SMALL INDUSTRIES

SPECIAL NUMBER



YOJANA

Vol. VI No. 15

August 5, 1962

Sravana 14, 1884

50 Naye Paise

Fortnightly Journal Published on Behalf of the Planning Commission



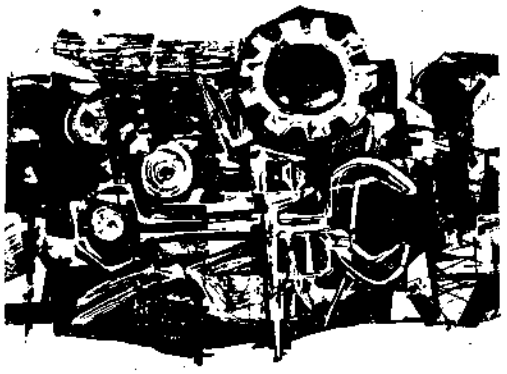
All this happened over 300 years ago. At the Gol Gumbaz in Bijapur, King Mohammed Adil Shah and the exquisite Rambha are climbing the stairs of the building to test its fantastic acoustics. Rambha stops midway while Adil Shah goes right to the top.

"Do you love me Rambha?" whispers the King. The words echo down to his beloved. "Very much, my lord", she replies. "More than your life?" whispers Adil Shah. "Do you doubt me, my lord?" Rambha asks passionately. The King's eyes twinkle with mischief. "Would I ask you if I didn't?" Suddenly there is a rustle of silk as Rambha throws herself down on the floor below....

As you walk into the Gol Gumbaz, your soft footsteps resound like thunder above the graves of the two lovers, while somebody tells you their story. To hear the myths and legends of our country is one of the pleasures of motoring. And you discover so much more when you go by road.

DUNLOP *Founders of India's Tyre Industry*

DC-580



THE IMPORTANCE OF BEING SMALL

THE Prime Minister has often called attention to the phenomenal spurt of small industries in our country. Surprisingly, there is no wholly reliable estimate or nationwide survey of this growth. Such statistics as we have cannot claim to be exhaustive. The contribution of small industries to the national income has yet to be ascertained with definiteness.

According to one estimate there are in the country today some 80,000 small-scale industries of the modern type, that is, factories using machinery but having an investment of less than Rs 5 lakh. Particulars about only half of them have been collected by the State Directors of Industries. Besides, there are several lakh traditional craft units—weavers, potters and smiths working in their own cottages.

The main arguments for promoting small industries—and the economic and social gains expected from their development—have been set out in the three Plans. They are restated in the opening article in this issue.

Some of these arguments have been questioned. Our small industries have in fact been the subject of animated discussion among Indian and foreign economists. It has been contended, for example by Lydall and Dhar, that small industries are neither capital-saving nor labour-intensive. But the latter author himself concedes that even if small industries may not fulfil the test of economic advantage, they are serving an important social function in the context of development. They have enabled the formation of more nuclei of industrial activity, and generated more entrepreneurs and managers in a country short in organisational ability.

However, it has not been a story without frustrations. Remarkable as the growth of small industries has been, some of our hopes have not been fulfilled. To name only two, neither rural industrialisation nor co-operativisation of small industry has built up the speed expected of them.

We have passed the stage of discussing the place of small industries in development. The question now is how best to make them serve our total purpose while helping them to grow further. Till now the small industries debate has been conducted mostly in specialist circles. There is need to let more people talk about them. That is one of the justifications of this Special Number.

IN THIS ISSUE

Section I: The Context of Progress

Small Industries and National Development ... 2
—*D. K. Malhotra*
Social Aspects of Small Industries ... 5
—*Pierre Bessaignet*
Small Industries And Dispersal ... 7
—*Contributed*

Section II : Some Problems

Ancillaries ... 9
—*P. S. Lokanathan*
Raw Materials ... 12
—*C. L. Bansal*
The Decentralised Sector ... 14
—*Gyan Chand*
Some Aspects of Finance ... 18
—*K. S. Krishnaswamy*
Regional Development ... 20
—*J. N. Thadani*
Extension Agency ... 21
—*S. L. Sharma*
Rural Industries ... 24
—*P. M. Mathai*
The Small And The Large ... 26
—*Madhav V. Rao*
Intensive Development Projects ... 32

Section III : Proof to See

To Ludhiana ... 33
—*H. Y. Sharada Prasad*
Photographs by *T.S. Nagarajan*
Tale Of Two Madras Cities ... 38
—*K. S. Ramanathan*

Section IV : Reports from States

Andhra—*M. N. Laxminarsaiah* ... 45
Assam ... 47
Bihar—*N. P. Sinha* ... 48
Gujarat—*C. B. Patel* ... 49
Kerala—*K. P. Viswanathan Nair* ... 50
Madhya Pradesh—*N. Swami* ... 51
Madras—*P. Sabanayagam* ... 52
Mysore—*R. S. Hooly* ... 53
Orissa—*C. B. Jain* ... 54
Punjab—*P. N. Sahni* ... 55
Rajasthan—*A. C. Das Gupta* ... 56
West Bengal ... 57
Book Review ... 58
List of Industrial Estates ... 60

Cover Design and Sketches by Jeevan Adalja.

Yojana endeavours to report on the Plan and to promote an earnest discussion of problems of social and economic development. It is issued every fortnight in two separate editions.

Although published on behalf of the Planning Commission, Yojana is in no way restricted to expressing the official point of view. Annual Subscription: India—Rs 5.00 Foreign—10s.6d. $1.50.

Printed at the Caxton Press (P) Ltd., New Delhi and Published by the Director, the Publications Division, Old Secretariat, Delhi-6. Chief Editor: H.Y. Sharada Prasad.

Role of Small Industries in National Development

DR. D. K. MALHOTRA

Joint Secretary, Planning Commission

ON the role of small industries in India's national development, considerable thinking has been done over the years; in the reports on the First, the Second and the Third Plans, separate chapters have been devoted to the programmes of village and small industries and during the last ten years the progress in this field has been periodically reviewed and evaluated. Yet the subject is not one on which unanimity or near unanimity can be claimed and it is interesting to see that, about this sector of national economy, the faith of the believers is often locked in combat with the scepticism and opposition of the doubters. The issue seems to be open and there is room for presenting a new view or restating an old one.

It may be useful at the outset to notice briefly the role of small industries in national development as envisaged in the three Five Year Plans. In the First Five Year Plan, the central place of village industries in rural development programmes was emphasised and the development of village industries was stated to be as much a matter of State action as the increase of agricultural production. Similarly the importance of small industries and handicrafts was emphasised from the standpoint of their employment potential for both trained and educated persons and for women. In the Second Five Year Plan, the place of village and small industries in the scheme of national planning was stated in more concrete and positive terms. These industries were described as an integral and continuing element in the national economy and as a progressive and efficient decentralised sector which is closely integrated, on the one hand, with agriculture and, on the other, with large-scale industry. The Third Five Year Plan has spelt out the role of these industries further. It is stated that one of the principal aims of planning in this field is to assist in the adoption of improved techniques and more efficient forms of organisation so that full advantage is taken of the basic facilities and services available as a result of general economic development and over a period the entire sector becomes self-reliant and self-supporting. The basic objectives of the programmes for these industries are stated to be to create immediate and permanent employment on a large scale at relatively small cost, meet a substantial part of the increased demand for consumer goods and simple producers' goods, facilitate mobilisation of resources of capital and skill which might otherwise remain inadequately utilised and bring about integration of the development of these industries with the rural economy, on the one hand, and large-scale industry, on the other. Further these industries are said to offer a method of ensuring more equitable distribution of the national income and avoiding some of the problems that unplanned urbanisation tends to create.

Basically, small industries are important for national development programme because they can make a contribution towards the realisation of the central purpose of such a programme, namely, to bring about efficient utilisation and proper direction of natural, human and capital resources of the country for the achievement of pre-determined ends. The principal elements in the economic picture of the country at present are the rapid growth of population, an increasing labour force, a large volume of under-employment and unemployment, growing pressure of population on land leading to more precarious existence for a large number of small owners and agricultural workers and the constant search by millions of people for jobs in which by making small investment they can assure themselves a certain minimum of income. According to the Second Agricultural Labour Enquiry Committee (1957), of the total number of 67 million rural households, 16.3 million were agricultural labour households and of these again 9 million were landless agricultural labour households. The number of small artisans and cottage workers in the rural and urban areas taken together is estimated to be over 10 million. In addition to the artisans and the landless agricultural labour there are other groups like the women and old persons who want light types of industrial work, the displaced persons and ex-servicemen and the growing number of persons who are receiving elementary or high school education and wish to enter some trade or the other. In addition, it has to be borne in mind that traditional social institutions like joint family system and the occupational basis of caste are breaking down and the protection they afforded to a person in contingencies of illness, unemployment, old age, widowhood, etc. has not been replaced by organised systems of social insurance or security.

The Critics' Viewpoint

Under these conditions which reflect largely the underdeveloped character of the economy and the processes of transition it is passing through, small industries have a multiple role. Viewed from the employment angle they serve as a means of providing whole-time or part-time work and, in certain situations, of affording relief to persons in economic distress. From the production angle, they supplement the production of large-scale industries and thus augment the available supplies of consumer goods and small producers' goods. Further,

they assist in the economical use of probably the most scarce resource in an under-developed country, viz., capital. They also have a useful role in facilitating the expresson of creative skill and in maintaining and strengthening the tradition of the independent artisan and the small entrepreneur.

Those who take a critical view of these industries point out that they embody inferior and in many cases obsolete and out-of-date techniques of production and that the advantage they offer of an economical use of capital is illusory when calculated in terms of the actual output per unit of capital employed. They further argue that the contribution to production secured from these industries is achieved at a certain cost to the nation because better and more efficient methods of production are rejected in favour of the less efficient and that in the process the worker in these industries also remains condemned to a relatively low level of wages. To the contention that if these industries are not given support in a period of rapid change, a huge waste may result in terms of unemployed labour, capital and local resources, the reply of the critics will probably be that such costs are necessary concomitants of progress. The process of economic advance ensures optimal and not maximal utilisation of resources; it would not, therefore, be correct to expect that under conditions of progress every resource would be fully employed. Frictional unemployment, obsolescence and bankruptcy and liquidation of inefficient industries and businesses which cannot hold their own are milestones on the road to progress.

Some Factors to Note

This labyrinthine maze of controversy is easy to enter but difficult to get out from because accurate and reliable data to support reasoning are not always available and the evidence is not convincing or conclusive. A safer and more prudent course is to rely on a pragmatic approach and not to overlook the significance of the following set of facts and propositions:

(1) Over 10 million persons depend for their livelihood wholly or partly on the small industries. This large mass of humanity cannot be quickly shifted to other, more remunerative occupations and any attempt to do so will result not only in loss of employment to many but also waste of a good deal of skill and capital employed in these industries. The more practical line is to lend support and strength to these industries and to achieve the occupational transfer, to the extent to which it is necessary and possible, by a gradual planned process.

(2) In a regime of planning, the implications and consequences of decisions taken and the developments occurring are a matter of concern to the planning authority or the State. The responsibility for taking steps to provide employment to those displaced by technological change has to be taken by the State because it cannot be assumed that everything would work out to the good in the end by leaving matters to themselves.

(3) Small industries are one of the means by which opportunities of work can be created for certain sections of population which are under economic pressure, e.g. landless labour, educated unemployed, the displaced persons, etc.

(4) The fact that certain light types of industrial work like handspinning are taken up by a large number of persons in spite of a low rate of earnings seems to indicate that more attractive avenues of employment are not readily available.

(5) The size and the pattern of investment outside the field of small industries in the Plans cannot at present take care of all those who offer themselves for work.

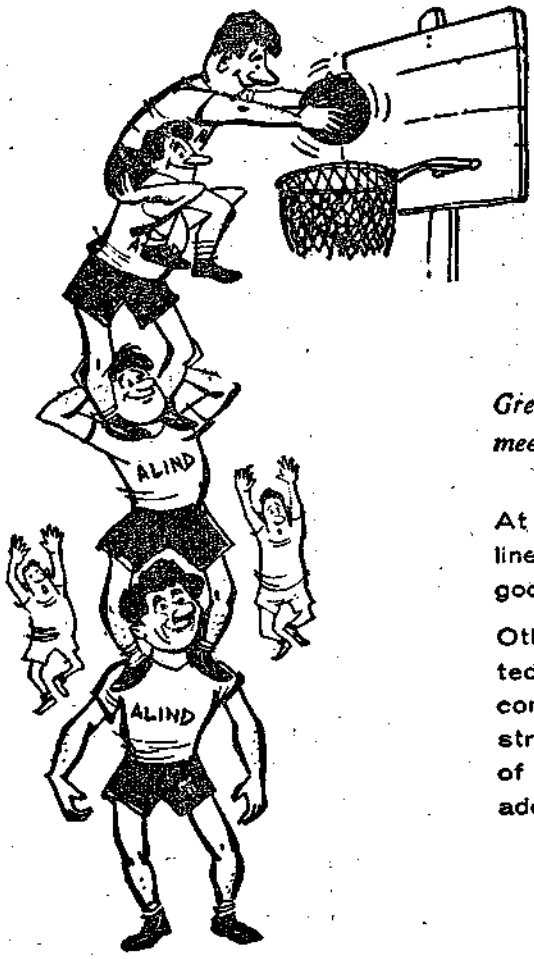
(6) Apart from their employment potential, small industries have certain social values associated with them.

Not a Dispensable Sector

From the pragmatic approach it is one more step to concrete detail. Taking the whole gamut of smallindustries in India, the role played by each is not exactly the same. The handloom industry represents probably the biggest sector of employment among the small industries, i.e. over 3 million persons, and also probably the biggest contribution by way of production, i.e., about 30 per cent of the total availability of cloth for internal consumption. Khadi and village industries represent another big sector of employment; the programmes sponsored by the Khadi and Village Industries Commission alone provide employment to over 2 million persons, but there is a large area of activity which is not reached or supported by these programmes. Khadi production is of the order of 80 million yards and the contribution of village industries, although not amenable to accurate measurement, is sizeable. A good part of it is for self-consumption or local or village consumption. The small-scale industries of the mechanised type which generally use electric power form technologically the vanguard of the small sector. They produce a large variety of articles of utility and their production in certain cases is linked up with that of large industries. Handicrafts constitute a distinct field because they help in preserving the traditional heritage of national skill and crafts and in providing scope for the creative expression of the craftsmen. Coir and sericulture are more localised industries of the rural type and provide large scale employment. The small industries taken together are thus a vital sector of the economy at present and while they must in course of time undergo a lot of technical change, it would be wild to suggest that they are a dispensable element of the economy or that they are being retained as a feature of the developing economy at an enormous and unconscionable cost to the nation.



Behind the overhead lines (IV)



It's team-work that does it!

Great things are done when men and mountains meet; this is not done by jostling in the street
—WILLIAM BLAKE

At Alind, there's team-work all along the line...so the company always delivers the goods!

Other Alind *plus* features are: its integrated production facilities, its rigid quality control measures, three plants in three strategic locations and a national network of sales offices. All of which splendidly add up to:

Quality first in the product...
Service first to the customer!

Lines Include: ACSR; All-Aluminium conductors; Conductor accessories and tools; Covered aluminium conductors for indoor wiring and outdoor weatherproof applications; also EC-grade aluminium rod and high-tensile galvanised steelwire.

turn to **ALIND**

a name with a tradition and a future!

THE ALUMINIUM INDUSTRIES LIMITED
India's largest manufacturers of aluminium conductors and accessories
Registered Office: Kundara (Kerala)
Works at: Kundara • Hirakud • Hyderabad
Managing Agents:
SESHASAYEE BROS. (TRAV.) PRIVATE LIMITED

SOCIAL ASPECTS of SMALL INDUSTRIES

THE UNESCO CENTRE'S RESEARCH PROGRAMME

By PIERRE BESSAIGNET

Director, Unesco Research Centre on Social and Economic Development in Southern Asia

ON January 1, 1961, the Unesco Research Centre on the Social Implications of Industrialisation in Southern Asia, which had been until then located in Calcutta under the Directorship of Prof. C.N. Vakil, was shifted to Delhi with new terms of reference to become the Unesco Research Centre on Social and Economic Development in Southern Asia. This new start made by the Centre with a wider scope was to lead to an expansion of one of the major series of projects already established by it while in Calcutta: an extensive study of the social aspects of small industries in Southern Asia.

Pioneering studies done in India, such as those by Berna, McCrory, and others, have definitely suggested that social structure influences the growth of medium and small industries and, in particular, entrepreneurship. Investigations by the Centre, in India and elsewhere, confirm this impression. The reason for it is that, in processes of growth, economic conditions often are first to change while social conditions change next, as the latter are usually forced to adjust to the former. In their turn, existing social structures tend to react to economic change and to impose their largely archaic and traditional pattern upon the new economic conditions. Economic structures lag behind technological growth and social structures in turn lag behind economic structures. This retardation of the socio-economic organisation of society and, within it, of the social, as compared to the economic, organisation may hamper development, but it also facilitates the assimilation, the digestion, of economic change and provides for a structural framework within which the economic system can find its organisation along new lines. On the other hand, certain patterns of social structure are sometimes a prerequisite to economic growth. This relationship between growth and social structure constitutes the "social aspects" of economic change. The Unesco Research Centre has embarked upon a series of surveys on social aspects of small industries in the region to study the various factors which may help or hinder the development of these industries as also their role in modifying the existing social structures. How class or caste, or mobility from one to the other, may influence the vocation of entrepreneurs and govern the orientation of certain types of individuals towards entrepreneurship; how family conditions among employers as well as workers provide a matrix for the organisation of small firms; how, in their turn, by their very growth, small industries create new forms of family relationship or human relations inside and outside the workshop; these are some of the many questions studied under the Centre's research programme.

Research initiated in India under the auspices of the Unesco Centre suggests, for example, that caste may have a definite influence upon entrepreneurship in small industries. In a Howrah study the Centre found that 26 out of 40 employers in small engineering establishments and 74 per cent of the total number of workers in these units came from one caste—the Mahisyas. In a Bombay survey 85 per cent of the entrepreneurs in art-silk industry were identified as upper-caste Hindus and Jains. Preliminary research under the Centre's sponsorship, now under way in the Ludhiana Industrial Estate, indicates that the 2,300 units in the Estate are owned by 300 entrepreneurs, revealing a high degree of family interlocking, and that 97 per cent of them hail from a single caste: the Ramgharias. In the Rajkot Industrial Estate, also being studied under the Centre's sponsorship, the majority of the entrepreneurs have been found to hail from artisan castes (blacksmith and carpenter), mostly Lohars. On the other hand, in Hyderabad, the vast majority of the entrepreneurs are Muslims, coming from the trading and financial occupations. In Madras, Berna had observed a few years back that though there was much freedom of entry into medium-size industry and that enterprising and capable industrialists were found in all groups, the most advanced of them were recruited from the ranks of graduate engineers among whom a strong proportion was of Brahmin origin. What these findings actually prove or do not prove as to the impact exerted upon the growth of small industries by the existing social structures may not be certain as yet, but it seems clear that a proper understanding of the conditions of that growth—and therefore a proper promotion of their development under economic plans—cannot be achieved unless such factors are taken into consideration. In countries of Southern Asia other than India, the social structures are very different from those prevailing in the sub-continent, but they also appear to affect in varying measures the development of those industries. This is why the Unesco Centre proposes to commit itself to a regional programme of research.

Three reports have already been published by the Centre, either under its own name or under its auspices by other reaserch institutions:

1. *The Survey on the Social Implication of Small Scale Industries in the Philippines* (National Economic Council of the Philippines and others, 1960).
2. *Industrial Efficiency and Industrial Growth: A Case Study of Karachi* (Institute of Development Economics, Karachi, 1961).
3. *Social Aspects of Small Industries in India: Studies in Howrah and Bombay*, (Unesco Research Centre, Delhi, 1962).

Two further reports are awaited: *Labour Force in Karachi Industry* and *Entrepreneurial Activity in Karachi Industry*, both to be published by the Institute of Development Economics in Pakistan.

At present, the Unesco Centre is expanding its programme in India. Four major projects are already in operation with supplementary funds made available by the Asia Foundation. These are based around Hyderabad, Rajkot (Gujarat), Ludhiana (Punjab) and Okhla (Delhi) in association with reputed Indian universities and research agencies. They are almost exclusively concerned with the social aspects of small industries. On April 6 this year, a meeting of the research directors of the four projects together with the Unesco Centre's officials was convened in Delhi. The purpose of the meeting was to ensure that the schedule and thus eventually the findings of the four projects would be somewhat comparable, subject of course to variations in order to meet local conditions. At the meetings, it was the general opinion of the participants that, since the major purpose of the discussion was to arrive at homogenisation of the surveys in such a way that, on the one hand, the coverage of the project should be adequate and, on the other, they allowed for comparison from survey to survey, it would be better to agree on a minimum list of questions to be included, in one way or another, in every survey on the social aspects of small industries to be conducted in the next two or three years. Agreement on such a list of questions, embracing a whole series of research areas, was then reached. Negotiations are in progress for an extension of this programme; additional projects for Central-Eastern India and Southern India are presently under consideration. Two more projects are envisaged this year in Thailand (handloom silk industry in Bangkok) and Viet-Nam (small scale industries in Saigon and Oholon). It is hoped that these studies designed with a strong "regional" orientation to the research may, in due course of time, be a significant contribution to the research undertaken to accelerate the social and economic development of Southern Asia, in particular, under the aegis of such international bodies as ECAFE. In the programme, as can be seen, a certain amount of emphasis is being now put upon research in India as, in that country, small industries receive a high degree of governmental patronage and academic recognition. A trend report on the research done so far on small industries in India, consisting of an evaluation of the existing literature and an exhaustive bibliography, which has already been completed by the Centre, shows that scholars have so far largely concentrated their attention on the economic aspects of small industries.

The Centre held, early in May 1962, a round-table conference on research on social aspects of small industries in India at the premises, and upon the invitation, of the Central Industrial Extension Training Institute, Hyderabad. Among the participants were several leading experts, academic as well as Governmental, including the Development Commissioner for Small Industries. The purpose of the conference was to evaluate the existing programme of the Centre and to make suggestions which could lead to the formulation of a national research programme on social aspects of small industries in India. The consensus of the conference was that, even as the Centre should expand its existing programme of general studies on the relationship between economic growth and social structures in relation to small industries, there was room for an integrated scheme of "action research". This was an area of research where findings could be most useful to planners and policy-makers. Some themes for action research studies were suggested by an especially appointed committee of the round-table conference. These were: social and cultural factors affecting the selection of potential entrepreneurs; role of "outsiders", such as migrants or displaced persons, in effecting technological change; changing social and cultural motivation patterns which govern entry of various groups into entrepreneurship; methods of approach in changing the existing patterns of behaviour among employers and employees towards modern technologies, new working conditions, etc. The Centre is currently examining how it can help in promoting that kind of action research in India, and the Government of Maharashtra has already made certain suggestions in that direction.

As it stands at present, the field programme of the Unesco Research Centre consists of general surveys designed to secure fundamental background information on the broad social aspects of small industries. It is still in the pioneering stage. It is meant to be an example setting effort aiming at relatively modest results. It is, however, hoped that the Centre will be instrumental in the launching of more comprehensive and penetrating studies in the future. As very little had been done in the area so far, basic general information is what was required first. It is on the basis of the list of questions mentioned above that the surveys now under way at the Centre have been consolidated, and that those to be started soon in Thailand and Viet-Nam will be designed. When the latter two surveys are finally processed, a round-table conference, similar to the one held in Hyderabad for India, may be held at a later date, if found feasible, for the countries of South-East Asia. The survey already completed in Philippines and those which might be finished in Thailand and Viet-Nam or be in progress in other countries would provide the working material for the conference. An attempt has been made to introduce a minimum of comparability and homogeneity among the various surveys, so as to allow for a tentative over-all evaluation of the Indian situation, and beyond of Southern Asia as a whole.

MAJOR AIM OF POLICY

Within the field of activity entrusted to the private sector, the major aim of policy is to ensure broad-based ownership in industry, diffusion of enterprise and the growth of co-operative organisation.....In licensing new industrial units and sanctioning the expansion of existing units, there must be considerable vigilance in permitting the growth of large existing businesses and, in the greatest measure possible, the entry of new firms should be facilitated and small and medium enterprises and co-operative organisations encouraged.

—Third Five Year Plan, Chapter I

Small Industries and Dispersal

SOME ASSUMPTIONS QUESTIONED

CONTRIBUTED

OUR Five-Year Plans attach much importance to the development of cottage and small-scale industries for a number of reasons. Perhaps the most compelling consideration is the need to maximise employment opportunities in the immediate future. There already is a large volume of underemployment, and population growth is rapidly adding to it. Our development programmes will eventually raise ouptput to a level at which full employment can be assured at a reasonable level of income. But this is still a distant goal and in the meantime we should attempt to avoid, as far as may be possible, further aggravation of the employment situation.

It would be wrong to think that small industries can solve the unemployment problem or that they can be regarded as alternatives to large plants over the entire range of industries. The scope for their development is largely a function of the growth of demand for their products on the one hand and the availability of raw materials, power and transport on the other. The former depends on an ability to step up the volume and rate of investment, while the latter requires massive investments in irrigation works, power projects, transport, steel, machinery and such other sectors in which the technological and economic advantages are overwhelmingly in favour of large, modern plants. The industries in which production in small-scale units offers greatest possibilities are processing of farm produce, manufacture of consumer goods and certain local-market-oriented industries. They account for only a small fraction of the addition to national output and if we allow, as we must, for a reasonable increase in the incomes of people dependent on them, they cannot be expected to absorb more than a fraction of the labour force. A very large proportion of non-agricultural employment is and will continue to be derived from construction, trade and services.

Within these limits, the Government's policy is aimed at raising the productive efficiency, and hence the earning, of those already engaged in them and at the same time encouraging the adoption of labour-intensive modes of production to produce as much of the additional output as may be possible without unduly sacrificing the long-term objectives and strategy of our Plans.

Accordingly, during the last decade, the policy has been one of restraining the growth of large factories in the processing of farm produce and manufacture of consumer goods to enable the established small industries to take advantage of the growing demand and effecting, at the same time, economies in the use of capital. In some cases, there is an outright ban on expansion of the large-scale sector, while in others the same result is achieved through a high excise on the products of large factories combined with subsidies to the small-scale sector. Besides curbing the growth of large units, several positive measures have been taken to improve the productive efficiency and earning capacity of traditional small industries and to encourage the growth of small enterprises in new lines of production. These measures include liberal financial and technical assistance, construction of industrial estates, common service facilities and encouragement of small units as ancillaries to large factories. In all, the Central and the State Governments have spent about Rs 220 crore during the last decade on the development of cottage and small industries; the allocation for the Third Plan is Rs 264 crore.

The results of these policies are indeed remarkable.



Cotton textiles produced outside the mill sector increased from 900 million yards in 1950-51 to 2,350 million yards in 1960-61. The volume of construction has also increased more than threefold in these ten years and it is reasonable to suppose that the manufacture of bricks and other products required by building industry have kept pace. Even more spectacular increases seem to have taken place in small-scale manufacture of machine tools, bicycles, sewing machines, builders' hardware and other engineering goods.

Taken as a whole small units falling outside the scope of the Factories Act contributed, according to official estimates, Rs 580 crore to national income in 1950-51 and Rs 770 crore in 1959-60—an increase of a little over a third. This however seems to underestimate the growth of the small-scale sector very

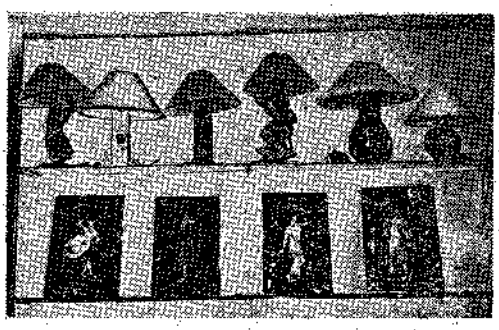
considerably. For if the output of cotton textiles alone, which accounts for about a third of the sector, increased by 160 per cent, then even if the others remained stagnant the total must have increased by over 50 per cent. In fact, as we have pointed out in the previous paragraph, the other activities were far from stagnant.

This expansion of output has without doubt resulted in fuller employment and higher incomes for those already employed in these activities. But we know very little about the net addition to the number of people employed. There are some indications that within the small industries sector, units using relatively modern techniques (e.g. powerlooms and power-operated oil-expellers) have grown faster. For instance the number of powerlooms in small units seem to have increased very much during the last decade. In fact some people claim that the expansion of cloth produced by powerlooms is much greater than is commonly believed. Similarly there is some evidence that the effect of the excise on large oil mills has benefited the small power-operated units more than the *ghanis*. The available evidence is sketchy and it is important to find out whether, despite the strict regulations on the installation of powerlooms, oil mills and rice mills, technological changes have in fact occurred at a faster rate than was planned for, so that we may be in a position to regulate them more effectively in the future.

Among the arguments justifying the development of small industries is that they make a wider dispersal of manufacturing activities possible. But in actual fact their utility in this regard is rather limited. The expansion of most of the existing small industries depends on the growth of local agricultural production and of the market for their products. Since the pace of development in different parts of the country is highly uneven, the growth of small industry is also likely to be uneven tending to gravitate towards areas where other activities are developing. In areas where local demand is not rising and which do not already have local industries like handlooms catering for a wide market, no sustained, healthy growth of small industry can be expected. It would be wiser not to spend scarce resources of capital and organisation on fostering them in such regions. Small units of the modern variety are even more difficult to disperse—they have a strong attraction to locations which give them easy access to raw material supplies, repair and servicing facilities, financial institutions, and customers—in short, to large towns and centres of large industry. If, as seems to be the case, small industries follow, by and large, in the wake of expanding agriculture and large industry, the extent of dispersal will appear to depend mainly on our ability to achieve a wider diffusion of agricultural and large industry development.

JAPANESE MACHINERY

The Union Government has allocated a sum of Rs 30 lakh out of the Second Yen Credit to the National Small Industries Corporation for the import of plant and machinery from Japan for distribution to the small industrialists on hire-purchase terms.



AMONG the handicrafts, which have symbolised the creative genius of the Indian craftsmen, Nirmal Artware occupies a place of unique distinction. Recreating such renowned masterpieces as Mogul Miniatures and Paintings from the Pahari, Kangda and Ajanta Schools, the industry is a store-house of beautiful and useful articles to suit your taste and pocket.

Some of the popular articles of this industry are : card boxes, cigarette boxes, ash-trays, standard and table lamps, wall plaques, beer mugs, coffee sets, drawing and dining room sets, etc.

You are cordially invited to visit our factory and show-room at Khairtabad, Hyderabad.

TRADE ENQUIRIES MAY PLEASE BE ADDRESSED TO :

The Managing Member, Nirmal Industry, Khairtabad, Hyderabad-4.

—D.I.P.R. A.P.

Small industries are the seed-bed of the large. As ancillaries, they can improve both quality and output and contribute significantly to growth. Before that can happen, the mutual distrust has to be removed and some problems solved.

Ancillaries

DR. P.S. LOKANATHAN

Director-General, National Council of Applied Economic Research, New Delhi

A MAJOR achievement in this decade of planning in India is the development of small-scale industries. The vital role of small industries in the industrialisation of the country is now fully recognised. They provide ample opportunities to young men and technicians with small financial means to utilise their business talents. In addition, they provide the seed-bed for the growth of large industries. They are also a means of decentralising industrial development and for facilitating the mobilisation of capital resources and skills.

The small industrialists are able to collect the major share of their resources from their friends and relations. These resources would not be forthcoming otherwise for accelerating the process of capital formation. The Third Plan has allotted a sum of Rs 264 crore for the development of small-scale industries (including cottage industries). The planners expect that a corresponding amount (about Rs 275 crore) would be forthcoming from the private sector.

Though the development of these industries is phenomenal, past experience has shown that a large number of these small-scale industries are not yet viable units and run into difficulties on account of certain weaknesses inherent in them. Inadequate finance, difficulties in marketing their products, the long gestation period, absence of technical know-how, shortage of raw materials and inadequate and untimely supply of power, coal and coke are some of the difficulties that can be enumerated.

It is generally believed that at least some of these problems could be mitigated if the small-scale industries are developed as ancillaries to larger units, rather than catering directly for the supply of consumer or other final goods. There are certain arguments in favour of developing the small-scale industries as ancillaries to larger units. First, the marketing of the goods is made considerably easier by the existence of ancillary relationships. With their meagre resources, the small industrialists find it difficult to tap a wider market. Once markets are assured, these industrialists can concentrate their efforts more and more on manufacturing, simultaneously improving both the quantity and quality of their products. Secondly, the small units without being a part of the parent unit can derive certain benefit without, at the same time, losing their identity and independence. The smaller firms can thus receive technical know-how and advice about management. This can enable them to dispense with the maintenance of a separate technical section. While precise data are lacking which would soon become available with the National Council of Applied Economic Research there are general grounds to believe that in some respects ancillary production might be cheap on account of lower overheads, free technical advice, availability of raw materials and other favourable factors.

The parent units are also able to expand their production at a faster rate as many of the components going into the final product are to be manufactured and supplied by others. Being relieved of the task of investing capital on the manufacturing of smaller items, the larger units can concentrate on increasing the production of the main product. The risks thus involved in the manufacture of the final product are shared among different agencies and not borne by only one unit. When the ancillary units are economic and when the demands of the parent units for the products of the ancillary units are not very large compared to their own final products, the parent units will benefit by buying from the market rather than manufacturing the components themselves. Thus, it is generally agreed that in the early stages of industrialisation industrial development is likely to be more rapid if a cluster of independent manufacturing units come into being as ancillaries to the large- scale units manufacturing complete products. The possibilities of encouraging such a cluster will become apparent when the experience of the operations of the industrial estate set up under the wings of the Hindustan Machine Tools Factory begin

to show results. This large plant will purchase its components from the units in the industrial estate nearby.

Three Kinds of Ancillary Units

There are three kinds of ancillary units: (a) those small units which almost exclusively engage in the production of components and parts for specific large units, (b) those units which produce specific parts and components required by all types of large-scale units and (c) those units which produce parts and components only against prior orders.

Though the development of small-scale industries, in the long run, will be as ancillaries to large units, at present such development is not as fast as it is expected to be. There exist certain basic problems relating to all small-scale industries. The ancillary units are not exceptions, though they have the edge over other units in respect of marketing and technical knowledge.

However, there is one major bottleneck in the way of faster growth of ancillaries. At present, there is considerable mistrust between the ancillary and parent units. The parent units do not like to depend on small units entirely, because they are not confident that the components and parts would be delivered in the correct time and according to the specifications laid down. These factors reduce the quality of the final product, thereby bringing down the reputation of the parent units. So, unless it is unavoidable, the parent units prefer not to buy from the ancillary units. On the contrary, the small units feel that they are not sure as to whether the large units will buy the components from them or not, however much they satisfy the specifications. Governments, both at the Centre and the States, should take the lead in clearing away this mutual distrust.

Future Policy

In the highly industrialised countries like the U.S.A., the U.K. and Germany, the large industries depend on small-scale ancillary units for nearly 60 per cent of the components. In India there is good scope for the development of ancillary industries.

The National Council of Applied Economic Research has recently conducted surveys on the problems of development of ancillary industries in the States of Bihar, Maharashtra and Madras.

Preliminary analysis of the surveys indicates that the larger units are indeed interested in the development of ancillary units on sound lines for the supply of components, especially in the case of those industries which require a large number of components. A preliminary survey of the ancillary industries shows that the following industries, among others, have good scope for utilising the production of the ancillary industries (Figures given in the brackets refer to the percentage share of the ancillary output to the total value of the final product): Industrial machinery (15 to 20), agricultural implements (15 to 20), machine tools(10), industrial and scientific instruments (50), bicycles (10 to 12), automobiles (20 to 25) and radio receivers (50 to 60). The production of the ancillary industries varies over a wide range depending on the complexity of the production and of the market for the product.

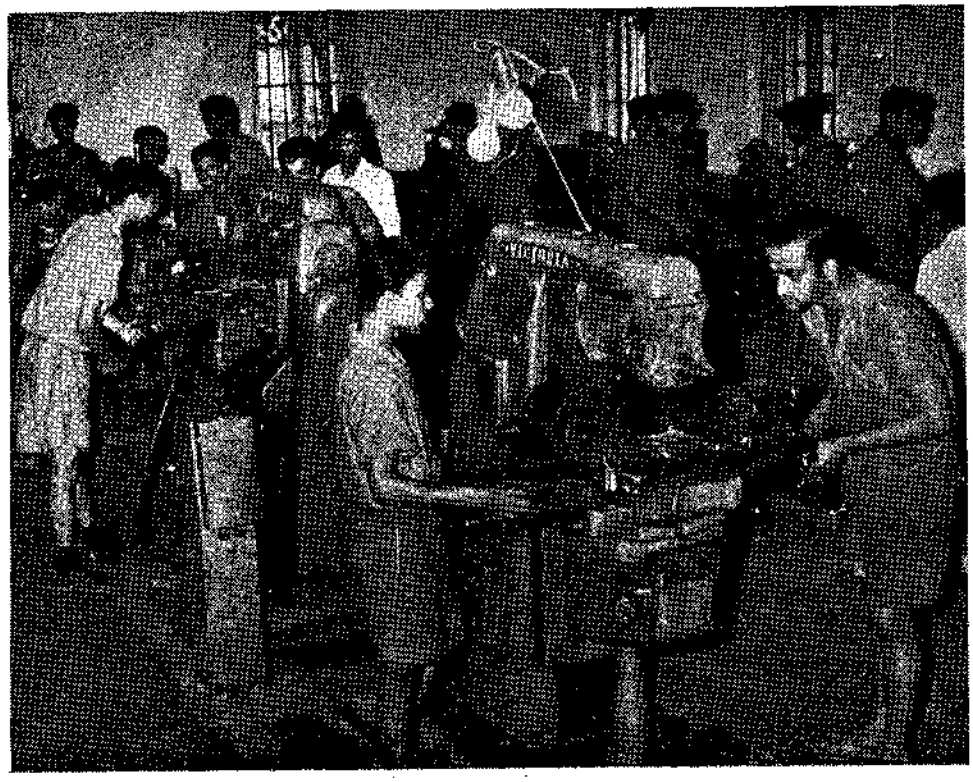
Both the Government and the large units should come forward to create a favourable climate for the development of ancillary industries.

Suggestions for Development

The Report of the Working Group of the Small-Scale Industries, while discussing the programme of work for the Third Plan, enumerates a number of suggestions for the development of ancillary units. The following, among others, are very important suggestions:

(a) When a large unit is being granted a licence for the production of a particular item, a list may be drawn up of various components which could be economically manufactured outside the unit. These items should be separated and licences given only for the manufacture of other items; (b) even when larger units are allowed to produce components, their share should be reduced progressively, and (c) the larger units should be made

Trained artisans are an important need of small as of large industries. Here are some trainees from Calcutta.



responsible for the development of ancillary units. The large units should supply both technical know-how and technical supervision to the smaller units without merging them in the parent units.

Possibilities of Growth

In order to encourage the small entrepreneur, the State should take initative in indicating the growth possibilities of the ancillary items in certain important industries. The information furnished by the Government should outline the following: (a) the nature and quantity of every single ancillary item for the industry under discussion; (b) the capacities that exist for the production of those items and the existing gap; (c) plant and machinery required for the manufacture of the components; (d) fixed and working capital required, (e) the markets that exist, both local and national, and (f) a fair idea of the production cost and profitability.

In purchasing components for government use, only those contractors who propose to place the maximum value of contracts on small-scale industries should be given preference. The Government can also fix the price schedules for components required for each industry. Though the price fixation is essentially a matter between the parent and ancillary unit, the Government can take a lead in bringing about such agreements.

Many of the ancillary units practise outmoded methods of production and frequently create enormous avoidable wastage. Moreover, the small producer has limited finances and he is, therefore, interested in making quick money. These factors contribute to the poverty in quality and high prices. As far as possible, Government should control these units by providing finance and also adequate raw materials. Ancillary industries have to register themselves with the Director of Industries in respective States, for getting their quota of steel at controlled prices. While recommending their application, the Director of Industries should be so empowered as to ensure the quality of the products also. Standardisation should be introduced by making, wherever possible, the ISI mark compulsory. However, there are a large number of ancillaries and the acutal enforcement of these proposals, despite their advantages, cannot be achieved at once. At least to make it a gradual process there should be well-trained Government inspectors for quality control. The ancillary units may be provided with certain centralised quality control and laboratory testing facilities.

The Government has established Development Councils for the major industries in which the Government and the industry are represented. The broad function of these Development Councils is to foster the growth of the insustries concerned. The Development Council for Automobile Industry has clearly demarcated the items that can be exclusively manufactured by ancillary units. This is a welcome gesture that can help the smaller units to plan their production. As a part of their functions, other Development Councils should also follow similar procedure and demarcate items that can be produced exclusively by the ancillary units.

In order to demonstrate their interest in the ancillary units the large units ought to undertake, besides providing technical assistance, the following measures: (a) to provide the smaller units with in-plant training facilities and to educate them in problems of management, (b) to provide raw materials from their quota in times of emergency and (c) to give financial assistance whenever necessary in the form of loans without having a controlling interest in the smaller firms.

While it cannot be denied there are a number of difficulties which have been hampering the development of ancillary industries in this country there is no reason for anyone to become pessimistic about it. The problems are not insurmountable and with a helpful attitude on the part of the Government and the major industries, many of these problems can be overcome easily. An international team has recently studied the perspective planning of small-scale industries which included ancillary industries. Their suggestions for solving problems and removing difficulties will go a long way towards rapid development of the ancillary industries in India.

IMPORTANT ROLE IN THIRD PLAN

Village and small industries have made a significant contribution in the First and Second Plans in realising the objectives of expanded employment, larger production and more equitable distribution. With the larger dimensions of the tasks to be accomplished in the Third Plan, their role will be even more important. The objectives of the programmes for these industries, as set out in the Industrial Policy Resolution, 1956, and in the Second Plan, are to create immediate and permanent employment on a large scale at relatively small capital cost, meet a substantial part of the increased demand for consumer goods and simple producers' goods, facilitate mobilisation of resources of capital and skill which might otherwise remain inadequately utilised and bring about integration of the development of these industries with the rural economy on the one hand and large-scale industry on the other. They also offer a method of ensuring more equitable distribution of the national and avoiding some of the problems that unplanned urbanisation income tends to create. With improvement in techniques and organisation, these industries offer possibilities of growing into an efficient and progressive decentralised sector of the economy providing opportunities of work and income all over the country. One of the principal aims of planning in this field, therefore, is to assist in the adoption of improved techniques and more efficient form of organisation, so that full advantage is taken of the basic facilities and services available as a result of general economic development and over a period the entire sector becomes self-reliant and self-supporting. At the same time, the pace of technical change will have to be so regulated that lage-scale technological unemployment with consequent hardship and misery to millions of people is avoided.

—Third Five Year Plan, Chapter XXV

The very vigour with which small industries are growing has aggravated the problem of raw materials. The discrepancy between allocations and actual supplies must end and the genuine manufacturer must be given all help.

Raw Materials

G. L. BANSAL

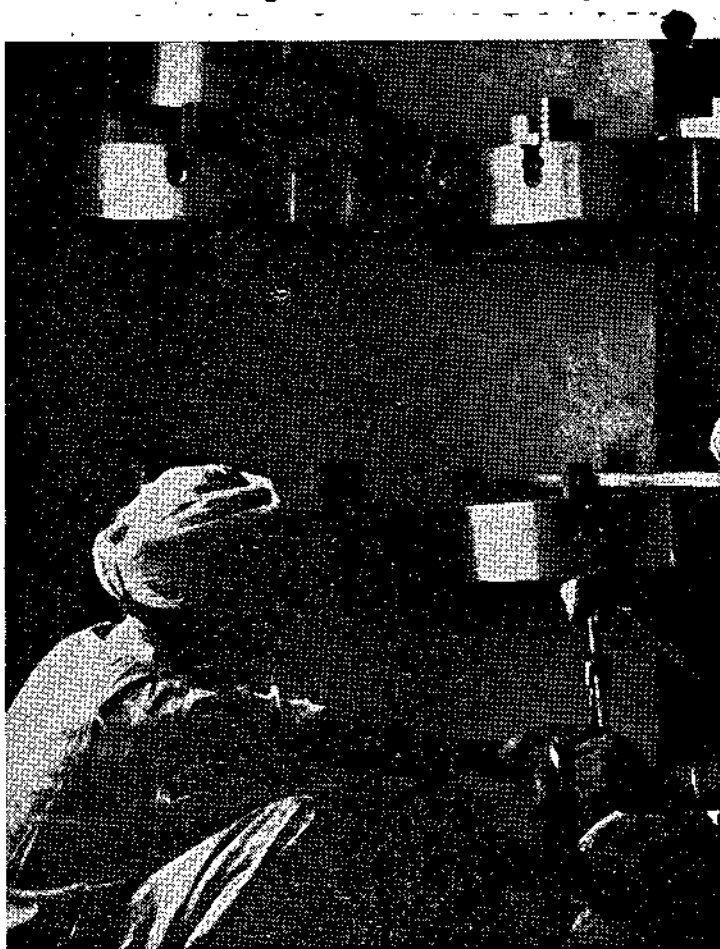
Secretary-General, Federation of Indian Chambers of Commerce and Industry

THE small industries programme was conceived a few years ago to promote and nurture entrepreneurship at various levels and create a viable base for the industrialisation of the country. These could also serve as the carriers of modern technology and the ideas that go with it to the remote corners of the country. And, indeed, a large amount of consumer and semi-durable goods could be manufactured in the small sector to meet the growing demand inevitably generated by a developing economy. In this context, the advance made by small sector has, by and large, been satisfactory. Small industries have not only achieved the targets set for them during the Second Plan, but in many fields outstripped them. Diversification of industrial products and the widening range of technologies involved have been a significant feature of their development. As a matter of fact, the types of industries which were being suggested a few years ago for small industries are fast becoming crowded and, therefore, greater stress has come to be laid on newer items and industries.

The story of small industries, however, has not been one of smooth and uninterrupted progress. At various stages and in different degrees they have faced and are facing problems on account of numerous handicaps in their day-to-day working. One problem that has assumed a somewhat serious proportion at present concerns shortage of raw materials which is hampering the production programme of many industries, particularly those depending on certain steel items, non-ferrous metals and plastic raw materials.

The raw materials problem has to be looked at from two angles: short-term and long-term. Industries based on steel items, chemicals, intermediates, etc., are currently experiencing shortages. But when all the units licensed in these lines commence full production, the supply position would naturally improve sizably. On the other hand, industries based on non-ferrous metals such as copper, zinc, lead, etc., may find their problems more durable until the overall foreign exchange problem eases and larger imports of these metals become feasible.

The lags on the steel front arise from the fact that demand has constantly kept ahead of the available supplies. The total availability of steel in 1961 was roughly 3.84 million tons inclusive of imports while the total demand approximated 6 million tons, if the indents released for relaxed categories and the demand placed by the various co-ordinating/sponsoring authorities for restricted categories were to be taken as a guide.

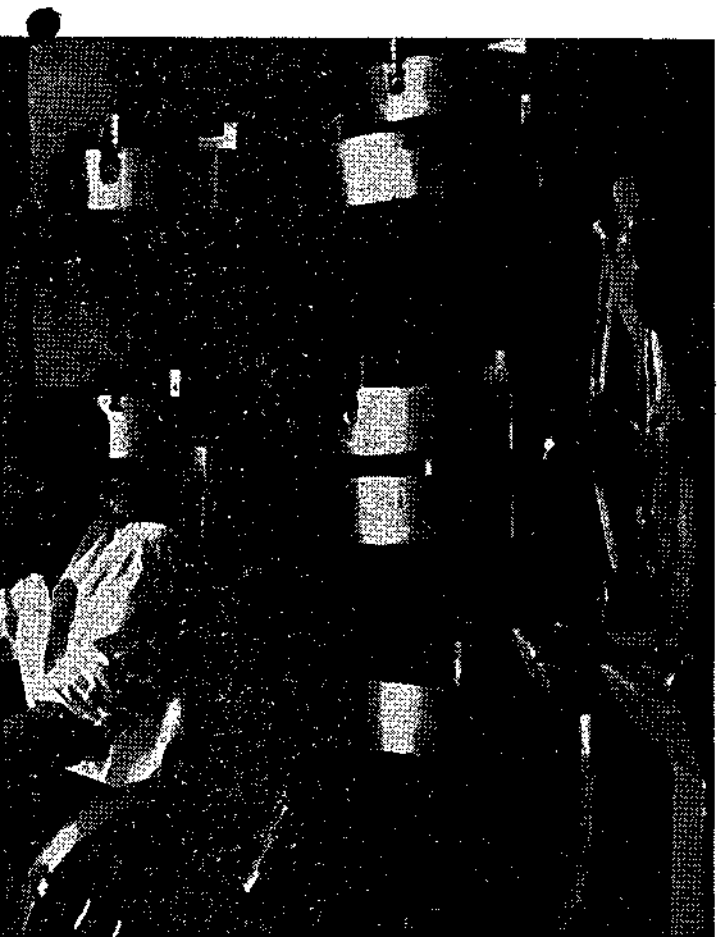


Gulzar Singh and Ajaiv Singh working on a dog chuck in a roadside workshop in Ludhiana. The factory is 80 feet long and 30 feet wide, tucked between the Grand Trunk Road and the rail track. Since their room is too small for their lathe they have made a hole in the wall to make way for the movement of the gearhead.

The position is particularly acute in respect of thinner gauges of sheets, tin plates and some types of wires. Though there has been some improvement in these scarce categories as compared to 1958-59, the supplies have remained practically stationary since 1960-61.

In certain other categories, though allocations are made in full, actual supplies do not materialise even to small percentages. There is a definite feeling that much of these allocations remain largely on paper. This is borne out by the fact that while the allocations of indigenous steel increased from 52,700 tons in 1957-58 to 2,75,000 tons in 1959-60, the despatches declined from 42,823 tons in 1957-58 to 29,408 tons in 1959-60. In 1960-61, the position worsened further and out of an allocation of 3,31,397 tons the despatches trickled to a mere 12,016 tons. It should be the earnest endeavour of all that the allocations of items in the case of which the supply position is relatively easier should be made available promptly to small enterprises, so that their production schedules do not suffer. In this behalf the Sub-Committee on Raw Materials of the Small Scale Industries Board had suggested that in view of the increase in capacity in the production of iron and steel in the country and the improvement that is likely to take place, the Government should consider setting up of a Steel Board to plan production of various categories of steel items and also to arrange the distribution in an expeditious manner. This suggestion, if implemented, could go a long way in solving problems arising out of distribution of steel items as well as fixing priorities for the same on an overall basis.

The case of non-ferrous metals is also pressing. The table in the next column gives a comparative picture of the bulk allocation of the non-ferrous metals for small scale units:



(Metric tons)

Metal	April-Sept. 1959	April-Sept. 1961	October 1961-March 1992.
Copper	6,109	11,800	11,800
Zinc	4,775	12,050	12,053
Aluminium	200	1,316	1,500
Lead	163	250	250

It will be seen that though availability of these metals has increased over the last three years, there has been no perceptible improvement since 1961. It may be reflective of the Government's desire to maintain supplies in spite of foreign exchange difficulties, but at the same time the rising demand has to go unsatisfied. This naturally militates against the growth aspect of industries. In this respect, it would be appropriate to bear in mind that shortages of non-ferrous metals are primarily on account of the difficult foreign exchange situation. The indigenous production of copper, zinc, tin, lead, etc., is grossly inadequate.

Registration of Small Units

I have referred above to the glaring discrepancy in the allocations and actual supplies of steel items. This phenomenon is intriguing all observers. If the actual supplies fall so short of demand, how is it that small industries go on developing at the rate at which apparently they have? There may be cases where small units have not been able to work to full capacity, but he will be a bold man who will say that there have been wholesale closures in this sector, as would certainly have been the case if the actual supplies fell so short of the allocations. Where then is the catch and where are the loopholes? The Raw Materials Sub-Committee of the All-India Small Scale Industries Board during its tour was impressed with the resourcefulness and ingenuity of the genuine small industrialist. He was somehow keeping his factory running. In fact, even some of those who were not getting any authorised allocations were somehow obtaining the necessary raw materials from what they termed the 'open market'. This is a phenomenon which has got to be studied carefully and it is up to the Directors of Industries to see that the genuine manufacturers are not treated at par with those who for one reason or another are not in a position to utilise the raw materials allocated to them. One of the steps that is being taken is to register all small units in the country after a thorough check of their capacity, capital investment and past production. It is essential that this registration is expedited and in the process the grain is separated from the chaff. I know that this is easily said than done; but this has got to be attempted to the best possible ability of the Administration. Another method that has been suggested is that associations of small industrialists on functional basis should be set up and these associations should be charged with disciplining their members and also with the task of assessing their requirements of raw materials, etc., procuring them and then distributing them on a scientifically worked out basis. The Sub-Committee did not find much enthusiasm for such a suggestion. But I still think that this should be tried

and an element of democratic self-discipline should be introduced in this sector, particularly in view of the phenomenon that I have referred to.

Meanwhile, efforts will also have to be directed at improving the distributive mechanism so that everyone has a fair and equitable deal. Moreover, in the case of all imported raw materials including non-ferrous metals and steel items a procedure can and should be evolved which would do away with the sense of disappointment and frustration resulting from the slashing of quotas by the Joint Chief Controllers of Imports after the necessary Essentiality Certificates have been obtained from the Directors of Industries. It should not be difficult for the Government to reveal the foreign exchange ceilings in advance to the J.C.C.Is so that they can take the Directors of Industries of their region in confidence and indicate the quantities of raw materials likely to be made available to them. This would obviate the need for carrying out cuts after the Essentiality Certificate has been granted. Also, as has been recommended by the Import and Export Policy Committee (Mudaliar Committee) the Directors of Industries should follow a uniform policy. The "Chief Controller of Imports should evolve, on the eve of the licensing period, the general criteria for assessing 'essentiality' in consultation with the Directors of Industries".

Perhaps efforts are also called for in another direction, specially in the case of non-ferrous metals. A major part of the allocations of these metals to small industries goes for the manufacture of domestic utensils and relatively little to essential goods such as making of bearings for machinery and machine tools, drawing of copper wire, manufacture of insulated wire, etc. Though it would not be desirable to curtail the manufacture of utensils since these are being absorbed more and more in the countryside, efforts should be made to persuade the manufacturers to take to substitute materials such as aluminium and stainless steel sheets. This will, however, be possible if stainless steel capacity is developed within the country. Somehow, the Government's policy in this respect has been fitful and tardy. The way out lies in licensing larger capacity in the private sector.

Inadequate Coal Supply

The question of substitution is exceedingly important. The demand for non-ferrous metals increases along with the development of steel-based and engineering industries. India is endowed with reserves of coal and iron ore. In the field of non-ferrous metals, however, except aluminium, the resources of ore-zinc, copper, tin, lead, etc., are still to be explored. The known resources are little. Hence, vigorous efforts should be made at substitution of the use of metals like brass by aluminium, stainless steel, etc. This would result in diverting the scarce raw materials from less to more urgent needs. The Mudaliar Committee has also underlined this point and suggested that the "question of substitution of imported materials in its widest connotation" should be studied. In this context, it has to be emphasised that though a beginning may be made in the field of substitution with non-ferrous metals and the like, this question shall have to be examined in its widest perspective. All the possibilities of substitution in as many directions as possible should be explored. In fact, there is need to

(*Continued on Page 19*)

One of the main defences of small industries is that it helps decentralised production. But decentralisation will prove beneficial only when the whole system of production and marketing is infused with social purpose.

The Decentralised Sector

—ITS TRUE SIGNIFICANCE

DR. GYAN CHAND

Former Economic Adviser to the Government of India

DECENTRALISED industries in India, for historical, economic and social reasons, have been given a place of their own in our schemes of planned development and in them are implicit issues of profound significance. Provision, actual and proposed, in the three Plans for their development not only involves large outlay but also the choice of values, techniques and alternatives relating to economic organisation, social structure and administrative and political relations. The fact that Mahatma Gandhi gave to decentralisation a very high place in his economic and social philosophy and made it an integral part of the struggle for national freedom has made it a part of our national legacy and created a strong bias in our thinking in its favour.

This is one of the reasons why the development of village and small industries has, under a Directive of the Constitution, been made an obligation of the community



This cloth printer from Rajasthan is symbolic of the old that remains in our industial structure

and it is not easy in practice to separate the problems of their development from their emotional surcharges. The result is that in the formulation and execution of the plans of decentralised industrialisation there are contradictions which have been resolved neither in theory nor in practice, and an impression is created that we are making a vain attempt to live in two worlds at the same time—the new world of modern scientific industries and agriculture with a fast vanishing world of archaic handicrafts and subsistence farming on the assumption that both can and will co-exist indefinitely in our economy. This is exemplified, from this point of view, by our setting up some of the most modern steel and heavy machinery plants on the one hand and spinning, oil-pressing and making of matches and other productive units with techniques which have and can have no future on the other.

The two, it is held, simply cannot co-exist from the long-term point of view, and our efforts to make them co-exist is a pure waste of very scarce precious resources—of capital the very scarcity of which is taken to be the reason for applying labour to inefficient technique for the production of goods. In a world of automation and atomic energy the old traditional techniques and instruments can have only vestigial significance and have to be replaced without undue delay by the most advanced techniques and machines. Industrialisation, whether rural or urban, has to mean the use of power, the latest scientific knowledge and its application to production; otherwise our people will not only lag far behind in a world of phenomenal advance in productive power but fail miserably in their efforts to raise themselves from the sub-human level at which most of them are living today to a level not of great affluence but of reasonable comfort and cultured life—the more so because our population is increasing very rapidly and we are in the midst of a great crisis of social and material expectations.

Contradiction

There is a fundamental contradiction in Gandhian approach which we have made our own and on which our policy of co-existence of the old and the new technique is based. The contradiction is there, and yet our most crucial difficulty is how to find work and means of living for the multitudes who can be absorbed neither in agriculture nor in modern, large-scale, organised industry. The estimates of 'surplus' labour vary, but there is no doubt that it is enormous and is being added to very rapidly by the rate at which our population is increasing. If our agriculture is rationalised—i.e. if we use advanced farming practice without necessarily using the most advanced machines and our manpower in agriculture is not in excess of what is needed for cultivating available land intensively without extensive mechanisation of agriculture—a vast number, say, 30 to 40 million persons, would be thrown out of it for whom work and living will have to be found in or near the villages in which they reside at present or in mobile units for carrying out works of public utility. Can this be done without landing ourselves in the ridiculous position of trying to find work for these enormous multitudes by methods that will not yield sufficient output even for meagre subsistence, what to speak of a minimum from the human standpoint to be raised by degrees according to the increase in production which, of course, has to be the aim of a rational way of life?

There is no question that work for work's sake cannot be the object of public policy under any condition—much less so in an economy which has set socialism as its goal. Work must mean production—i.e., remuneration which is at least equal to the prevailing rate of wages in other comparable occupations and carries in itself the possibility of raising it (remuneration) to the level of human minimum referred to above as its full potential is realised. That is why the question of technique is all-important. Modes of production under which this object cannot be realised are not suited for any economic development—much more so for planned socialist economic development. The technique has, however, to be rerelated to the available resources, and if advanced technique cannot be adopted owing to want of resources needed for obtaining the required equipment—capital goods—there is, reasonably speaking, no earthly reason why such equipment—tools or production—as is available, should not be utilised until expansion of production and national income make it possible to acquire and press into service tools of over-increasing efficiency and raise and keep on raising the level of production and therefore consumption, provided, in the process, no economic or social obstruction is created to the adoption of the technique of greater and greater efficiency. Increasing output is the essential condition of increasing consumption, and it cannot be realised without continuous improvement in technique, which, as stated later, requires continuous increase of stock—capital formation.

The contradiction arises because outputs of higher and lower techniques are both produced for the market

and the former (goods produced with higher technique) undersell the latter and drive those who produce them out of the market—i.e. into destitution. From the social standpoint there is neither sense in using lower technique of production when the higher techniques—the equipment in which it is embodied—is available, nor in not using lower technique when equipment needed for using higher technique is beyond the means of the community owing to the want of surplus—of capital resources. The essential condition for using both higher and lower techniques at the same time is that in their utilisation the standpoint of the community should be supreme and the choice of technique should be governed by it, and that can only be done when production and distribution of goods is regulated by the community and in its interest and not in that of the individuals and in their interest. The ultimate aim has, of course, to be the use of the highest technique for maximising output and minimising labour cost—i.e. labour input, and, as stated above, the level of technique has to keep on rising.

This is the commonsense view, and the right view, for increasing aggregate production per production unit and per worker. It can be taken exception to on the



A rural artisan family from Manipur

ground that production beyond a limit can only be made in response to insensate multiplication of wants and is desirable from the point of view of neither rational allocation of resources nor a rational way of life. This point is valid for a number of affluent countries in which private waste has assumed great dimensions; but in India though steps have to be taken to reduce and prevent waste, particularly at very high levels, increase of production in aggregate and per worker is our paramount need both for freedom from want and provision of resources for economic growth, and the level of our technique has to be raised in our economy as a whole in all sectors.

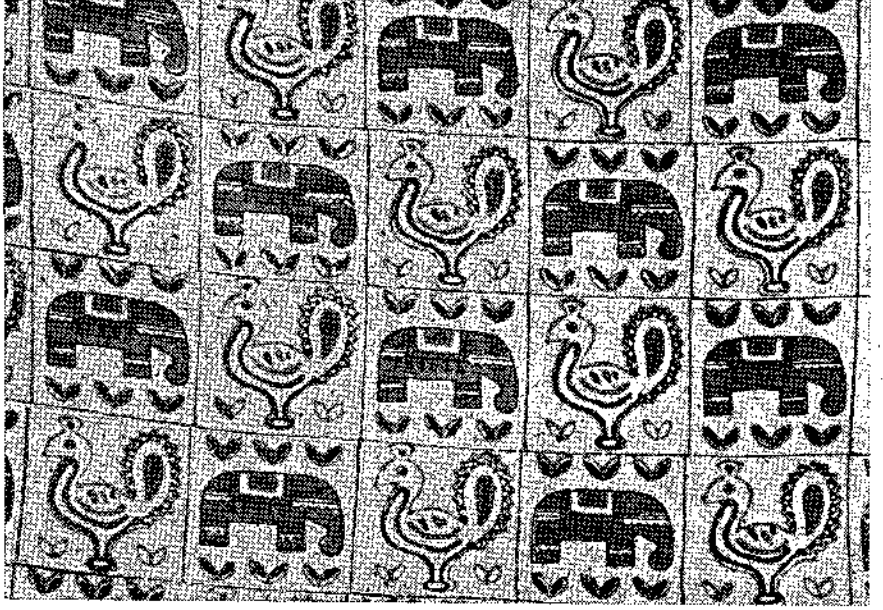
Market Mechanism

This however does not affect the necessity and desirability of using technique which, in combination with our available surplus labour, can contribute to the increase of production and consumption provided the forces of market can be brought under control, competitive underbidding by producers of goods produced within and from outside the country with higher technique can be regulated and production at all levels is subject to the over-all control in the interests of the community as a whole. All this is also subject to the overriding condition that available human resources must not be wasted and, without creating a set bias in favour of lower technique, we have to use such tools of production as are within our means to satisfy the real needs of the people. The crucial point, to repeat, is that in planned production, what is called free play of market forces must not be allowed and their distribution should be subject to public control within the country and in spite of varying costs, an integrated price-structure to serve the interests of the community has to be built up and operated.

This cannot be done in a free price and free enterprise economy, and our disappointing achievements in developing village and small industries are mainly due to our inability to appreciate the need for an integrated price structure and absence of an adequate organisation to operate it. We have through subsidies and rebates tried to temper the working of market forces and provide a shelter for goods produced with lower technique with very limited success. The result is that, in spite of reservations and a partial ban on expansion of factory production, price differentials in favour of the latter have remained and subsidies and rebates have mainly protected inefficiency and not created conditions for rational utilisation of available manpower. In other words, lower and higher techniques can co-exist and be used beneficially when social purpose permeates and dominates the whole economy and private interests are subordinated to public good. This means that substitution of production for use and not free market according to a real effective plan for the existing, almost truly blind, production has to be achieved.

The conclusion is obvious that we can neither utilise our enormous idle manpower nor achieve purposive technical progress in the entire economy without paying high social cost, without a framework of norms suited to a socialist economy. This, it should be clear, is not at all a backward-looking approach. It does not involve creation of an Arcadia and a longing to preserve a fast vanishing world. It is definitely a forward-looking view and an argument for using to the utmost not only the scientific techniques but also social techniques of a high order. There is no question of relying upon obsolete or frozen techniques for development. These have, consciously and according to a planned programme, to be superseded and the development plans have to be formulated and implemented as to assimilate most efficient techniques in the social context of rapid development and transformation from the very basic level.

This assimilation is not possible unless, to repeat, market forces are brought well under control and the whole system of production—and not merely production of village and small industries—embodies social purpose and works according to the tenets, that is, unless socialism becomes the all-embracing force of the entire economy. Our experience of the development of the village and small industries in the last decade and before fully confirms this conclusion. We have to follow with clear understanding and earnestness its logic and implications. Approximate parity of prices has to be one of the prime objects of the co-existence, when socially necessary, of higher and lower technique as a measure of decentralised industrialisation.



A beautiful specimen of printed Khadi

The other social objects of decentralised industrialisation have also a basic importance of their own and need to be duly considered. Among them decentralisation of personal initiative, planned dispersal of industries on a regional basis suited to local and regional resources and needs and developing the economy with a view to providing small units for planning, development and creative social effort on as wide and diversified a basis as possible in order that the social and economic pyramid may rest on its base and not on its apex, are of pre-eminent significance and have to be duly provided for.

Decentralisation and Integration

This can be done only if decentralised industrialisation is made an integral part of decentralised agricultural development and derives its strength and importance from it. This point has been dimly understood but not acted upon in the last decade. Now its importance has emerged more clearly and consequential action is being contemplated, but its far-reaching implications even now are not being appreciated. India has to be a country of small communities, and the latter have to be consciously developed in order to give reality to our economic and political democracy. It has, however, to be understood that decentralisation has to function within the framework of an integrated national economy, and the latter has to make efficient working of the organs of decentralised development of agriculture, industry and commerce one of its most engrossing concerns. Its policy, decisions and their execution have to emanate from this prime object and framed for its full realisation. India needs a strong and effective centre from not only the political but also the economic standpoint and we cannot possibly underrate its importance; and all decentralised institutions have to function with a lively understanding of this all-important need and any trends which undermine integration have to be countered and checked. But the central institutions have more and more to assume the responsibility for servicing the decentralised institutions and contribute as far as they can to their healthy growth.

The balance between decentralisation and integration can be contrived and achieved through building into the economy a working apparatus with internal initiating and counterveiling devices and keeping clearly in view the need for continuous readjustment in the light of experience. The balance, however, has to be balance of purposes and functions and can be realised if decentralisation and integration are conceived as parts of the same social process and are informed by its socialist objective. Decentralisation is needed because broad-based economy is essential for broad-based democracy, and it taps reserves of ability, energy and social interest, which otherwise remain dormant or unutilised.

Small Production

Decentralised production would necessarily mean small production, which, according to the Marxist view (in the words of Lenin), "engenders capitalism and *bourgeosie* daily, hourly, spontaneously and on a mass scale" and "the force of habit, the strength of small production for those small commodity producers by their ordinary imperceptible, elusive activity engenders capitalism all the time." This view has widely influenced the minds of the communists and even socialists: they do not regard the development of village industries in particular and small production in general as welcome features of economic development or rather they are of the opinion that Charkha and all that it stands for are retrogressive in their effect, breed industrial romanticism, and divert attention from the real issues of poverty and exploitation of the masses and therefore blunt the edges of class struggle. The communists in India mostly share their views and are not enthusiastic about decentralised industrialisation; they really fully share the capitalists' aversion to the use of lower technique for development, and what to them are purely utopian plans for developing village industries.

This antipathy is intelligible, for though the Sarvodayists, who are the most ardent advocates of village industries, have a great deal to their credit and their contributions to social thinking are not by any means negligible, they have not challenged the forces which are dominant in our economy and are retarding the realisation of the values on which they have laid so much stress. The real point is not violence versus non-violence, important as it undoubtedly is, but generating of forces which can replace those who yield economic and political power and are upholding the values which are a negation of the values which they (the Gandhians) stand for. A social revolution, even if it is non-violent, has to be real revolution, i.e. it has to change the very basis of the economy and make the people masters of their own well-being and future. Their decentralisation is meant to be a revolution from below, a manifestation of peoples' power, Lok Shakti, but in effect it has not created conditions under which this object can be achieved and a new social equilibrium brought about. The result has been that economic and social effects of the gospel of the

(*Continued on page 43*)

Difficulty in obtaining credit hampers small industries from developing into an effective counterweight to the large-scale sector. Credit institutions must shed some of their conservatism. Small industries, on their part, must actively improve their operational and marketing structure.

SOME ASPECTS OF Finance FOR SMALL INDUSTRY

DR. K. S. KRISHNASWAMY

Chief, Economic Growth & Policy Planning Commission

IN our Five Year Plans the development of small-scale industries has been viewed as a means of achieving a variety of objectives among which decentralisation of economic activity and power is a dominant one. On the face of it, it seems plausible that a flourishing small-scale industries sector can function as an effective counterweight to the sector of large-scale industry. And by definition the growth in the size of the small-scale sector will amount to an increase in the number of manufacturing units and therefore a dispersal of economic activity and power within that sector itself. In other words the objective of reducing economic concentration will have been achieved through the creation of conditions by which competition between users would in fact be operative in a large number of markets.

This, however, is what the development of small-scale industries could lead to under ideal conditions. Whether, in fact, this will happen is a matter more open to question. This is because in all countries seeking to enlarge their industrial potential at a rapid pace, there is both an urge and a necessity to utilise the technology that has been developed in the more advanced countries.

As a rule this implies the adoption of techniques in production which favour the larger units using more capital-intensive operations. Given the compulsion to develop the modern large-scale type of industries certain difficulties arise in visualising the small-scale industries as a counterbalancing instrument. The difficulties arise not just because economies of scale operate in certain industrial activities; they arise even more from the bias they introduce in regard to the nature of small-scale industries that would be established. That is to say, in an economy in which for one reason or another the large-scale industrial structure is being expanded, it seems almost natural for small-scale industries to view themselves as ancillaries to the large-scale sector. In so far as such an arrangement facilitates the exploitation of fairly stable markets by small industrial units it is undoubtedly beneficial to small-scale industries to function as ancillaries. But extreme dependence of this sort would not be conducive to what may probably be called the economic independence of the small producers. This is not to say that every small-scale unit depending for its market on a major industry will not contribute to the achievement of certain other objectives such as industrial dispersal or enlargement of employment opportunities. The point here is that their function as a countervailing element to the power of the large unit will be substantially impaired.

One can look at this from another side and come to almost the same sort of conclusion. As the large-scale industrial sector grows, the financial and distributive agencies in the economy adopt themselves more rigidly to the needs of that sector. The result of this usually is that the relatively small unit finds it difficult to obtain the finances it needs for current as well as capital purposes; and it also experiences considerable difficulties in organising its marketing operations properly. This has been the experience of small industries even in the developed countries, with the possible exception of Japan. Here again it becomes almost inevitable for the small units to accept arrangements which convert them into mere adjuncts to one or the other large-scale industries, as a means of obtaining access to both organised credit institutions and organised markets.

Obviously when the choice for the small-scale industries is between growth as ancillaries to large-scale industries or a transition through unequal competition, there is little sense in opting for the latter—from the point of view of the individual firm as well as of the community. If new markets come into being as a result of the establishment of new industries, it is only proper that small-scale industries should be encouraged to make the best of the situation. If, however, this has to be reconciled with the social objective of preventing the exploitation of small units by the large buyers of their product, it will be necessary to operate on two fronts. The first of these is the financial one; it will be necessary to develop institutions and instruments suitable for meeting the financial requirements of the small-scale producers. Secondly it will be necessary to organise the marketing of the products of small industries in

such a way that they will not all the time be at the mercy of one or two buyers. These are inter-connected. Without proper arrangements for financing, the small units will find themselves unable to choose the time or the price at which they will sell their output. And because this weakness exists on the marketing side, they find it difficult to persuade organised financial institutions to provide them short-term or long-term capital in adequate amounts or at favourable rates. The close relationship between finance and marketing makes it impossible for policies of financial assistance or of marketing assistance to small-scale industries to have an appreciable effect unless they are conceived as parts of an integrated programme.

When one looks at the matter this way, it is apparent that the setting up of special institutions for provision of finances to small-scale industries, or participation by Government agencies in supplying equity or loan capital to them, cannot by itself succeed. It cannot succeed because in whatever form investible resources are made available to the small-scale sector, the continuation and the enlargement of the flow of funds will depend on the borrowing units generating a surplus large enough to repay the debt incurred and yield a sizable return on the equity capital. If their marketing organisation is weak and therefore not conducive to the making of adequate profits, their credit-worthiness is to that extent impaired. In other words, as long as small-scale units find it difficult to generate a substantial portion of the finances required by them for their marketing operations, they will not be, from the point of view of the type of organised credit institutions that exist in the country, "sound" borrowers. And even when special institutions are set up for the purpose of financing the small-scale industries, the benefit accruing from them will tend to be limited. That this is so is evident by the very slow progress achieved in the country by State Financial Corporations or by the Government under the State Aid to Industries Acts, or even by the credit guarantee schemes recently introduced.

It would, however, be wrong to conclude from all this that there is no scope for adjustments and adaptations on the side of financial institutions. Indeed it is arguable that even the existing financial institutions could contribute a great deal more than they are doing, given a greater willingness to undertake reasonable risks. They are at present so security-minded that their loaning policies give more weight to existing assets than to growth possibilities. A change in their attitude towards evaluation of the profit potential of prospective borrowers could be of benefit to a variety of borrowers as well as to the loaning institutions themselves.

However, this is very much of a chicken-and-egg problem. On the side of the borrowers there is need for greater willingness to provide organised credit institutions with the information they need for assessing credit-worthiness. For one reason or another, small-scale units are either unable or unwilling to give a reasonably accurate picture of their financial operations and, further, their lackadaisical approach to such matters as proper maintenance of equipment, standardisation of quality, observance of terms of contracts and so forth exaggerates the problems of evaluating their true potential.

In this combination of conservatism on the one hand and carelessness on the other, even those policies which are basically good fail to yield the results expected of them. And if the situation has to change without detriment to the objective of decentralisation of economic power, it has to be ensured that small-scale operations do not become synonymous with inefficient operations. This implies that in all those areas where there are *prima facie* significant economies of scale we should desist from encouraging the small units. Secondly, where the position is not so clear, it would be necessary to devise adequate machinery for promoting productive efficiency, both by tendering technical assistance and by allowing the operation of competitive forces on the market. And finally, in financing these units the emphasis should be not so much on cheap credit as on adequate credit for both working capital and developmental means. It is in these directions that we may have to move if the small-scale industries sector is to be enabled to contribute significantly to national economic growth.

Village industry programmes in the Second Plan have provided partial relief to about 5 lakh of artisans and under-employed women workers in villages. They have also furnished experience which should be useful in working out future patterns of industrial development in rural areas.

Third Five Year Plan, Page 430



Raw Materials

(*Continued from page 14*)

set up a permanent Institute of Substitution to go into the details of the question and to suggest the likelihood of substituting items being imported from abroad from time to time.

Another difficulty of considerable magnitude relates to the inadequacy of coal and coke. This is a problem which is common to all industries—small or large scale. Supplies to the States are currently running far behind their actual requirements. Wagon allotments are grossly inadequate.

There are many more industries encountering this problem in one form or the other. All of these cannot be encompassed within this broad survey. Viewed in perspective, however, it would not be wrong to conclude that things have improved significantly in the last few years. If difficulties persist even now, these can partly be ascribed to the depth and spread gained by the small sector. Perhaps, with a diversified economy which is gradually taking shape, it may not be altogether wrong to look ahead with a measure of hope and confidence.

Small industries are ideally placed to meet the expanding needs of the rural people —for farm inputs and for consumer goods. They can thus make an important contribution to regional growth.

Regional Development

DR. J. N. THADANI

General Manager of the Rajasthan Vinyl and Chemical Industries and former Director of Industrial Projects, Punjab

IN recent years so much has been said and written about the role of small industries in relation to so many different problems that some people may legitimately complain that a school of thought is growing up which looks upon small industries as a panacea for all ills. There are obvious limitations to the achievements that are possible through small-scale industrial enterprise; and it is necessary that we should remember these, specially in respect of technical competence, capital investment utilisation and progressive efficiency. It is also necessary to keep in mind the fact that a healthy small industries sector presupposes the existence of an organised large industries sector of perhaps much greater magnitude, which would be able to supply the many raw materials and machines required for modern competitive small industries, and also provide a consumer market for the products and services of many small-scale factories. It would be futile to think of small industries growing to significant proportions without the complementary growth of many large-scale industries. Modern industrial technology has grown to such an extent that numerous activities are economic only when a very substantial turnover is feasible. Many industrial processes are so complex and interrelated that they are possible only in terms of large and integrated organisations; and they are vital for self-generating industrial growth. This is so specially in the case of engineering and chemical industries.

Within the circumference of these limitations, however, there is very great scope for a significant role by small-scale enterprise for the proper and balanced growth of the national economy, specially when we keep in view the question of regional balance in economic growth. The sheer pressure of cost factors will compel a certain pattern of location for large-scale and heavy industries, which may be at considerable variance with the existing pattern of population distribution. We cannot afford the cost of large-scale redistribution of the employment-seeking population in order to match the feasible location pattern of large-scale industries; indeed, we could not even contemplate this, for large-scale industries cannot in the foreseeable future absorb more than a small fraction of our employment-seeking population. On the other hand, the country cannot afford to have the rapidly growing population in certain regions dependent permanently on agriculture alone, because the agony of deepening poverty that such a course would bring in its wake would be accompanied by social and political penalties too!

It is in this context that we have to appreciate the significance of the role of small-scale industries. During the Second Five Year Plan, considerable importance was attached to the organised growth of this sector of economic activity, and a pioneer effort was made to disperse industrial activity to the backward and traditionally stagnant areas, through the construction of industrial estates and areas, through the direction of technical assistance and services to places where the growth of small industries was considered economically feasible, and by special attention to their problems in respect of finance, raw materials and markets. For the Third Plan period, very much greater importance is attached to the role of small-scale industries as a spearhead in the strategy for reducing regional disparities in economic standards.

A tremendous effort is afoot throughout the country to develop agricultural and mineral and other basic natural resources. A natural accompaniment of these developments will be an increase in consumer demand for a wide variety of goods and services. On the other hand, with the growth of large-scale undertakings for basic industrialisation, there will be a tremendous growth in the demand for a long list of goods and services of ancillary nature. Both these developments offer special opportunities for the organised growth of small-scale industrial activities on a balanced regional basis. On the one hand, the increasing volume of agricultural production and greater marketable surpluses will create greater demand for commodities required for intensive agriculture and for the processing and preservation of farm produce. Simultaneously there will be a growing demand



Worker at a type caster at the Industrial Estate, Hyderabad.

for consumer goods which the more prosperous farmer would be able to afford and demand. And these needs of our numerous farmers—for farm inputs and for consumer goods—can be effectively met by small-scale industries located near the widely dispersed markets. Among other advantages of such development would be better after-sales service, and a dispersal of technical knowledge about the goods and commodities, which would in turn generate new demands and further growth of industrial activity.

At the other end of the scale, the major industries that are being developed in various parts of the country in accordance with the needs of a sound policy of economic location create demands for ancillary goods and services which again could be met to some extent by small-scale industries, which would create secondary employment in the different regions, and lay the foundations for further economic growth.

An important point to consider in respect of the role of small-scale industries in the development of regions within the country is that there is a wide variety of possibilities to choose from; and within the limitations imposed by shortage of capital resources and poverty of available technology, small beginnings have special advantages associated with them.

But it is also important to remember that there is no logical inevitability about the growth of small-scale industries. They have to be investigated, foreseen, planned and fostered; and in the absence of industrial foresight, planning and perseverance, a fertile field may remain fallow and stagnant, and wide regions of our poor country may continue to starve as they have done for a century. The intentions of the Government, as defined in successive Plans, and the enthusiasm of the people, as witnessed in recent years, promise well for the future, if we can match words with deeds and sustain bright beginnings through the hard relentless struggles that are part of the process of economic growth throughout the world.

Of the total production target of 9300 million yards of cloth set for the last year of the Third Plan period, the decentralised sector, namely, the handloom, powerloom and khadi industries, has been fixed at 3500 million yards, as compared with its output of about 2353 million yards in 1960-61. The major portion of the additional production is expected to come from the handloom industry.

There are 40,000 registered small industrial units in the country and about as many more unregistered. Thousands are coming into being every year. To give them technical knowledge and training in production, management, marketing, designing and quality testing is the function of extension agencies.

Extension Service

AND TRAINING PROGRAMMES

DR S. L. SHARMA

Director, Central Small Industries Organisation

THE mechanised small-scale[1] sector is of recent growth in India. It continues to increase in its size and impact under the influence of various Governmental measures and programmes of assistance but owing to lack of basic statistics little is known about the number of units or aggregate employment. In 1958 the contribution of small factories to the net value added by manufacture was approximately 12 per cent. Using this percentage on the figure of net output[2] for factory establishments for 1958-59 and 1959-60, we get a figure of Rs 100 crore and Rs 112 crore respectively as contribution of the small factories. However, there will be more small industries below the "factory"[3] limit whose contributions are included in the national income estimates under the category of "small enterprises". We are not concerned with them here.

In the 29 industries covered by the Census of Indian Manufacture for 1958, small-scale units comprised 73



The help of foreign instructors is being utilised to teach our future foremen and industrialists. This picture is from the Indo-Japanese Production and Training Centre, Howrah

per cent of the total, showing their heavy preponderance. During the Second Plan period small-scale units developed a diversification of production which matches with the large-scale sector. They today produce varieties of products too many to mention here and their number likewise is too large to count.

Dispersal of Entrepreneurs

The Planning Commission has estimated that about 3 lakh persons found employment in small industries during the Second Plan period and a few surveys carried out by the Central Small Industries Organisation (SCIO) show that the average employment in small factories can be placed at about 17 persons. This would yield a net increase of about 3,500 units each year or a total of 17,500 units over the Second Plan period. This is perhaps a gross under-estimate because in the Punjab alone the number of small-scale units has been placed at 25,000 by the Third Productivity Team sponsored by the National Productivity Council. The total number of units registered to date by the Directors of Industries all over the country runs to approximately 40,000 which on account of the rules of registration[4] might be placed at half or even less of the numbers which might be functioning of their own.

Surveys conducted by the CSIO also show a very high proportion of sole proprietorships and partnerships in this sector—the former ranging as high as 52 per cent and the latter 40 per cent of the total. Thus the fortunes of small industries, by and large, depend on the quality of entrepreneurship and workmen associated with them. The more their quality can be improved the more chances small industry will have to grow.

Apart from the large numbers of entrepreneurs and workers engaged in the small-scale sector an important phenomenon in this field is the increasing emphasis on their dispersal. Under the impact of the rural industrialisation programmes pursued by the Ministry of Community Development and Co-operation or of the intensive development campaigns carried out by the CSIO, smaller industries are spreading to cover newer areas and new sets of people. While this is a welcome feature, it places undue strain on the resources of personnel charged with the responsibility of rendering various types of assistance on behalf of the Central and the State Governments. The problems of small industries are multi-dimensional and it is only through an extensive network of service agencies and personnel that they can be tackled. These problems include:

(1) Technical know-how and training.
(2) Techno-economic information.
(3) Research and product designing.
(4) Quality testing and inspection.
(5) Management, including marketing.

To provide solutions to these problems, the CSIO, over the past seven years, has developed a chain of 16 major Small Industries Service Institutes (SISI), one in each State, and four branch Institutes. To tackle problems of specific industries and areas, 66 Extension Centres have been established. Further, four Production Centres and two Central Training Centres have also been brought into being. To meet the needs of rural artisans and under-developed areas, a fleet of 47 mobile vans, fitted with simple but modern machinery, operates continuously under the supervision of trained technicians propagating the use of modern machinery and methods.

In the field of small-scale industry, the industrial extension service and training programmes have two major objectives. The first is to effect change in the existing knowledge and methods of manufacturing either by slow development or steady replacement of the inferior with what might be termed as more modern. Extension service consists of heralding a technological and economic change in keeping with the broad socio-economic objectives of the country. It is to provide a new orientation, a new meaning and the necessary leadership to proprietors and workers of small factories to bring about the desired change.

The second task of the extension service, one no less important, consists of its ability to diagnose or identify the problems of small industry and provide to them through various communication techniques the necessary wherewithals by which they can improve themselves. It is an exciting experiment for the extension personnel to live with the problem, get emotionally involved in the environment and act as an instrument of desired change. This presupposes that the extension staff is not only expert in technological, management and marketing fields but is also constituted of technicians in "communication".

Improving Production Methods

The fundamental problem for those engaged in extension work is to improvise methods by which an "improvement" can be communicated to the small entrepreneur and his workers. This might be done many a time through discussions across the table and in a language understandable by the 'client', through

demonstration, through literature and classroom lectures or by shop-floor training. All these methods are being used currently by the CSIO and its field agencies, but the effectiveness of a method would depend on the correct diagnosis of the problem. While principles of costing are taught to the entrepreneurs in the classroom, the actual cost applicable to a specific plant operation is designed for him in the workshop. Advice on tooling, designing, quality testing, methods of welding, electroplating, heat treatment and the like is tendered both in the small factories and the workshops of the Institutes according to the facilities which might exist in them. The continuous emphasis is on improving the techniques of production and making better technicians so that the impact and weight of small-scale industry in the economy may become larger.

An important element in the philosophy of extension service is that it should act as a contact agency by going to the door of the 'client' rather than waiting for him to come to it. This way it is easier to disseminate knowledge to many, inspire greater confidence and pick up problems of interest (technical and human) which need fuller diagnosis to effect improvement. That this operational technique is very effective cannot be doubted, but the results would necessarily be limited by the size of the staff, its mobility, competence in terms of professional knowledge and financial resources available to them. While the size of the staff is a question of finance, there is no doubt that its professional competence would depend on its constant endeavour to achieve always better and higher results. This is assisted, as is the case with the CSIO, by launching special training programmes for the extension service personnel and sending a few abroad for obtaining higher degrees of skills. In fact to enable larger numbers of such persons to get maximum advantage of training, a Central Industrial Extension Training Institute has been started at Hyderabad. Under various aid programmes small entrepreneurs are also sent to foreign countries to gain experience and knowledge in their respective fields of interest. This is further supplemented by inviting foreign consultants to work with the SISIs in India and giving to small industry the benefit of their knowledge and technical competence.

Advanced Training for Workmen

Since a higher form of technology requires sometimes the use of more expensive and complicated machinery and equipment, the National Small Industries Corporation, a Government undertaking, has been specially established to supply on hire-purchase basis such equipment. Where a process requires use of expensive and heavy machinery which a small unit cannot afford, arrangements have been made to establish common facility workshops where several of the difficult intermediate processes are finished for the benefit of small industrialists. As there has to be a continuous improvement in the production methods, if industry has to survive, opportunities have been created for giving advanced training to workmen of the small factories. Three prototype production centres have so far been established in collaboration with the Governments of West Germany and Japan and the T.C.M. (now U.S. Agency for International Development) which are expected to bring to small industry the benefit of more specialised training which has been difficult to obtain within the country thus far. To help rural artisans and others, various schemes of financial assistance and distribution of improved tools have been worked out; and owing to these, the small industries continuously face a hunger for technical personnel, equipment and raw material. Small industry extension service, therefore, has yielded very rich dividends over a short span of about seven years. Subsequent Plans can be expected to lay greater emphasis on this sector because of the results achieved so far and the promises that it holds for the future. Much will depend on the experiences that the CSIO has gained so far and the lessons that it has drawn therefrom.

1. In this article small scale refers to units having a fixed investment of less than Rs 5 lakh.

2. Estimates of net output are :
   1958-59 = Rs 831 crore
   1959-60 = Rs 936 crore

3. Unit working with 10 or more workers with power or 20 or more without power.

4. Registration started about a year and a half ago and applied to only such units as come to Directors of Industries for one type of assistance or the other.

ELECTRIC POWER

The very breath of Industry

We manufacture Heavy Electrical Equipment for generation, transmission, distribution and utilisation of power.

Range of manufacture :

* Hydraulic & Steam Turbines
* Alternators & Diesel generators.
* Power Transformers upto 400 MVA at 220 Vk.
* Switchgear upto 220 kV & 7500 MVA.
* Electric Traction equipment.
* Capacitors and synchronous condensers.
* Welding Transformers.
* Industrial motors & control-gears upto 5500 H.P.

HEAVY ELECTRICALS (INDIA) LIMITED, BHOPAL

Contributing its mite for India's prosperity.

For decentralisation of political power to have substance, economic forces must also be decentralised. Growth of rural industries will bring this about. All over the country rural artisans are being trained and the formation of industrial co-operatives is being promoted.

Rural Industries

P. M. MATHAI

Director (Industries), Ministry of Community Development, Panchayati Raj and Co-operation

WHEN the Community Projects were started in 1952, the main industries programme was the establishment of production-cum-training centres to improve the skill of existing artisans. The same approach was adopted in regard to both agriculture and rural industry, namely, to make the farmer a better farmer and the artisan a better artisan. The industries programme, however, proved difficult. The production-cum-training centres did not yield the results expected of them. The annual conference of the State Development Commissioners held in 1955 sponsored a scheme for starting 26 industrial pilot projects in the country to gain experience for guiding future development. The annual conference on Community Development held in 1958 further recommended a minimum programme for every Community Development block. During the review of the achievements made by the subsequent annual conferences, it was realised that the minimum programme could not be implemented in full for want of adequate finances, technical personnel and difficulties in marketing. Hence it could be said that the impact of the programme on the rural economy has not been very appreciable.

The importance of village and small-scale industries in the economy of the country and the need to promote them as part of the general development programmes found recognition even in the First Plan. An attempt was made on an all-India basis to deal with the difficulties and problems facing these industries. Among the measures taken for promoting them were organisational and technical improvements, provision of financial facilities, arrangements for research and training, establishment of new centres of production and sales depots, pursuit of state policies aimed at development of this sector of industries in competition with the large industries and introduction of improved tools and equipment. These measures helped the village and small-scale industries sector significantly. Particular mention may be made of the handloom industries and the considerable progress achieved in small-scale industries which combine in them the advantages of modern technology and the use of power with those of increased employment and greater opportunity for small entrepreneurs as well as for co-operatives.

Extension Service

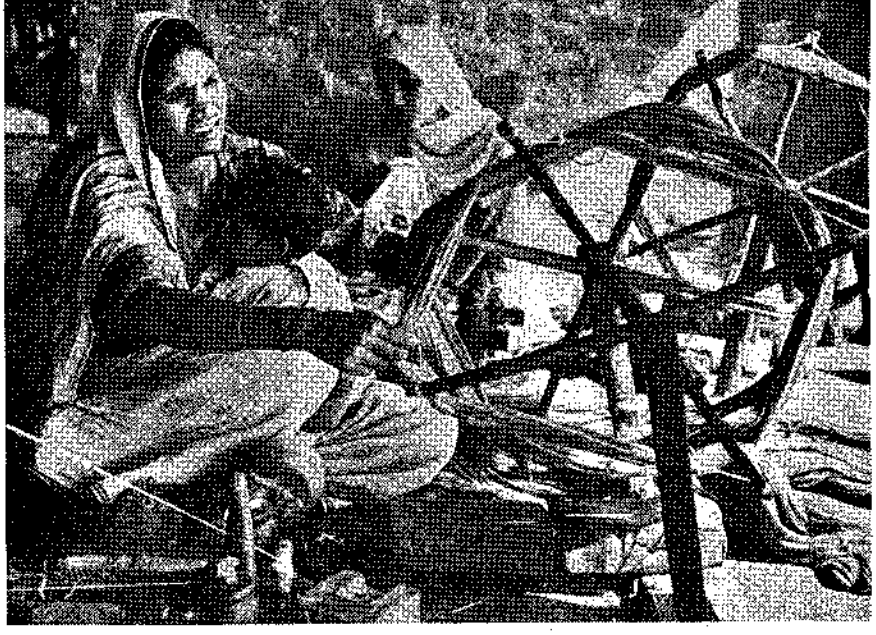
With the establishment of five all-India Boards and the Khadi and Village Industries Commission, efforts have been intensified to develop those groups of industries which are the responsibility of these organisations. An extension service has also been developed for the small-scale industries sector. Small Industries Service Institutes have been established in every state, besides about 60 Extension Centres. In the States, the Departments of Industries have been considerably strengthened and much better equipped. In the rural areas, out of 3,500 Community Development blocks existing, about 2,500 blocks are now provided with trained Industries Extension Officers. A number of village industries, Khadi, sericulture, coir, and to an appreciable extent, handloom, have been developed in rural areas. But, the small-scale industries have so far been by and large located in or near the cities and large towns.

The overall achievements of village and small-scale industries in the country during the last one decade have, as already noted, been appreciable. For example, the production of handloom cloth has increased from about 740 million yards in 1950-51 to about 1,900 million yards in 1960-61, and that of Khadi from 7 million yards in 1950-51 to 48 million yards in 1960-61. At the end of First Plan, there were 13,272 industrial co-operatives. By the end of June 1960, this number had increased to 29,222.

Industrial Pilot Projects

One of the important schemes undertaken in the C.D. blocks has been the establishment of 26 industrial pilot projects. A study team, which went into the work of the projects, made a number of recommendations which proved useful in formulating the Third Plan proposals for rural industrialisation. One of the important recommendations of the study team was that an integrated approach to development was essential for the success of rural industrialisation. The experiences of the intensive area scheme of the Khadi and Village Industries Commission also led to the same conclusion. The Gram Ekai scheme, sponsored in Third Plan, is an integrated and co-ordinated approach to the development of rural industries and agriculture area by area.

Based on the recommendations of the study team, the Srinagar Conference on Community Development, held in 1960, considered the entire programme of rural industrialisation and recommended a programme to be undertaken in C.D. blocks or in other rural areas. This programme, now under implementation, may be broadly divided into (a) programmes for every block, and (b) programmes for a group of blocks. The programmes for every block are: supply of credit for artisans and entrepreneurs, training to improve the skill of existing artisans, providing common worksheds for artisans, supply of improved tools and equipment on subsidised rates, conducting demonstration in improved techniques and methods of production and organising artisans in industrial co-operative societies. Extension activities like refresher training, seminars, study tours and exhibitions are also organised for every block. In order to ensure more lasting stability and strength, it was decided to give rural industries strong technical support by establishing common facilities and services centres, and artisan training centres for a group of blocks, in addition to the most important scheme of establishing rural industrial estates.



A nursing mother at the reeling wheel

Rural Industrial Estates

The programmes to be undertaken in every block were drawn up mainly with village artisans as the main focus of rural industrialisation. The objective is to make him a better artisan today and an entrepreneur tomorrow. The village artisan is given training to improve his skill, assistance in the way of common facility services in such operations as he needs, and loans and grants to become a member of the industrial co-operative society and to purchase improved tools and equipment. He could also get loan for working capital to buy raw materials and to run the business.

The rural industrial estates will be used as an instrument for decentralising and diversifying industries in rural areas. There will be one such estate for a group of C.D. blocks. To attract small entrepreneurs in rural areas the Government have to extend incentives and to create necessary facilities by providing worksheds, electricity, water supply, preferential allotment of scarce raw materials and a favourable store-purchase policy. Manufacture of farm implements and other hardware articles, utensils, articles required for schools and offices and other consumer items may be started in rural industrial estates. Likewise, service workshops for agricultural machinery and processing industries based on agricultural products can be located there. Wherever possible these rural industrial estates can undertake ancillary and feeder industries to meet the requirements of large industries.

Over a large number of years the rural industrial estates are expected to grow into agro-industrial estates which will be dotted all over the country. Twenty rural industrial estates and ten small industrial estates were initiated in Community Development blocks and industrial pilot projects during Second Plan. It is visualised that at least one rural estate will be established in every district during Third Plan period.

The cluster-type training centres for village artisans visualised for a group of C.D. blocks perform a very important task in the promotion of rural industrialisation. It is hoped that the training centres should be the focal point in the district from where technical know-how could be diffused, and seminars, exhibitions etc. could be arranged. Besides giving basic training the centres can arrange for short intensive training for progressive artisans. The peripatetic training parties functioning in the blocks could also work under the technical supervision of these centres. The centres could also undertake other useful functions in designing improved tools for traditional industries, distributing such tools to the artisans, giving necessary common facilities services and also imparting technical counsel and marketing intelligence.

Training Centres for Districts

The training centres will also give organisational and technical support to the Industries Extension Officers in the blocks. About 100 cluster-type centres have been established in the country, and by the end of the Third Plan, there would be one such training centre for every district. In addition there are about 500 common facilities centres and rural workshops functioning in the blocks and their number may be doubled by the end of Third Plan.

In the Third Plan, it is expected that more rapid progress will be made in the field of village and small-scale industries and greater attention given to establishing industries in small towns and rural areas. A total provision of Rs 264 crore has been made in the public sector for the programme of village and small-scale industries as against Rs 176 crore spent in the Second Plan. Besides, it is estimated about Rs 275 crore will

be invested through the private sector. A further sum of about Rs. 20 crore is available under the Community Development block budget for rural industries programme. Institutional finance is available in increasing volume from the State Bank of India and commercial and co-operative banks for small-scale industries. Most of the schemes for Khadi, silk, coir and handloom industries are by and large located in rural areas. It is felt that a substantial portion of the funds earmarked for small-scale industries under the Third Plan should be spent for the benefit of the people in rural areas. Efforts are being made to see that a minimum expenditure of about 75 per cent of the allocation for small-scale industries (including the funds for industrial estates) is incurred in the rural and semi-urban areas out of which two-thirds are spent in villages with a population of less than 5,000.

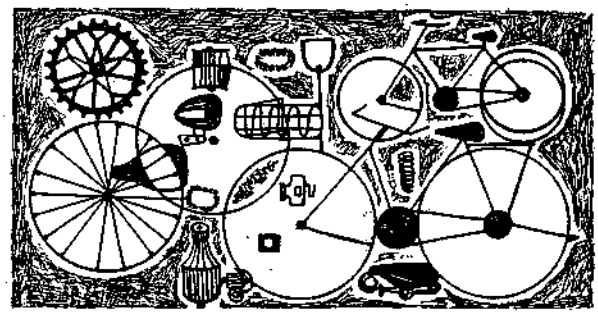
Out of five and a half lakh villages in the country, it is expected that only 40,000 villages will be electrified by the end of the Third Plan. While every effort should be made further to extend rural electrification, emphasis should also be laid on building up the programme of Khadi and village industries in such villages as are without electricity. Both these should be deemed an integral part of the Community Development programme.

With democratic decentralisation and the introduction of Panchayati Raj, it is expected that the people's institutions will take over more and more responsibilities for the establishment of rural industries. The necessary powers are being delegated to them. Decentralisation of economic production will give substance to the decentralisation of political power. The State Industries Departments and other technical agencies will make their services available to the people's organisations for the development of village and small-scale industries. The accumulated results of the financial investments and efforts made by the people, the Government, the various self-governing organisations and industrial co-operatives will have a perceptible effect on the future of the rural economy of the country.

INDUSTRIAL CO-OPERATIVES

The number of industrial co-operative societies increased from 7,105 in 1951 to about 15,300 in 1956. The handloom industry accounted for about 8,000 co-operative societies; the next largest group was of palm-gur societies, followed by tanners' and leather workers' societies, societies of small scale industries including light engineering goods, and sericulture. By 1959-60, the total number of industrial co-operatives increased to about 29,000, including about 11,200 handloom weavers' societies.

—Third Five Year Plan, Page 429



An argument advanced by large concerns for not subcontracting production is that small concerns are not only unreliable in business dealings but that their products are below standard. It is important to remedy the situation.

The Small and the Large

MADHAV V. RAO

St. Stephen's College, Delhi

SMALL-SCALE enterprise—understood here as referring to undertakings that are organised on the basis of personal proprietorship—may be observed to make its appearance in a large variety of activities that range from the production of 'traditional' goods to the manufacture of 'modern' articles of consumption. In some of these spheres of activity, small-scale undertakings may represent the normal form of business organisation. This is likely to be the case wherever imperfections exist that tend to break up the economic continuity of the market. There are, however, a large number of commodities whose production is not subject to such constraints and in the manufacture of which small-scale undertakings are most likely to come into conflict with large-scale undertakings. Even here, however, there is room for small establishments, in the case of commodities which involve the assembly of sub-assemblies and components, and which are consequently amenable to fragmented production. Situations such as these, involving "bag

of products" commodities, furnish the so-called ancillary argument for small-scale undertakings.

Economic policy relating to the development of small-scale enterprise has, therefore, to take into account two distinct though related problems. On the one hand it would have to concern itself with the ways and means of fostering such forms of business activity, while on the other hand it would have to explore the possibilities of minimising the area of conflict between small units and large units within the same industry. Small-scale enterprises may, therefore, be regarded as constituting a definite and additional sector of manufacturing activity in some cases and a possible technological alternative in others. In the case of those activities that are naturally predisposed to organisation on a small scale, the promotion of small-scale undertakings would merely represent an act of midwifery, and the measures that are taken would constitute an attempt at uncovering the many investment opportunities that are latent and which are capable of being exploited by relatively small investments and local skills. While the preference for small undertakings in other cases has to be based upon an assessment of the relative magnitudes of the relevant economic coefficients; a great many marginal situations may be encountered where the output of small scale enterprises may constitute a low quality subsititute for items that are otherwise excluded from a planned investment programme on grounds of resource availabilities and priorities.

Feeders to Industry

The purpose of this article, however, is to examine a particular aspect of small enterprise development, viz. the problem of shaping them into units that are capable of acting as ancillaries or feeders to the more organised and modern sector of manufacturing industry. Such a policy is to be desired on many grounds. In the first place the experience of other economies would seem to suggest that such differentiation of activities is conducive to an increase in industrial efficiency and a lowering of costs. Further, the dispersion of production over a large number of relatively small manufacturing establishments—wherever it is technically and economically feasible—is likely to give flexibility to the industrial structure. This is so because large vertically integrated concerns have a tendency to go in for specialised equipment where the equipment of small-scale subcontracting factors is generally more malleable, thus enabling them to make change-overs from one line of production to another with relatively little difficulty. The advantages of not locking up capital in too specific and rigid a form in a capital-hungry economy have therefore to be balanced against the superior productivity of integrated though specific technology. The choice would obviously vary from industry to industry. Nonetheless it is useful to remember that the great structural flexibility of the Japanese economy during the 1931 depression as well as the immediate post-war period is to be attributed in no small measure to the highly dispersed nature of her manufacturing activity. Quite apart from all this, however, if one is interested in developing the sector of small-scale enterprises as a long-term proposition, then the promotion of ancillaries is crucial, because such units constitute the medium through which the higher level of skills and techniques that characterises large enterprises is transmitted to the sector of small-scale industrial undertakings. The report of the Japanese delegation on small industry, in which they draw attention to the tremendous technological gap between small undertakings and large undertakings in this country, would appear to reinforce this point.

But the fact that such differentiation is both technically feasible and economically desirable does not, however, necessarily imply that it would occur. The differentiation of the industrial structure implies the division of labour between different industries, while differentiation in the structure of any single industry implies the development of division of labour as between different firms. Under normal conditions any individual concern would be prepared to obtain its requirements of components and semi-finished goods from other concerns, only if it is constrained into doing so or if it finds it advantageous. If we consider the fact that in all other economies the development of subcontracting has taken place not because of the adoption of any specific governmental measures, but because of the mutual advantages that it confers on both parties, it appears somewhat odd that the tendency of large manufacturing concerns in this country is towards greater self-sufficiency.

In examining this peculiarity it is essential to understand the nature of ancillary units. Ancillaries or feeders are generally observed to occupy an intermediate stage in the industrial structure. In other words such concerns are more or less removed from the final consumer and their output is generally fed into other manufacturing concerns. The output of ancillaries therefore consists of intermediate goods or inputs. This would seem to suggest that the establishment of ancillary units is something that succeeds the establishment of assembling units. The implication of this simple fact will become obvious as we proceed.

Complete commodity concerns (or assembling units) may find it convenient to rely on outside sources, particularly if such outside sources happen to be well developed technically and organisationally. This may be so because such outside sources happen to have already developed special processes and techniques that make for better quality and/or lower costs. Alternatively such concerns may be operating at a scale that is large, relative to the complete commodity manufacturer's own requirements, and therefore may be able to provide such items more cheaply. But such dependence on outside concerns also embraces the import of parts and components. If we neglect the phenomenon of imports for a moment it would appear that for a firm to be able to decide as to what items it should manufacture itself and what it should obtain from other concerns, establishments producing such items should already exist in the economy. The freedom to exercise such choice is thus conditional upon the prior existence of parts manufacturers. To the extent to which this is not so, the complete commodity manufacturer is constrained into setting up his own plant for as many items as are feasible and supplement this through imports of those items that are not manufactured. It is of course entirely possible that, with the passage of time, separate establishments would emerge that concentrate on producing the items that were hitherto being imported. This process, however, is being vitiated by the difficult position in which the Indian economy is placed as regards foreign exchange. Partly owing to the preference for imports of capital

MADE IN INDIA

A SIMPLE PHRASE...
...VITALLY IMPORTANT!

The Third Five Year Plan
Bird-Heilgers' part in it....

"...special emphasis is being placed on... steel and machine-building and the manufacture of producer goods". The Third Plan very rightly stresses the need for rapid industrial development. Every new project for domestic production creates employment, saves foreign exchange, adds to the national striving for economic independence. The expansion of indigenous manufacture is critically important, and Bird-Heilgers is deeply committed to this decisive aspect of the Plan.

Steel for a solid industrial base

Steel is the very life-blood of an economy. Industries, utilities, homes, all depend on steel. Steady steel production depends, in turn, on the uninterrupted supply of minerals to the nation's blast furnaces. Bird-Heilgers supplies these minerals. Between 1957 and 1961, the group's output of minerals—coal, dolomite, iron and manganese ore and limestone—shot up almost 100% to well over 6,000,000 tons. The group will continue to help meet demand...to feed the blast furnaces with the minerals they must have.

"Made in India"—by Bird-Heilgers

A vast range of products, hitherto imported, are now manufactured in India by Bird-Heilgers. The group produces jute goods, paper and board, water treatment equipment, air compressors and springs, castings and fabricated steel. The refractory manufacturing plant is the largest single unit in the East. A factory for the production of coal washeries was the first in India.

The group's engineering units are extremely flexible. They contribute, with equal facility, to projects as far removed as blast furnaces and ceramic plants. Planned diversification finds the group engaged in shipping, insurance, exporting and importing. The agency department handles everything from heavy capital equipment to light consumer goods.

Towards a self-generating economy

A phrase on everyone's lips. A phrase that finds concrete expression in the urgent activity of an economy on the move. Bird-Heilgers reflects the nation's striving. The group is alive to the problems of a growing economy. It deploys the full potential of a century's resources, technical knowledge and executive skill to broaden its activities...increase domestic production...join in the national drive to economic independence.



BIRD & CO., (PRIVATE) LTD., F. W. HEILGERS & CO., (PRIVATE) LTD.,
Chartered Bank Buildings, Calcutta-1

BHDJC

equipment as against maintenance imports and partly because of the uncertainty that shrouds the renewal of licences for such imports, complete commodity concerns find it necessary to acquire plant that would ensure self-sufficiency as far as possible. The sheltered nature of the Indian market, coupled with a high level of domestic demand and a policy of controlled licensing of capacity, reduces the risks of such investment to large concerns. Furthermore, because of the comparative stability of the domestic market, the incentive to subcontract production, so as to disperse the risks of fluctuations, is also absent. What was and still is an important contributory factor to the development of subcontracting in the Japanese economy (since a good proportion of Japanese industrial output is directed to the export market which is generally far more unstable) thus appears to be missing in the Indian economy.

The discussion, however, has proceeded on the assumption that the establishment of ancillaries always succeeds the establishment of assembling units. This is not necessarily true, because parts manufacturers are sometimes capable of emerging in advance of complete commodity concerns, particularly in the case of those items that tend to wear out quickly in relation to the life of the "bag of products" commodity itself. It would then appear that the concerns catering for the "spare parts" market constitute the most important seed-bed for the location and nurturing of potential ancillary units.

Quite apart from this, however, in the case of components that involve relatively simple and basic manufacturing methods, the mere existence of small concerns employing such methods and processes—even though they may be engaged in producing items that are entirely unrelated to the desired products—constitutes a potential that can be drawn upon by complete commodity concerns that desire to subcontract production. This is found to be particularly so in the case of items that use malleable equipment, equipment that is capable of being put to a wide variety of uses and which is therefore not significantly specific. Basic machine tools, presses etc. provide good examples of this type of situation. Under such circumstances the lead, in developing ancillaries, would have to be taken by the assembling units.

It is of course entirely possible that even though parts manufacturers already exist, an assembling unit might be constrained from regarding them as possible sources of supply because of considerations relating to quality. Such shortcomings on the part of existing parts manufacturers may be due to the fact that they are unduly small in size, or because the equipment that they possess is not suitable, or because they are denied access to certain overhead facilities. As a matter of fact the major argument that is advanced by large concerns for not subcontracting production is that small concerns are not only unreliable as regard business arrangements but that the quality of their output is also substandard.

This is partly but not wholly true. In a large number of cases the non-development of subcontracting may be traced to the absence of any pressures on large undertakings to do so. In some instances, for example the bicycle industry, the slow rate of growth of demand (as distinct from the stability of demand) is an incentive to achieving self-sufficiency because the margin of profits is thereby increased. It would however be foolish to deny that existing small concerns are inadequately equipped to meet the more rigorous demands of large concerns. Such inadequacy can be traced in most concerns to their being unduly small. Quite often it is also due to their lack of access to certain facilities.

As far as the question of quality is concerned, for instance, the problem is capable of assuming different forms in different cases. In many instances the quality of the product is essentially a function of the quality of the raw material and in such cases the achievement of quality production is merely a question of making the proper material available to small units. This is largely so in the case of bicycle components. In other instances quality implies dimensional accuracy and here the need for better equipment is greater, for example sewing machine and automobile parts. In yet other cases, quality depends upon the possession of technical know-how as is to be observed in foundry, tempering and electroplating processes. In most cases therefore the capital intensity (and therefore size as measured by investment outlay) of units acting as subcontractors would have to be greater than that of units catering for the spare-parts market. It also appears that a somewhat larger scale of operations on the part of ancillary units is to be desired because business reliability is quite often a function of the scale of marketing and organisation. This does not, however, preclude the desirability of exploring the possibilities of placing constraints on the investment policy of large undertakings as also the possibility of modifying licensing policy in a manner calculated to achieve differentiation. But unless such measures are supplemented by more positive steps such as the intelligent and selective provision of finance, technical know-how, raw materials etc. to the subcontracting firms, the remedy is likely to be worse than the disease.

IMPROVED TOOLS

In all village and small industry programmes, emphasis is being laid on the introduction of improved tools and equipment. For small-scale industries, a scheme for supply of machines on hire-purchase terms was introduced during the Second Plan period and it is proposed to expand it in the Third Plan so as to supply machines to a larger number of small industrialists and co-operatives.

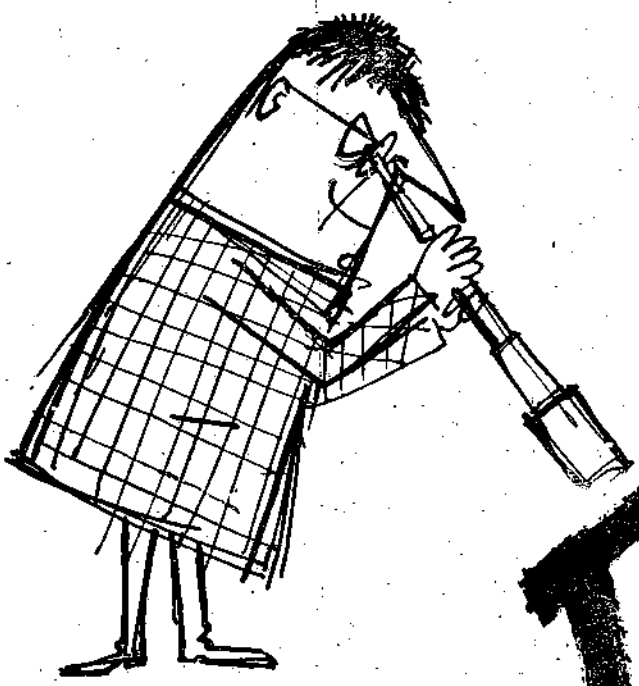
—Third Five Year Plan, Page 432

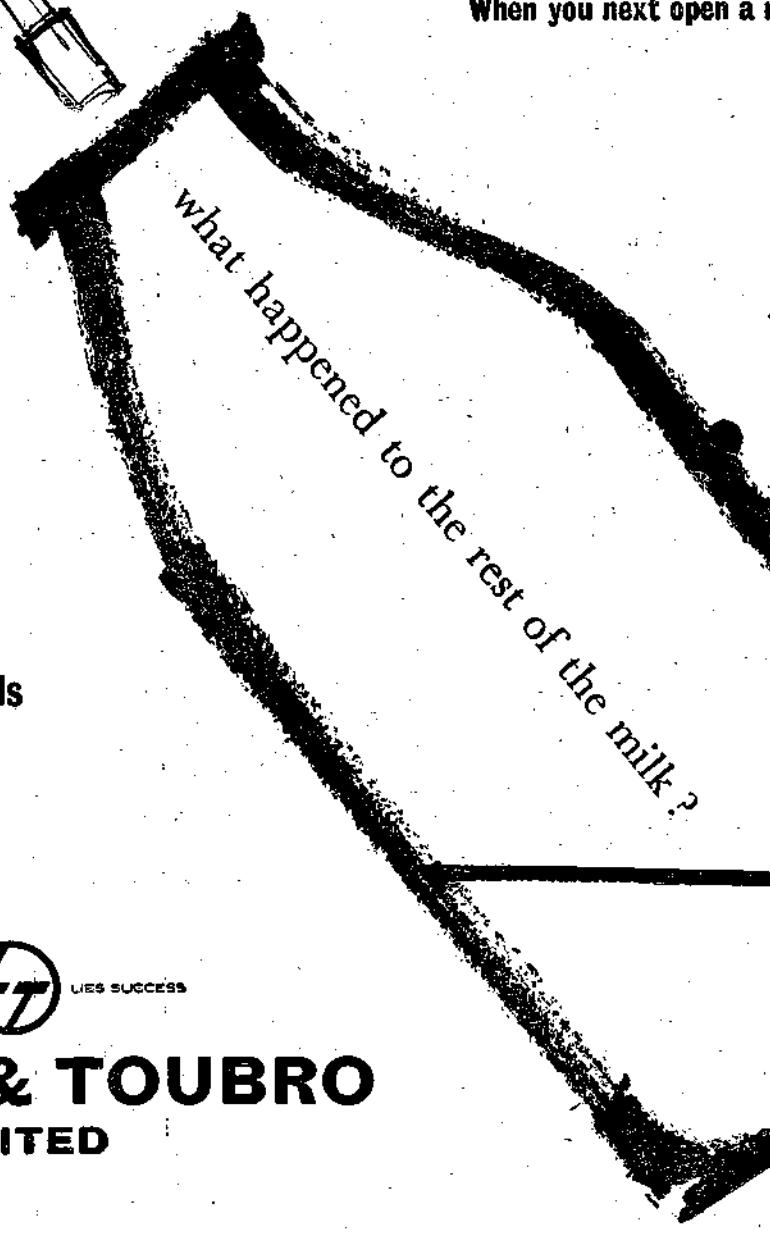


what happened

It just isn't there! About 5 oz. of
people! That includes milk produ
Not enough? Precisely. More mil
equipment: milk cans, can-washe
And that is the range of Larsen &
to complete dairies worth several

When you next open a





L & T contributes also
to the development
of these vital industries :

- **oil**
- **food & agriculture**
- **steel**
- **chemicals & pharmaceuticals**
- **paper**
- **minerals**
- **electricity**
- **transport**
- **construction**

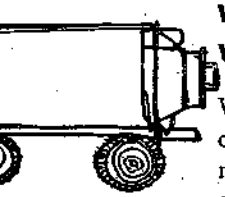
IN SERVICE L&T LIES SUCCESS

LARSEN & TOUBRO
LIMITED

to the rest of the milk?

k is what *you* get per day—if all the milk India produces is equally shared by her too! And in the next 5 years per capita consumption is expected to go up by just ·2 oz! as to be produced. Distribution has to be widened. That means more dairies and asteurising plants, storage tanks, bottle-washers and fillers...even foil caps for bottles! ubro products for the dairy industry alone—from a foil cap costing a few naye Paise ns of rupees!

bottle, consider—



who puts the wheels on milk cans?

We do—but not exactly on cans! Large dairies need large quantities of milk. And it has to be collected in time. A special job for road tankers—virtually tanks on wheels like the ones made by L & T.



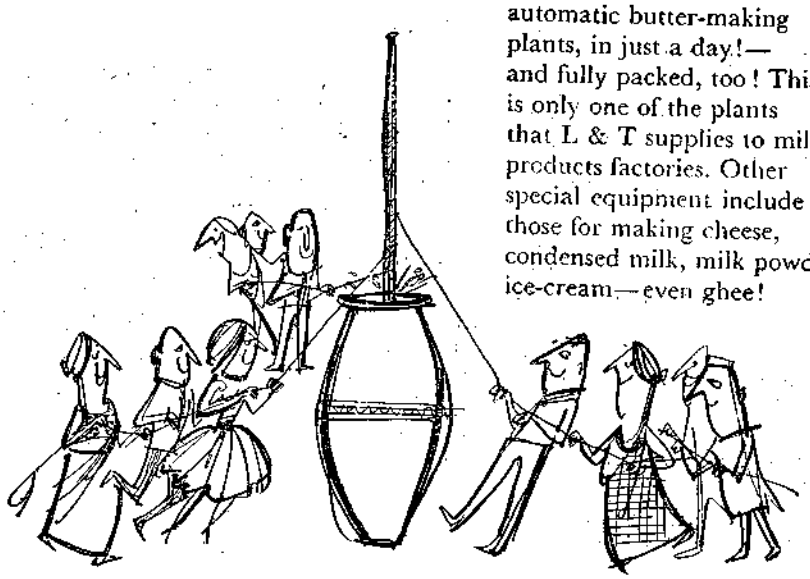


here, food preservation is no problem!

...but in the tropics it's a different story. Foodstuffs deteriorate fast. Take milk, for instance. *Tons* of it! That is what a large dairy handles—*every* day! Milk is collected from distant centres, weighed, tested, clarified, pasteurised and chilled. It's then stored in insulated tanks or cold stores that keep the milk cool, safe from bacteria. Next comes filling and capping of lakhs of bottles—bottles that have already been washed, sterilised and dried. A complicated process? Certainly. Something that cannot be done well enough – fast enough—without special plant and the know-how—exactly what L & T provides.

how many hours to churn 11,500 litres of cream?

If by hand—well, it is impossible! But with automatic butter-making plants, in just a day!—and fully packed, too! This is only one of the plants that L & T supplies to milk-products factories. Other special equipment include those for making cheese, condensed milk, milk powder, ice-cream—even ghee!



At a conference of representatives of State Governments held in the Planning Commission on July 21 and 22, it was decided that 46 projects should be started for intensive development of small industries in rural areas.

An allocation of Rs 20 lakh per project is being made to serve as a nucleus to cover the four-year period 1962-1966, over and above the present allocations under the Third Plan.

The proposed projects have been allotted to the various States and Union Territories in the following manner:

Andhra Pradesh 3, Assam 2, Bihar 4, Gujarat 2, Jammu & Kashmir 2, Kerala 2, Madhya Pradesh 3, Madras 3, Maharashtra 4, Mysore 2, Nagaland 1, Orissa 2, Punjab 2, Rajasthan 2, Uttar Pradesh 5, and West Bengal 3,

Himachal Pradesh 1, Manipur 1, Tripura 1, Goa 1.

The exact location of the projects will be decided by the States concerned.

A summary of a Paper prepared by the Rural Industries Planning Committee for the consideration of the conference is published here.

Industrialising the Villages

46 Projects Being Taken up

In the *Third Five Year Plan*, the problem of finding work for the present labour force in the country and the additions expected during the next five years (and over the next fifteen) has been analysed at some length. In the context of the Third Plan itself, in addition to various Plan programmes, a rural works programme calculated in due course to provide work for about 100 days a year to 2.5 million persons has been initiated. Two hundred such projects were sanctioned for being taken up during the slack season this year.

Such supplementary rural works do not in themselves provide a complete or lasting solution of the problem of rural unemployment and under-employment and utilisation of the available manpower resources. For this, it is essential to secure the fullest possible development of agriculture as well as the development of industries and of economic and social overheads.

Projects for the intensive development of small industries in selected rural areas are proposed to be taken up so that they may illustrate how different kinds of industries could be best integrated and varying levels of techniques developed together in the overall interest of the economy of the selected areas. In the first series, such projects are proposed to be taken up in 40 selected areas (since increased to 46).

Objective of Projects

The primary objective is to bring about a co-operative agro-industrial economy. This involves all-round development of agriculture, irrigation, communications, industries, social services, etc. For this purpose, the initiative and effort of local communities will have to be stimulated and mobilised to the fullest extent. Among the most important measures to be taken towards the diversification of the rural economy is the building up of industries based on agriculture and other resources and the vigorous development of non-agricultural along with agricultural occupations.

The most difficult problem in the rural areas is to create, maintain and expand non-agricultural employment. Even the success of efforts in other directions will depend on progress achieved in building up industries suited to rural areas. This is of particular importance for raising the levels of living and productivity and for providing larger employment opportunities to the landless and the weaker sections of village communities. There is need for intensive effort in selected areas, so that its lessons may be more generally applicable.

The projects are, therefore, intended to provide the necessary experience and to contribute towards the solution of the rural employment problem in keeping with conditions in different States. The projects are directed to industries which can be developed in rural areas and activities ancillary to them, but obviously in any area these must form part of a wider and well co-ordinated plan of local development. Both for drawing up programmes for rural industries and for securing adequate results from those undertaken, such overall area or regional development plans are essential. Steps will be taken in the selected areas to prepare such plans and to link up the various development programmes with one another.

Two Processes

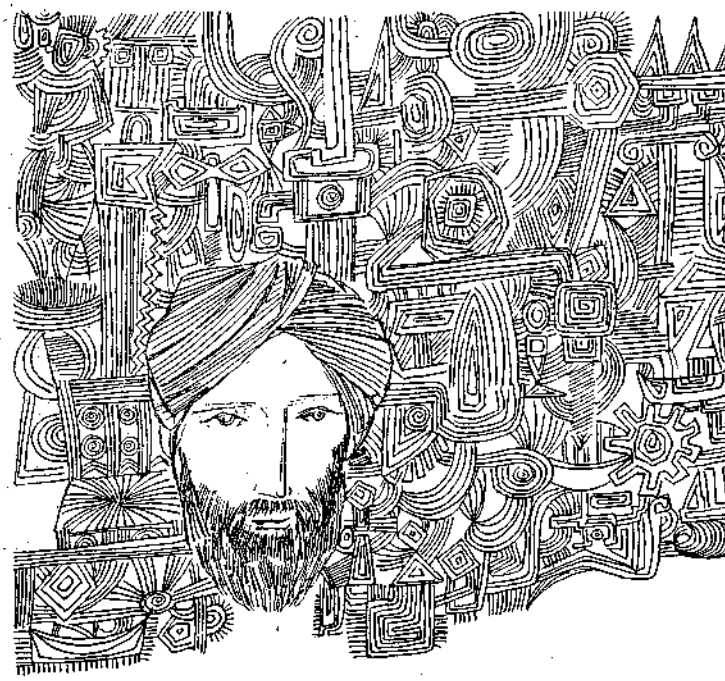
The expression "rural industrialisation" comprises two separate processes, namely (a) location and development of the larger industries with a view to balanced regional growth and checking the tendency towards concentration of industry in large urban and metropolitan centres, and (b) development of village and small industries, some of the latter being linked with large-scale industries as ancillaries.

The proposed projects are for the intensive development of all kinds of small industries and of processing industries based on agriculture. To the extent to which large industries are established away from the major urban centres, areas in which village and small industries and processing industries are developed will become industrialised in the wider sense of the term. Nevertheless, it is recognised that the proposed projects have a limited purpose, namely, the development of small

(*Continued on Page 59*)

Report by H. Y. Sharada Prasad

Photographs by T. S. Nagarajan



TO LUDHIANA –A Journey of Discovery

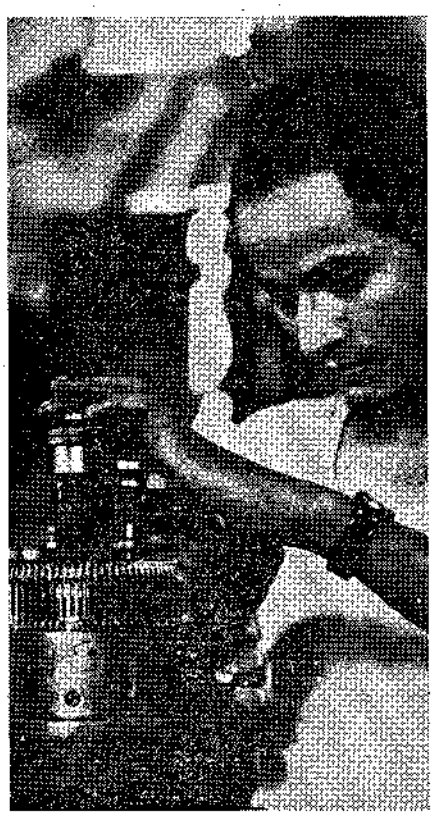
Finding an Answer to the Riddle of Its Surge

"WHAT we want is pig, more pig, better pig".

Sardar Arjun Singh said this in Hindi with the brusque accents of Punjabi, but the word 'pig' was uttered in English. His voice sounded like a diesel locomotive's lowing.

I looked at him. It was his hands rather than the face that demanded attention—forearms solid like old teak or billets of pig iron that he was referring to. But the fingers were supple for all their ruggedness. Surprising in a man so stocky and so grave of face.

Arjun Singh took us round his plant, from its A to its Z, the foundry that cast the frames for his sewing machines, the files that planed the edges, the drills that bored holes, the spray-room where they were painted and polished, the shop where wheels and parts were fitted, the finishing room where the lables were colour-transferred and the packing room where they were made ready for despatch to other regions of India and to Afghanistan, Iran and other countries. He used more gestures than words, and when he spoke an interpreter was needed to render his dialect into Hindi or English, but the caressing pride in his voice —the affection of a builder for what he has built—could not be missed.



Tara Singh who works in a hosiery works

Back in the office-room, which, unlike administrator-run establishments, was in an insignificant corner. I asked Arjun Singh to tell me what he was before he set up the factory. There was no coyness when he talked about himself. Years ago—twenty years ago maybe—he was a small arms repairer in Lyallpur. He also repaired sewing machines. Came Partition and he migrated to Ludhiana. He now has 200 people working for him, and his plant makes 60 machines a day on the average. Arjun Singh wanted me to notice the equipment he had made with his own hands—and as he said so, he spread out both palms and fingers and looked at them himself. "The casting machine with which we cast the body of the sewing machine, do you know how much it costs imported? Twelve thousand. We made it ourselves for a thousand five hundred".

"How did you make it?"

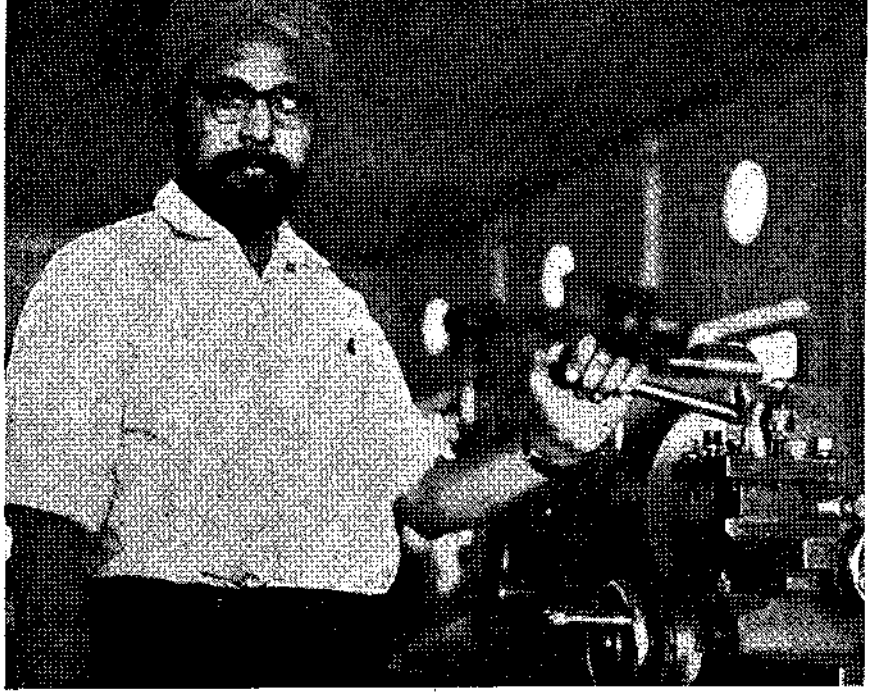
"What is there in it? If we can see a thing we can as well make it. That is why the Japanese don't send us catalogues. Do you know that?"

The mention of Japan made the District Industries Officer who was with us ask Arjun Singh about his own recent visit to Japan. "What impressed you most there, Sardar Saheb?" he asked.

"Wonderful discipline those people have".

He explained: "I went to Osaka. It is not a place where an Indian, and a Sardar like me, is seen every day. But do you know, the workers didn't stop their work to look at me. But here? Some of these lazy fellows have just been following us around, leaving their jobs!"

* * *



Technician Amrik Singh, 48, with hand on a lathe he designed and made. He went to no institution

IF you walk past the clock tower of Ludhiana, past the shop where the city's smart set buys betel leaves, past the restaurant which offers "rock'n roll ice-cream", past the cinema in which show-windows do not display dresses and handbags but bicycle seats (!), past the little field where children creak merrily in wooden giant wheels, turn left, turn right, turn yet another time, if you are led by some sort of Morgiana, you come to Mr Pawa's shop. It is not a shop but a factory, a narrow, crowded, old-fashioned building with many staircases and tiny landings. And wherever you turn your eyes—under flights of stairs, behind door—you see men bend over their work, tapping and turning little things, like jewellers setting rubies in gold. These workmen are indeed making precious things—costly surgical instruments on order for hospitals in all parts of the country. Their quality has created such a good impression that the Government has sent them to the World Fair at Seattle.

What is Mr Pawa's story? He started in Sialkot in the 'thirties, lost all in Partition, came to Ludhiana and worked as a part-time typist for a chemist, borrowed Rs 500 from him and started all over again. Then, for a couple of years, he went to England—to see and work and learn.

"How many kinds of things do you make Mr Pawa?"

The lean man with a scholar's face gave me several dozen leaflets describing the apparatus made by his firm.

"Haven't you got a full catalogue?"

He showed a well-known British firm's catalogue and modestly added that any surgical instrument there was on the earth, he could make it.

* * *

BACK through the labyrinth of the old town, back to Industrial Areas A and B, to see one, two, three

Below:. **This wheel was cast right on the road by craftsmen who have taken a leap from traditional blacksmithy to the machine age.**



bicycle factories. Mr Om Prakash gave figures about his factory's progress. Started 1956; Production in 1957—7,503; in 1958—11,078; in 1959—13,457; in 1960—20,641; in 1961—31,125. This year they hope to touch 50,000. Before setting up the assembly plant, they were making spare parts, and before Partition they were mere distributors of bicycles. Most of the machinery installed in their shop is made in Ludhiana, and his is one of the half dozen bicycle factories in India to make chains. They are soon branching out into another line—the making of cold rolled steel strips.

Mr Om Prakash was proud of the fact that his factory and a couple of others in Ludhiana could sell bicycles for 50 rupees less than the large-sized bicycle factories did. "And if the tyre and tube situation eases, we can cut the price by another ten rupees".

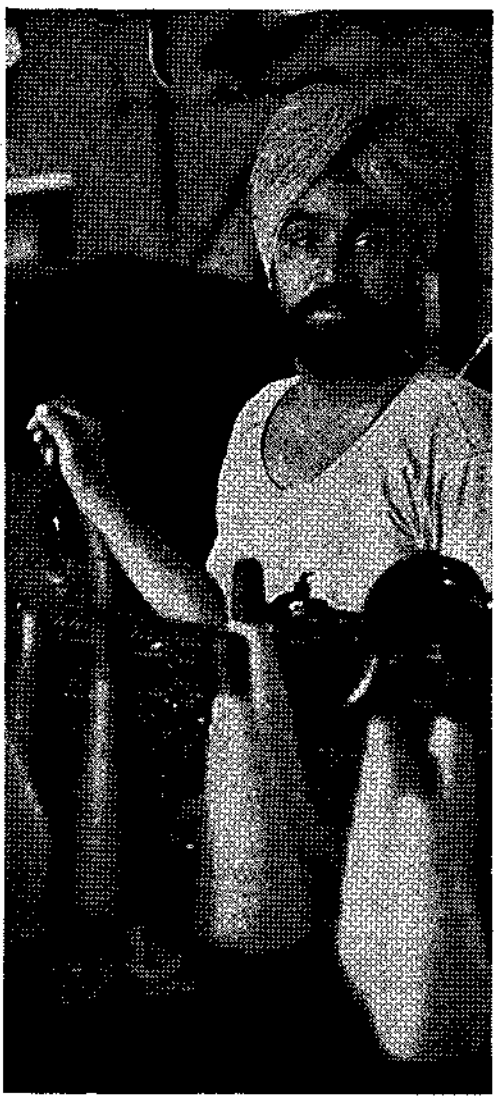
Another bicycle maker, Mr Hans Raj, narrated how it was the encouragement given by the Tariff Commission that had made him take to the business. "There they were, all those big people—Mr G.L. Mehta and others. Sitting at the same table I was dumbstruck. When they all said 'We'll give you these concessions, you go ahead', I told myself that I must live up to the confidence they have in me". Mr Hans Raj is fluent in Hindi, understands English but does not speak it. His plant has 100 workers and makes 200 bicycles a day and he has opened another shop at Chandigarh which makes free wheels.

* * *

THE progress from small beginnings into flourishing, many-sided activity is best represented by one of the most resourceful and streamlined of Ludhiana's industrial concerns, Pearl. It would be wrong indeed to call it a 'small' industry except in the sense that its beginnings were small and fairly recent. In the 'thirties, two Ludhiana cousins, who were in commission agency, thought of buying a couple of spinning mills and entered the hosiery line. The outbreak of War and army contracts gave them a chance for quick expansion. They accumulated some capital. Spare parts were hard to buy; so they began manufacturing them. Soon

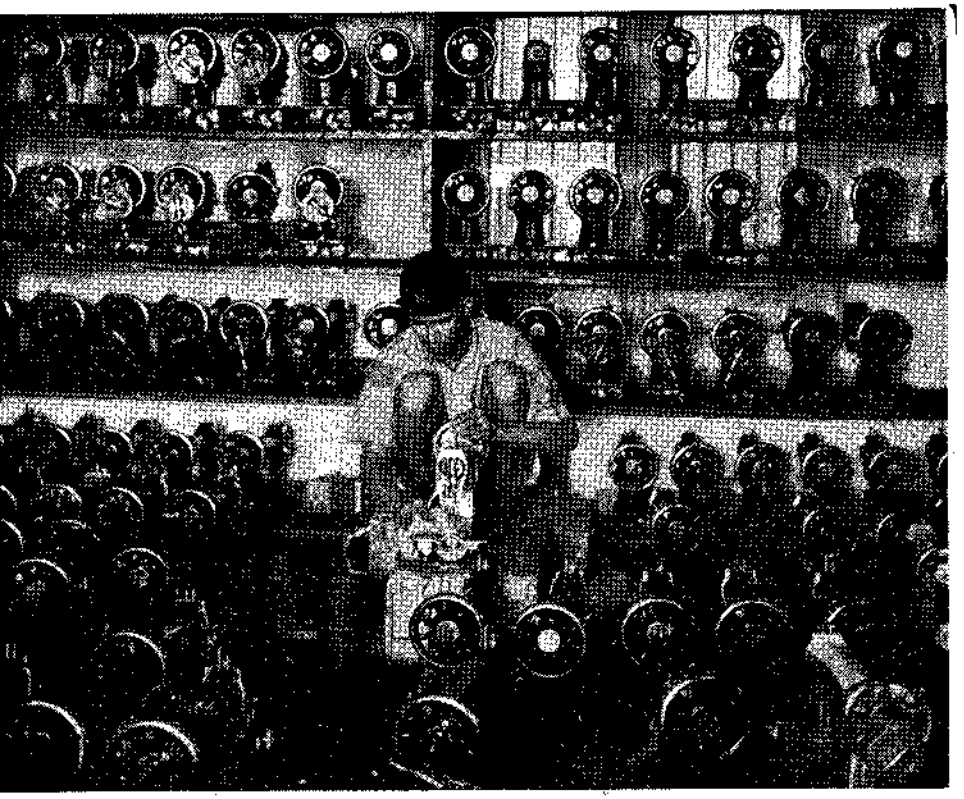
Town Where People Are Too Busy to Grumble





Mohinder Singh can talk on many things, had comments to offer on planning. His employer is eloquent about Mohinder Singh's mechanical skill. He made the loop wheel seen in photograph for Rs 4,000. (Cost, if imported, Rs 40,000). He spoke of offers from foreign companies which he has rejected.

they were making whole spinning machines. In 1956—as recently as that—they acquired some Chinese machines from the Delhi Industries Fair. With these they branched out into machine tool-making. In the last seven years their machine tools have made quite a name, and they have now begun making scooters. Also, with Japanese help, they are making more complicated spinning machinery and are soon setting up a foundry at a cost of Rs 20 lakh. The original partners separated (and are now no more) but a second generation of youthful, alert and well-educated executives have taken over and are making a go of the business.



In Mr Jagadish Lal Bahel I found an industrialist as dynamic and knowledgeable as any young entrepreneur anywhere else, and so I asked him questions about his work. He listed three things as the causes of his (and Ludhiana's) success: (i) the size of the operation which enabled the proprietor to know his workmen personally, which enabled them to get the best out of their labour, (ii) the quick uptake of the workmen like his own engineer Amrik Singh, and, more important than these two, (iii) the help and encouragement of the State Government. From the Chief Minister down to the smallest official everyone was devoted to the idea of industrialising Punjab.

"Any red tape?"

"None. I have no complaint whatever against the State Government despite the shortage of power, coal supplies and the difficulty of getting exchange".

Jagadish Lal's younger brother, Kanti, chimed in with a good word for the Small Scale Service Institute which was showing entrepreneurs how to process their applications.

Kanti had earlier taken us round the works and pointed out with pride what he called his 'private United Nations'—a bank of lathes and milling machines made in many countries—Yugoslavia, West Germany, Poland, Japan, United States, England, China and, of course, India. "And more valuable than these machines to us is this man", he said, placing his hand on the shoulder of a mild-mannered Sikh. "Mr Amrik Singh is our chief engineer. Show any machine to him, he will make it. Explain any idea for improving a machine; even without a blue-print he will give you what you want".

Last year there were 175 factories in Ludhiana alone making sewing machines and their parts. Of 106 parts that go into every machine Ludhiana makes 100.

The engineer shrugged off the compliment but not the hand placed on his shoulder.

"He's virtually uneducated, you know, but his ability amazes us. From his example a few fellows working under him learn much. But if he had been educated, what a change it would have made! What we are trying to do is to coach him in the art of blue-print drawing, so that his work gets systematised".

***

FIFTEEN years ago the name Ludhiana brought to mind pullovers and socks and underwear. Today this town, founded by the Lodhis in the fifteenth century, is no longer a hosiery town or a one-trade town. It signifies everything, big or small, that is comprehended by light engineering industry. Brakes and bolts and bicycles; chains and chaff-cutters and sewing needles; seamless pipes and steel tapes and slide rules; precision lathes and surgeon's knives and scooters; wool-topping machines, wood screws and water-coolers, grinders, bandsaws and electric fans—the list is long. What Mr Pawa claimed, the whole city can claim: Anything can be made here. Its new workshops, white and yellow in the sun and beyond the dust stretch endlessly. And the Grand Trunk Road is one continuous open-air factory, as Bolpur is an open-air university. And as baskets are made on the roadside elsewhere, so are oil engines here! "Roots of Change", the Ford Foundation's booklet on the progress taking place in India, had vividly described the hustle of this 'Indian boom town' with its special flavour—not only 'the range of its products but the conditions under which they are produced'. An international magazine recently called it 'a pulsating city, growing by the hour', and the State Government's district booklet declares in American style that Ludhiana is 'the small industries capital of India'. Another writer has said that Ludhiana of today recalls Birmingham a hundred years ago. And the city is making steady progress—not in many-storeyed houses and coloured lights but in the range and quality of its products. It still has the look of a district town and agricultural market. Not even the neatness of an old cantonment (for the cantonment was at Ambala). But no slums either, luckily.

But what progress in 15 years! In 1947, there were fewer than 1,000 workshops (mostly of hosiery). Now there are 4,000, making a large variety of industrial goods. How and why this spectacular growth?

* * *

"If you think a little about it, Ludhiana has no reason to exist", said Mr M.L. Bhoocher, the District Industrial Officer.

"What do you mean?"

"It doesn't fulfil any of the traditional conditions economists say are necessary for a place to come up. It does not have any local resources or raw materials; it has no nucleus of large industry; it has no pressure of markets for its markets are far away; it is not abundant in power; it has no stock of capital; it has no ready technical leadership (for there are no engineering colleges here). Yes, none of the so-called pre-requisites".

"Then what does it *have*?"

"People; people determined to make good".

I tried out a couple of theories to explain the reason for Punjab's economic sturdiness. One of them runs somewhat as follows: the long connection of Punjab with the Army brought it money from outside; the British built canals and laid roads and railways far more than elsewhere; it was a sort of community development through contractors; and through the Army the people gained technical skills and discipline. In other words, there was capital, there was infrastructure, there was administration, there was skill. And, hey presto, you have development.

Bhoocher shook his head. He could easily prove there wasn't much investment from outside. He also disposed of the theory that Army-trained technicians had stepped into industry. Of the 4,000 factories in the area—and he knew all the owners—very few were ex-Army men. In fact the ex-Army men in Punjab mostly went back to agriculture. The few that had got into small industry had not proved good proprietors or workers.

"That leaves us with the people themselves and their attitude", Mr Bhoocher came back to *his* theory. "The Punjabis don't beg. Our people aren't contented with low wages—for they want to eat and live well. The small returns of traditional handicrafts will not satisfy our people. We work hard, harder than anybody else in the country, because we *can* and *want to*. And then came this Partition. That was a challenge. It lit a fire in us. We vowed to make good. The progress you see is the result of this spirit of assertion, call it the spirit of vengeance if you want".



In Ludhiana "there are no sidewalks, and road shoulders are cluttered with piles of scrap metal and workmen tinkering with machinery."

Perhaps Mr Bhoocher was reading a little of his own personal history into his theory. (He said he was managing a firm before Partition.) Perhaps he has underestimated the role of the Ramgarhiyas, the Sikh and Hindu artisans who, according to many, have triggered off the miracle. And certainly he overlooked the fact that the industrial resurgence of Ludhiana began *before* Partition and before even the War.

* * *

From here where does Ludhiana go? Onward, of course; but there are problems. As the city and its industries grow, the workers will expect higher wages. Then the question of markets. For a brief few years the goods of Ludhiana found a ready market, but other areas are coming up too, and Ludhiana faces competition.

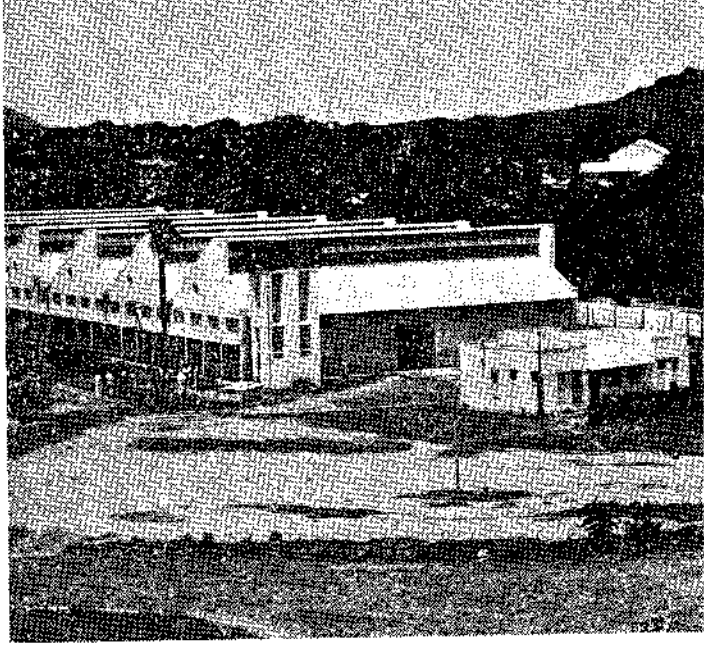
As an ILO team recently said in its report "Small-Scale Engineering Industries in the Punjab": "The two important factors on which their future development depends are: (1) how they are able to hold their own in competition with large-scale enterprises in the indigenous market, and (2) how far they can maintain an upward trend in exports". So Ludhiana has to adjust itself to the ways of a buyer's market. Business sense and governmental persuasion are helping the growth of quality-consciousness. This becomes evident if you examine the trade marks, labels and literature of any single company. Their grammar and good taste have improved.

A person closely associated with the qualitative improvement of Ludhiana products, Dr B.P. Ghosh, Director of the Small Industries Service Institute, is happy with the eagerness of the manufacturers to see, learn and improve. He has been in Ludhiana for seven years and is an admirer of the entrepreneurship of its people. "Government or no government, the industries

(*Continued on page 60*)

Report by K. S. RAMANATHAN

A TALE OF TWO MADRAS CITIES

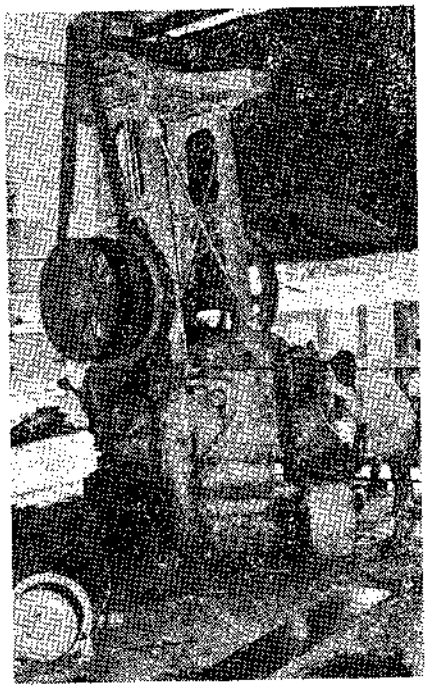


and of the State's Efforts to Create an Industrial Climate

MR Haran is past 50. He is known to everybody in his home town, Coimbatore, and to many beyond. As an insurance man for nearly three decades, Mr Haran achieved much success. Normally, one of his two sons should have inherited the business and the contacts he built up. But father and sons are today industrialists. They own a factory a few miles off Coimbatore on the road to Podanur which has many modern machines. The product they turn out may not strike you and me as very important —paper bags of different sizes. But you must hear Mr Haran talk about them and you will be convinced of the importance of packaging in a growing economy.

Mr Haran and his sons are typical of the new class that is coming up in Madras State. Instead of taking to white-collar jobs, as in the old days, they have now begun setting up factories, mostly small, making the fullest use of official help available under various programmes. And they are total converts to what is commonly called the cult of the dirty hand.

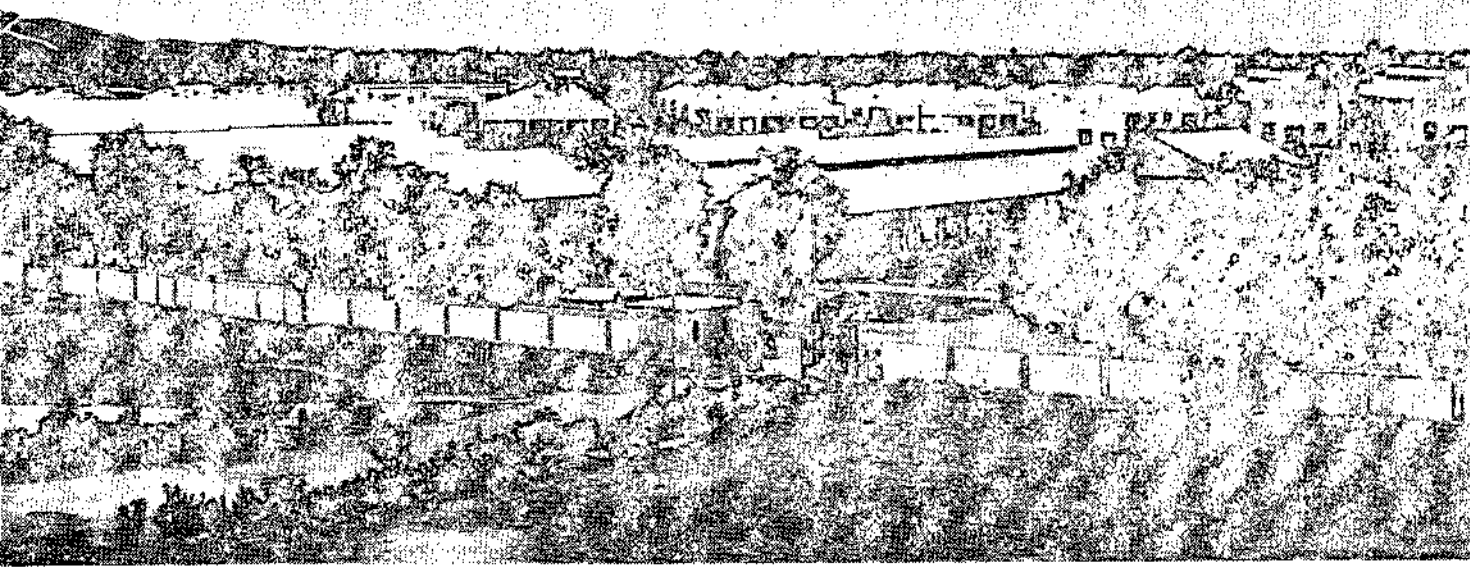
I recall another person who symbolises this change in attitudes towards work and values. He prefers, however, to remain unnamed. A *mirasdar* (landlord of some consequence) of Tanjore district, he has broken from the family habit of



Inside view of a small factory in Coimbatore

adding to the holdings, and converting savings into land. What his reasons were I was curious to find out. Ceilings, he said. The air was thick with land reforms, and what future was there to investment in land? On the other hand, the incentives offered to those setting up small industries tempted him. Why should he not set up a factory? At first there was none to guide him. A chance meeting with a qualified technician of a big industrial firm in Madras City proved the turning point. The technician was on the look-out for a financier who would help him to start a factory in the new industrial estate at Guindy, which was then being proposed by the Madras Government. The two talked it over, and as a result industry gained a new adherent from agriculture.

If these two represent people who had the advantage of some capital, Mr K. Natarajan is typical of the workman who has come up the hard way developed into an entrepreneur. For years he made looking glasses with his hands and a couple of helpers in a small workshop on Wall-Tax Road in the heart of Madras City. He found buyers, of course, but he was not the type to be satisfied with the product he turned out, which couldn't hope to compete with imported mirrors. He was determined not to lose, and then he learnt of the proposal of the State Government to establish an industrial estate in Guindy. Meanwhile a survey was being conducted by the State Industries Department of trades like his. Some officials came to him and asked him where he was getting his raw materials from, what rent he was paying, whether he was willing to switch over to



The full spread of the Guindy Industrial Estate.

modern methods of production and, if so, whether he would take Government help to secure capital and machinery. Mr Natarajan was a little hesitant, for it was all too sudden and unbelievable. He had the traditional distrust of officials collecting information. But, as he explained to me, his desire to find out if the officials really meant what they said got the better of his diffidence. He went to the Office of the Director of Industries in Chepauk. It was not the first time he had gone to Government offices, and he expected that as usual an underling would send him from one desk to another. So Mr Natarajan was not a little surprised at the change in official attitudes that he saw. Instead of curtness he found the officials willing and even eager to answer his queries. Their helpfulness, and the prospect of taking up a shed in the industrial estate at Guindy and getting the machinery required for a modern factory of his dreams spurred him. Today Mr Natarajan has a "C" type shed in the estate, and, according to his calculation, capital worth over Rs 1 lakh has gone into his factory which makes mirrors of different sizes.

Mr Natarajan is certainly not the only person to have noticed the change in official approach to would-be industrialists. In fact helping the small man to go on with his small industry has become so much of a new commandment with Madras officials that Mr Manubhai Shah told a conference of State representatives in Delhi a few months ago that whoever wanted to know how to cut through the chief obstacles confronting an intending entrepreneur, such as scarcity of capital, long delays and expense involved in acquiring a suitable site, obtaining approval of plans and licences from authorities and in getting water supply and power connection, should go to Madras. The ten industrial estates planned to be set up in the State during the Second Plan represent a concerted bid to solve all the difficulties of the potential small industrialist.

In statistical terms, the policy of encouraging small industries in the State had yielded the following results: (1) investment of Rs 28 crore in small industries which at present number about 3,900 units; and (2) employment to about 42,000 persons. During the Second Plan period, Rs 109 lakh were distributed as State aid to small industries. In the first year of the Third Plan, the amount so advanced was Rs 38.78 lakh, benefiting 3,033 cases. More important than these figures themselves is the 'industrial consciousness' which the policy has produced. If Madras State is firmly on the road to becoming an industrial State, much of the credit for providing the motive and means should go to the State Government.

* * *

This impression was strengthened by the talk I had with Mr R. Venkataraman, the State Minister for Industries.

To what extent, I asked Mr Venkataraman by way of an opening, did conditions in Madras resemble those in the Punjab, another State where small industries have grown so remarkably?

He replied: "Ours has been a predominantly agriculturist State, with the industries concentrated in a few areas like Coimbatore, Madurai and Madras City. The educated classes generally shifted to white-collar jobs and even those who preferred to be self-employed thought in terms of commerce and trade rather than promoting an industry, small or big. Starting an industry means taking risks. And to induce one to do so is a delicate task. Therefore, we had first of all to generate a climate propitious to industrial venture before taking other steps. Judging from the response, I should say our policy has paid good dividends".

"Do you, in other words, say that the Punjab Government found a ready-made climate for industry while you have had to create one?"

Mr Venkataraman: "That is more or less correct".

"Is it because of this cautious gradualism that the State Government has preferred to encourage the growth of small industries in areas next to those already industrialised instead of trying to promote them in the farther villages?"

Mr Venkataraman: "You may

call it a cautious policy, if you like. But in evolving the strategy for promoting small industries, the State Government deliberately decided to proceed from proved ground rather than breaking untried ground. The course we have adopted has many advantages, the biggest being the fact that the new industries will be working in an area where the use of machines and power are familiar to the people. Finding trained technical hands and ready markets are no small advantage. That is why, whenever a potential industrialist comes to us with a proposal, we make it a point to tell him: "You go just ten miles beyond the present industrialised area (in Coimbatore, Madurai, Madras or other places) and we will provide you all the facilities you need. Our suggestion has invariably been accepted and it has benefited the promoters also".

Mr Venkataraman told me to note that the State Government was at the same time very particular that the present industrialised towns did not become more congested. During the last five years, he said, not a single medium industry had been permitted to be started in Madras City.

"But are the industrialists easily persuaded?"

"Well, we talk things over thoroughly and show them the advantages and disadvantages, and tell them about the facilities we can give them if they take our advice".

I inquired what these facilities were. Mr Venkataraman explained them patiently: "You take Madras City. As I said, we have firmly set our face against allowing any new industry to be started in the City. But we encourage the development of industries southward, northward and westward of Madras, with the result that if you go south from Madras City, you will find that the wave of small industries has today touched Pallavaram, 12 miles away, and a number of industries are coming up in Tamabaram and Vandalur as well. My own expectation is that this kind of development will take place right up to Chingleput, 30 miles away. Similarly, our schemes for developing industrial plots at Avadi, Ambattur and Pattabhiram will facilitate the growth of small industries to the west of Madras and here also, one can expect this movement to go as far as Arkonam, about 40 miles away. We have a scheme to build a first-class industrial road between Tiruvellore and Arkonam, and once this is completed, I am sure industries will start springing up on either side of the road.

"Or, take again our proposal to have a second road right along the sea coast from Madras Harbour to Ennore. We are planning this road mainly with the idea that it will enable the growth of industries to the north of the City also.

"We are setting great store by these 'industrial roads'. They will be arteries carrying industrialisation effectively to the outlying areas as a matter of normal course".

My next question was about the administrative measures adopted by the State Government to persuade people to start small industries. Mr Venkataraman replied that some of the measures were the result of what he had seen in the United States. "In advanced countries like the United States, you have any number of industrial consultants. I have closely studied how these consultants function and I must say that their role has considerably stimulated industrial growth. Anyone who wants to start a new industry seeks their advice. The consultants make them answer an elaborate questionnaire. On the basis of the replies and on the basis of information the consultants have in their possession, they formulate a complete blue-print on which the industrialist-to-be can act.

"Unfortunately, we do not have such agencies here in our country. Much of our slow progress in industrialisation can be attributed to this gap. I am convinced that what is holding up the pace of our development of industries is neither capital nor entrepreneurship, but the lack of reliable industrial guidance and advice.

"Therefore, we are proposing to have some kind of Industrial Information Bureau in our State; and until it is set up, we have asked our District Industries Officers to function as single-man industrial consultants. Our instructions to our officials in this regard are quite clear and definite. Our Assistant Directors of Industries are not to act merely as agencies to sanction the applications for State aid. Their promotional work is far more important and we have impressed upon all of them to be constantly on the look-out for possible industries that could be developed in their respective districts, keeping in view the raw materials available locally and local market conditions. After making such a detailed assessment, the Assistant Director is to do intensive canvassing among potential industrialists who may require his guidance on the possible lines they could promote in the area. If you talk to our Assistant



Wheel barrows made by a small-scale workshop at Coimbatore for use by municipalities in Madras State.

Directors, they will tell you that the major portion of their time is spent on preparing detailed schemes for starting new industries in response to requests from the people of the area".

My next question was on how promptly the applications for State aid were disposed of, since that after all was the real proof of the Government's willingness.

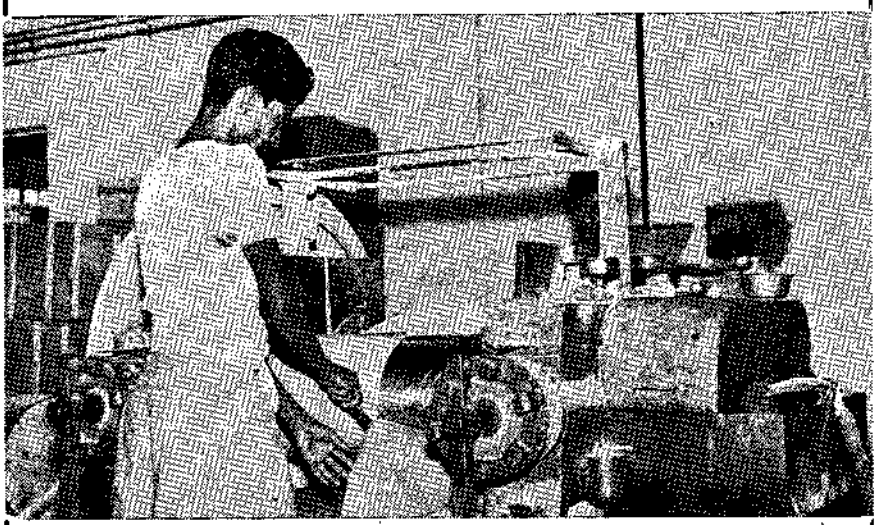
Mr Venkataraman: "Apart from liberalising the terms on which such aid is now made available to people, we have taken great care to ensure that applications for State aid are attended to with the utmost expedition. We have in fact evolved a fool-proof apparatus for it. No applications for aid below Rs 5,000 are subjected to any delay, because the Assistant Director of Industries (who is stationed in the District headquarters) has powers to sanction them without reference to higher authorities. In cases for aid above Rs 5,000, more than half are disposed of within 40 days and it is only 10 per cent of the applications that get delayed beyond three months. Once every three months, there is a meeting of all the district officials and this is almost the first item to be reviewed at these meetings".

"Under your scheme of things, Sir, won't it take a long time before the villages get even a glimpse of industrialisation?" I asked.

Mr Venkataraman was emphatic in rejecting such an inference. "We have already begun to industrialise all our district towns; from there, as I told you, we are pushing the small industries steadily into the neighbouring areas. In the next stage, we shall start doing this from the *taluk* headquarters. Actually we have proposed to do this within the Third Plan period, and when this gets into stride you will see our villages entering the industrial age. In fact this approach is sounder and more certain of success than to start from the circumference. The reasoning behind our plan is simple and unassailable. Before we take industries to villages, it is necessary to create in them what may be called machine-consciousness. With this idea we have embarked on a scheme of locating work-sheds in rural areas. These are for very small establishments such as carpentry and blacksmithy units using simple machinery

Footloose in the Field of Small Industry





SANDALS made of rubber are a current vogue in footwear. Since they are softer on the feet, many people prefer them. A Coimbatore enterprise which produces these in large quantities also demonstrates the manner in which many parts of the country have to combine to make an enterprise in any one part a success. The factory is in Madras, but the entrepreneur is from Kerala. The rubber sheets required for the soles of the 'chappals' also come from Kerala. The strap (which is of leather) is got from far-off Kanpur. The most plausible reason for locating the factory in Coimbatore is that the place has an industrial tradition and promoters want to take full advantage of the facilities that are ready to hand.

Footwear is one of the industries which show the scope there is for the use of simple mechinery for increasing output. As pointed out in the last issue of *Yojana*, only one person in four in our country wears something on his feet and the others go barefoot. But as incomes improve, the demand for footwear is likely to increase fairly fast. We have large numbers of village cobblers but they will not be able to meet the entire demand. Footwear also has good export possibilities. An important requirement of exports is strict control of quality. This will be best assured through adoption of modern industrial techniques.

such as a circular saw or a blower. The main idea is that the people of the area should see the working of these improved tools and develop an aptitude for using machines and power-driven tools. Once we succeed in making the rural people machine-minded, half of our battle is won".

Mr Venkataraman summed the features of the State's policy as follows: "First, we proceed from proved ground; secondly, we lay great emphasis on building up an efficient system of industrial guidance and advice; thirdly, we insist on the expeditious disposal of all applications for State aid, and lastly, we attach great importance to the preparatory work of creating machine-consciousness among our people".

"And now," he said, "go and see things for yourself. Go to Guindy and also see how small industries have grown in Coimbatore".

* * *

Five years ago if you happened to drive from Madras City to the Meenambakkam airport, you would have found the over-grown village of Chennapatna suddenly coming to a stop beyond the Raj Bhavan grounds, yielding place to the tiny villages of Chingleput district. But things have changed. Where you would expect city limits to end, and stretches of rural vegetation to begin, you now see a neat cluster of concrete buildings and more than a hundred factory sheds. It is the Guindy Industrial Estate.

The largest and most important of the ten industrial estates in the State, the Guindy Estate occupies some 100 acres of land and combines in itself several schemes and facilities. Started in 1958 with 52 units, it has today 128 units functioning within it with a complement of 93 different entrepreneurs. These factories have an annual turn-over of nearly Rs 1.75 crore and provide employment for 2,544 persons. The output could be further increased with adequate supply of raw materials.

The factory sheds are of eight different types to suit the requirements of different sizes and kinds of industries. The Government provides the units numerous technical services such as a mechanical, metallurgical and chemical testing laboratory, a tool-room, a forging and heat treatment shop, a finishing shop, a wire drawing, enamelling and cotton cover unit, a pressure die casting unit, a foundry, a wood working and sports goods unit, a scientific glass products unit, a raw materials depot, a technical information section with a library; blue-printing equipment and common lease shop. All these have cost nearly Rs 100 lakh.

The workers have subsidised houses, and the Estate provides other facilities such as a post office, a telephone exchange, a show room for estate products, a bank, a fire station and a transport office, all for the employers, and a canteen, rest-shed, playground and recreation centre for workers.

I talked to many of the entrepreneurs, and heard most of them saying they would never have ventured into the field but for the encouragement and facilities provided at the estate. If only they could get all the materials they needed, they could increase their production. A manufacturer of domestic electrical appliances and cinema equipment flung at me a letter he had received from a Central Government office in Delhi in which the authorities seemed to imply that if his letters did not improve in tone, they would know how to deal with him. Trivial though the incident might seem, I thought that it revealed how much of sympathy the 'sponsored entrepreneurs' expected from the Government.

A second encounter was more poignant. The entrepreneur in this case had earlier been a highly-placed technical head of a major industry in Madras. In response to suggestions from State officials, he set up his own shop which manufactured bolts, nuts, rivets, hinges, washers and non-ferrous forgings. His factory needs brass, but it is a material in short supply which is distributed only to those who had been actual users in 1956. Now, his factory had not been set up in 1956; it came up later with the assistance of the State Government. Yet he was denied supply of brass on the ground that he had not been an actual user in 1956.

A third incident relates to Mr Natarajan, whom we met earlier in this report. While he has the satisfaction that his techniques had improved he has the chagrin of being denied supply of imported glass. Without it he cannot manufacture mirrors. "I have moved every authority known to me and I have failed. How can I go on with my show?" he asked.

It is difficult to find an easy answer to the issue raised by these three entrepreneurs. It only indicates the need for far greater co-ordination between State Governments who encourage people to establish small industries and the official machinery which regulates supplies.

In sharp contrast to the expectation of continued official support which one notices among the small industrialists in the Guindy Estate is the attitude of their compeers in and around Coimbatore. Among the half dozen industrial units that I visited, most had not sought or taken any help from the Government. They were confident of standing on their legs. Mr Haran needs a new type of German machine for his factory. The foreign exchange difficulties stood in his way, and he is trying to find out if he can export something which will give him the foreign exchange required for buying the machine. This is typical of the outlook of the small industrialists of this area. There are more than 350 small industrial units and almost all of them are flourishing. One reason for their rise and strength is the fact that Coimbatore has a long history of established industrial acitvity, with more than 60 textile mills. A host of ancillary industries have sprung up of their own accord. The State Government does not need to go round persuading people to start small industries. They know the line and how paying it is. The facilities now provided by the official agencies in the area serve to stimulate the growth and channel it along directions most helpful to the nation.

The programme of promoting small industries, as pursued by the Madras Government, bears out what Mr Venkataraman said, that "industrialisation was no more a capitalistic function but a social function oriented solely towards uplifting the common man".

DECENTRALISATION IN PERSPECTIVE

(*Continued from page 17*)

spinning wheel and efforts made to propagate and support it have, in economic and social terms, been disappointing. In all critical social situations the Gandhians have either been indifferent or at least neutral, and their strength, whatever it has been, has not been used for helping or promoting the forces of social change. This observation is prompted by the fact that industrial decentralisation of the kind that has been attempted in India and its philosophy have not refuted the view that in terms of social change they hardly make any difference so far as *status quo* is concerned and they cannot be a dynamic element in shaping the course of events.

That, however, does not explain why, according to the Marxist, small production engenders capitalism and the *bourgeosie* and how the small commodity production by his ordinary, imperceptible, elusive activity engenders capitalism all the time. Lenin also adds that "small commodity producers cannot be driven out or crushed and that it is a thousand times easier to vanquish the centralised *bourgeosie* than to vanquish the millions of small owners" and further "they must be re-moulded and re-educated by very, very prolonged, slow, cautious organisational work."

Decentralised production is small production and it is also small commodity production, i.e. production for the market, and is governed by the principles embedded in the market economy. The small commodity production produces, again to quote Lenin, "the force of habit of millions and tens of millions", which is a "most terrible force", and that is why the millions of small owners cannot be crushed; they have to be reoriented. Among the small producers are included not only artisans but also peasants and they are all formidable because their capitalism lives in the hearts of millions, and the process which creates *bourgeosie* is at work all the time. Without attempting an analysis of capitalism, it is easy to posit that if millions are enmeshed in the working of market economy, they necessarily 'by the force of habit' become acquisitive. In their calculus, human values have hardly any place and labour becomes merely a commodity and its human needs and social attributes are completely lost sight of. These are the results of commodity production and, if its scale is small, this force works in an imperceptible and elusive manner and the social milieu, which it creates, is completely unfavourable to the realisation of socialist relations and values.

The question, however, arises as to whether it is possible to organise small production and reduce the impact of dehumanised market on it, or change it to subserve social values rather than work in opposition to them. The difficulties of organising small production are, it is true, much greater than those of organising large production from the socialist standpoint. In it is involved the slow and prolonged process of re-education and re-moulding. In India—in fact in all undeveloped countries with large, dense and rapidly-growing population and with no empty spaces to fill—decentralised integrated production becomes an inescapable necessity; and with all its other social advantages, referred to earlier, it acquires a special significance of its own. The main question is whether it can be given a real social content and made an instrument for the realisation of the socialist objective. The answer to this question has to be evolved through elaboration of all the major issues of social transformation, but merely the smallness of production need not, if other conditions are favourable, itself be an insuperable hindrance in the way of realising this object. There has to be inter-penetration and inter-dependence between large and small production. But if property-relations are changed, accumulations of private fortunes for exploitation and self-aggrandisement is put an end to, all prime-movers of the economy are controlled by the community and operated by it and the same social values govern all activities whether in small or large production, there is nothing in small production itself which can make it 'a terrible force'. If the small producer ceases to be a small commodity producer and his activities are co-operativised in the context of a socialist economy, he too can become a contributing member of a socialist, i.e. truly co-operative, economy and be a constructive and not a terrible force. He can respond as well to the needs of a socialist economy as the large producer and contribute to its development and growth. The conditions indicated above are important and have to be realised. Decentralised production cannot be carried on in isolated islands of the economy, it has to be woven in its entire texture. That is why integration becomes a cardinal element of decentralised industrialisation—its very sustaining principle.

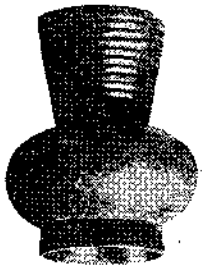
Capital Formation

There is another point, which has been urged against decentralised industries, and needs to be given serious consideration, and that is the question of creating surplus for economic growth, i.e. the question of capital formation. The point is simple and can be easily stated though it is being unduly complicated by the models of economic growth which are now the vogue. We need heavy investment in the economy, including investment in human material, i.e. the development of social services, and the economy itself has to provide the resources for the purpose, i.e. rates of savings to the total accrued national income have to be increased rapidly to accelerate the rate of growth. The first point of course is that the income itself has to be greatly enlarged if we are to find the capital needed for rapid development mainly from within the country. With our existing national income the margin for saving for a vast majority of our people, it need not be said, is extremely limited. If we put an upper limit on higher incomes, as we should if we are really serious about socialism and also on wealth, we will have to rely mainly on the community savings for capital accumulation. The extreme and growing inequalities in the distribution of income and wealth are at present a limiting factor from the standpoint of the community and have to be redressed. Decentralised development would mean lower concentration of income

and wealth and therefore the wealth and income of the rich would be less and less available for capital accumulation. That itself would make it necessary to bring compensatory factor into play. Moreover, if in decentralised industries the output per worker is so low as to make it impossible to accumulate capital, even if work at low wages is provided by them for most people, it would, from the long-term view, be a serious disadvantage inasmuch as it would greatly slow down the rate of development of the undeveloped countries. In the centralised large industries, output per worker being higher, they would not only pay higher rates of wages, but also provide scope for capital formation.

The rate at which surplus would accrue and be utilised for planned development would, according to a scheme of well-considered social priorities, of course, depend upon adequate social control of the centralised large industries. But assuming that the control exists, they will be able to contribute more to the accelerated development of the country than the decentralised industries. Their output, i.e. of the decentralised industries, has to be large enough to pay reasonably good wages, or, if self-employment is the rule, provide reasonably good earnings and yet generate enough surplus to finance its development from within. At present village and even small industries are not in a position to enable the workers or artisans to have earnings comparable with those of large industries and create reasonably good surplus for economic growth. Parity in earnings and capital accumulation can be achieved, if at all, after a length of time; but at present the gap between the two is wide and has not been narrowed by such development of small industries as has taken place in the last decade. Output and surplus per worker are low even in our large industries as compared with the developed countries, but output in small industries is very much lower and they can provide neither reasonable earnings nor surplus for development. If decentralised industries are to have a more significant role in our development, this serious defect has to be remedied. Their production not only in aggregate but also per worker has to increase very considerably if they are to develop on sound lines, i.e. the producer in small industries has to be much better paid than he is today, generally speaking, and capital reserves for development have to be created and built up. At present the producer, in khadi and village industries particularly, and in other small industries, have miserable earnings. They have not improved significantly under the two Plans and they are being largely subsidised, what to speak of having margin for capital formation. These industries have to be developed for the reasons given above, but apart from raising greatly the level of their technical performance, they have to be reorganised, mostly co-operativised, in order that their marketing may become orderly, efficient and be related to the needs of the community. In other words, they too should produce for a planned budget of needs and be able to dispense with subsidies and rebates. This can be done, as will be explained later, if these industries mostly centre on agriculture—rationalised and much more developed agriculture. In the universe in which they function, agriculture and its allied activities become the centre of their solar system. The scope for increase in production and reduction of cost is so great that, given the necessary will and organisation, the whole rural sector can not only raise the production and income of the agriculturists but make developed decentralised industries an integral part of its development, and raise the level of earnings in them very considerably. Agriculture and industries, together with local public works in which surplus manpower can be utilised, can have enough surplus for their own development and contribute to the increase of capital resources of the country.

The most important condition for achieving this result is that techniques specially designed for this type of development should be widely used and production should be planned and organised for the benefit of the producers but from the point of view of the community and its organs. What is called propensity to consume is high among the agriculturists and producers in small industries. A large part of increase in their income is spent on increasing their consumption. This is neither regrettable nor undesirable. Their present standard of living being so sub-human, it is right that with the increase of their earnings, their consumption should increase. But if production and consumption are both planned, increase in consumption would be a regulated process and would not take place at the cost of capital formation. At present there is no scope for it in agriculture and small industries because their output is low owing to poor organisation and inefficient technique; but if both are developed in the way they should be, they will become the most important source of capital formation of the country. The technical potential of the increase in their production is so high that increase in the standard of living and investible surplus can both be achieved if production and the utilisation of its increase are competently planned. The condition, of course, is that decentralised industrialisation, instead of slowing down the rate of development, would greatly contribute to its acceleration, if it is integrated with agriculture and interests of the community receive the highest consideration in their development. This amounts to saying that, with a socialist approach in the preparation and execution of the plans of development in agriculture and decentralised industries, significant increase in consumption and capital formation can both be achieved through rapid increase in production.



This modish design is one of the specimens of work done by the Design Centres of the All-India Handicrafts Board.

Surge of Ancient & Modern Crafts

Andhra Pradesh

SOUND GROWTH WITNESSED

Stress on Consumer Goods Industries

DR. M. N. LAXMINARSAIAH
Minister for Industries



UNTIL recently the industries which had developed to any extent at all in the State of Andhra Pradesh comprised mainly of those which processed agricultural produce, such as rice mills, flour mills and oil mills. There has, however, been of late some growth of engineering industries in the twin cities of Hyderabad and Secunderabad and other important towns such as Vijayawada and Rajahmundry.

In pursuance of the recommendations of the Small-scale Industries Board and taking into account the relative industrial underdevelopment of the State, the Government of Andhra Pradesh has drawn up a programme for the development of small industries on the following lines:

> Establishment of training centres with a view to improving technical skill with special emphasis on the use of improved tools and equipment. Establishment of common service centres for the benefit of specific categories of industries. Undertaking research schemes. Establishment of pilot production centres for introduction of new industries. Establishment of industrial estates. Affording financial assistance to industries and organisations and assistance to industrial co-operatives.

Under the Second Plan the State Government outlay on small-scale industries has been about Rs 380 lakh by way of investment in industrial estates, training centres, pilot production units, common facility centres and rural community workshops established throughout the State. To step up the development of small industries more effectively the State Government also decided to establish a Small-scale Industrial Development Corporation. Perhaps the more significant advance in the industrial development in Andhra Pradesh under the Second Plan was in the small-scale sector. Particularly notable is the development of industrial estates.

Light engineering industries form by far the largest category, next to agricultural processing industries. Recently, with the increase in motor vehicles, both for passenger and goods traffic, automobile repair and servicing workshops are coming up all over the State.



Birds of Kondapalli, the famous toy-making centre

There are a few units manufacturing agricultural implements, hand-tools and builders' hardware in the districts of Visakhapatnam, East Godavari, Krishna and Hyderabad.

Household Goods: The manufacture of padlocks is mainly concentrated at Dowleshwaram in East Godavari district. There are twenty small-scale units manufacturing fountain pens and nibs in the State. The machine tool industry is coming up in the cities of Hyderabad and Secunderabad. There are two glass factories now functioning in the State, one at Hyderabad and the other at Gudur. There are two enamel factories in the State located in Hyderabad.

Electrical Industries: The growth of electrical industries is of recent origin and there are only two units, both in Hyderabad, manufacturing electrical appliances. To give an impetus to the industry, the Government is setting up units for the manufacture of fractional H.P. motors, small insulated copper wires and radio spare parts and receivers in Hyderabad.

Leather: Model tanneries for the manufacture of finished leather employing standard leather finishing machines are being set up at Guntakal, Eluru and Warangal. Production centres for the manufacture of footwear and leather goods have been set up in Vijayawada and Hyderabad. These centres also provide facilities for training artisans in improved methods of manufacture of footwear.

Small-scale Industrial Development Corporation: One of the important steps taken by the State Government to assist the development of small-scale industries is the establishment of a Small-scale Industrial Development Corporation as a private limited company with an initial capital of Rs 50 lakh which will be entirely held by the State Government.

Industrial Estates: It is no exaggeration to say that no greater and more positive step has been taken to assist the development and dispersal of small industries than the programme of industrial estates.

The Government had originally programmed to establish, during the Second Plan period, five industrial estates, one each at Sanathnagar, Visakhapatnam, Vijayawada, Samalkot and Nandyal at a cost of Rs 90.78 lakh. Later, owing to persistent demand from the local entrepreneurs, the Government sanctioned the establishment of two more industrial estates—at Warangal and Cuddappah—at a cost of Rs 10 lakh each during 1958-59 and 1959-60 respectively.

Because of the good response to the allotment of factory accommodation in the industrial estates, the Government sanctioned, during the years 1959-60 and 1960-61, the expansion of the estates at Sanathnagar, Vijayawada and Warangal. The Government have also sanctioned the establishment of an additional industrial estate at Chandulal Baradari at a cost of Rs 13.92 lakh to provide better employment opportunities in the old city of Hyderabad.

Assistance to the Private Estates: As a result of the growing realisation of the facilities that industrial estates offer, there has been widespread clamour from all parts of the State for similar industrial estates. Owing to scarcity of resources, however, it is not possible for the Government to set up estates at many places. A revised scheme has been prepared for the establishment of "assisted private industrial estates" which do not involve as much expenditure on the part of the Government.

Briefly, the arrangement proposed is that the estate should be constituted as a joint venture between the prospective occupant industrialists and the Government. The Government has sanctioned 18 assisted private industrial estates under this scheme. A large variety of products is being manufactured on these estates such as steel furniture, bicycles, electric grinders, microphones, tape-recorders and radio receiving sets.

Programmes for village and small industries have an extremely important place in the Third Plan because, besides providing employment opportunities, they are calculated to broaden the industrial base of the economy. Through them, over a large range of activities, it is hoped to improve existing skills and equipment and to secure fuller use of the local resources of each area. Industrial centres are being developed in small towns whose economy can be linked closely with that of the neighbouring rural areas.

Small Industries and Co-operative Banks: The need for channelling credit to small-scale industries through co-operative banks was recognised long ago but the steps taken so far in this direction have not yielded tangible results as the co-operative banks are not equipped to understand the problems of industrial units and are unwilling to advance credit to them. To give assistance to small-scale industries, it is proposed to establish an industrial co-operative bank at Hyderabad. For this purpose a sum of Rs 10 lakh has been provided. Rs 25 lakh have been provided for equipping the Industries Department with experts who have experience and capacity in the different fields. They will draw up detailed schemes and take up the establishment of small-scale factories for production of various consumer products and also guide the private sector where required. Chain stores are to be organised to assist small industrialists in getting their supply of raw materials and machinery, in marketing their products, and also in production against assured orders by securing contracts. Each branch will be provided with working capital to the extent of Rs 25,000. The total expenditure, both recurring and non-recurring, on account of the scheme, would be Rs 25 lakh. During the Third Plan period, it is also proposed to grant loans under the State Aid to Industries Act and a provision of Rs 70 lakh (Rs 40 lakh for the Andhra region and Rs 30 lakh for Telangana) has been made towards this scheme.

Besides the schemes mentioned above, it is also proposed to start about 30 small-scale industries which are intended to stimulate production of consumer goods—like stoneware pipes, radio components, locks, steel trunks, sheet metal, folding and bending machines and scientific glass apparatus. It is also proposed to start training centres for training village artisans in various cottage industries. Many training and production centres will also be started. A sum of Rs 100 lakh has been set apart in the Plan for the development of the leather and tanning industry.

Industrial Estates: The principal objective of setting up industrial estates is to enable a number of small-scale units to have the advantage of common services and other facilities, such as ready-made factory buildings, electricity, water, gas, steam, compressed air, railway sidings, watch and ward, etc. Being located near one another, some units may be better able to use the goods and services of others, so that they become inter-dependent and complementary. With the setting up of industrial estates in the different parts of the State during the Second Plan period, people have realised their importance and industrialists are being attracted to them in increasing numbers. It is proposed to set up during the Third Plan period at least one industrial estate in each district, besides 18 rural industrial estates, and a provision of Rs 220 lakh—Rs 83.57 lakh for the Andhra region and Rs 136.43 lakh for Telangana—has been made in the Plan.



Skilled hands shape and examine several kinds of survey instruments made at a factory in the Industrial Estate at Sanathnagar, Andhra Pradesh

---

NEXT FORTNIGHT

Kashmir Designs Centre
—Pictorial Feature
R. J. Chinwalla

* * *

Quality Control in Small Industries
V. S. Mahajan

* * *

The Talk We Talk
Krishna Gorowara

* * *

Ramabai Ranade
Lalji Pendse, M.P.

Notable Advance In 3 Directions

Special Schemes for Backward Classes

THE Cottage Industies Department of the Government of Assam has many schemes in hand for the development of small-scale and cottage industries in the State. Over and above the normal schemes, the Department has formulated many important development schemes to be implemented during the Third Plan with a total outlay of Rs 270 lakh for the Plan period. These schemes are to be implemented with the financial assistance of the Central Government and they are therefore called "Centrally assisted schemes."

These new schemes have been classified under three groups, namely: (1) small-scale industries schemes, (2) industrial estates and (3) handicrafts schemes. The total provision for 1961-62 for various new schemes was Rs 38.13 lakh.

Small-scale Industries Scheme: A sum of Rs 30.53 lakh was provided in 1961-62 for this scheme. Twenty-one different minor schemes were to be taken up under this head, but only 16 schemes were sanctioned by State Government and these have been implemented. These include five spill-over schemes of the Second Plan, namely: (1) the completion of the Central Workshop at Gauhati, (2) completion of the pilot production centre at Darrang district, (3) completion of training-and-production centre, (4) completion of the production centre attached to the State Home and (5) completion of six training and production centres in Community Project areas. These five spill-over schemes were provided with Rs 4.40 lakh during 1961-62. The centres have been equipped with buildings, machinery and necessary staff.

The other 11 schemes implemented at a cost of Rs 22.88 lakh during 1961-62 are as follows: (1) Apprenticeship and in-plant training programme within and outside the State; (2) further share capital to the Government Marketing Corporation; (3) establishment of raw material depots; (4) exhibitions; (5) establishment of a Small-scale Industries Corporation; (6) establishment of a unit for the manufacture of small tools and agricultural implements; (7) supply of improved tools on subsidy basis together with demonstration units; (8) loans to small-scale industries; (9) loans to industrial co-operatives; (10) production of improved techniques in rural areas through mobile vans; and (11) subsidy for power supply to small-scale industries.

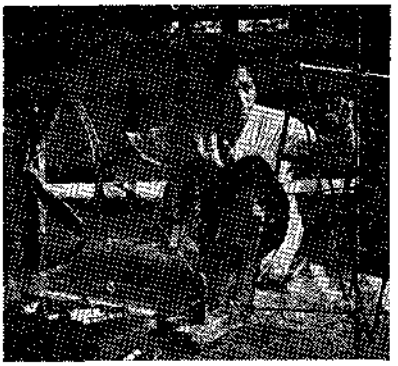


Industrial Estates: At the beginning of 1961-62 it was proposed to establish three new industrial estates at Nelbari, Sibsagar and Makkum. The two industrial estates established at Gauhati and Dhakiajuli were also to be completed. For this purpose a sum of Rs 5.60 lakh was provided in 1961-62. The two estates at Gauhati and Dhakiajuli have been completed and new estate at Nelbari is under construction. On these three estates a sum of Rs 2.46 lakh was spent during 1961-62. Preliminary steps for the construction of industrial estates at Sibsagar and Makkum have also been taken.

Handicrafts Schemes: During 1961-62 the Department proposed to take up three schemes under this head within Rs 2.00 lakh. Of them, only two have been sanctioned within Rs 1.50 lakh and implemented successfully. A cane and bamboo production centre was established at Karimganj at a cost of Rs 0.56 lakh. In addition, a sum of Rs 0.20 lakh was sanctioned to 59 handicrafts industrialists as grants and a large number of persons are now under training in various handicrafts.

Other Activities: (1) The Department has also taken up various schemes under Article 275 of the Constitution for the economic progress and uplift of backward classes. The scheme involved a financial outlay of Rs 2.97 lakh during 1961-62. This available fund is utilised for (a) training tribal boys and girls in various small-scale and cottage industries; (b) financial assistance to individuals and industrial institutions; (c) establishment of training and production centres in various trades like carpentry, bee-keeping, blacksmithy, hand-made paper making, doll and toy making, soap-making and cane and bamboo work etc. in all the tribal districts; and (d) establishment of industrial units in the public sector such as (1) the castor seed crushing units at Dalu in Garo Hills, and (2) the lime and coke making units in Khasi and Jaintia Hills and Garo Hills.

State Store Purchase Programme: To buy small-scale and cottage industries of the State by way of patronising their products, the "Assam State Store Purchase Committee Rules" were enacted and came into effect from September 1961. According to these Rules, all Government Departments and other statutory bodies have to confine their purchase of store to *bona fide* cottage and small-scale industries of the State. For this purpose, the Directorate of Industries Department have registered the small-scale and cottage industries of the State. As on March 31 this year, 43 small industries and 19 cottage inudstries had been registered by the Department. The Government



Weaver from an Assam village

Departments have to buy their stores requirements from these registered units even if their prices are higher by 7 per cent for small-scale industries and 10 per cent for cottage industries than the prices quoted by large and medium industries.

Participation in Share Capital: To have sufficient accommodation from financial institutions, a small industrial unit has to have share capital on a scale which it is generally not in a position to raise. Further, for want of sufficient securities to be offered for loan or advance, a small industrialist finds it difficult to arrange the necessary working capital from a bank. In such case where the prospect is good and technical knowledge is available to the industrialist, the question of Government's straightforward participation in equity share capital arises. The Government's participation is restricted only to a public or private limited company or co-operative society. In the small industries sector these are in a minority. Further, Government participation is likely to lessen the promotional enthusiasm of the entrepreneurs. Government participation is, therefore, very selective in its very nature.

The Government of Assam has already made the necessary provision under its amended State Aid to Industries Act, 1959, for participation in share or purchase of debentures. An expert committee has been constituted to advise and help the Director of Industries, Assam, in connection with such participation.

Until the end of 1961-62, the Government of Assam had participated in the following companies with the amount shown against each: (1) Assam Tanneries Ltd., Gauhati—Rs 1,27,000, (2) Assam Pharmaceutical Works, Gauhati—Rs 50,000.

The regular features of *Yojana* have been held back to find space for special articles on small industries. They will be resumed from the next issue.

UPGRADING OF SKILLS

More Rural Artisans Being Trained

By N.P. SINHA
Director of Industries

A NUMBER of programmes were taken up in Bihar during the Second Plan in the field of small-scale and cottage industries. No doubt in their implementation we have made mistkaes. But we have thereby built upon our knowlege also, and we hope, in the light of the experience gained, to tackle the problems better in shaping the rural economy of the State.

Following the recommendations of a team of the Committee on Plan Projects, commonly known as Balwant Rai Mehta Committee, provision for rural arts, crafts and industries programme out of C.D. funds was enlarged so as to cover every Block from 1958-59. As far as possible, these nucleus funds were also supplemented by resources made available from the normal industries budget of the Department. Some of the important activities in C.D. areas out of these funds related to the establishment of training-and-production centres for upgrading the skills of existing artisans and creation of new skills, organisation of industrial co-operatives and provision of necessary assistance, introduction and popularisation of improved tools among artisans at subsidised rates, organisation of training camps for executives of industrial co-operatives, and holding of exhibitions and fairs to popularise the products of cottage industries.

Pilot Projects: For intensive development of cottage and small-scale industries in compact areas; subject to environmental variations, Pilot Projects were started—one in North Bihar with headquarters at Pusa, another in South Bihar at Biharsharif and the third in the Chotanagpur region. With the experience gained in these Pilot Projects, a model programme of rural arts, crafts and industries was drawn up, which is being currently implemented all over the State in C.D. areas with varying degrees of success. The work done in the Biharsharif Pilot Project was reviewed by a Study Team appointed by the Government of India and its performance has been highly commended in their report.

For providing training in improved manufacturing processes using electrically operated machines, 24 Model Workshops have been set up in some of the basic crafts like carpentry and blacksmithy. For developing related industries, including provision of common facility services, 19 units have been started. For demonstrating the technical and economic feasibility of small-scale enterprises, specially small manufacturing industries, 21 units have been set up. A number of all these units are located in rural and semi-urban areas like Pusa, Saharsa, Dumka, Bikram, Biharsharif, Mehsi, Tilaiya, Sabour, Shakri, Bihta, Hajipur, etc.

Major portion of the financial assistance for industrial development under the State Aid to Industries Act has been given in rural areas only —Rs 80 lakh out of Rs 135 lakh spent on this account during the Second Plan period.

The entire expenditure on Khadi and Village Industries, amounting to Rs 2.45 crore during the Second Plan period, has been entirely in rural areas, giving full-time employment to 3.5 lakh people and part-time engagement to nearly 1.5 lakh persons. Ninety per cent of the allocation for sericulture schemes is spent in rural areas of the Chotanagpur and Santhal Parganas districts, on supplying disease-free layings through Tassar Seed Stations, forming rearers' co-operatives and organising proper marketing facilities for the benefit of tassar rearers, most of whom are Adivasis. Likewise, 80 per cent of the allocation for schemes of handloom development is spent to assist the weaving industry in hundreds of villages. Under a new scheme for the introduction of powerlooms, 900 powerlooms have already been distributed and consequently earnings of handloom weavers have gone up.

Under handicrafts almost 60 per cent of expenditure has been concentrated in the rural sector, to revive and strengthen the existing crafts. Most of the beneficiaries are women and members of the scheduled castes and backward communities. For craft training of women, 9 Women's Industrial Schools have also been started, besides a large number of knitting, embroidery and tailoring centres spread throughout the State. For the training of rural artisans, over 450 training-and-production centres in more than twenty different crafts were run during the Second Plan.

Third Plan : The Third Five Year Plan for Industries has been drawn up with a distinct bias towards rural industrialisation. Out of a total provision of Rs 1,103 lakh for Village and Small-scale Industries, the expenditure in rural areas is likely to be Rs 533 lakh. This is exclusive of the expenditure on Khadi and Village Industries which is estimated at nearly Rs 5 crore. Besides sericulture, handloom, handicrafts, Khadi and village industries, the State Government intends to spend 75 per cent of the allotment for Small-scale Industries, including industrial estates (i.e. Rs 583 lakh out of Rs 777.43 lakh) in rural and semi-urban areas.

A number of new schemes have been formed and some of them have already been introduced. For instance, to minimise delays in the execution of commercial schemes and bring about business-like efficiency in their operation, a Bihar State Small Industries Corporation was registered in August 1961. This is entirely a State undertaking. With an authorised capital of Rs 50 lakh, the Corporation would, among other things, undertake the following activities:

(i) Management of industrial estates;

(ii) Management of small-scale industries of commercial nature already set up by the State Government;

(iii) Supply of machinery to small producers on hire-purchase terms;

(iv) Promotion of sales through schemes of quality marking and establishment of sale depots and emporia at suitable places both inside and outside the State, etc.

The Corporation started work in February 1962 and a large number of commercial schemes have been entrusted to it.

During the Second Plan, industrial estates came to be recognised for the first time as a means to achieving decentralisation of industry, and accordingly four industrial estates were set up. In the Third Plan, there is provision for 14 industrial estates, of which ten will be rural in character. Sites have been selected and steps taken for acquisition of land in all cases. It is proposed to set up in 1962-63 a large industrial estate at Muzaffarpur, a medium-sized one at Purnea and smaller estates at Tilaiya, Ramnagar, Barun and Lakhisarai.

Industrial Areas : In the industrially-minded areas like Adityapur, Patna, Barauni and Amjhore in Shahabad district, it is proposed to set up 'Industrial Areas' where developed sites would be made available to entrepreneurs for putting up their own factory sheds. The schemes of Industrial Estates and Industrial Areas would thus, in course of the Third Plan, open up undeveloped areas to industrial ventures of various kinds, thereby generating additional income and employment in the rural sector of our economy. Ramgarh-Patratu plateau adjoining the South Karanpura coalfield is fast developing into a centre of industries based on coal. The biggest thermal power station in Bihar is being constructed at Patratu and a large number of refractory industries are coming up. The State Government is acquiring 4,000 acres of land in this belt for offering developed factory sites to prospective industrialists.

In addition, 50 units of workshop sheds are also proposed in the Plan, exclusively for village artisans working in rural towns with a population of less than 5,000. Four such units will be set up at Vendra (Hazaribagh), Chakla (Purnea), Daudnagar (Gaya) and Pareo (Patna) in 1962-63.

The Community Development programme has brought within its wake the technological advancement of rural areas through the introduction of improved agricultural implements and a variety of other equipment. For maintenance and repair of these, the Plan provides for 60 rural workshops. These are to be located in the rural industrial estates.

Credit Facilities : Credit for setting up industries is available in the shape of (a) long-term loans under the Bihar State Aid to Industries Act, (b) machines on hire-purchase basis from the National Small Industries Corporation, (c) long-term loans granted by the Bihar State Financial Corporation and (d) short-term loans advanced by the State Bank of India.

There have, generally, been two kinds of complaints regarding the loans granted under the State Aid to Industries Act;

one about delays and the other about misuse of loans. Steps have been taken from time to time to eliminate the difficulties of the entrepreneurs and also to minimise the chances of misuse.

To remove administrative delays, powers have been delegated to officers concerned. The Director of Industries and Additional Directors of Industries can grant loans up to Rs 20,000, the Collectors and Additional Collectors up to Rs 10,000, and the S.D.Os and C.P.Os. (I) up to Rs 5,000. It is also proposed to delegate powers to the B.D.Os up to Rs 5,000.

As regards misutilisation, Government made a detailed survey of all units which have so far received financial assistance. It was noticed that out of 4,644 loanees, only 440 had misutilised the amounts. Steps have been taken to terminate their loans and to recover the entire sums, with interest and penal interest through certificate proceedings. The power to terminate loans at present rests only with the State Government, leading to delay in taking action against defaulters. Government proposes to amend the State Aid to Industries Act to empower the district officers to terminate the loans sanctioned by them.

Strict instructions have been sent to the District Industries Officers to enquire into the cases of misuse. Emphasis is now laid on granting machines rather than cash loans. Government also proposes to liberalise the terms for grant of machines on hire-purchase.

A total sum of about Rs 1.40 crore has so far been advanced as loans to small scale and cottage industries since 1955 under the State Aid to Industries Act alone. Besides, the Bihar State Financial Corporation has given loans up to Rs 2.25 crore. At present loans up to Rs 10 lakh only can be granted by this Corporation. The Central Government is considering a legislation to enlarge the scope of the Corporation to raise the loan limit to Rs 20 lakh.

Government has arranged with the State Bank of India for grant of short-term loans against the security of raw materials, finished products and the Zamindari Compensation Bonds. In suitable cases, the Bank can even consider the grant of clean advances in order to overcome the difficulties of entrepreneurs of a purely temporary nature.

State Participation : State participation in the capital structure of private enterprises has come to be recognised as one of the positive steps to attract industrial units to backward and underdeveloped areas. It is now being extended to the small-scale sector also, and a scheme to this effect has been included in the Third Plan. An Advisory Committee has been set up to scrutinise the applications and advise Government in the general implementation of this scheme. A sum of Rs. 3 lakh has been set apart for expenditure on this head during 1962-63. Government has already decided to purchase shares worth Rs 50,000 in a private company. Other cases are under consideration.

Other schemes of rural industrialisation relate to establishment of Pilot Projects in new areas. Three of these have already been started at Garhwa, Kishanganj and Siwan. More model workshops in carpentry and blacksmithy will be set up. Additional production centres to utilise local skills and raw materials will be established.

For the training of rural artisans in a number of crafts at one place, 34 centres have been sanctioned and most of them have already started functioning in C.D. areas. There is a growing emphasis on the formation of industrial co-operatives of rural artisans with the provision of various kinds of assistance to them in production and marketing. Rural arts, crafts and industries programme in Blocks is constantly being reshaped in the light of experience. For instance, the limit of annual turn-over for grant of managerial assistance to industrial co-operative societies has been reduced from Rs 10,000 to Rs 5,000. Unlike in the past, loans up to Rs 15,000 can now be granted to artisans out of C.D. funds. Instructions about subsidised supply of improved tools have been suitably revised. To assess the performance in each Block both in quality and quantity, annual targets are being prescribed. In addition, efforts are being made to pool all resources to intensify efforts for rural industrialisation in certain selected Blocks with the co-operation of non-official agencies already working in the field, such as, the Shekhodeora Ashram in Kawakol area of Gaya district and the Bihar Khadi Gramudyog Sangh in the districts of Muzaffarpur and Darbhanga.

Gujarat

APPLICATIONS POUR IN

Need to Assure Supplies

By C. B. PATEL
Director of Industries

THE State Government's role in assisting small-scale industries to stand on their legs is as important as that of the Central Government. While some schemes of assistance, like supply of credit, hire-purchase facilities for capital equipment and the establishment of industrial estates, are implemented on an all-India basis, it is up to the State Governments to offer subsidies on power consumption and special concessions in buying materials.

Since the birth of the new Gujarat State on May 1, 1960, the State Government has been taking all possible measures to aid small-scale industries in various aspects. This article gives details of the progress made in the last two years in the various schemes in the State which are worked through the State Directorate of Industries.

The particulars of loans sanctioned under the State Aid to Industries Rules since the inception of the Gujarat State on May 1, 1960 to March 31, 1962 are given in the following table :

Type of industry	No. of applications received	Amount applied for Rs.	No. of applications sanctioned	Loans sanctioned Rs.
Engineering	141	47,12,000	56	14,50,000
Chemicals	48	18,78,075	17	4,22,000
Textile	24	7,32,000	9	2,60,090
Others	56	17,07,100	12	3,58,000
Total	269	90,29,175	94	25,60,000

Engineering industries account for more than 50 per cent of the total applications approved.

Out of the schemes undertaken for development of small-scale industries, the scheme of industrial estates has been found to be the most useful. The first industrial estate in the whole country was established at Rajkot in this State in 1955. During the Second Plan the Rajkot estate was expanded and new estates established at Ahmedabad, Baroda, Gandhidham and Udhna (near Surat). One more estate will start functioning at Bhavnagar very soon. Of the six estates, those at Bhavnagar, Gandhidham and Rajkot have been set up on Government account; the Ahmedabad estate by the Municipal Corporation; the Baroda estate by the Baroda Industrial Development Corporation and the Udhna estate by a co-operative society. The total expenditure of these estates is more than Rs 1 crore. The position of all these estates as on March 30, 1962 is given in the table on the next page.

During the Third Plan period 13 new estates will be set up at an estimated cost of Rs 110 lakh in rural and semi-urban areas. They are to be so planned that every district will have at least one estate. Work on the estates at Godhra and Mehsana is in progress.

Besides, the State Government has approved the guarantee scheme, formulated by the Government of India, under which industrial estates can be established by private agencies like limited companies or co-operative societies. Such sponsoring authorities have to get their programmes approved from the State Government who will stand guarantee for the loans obtained from financing institutions. Provision has been made under the scheme for getting necessary finance from commercial banks against the guarantee of the State Government. In response, several schemes have been put forward by the limited companies and co-operative societies and it is expected that by the end

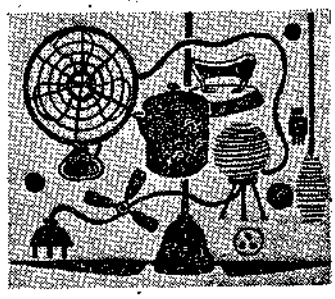
of the Third Plan about 50 such estates would be established in the State.

In the interest of economic development of rural and economically backward areas, the Government of India has recommended that industrial estates should be established in rural or semi-urban areas and the State Governments should spend 75 per cent of the Plan funds earmarked for the scheme of industrial estates for this purpose. Most of the new estates to be established in the current Plan are to be located in the rural or semi-urban areas. It would, however, be pertinent to discuss here a few points relating to the problems that are to be faced for the establishment of rural estates.

Industries in such estates are obviously based on locally available resources. As far as this State is concerned, there are very limited forest resources of industrial importance. The entire availability of bamboo has been earmarked for the industrial project approved in the large-scale sector. In the agricultural sector, cotton and oilseeds are important groups. These are at present exploited fully by the existing installed capacities in the cotton textile and vegetable oil industries. In the mineral sector, there are deposits of limestone used for lime kilns and clay for manufacture of bricks, roofing tiles, pottery, chinaware etc. on small scale. There are some cellulosic raw materials but a number of schemes have been sanctioned for their utilisation in both the large-scale and small-scale sectors. There is some scope for establishing modern carpentry and engineering workshops and manufacture of agricultural implements. In the aggregate, however, the present scope for establishing diversified industries is limited and the scheme will have to wait until the necessary demand has been created by the rising standard of living in rural areas.

Further, entrepreneurs are not eager to divert their attention to rural and semi-urban areas because of the various inherent difficulties they have to face in such areas. Land may be available easily but there is hardly any provision for power and water supply and approach roads. It is also difficult to get technicians and technical knowledge in most of the rural areas. Efforts will have to be made to provide these facilities, as well as secure scarce materials like iron sheets, tinplates, non-ferrous metals, cement, coal and coke. In addition, special incentives will have to be provided in order to attract industrialists to rural areas.

A critical analysis of other facilities for small-scale industries suggests a few problems. Regarding the provision of loan, for instance, it is to be emphasised that the small-scale applicants desire to have such loans very early. The applications are to be dealt with at different levels and, in spite of all possible earnestness, it is difficult to avoid



a certain amount of delay. The cumulative effect of these delays, however, is considerable and applicants have to wait for months before they can secure loans. It is rather difficult to suggest a way out of this impasse. It may, however, be mentioned that the applicants, in their own interest, should give exhaustive but correct information in the application form so as to avoid the time now spent on finding out further particulars.

Regarding hire-purchase facilities, it has been experienced that the applications are sent by the State Directorate of Industries to the National Small Industries Corporation without delay. The Corporation, however, requires time to study these cases at its level. Even after the schemes are approved and the amount of advances by way of deposits has been received from the applicants, one fine morning a letter comes from the Corporation that the required machinery cannot be obtained due to foreign exchange difficulties. Such cases create a sense of despair and frustration among the entrepreneurs and should be avoided as far as possible. We are aware of the foreign exchange difficulties, but such contingencies can be foreseen in time and the applicants need not be asked to go through the entire procedure culminating in the actual payment of advance.

Regarding provisions of scarce materials, whether indigenous or imported, all possible efforts are made to secure such materials for small-scale units. Shortages, however, are inherent in a developing economy and cannot be dispensed with altogether. The small-scale industries should not get frustrated if some of the materials required by them cannot be procured as and when required.

On the whole, whatever the shortcomings of different schemes for aiding and encouraging the small-scale units, day by day we have been receiving an increasing number of applications for assistance in starting different types of industries. With the improving position of raw materials and spread of technical knowledge, such industries are bound to increase. Our intention is to assist and encourage them in all possible ways so that the small-scale sector can assume an honoured place side by side with the large-scale sector.

Location	No. of sheds completed	No. of sheds occupied	No. of factories working in the estate	No. of persons employed
Ahmedabad	88	86	54	493
Baroda	57	51	29	618
Bhavnagar	36	—	—	—
Gandhidham	52	34	7	28
Rajkot	110	109	38	455
Udhna	78	65	101	1070

More Industries Urgent

Expanding Role for Government Aid

By K. P. Viswanathan Nair
Director of Industries & Commerce

THE economic problems of Kerala can be tackled only by a policy of extensive industrialisation. In the First and Second Plans, however, there was no appreciable development in the industrial field in the State, more emphasis having been laid on agricultural development.

An ambitious programme for industrial development has been drawn up under the Third Plan taking into account the availability of raw materials and other facilities and the need to harness the joint efforts of the public and the private sectors.

The schemes under the Third Plan include the expansion of the existing Government-owned, Government-managed and Government-sponsored industrial concerns, providing financial and other assistance to private industrialists for the establishment of large-scale and small-scale industries and the rehabilitation of other industries like coir, handloom, handicrafts, etc. on co-operative basis.

The expansion of the Government-owned industrial concerns includes the enhancement of production of soaps in the Kerala Soap Institute, Calicut, from 360 tons to 700 tons a year; manufacture of synthetic detergents up to 200 tons per year; expansion and modernisation of the Government Oil Factory, Calicut, including hydrogenation of fish oil; deep mining and expansion of production of china clay in the Government Ceramic Concerns, Kundara, from 3,500 tons to 8,000 tons per annum; production of stoneware pipes, refractories and sanitary wares in the factory; modernisation and expansion of the Travancore Rubber Works by enhancing production to 500 tons of rubber goods and 12 lakh cycle tyres and tubes per year; expansion of the existing production capacity of the Government Cycle Rim Factory, Trivandrum, to 500 mudguards and 1,000 rims per shift; and expansion of the Trivandrum Spinning Mill by another 12,000 spindles.

As regards Government-managed industrial concerns and other Government companies, similar expansion programmes have been drawn up in respect of Malabar Spinning and Weaving Co., Calicut; Travancore Cochin Chemicals Ltd., Alwaye; Travancore Titanium Products Ltd., Trivandrum; United Electrical Industries Ltd., Quilon; and the Electrical and Allied Industries (Travancore), Kundara.

In the private sector, effective steps are being taken to establish the Premier Tyres Ltd., Alwaye, for the manufacture of automobile tyres, in which the State Government has participated in the share capital structure to the tune of Rs 50 lakh. In the Travancore Electro-Chemical Industries Ltd., Chingavanam, which has been lying defunct for the last few years, steps are being taken to restart production at the rate of 10,000 tons of calcium carbide per annum. The State Government have already invested Rs 7 lakh by way of share capital. The Pallathra Bricks and Tiles Ltd., is a Government company with a share capital of Rs 11 lakh. The scheme is under implementation. The factory is being erected at Shertallai for the manufacture of sandlime bricks and tiles.

The F.A.C.T. Ltd., Alwaye, which is also a Government company is now implementing its second stage of expansion for producing 39,600 tons of ammonia which will be utilised for the manufacture of ammonium sulphate, ammonium phosphate, ammonium chloride and super-phosphate. The factory will also produce 3,000 tons of liquid sulphur dioxide. With this expansion, the cost of production of ammonium sulphate is expected to be brought down to the level of that at Sindri Fertilisers.

The United Electrical Industries, Quilon, under its expansion programme, will be manufacturing 150,000 single-phase meters and 12,000 poly-phase meters per annum.

The immediate expansion programme of the Travancore Titanium Products Ltd., envisages increase of production of titanium-dioxide to 18,000 tons per annum. A licence has been obtained for a further expansion of 50 tons daily capacity. We are negotiating for foreign collaboration for taking up this big scheme.

The establishment of a few large-scale industries in the private sector is also contemplated under the Third Plan. In respect of some of these preliminary steps have already been initiated and some of them are actually under implementation. The Rayon Grade Wood Pulp Factory at Calicut, the Premier Tyres Ltd., Alwaye, the Tracco Cables Ltd., Tripunithura, the two co-operative sugar factories at Chittur and Pandalam respectively and the two spinning mills, one at Balaramapuram in the public sector and the other at Cannanore in the co-operative sector, will be completed during the Third Plan period. In addition, certain central sector projects are also expected to be started during the Third Plan period, the most important among them being the second ship-building yard at Cochin, the Photo-Chemical Industries at Neriamangalam and a Precision Instruments Factory, in addition to the Forms Press at Koratti which was already sanctioned under the First Plan.

In order to assess the potentialities of industrial development of the State, a techno-economic survey was conducted by the National Council of Applied Economic Research, New Delhi. The survey report contains concrete suggestions for the establishment of new industries based on agricultural products, forest produce, chemicals, engineering industries and minerals of the State. The agriculture-based industries for which there is great scope in the State are sugar factories, textile spinning mills and factories for the solvent extraction of oil cakes. The forest-based industries include the rayon pulp factory, hard-board plants, bamboo Bagasse paper factory, urea formaldehyde resin factory etc. Under chemical industries, there are vast potentialities for establishing factories for the manufacture of industrial alcohol and dry ice, fermentation chemicals, starch and glucose, essential oils, polyvinyl chloride plastic etc. The scope for establishing new engineering industries in the State is very great and with the establishment of the second ship-building yard at Cochin, it is expected that several engineering industries can be started as ancillaries. The mineral-based industries for the establishment of which there is very great scope, are high tension insulators, sheet glass, sanitarywares, titanium dioxide etc.

For the expansion and modernisation of the existing large-scale industries and for starting new industries in the State, the Kerala Industrial Development Corporation has been formed recently by the Government with an authorised capital of Rs 5 crore. The Corporation will be considering and taking effective steps in respect of the schemes of private industrialists for share participation and other assistance.

A Small-scale Industries Corporation (The Kerala State Small Industries Corporation Ltd.,) has also been formed recently for financing and assisting small-scale industrialists and for establishing new small-scale industrial units in the State.

Under the Third Plan the development of village and small industries will also be developed side by side with large-scale and medium industries. For the development of village and small industries including handloom, coir, handicrafts, etc. a provision of Rs 8 crore has been made. The coir and handloom industries will be rehabilitated and expanded on co-operative basis. There are also schemes for establishing traditional handicrafts in the State on co-operative basis and also for giving financial aid to other artisans. The development of Khadi and village industries is being implemented by the Kerala Khadi and Village Industries Board with funds obtained from the All India Khadi and Village Industries Commission and the State Government.

With the implementation of the schemes formulated under the Third Plan, it can be reasonably expected that the incidence of growing unemployment in our State will be reduced, and the standard of living of the people raised to an appreciable extent.



A tribal woman of a Madhya Pradesh village making a mat from the leaves of the date palm

5,000 NEW UNITS IN 3rd PLAN

Large Scope for Entrepreneurs

By N. SWAMI
Director of Industries

As in the case of large-scale industries, Madhya Pradesh has to make up considerable lee-way in small-scale industries also. The total number of industrial units in the State including those using power, according to a recent enumeration was 12,191. Most of the small industries can be grouped under rice mills, 'dal' mills, oil mills, printing presses, small flour mills, ginning and pressing factories, band saws, powerlooms and ice factories.

The Third Plan provides Rs 6.87 crore for the development of this sector. Of this, Rs 4.97 crore are for various programmes of development and the remaining Rs 1.9 crore are earmarked for industrial estates and work-sheds.

The industrial estate, as an instrument for developing small-scale industries, has established its unquestionable place in the State. At present industrial estates have been completed in Indore, Gwalior, Jabalpur, Raipur, Burhanpur, Bhopal, Sagar and Satna, and are under construction in Ratlam, Bilaspur, Ujjain and Vidisha. Six estates will be put up in Rajnandgaon, Bhilai, Durg, Guna, Shahdol and Katni. Besides these, the Plan provides for 26 rural estates and 50 work-sheds. Construction of work-sheds by the State Small Industries Corporation is making progress. They are expected to lay a strong foundation for mechanised industries in rural areas where electric power has already reached. An all-out effort is being made to provide simple machines in such work-sheds for blacksmithy, carpentry and footwear to enable the rural artisan to have the benefit of electric power on the one hand and to double the production on the other. This is an experiment which might lead to substantial results.

The provision of common facility centres in various industries such as tanning, blacksmithy and pottery and the establishment of a timber seasoning and treatment plant is an important part of our small-scale industries development scheme. The experience so far gained shows that entrepreneurs take full advantage of these common facility centres. Slightly more ambitious are schemes for development of small industries like umbrella ribs, electric fans and motors and bicycles on a decentralised basis with a central factory providing the training, assembling and marketing services. These schemes are making good progress.

The provision of finance for small-scale industries has been recognised to be an important service to be rendered by the State and the Third Plan provides Rs 200 lakh for the purpose. This is of course totally inadequate and is being supplemented by invoking facilities under the hire purchase scheme for supply of machinery to small-scale industries established by the Government of India. A vigorous drive initiated in the middle of 1961 has yielded remarkable results and the total value of applications for hire purchase of machinery received during 1961-62 has come up to Rs 106 lakh. The problem, however, is the delay in the supply of such machinery by the National Small Industries Corporation (N.S.I.C.). This is a problem which the authorities of N.S.I.C. are fully seized of.

The State Finance Corporation has been dealing with applications for loans for small-scale industries promptly and with sympathy and advancing loans up to the extent of 75 per cent for construction of buildings and purchase of machinery. The State Bank Scheme for loan assistance has been making tardy progress and much more energetic action is indicated.

The toughest problem faced at present by small-scale industries in our State is that of raw materials, specially non-ferrous metals. It is unfortunate that owing to the reorganisation of the States, adequate data of consumption in the basic year could not be collected and sent in, with the result that quotas to the State have been fixed very low. This has led to considerable hardships to thousands of traditional artisans. The steel supply position is also equally difficult and a large number of steel processing industries are having a hard time. It is not only that the quotas are inadequate; even these limited quotas are not received.

One point very highly favourable to development of industries in Madhya Pradesh is the large availability of electric power. With the commencement of the Chambal Hydro-Electric Project nearly 75,000 kW of surplus power is available in about nine districts of the State in the western region. A bold and far-reaching power programme is under execution there. In other parts of the State also, electric power will be available during the Plan period. The real problem, however, is to get entrepreneurs in adequate numbers to utilise the power. For this purpose a specially low rate of electricity for small-scale industries, at 6 nP per unit, has been sanctioned by the Government. Along with it other generous concessions, such as grant of land at very low rates and reduced rate of sales tax on raw materials, have been extended to industries including small industries.

While results are visible and entrepreneurs are coming from outside and inside the State, the speed of development requires to be considerably accelerated. This will be possible only if entrepreneurs come forward in hundreds and with proposals not for establishment of conventional industries consuming quotas of scarce raw materials, but proposals involving production of articles involving skill and essential to the community.

The problems of certain districts like Bhind and Morena which have to support a high density of population are peculiar to the State. Similarly the problems of districts predominantly populated by aboriginals who form a substantial percentage of the population and who are living below the subsistence level are problems compelling immediate attention. The establishment of industries in such districts is not an easy problem. But industrialisation alone can hope to provide stable and whole-time jobs over the years.

In this task enormous help has to come from the Centre. These problems have to be recognised as something peculiar to the State and the same yardstick for giving assistance in the form of money, import licence, quotas, etc., which are applied to advanced States like Maharashtra cannot be applied to this region.

The Department has set before it a target of an addition of 5,000 new small-scale units during the Third Plan and is prepared to go all out to help the private sector in achieving this target. It is a challenge to the private sector and it is hoped it will take it in the right spirit.

Madras

NEW TALENT EMERGING

Industries Spread to Villages

By P. SABANAYAGAM
Director of Industries and Commerce

THE importance of small-scale industry in the national economy has become an established fact. In the context of solving unemployment and meeting the demand for consumer goods, small-scale industries have a vital role to play. From the point of view of regional development and decentralisation too, small industries, as centres of intense economic activity, attain significance.

During the five years, Madras State has made remarkable progress in this field. The State Government, which is responsible for their development, provides assistance for their growth in several ways but chiefly in the form of loans, technical assistance and technical training facilities. During the First Plan period an outlay of only of Rs 12 lakh had been incurred on the programme, but in the Second Plan the tempo was considerably stepped up with a total outlay of Rs 535 lakh. Further increase has been planned during the Third Plan, and a sum of Rs 1,120 lakh has been set apart for the purpose.

Achievements in Second Plan : The schemes formulated for the development of small-scale industries during the Second Plan included model production units, six demonstration and training centres, 19 common service facility workshops, five social welfare centres, one technical information centre, one raw materials depot and eleven sales depots. Besides, bulk provisions were made (1) for granting loans to small industries under the State Aid to Industries Act, (2) for providing subsidy over rates, (3) for organising industrial co-operatives and (4) for securing the services of foreign experts. Most of the model production units produced a variety of articles.

Common Service Centres : The common service facility workshops now functioning provide servicing facilities in the fields of tools, dyes, jigs, fixtures, precision works, drop forging, heat-treated parts, woodworks, sheet metal articles, electroplated parts, textile mill parts, agricultural implements, tin containers, brass articles, footwear, etc. About 650 small entrepreneurs, artisans



An outstanding example of Tanjore metal repousse work.

and industrial co-operatives have so far taken advantage of the servicing facilities. Thirteen industrial co-operatives have been organised. The technical information centre has been doing good work and the raw materials depot supplies essential raw materials such as iron, steel and coal.

Loan Facilities : Under the State Aid to Industries Act, loans to the extent of Rs 62.61 lakh, under liberalised terms and conditions, were sanctioned to 7,659 small industries from 1956-57 to 1958-59. The policy of the Government in the grant of loans has been that the industries for the development of which aid is sought should have an important bearing on the economic development of the country and should be (a) new or nascent industries, (b) industries to be introduced in areas where such industries are under-developed, (c) cottage industries or samll-scale industries or (d) old or established industries. With a view to giving fillip to the development of cottage and small-scale industries, the Government has reduced the rate of interest chargeable on loans not exceeding Rs 50,000 to three per cent per annum. For industrial co-operatives, the rate is 2½ per cent per annum.

Industrial Estates : Perhaps the most important among the schemes is the establishment of industrial estates and colonies where the various facilities have been integrated and incentives offered to small industrialists. Such estates provide on a rental basis (at subsidised rates for a few years) good accommodation and other basic common facilities to groups of small entrepreneurs who would otherwise find it difficult to secure these facilities at a reasonable price.

Out of the ten estates and colonies programmed during the Second Plan, industrial estates have been established at Guindy and Virudhunagar and industrial colonies at Madurai, Erode, Tiruchirapalli, Tanjore, Pettai, Marthandam and Katpadi. Another industrial colony at Salem is expected to start functioning soon. At Guindy, the biggest of all the estates and colonies in the State, there are 128 units occupied by 93 different entrepreneurs. These factories, besides conserving valuable foreign exchange, provide employment for about 2,500 persons with an annual turnover of Rs 1.75 crore which could be increased further with adequate supply of raw materials. The total number of sheds constructed in all the estates is 237.

Housing Scheme : For the benefit of workers employed in the units in the estates and colonies, 592 tenements have been constructed under the subsidised Industrial Housing Scheme and they are given to workers at subsidised rates of rent. Amenities such as approach roads, water supply, electricity, and modern sanitation have been provided.

Training Programmes : The State has a well organised programme of technical training, both institutional and in-plant. The State Directorate of Industries has set up a number of training-and-production or demonstration centres in the State where training will be given to selected artisans in particular trades. Mention may also be made of the apprenticeship training scheme and the "evening classes" for workers.

Third Plan Targets : A total provision of Rs 11.20 crore has been made for the development of small-scale industries and industrial estates during the Third Plan. Ten more industrial estates will be set up before 1965-66. The programme includes the expansion of existing service facilities and the pilot production centres and the establishment of new ones. Creation of a staff school to train the technical staff on the administrative side and the administrative staff on the technical side, getting foreign experts in various fields of industrial development to get under-studies trained by them are some of the other measures contemplated.

During the Third Plan period, a functional industrial estate for footwear and leather goods and a ceramic industrial estate are being set up and industrial estates by private agencies and co-operatives with the assistance of the Government are also coming up.

Towards achievement of rural industrialisation, it is proposed to set up, in 50 villages, small general purpose rural workshops costing not more than Rs 50,000 each.

Industrial Co-operative Bank : To augment the credit facilities to the small-scale industries, the Madras State Industrial Co-operative Bank Ltd., with an authorised share capital of Rs 30 lakh of which 51 per cent will be held by the Government, has been set up at the Industrial Estate, Guindy. The objective of the Bank is to provide assistance of long-term loans to over 2,000 industrial co-operatives and 5,000 small-scale industries scattered throughout the State.

Emergence of New Class : Thanks to the small-scale industries programme, there is already an awakening among the people to start more industries. An outstanding achievement of the programme is that it has led to the emergence of a new class of entrepreneurs, viz the educated class. Many who were pursuing other avocations in life have now become entrepreneurs themselves. Further, the worksheds proposed to be set up at the village level are expected to generate industrial activity in the villages. This is, in short, an attempt to solve the unemployment problem at the source in the sense that it is expected to check the migration of skill and enterprise to urban areas.

The development that has already taken place is heartening and the State looks forward to the future with confidence.



A view of the finishing section at an optical goods factory in the Industrial Estate at Guindy, Madras

Mysore

INDUCEMENTS TO INDUSTRIES

Low Rents and Block Loans

By **R. S. HOOLI**

Assistant Director, Small-Scale Industries

THE growth of small-scale industries is one of the most significant features of the development programme of Mysore State. During the Second Plan period, a sum of Rs 138 lakh was spent on these development schemes and the amount set apart for these schemes during the Third Plan period is Rs 337.10 lakh. A brief account is given here of the steps taken to induce and encourage artisans and entrepreneurs to start, expand and develop small-scale industries.

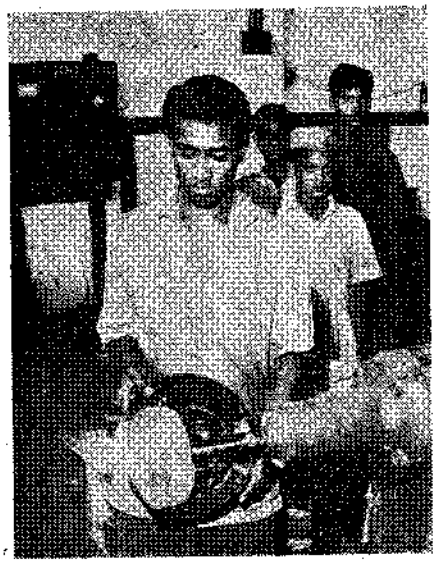
(1) *Establishment of Industrial Estates and Development Areas* : The growth of small-scale industries has been greatly hindered by the absence of proper and healthy locational facilities with adequate power, water, and communications. To overcome these difficulties a network of industrial estates has been planned which will provide enough accommodation and planned layout of machinery. According to this programme every district in the State will have two industrial estates with a total of 400 work-sheds of different types. A sum of Rs 50 lakh has been spent on the construction of eight industrial estates with 155 work-sheds and a sum of Rs 103 lakh has been set apart for other industrial estates during the Third Plan.

In addition, every district in the State will have a development area that is, a stretch of developed land which give all the amenities that an industrial estate does except building. A sum of Rs 26 lakh has been provided for these development areas. Plots will be given in these areas to entrepreneurs on hire purchase or outright sale, so that they can build their own work-sheds of approved designs.

The economic rent on the work-sheds so far constructed works out to 12 naye Paise per square foot of plinth area per month. But even on this a concession is given to the extent of 25 per cent in urban areas and 50 per cent in semi-urban and rural areas. The concession in rent continues for a period of two years with effect from the date of occupation of the work-sheds and thereafter the rent increases at the rate of one nP. per square foot per month every year till the economic rent of 12 naye Paise is reached. This arrangement provides excellent accommodation to the small industrialists without their capital being locked up on the land and buildings and helps them in the initial stages of production.

Every industrial estate and development area will have a common facility centre or a workshop equipped with necessary modern machinery for the benefit of the small industries located in the estates or areas. A sum of Rs 40 lakh has been provided in the Third Plan under the scheme.

Co-operative, Private or Aided Industrial Estates : Establishment of two or three industrial estates in a district will not be enough to meet the ever increasing demand for work-sheds and it may not be possible for the Government to build more industrial



A mechanic at work in an electroplating factory at the Industrial Estate at Hubli

estates or development areas because of limited funds. Co-operative bodies and private agencies will therefore be encouraged to set up industrial estates. These agencies are expected to collect one-fifth of the amount required for such industrial estate and the Government will arrange for the rest of the amount. Assistance will be extended for acquisition of the land required for such industrial estate.

Financial Help : Under the 'block loan' system, financial aid is given to small industrialists by way of loan on liberal terms, namely, at 3 per cent interest repayable in five to ten years' time. For the benefit of skilled workers who are unable to invest money in the establishment of small-scale industries, industrial co-operatives are formed and they are given long-term loans at 2½ per cent interest for working capital and share capital as also for buying machinery. In addition, the industrial co-operatives are given grants towards the managerial expenses for the first three years of their commencement. This helps them to organise and run the industries efficiently. So far 62 industrial co-operatives have been organised and Rs 26.51 lakh have been given as loan and Rs 62,200 as grant towards managerial expenses to some of these societies.

Financial assistance on liberal terms under the Mysore State Aid to Industries Act is also given to small-scale industrialists to the extent of Rs 10,000 in individual cases. Above this limit the loans are sanctioned through the Mysore State Financial Corporation, Bangalore.

Supply of Raw Materials : Small manufacturers with meagre capital at their disposal are unable to keep adequate stocks of the required raw materials of the right type and quality for use in their manufacturing process. The Department, therefore, is stocking such raw materials with the Mysore Small Industries Corporation, Bangalore, and supplies are made to them from time to time according to their requirements. Arrangements are also made to issue 'essentiality certificates' for the import of such raw materials as are not available indigenously.

Power Supply : In spite of acute shortage of electricity in the State, the Government of Mysore has earmarked a specific quantity of power supply for being allotted to small-scale industrialists. The Department recommends deserving cases to the Mysore State Electricity Board. To give a further fillip to small manufacturers the State Government has passed orders for grant of subsidy to units which generate electricity with the help of diesel sets and supply it to small-scale industries to cover the extra generating cost over the scheduled rates of the Mysore State Electricity Board.

Marketing Facilities : To help small-scale industrialists in the disposal of their products a sales depot has been started at Bangalore recently. In the first instance it deals with leather articles but it is expected soon to sell other goods also. Efforts are being made to establish liaison between the small-scale manufacturers and the Director-General of Supplies and Disposals and the Railway Equipment Committee for the supply and purchase of their requirements.

Training: To acquaint small manufacturers with the latest developments in techniques and use of machinery, training centres in different trades have been established at 26 different places in the State. Training is given at these centres to skilled workers and artisans for one year and during this period the trainees are given a stipend of Rs 30 per month. This enables even a poor worker to maintain himself while learning the trade. Rs 45.43 lakh have been provided for all these schemes during the Third Plan.

Small-scale Industries and Handicrafts Board : The Government of Mysore has constituted a Small-scale Industries and Handicrafts Board, consisting of representatives of small-scale industrialists and other non-officials interested in the development of small-scale industries. The Board meets periodically and advises the Government on the various steps to be taken for the development of small-scale industries in the State.

Orissa

BID TO WIPE OUT BACKWARDNESS

Panchayats Aided to Set up Units

By C. B. JAIN

Director of Industries

FAMOUS through the centuries for her art and architecture, Orissa has not developed much in industry as we understand it today. Her backwardness in this respect is quite visible when one compares her with her neighbouring States to her north and south — West Bengal and Andhra Pradesh. This backwardness is mainly due to the predominantly agricultural economy of the State and lack of adequate communication facilities. This latter factor is especially responsible for the slow progress the State has made in harnessing her vast natural resources and industrial potentialities.

However, with the impetus given by the Five Year Plan programmes, Orissa has launched an ambitious programme of industrial development since the beginning of the Second Plan.

Emphasis has been laid on the development of small-scale industries in the State as this type of industry is best suited for the semi-urban and rural areas of Orissa. It is the policy of the State Government to encourage development of these industries in the private sector. They have, therefore, been helping private entrepreneurs with financial and technical assistance on the same pattern as in the rest of the country. A few of these may be quoted briefly.

Financial Assistance: The State Aid to Industries Act has been amended to liberalise the terms and conditions for setting up new industries and developing existing ones. The rate of interest has been fixed at 6 per cent with a rebate of 3 per cent per annum on regular payment in individual cases and 3 per cent with a rabate of ½ per cent on regular payment in the case of industrial co-operatives. District Industries Officers have been empowered to sanction loans up to Rs 2,000 in each case. The Director of Industries is now granting loans up to Rs 5,000 in each case without reference to the State Board of Industries and Rs 20,000 in consultation with the Board.

A State Financial Corporation was set up in 1957 with an authorised capital of Rs 2 crore. The State Government has subscribed Rs 35 lakh as its share. This Corporation grants loans to small and medium industries in the State on medium-term and long-term basis. It has now been decided that the Corporation will act as the agent of the State Government in disbursing State aid loans between Rs 20,000 and Rs 25,000.

Pilot Project Scheme: The State Government operated a pilot project scheme for the development of small industries during the Second Plan. Under this scheme, the State Government participated with private entrepreneurs and set up small industrial units as joint stock companies with limited stabilities. The proportion of investment by the Government and private parties is 90 per cent and 10 per cent respectively. A company promoted under this scheme is placed under the management of a board of directors of which the private participant becomes the managing director. During the Second Plan period, 40 such companies have been promoted with capital investment of nearly Rs 61 lakh.

Industrial Estates: The programme of setting up industrial estates in the State started under the Second Plan. Five estates were set up during the period at Cuttack, Berhampur, Rourkela, Jharsuguda and Kendrapara at a total cost of Rs 65 lakh. Two more estates at Baripada and Dhenkanal, started towards the latter part of the Second Plan period, are nearing completion.

In the Third Plan it is proposed to set up four major and 48 rural industrial estates in the State at a total estimated cost of Rs 1.41 crore.

Commom Service and Production-cum-Training Centres: Common service centres have been set up at different places in the State in carpentry, horn-work, wire-drawing, blacksmithy, tailoring and leather-work for rendering common-processing services to the rural artisans.

Production-cum-training centres have been set up in the Community Development blocks in different trades in which the rural artisans are interested. It is proposed to convert these centres into full-fledged production units during the Third Plan so as to enable them to produce small agricultural tools, implements of improved varieties and house-building materials. To start with ten centres each in carpentry and blacksmithy are being converted into production units this year. They will be run by a co-operative society organised for the purpose.

Orissa Small Industries Corporation: This Corporation has been set up to supply raw materials to small-scale industries and market their products. It will also undertake the setting up of small engineering units in the rural areas.

The authorised capital of the Corporation is Rs 50 lakh. The State Government have so far taken shares worth Rs 2 lakh of this Corporation.

Panchayat Samiti Industries: This scheme, taken up in the Third Plan, envisages greater collaboration of the people with the rural indu trialisation programme of the State. Co-operative societies at the Panchayat level will be formed to set up and run these industries which will be engaged in producing consumer goods for the rural p pulation. The main purpose of this new scheme is to improve existing local skills and to introduce new techniques in production, diversify the occupational pattern of the rural people, manufacture building materials and undertake repair, maintenance of agricultural machinery and implements and process agricultural produce to ensure better cash returns to producers. Industries at the Panchayat level will be divided into two main categories : (1) agricultural processing units such as sugar units, rice and oil mills, groundnut and cashewnut processing, and (2) artisan units such as powerlooms, tile factories, boat-building units, utensil manufacturing units, agricultural tool manufacturing units, etc.

Under this scheme, the Government has taken steps to set up some tile factories and open-pan lime sulphitation units this year.

Training Facilities: There are training centres at Cuttack, Berhampur, Angul and Phulbani for giving training to artisan boys and young men with some schooling in trades like carpentry, blacksmithy, cardboard box making, aluminium utensil making, manufacture of steel and wood furniture and plastic goods, making of metal containers and maintenance and operation of water pumps.

A training section has also been opened at the pottery development centre at Jharsuguda to give training in tile making.

An atmosphere for industrial development has been created in the State and the enthusiasm shown by the would-be entrepreneurs bids fair to show that the State will be showing some tangible results by the end of the Third Plan.

Punjab

INCREASE IN OUTPUT

State Goes All Out to Aid Industrialists

By P. N. SAHNI
Director of Industries

THE progress achieved in the truncated Punjab in the small-scale sector of the industrial field has been marked by significant expansion of capacity and output in several lines of manufacturing although large food deficits, slow capital formation, shortage of industrial raw materials, stringency of foreign exchange and external economies, inadequate supply of electric power and pressure of inflation faced this part of country formidably. At the time of Partition, there were only 600 factories registered under the Indian Factories Act as against 4,090 now. About 90 per cent of these units fall in the small-scale sector. The present manufacturing capacity of the various small-scale industries in the State extends to roughly 25,000 units employing about 12 lakh workers and the varied production pattern which this sector has developed includes not only consumers goods like agricultural implements, bicycles and components, sewing machines and components, hosiery and kitchen utensils, but also engineering goods like machine tools, scientific and survey instruments and components for machinery employed in textile and other industries.

The achievements in this field of development are largely attributable to the close co-operation with which private entrepreneurs and the State Government have worked. Private enterprise has, in addition to showing initiative, acquitted itself creditably in relation to the task of organisational and other executive functions. The Punjabis have earned a good name in this regard. They have created a climate conducive to harmony and good relations. Hard-working and resourceful, they make best of any opportunity that comes their way.

The State Government on its part has endeavoured to meet as far as possible all the needs affecting the growth of small-scale industries in the private sector, such as factory accommodation, long and medium-term credit, common facility services, quality control on the manufactured goods, import facilities, procurement of raw materials, and power.

The special emphasis laid on the development of small-scale industries by the State would be clear from the fact that out of a total capital outlay of Rs 9.34 crore provided for the industrial development under the State's Second Plan, nearly 47 per cent, or Rs 435.65 lakh was allocated for the small-scale industries. Some of the more important allocations were: Rs 2 crore for granting of financial assistance, Rs 84 lakh for the setting up of five industrial estates at Ludhiana, Batala, Sonepat, Nilokheri and Malerkotla (which have all been established); Rs 17 54 lakh for common facility services and Rs 11.86 lakh for a scheme of standardisation and quality marking. Further a sum of Rs 7.49 lakh was provided for the development of small-scale industries in the pilot project areas on an intensive basis.



A cricket ball being stitched by a Punjab worker. Sports goods made in the State earn foreign exchange too.

The performance in the schemes during the Second Plan was indeed appreciable. Encouraged by the results, more elaborate programmes have to be taken up in the Third Plan. The programme envisages provision of financial assistance, laying out of more industrial estates both in rural and urban areas, opening of quality marking centres for standardisation of finished goods, creation of new common facility service, and expansion of industrial education and marketing facilities.

As a result of the promotional aids provided by Government, there have also been striking developments in the small-scale sector during the recent years and it is hoped that when the schemes already approved by Government are implemented, the Punjab will start producing watches, clocks, time-pieces, transistor radios and components, tape-recorders, etc.

The production figures of the more important products of the small-scale sector give an indication of the vigour of the sector and of the range of governmental encouragement. In 1960-61, the number of bicycles produced in this sector in the State was 74,674, and the value of bicycle parts was Rs 826 lakh. The production of sewing machines increased to 61,242 complete machines. In addition, sewing machine parts worth Rs 153.59 lakh were produced. Similarly the value of agricultural and machine tools produced rose to Rs 761 lakh, of hosiery to Rs 435 lakh, of sport goods to Rs 104 lakh, of scientific instruments Rs 79.30 lakh, of powerloom weaving

Rs 1,375.57 lakh, of rubber goods Rs 147.52 lakh and that of utensils Rs 739 lakh during the year. Besides, many other small scale industries such as cotton ginning and pressing, rosin and turpentine, electrical goods, surgical instruments, glassware, carbon dioxide gas, auto-lamps and so on, took a great stride forward and contributed significantly to the development programme. Many new lines of industries, such as the manufacture of watches, are being taken up in the small-scale sector.

The Punjab Government is taking keen interest in the further promotion of industrial activity through State participation in the following type of industries:

(i) Industries which involve the exploration and extraction of mineral and other natural resources of the State.

(ii) Enterprises which are important for the welfare of the people, such as, drugs and pharmaceutical industries.

(iii) Industries which cannot normally be financed from private sources or through other financing institutions such as Punjab Financial Corporation and Industrial Finance Corporation of India, but for which the sponsors are otherwise competent and possess the necessary technical know-how and experiences.

This type of encouragement enunciated by Government is also applicable to the establishment of large and medium-scale industries in all possible ways.

In addition to the above-mentioned facilities the State Government made an announcement of specific assurances and concessions in early 1960 According to this industrial policy declaration the following additional facilities for the development of industries, in both the organised and small-scale sector, will be also available in the State :

(i) The State Government would give assistance for the acquisition of land for factories on a planned basis wherever industrial areas do not yet exist. Government will also consider cases for special assistance for acquisition of land, with necessary facilities for transport and electricity in the case of large-scale projects which are not able to make these arrangements for themselves effectively.

(ii) The State Government will acquire land on a planned basis for the creation of industrial areas wherever these are considered necessary and expedient. After development, the plots would be sold to individual industrialists, either on outright payment or on a hire purchase basis.

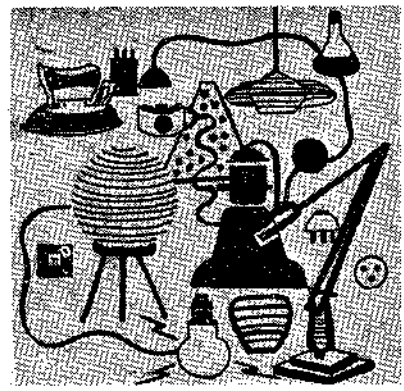
(iii) The State Government would consider individual cases of industries which require State participation in share capital. The decision in each individual case would depend on its merits. Government would also consider assistance by way of investment in debenture shares.

(iv) In view of the existing shortage of public power supply and the need to encourage private generation of electricity by industries for their own requirements, for some time to come, no State duty would be levied on new generating capacity for next ten years.

(v) No new taxes would be levied in respect of the purchase of industrial raw materials for manufacturing processes in factories within the Punjab during the next ten years.

(vi) Government would continue to investigate industrial possibilities by specific surveys of candidate industries.

All interested parties from within or outside the State are encouraged to avail themselves of the opportunity for planned industrial development in this State. This announcement has created a favourable response and schemes for the establishment of several industries have been finalised in the organised sector and are under execution.



Rajasthan

State's Resources Put to Use

Scope Enlarges with New Power Projects

BY A.C. DAS GUPTA
Joint Director of Industries

RAJASTHAN abounds in mineral resources and raw materials needed for industrial development and is well known for the superiority of its entrepreneurial ability. The State produces about one-third of the raw wool of the country and is the only producer of lead and zinc. Nearly 92 per cent of the total production of gypsum is from the State. There are other major mineral products in the State, namely Fuller's earth, glass-sand, lignite, mica, manganese, iron ore, marble and soapstone.

In spite of these potentialities, no tangible industrial development had taken place before the integration of the State of Rajasthan. The only industries of importance before the formation of Rajasthan were some seven textile mills and a cement factory.

During the First Plan, the unified State realised the urgency of industrial development and potential of large, medium and small-scale industry. The greatest difficulty encountered was the inadequacy of power. Inadequate means of communication and transport and insufficient water supply created further obstacles to industrialisation. In the Second Plan, however, power supply was augmented both by thermal and hydel projects and the base of industrialisation created. Of Rs 577.21 lakh provided for development of industries and mining in the Second Plan, Rs 537.06 lakh were for industrial development and Rs 40.15 lakh for mineral development. Besides, Rs 227.95 lakh were provided to the Rajasthan Khadi and Gramodyog Board by the Khadi and Village Industries Commission for the development of Khadi and village industries.

The main feature of the Second Plan was an industrial survey to explore the industrial potential and to assess the possibility of starting new industries or expanding the existing ones. To augment employment potential of small scale industries under different heads—Khadi, handloom, handicrafts and village industries—plans were formulated on the lines of the all-India pattern. Loans were provided to the extent of Rs 82.16 lakh in the Second Plan to small entrepreneurs under State Aid to Industries Rules and fourteen industrial estates consisting of 164 sheds were constructed. Technical training was imparted through small vocational centres to 1,593 craftsmen, and technical advice given to 6,750 people. In the handloom sector, 28 sales depots were opened, 130 powerlooms distributed, 19 dye houses set up and 300 looms and accessories given to weavers. In addition to this five housing colonies for weavers were taken up for construction. In the field of handicrafts an artistic crafts training institute was established, three additional emporia and five sub-sales emporia opened and design extension centres established.

The programme of development of village and small-scale industries has the specific objective of increasing the production of consumer goods, fuller utilisation of manpower, dispersal of industries and development of ancillary industries as an adjunct to large-scale industries. The same objectives are being pursued in the Third Plan and already a substantial increase in the employment opportunities has been effected. Apart from maintaining the programme of development of small-scale industries by providing loans, establishing industrial estates and imparting technical and vocational training, and granting subsidy on power, the special feature of the Third Plan is the establishment of a Small Industries Corporation.

This Corporation has been established as a private limited concern with an authorised capital of Rs 25 lakh. The Corporation has taken over the work of procurement of industrial raw materials like copper, zinc, stainless steel, iron and steel, ivory, cement, coal and other such items. In addition to the procurement of raw materials the Corporation has taken over the management of the three State Handicrafts Emporia located at New Delhi, Jaipur and Mt. Abu. The Corporation also manages a few production centres, such as the furniture-making centre and the woollen production centre, Bikaner. The establishment of the Corporation has thus considerably eased the difficulties faced by small entrepreneurs in getting raw materials.

In addition to the establishment of the Corporation the special feature of the Third Plan programmes under this head is the establishment of 'industrial areas'. Industrial areas are being developed at Jaipur, Kota and Jodhpur with adequate facilities of power, water, roads, communications and Railway sidings and the land so developed is being allotted to medium

and small-scale industries at the concessional rate specially meant for industrial development. The industrial area scheme is different from the industrial estate scheme in so far as the entrepreneur invests his money in building his workshop and quarters for his own industry. And since he sinks in more of his capital, he appears to have a greater stake in the project and his resourcefulness is exercised to the full in making it a success.

The next important feature of the small industries programme of the State during the Third Plan is the supply of electricity at much lower rates than in the past. The Government of Rajasthan provides electricity normally at 2 annas a unit to all small-scale industries and at one and a half annas to large industries. The small industries, however, get a further reduction of half an anna as rebate. Again, facilities like exemption from octroi for import of machinery for industrial purposes and exemption of sales tax on many items of small-scale industries have considerably eased the difficulties that were faced by small-scale industries in the past.

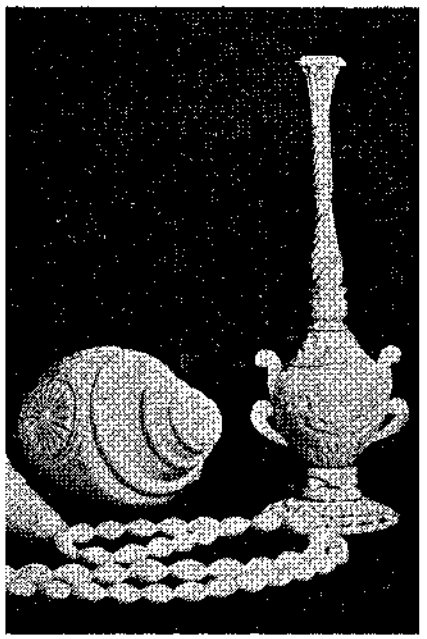
The development of two hydro-electric projects in Rajasthan has made larger quantities of electricity and water available to the Bikaner and Kota divisions. The areas now covered by the two projects are attracting many large industries. Numerous large-scale industries are being set up in Kota, for example, and there is thus great scope for development of small industries in this area as ancillaries to the larger industries. Already 30 small industries have been established in Kota and the number is bound to go up in the next few years as establishment of the larger industries progresses.

The total number of small-scale units registered by the end of Second Plan in the State was about 3,000. This number does not include many of the units manufacturing handicrafts. The number of units established in the first year of the Third Plan is considerable and survey and registration of units not so far registered are in progress.

The State is pursuing the programme of rural industrialisation through the Panchayat Samitis in different blocks. Each Panchayat Samiti has been provided funds for running three to five training schemes to rural artisans. Panchayat Samitis, again, distribute loans to small craftsmen and the Co-operative Department is assisting industrial co-operatives in the rural areas with adequate finance. So far 171 blocks have initiated programmes of rural industries out of 232 blocks to be created by the end of the Third Plan covering the entire State.

In the Second Plan we found that the increase in small-scale industries was on an average 400 new units per year. On this basis, and in consideration of the fact that supply of electricity will be comparatively easy now, it is expected that an additional 3,000 small-scale industrial units will come up in the Third Plan. The total number of additional jobs that will be created as a result will be 50,000.

It has not been possible to include reports from Jammu and Kashmir, Maharashtra and Uttar Pradesh. We hope, however, to publish a report on the progress of small industries in Maharashtra next month.



Conch-shell products made by West Bengal artisans

West Bengal

DEVELOPING RURAL AREAS

Stress on Co-ops and Marketing

BY adopting various measures and implementing schemes which would promote and develop village and small industries, the West Bengal Government is endeavouring to create more employment opportunities and increase the earning capacity of the people of the State in the rural and semi-urban areas. While the competitive strength of small producers is being improved through these efforts, special emphasis is being laid upon the co-operative form of organisation. There are at present 1,932 industrial co-operatives in West Bengal. The main cottage industries to which Government's attention has been directed are handlooms, powerlooms, silk and sericulture, ceramics, handicrafts, coir and lac. Besides, West Bengal has a large number of small-scale industries like iron foundries, lock-making, ceramics, leather, carpentry, cutlery, woodcraft, bamboo-craft, chemical industries and light engineering industries mostly concentrated in the Greater Calcutta region. It could be said that the chemical and light engineering units dominate the scene of small industries.

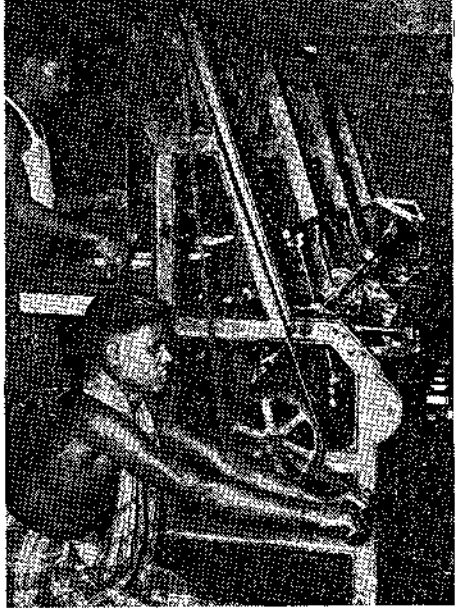
At the end of the Second Five Year Plan the total number of handloom weavers in the co-operative fold had increased to 80,000 from 68,000 a few years before. The total annual production of handloom cloth increased to 190 million yards at the end of the Second Plan as against 100 million yards in 1955. The total number of registered handlooms in the State correspondingly increased from 1,00,000 to 1,35,000. In order to step up output and economise in production costs, powerlooms are being gradually introduced, and so far 1,600 powerlooms have been distributed to 100 co-operative societies. The scarcity of the finer counts of yarn in the State will be met by the Kalyani Spinning Mill which has started operation. Two more spinning mills —one in the public and the other in the co-operative sector—each of 25,000 spindles producing yarn of coarse counts will also be set up in the State during the Third Plan.

A quarter of a century ago, West Bengal used to produce quality silk of high grade which had a reputation of its own throughout the world. For various reasons the quality as well as the volume of production was found to decline gradually. Steps have been taken to revive this industry. At the end of the Second Plan, the acreage under mulberry went up to 16,000 as against 12,000 at the beginning of the Second Plan. Production of silk has also increased to 2.5 lakh pounds per annum. By crossing indigenous races of silkworms with imported strains of worms a number of hybrid races giving a higher yield and a better quality of silk have been evolved. During the Third Plan it is proposed to intensify this work on the lines hinted above in order to reach an annual target of production of 7.5 lakh pounds. A filature is under construction and is expected to be completed soon with improved domestic units being supplied to reelers.

Four training and production centres for coir weaving have been organised at Latibpur and Dhulagori in Howrah, Joka in 24-Parganas and Balisai in Midnapur and a co-operative coir production centre has been started at Sherakole in 24-Parganas. A branch research institute, with model coir factory attached to it, has been set up under the auspices of the Central Coir Board at Uluberia in Howrah. A scheme has been taken up for co-ordinated development of the coir industry in the State, beginning from the extraction of fibre up to the marketing of finished goods.

To develop the lac industry, five brood lac farms have been established in the district of Purulia. There are three other brood lac farms in the Bankura district. An industrial centre for the manufacture of lac products and lacquered articles has also been set up at Balarampur in Purulia. One service co-operative for lac has been organised.

Small-scale industries are also being encouraged through the establishment of industrial estates, supply of raw materials at low rates, supply of finance on easy terms and through arrangements for quality marking of the products. Of the five industrial estates included in the Second Plan, the industrial estates at Baruipur, Kalyani and Saktigarh have been completed. Work relating to Howrah and Siliguri industrial estates is in progress. It has been decided to set up eleven industrial estates



Silk weavers of a Malda village change over to a modern reeling machine.

during the Third Plan—three large and eight small.

The unit at Baruipur, manufacturing surgical instruments, has been showing commendable progress and the instruments produced there have earned high praise from the medical profession for their precision and quality. The Central Engineering Organisation at Howrah has also undertaken the manufacture of surgical tables on an experimental basis. This Organisation, in addition, secures orders for small-scale units, finances them and renders technical help.

The ceramic industry has made good progress under State auspices through the effort of the Bengal Ceramic Institute where modern machinery has been installed. Processed clay is being supplied to small manufacturers of ceramic goods in order to help them to increase their production and improve the quality.

The main difficulties that the cottage and small industries face in this State are lack of availability of the right type of raw materials at reasonable rates and inadequate facilities for marketing. For instance, there are about 12,500 conch shell artisans in West Bengal whose minimum demand of raw materials is to the extent of 37,57,000 pieces of shells per year. The main sources for supply of shells are Madras and Ceylon. The State Government is assisting these artisans by supplying shells at a reasonable price through the West Bengal Small Industries Corporation.

The West Bengal Small Industries Corporation Ltd., a State Government undertaking, has been entrusted with the working and further expansion, as may be necessary, of the schemes relating to the procurement and supply of raw materials and marketing of cottage and small-scale industries products on a commercial or semi-commercial basis. The Corporation has already set up two depots in Calcutta for storing and supplying raw materials required for small industries. There is a proposal for setting up branch depots in the districts alongside of existing sales depots where raw materials will be supplied to local industrial units and artisans.

A number of sales emporia have also been set up by the State Government in Calcutta and Howrah for the display and sale of the cottage and small industries products of West Bengal.

Financial help is being given to the small-scale and cottage industries under the provision of the Bengal State Aid to Industries Act. During the last five years loans amounting to more than Rs 50 lakh have been distributed to various industrial units. The provisions of this Act have been considerably liberalised in order that small industrialists seeking moderate amounts of loan may also obtain these on more liberal terms and conditions than otherwise available.

As against a provision of Rs 1 crore for schemes under the Commerce and Industries and Cottage and Small-Scale Industries Departments in the First Plan, an amount of over Rs 7 crore was provided for the Cottage and Small-Scale Industries Department alone in the Second Plan. A considerably higher allocation, amounting to Rs 11.16 crore, has been made under the Third Plan for cottage and small industries.

In order to provide technical hands in the existing projects as also having in view the programme of industrial development in the years to come, the West Bengal Government has undertaken an ambitious programme for training of boys in technical and vocational trades so that they may be absorbed in suitable technical and supervisory posts. In the field of vocational and craftsman's training, four training institutes, one each at Kalyani, Jhargram, Cooch Behar and Durgapur, have been established in addition to the existing institutes at Gariahat and Tollygunj and the Calcutta Technical School and Howrah Homes. At the end of the Second Plan about 3,600 seats had been made available at these institutes and it is proposed to add 3,000 more seats during the Third Plan. Training facilities also exist in technical institutions at Krishnagar and Kurseong. It is proposed to open nine more such institutes in the State during the Third Plan.

Review

Sketchy Survey

Finances for Small-Scale Industries in India by K.T. Ramakrishna (Asia), 79 pages, Rs. 9.50.

A BOOK on any aspect of the Indian economy which does not set its subject in the context of the Five Year Plans must attract the reader's attention which is so conditioned by the Plans during all these years. Here is a recent publication on the problem of capital and credit requirements of small-scale industry in India which, besides totally ignoring the Plan programmes in this sector refers only to the First Plan but once. The reader's reaction to this, however, must be tempered by the thinness of the book which runs over a bare 60 pages of subject-matter.

The problem of finance for small industry is of course important, particularly when a a vital role is assigned to this sector in the design of our development. The author, however, falls so much in love with his subject that he seems to regard it as the only problem of the small enterprises which is different from saying that their problems are interdependent and that they form a complex. He realises this in the very next chapter when he dwells on the non financial problems—of training, techniques, raw materials and power and dovetailing of big and small industry—which are all problems more of organisation than finance alone.

The author has discussed the role of the various financial institutions in financing small industry, devoting a small chapter to each one of them. The record of these agencies excepting perhaps the State Bank under its promising Pilot Scheme is disappointing. But to say that this is so because of the lack of credit-worthiness on the part of the enterprises is to beg the question. The handicaps they suffer from are well-known. What is important is to examine how far our policies have succeeded in removing them.

The author has heavily depended on official records which are none too ample or searching. He has not even drawn on the surveys recently conducted. The result is a sketchy description of more or less well-known things. The author finds that small loans did not find favour with State Financial Corporations, and adds: "This might be interpreted to imply that small loans do not seem to be popular with most of the State Financial Corporations or there is no demand for them." Who should tell us the truth? One should feel that research studies are undertaken to get at the truth. Admittedly this is a field where recorded information is very meagre and one cannot go very far on the basis of such information. Even a small field study supplemented by qualitative data gathered through interviews and observation may be therefore more valuable.

The chapter on the State Bank's Pilot Scheme is informative and the author's survey of the guarantee schemes for bank credit in U.S.A., Japan, etc. gives hope for the success of the Reserve Bank's scheme launched in 1960. The book contains some useful suggestions for bringing commercial banks and small-scale industries closer. The author's suggestion that the more fortunate small industrialists should set up a fund to help their less fortunate brethren as in the Netherlands is interesting. The other suggestion regarding the provision of consumption loans to small industrialists so that their borrowed capital should be used only for productive purposes seems to go too far. This principle is not adopted even in the case of members of the primary agricultural co-operatives. There is again the general dearth of finance which takes us to the point where we started.

M. R. KULKARNI

Rural Industries Plan

(*Continued from page 32*)

industries (including village industries) and of processing industries based on agriculture.

Experience in the intensive development of small industries in rural areas has to be gained under different sets of conditions, notably—

(a) where agricultural conditions are favourable but there is heavy pressure of population;

(b) where agriculture is undertaken mainly under unirrigated conditions,

(c) where there is considerable under-employment because of unfavourable natural conditions;

(d) tribal and other backward areas;

(e) areas in which large industrial projects have been or are being established (such as Bhilai, Durgapur, Bhadravati) so as to achieve integrated industrial and rural development, agriculture and small industries being developed together within the region of the industrial projects; and

(f) areas in the neighbourhood of rural universities and institutes.

Earlier Experience

There have been two sets of projects whose lessons have to be incorporated in any new scheme. The first group are the pilot projects for village and small industries which were undertaken in 26 community projects of the 1952-53 series, each of which generally consisted of three development blocks. These projects were reviewed by a special Study Team set up by the Ministry of Community Development and Co-operation which reported two years ago; they were also studied by the Programme Evaluation Organisation. The second group of projects are the development blocks for which plans are being prepared under the Intensive Areas Scheme of the Khadi and Village Industries Commission.

The principal lessons from this earlier experience have been incorporated in the present scheme. Some of them are: (i) need to base the programme of industries on a careful survey of the needs, resources and possibilities of the area; (ii) the quality and training of personnel chosen to work the programme; (iii) consultation with and involvement of the people of the area in drawing up the programme; (iv) pooling of the resources of various organisations engaged in developing industries; (v) flexibility in execution of the programme; and (vi) stress on training of artisans, and provision of common facility centres, credit and marketing facilities.

The programme of small industries and processing industries and the programme for rural electrification should go hand in hand. But power should not be treated as the limiting condition. It would be useful to gain experience in areas not likely to be electrified in the near future.

A few of the industries which can be taken up under the scheme are: traditional village industries, handicrafts, Khadi, handloom and powerloom, sericulture, agricultural processing industries, industries using local raw materials (such as tanning, leather, ropes and twines, bone meal and fruit and vegetable preservation); industries meeting local needs (such as agricultural implements, Persian wheels, buckets, etc., roofing tiles, brick kilns, construction of doors, windows, etc., domestic utensils, hosiery and soap) and the newer small-scale industries (such as sports goods, bicycles and parts, leather footwear, hand tools, surgical instruments, scientific glass apparatus, leather goods industry, electric motors, diesel engines, plastic goods industry, cutlery, paint, varnish and lacquer, fountain pens and nibs, domestic electrical appliances and accessories, machine tools, builders' hardware, assembly industries of various kinds, repair industries of various kinds, forge shops and machine shops). This last group can be developed in association with large-scale industries or independently with common service and workshop facilities.

Each selected area in the first series will have a population of 3 to 5 lakh, consisting of *complete* development blocks, all of which will be situated within the same district. For such a *planning area* it should be possible to provide a team of specialists with experience in different categories of industries, including village industries, handicrafts, handloom and various groups of small-scale industries using power. For *implementing* some of the schemes and preparing proposals, the block will serve as the effective unit. For subsequent series, the possibility of covering an entire district will be kept in view.

A survey will be carried out in each selected area to assess local resources and potentialities. As regards implementation, the Planning Commission will undertake the necessary co-ordination and assist the State Governments in carrying out the programme. In each State, a high-level Advisory Committee for Rural Industries will be set up, and for each selected area, a Project Committee for Rural Industries is to be appointed. Close and continuous collaboration is to be ensured between the Zila Parishad, Panchayat Samitis and their administrative and technical personnel and co-operative organisations, registered institutions associated with the Khadi and Village Industries Commission and non-official workers.

To begin with, an assured minimum provision of Rs 20 lakh will be made for each of the projects covering the four-year period 1962-66 over and above the allocations under the Third Plan. Besides these additional funds, the projects should also be able to draw funds from the State Plan and the all-India Boards according to their respective programmes and allotments for the area; and loans and credits from financial and co-operative institutions and under the State Aid to Industries Acts. Besides Rs 8 crore, there will also be provision for a contingent fund of Rs 7 crore for the four years.

Approach to Area Plans

The broad approach in preparing and implementing area plans is now outlined:

(1) *Selection of industries:* The main considerations should be local resources, the skills locally available, promise of success, and the overall plan of development in the State. Local needs will also be taken note of.

(2) *Technological considerations:* Where new industries are being established, improved techniques should be introduced from the beginning, with due training facilities. In the case of existing industries, attempt should be made to improve technology.

(3) *Co-operatives and individuals:* For the traditional village industries, and for processing industries, co-operatives should be organised whenever possible. In the new lines of production, small entrepreneurs and artisans, both individually and in co-operative groups, should be encouraged, with special facilities to co-operatives.

(4) *Period of implementation:* Intensive industrial development in any rural area should be conceived of as a task to be accomplished over a period of up to 10 years. Over such a period the area should develop a reasonably diversified and balanced economy which can go forward largely on its own momentum.

(5) *Nuclei:* Each centre should be conceived, not by itself, but as a nucleus serving a certain group of villages, envisaged in the concept of "Gram Ekai". Development of small industries at a small town or at a rural or semi-rural centre is to be regarded as a step in the intensive development of its surrounding area.

(6) *Credit institutions:* It is proposed that in the selected areas the assistance of the State Bank of India, other commercial banks and of co-operative financing agencies should be availed of to the maximum extent possible. The Reserve Bank of India has already initiated action in a number of directions and its assistance and advice should also be sought from the beginning.

(7) *Training facilities:* It will be essential to organise educational as well as training facilities in selected areas as a part of the programme for intensive development of small industries. Besides reorganisation of school education along basic lines, provisions made in the State Plans might need to be supplemented by local community efforts. For rural artisans, provisions have been made in the State Plans for 'cluster-type' training institutions and also travelling demonstration and training parties. In some of the selected areas, Industrial Training Institutes might also be set up under the scheme of the Ministry of Labour and Employment.

(8) *Industrial extension:* The existing machinery for industrial extension comprising the Extension Officers (Industries) at block level, technical officers of the registered institutions, etc., will need to be strengthened adequately. The all-India Boards have already institutes and centres engaged in research in technology, including research for developing improved tools and equipment. Their activities may have to be strengthened and co-ordinated.

The projects proposed in the first series are in the nature of a beginning. As experience is gained, it is hoped that their working will influence decisively the lines along which the existing programmes are being worked by the State Governments and the all-India Boards. It is also proposed that further area projects should be taken up in later years of the Third Plan.

The Rural Industries Planning Committee set up by the Government of India consists of Mr G.L. Nanda, Mr K.C. Reddy, Mr Nityanand Kanungo, Mr S.K. Dey, Mr Shriman Narayan, Mr T. N. Singh, Mr V.L. Mehta, Mr Shankar Rao Deo, Mr Jayaprakash Narayan, Prof D.R. Gadgil, Mrs Kamaladevi Chattopadhyay, Mr Dwaja Prasad, Mr Krishnadas Gandhi and Dr D. K. Malhotra (member-secretary).

---

would have come up, for the refugees' necessity gave the push. But the State and Government have made vital contribution by providing credit, technical advice, hire-purchase opportunities and so on. Now we are all busy improving the standards".

"How do you proceed?"

"In many ways. First of all by showing the proprietors where their true interest lies. We are inducing them to observe ISI standards and get ISI certificates. They have realised the advantages. In machine-tools there are yet no ISI standards; but the desire to get on to the approved list of the Directorate-General of Supplies and Disposals—which means that the order books will be full—acts as a spur".

"Another approach we have tried", Dr Ghosh went on, "is to select a few units, concentrate all attention on making them technologically sound, and then taking other entrepreneurs to study these model units. That stage being over, we are now concerned with the improvement of every unit. We give them technical feasibility schemes, introduce them to advanced equipment and methods, give advice on plant layout, bring experts to talk to owners and managers and conduct training courses to workers deputed by companies".

"Do the owners co-operate readily?"

LUDHIANA STORY

(*Continued from page 37*)

"Oh you should see the demands they make on us. After all isn't it *their* business?".

* * *

A FRIEND to whom I narrated what I had seen on this journey of discovery, said, as if in reproach of my enthusiasm: "Granted they are good imitators, copy-cats; but can they create?"

Can music be created by those who do not know how to sing? Can paintings be created by those who do not know to draw? Ludhiana shows we have the ability to make. To lift this ability to the level of creation is not for Ludhiana only; it is for the rest of the country as well. The first Indian to go to the moon will in all probability be from Ludhiana.

Industrial Estates

The number of industrial estates sanctioned during the Second and Third Plan period is 212. Of these, 68 are now functioning in different parts of the country, while work for another 21 has been completed. Sixteen others are under construction and preliminary work is in progress for the remaining 107.

The distribution of the industrial estates functioning in the country (till March 31, 1962) is given below :

(1) Andhra Pradesh: 6; (i) Sanathnagar, (ii) Vijayawada, (iii) Samalkot, (iv) Vishakapatnam, (v) Nandyal, (vi) Warangal.

(2) Assam: 2; (i) Gauhati, (ii) Dhekiajuli.

(3) Bihar: 4; (i) Patna, (ii) Biharshariff, (iii) Darbhanga, (iv) Ranchi.

(4) Delhi: 1; Okhla.

(5) Gujarat: 5; (i) Rajkot, (ii) Ahmedabad, (iii) Baroda, (iv) Udhna, (v) Gandhidham.

(6) Himachal Pradesh: 1; Solan.

(7) Jammu & Kashmir: 2; (i) Gandhinagar, (ii) Srinagar.

(8) Kerala: 8; (i) Pappanamcode, (ii) Ettamanoor, (iii) Nollakkadavu, (iv) Olavakot (v) Ollur, (vi) Veli, (vii) Kozhikode, (viii) Palayad.

(9) Madras: 9; (i) Guindy, (ii) Madurai, (iii) Trichy, (iv) Erode, (v) Virudhunagar, (vi) Marthandam (vii) Pattai, (viii) Tanjore, (ix) Katpadi.

(10) Madhya Pradesh: 3; (i) Indore, (ii) Gwalior, (iii) Bhopal.

(11) Maharashtra: 7: (i) Kolhapur, (ii) Hadapsar, (ii) Karad, (iv) Nagpur, (v) Amravati, (vi) Kurla, (vii) Sangli.

(12) Mysore: 3; (i) Mysore, (ii) Bangalore, (iii) Hubli.

(13) Orissa: 3; (i) Cuttack, (ii) Jharsuguda, (iii) Rourkela.

(14) Punjab: 3; (i) Ludhiana, (ii) Sonepat, (iii) Malerkotla.

(15) Rajasthan: 4; (i) Jaipur, (ii) Bhilwara, (iii) Makhupura, (iv) Kotah.

(16) Tripura: 1; Arundhatinagar

(17) Uttar Pradesh: 4; (i) Kanpur., (ii) Agra, (iii) Naini, (iv) Deoband.

(18) West Bengal: 2; (i) Baruipur, (ii) Kalyani.

SIEMENS
INDIA

POWER FOR PROGRESS

The Siemens Organisation makes significant contributions to every aspect of the electrical industry.

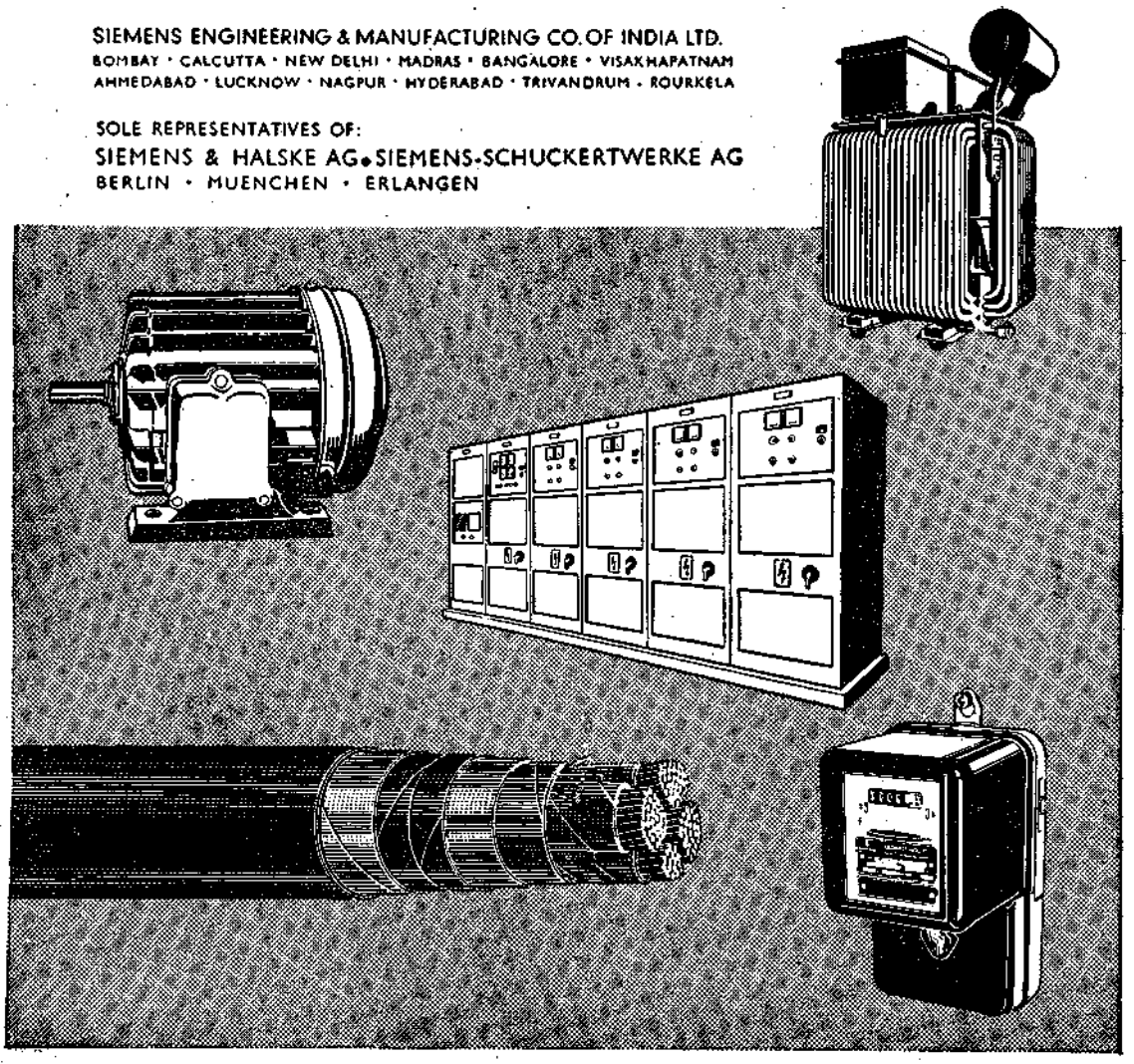
Siemens offer a wide range of equipment to generate, convert and convey electric power—to scale power down into the microwatt range and to step it up to the megawatt range.

All these Siemens products are backed by over a century's experience in all spheres of electrical engineering.

Equipment manufactured in India in collaboration with independent Indian Enterprises, under Licence Siemens Germany, includes Motors, Transformers, PVC Wires and Cables, Paper Insulated Cables, Switchgear, Meters, etc.

SIEMENS ENGINEERING & MANUFACTURING CO. OF INDIA LTD.
BOMBAY · CALCUTTA · NEW DELHI · MADRAS · BANGALORE · VISAKHAPATNAM
AHMEDABAD · LUCKNOW · NAGPUR · HYDERABAD · TRIVANDRUM · ROURKELA

SOLE REPRESENTATIVES OF:
SIEMENS & HALSKE AG • SIEMENS-SCHUCKERTWERKE AG
BERLIN · MUENCHEN · ERLANGEN





کیلی پھب کتئ پتییۂ اکھوٗ
کونگ کوٗئ رنگ کرنا دیو
زأدِلِ شال دونیو پنییۂ اکھوٗ
کونگ کوٗئ رنگ کرنا دیو

"I will dye it in saffron" says she, "I will also knit a shawl which will be in matching saffron colour".

THE DAINTY SAFFRON

Absorbed in setting up her new home, the young Kashmiri bride proudly resolves to weave a *Pashmina* with her own hands.

Handlooms

THE NATIONAL HERITAGE

DA 61/57

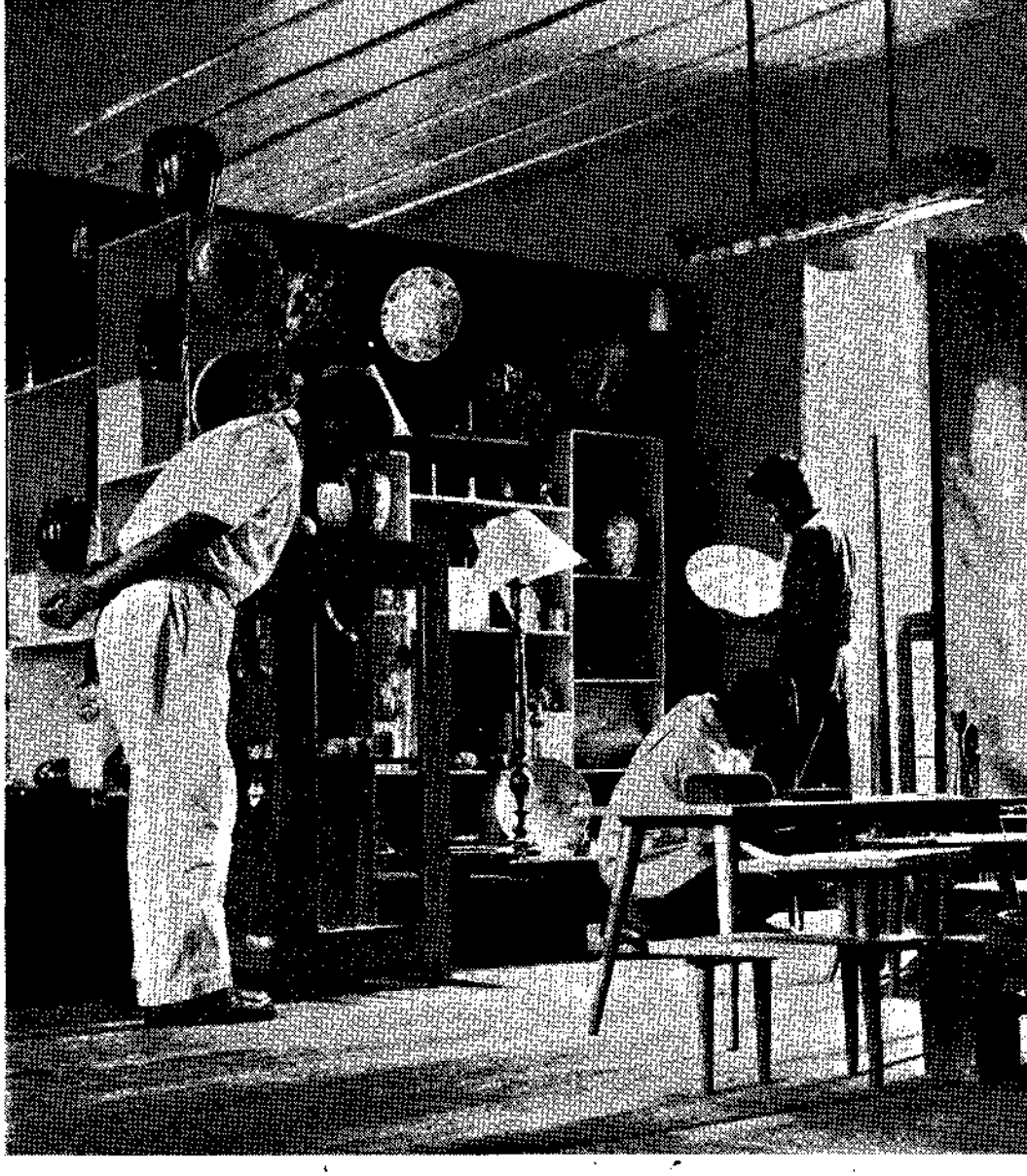
YOJANA

PLANNING COMMISSION



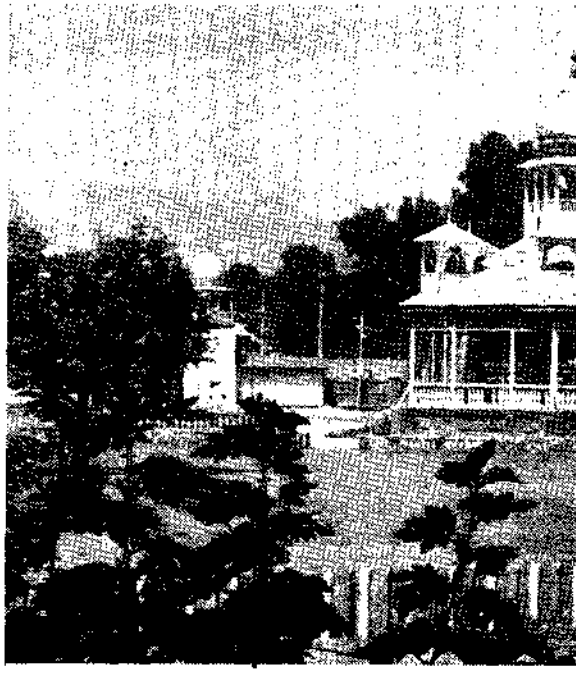
INSIDE : IZATNAGAR VETERINARY INSTITUTE

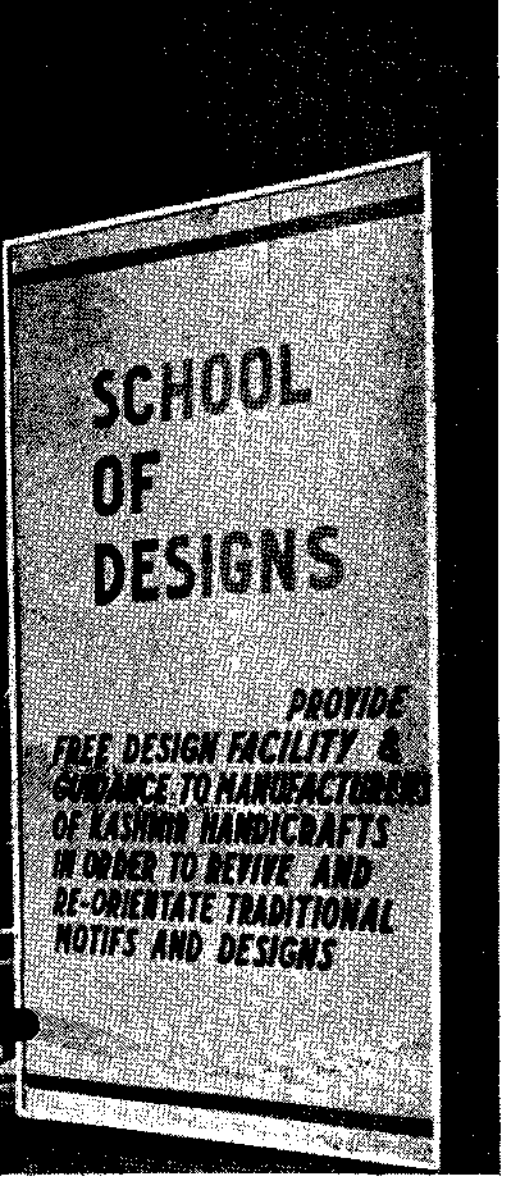
To Give the Modern Buyer the Best of the Old





Devoted to adapting traditional designs to suit modern tastes and use, the School of Designs pioneers the renaissance in Kashmiri handicrafts. We publish this article as a special feature for the Kashmir festival starting on August 15.





New Deal for Kashmir Craftsmen

WORK OF DESIGN CENTRE

Text and Photographs : R. J. CHINWALLA

THE most important industry of the beautiful and enchanting State of Jammu and Kashmir is at present the tourist trade. Tourists, being in an expansive holiday mood, are the largest buyers of the best in souvenirs that Kashmir has to offer —from the famed Kashmir shawls to the traditional jewellery sported by the nymphs of the Kashmir vale. Behind the apparently mad scramble of goods offered by the craftsmen there is a silent, hard-working institution located in Srinagar, the School of Designs. This institution has been mostly responsible for the attractive designs, traditional in heritage but suited to modern utility, which mark practically every indigenous handicraft item that Kashmir now produces for the tourist trade and for export.

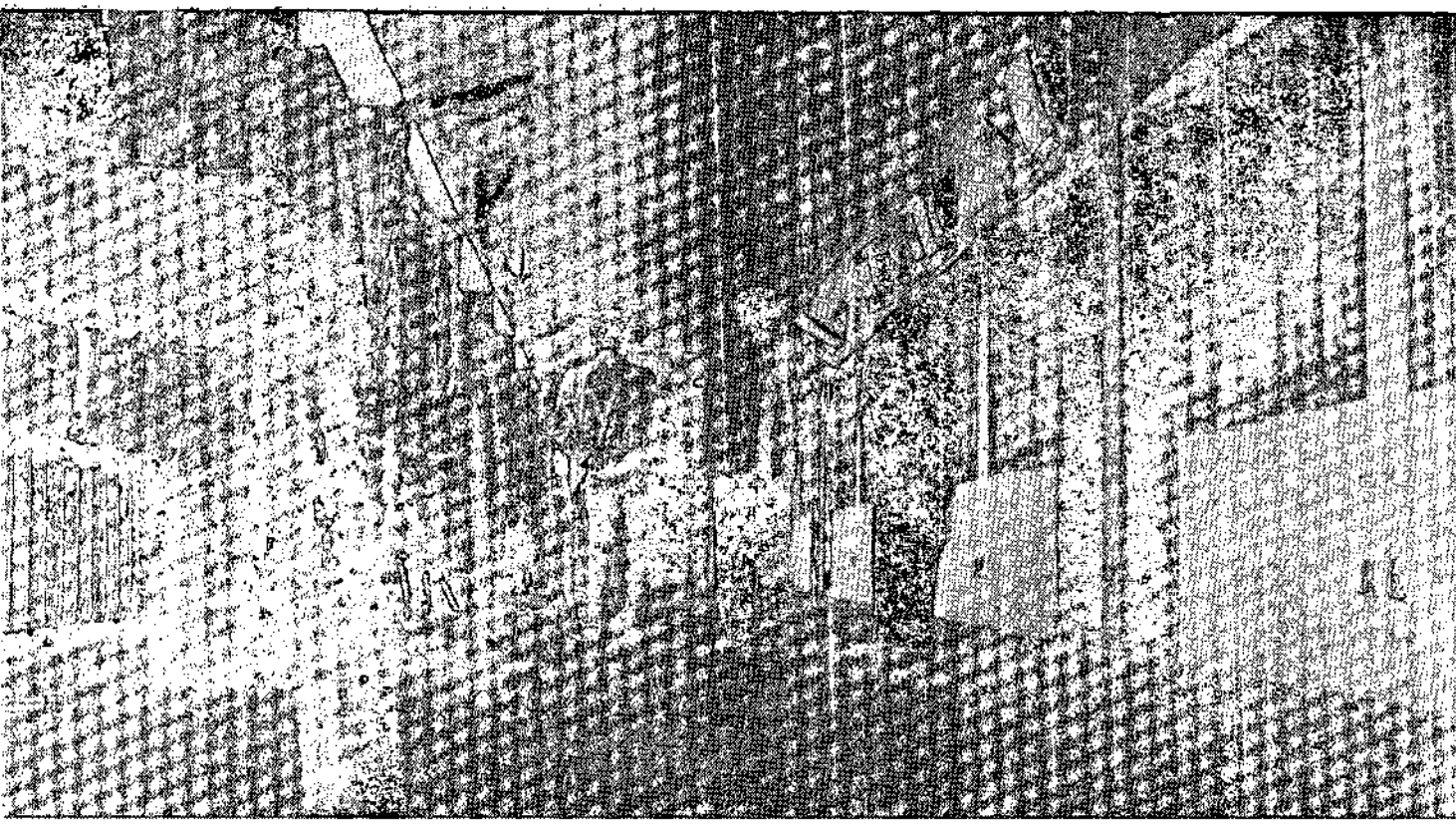
A State Government venture launched with Central backing, the School of Designs was started in January 1958, with four divisions: wood carving, papier mache, turquoise ware, and embroidery of the hook type. It is headed by Mr T.N. Kaul, a noted designer and painter, and each section has a chief craftsman and four assistants, as well as a separate design section with its own artists and designers. The School of Designs is not a teaching organisation but one devoted to study and experimentation.

The entire scheme of work revolves around a Museum and a Library. The first has a collection of some 1,600 rare samples, of which 700 are shawls. The Library contains several hundred valuable books on arts, crafts, and fashion. The Library encourages the understanding of past and present trends, while the sample division is of great importance owing to the stress the School lays on Kani Shawls, the production of which is getting extinct.

The Kashmiri shawl is a storehouse of designs, and for centuries its fame has spread over the world. During the Mughal period there are believed to have been some 40,000 looms at work in nearly 14 centres, providing two-thirds of the entire population with employment. According to an estimate practically every household at that time was linked with this vast household enterprise.



The School of Designs, which is devoted to study and experimentation on new designs for handicrafts, has extensive gardens and buildings (*left*) in typical Mughal architecture. Its museum (*top*) displays the various designs evolved.

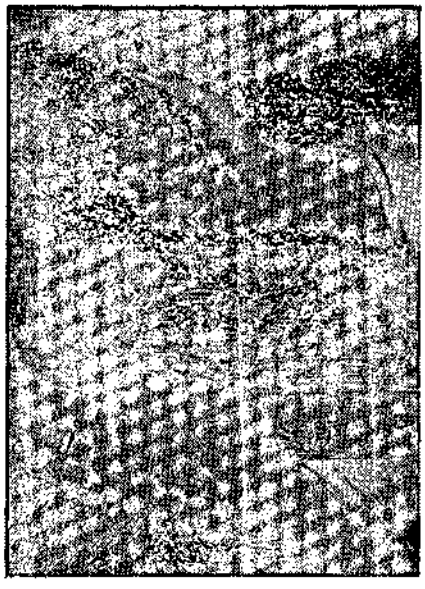


Artists take a stroll in School corridor. Rooms on the right house the different sections of the institution.

The special feature of the Kani shawls are the Patta-Patti borders and Sozankari work (needle embroidery).

The design section at the School thinks up various designs to be used in different crafts, based on traditional motifs suitably modified. The head craftsman then works out the design into the actual material, and through a system of trial and error the first specimen copy is made which, if approved by the various members of the Centre, is translated into a few more copies. One copy remains on permanent display in the hall, and here come the manufacturers, the distributors and the exporters, and if they like any pattern a copy is lent free, since there is no copyright. To date some 2,000 such designs have been worked out on paper, out of which nearly 450 have been translated into production. Nearly 110 organisations including Government emporia, Government arts co-operatives and the Indian Co-operative Unions have availed themselves of the School's service.

The School's work does not halt here. It also conducts surveys of marketing centres, to find out which articles are more marketable. With the start of the Third Plan, the School has added five more crafts: carpets, toys and dolls, artistic pottery, metalware (engraving), and costume embroidery. Its tenth section, started on an experimental basis, is devoted to the art of jewellery.



Beauty and utility combine in the craft work done at the school. Deft hands (*Above*) carve an intricate design on a wooden casket. (*Right*) A few specimens produced by the wood carving section.

One of the School's best-sellers is a double-almond bowl in walnut, which has sold in thousands to procure valuable foreign exchange for the country. It has also given fillip to one of the older crafts in the State—turquoise ware. There are only 60 craftsmen devoted to this craft and they have been taught considerable improvement of their art, to bring about harmony not only through modernity but also in the turquoise colours used.

The School of Designs is a growing institution with an assured role in the future. The direction in which it has developed points out to some more outstanding benefits to the Kashmiri craftsman. An expansion scheme visualises a full-fledged Designs Museum with an exhaustive catalogue which will visually present the progress of Kashmiri arts and crafts through the centuries in all their myriad designs. The Kashmiri craftsman and the handicrafts



industry can, therefore, look forward to some remarkable innovations, innovations that are bound to provide even the casual tourist with a tempting array of exquisite items. To leave the valley without a memento or utility article with tell-tale form and design is even now difficult; it will become unthinkable in future.

Better Prospects For Underdeveloped Areas

High Priority to Minor Irrigation, Soil Conservation and Rural Works

SHRIMAN NARAYAN

THE Third Five Year Plan has laid great stress on the development of backward areas in the country in order to bring them up to the level of the other regions as speedily as possible. In addition to various programmes for these under-developed regions, including the tribal areas, which have already been included in the State Plans, there are a number of Centrally sponsored schemes which could be availed of by the State Governments for supplementing their developmental programmes in the backward regions. Some of the important Central schemes are mentioned below for general guidance of the State Governments concerned:

(i) The Planning Commission has decided to accord a very high priority to programmes of minor irrigation and soil conservation in order to step up agricultural production. If, after proper technical surveys, the States are able to implement these programmes on a scale larger than what has been provided in their Third Plan, the Planning Commission and the Ministry of Food and Agriculture would provide additional funds for the purpose.

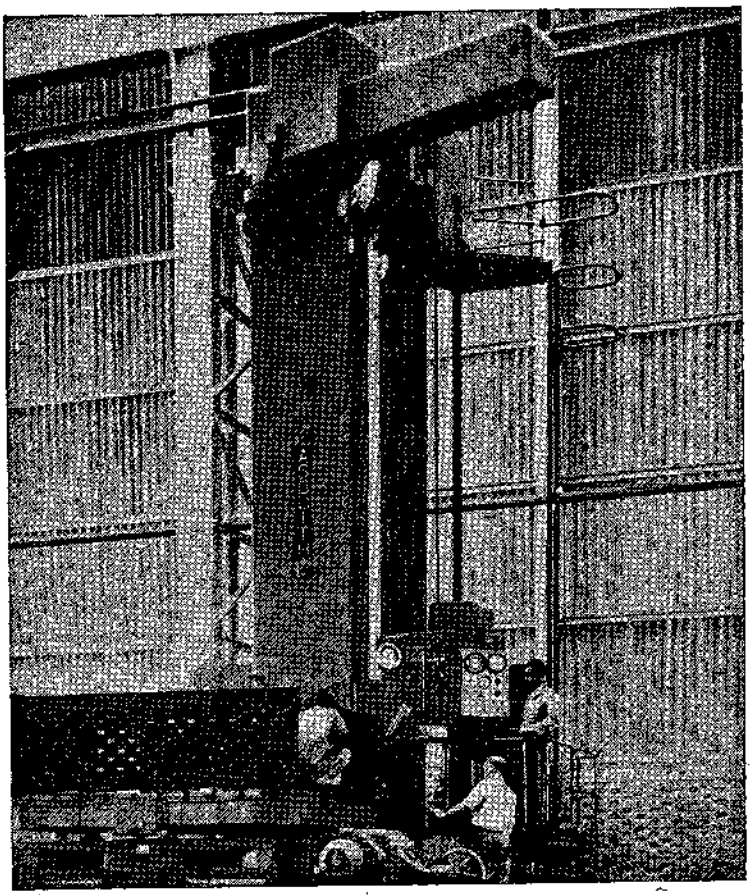
(ii) In order to provide fuller employment to the people in backward areas, the Planning Commission has already initiated about 200 pilot projects in different States for intensive rural public works. An amount of Rupees two to three lakh, out of which 50 per cent is outright grant and the rest loan, is being spent in each project for rural works. Next year it is envisaged that about 800 to 1,000 rural works programmes would be taken up in different States. By the end of the Third Plan, their number is likely to rise upto 3,000. Rs. 150 crore have been earmarked for this important programme during the Plan period. State Governments have been asked to choose underdeveloped areas for the programme, some of which must necessarily be tribal areas.

(iii) Recently the Planning Commission has initiated a series of 46 projects for intensive development of rural industries. Each State has been asked to select two to four project areas and the list would be finalised soon. It has been suggested to the States that some of these areas should be in the tribal development blocks.

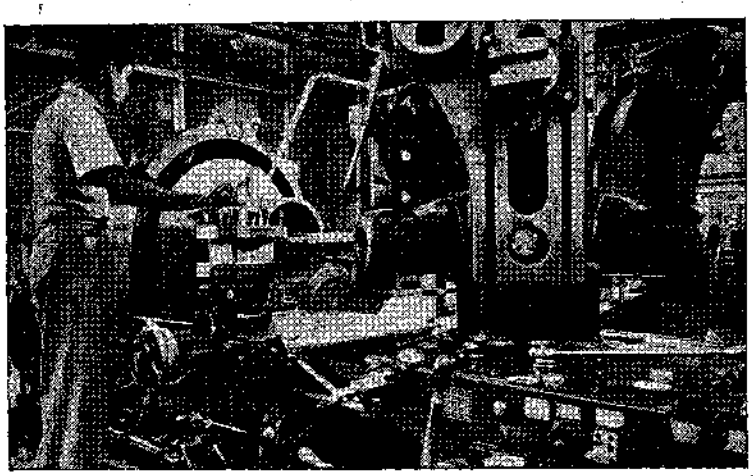
(iv) Rs 35 crore have been reserved at the Centre for providing drinking water facilities in the rural areas. States have been requested to make a survey of the difficult areas from the point of view of rural water supply so that these funds at the Centre could be distributed among the States according to their needs. The States are expected to pay special attention to the tribal areas in drawing up their programmes. The pattern of assistance will be in accordance with that of the Local Development Works.

(v) Rupees eight crore have been earmarked for helping the settlement of landless labour on newly reclaimed lands, Bhoodan lands and surplus lands as a result of the imposition of the ceilings. The Centre will give Rs 500 for the settlement of each family of landless labourer, 75 per cent of which will be grant and 25 per cent loan. In addition, Rs 150 per acre will be made available to the States for meeting the initial expenditure in reclaiming sizable plots of lands.

(vi) Rupees six crore will be available from the Central funds for helping good co-operative farms outside the pilot project areas. Since the tribal areas are in greater need of such measures, it is expected that the State Governments would utilise these funds for helping the tribal population.



6' spindle ram-type horizontal mill and boring machine



No. 14|36 combination turret lathe installed in the AVB light machine shop

The **REAL POWER** of AVB...

Vast Technical Resources... Modern Workshops...

Immensely rich in experience and technical knowledge, with modern workshops equipped with some of the world's most up-to-date machine tools... here is the *real power* of AVB. The essential combination to generate *real industrial power*.

This real power and potential of AVB will give added impetus to the continued and large-scale expansion of industry... by providing the finest facilities for the manufacture of high pressure steam-raising plant and pressure vessels and heavy machinery for the cement-making and mining industries.

Among the modern machine tools in the AVB workshops are

1. **6" ram-type horizontal mill and boring machine:** This machine has a vertical movement of 14' 6" and a horizontal movement of 20' and is the largest of its kind in India
2. **Numerous capstan and turret lathes:** Upto 36" diameter swing and central lathes upto 42" diameter.
3. **28/60 vertical model hydrotel milling machine:** With 360° profile milling equipment.

AVB

...a Powerful Partnership for Progress

ACC-VICKERS-BABCOCK LTD.

16, Queen's Road Estate, Bombay 1
Calcutta Offices: Ilaco House, 1 & 3 Brabourne Road, Calcutta 1
Works: P. O. Durgapur 1, Dist. Burdwan, West Bengal

TWT-AVB.3365



I.V.R.I. Helps Improve Our Livestock

By Better Breeding, Better Feeding And Disease Control

A TELEGRAM was brought to the Registrar. The Registrar sent for a doctor and said, "This telegram says some strange disease has broken out in some area. Cattle are dying there. Please rush there and see what it is".

This incident happened when I was on a visit to the Indian Veterinary Research Institute at Izatnagar on July 12. My inquiries showed that such calls were not unusual. They were frequently received from different parts of the country and the Institute regarded it as its duty to render immediate help in such cases. The Institute is well equipped to meet such contingencies. It sends one veterinary scientist to the emergency area who generally succeeds in diagnosing and checking the disease. Where necessary, the Institute's laboratories are asked to undertake thorough tests. "You might recall the unforeseen epidemic of African horse sickness last year", Dr Gulrajani of the Biological Products Division of the Institute said. "The disease had been unknown in the country and people were baffled when hundreds of animals began to suffer. With commendable speed the Institute produced a drug that soon brought the epidemic under control".

Seventy Years of Fruitful Research

The Institute has evolved numerous vaccines and sera which have saved countless numbers of animals from pain and death. The foremost is the vaccine G.T.V. which is used against rinderpest, the cattle disease which has, until recently, caused a damage of Rs. 30 crore to farmers every year. Discovered in 1926 by Dr Edwards, then Director of the Institute, G.T.V. confers on cattle life-long immunity against rinderpest, and its cost of production is only two naye paise per dose. Rinderpest vaccination is considered so valuable that it finds an important place in the animal husbandry programme of the Third Plan. It is expected that by 1963-64 the entire bovine population of the country will have been inoculated. Next in importance is the vaccine against Ranikhet disease from which fowls suffer. A single injection of this vaccine to birds, even to one-day-old chicks, immunises them against Ranikhet disease for the rest of their lives and costs only one naya paisa.

Effects of different climatic conditions on animals are studied in the climatology section of the animal genetics division. The respiration of a cow is being tested here against climatic changes (*picture above*)



A herd of cattle at the Institute.

This vaccine is now available in freeze-dried state. Formerly it used to be sent packed in ice with couriers at a considerable expense. Another of Izatnagar vaccines is against the tick fever, a scourge of poultry. A vaccine against the haemorrhagic septiceamia of cattle is yet another discovery of the Institute. This disease kills about 40,000 animals every year. The vaccine against the South African horse sickness has already been referred to.

Apart from having evolved these medicines, the Institute regularly prepares several other standard vaccines and sera at Izatnagar which is 12 miles from Bareilly in U.P. and the branch laboratory at Mukteswar in Kumaon hills, also in U.P. They are in all some 50 varieties of "biological medicines" covering a number of veterinary diseases including anthrax, surra, black quarter, equine abortion, fowl cholera, fowl pox, sheep and goat pox, cattle tuberulosis, bovine abortion, foot-and-mouth disease and dermatitis. These are made in quantities enough to meet the country's entire requirements.

Important as this work of producing the medicines that keep the nation's animal wealth well and healthy, it forms only a part of the activities of the Institute. It is one of the premier institutions in the world conducting research into animal sciences. Its experiments in controlling tuberculosis among the cattle promise to yield excellent results. An outline of the research programme was given to me by Mr H.D. Srivastava, the Director. In addition to the rigorous research projects of the Institute, it also undertakes research on problems referred to it by the Central and State Governments. One of the most important lines of scientific inquiry pursued is animal genetics.

Seventy-three years old, the Institute claims to have the distinction of being the first scientific research institution to be established in the country. It was started in Poona in 1889 under the name 'Imperial Bacteriological Laboratory'. Although Poona itself is something of a hill station, it was felt, in those days when air-conditioning and refrigeration was unknown, that a still cooler climate was necessary for carrying out the research and preparing the vaccines. So the laboratory was moved to Mukteswar in the Kumaon hills in 1893. "The sentiment against the spilling of bovine blood was perhaps also an added consideration in favour of selecting such an isolated locality", notes Dr S. Datta, a former Director of the Institute. The laboratory grew at Mukteswar in a spacious building on a 3500-acre stretch



Above: **The vaccine containers are being loaded into a large steam steriliser.**

Top right: **Initial researches are conducted on guinea pigs, rabbits, mice and such other small creatures. The picture shows the examination of the intestines of a rabbit.**

of forest. In 1925, by which time the teaching and research work had also expanded, the name was changed to the Imperial Institute of Veterinary Research.

The need for opening a branch laboratory in the plains was felt as early as 1907 and a sub-station was





set up at Izatnagar where a plot of 700 acres was bought. By 1930, the sub-station was developed into a centre for research and mass manufacture of biological products all the year round. The Izatnagar establishment, named 'the Imperial Veterinary Serum Institute', outgrew its own original function as well as its parent institution at Mukteswar and became the headquarters of the combined institution. The new name, 'Indian Veterinary Research Institute', was given after Independence.

Of the Institute's six Divisions, the Pathology and Bacteriology Division is at Mukteswar, and the Divisions of Biological Products, Animal Nutrition, Parasitology, Animal Genetics and Poultry are at Izatnagar. It is likely that a separate Division for Physiology will be started at Izatnagar during the Third Plan. As Dr Ray of the Parasitology Division pointed out, whatever special knowledge of Indian conditions and measures for preservation and improvement of the livestock had been gathered could be put down to the credit of this Institute and the work was being intensified.

I went round the Divisions, seeing and asking questions. I found that the Biological Products Division works almost like a public sector enterprise. The vaccines and sera are produced on a commercial scale and sold mainly to State Governments, which, in turn, distribute them to veterinary hospitals. The total production is valued at about Rs 25 lakh a year.

Interesting work on animal fodders is done at the Animal Nutrition Division. I learnt about what Dr N.D. Kehar, till recently officer in charge of the Division, had done to utilise the protein-rich seeds of *jamun*, mango, tamarind and acasia (*babul*) as animal food. Similarly Dr K. Chandra has discovered about half a dozen different grasses that grow in the Kumaon region and which, if adequate transport facilities could be arranged, will serve a large part of the country as good fodder. Effects of various feeds on animals are also studied. For instance, it is found that the rice husk causes calcium deficiency in the animals due to the content of oxalic acid. Experiments are also being carried out on preservation of fodders. The milk-yield of an animal depends on nutritious feed, healthy climate and, more than all, on its breed. To a layman like me it came as a surprise that it is the parent bull, not merely the mother cow, which transmits the milk-yielding capacity to the next generation.

In the Poultry Division, considerable work is done on evolving new strains that suit the country. One of the strains developed is capable of laying 225 to 250 eggs a year, as opposed to the present average of 60 eggs. Mr Srivastava, a research worker in the Division, says the aim is to improve the breed to lay 300 eggs per year. Preservation of eggs for a longer time is a problem under investigation.

The Animal Genetics Division, started in 1944, is the youngest of the six Divisions, and has a crucial role in the five-year plans. The key-village scheme for improving cattle breeds in the country rests on the basis of research in this Division. We have more cattle than any other country in the world, but less milk per head. Of course, more than half the cattle are oxen which work on the fields. There is need to improve both draught power and milk production. This will happen only if we rear better cattle. The secret of improving the quality of cattle lies in having good bulls. And each good bull must be enabled to cover a wider field. Hence the recourse to artificial insemination, which is an efficient way to rear more good calves without causing too great a strain on the bulls. A problem in artificial insemination is to preserve semen longer so that it could be despatched to distant areas. Considerable progress has been made in inquiring into these problems. The idea of evolving a 'dual-purpose animal' is also being pursued. A new strain of Hariana, which is primarily a draught animal, has been evolved which also yields good quantity of milk.

In addition to Artificial Insemination Section there are now six more sections in the Division—obstetrics and gynaecology, hormones, quantitative genetics, immunogenetics, farm animal genetics and climatology. The last section was added recently with the help of the U.N. Food and Agricultural Organisation to study climatic effects on animals. Two more sections—population genetics and cytogenetics—are proposed to be opened during the Third Plan period. In a sample all-India survey of fertility, it was found that 3 per cent of the female animals were sterile and 8 per cent suffered from subfertility owing mainly to malnutrition. The impact of hormone treatment on inducing lactation in cows which were formerly sterile is being studied in detail.

(Continued on page 28)

YOJANA

Yojana seeks to carry the message of the Plan to all sections of the people and to promote a more earnest discussion of problems of social and economic development.

It is issued every fortnight in two separate editions, English and Hindi.

Although published on behalf of the Planning Commission, *Yojana* is in no way restricted to expressing the official point of view.

SUBSCRIPTION RATES

	Single Copy	Annual
India	25 nP.	Rs 5
Foreign	6d or 7cents	10s 6d or $ 1.50

Editorial Offices: Yojana Bhavan, Parliament Street, New Delhi-1. (Tel. 33367 and 34380).

Business Offices: The Publications Division, Old Secretariat, Delhi. All business inquiries are to be sent to the Business Manager at this address. Direct subscribers are advised to send their subscription preferably by postal order.

IN THIS ISSUE

New Deal for Kashmir Craftsmen ... 1
—*R. J. Chinwalla*

Prospects for Underdeveloped Areas ... 3
—*Shriman Narayan*

I.V.R.I. Helps Improve Our Livestock 5
—*M. K. Pardhy*

Helping Poorer People in Villages ... 9
—*Planning Commission Newsletter*

Small Industries Need Better Organisation ... 11
—*V. S. Mahajan*

The Talk We Talk ... 13
—*Krishna Gorowara*

Side Track ... 16

How to Start a Small Industry ... 17

You Ask Us ... 19

Book Reviews ... 21

Ramabai Ranade ... 23
—*Our Cultural Heritage*
Lalji Pendse, M. P.

As the Plan Moves ... 25

Farming Notes ... 26

Small Industries—A Reading List Cover iii

Saris of Arni—Pride of Place Cover iv

Our Cover: A happy Kashmiri family in front of their home in the Martand village. Kashmir is now celebrating its famous festival. Please see pages 2 and 3.

NEXT FORTNIGHT

OUR POSTAL SERVICES
—Pictorial Feature

CHANGES I WOULD LIKE TO SEE IN
Government Procedures
—J. P. Chaturvedi

ADMINISTRATIVE EFFICIENCY
—Introducing a new series

Editorial

'They' Must Become 'We'

SPEAKING about the need for increasing our agricultural production, Mr Nanda told the recent annual conference on Community Development that the problem was more one of organisation than one of resources. The Third Plan document, in fact, has said this of the whole of our Plan in pointing out that difficult as the question of resources is, the real challenge is implementation.

This awareness is reflected in the stress laid in the Third Plan on the re-education of administrators. While the Plan expects a good deal from the people by way of enthusiasm, co-operation and initiative, it demands even more from officials; for the nature of the people's response itself depends to a large extent upon the example of dedication that the officials set.

On the theme of training the officials the Vice-President has spoken some illuminating words. In an address to the School of Public Administration, Dr Zakir Husain has admirably analysed the question of the attitudes of administrators and the people towards each other.

Himself an eminent educationist, the Vice-President has said that in the process of education the acquisition of understanding is more important than the acquisition of information and skills. Do our administrators understand the people? In turn, how do our people regard the officials? In the early days of British rule, Dr Zakir Husain reminds us, the bureaucracy, in spite of its being the tool of a foreign domination, was even liked and respected for its efficiency, its impartiality and its incorruptibility. But as the years went by and this bureaucracy grew, it also deteriorated, until a time came when the Mahatma was to characterise it as satanic.

Why did this deterioration come about? Because this 'efficient, impartial and incorruptible' machine did not function amidst a vigilant people. In the absence of virile and valid criticism it lost what moral fibre it had. Power corrupted it. And when the people at last did show signs of a stirring, officialdom ranged itself against the national aspirations and forfeited the people's sympathy.

This suspicion and hostility have not wholly disappeared even after freedom. As the Vice-President has put it, the administrator has not shaken off "that exclusive, forbidding touch-me-not-ness, that stand-offish sense of superiority, that lack of sympathetic understanding" of the old days. This is one of the reasons why the people still speak of officials as *they* and *them* and not as *our* and *us*.

The gap between the people and the administrative machinery will harm the country if allowed to exist much longer. But how is it to be bridged? How can we get the people to regard the officials as *our own* and as an instrument of *our will*?

The key to this change lies in the officials' own hand. They can bring it about through self-education. What constitutes this self-education is best seen in the Vice-President's own words :

"In the expanding democratic life of this country, there is not much room for people who find their greatest satisfaction in imposing their will on others and in demanding and receiving unquestioning compliance. The administrator today has to work among people who after long years of sullen, unquestioning compliance have at last come into their own. The basis of that compliance has radically changed..... Unquestioning obedience has to give place to intelligent and understanding acceptance.

"This should affect your whole attitude to human relations with the people in general and with the team in which you work, your superiors and inferiors. It will perhaps lead you to evolve a technique of open and frank communication in good faith allowing no tales to be secretively carried to you or by you. It will perhaps help you in not being in a hurry to judge or to let down a subordinate and in not making special pets or favourites. It will perhaps give you an inner resistance against sycophants. It will perhaps give you a quality of self-criticism and inner vigilance which may enable you to resist what pleases you to hear."

HELPING POORER PEOPLE IN VILLAGES

First Comes Agriculture, Then Rural Works



At the last meeting of the Central Committee on Community Development held on December 26, 1961, the Planning Commission was required to co-ordinate the examination of the Report of the Study Group on the Welfare of the Weaker Sections of the Village Commuity, and to suggest further action. The Note published here is an attempt at such co-ordination.

The Note was discussed at the meeting of the Central Committee on Community Development on July 24.

The Committee arrived at the following conclusions: (i) The primary emphasis of the community development programme should continue to be on increasing agricultural production; (ii) The rural works programme should be concentrated in areas with higher incidence of unemployment; (iii) The Centre should offer assistance to the State Governments for expanding the programme to cover 10 million children by the end of the Third Plan. The sharing of expenditure by the Centre and the State Governments should be in the ratio of 1 : 2 between them.

WHILE there is much in common between the general outlook in the Report and in the Third Plan, many of the specific proposals of the Study Group are not directly or sufficiently linked with the development programmes and policies which are being actually implemented under the Plan. Moreover, several policy recommendations of the Study Group's Report do not go far beyond general observations and the administrative, financial and other implications are not always set out.

There is one significant difference in emphasis in the Third Plan and the Report. The issue concerns the priority to be given to agriculture in the C.D. programme and the role of C.D. in relation to the weaker sections of the village community. The Third Plan states "One of the major aims of community development is to create conditions for the growth of a progressive rural economy with a diversified occupational structure in which the weaker sections of the community are brought speedily to the level of the rest". (Page 12.) In this respect, the Report points out that, "By putting up extraneous tests for judging the performance of community development, the (Third) Plan fails to pinpoint the main responsibility of that programme to achieve the welfare of the weaker sections". (Page 3.)

Raising agricultural production is the most important factor in the welfare of the weaker sections of the rural community, as pointed out in the Third Plan and the Report. If diffusion of effort under the C.D. programme and the dilution of the agricultural extension functions of the C.D. organisation are not to occur, there should be no doubt at the present time regarding the need to concentrate on agricultural production.

Means Test

The Study Group itself was not able to undertake or arrange for investigations as to the proportion of the population which would be reckoned as the "weaker sections" of the village community or as to the extent to which these sections have benefited from C.D. and other programmes. Such enquiries are in their nature difficult and protracted. On the basis of evaluation reports of recent years and other studies, the Study Group has inferred that the weaker sections have not benefited sufficieutly from the community development programme. It suggests that the problem of backwardness is deep-rooted and cannot be met by short-term solutions; it should be attacked on both fronts, social and economic. It has attempted to lay down criteria for identifying the weaker sections of the village community. A "means test" approach is proposed under which families whose income is less than Rs 1,000 a year are taken to cover "cases of chronic economic backwardness". Within this group, priority for assistance is recommended for those whose income is less than Rs 500 a year. Families whose income is less than Rs 250 per annum are regarded as "destitutes", for whom suitable welfare measures on the part of Panchayati Raj institutions and grants-in-aid by the State are envisaged.

The "means test" approach suggested by the Study Group is not without its pitfalls and is, in any case, subject to so many limitations that it appears desirable to find other ways of dealing with the problem. This is the approach of assuring the basic necessities or minimum needs to the bulk of the people.

The importance of ensuring as speedily as possible a minimum level of living has been stressed in the Third plan. The Plan observes that "the first condition for securing equality of opportunity and achieving a national minimum is assurance of gainful employment for everyone who seeks work". This is also the general approach adopted by the Study Group regarding the minimum requirements for the welfare of the weaker sections. The Study Group has offered suggestions concerning agriculture, public works, rural industries, housing and drinking water, education, health, protection from economic exploitation, freedom from social and cultural disabilities and reform and prevention of wasteful habits and customs.

Since the Report of the Study Group and the Report on the Third Plan became available, there have been certain developments in several of these fields, specially rural works, the programme for intensive development of small industries in rural areas, education, supply of drinking water in villages, rural housing and provision of house sites for landless agricultural workers. These and other development programmes are under way and further intensification is possible in several cases. Conditions in regions which are particularly backward are proposed to be studied carefully with reference to their development programmes and possibilities as no small part of the problems of weaker sections exists in such areas. Some suggestions, which take into account the recommendations of the Study Group, are offered below.

The programme of rural works began with 32 projects in 1961, and this year

about 200 more projects have been sanctioned. Provided State Governments organise these projects efficiently and also plan adequately for the next phase, it is proposed to take up about 800 more projects early in 1963.

The rural works programme aims at present at providing additional employment during the slack agricultural season which extends from 3 to 5 months in different parts of the country. As the programme develops and becomes better integrated with other activities at the block and village level, it should be possible to expand or contract it according to the actual need for employment in an area, and enable village Panchayats to utilise this programme as a means for providing continuous employment to agricultural workers. Thus, the objective of assured employment at the village level to those who are willing and able to do manual work will be served in a practical way.

This approach is calculated to achieve the essential purpose which the Study Group has in view but, deliberately, it does not go as far as the recommendation of the Study Group that "Government should undertake and make a declaration to that effect to guarantee employment to every citizen who is prepared and fit to do manual labour".

There have been important developments in the field of rural industrialisation in recent months. These include the setting up by the Planning Commission of a high-level Rural Industries Planning Committee and the decision to take up the first series of projects for intensive development of small industries in rural areas.

Social Services

The Third Plan has the objective of providing facilities for education for the age-group 6-11 on a free and universal basis. The two main lags in this programme are in the backward areas and in relation to girls. These have to be overcome, and the resources needed have been assured.

The Study Group has advocated mid-day meals for *all* children in the primary classes, that is, for about 50 million children by the end of the Third Plan. If half the cost of the mid-day meal is met by the community, at 12 nP per meal per day for 200 working days in the year, the additional resources required (on certain phasing) for providing mid-day meals for these 50 million children would be about Rs 144 crore. The School Health Committee set up by the Ministry of Health has envisaged a target of 25 million children. Recently, the Ministry of Education discussed the possibility of a target of 15 million children. Considering that the number of childern receiving mid-day meals at present is about 4 million, a realistic target for the end of the Third Plan may be about 10 million children. A programme of this size would require additional resources of the order of Rs 40 crore. It is for consideration whether this financial burden should fall entirely on the State Government or whether the Central Government should share it on an equal basis.

The objective of providing clean drinking water in most villages by the end of 1965-66 has been accepted in the Third Plan. Besides the provision under the local development works programme, there are allocations for the rural water supply and sanitation programme under health as well as under community development and also under programmes for the welfare of backward classes, all the sources making up together a possible outlay of about Rs 67 crore. The actual allocations being made from year to year are on a lower scale, and it would be desirable to ensure provisions at least in line with the Plan, specially after States complete their surveys of the rural water supply problems.

The Third Plan contains important proposals regarding rural housing and also provides to a limited extent for the provision of house sites for landless agricultural workers. Details of the latter scheme have been worked out between the Planning Commission and the Ministry of Works, Housing and Supply, and instructions are being issued. It should be added that the existing provisions in the Third Plan are quite modest, about Rs 13 crore for rural housing, of which about Rs 5 crore are earmarked for providing house sites for landless agricultural workers.

Once Zila Parishads and Panchayat Samitis start implementing these programmes effectively on the lines set out in the Third Plan and the development of rural housing and replanning of villages becomes an integral part of the scheme of rural development, it should be possible to give greater support to these activities. It is realised that they have far-reaching significance in transforming the character of village life and in providing an essential base for the development of rural industries.

This note has only dealt with the principal operative recommendations in the Report of the Study Group.

MONTH IN YOJANA BHAVAN

(Up to August 10)

The sixth meeting of the Committee on Distribution of Income and Wealth was held on July 23 and 24.

The Committee was set up by the Planning Commission in October, 1960, with Prof P. C. Mahalanobis as Chairman. The Committee reviewed the draft prepared by the member-secretary and suggested certain changes which are to be considered at the next meeting to be held some time towards the end of September.

To prepare a programme of transport on a sound and scientific basis a group of transport planners will be constituted soon. The decision was taken at a meeting held on July 27 with Mr Jagjivan Ram, Minister for Transport and Communications, in the chair. The group which will work in Planning Commission will consist of three senior officers two of whom would be technical experts with experience of railways and roads and road transport and the third would be an economist. For development of roads it was decided to constitute a Central Organisation for executing more difficult road and bridge works on the National Highways. Mr G. L. Nanda, Deputy Chairman of the Planning Commission, emphasised the need for development of roads in rural areas. To determine the relative responsibility for construction and maintenance of these roads at different levels it was agreed that the Ministry of Transport and Communications in consultation with the Ministry of Community Development should put up proposals for consideration of the Planning Commission. It was also decided that a technical organisation for advising on the manufacturing programme of commercial vehicles would be set up by the Ministry of Transport and Communications.

Other decisions taken at the meeting related to shipping, inland water transport, civil aviation and telephones. The question of getting ships manufactured for commercial use would be pursued jointly by the Ministry of Transport and Communications and the Ministry of Defence and an organisation for development of inland water transport would be set up as early as possible. As regards civil aviation, the Minister said that Indian Airlines Corporation was advised to go in for Avro 748 even if the cost of operation was high. In view of the growing demands for telephones both in the urban areas and the countryside a long-term plan for expansion of telephones industry as well as the feasibility of introducing a third shift in Indian Telephone Industries were considered necessary. The Posts and Telegraphs Department was asked to put forward proposals for consideration of the Planning Commission.

A Materials Management Seminar was held in New Delhi on August 8, 9 and 10. Organised by the Committee on Plan Projects of the Planning Commission, the three-day Seminar was attended by senior executives of public sector undertakings and experts in materials managements. Dr A.N. Khosla, Member, Planning Commission, inaugurated the Seminar.

The Research Programmes Committee of the Planning Commission has been reconstituted. Consisting of eminent social scientists in the country, it will now develop into an inter-disciplinary advisory body to the Planning Commission on problems of social and economic research. The Committee has already sponsored 140 research schemes on problems of national development in co-operation with various universities and research institutions. The members of the Committee are : Mr G. L. Nanda, Dr I. G. Patel, Dr D. T. Lakdawala, Dr B. H. Mehta, Dr Baljit Singh, Prof. V. V. Ramanadham, Dr J. P. Bhattacharji, Dr B.K. Madan, Mr P.C. Mathew, Prof. V. K. N. Menon, Mr Samuel Mathai, Dr P. J. J. Pinto, Mr P. D. Shukla, Dr S. R. Sen, Mr N. C. Sen Gupta, Prof. D. R. Gadgil, Prof. D. G. Karve, Prof. C. N. Vakil, Dr V. K. R. V. Rao, Dr P. S. Lokanathan, Prof. A. R. Wadia, Dr Radha Kamal Mukarji, Prof. M. L. Dantwala, Dr B. N. Ganguli, Prof. D. Ghose, Dr R. Balakrishna, Dr A. K. Das Gupta, Prof. S. K. Basu, Dr A. Appadorai, Dr M. N. Srinivas, Prof. K. P. Chattopadhya, Prof. S. V. Kogekar, Prof. V. R. Pillai, Prof. N. Srinivasan and Mr A. V. Venkateswaran.

Dr D. K. Malhotra, Joint Secretary, Planning Commission, is member-secretary.

Need For Better Organisation And Quality Control

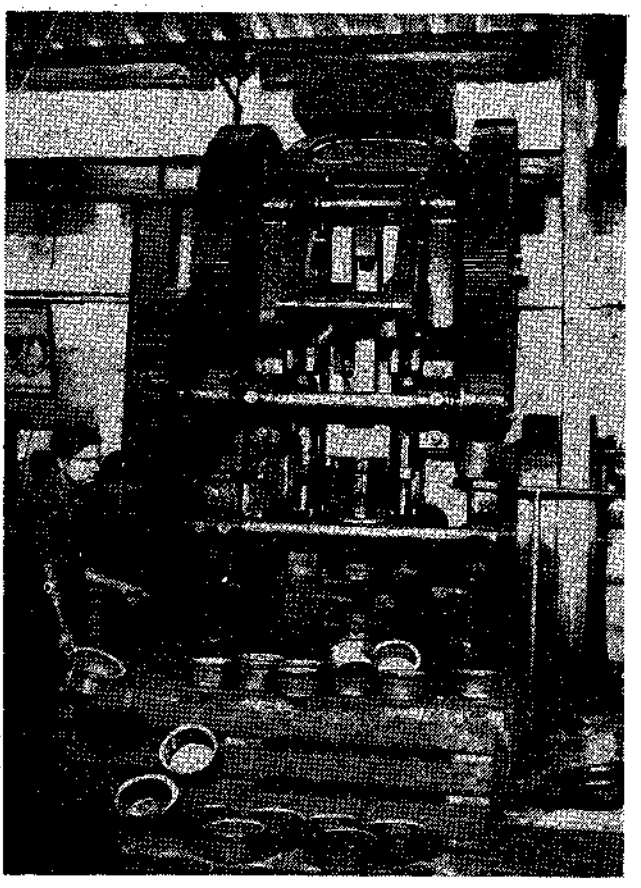
V. S. MAHAJAN

IN the usual model of growth, borrowed from more developed economies, the growth rate in output becomes a function of heavy investment in large and basic industries, and small industries usually receive inadequate attention. While emphasis is laid on supply, the demand side is treated as a fixed variable, with the market for the growth in output *via* investment in basic and heavy industries being taken for granted. It does not take long to realise, however, that the demand factor has not been properly integrated in the production function of the economy. The result is over-production in certain heavy industries and under-production in certain consumer industries. The obverse of this is that, had adequate attention been given to internal consistencies between the demand and supply functions in the economy, much more attention would have been devoted to small (factory) industries than at present and the growth of basic industries properly integrated with the needs of these industries and other sectors. What is more important, such a policy would have solved the anomaly of rapid production (*via* heavy industries) on the one hand and an ever increasing volume of unemployment on the other.

One feels that the Indian economy has laid far more emphasis on the supply aspect than on demand. When faced with the growing volume of unemployment, instead of trying to analyse the problem more objectively, it has thought of cottage (hand) industries as a solution. These industries have been created with an unlimited built-in capacity to absorb an ever expanding labour force.

Where do we find ourselves after ten years of planning? Alas, the cottage industries have not worked the magic expected of them. Instead, unemployment is larger than at the commencement of the Second Plan. Where have things gone wrong? Obviously we have not sufficiently grasped the dynamics of small industries. Instead, we continue to depend too much on outmoded cottage industries, on the one hand, for solving unemployment and output of consumer goods, and on basic and heavy industries, on the other, to help us in reaching the goal of self-sustained growth.

How inadequate our attention to small industries has been becomes evident when we analyse the Plan allocations to cottage, small and large industries in the Second and Third Plans. Whereas in the Second Plan Rs 120 crore and Rs 900 crore were spent in the public sector for the development respectively of cottage and large industries (the latter also including a small allocation for mining), the outlay during the Third Plan on small and cottage (perhaps mostly cottage) industries in the public sector is placed at Rs 264 crore, whereas the outlay on (basic) industries and minerals is at Rs 1,520 crore, or six times larger. This shows that, instead of gaining from the experience of the Second Plan, we are making the Third Plan even more capital-intensive.



Industrial estates are an excellent example of integrated development of small industries. We have in India 68 of them today. This picture showing pressing of household utensils is from the Hubli Industrial Estate in Mysore.

Also, within the private sector, the larger industries have received disproportionate attention as compared to small ones. The large private industries have been provided with more help from the Government than the small industries in the shape of improvement in basic facilities, liberal import export policies, sheltered domestic market due to import restrictions, extensive tariff protection, liberal financial help through a number of financial corporations and improvement in the working of the public issue market.

This appears to contradict our avowed objective of a socialistic pattern of society. In fact, the fruits of planning have tended to accumulate in the hands of those who control large industrial and commercial undertakings.

We have been slow in realising the true significance of small industries. It was perhaps not until the publi-

cation of the report of the Ford Foundation's team of (American) experts on small industries that we adequately realised the important role of these industries in our development. This team made some useful suggestions, and though we have picked up a few of them (like National Small Industries Corporation and Regional Service Institutes), on the whole our attempts have been half-hearted. A part of the explanation may lie, as suggested earlier, in our enthusiasm to take to a model of growth suited rather to more developed economies than to an underdeveloped economy like ours.

It is also because of our desire to catch up with more developed economies within the minimum time that we have paid more attention to the development of basic and heavy industries. In the process we have neglected small industries and aggravated our own problems of employment and exchange. This is perhaps a consequence of the famous 'demonstration effect'. That is, the more we see the superior technology and standards of living of Western economies, the more conscious we become of our own low levels, and hastily proceed to copy Western patterns of production. This approach has the full support of the large private sector, which, because of its direct and indirect influence over the political and economic life of the country and over media of communication, has a large say in moulding public policies. Whereas large industrialists and commercial interests are well organised and have very vocal national federations and chambers exclusively engaged in furthering their corporate interests through publications, memoranda and pressure, such is hardly the case with small industries. Not to speak of a national organisation, these industries are not even organised at the regional level. This naturally puts them at a disadvantage as compared to large industries. Consequently, small industries have a small say in official policy matters. Part of this anomaly may be corrected by providing adequate representation to small industrialists in the advisory groups attached to the Planning Commission and other national and State bodies.

There is need for a vigorous attack on the basic defects in small industries, which are, mainly, lack of finance and lack of adequate organising capacity. In a way both these are interrelated. If we can improve the organisational structure of small industries—irrespective of whether they are co-operative, individual or of the limited liability type, provided they are efficient—we shall have, to a large extent, paved the way for their being more liberally accepted by the existing financial institutions. The fact that small industries participate only to a limited extent in the finances of various State financial corporations, when these corporations are largely expected to help these industries, also points to the weak organising capacity of small industries.

Another factor which retards the development of small industries and also limits their organising capacity is the absence of basic infra-structure—transport, communications and power—in small towns and rural areas, which are the obvious centres for the growth of small industries. No wonder, therefore, that small industries continue to use outmoded methods of production and are not in touch with the latest development in the market. There is hardly any quality control over goods produced by them, which naturally limits their market to the immediate neighbourhood. Thus, while we emphasise earning foreign exchange to fill the widening gap in our balance of payments, we appear to be complacent about the quality of goods turned out by most of our small industries, and do not take sufficient measures to improve quality. But quality improvement can only come with improvement in the basic organisation of small industries and this, to no small extent, depends on the vigour with which we bring our small towns and rural areas within the fold of modern distribution.

Again the issue of lack of sub-contracting, on which much emphasis has been put by the various learned economists (including George Rosen and the Japanese delegation on small industries), appears to be intimately linked with the provision of basic facilities to small industries and improvement in their organisation. If the Japanese have been able to make an exclusive use of the sub-contracting system, it is surely due to their having access to excellent basic facilities and the rigid quality control over goods manufactured. If we want the system of sub-contracting to flourish in India in the interest of larger employment etc., it is necessary that we devote more attention to quality control, which in turn means control over the basic raw materials and plants used in small industries. In this connection we need to enlarge the facilities available under the National Small Industries Development Corporation and various regional institutes.

Industrial estates are an excellent example of integrated development of small industries. Unfortunately their full significance has not been grasped yet, as is evident from the lack of optimum use of facilities available in these estates. Part of the explanation for this might be that these estates are not publicised as widely as they should be. Also, small industries are slow to change their methods of production. This merely confirms the need for a more vigorous drive to improve the organisation and technical education facilities in small industries and their effective integration with regional and national bodies of small industries.

SMALL IRON PLANTS CAN BE SET UP IN STATES

THE National Metallurgical Laboratory (N.M.L.) at Jamshedpur has conducted extensive smelting trials with iron ore and other raw materials found in Punjab and Maharashtra. The trials show that small-scale plants to produce pig iron can be successfuly set up in those States to meet the demand of foundries.

Iron ore deposits of Mohindergarh area of Punjab can be utilised for producing pig iron required for over 100 foundries around Batala. In Maharashtra also, small-scale plants can utilise the iron ore and limestone available in the State.

It is the policy of the Union Government to promote small-scale iron producing units on a regional basis. Licenses have been issued to several private firms for this purpose. The N.M.L. is conducting trials on raw materials from the different States.

The CHANGES I would like to SEE in



The Talk We Talk

BY KRISHNA GOROWARA

MR Menon, among the most active of our countrymen, has hit us all, right and proper. We do not work, he says, for more than two hours per day on the average. The national character of 'Hum Hindustani' is composed in the main of two traits, namely loose-tonguedness and loose-limbedness. It logically follows that we have to effect an immediate change-over to be recognisable as a people who would talk a little less and could work a little more. But in these days of planned minds, we dare not think of proceeding in any haphazard manner.

To my mind, the first step in the correct direction is to be taken by the research surgeons of the Hospital for Tropical Diseases. For, tropical, no doubt the disease is. The climate just gets us under. The heat sags the nerves and muscles sooner than we've got used to their youthful toughness and strength. Enlightened surgeons have hence the immense responsibility of finding out the exact muscle and nerve for the necessary tightening and pulling up. And having discovered such a way out, they have to impart the know-hows first to the mechanics of the trade who could forge the right fool-proof tool that would be turned out of their foundry (or factory?) by the bulk; and secondly, they have to train a set of recruits who, like the personnel at one type of performance at family planning centres, could be at this second grand deed.

I volunteer for the experimental operation! It is hey-day successful ! I begin to see and do the obvious. First things first. The eyes of the Conference-mongering, Council-holding Pundits are leadened with scrutinising stacks of files; their already-bent physiques are almost deadened under the weight of words ceaselessly cascading upon them. And all over the Hindi-English tangle! This thing, they groan and moan, costs so much, and that so much more; this man to lift a straw charges so much, and that so much more. Leaving them to their laments, I equip myself with two tins of paint: one black and one white; and with two brushes, one for the black paint, and one for the white. Goblin-like I trip out. And before they've gone very far on their *pada yatra* with Vinobaji's blessings, before the two young enthusiasts have gone very far on their way to Washington and Moscow, I smear off the apologetic, tail-between-the-legs position of the message inscribed in Hindi and, as should be, write instead that in English lower down. I then go to the streets and roads to ensure the same consistency even if we are to be a bi-lingual (at the least) nation.

Climbing a D.T.U. bus, I look from top to toe and from toe to top, at the dhotieites boarding at Mehrauli and the down-and-outs at Pahar Ganj and Tis Hazari and such areas. Dizzily I quiz. For a brief spell only . Soon enough it becomes increasingly clear that they can't be expected to decipher routes indicated in a foreign language against the number of a bus unless the change is wrought. Out comes my black brush first, and then the white with which I write the right squiggles. That job over, while the City Fathers higgle-haggle over the next Civic Reception, I rally together a whole troop of waifs and strays (of whom there is no dearth) and climb them up and down the huge, big advertisement-boards at crossings and along busy thoroughfares. Soon, splash and swoosh go the brushes I fetch for them. Is it essential for a patron of Hindustani films to read the ads in English? And what is more enigmatic, in English only? Anybody's mind'ld be in a maze. Am I in topsy-turvydom? Or have I come out of a Lilliputian land of tits and nitwits and so cannot perceive the wider connotations, of logic, if any in the present-day disquietudous goings-on?

I FLIT around, however, until I come to the University. Matters are a trifle different here (English having been given an indefinite lease of life). At the time of the annual Convocation, thousands of graduates have the Vice-Chancellorian formula dinned into their heads. "I charge you," it goes something like this, as the degrees are conferred, "that ever in your life and conversation you prove yourselves worthy of the same." When it comes to English, the usage of it I mean, I come across two types of students: the long-tongued and the tongue-tied. Could I divide the undergrads still with us accordingly into sections? We must teach the art of conversation. While the former, I discover, get away with the glib interjecting of all talk with their "aws" and "haws", "ows" and "wows", the latter sit blinking their eyes: not getting the hang of racy-slangy twists and turns to parts of sentences. Parts, yes, for seldom is a sentence complete.

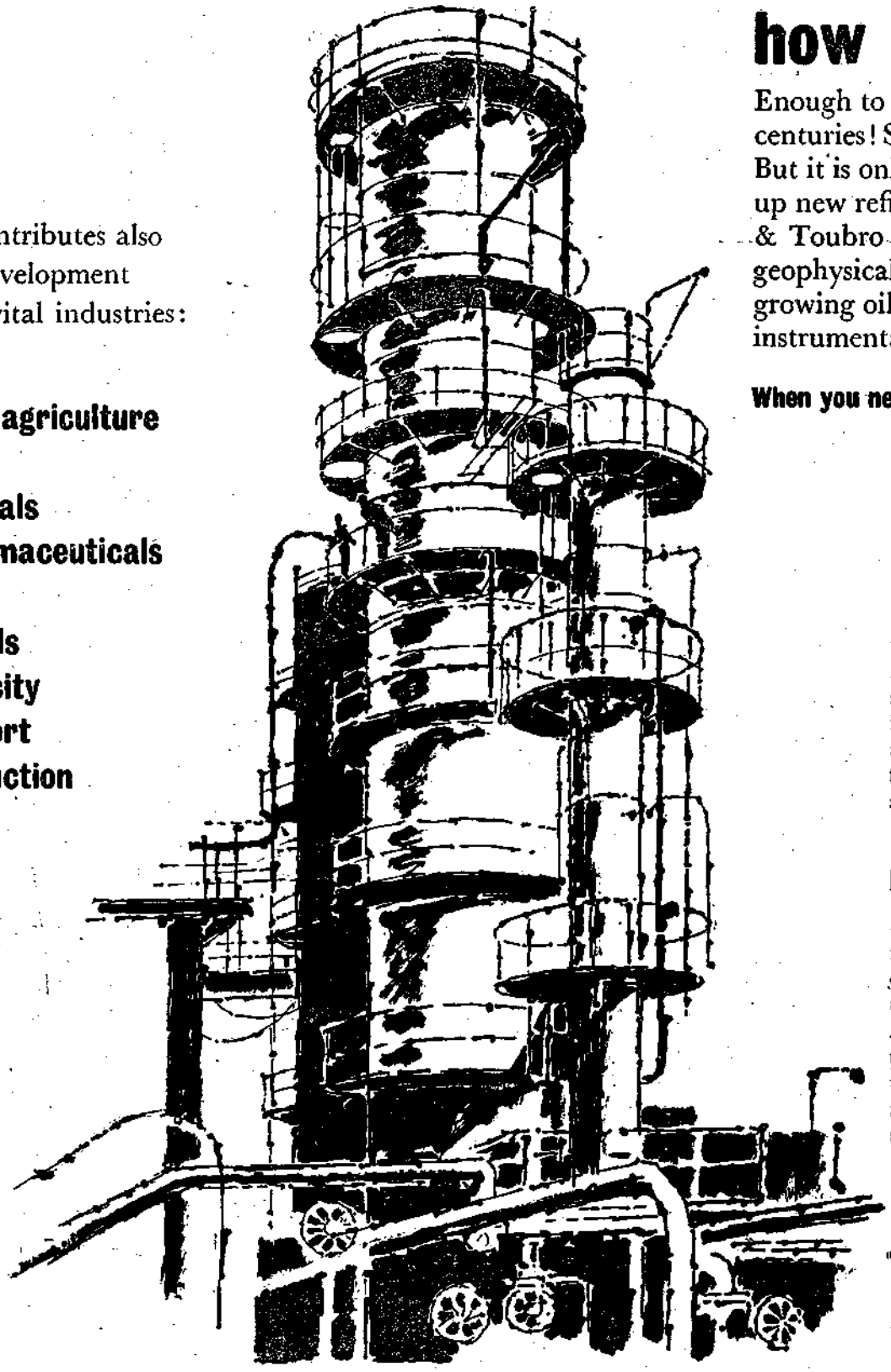


Not exactly like Shaw's Professor Higgins, but in line with his policy in part nevertheless, to the talky tribe I'd give more written work in tutorials; while from the 'silent bands' I'd extract if I could, the spoken word—complete with its force and meaning. Terribly unconventional though it may seem by modern systems we have been habituated to, I'd sit them at a corner-table of the cafe in the compound—the easiest way of breaking them into familiarity of some sort. But sit over what—tea or coffee? The drink would moisten the palates. But since out of the same pot, would there not be some communion of thought stimulated with it? In summer, I'd prefer similarly a jug of lime cordial out of which we could replenish our glasses without having to ask for more;

(*Continued on page 28*)

L & T contributes also
to the development
of these vital industries:

- **dairy**
- **food & agriculture**
- **steel**
- **chemicals & pharmaceuticals**
- **paper**
- **minerals**
- **electricity**
- **transport**
- **construction**



how m

Enough to keep
centuries! Seem
But it is only a
up new refineri
& Toubro toda
geophysical, pr
growing oil indi
instrumentation

When you next st

how
minu

Deper
drillin
be an
throu
throu
And t
severa
int
any d
for th
suppli

how

Say,
imagi
count
tanks
A rou
petrol
tant p
made
name

IN SERV

LTY.2

h energy from 750,000 tons of oil?

he cars in India going for weeks—or to make one of them run non-stop for
t of energy? It is. 750,000 tons of oil is the annual capacity of the Noonmati refinery
of India's requirements! One reason why crores are spent to find new wells, set
large the distribution network. It is a gigantic enterprise—one in which Larsen
ys an important role. Drilling rigs and bits, valves, petrol pumps and
and telemetering instruments—these are some of the items L & T supplies for the
. Even the complete mechanical construction and erection, including
he Noonmati refinery was a job done by L & T!

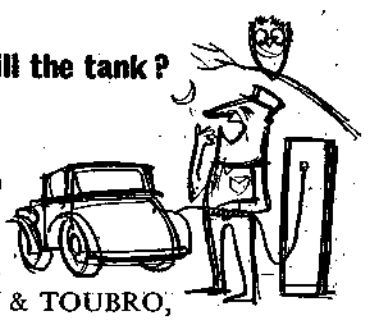
a petrol pump, consider—

loes it take to drill a hole—
hours? days?



it's
il, it could
! Minutes
soil, hours
d rock.
l can go
and feet
Not
nly those specially designed
-drills and bits like the ones
L & T.

petrol to fill the tank?



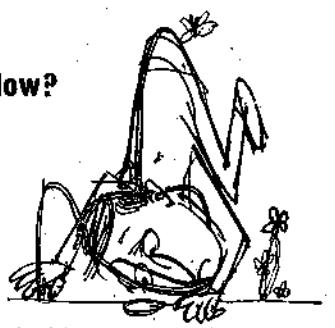
s. And,
over the
usands of such
ing filled.
-clock job for
s—an impor-
of LARSEN & TOUBRO,
esign backed by a famous
arco!

It's no child's play to stop the flow...



Not when it is inflammable petrol! And that too, in an emergency—say, a fire at an oil refinery! When lives are in danger, seconds count—and seconds are what it takes to close an *Audco* valve. One reason why it is an important component at oil wells, refineries and pipelines.

Is there oil down below?



Perhaps. But how does one find out? Experts drill a hole, fill it with charge and explode it. They record the shock-waves—but not with a stethoscope! Highly sensitive geophysical instruments are used to discover oil-bearing strata far, far below the earth's surface—instruments like the ones made by the world-renowned Texas Instruments Incorporated

LIES SUCCESS

LARSEN & TOUBRO
LIMITED

Side Track

School Atlas

A FEW days ago *The Hindu* of Madras wrote about the difficulties school students, teachers and parents were experiencing owing to non-availability of good atlases. *The Times of India* had a similar account of the plight of Delhi children.

In *Yojana* of June 10, 1962, we had a short article on the School Atlas published newly by the Ministry of Scientific Research and Cultural Affairs. It is a good piece work which amply justifies the reputation that the Survey of India has built up over nearly 200 years.

In the article we also pointed out the need to put large numbers of the Atlas on sale so that the shoddy and inaccurate atlases are driven out of the market. We are glad to learn that the Scientific Research and Cultural Affairs Ministry has made arrangements to print a substantial number of the School Atlas and release them through the recognised book-sellers.

Another welcome item of news is that the Atlas will also be published in a hard-cover edition so that it can stand rougher use. (After all boys will be boys.) This edition will be priced at Rs 8; the paper cover edition will continue to be sold at Rs 5.

Hearsay & History

WE recently drew attention to how most of the newspapers of the country had, in using a brief report, spoken of 'pytochemicals' instead of 'phytochemicals' and said that this was an example of ignorance of simple industrial terminology. Another Delhi newspaper—and one noted for high standards—recently proved that such ignorance extends also to current history, considered to be a strong point with journalists. A report in the newspaper spoke of Dadabhai Naoroji as a person "said to be the first Indian to demand self-government for the country" and "said to have been the source of inspiration for Mahatma Gandhi". The same report also spoke of Dinshaw Wacha as one-time secretary of the Indian National Congress and gave Gokhale's initials as B.K.

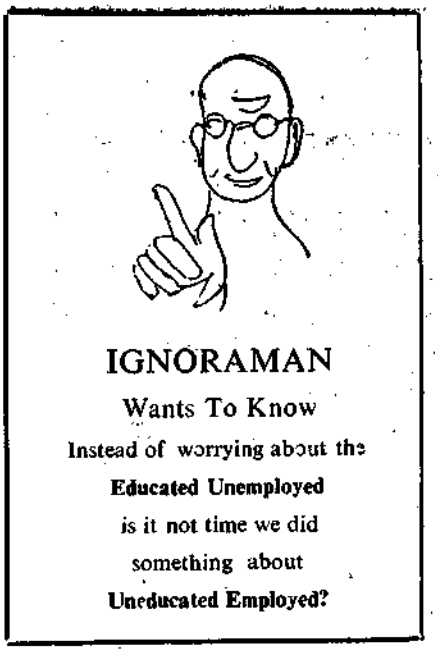
On another occasion, Vyjayantimala was described as an "unidentified Indian actress". The 'sub' who could not identify one of the highest-paid Indian actresses would not probably find any difficulty in identifying B.B. or M.M. This merely shows what we are oriented towards.

There is an old newsroom superstition that when one journal points out the slips of another, the Imp of Retribution strikes without remorse. Having asked for it, we wait.

Food & Fertility

HOW does nutrition affect fertility and reproduction? This is a question that is being studied in many countries, and no final answer has still been found. There is one school of thought which believes that as nutritional levels rise, men and women tend to have fewer and fewer children. Some other scientists think that when under-nutrition is remedied, men and women gain more strength and energy, leading to an increase in both sexuality and reproductive capacity. Field observations in Holland and Russia on prisoners of war showed that chronic starvation caused involution of sex glands and even sterility. At the other end, experiments on rats as usual show that when proteins constitute more than 18 per cent of the diet, the incidence of sterility in females increases and the number of litters and the number in each litter decrease. Low protein diet, it has been noted, prolongs the reproduction life span in both male and female animals.

An article in *Family Planning News* by Dr P. S. Venkatachalam of the Hyderabad Nutrition Research Laboratories describes these and other findings of research. The author prudently adds that not nutritional levels alone but several other factors, social, religious, economic and cultural, influence fertility. This is where human beings differ from rats. Evidently, in a developing country which aims at both restriction of population and increase in nutritional standards, more systematic research has to be done in this field.



Fluorides

Fluorides in water hurt the teeth if their dose is too much *or* too little.

The Central Public Health Engineering Research Institute of Nagpur has developed a process to control the proportion of fluorides in the water. The proportion can be reduced to between 0.8 and 1.5 milligram per litre of water which is the permissible limit.

A defluoridation unit, incorporating this process, has been devised for domestic use. It has a capacity of 70 litres, enough to serve the needs of an average family.

Entomology

Lizard in Soda-Water Bottle
Rat in an Ice Slab
Moth in Milk Bottle
Cricket in Beer

—all in a fortnight in Delhi. But what is so strange, when Delhi has

Corpses in files
Hippos behind desks, and
Frogs in position?



HOW TO START A SMALL-SCALE INDUSTRY

THE basic needs of an industry are capital, raw materials, site, technical knowledge and a nucleus of skilled staff. Before starting any venture it is necessary to have precise knowledge of the items to be manufactured, the scope for marketing them, the sources and terms of financial assistance, names and addresses of other manufacturers and dealers, the procedure for obtaining import licence and so on.

The State Governments generally come forward to give all the information that a willing entrepreneur needs. To assist their efforts, the Government of India have set up two organisations for assisting small industrialists. One is the office of the Development Commissioner, Small-Scale Industries, in the Ministry of Commerce and Industry, and the other is an autonomous body called the National Small Industries Corporation. The Small Industries Service Institutes located in all the States work under Development Commissioner, Small-Scale Industries, and render advice on planning and production, improved technical processes, training in business management, market research surveys, etc. The National Small Industries Corporation helps the entrepreneurs in getting machinery and equipment on easy payment basis, securing contracts from the Director General of Supply and Disposals as well as from the Railways and training of artisans at the production and training centres at Rajkot, Okhla and elsewhere.

To provide the necessary information to small entrepreneurs, the Central Small Industries Organisation also runs an information service in the office of the Development Commissioner, Small-Scale Industries, Udyog Bhavan, New Delhi , as well as in the offices of the Small Industries Service Institutes located in all the States. Intending manufacturers can get in touch with any one of them. The addresses of the Small Industries Service Institutes are given below:

1. Delhi : Okhla Industrial Estate, Okhla, Delhi
2. Andhra Pradesh : Iftekar Mansion, 79, Azamabad, Hyderabad
3. Assam : Shed No. 4, Industrial Estate, Bamuni Maidan, Gauhati

TIPS FOR BEGINNERS

4. Bihar : Boring Road, Patna
5. Gujarat : Relief Road, Ahmedabad
6. Jammu & Kashmir : School of Design Building, Karan Nagar, Srinagar
7. Madhya Pradesh : 10 Industrial Estate, Polo Ground, Indore
8. Kerala : Kerala Verma College Road, Trichur 4
9. Madras : 20 Rutland Gate, Madras 6
10. Maharashtra : 40/40A Cowasjee Patel Street, Fort, Bombay 1
11. Mysore : 193, 6th Cross Road, Gandhi Nagar, Bangalore 9
12. Orissa : Darpan House, Chandni Chowk, Cuttack
13. Punjab : BXV 1679, Ferozepur Road, Ludhiana
14. Rajasthan : Mirza Ismail Road, Jaipur
15. Uttar Pradesh : 113/121 C Swaroop Nagar, Kanpur
16. West Bengal : 4 Camac Street, Calcutta 16

To help the small entrepreneurs further, the Development Commissioner, Small-Scale Industries, has published a number of pamphlets, both in English and Hindi, on model schemes. His office also issues technical bulletins. They provide a fund of information on types of machinery, raw materials and the capital required for starting any particular small industry. More than 400 publications have already been brought out, and hundreds of others are under print. Those interested may get them either from the Office of the Development Commissioner, Small-scale Industries, Udyog Bhavan, New Delhi, or from any of the Small Industries Service Institutes.

A selected list of these publications is given below :

MODEL SCHEMES

	Title	Price Re. nP.
1.	How to Manufacture Football	
2.	Wood-sheathed Slate Pencils	0.10
3.	Writing Inks	0.10
4.	Combined Chrome and Vegetable Tannery	0.15
5.	Cast Iron Soil Pipes	0.10
6.	Electroplating Unit (Small and Medium)	0.20
7.	Common Crockery Wares and L.T. Insulators	0.15
8.	Roofing Tiles	0.10
9.	Storage Batteries	0.15
10.	Plastic Toys and Articles	0.15

11. Holdalls 0.15
12. Cast Iron Foundry 0.15
13. Brass Utensils 0.10
14. Puri Glass Bangle Industry 0.10
15. Glass Phials 0.15
16. Neon and Glow Sign Industry 0.20
17. Scientific Glass Apparatus 0.15
18. Paints and Varnishes 0.15
19. Leather Goods Factory for Production of Hand-bags, Purses, Folio Bags, etc. 0.10
20. Electric Motor Stampings, Fractional and Electric Motors and Electric Motor Components 0.15
21. Chalk Crayons 0.15
22. Cycle Saddle Tops (leather) 0.10
23. Fractional H.P. Motors (fitted into electric hand tools). 0.15
24. Automobile Electrical Accessories 0.15
25. Domestic Electric Appliances 0.15
26. Assembly of Radio Sets (Medium Wave Band) 0.15
27. Automobile Dynamos 0.15
28. Loud Speakers 0.10
29. A Small Carpentry Unit 0.10
30. Cast Iron Metric Weights 0.15
31. Handmade Matches 0.15
32. Drawing and Filter Papers 0.15
33. Safety Pins 0.15
34. Tin Cans and Tin Printing 0.20
35. Table Blowing Glass Toys and Biological Birds 0.15
36. Decorated Glass Wares 0.10
37. Fruit and Vegetable Preservation 0.10
38. Cutting of Galss Articles 0.10
39. Shuttlecocks 0.15
40. Fishing and Landing Nets 0.15
41. Boot Polish 0.15
42. Stainless Steel Utensils 0.15
43. Absorbent Cotton 0.10
44. Clinical Thermometers 0.15
45. Bolts and Nuts 0.15
46. Brush Ware 0.15
47. Aluminium Hinges, Tower Bolts and Socket Bolts 0.15
48. Glass Lens specially suitable for advertisements and publicity 0.10
49. Sodium Silicate 0.10
50. Industrial Alcohol 0.10
51. Sodium Sulphide
52. Manufacture of Bone Meal
53. Splints and Veneers 0.10
54. Rubber Moulded Goods 0.10
55. Manufacture of Mirrors 0.10
56. General Heat Treatment
57. Manufacture of Pendulum Clocks
58. Carbon Papers and Typewriter Ribbons
59. Manufacture of Glue
60. Hand Lift Pumps and Centrifugal Circulating Pumps and Fittings. 0.15
61. Tennis and Badminton Rackets
62. Nylon Fishing Nets
63. Plastic Raincoats
64. Trouser Buckles
65. Water Proof Packing Paper
66. Vices (Mechanics Vice and Pipe Vice)
67. Running Shoes and Football Boots
68. Crushed Bones for Export
69. Spanners and Hand Tools

TECHNICAL BULLETINS

1. Know Your Costs
2. Modern Practical Blacksmithy
3. Forging of High Speed Steels
4. Some Precautions Required to Melt Brass Scrap
5. Common Casting Defects
6. Pottery Glazes
7. Sales Organisation
8. Book Keeping for Small Industrialists
9. Electric Motor Winding
10. Tin Plating
11. Lace Leather
12. Manufacture of Leather Goods e.g. Suitcases, Portfolios, etc.
13. Various Compositions Used in the Manufacture of Safety Matches, Suggestions for Improvement
14. Power Requirements of Machine Tools Lathe
15. Match Compositions
16. Do's and Dont's in a Small Pottery Factory
17. Raw Material Required for the Manufacture of Rubber-coated Cables
18. Press Tools
19. Manufacture of Plaster of Paris and Factory Moulds
20. Monthly Accounts for Small Industries
21. Sales for—Casting for a Small Unit
22. Shop Tools : Their Use and Maintenance
23. Heat Treatment of Steel Tools
24. Some Data on Brick Manufacture (Part 1).
25. Fruit Preservation Methods—1
26. Manufacture of Sealing Wax
27. Slate Pencils : Common Defects, Causes and Remedies
28. Blue Black Writing Ink : Its Manufacture, Troubles and Remedies
29. Troubles of Storage Batteries : Symptoms, Causes and Remedies.
30. Industrial Co-operatives for Small Industrialists.
31. Production of Football Leather
32. Glue Manufacture from Fleshings
33. Rust—A Source of Industrial Waste
34. Metal Polishing: Methods & Technique
35. Principles of Canning
36. Factory Planning for Increased Productivity
37. Drawing Tools
38. Improved Hand Tools—Blacksmithy
39. Steatite Radio Insulators
40. Proto Type Machines
41. Incentives : Financial and Non-financial
42. Production Planning
43. Basic Consideration for setting up a Small Scale Unit
44. A Few Suggestions for Better Personnel Relations
45. Workmen's Compensation Act 1923
46. Salesman's Selling Tools
47. Industrial Leather
48. Safety Measures for a Foundryman
49. French Polish and Bleaching of Shellac
50. Gears
51. Installation and Levelling of the Lathe

Kashmir Apples Fight Poverty

The Government of Jammu and Kashmir claims to have been ahead of the other State Governments in extending the community development movement over the whole area of the State. The estimated outlay on community development during the Second Plan was Rs 345.4 lakh. For the Third Plan period the State Government wants to spend Rs 325 lakh on community development, in addition to Rs 109 lakh on Panchayats.

Chadoora, half an hour's drive by jeep from Srinagar, is one of the 53 Development Blocks in the State. As I was told by the State officials, it reflects, to a great extent, some of the characteristics of rural development in the northern area.

I drove along one of the *kutcha* roads built by the villagers. Gurgling alongside the road was a drainlike canal diverting water from a natural spring. At several places there were small diversions from the drain-canal and small wooden cabins which I first thought housed some water-mills. They were, as I came to know later, bathrooms built by the villagers.

The block headquarters as well as each Panchayat building were girdled by nurseries. From these, mulberry, walnut and other fruit plants were distributed at low prices to the village farmers.

The most spectacular achievement I saw in this block was not schools (there were two high schools) or dispensaries (two in the block) or doctors (one lady and one male) but thousands of acres of apple orchards through which I could drive for miles. Some Panchayats joined together to pool hitherto unused land and planted 35,000 apple trees to keep poverty away.

When State officials talk of community development achievements I find they convey a special meaning. For instance, a dispensary may be a first-aid box and a compounder visiting a village twice a week. And when the Chadoora Block Development officer talked of trained nurses operating in the Kashmir wilderness, I had my doubts which proved well-founded. The trained nurses, as I came to learn, were none but the traditional village *dais* who had had the benefit of a few hours' lectures and training in Srinagar. After all, the English version of *dai* perhaps is nurse. The programme evaluators have to assess not only statistical performance but also the meaning of words.

K. KRISHNA MOORTHY

YOU ASK US ????

Questions from readers on planning and development will be answered on this page. It might be noted that the purpose of this service is to provide information. Trade queries will not be entertained.

AGRICULTURAL INCOME

QUESTIONS from Mr Bishambar Singh, Gurha Slathian, Jammu District:

(1) What is the contribution of agriculture to the national income of India?

(2) What is the total area under crops in the country?

(3) What is the percentage of people depending on agriculture to the total population of the country according to the 1961 Census?

ANSWERS: 1. According to the Estimates of National Income for 1960-61 published by the Central Statistical Organisation, the total national income, at current prices, was Rs 14,200 crore in 1960-61. The output of agriculture for the year, at current prices, was Rs 6,640 crore which works out to 48.3 per cent of the national income. In 1959-60 the total national income was Rs 12,860 crore and the agricultural income Rs 6,180 crore.

2. The total area under crops in 1960-61 was 327 million acres as against 318.2 million acres in 1955-56.

3. The occupational statistics of the 1961 Census have not yet been made available.

LARGEST ENTERPRISE

QUESTION from Mr J. P. Saikia, Dergaon (Assam):

According to *Yojana* of June 24, 1962, the Heavy Engineering Corporation is the second largest industrial undertaking of the Central Government. Which is the first?

ANSWER: The Hindustan Steel Limited is the largest industrial undertaking of the Union Government. It had a share capital of Rs 300 crore on 31-3-1962. It controls all the existing three steel plants in the public sector—Bhilai, Rourkela and Durgapur,—and is putting up the fourth plant at Bokaro.

If non-industrial enterprises also are taken into consideration, Railways are the biggest undertaking of the Union Government. According to the latest 'Statistical Abstract' published by the Central Statistical Organisation, the Railways had Rs 1370.32 crore as capital at charge and a total employment of 11.60 lakh people on March 31, 1960.

PANCHAYATI RAJ

QUESTIONS from Mr M. A. Hiremath, Gulbarga (Andhra Pradesh):

(1) What is the date of commencement of Panchayati Raj? How many States have introduced the system so far?

(2) What is, in brief, the organisational set up of the Panchayati Raj system?

(3) Can it be true that conditions in India are not yet ripe for such a decentralisation of power as envisaged through the system of Panchayati Raj?

ANSWERS : 1. Panchayati Raj was not introduced all over the country on a particular day. The Panchayati Raj, as it has been conceived, is the concern of the States and our States, which enjoy autonomy in their affairs, are free to introduce it when it is convenient for them. Only general directives about the broad pattern of the system have been issued from the Centre. That is why there are variations within the broad pattern in the system from State to State.

Rajasthan was the first State to introduce the system, that is, on October 2, 1959, followed by Andhra Pradesh and Mysore (in November) and Madras (in December) the same year. Orissa and Assam joined in 1960 and Punjab, Uttar Pradesh and Bihar in 1961. Maharashtra and Gujarat have introduced it this year and Madhya Pradesh is soon expected to follow suit. The remaining States are in different stages of preparing for the system.

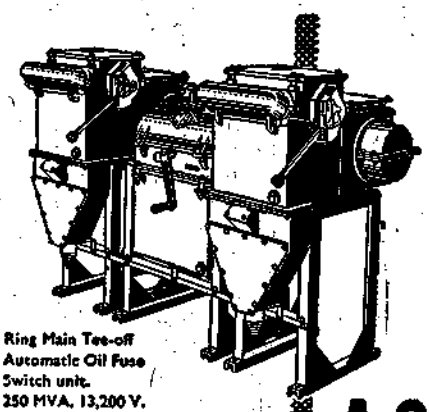
2. The set up varies according to the special conditions from State to State. However, the general pattern remains the same.

It is an integrated three-tier system —the Zila Parishad at the district level, the Panchayat Samiti at the block level and the Gram Panchayat at the village level and the three are organically linked up. The members are elected and there is provision for co-opting representatives of co-operatives and women.

3. The opinions may differ whether the conditions are ripe for such a decentralisation of power. But experience brings conviction better than reasoning. Fifteen years ago, there were persons who thought that India was not fit to become free. But we won our freedom and the experience of past fifteen years shows that we well deserved it.

However, once we have accepted the goal of establishing a welfare state of the socialistic pattern by democratic means, the decentralisation of power and other State institutions follows, and we cannot postpone it indefinitely without doing harm to our set goal. If we have already taken measures to bring about the socialistic change and to introduce democracy in our society, let us also have the Panchayati Raj, which is an embodiment of the decentralisation of power, in right earnest.

Maybe there are failures in certain aspects, particularly in the initial stages. But failures are not essentially the sign of incapacity. The tradition of Panchayats perhaps dates back to the ancient system of small republics and is still in vogue in many parts of the country, at least in the sphere of social life of the village people. Times have changed, and the form of Panchayats has also now changed, but the spirit continues to be the same.



Ring Main Tee-off
Automatic Oil Fuse
Switch unit.
250 MVA. 13,200 V.

MEI

H.T. & L.T.
SWITCHGEAR
&
L.V. MOTOR CONTROL GEAR

common production programmes and fulfilment of higher consumption needs largely through the expansion of small and cottage industries, is by no means over in our country. During the Second Plan we launched a fairly ambitious programme to develop small industry without detailed enquiries into the prospects of various industries, let alone of individual units and areas. In the Third Plan we are continuing and strengthening our programmes. It is being realised that industry outlook surveys, area development surveys, market surveys and allied enquiry and information must constitute the basis of a sound programme of development of small industry. The authors of the present study are competent researchers with first-hand knowledge of the subject. It is no wonder that out of their labour has emerged a compact, clear-cut and down-to-earth discussion of the nature, purpose and scope of the surveys; the organisation and personnel requirements; the various pitfalls involved and the evaluation of the work done in this country and the future programmes and prospects. And all this has been done against the backdrop of the Indian experiment.

It is good to have cleared two popular impressions—rather misconceptions—about the role of small industry in economic development. Our having actively launched a small industry programme makes it conspicuous. In fact most of the industrialised countries have a big, thriving small industry sector no less important than the corporate sector. Japan of course is the Jerusalem of small establishments; but in the U.S.A., the citadel of big business, small enterprises employ 26 per cent of the manufacturing employees and contribute 22 per cent of manufacturing output. The ratios are only higher for U.K., West Germany, etc. Secondly, we should not make a fetish of small industry as such. Our approach has to be pragmatic and experimentative. There is no predestined role for this industry in any country.

Economic research, analysis and application are valuable both in adopting a developmental policy and in making it a success. Certain aspects precede, some follow. Assessment of prospects of "candidate" industries, study of industrial potentialities of different areas, etc. precede, while study of the problems of the industries and establishments in regard to finance, techniques of production and management, marketing and evaluation of the programme follow. The book systematically deals with all these problems in the context of our programme of small industry development.

About half of the book is covered by appendices, giving it an impression of lopsidedness. The appendices, however, would be found useful with their case studies and examination of specific problems. For a general reader interested in small industry, the appendices, as also certain portions of the earlier treatment, cannot promise much interest. In fact the whole endeavour is addressed in parts to a diverse readership —the up and coming small entrepreneurs, the staff of the Development Commissioner's office, the district and block officials, and those interested in planning surveys and research work. Perhaps there is one large and homogeneous group to which it is profitably addressed: the underdeveloped countries which can learn from our experience in almost every way. The chapter on recruitment and training, the description in detail of the staff-pattern and work-distribution pattern in the Development Commissioner's office and at the State Extension Service Institutes, and the organisational, administrative and staffing problems would be of interest to those who are immediately concerned with these things. There is a very good account of the machinery for small industry development, how it functions, the various facilities and assistance provided for small industry through the network of Service Institutes and Extension Centres, Industrial Estates, the National Small Industries Corporation and the State Bank and the Reserve Bank. With the help of all these agencies and with better co-ordination and growing efficiency, an impressive machinery has come into operation. In almost every aspect of small industry development—research and investigations, introduction and supply of latest techniques, expansion of credit and marketing facilities—there has been appreciable progress. Perhaps all this needs much more publicity than it has received.

The most vital chapters in the book are: "Industry Outlook Surveys" "Area Development Surveys", "Market Surveys", "Economic Information Service" and "Problems and Evaluation". Those interested in planning and methodology of such surveys will find here a competent account of them. What is of special interest is the quality and utility of the surveys. The former depends on the meticulous planning of the survey, the quality of personnel and the promptness with which it is completed. The latter depends on the follow-up action. Both these leave many things to be desired. But, if we are to believe what the authors assure us, some deficiencies have been made good and more improvements are afoot. There however still remains a need for a fuller clarification of the scope and nature of the surveys. It is already realised that general industry-wise surveys are of limited use and setting up of successful individual units is more important; that there must be greater expediency in completing reports; that proper implementation and follow-up action alone can justify a good survey report.

Similarly the problem of reconciliation and co-ordination of industry outlook surveys with area development surveys remains to be tackled. Not looking beyond a certain area may conflict with the selection of industries with most attractive prospects from a wider point of view. Similar conflicts may be in evidence in regard to the agencies conducting the two types of surveys. Incidentally, one may even advocate—which the authors do not—some over-all co-ordination of this work with similar work done under the auspices of official bodies like the Research Programme Committee and private agencies like university departments and research bodies.

In evaluating the work done, the authors are satisfied that due to "good judgment and careful planning" the programme encountered fewer problems than a similar one normally would. This, however, does not detract them from the deficiencies and the problems of the future. They have some home-truths to tell about the why and how of survey work. They have frankly criticised the pressures that are brought to bear on the staff to tailor the surveys to administrative needs and referred to the lack of incentive for merit, irregularity in recruitment and promotions, the absence of in-service training and the problems of co-ordination and delegation of powers and functions.

For the future, proper orientation of the survey programme and vigorous follow-up action are the main tasks. The limiting factor in both the cases would be properly trained personnel. There seems to be a growing need for separate implementation staff. Even four Deputy Directors at the Centre will not be able to cope with the work as suggested by the authors. There must be not only more action-oriented, specific plant and production-line studies, but also a continuous reorientation of the small industry programme in the light of the data and conclusions thrown up. The assumptions of the programme must be tested in the light of the enquiries and the developmental policy properly adapted.

The programme for the future must be decided in the light of past experience. For this reason there should be a proper review of the work done. This is not attempted because in the opinion of the authors it is rather early for a full assessment. But then it is rather early to speak of any important changes in the programme. Nevertheless the case for strengthening the programme seems strong. There is a growing and immediate need for economic information and industrial counselling; and these have to be adequately supported by the basic work of investigation and analysis.

So some good work has been done and more remains to be taken up. The authors pay a well-deserved tribute to the persons in charge of the programme, who are "pioneering new techniques in India". It would be only fair to let those others in the universities and elsewhere share this compliment for there is some pioneering work on the other side of the fence too.

M. R. KULKARNI

ANSWERS TO QUIZ

1. (a) One telephone every minute
   (b) January 26, 1949
   (c) 4,08,000 as against the target of 3,20,000
   (d) 8,75,000 telephones; besides line equipment for 6,60,000 subscribers and transmission equipment worth Rs 12.88 crore.
2. About 6 million acres from large and medium projects. The area under irrigation increased from 22 million acres in 1950-51 to 24.9 million acres in 1955-56 and 31 million acres in 1960-61. The Third Plan target is 42.5 million acres.
3. About 2.5 tons of lignite yield as much heat as a ton of coal.
4. (A) (c) 705 including 255 pilot societies and 450 other registered societies.
   (B) (c) 94,397 acres.
   (C) (a) 3,180 pilot societies.

RAMABAI RANADE

Devoted Wife Who Grew to be a Great Pioneer—A Centenary Salute

By LALJI PENDSE, M.P.

THE social conditions in Maharashtra have changed phenomenally since the time in which Ramabai Ranade lived and worked. Ignorant and illiterate women and the dumb, awe-stricken child widows are no longer to be seen in the urban population. Today we see well-educated women working alongside of men and often outshining them. There are women teachers, doctors, admjnistrators and legislators of distinction. The modern spinster has not even the slightest resemblance to her sister in the eighties of the last century.

How did this change come about? The pioneers had to wage a courageous and relentless battle against orthodoxy and its crushing social customs. Giants of the stature and stamina of Raja Ram Mohan Roy and Ishwar Chandra Vidyasagar, Justice Ranade and Joytiba Phule, Agarkar and the centenarian Karve, Pandita Ramabai and others, undaunted by opposition and ridicule, pursued their mission and contributed substantially to the uplift of women.

THE SOCIAL UPHEAVAL

The new change came as a result of what these reformers described as 'Dispensation of Providence'—the British rule in India. This rule was the reflex of the Industrial Revolution which brought about a fundamental change in the mode and means of production, transport and communication as also in social and political institutions—in India as in Europe. This in turn gave birth to new classes —the modern working class and the middle classes. They cut asunder the caste structure and destroyed the feudal order. New vistas were opened for the suppressed and the oppressed—women and the *shudras*.

The effects of the change were felt more markedly in Maharashtra as also in Bengal, the two regions earliest to come under modern production. Hundreds of families belonging to the martial order of the outgone Maratha power were thrown out of gear. Having had no function to perform, their existence became purposeless. They lived on past glory and its attendant vices and vagaries. Thus the new order involved disintegration of village economy and the disruption of the joint family. The widow lost whatever shelter or protection she used to get. Disease and plague took heavy toll of young men and the ranks of child widows grew.

OUR CULTURAL HERITAGE

Ramabai was born in a remote village of Maharashtra, Kurle near Sangli, exactly a hundred years ago (1862). At the age of eleven she



was married to one of the tallest men of India, the late Justice Ranade. In the words of the late Mr. G.K. Gokhale, "In the later 30 years of the last century Ranade was a preceptor and a pillar of all the numerous activities not only in Maharashtra but in the whole of India". This was Ranade's second marriage, and he was criticised for marrying a child wife though he was a staunch advocate of widow remarriage. This was Ranade's peculiar weakness. He did not like to do anything that would hurt the feelings of other members in the family.

Ramabai, like any other girl of the day, was illiterate; and immediately after marriage was introduced to the three R's. She made swift progress. She read greedily and soon was able to take dictation from her husband. This was resented by the women members of the family. But the worst came when she began to learn English. About this she writes in her *Reminiscences*, "When I saw younger members of the family going in for higher education in English, I took a fancy for English and prevailed upon my husband to let me learn it. But this venture on my part enraged the orthodoxy in our house. My mother-in-law and sister-in-law thought that it was an outrage on Hindu woman's modesty and character. Superstition held that learning English—the *'mlenchha vidya*—on the part of a Hindu woman spelled the death of her husband. I was treated with scorn and contempt. I was forbidden from entering the kitchen. No one would speak with me. It was difficult to suffer in mute agony". A word from Ranade would have had some restraining effect; but he would not do so lest it should hurt their feelings. So Ramabai decided to suffer in silence rather than hurt others' feelings, which her husband would not like. She made this a guiding principle of her conduct and observed it all through her life. She boldly stuck to her studies and made such progress that in 1883 she delivered her maiden speech in English.

DEVOTED WIFE

Ranade was a religious person. He took a leading part in founding the Prarthana Samaj. A main feature of the Samaj was the congregational prayer coupled with religious discourses. Ranade often conducted the prayers and delivered discourses which were later published in a book form. Only a handful of women, including Ramabai, dared to attend these prayers. For, as one of Ramabai's co-workers has described, "people in the streets mocked and pelted stones at us from afar".

There was nothing very spectacular or exciting about the life and work of Ramabai Ranade. Hers was a life of consummate devotion to the cause and teachings of her husband. The reformist movement was for her a mission of service of the needy and the neglected rather than a struggle for rights and privileges. That is why she chose for her that part of the work which needed sustained but silent effort.

High judicial office did not deter Justice Ranade from criticising Government policies. His speeches and articles on economic policy and his fearless advocacy of more political rights for India bear testimony to his patriotism. He was a pillar of the newly formed Indian National Congress and attended its sessions regularly. His mission may be summarised as:

(i) Religious reform and freedom. This led to the establishment of the Prarthana Samaj.

(ii) Removal of unjust and decadent social customs and disabilities. This led to the movement for the uplift of women, including their education and widow remarriage. This further resulted in the establishment of a number of women's organisations.

(iii) Political rights and responsibilities to Indians. That brought him to associate himself with the founding of the Indian National Congress.

(iv) Reversal of the economic policy which drained India.

His famous speeches in Poona on economic exploitation were a bold indictment so devastating in effect that it turned Vasudeo Balwant Phadke into a full-blooded revolutionary. Phadke took a vow to overthrow the British rule, by violence, if necessary, and introduce sovereign parliamentary rule in the country. These activities made Government suspicious of Ranade and he was placed under serveillance for some time.

As a devoted wife, Ramabai participated in all the intellectual and social activities of her distinguished husband and always moved as his shadow.

Death came to Ranade in 1901 and Ramabai was widowed at the age of 39. Grief-stricken, she went into seclusion, and for three years lived away from the public gaze. In 1904, however, Dr Bhandarkar succeeded in pulling her out of the self-imposed ordeal. He persuaded her to preside over a women's conference. In a moving address to the conference she said, "I have felt the soundness of Dr Bhandarkar's advice—rather admonition, you may say. I now realise that I owe a certain duty to him (Justice Ranade) who moulded my life and gave a meaning to it. I have no right to run away from the work, the debt, he left behind". In this speech she formulated a programme and decided to dedicate the rest of her life in working for it.

REAWAKENING

Thus a second phase in Ramabai's life began in 1904. She moved down to Poona and until her death in 1924 she worked untiringly for improving women's lot. If social conditions in Poona changed in these years, part of the credit must go to Ramabai herself. The city itself developed into one of the radiating centres of patriotism and leadership in the country. It was the home of education and many intellectual stalwarts. Through the exercise of a handy wisdom, the leaders of Poona taught how to cast off the worst of inherited evils and retain the best. While Gokhale and Tilak proclaimed respectively the message of constitutional reforms and activist nationalism, Maharshi Karve worked patiently for women's education, and his dream of a women's university took shape.

Ramabai chose for herself the cause of the women as her field of activity, and with the help of Mr Gudumal founded the Seva Sadan for women in Poona in 1909. The aims and objects of the society were: (i) to impart education, with religious instruction, to women; (ii) to render help and service to the needy and the poor; (iii) to visit hospitals and attend on poor patients and help redressing their grievances; (iv) to supervise the working of girls' schools and secure necessary help and amenities from the authorities and the public; (v) to organise home classes for married and grown-up women and impart information regarding the various changes taking place all around and to enable them to assimilate new ideas and knowledge; and (vi) to help the neglected and deserted women and orphans.

In building up the Seva Sadan as the premier organisation for women in Maharashtra, Ramabai was ably assisted by the late Mr G.K. Deodhar. Later he founded a society which took over the control of Seva Sadan and relieved Ramabai from personal responsibility. Till the Sadan had its own building, it was housed in Ramabai's residence. She was absorbed in its work night and day. Yet occasionally we find her associating with other activities also. On one occasion we find her supporting the cause of Indian emigrants in Kenya. On another occasion she forcefully pleaded for India's political demands at the war conference convened by the Governor of Bombay. The conference was held to secure public co-operation to the war effort. At this conference, held in 1917, Lokamanya Tilak agreed to co-operate provided the British Government conceded the right of Swaraj, while Gandhiji was for unconditional co-operation. In 1919, she campaigned for the right of suffrage to Indian women and was greatly responsible for getting a bill passed by the Bombay Legislative Council.

LITERARY CONTRIBUTION

It is said, bushes remain stunted and shrouded under big trees. It is so with people too. As long as the mighty figure of Justice Ranade dominated the scene, Ramabai remained in the background, growing all the time, however. But after his departure, she came into her own. Hitherto she had written only stray articles and made occasional speeches. But now she made an outstanding contribution in the shape of the Introduction to the *Religious Discourses* by Justice Ranade. The lucid exposition, maturity of thought and deep scholarship of this Introduction attracted tributes from the eminent scholar, Dr Bhandarkar. Her remarkable contribution to Marathi literature is the *Reminiscences of Our Life*. The narration, which is easy in style, rich in imagery, versatile in expression and captivating with human touches, has become a classic.

When death claimed Ramabai Ranade in April 1924 she was still growing in stature and talents. This in itself is a tribute to her mental and moral personality.

As the Plan Moves

Koyna, Poorna & Bombay Port Get IDA Credit

The International Development Association (IDA), an affiliate of the World Bank, has extended development credits of 30.5 million dollars for the Poorna and the Koyna projects in Maharashtra.

Of these two, the credit of 17.5 million dollars (Rs 8.5 crore) will help finance the second stage of the Koyna hydro-electric project. The second stage, to be completed in 1967, will add 340,000 kW of power, increasing the total capacity to 580,000 kW. The third stage, to be taken up later, will add another 100,000 kW.

The other credit of $ 13 million (Rs. 6.21 crore) is for the Poorna project which will irrigate 152,000 acres of land and generate 15,000 kW. of hydro-electric power. The Poorna project will introduce irrigated agriculture for the first time in the drought-stricken area in the Deccan. The agricultural production is expected to increase six-fold.

IDA gave another development credit equivalent to 18 million dollars (Rs 8.6 crore) for improvements at the Port of Bombay. A five-year programme has been undertaken to eliminate ship congestion by expanding the capacity of the Port and to improve facilities for the handling of cargo and passenger traffic.

These credits form part of the assistance by the Union Government for these projects. Repayment will be made in 40 years beginning in 1973.

The IDA has extended five more credits last year totalling 56.5 million dollars for assisting in the development of agriculture in Punjab, Uttar Pradesh, Bihar, Orissa, Gujarat and Maharashtra.

AID INDIA CLUB OFFERS RS. 512 CRORE FOR 3rd PLAN

The Aid India Club and the World Bank have offered a credit of 1,070 million dollars (Rs 512 crore) for economic development in the second year of India's Third Plan. The amounts in million dollars offered are stated below against the names of the member countries :

Austria—5; Belgium—10; Canada —33; France—45; Germany—139; Italy—53; Japan—55; Netherlands —11; U.K.—84; U.S.A. 435; World Bank and International Development Association—200.

Belgium, Italy, Austria and Netherlands have become new members of the Club at its meeting in Washington on July 10.

Colliery in M.P.

The National Coal Development Corporation will shortly open a new colliery at Sonawani in Madhya Pradesh. Situated to the east of the Corporation's Kurasia Colliery, Sonawani has a minable reserve of 14 million tonnes of grade I coal. The project will cost Rs 3 crore and will produce over half a million tonnes of coal per annum. The life of the mine will be 25 years.

Criterion for Backward Classes

The States have agreed in principle to fix a minimum percentage in the allocation for different programmes to be spent only on the Scheduled Castes and Scheduled Tribes on the basis of their population. These funds will be in addition to the special provisions made for 'Backward Classes'. This decision was taken at conference of State Ministers in charge of the welfare of 'Backward Classes' held in Delhi recently. Suitable administrative machinery will be created to examine how far the general programmes were being implemented so as to offer maximum benefits to the 'Backward Classes'.

The Conference of Chief Ministers held last year had agreed that economic backwardness rather than community or caste would provide the proper criterion. With the exception of Maharashtra and Gujarat, no State Government has so far taken any steps to adopt the economic criterion for determining the 'Other Backward Classes'. A separate department or directorate will be set up in each State for Scheduled Castes and Tribes.

SERVICES OF RETIRED TEACHERS

The University Grants Commission has instituted a scheme to enable Universities and colleges to utilise the services of selected teachers and research workers after superannuation. The scheme provides for an honorarium of Rs 4,000 and a contingent grant of Rs 1,000 per annum for two years. Twenty-two persons have been selected during the current year for 14 different subjects.

RECORD PRODUCTION OF BARLEY

Production of barley during 1961-62 touched the record level of 30.67 lakh tons—an increase of 2.46 lakh tons or 8.7 per cent over the 1960-61 figure. The crop was sown in 82.55 lakh acres—a rise of 2.9 lakh acres or 3.6 per cent over the 1960-61 level.

(*See also page 28*)

BRIGHT SPOT

H.M.T. IN WORLD MARKET

The Hindustan Machine Tools, Bangalore, entered the world market in 1961-62 by exporting machine tools to West Germany and Switzerland.

It produced 1,251 machines and earned a profit of Rs 1.27 crore—24 per cent of the share capital.

Its second factory started production in July 1961.

FARMING NOTES

PROTECTING PADDY SEEDLINGS

I.C.A.R. Information Service

THE damage to the paddy crop in India is mostly caused by insects. Now that the seedlings are growing we should know more about the insects and adopt proper measures to control them. The names of some pests and the way they cause the damage are given below:

Rice Hispa (*Hispa armigera*): This pest attacks paddy seedlings. The beetles feed on the green matter of the leaves, producing narrow white lines and the grubs burrow into the tissues. They lay eggs inside minute slits made on the tender leaves. When the eggs are hatched the grubs burrow into the tissues and pupate there. They are active in almost all paddy-growing areas of India.

Blue Beetle (*Leptispa pygmoea*): The target of this pest too is paddy seedlings. They are small and slender, bluish in colour, often found with the rice hispa. They also attack paddy seedlings in the same way as rice hispa and affect the paddy plant.

Rice Caseworm (*Nymphula depunctalis*): They attack the tender shoots and leaves of the plant as small caterpillars. The moths lay eggs on the new leaves and the larvae cut the paddy blades. They make a tubular case and remain inside it. Rice caseworm can breathe under water.

How to Control

The most effective method of controlling these pests is to dust the crop with B.H.C. or to spray it with D.D.T. The following dusting or spraying schedule is recommended and should be followed as soon as any of these insects is noticed in the field:

Seedlings should be dusted with 5 to 10 per cent B.H.C. at the rate of 15 lb to 20 lb per acre. Or, they may be sprayed with 0.25 per cent D.D.T. It can be prepared by dissolving one lb of 50 per cent wettable D.D.T. in 20 gallons of water. This is enough to spray one acre of paddy seedlings.

EARLY BLIGHT OF POTATOES

IN the plains of northern India, where potato is cultivated on a large scale, the blight disease makes its appearance from time to time. Since the disease occurs late in the season the early planted main crop is not affected. The affected plants show brown spots with concentric rings on the leaves. The spots enlarge and destroy the leaves, causing reduction in yield. Timely spraying with Bordeaux mixture, "Perenox" or "Diathane-D-14" effectively controls the disease.

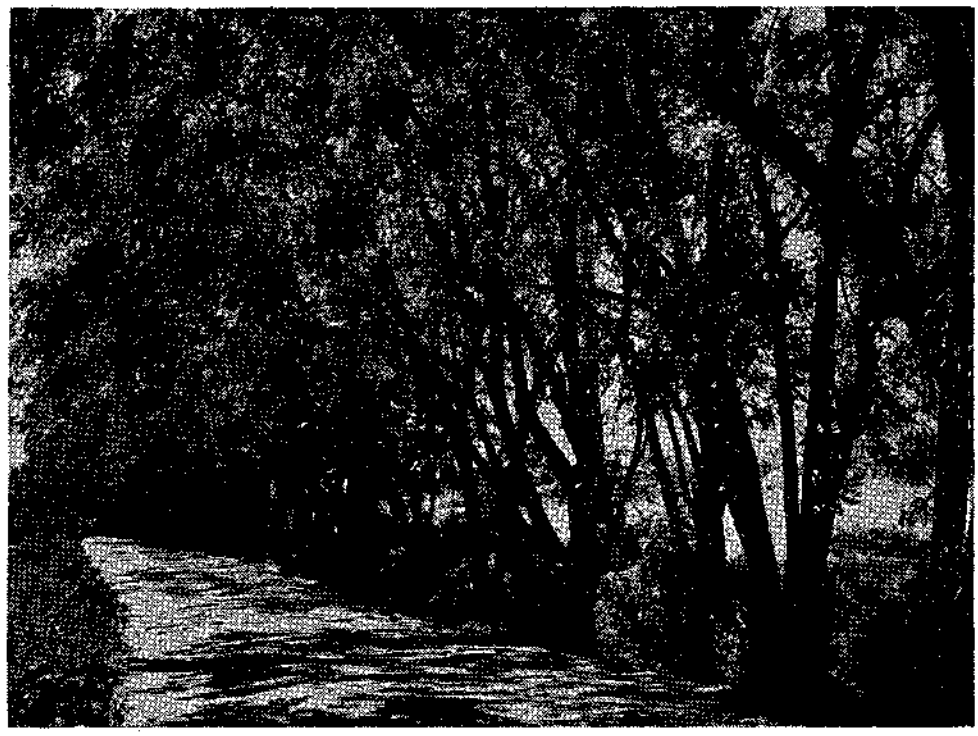
SOWING WHEAT

A BETTER crop of wheat can be obtained if proper attention is paid to the sowing. A more uniform germination is assured when seed is drilled than when broadcast behind the country plough. The seed should be drilled in rows, 9 to 12 inches apart. A deeper sowing of 2½ to 3 inches is recommended under rainfed conditions and a shallower sowing of 1½ to 2 inches under irrigated conditions.

GLYRICIDIA FOR GREEN MANURE

APART from giving green leafy matter of high nitrogen value, Glyricidia can be grown on the boundaries of compounds, fields, along fences and along the road and can replace useless shrub being grown at present for fencing. Since it produces clusters of light pink flowers it can be used as a beautiful hedge-plant around seed nurseries, houses or office compounds. Seedlings have to be raised in the nursery. When they are a year old, they can be transplanted, during the monsoon, in a line, 2 to 2½ feet apart. When the seedlings are three feet high, topping should be done to induce branching. Later, as the plants grow and produce shoots, topping and side trimming may be done at regular intervals. In course of two to three years a hedge of about 5½ to 6 feet can be obtained.

For maintaining the hedge five trimmings have to be done. Not less than 7,500 pounds of green leafy matter can be obtained from the hedge of one-acre plot.



A glyricidia avenue; when in bloom, it produces clusters of light pink flowers.



your little son may become an ENGINEER

HERE'S AN EASY, FOOL-PROOF PLAN TO GUARANTEE MONEY FOR HIS EDUCATION

Your son will need at least Rs. 6,000 (excluding hostel fees) for a 5-year engineering degree. You may find it hard to meet the expenses when the time comes. So take a Life Insurance Educational Policy for your son *now* and guarantee the money for his education Premiums are easy to pay. Example: if you are 25, and your little son is two years old, you need pay only Rs. 26.32 a month to ensure that he gets Rs. 600 every half-year for five years from the age of 18. (Rates vary with varying ages). *The full policy amount will be paid to your son in half-yearly instalments for five years even if you don't live long enough to pay all the premiums.* No other form of savings offers you this advantage. Take a Life Insurance Educational Policy for your son *today*. Do not postpone the decision. The older you are, the higher the premiums you have to pay. Don't leave your son's future to chance. Leave it to the LIC.

There's no substitute for
LIFE INSURANCE

ASP/LIC-80.

IZATNAGAR INSTITUTE

(*Continued from page 7*)

To facilitate research and for extraction of vaccines and sera, the Institute has a vast stock of cattle, sheep, goats, fowls, guinea pigs and mice.

The Institute provides post-graduate research and training facilities to veterinary students from all over the country. It started a post-graduate college of its own in 1958, in which about 30 students are admitted every year in various courses leading to the M.V.Sc. and Ph. D. degrees. Training is also given to scholars deputed by State Governments. Four post-graduate National Diploma courses, each of the duration of one academic year, have been introduced in preventive veterinary medicine, animal husbandry, poultry husbandry and animal gynaecology.

Besides these, there is a four-month course for training in the manufacture of vaccines and sera. A limited number of candidates are admitted for two-year post-graduate training course leading to the Associateship of the Institute. Facilities for conducting research on specific projects are offered to research workers. There is also provision for giving short-term practical training in the various branches of veterinary and animal husbandry subjects.

The training activities of the Institute are expanding and the Director hopes that, like the Indian Council of Agricultural Research, this Institute will soon be raised to university status.

Thus the Institute fulfils three different functions—academic research, field service and training. The basic objective is the development of animal husbandry by 'breeding, feeding, disease control and management', in the words of Mr P.N. Nanda, former Animal Husbandry Commissioner. This is a tremendous task, when we remember that a fourth of the world's cattle are in India, not to speak of millions of sheep, goats and other animals.

M. K. PARDHY

PLAN QUIZ

1. Fill in the blanks :
   a. The Indian Telephone Industries Ltd., Bangalore, manufactures telephones at the rate of.....
   b. The first telephone came out at the I.T.I. on.....
   c. During the Second Plan period the I.T.I. produced .....telephones.
   d. The target of production for the Third Plan is..... telephones.
2. What is the area brought under irrigation during the Second Plan?
3. What is the heating capacity of lignite in relation to coal?
4. (a) The number of co-operative farming societies formed up to the end of March 1962 was (a) 655, (b) 450, (c) 705.
   (B) The total area under co-operative farming by the end of March 1962 was: (a) 32,377 acres, (b) 62,020 acres, (c) 94,397 acres.
   (C) The target for pilot co-operative farming societies in the Third Plan is (a) 3,180, (b) 1,380 (c) 1,830.

(*Answers on page 22*)

Snippets

A Central Apprenticeship Council has been set up, as provided in the Apprentices Act, 1961, with Union Minister for Labour and Employment as its Chairman... ...The Institute of Catering Technology and Applied Nutrition will open in Delhi on August 20. One of the four such institutes sponsored by the Union Food Department, it will improve nutritional standards in the country and provide training facilities for those who desire a career in the Hotel and Catering Industry. Two other institutes are to be set up in Calcutta and Madras and the existing College of Catering and Management in Bombay is being reorganised .... The rate of interest on all Post Office Savings Bank Accounts has been increased by ½ per cent with effect from August 1. Thus interest on deposits up to Rs 10,000 in individual accounts (up to Rs 20,000 in joint accounts) will now be 3 per cent per annum and on balances in excess thereof as also on public accounts, 2½ per cent and 2 per cent respectively... The Department of Atomic Energy has formulated a scheme under which 120 scholarships will be awarded every year to under-graduate and post-graduate students undertaking a course of study in Indian Universities or institutions in scientific disciplines.....A sum of Rs 1.82 lakh has been allocated to all the State Governments for conducting students' tours in the country.....The State Trading Corporation has concluded an agreement for the sale of 1,00,000 tons of Indian crystal sugar to Canada in 1963.....A high-powered Defence Research and Development Council has been set up in the Ministry of Defence to provide the necessary impetus and achieve speedier progress in defence research and technology.....The first unit of the Neyveli thermal power station of the integrated lignite project, was commissioned on August 5.....It has been decided that donations to the National Foundation for Teachers' Welfare will be exempted from income tax and gift tax.....The sixth volume of the *Wealth of India*, an encyclopaedia on the raw material resources and industrial products of India, has been published by the Council of Scientific and Industrial Research .....The traffic of goods handled at the Cochin port during 1960-61 was 16.21 lakh metric tonnes as against 15.49 lakh metric tonnes in the previous year.

THE TALK WE TALK

(*Continued from page 13*)

hence without disturbance or interference we could carry a session on. No coke at a stroke for me! The dollar has opened dams in these parts. Aside from lime cordial, could we not instead have a drink from the grapes of the Bangalorian vine-yards we've every reason to be proud of? Or some such from the apples of Kulu and Kashmir? Would that not be more nationalistic?

When we were young there was always a greater variety of coloured bottles to choose from—yellow stood for lemon with us, pink for rose, green for banana, and so forth. We used to be in lyrical ecstasies when we grabbed at colour of our humour and choice. Is there any such stimulation from the same monotone of coke-red? Or is it, I wonder, symbolic of one type of red counteracting another one? While the latter would go down as a phase of Socialistic History, would the former, say a century hence, be interpreted as a MUST with cultured Western 'Sociability'? Just as the ale is considered to be a characteristic convivial quality of the Elizabethan period or the sillibub with the Augustan, or Bohea with the Johnsonian circles? We have energy enough to speechify by the hour. Comparatively, failing everything else, it would be effortless to change over to the shades of sherbet: more symphonically as they evolve out of the colour and character of the East.

One digresses. But that does not entail losing sight of the essential point. On the contrary. The idea of grouping ourselves out for a tutorial over a drink would be to learn a little of each other of life's values. Simple principles for 'life and conversation' happen to be bracketed together in the Vice-Chancellor's formulated exhortation quoted heretofore from. In a formal class conducted in the class-room, how indeed can one say anything about dripping taps, greasy wash-basins or toilets that tell their own malodorous tales? Sanitation is not a strong point with us; but a sense of civic hygiene need not be found wanting too. Such changes of thought and habit cost, after all, not a dime nor doit.

Small Industries–a reading list

This is a short list of available materials on small scale industries in India. Its primary emphasis is upon the economics of these industries; so far very little has been published on the social aspects. For a comprehensive bibliography, see "Bibliography on Small Scale Industries in India", Delhi, Unesco Research Centre, April 1962. 68 p., mimeo.

Books

1. BASU, S.K., Place and problems of small industries. Calcutta, A. Mukherjee & Co., 1957. 97 p.
2. BERNA, James J., Industrial entrepreneurship in Madras State. Bombay, Asia Publishing House, 1960. xvi, 239 p.
3. DHAR, P.N., Small-scale industries in Delhi: a study in investment, output and employment aspects. Bombay, Asia Publishing House, 1958. ii, 277 p.
4. DHAR, P.N., and LYDALL, H.F., Role of small industries in Indian economic development. Bombay, Asia Publishing House, 1961. xvi, 95 p.
5. FORD FOUNDATION. INTERNATIONAL PLANNING TEAM. Report on small industries in India. Delhi, Ministry of Commerce & Industry, 1954. 81 p.
6. INDIA. COMMERCE AND INDUSTRY (Ministry of——). Small industry in a North Indian town. Delhi, Manager of Publications, 1956. iv, 145 p. (Case Studies in latent industrial potential).
7. INDIA. COMMERCE AND INDUSTRY (Ministry of——). SMALL SCALE INDUSTRIES (Working Group on——). Evaluation report, 1959. New Delhi, General Manager, Government of India Press, 1959. 153 p.
8. INTERNATIONAL LABOUR OFFICE. Services for small-scale industries. Geneva, 1961. 204 p.
9. LAKDAWALA, D. T., and SANDESARA, J.C., Small Industry in a big city: a survey in Bombay. University of Bombay, 1960. xvi. 387 p.
10. NANJUNDAN, S., and others. Economic research for small industry development. Bombay, Asia Publishing House, 1962. ix, 316 p.
11. SINGH, B., Economics of small-scale industries: a case study of small scale industrial establishment of Moradabad. Bombay, Asia Publishing House, 1961. xxi, 144 p.
12. STEPANEK, J.E., Small industry advisory services: an international study. Glencoe, Ill., Free Press, 1960. xiii, 193 p.
13. UNESCO RESEARCH CENTRE. Background and current trends in research programmes on the social aspects of small industries in India. Delhi, 1962. 15 p., mimeo.
14. UNESCO RESEARCH CENTRE. Evaluation of literature on small-scale industries in India, including a bibliography. Delhi, 1962. 39, 68 p., mimeo.
15. UNESCO RESEARCH CENTRE. Social aspects of small-scale industries: studies in Howrah and Bombay. (In Press).

Articles

1. CHADDA, T.R., "Factors inhibiting growth of small-scale industries", *Indian Journal of Commerce* 12(4), Dec. 1959: 101-111.
2. CHARLU, J.S., "Defining a small-scale industry—should capital or production be the measure?", *Yojana* 5(12), 25 June 1961: 15,31.
3. DANTWALA, M.L., "The case for village and small-scale industries", *Indian Economic Journal* 3(3), Jan. 1956: 269-277.
4. DATTA, A., "Some reflections on the place of small scale enterprise in industrial development", *Arthaniti* 2(1), Nov. 1958: 23-39.
5. DHAR, P.N., "Some aspects of technical progress in small-scale industries", *Indian Economic Review* 3(1), Feb. 1956: 67-76.
6. FAROOQUEE, Q.H., "Problems of small-scale industries analysed", *Indian Journal of Commerce* 12(4) Dec. 1959: 67-77.
7. GHOSE, D.N., *Small Industries: their place in post-war industrialisation, a study in organisation and planning.* Calcutta, General Printers and Publishers Limited, 1947, 94 p.
8. "Household and small-scale industries: some problems of industry analysis", *Economic Weekly* 11(38) Sept. 19, 1959: 1303-1306.
9. KARVE, D.G., "The role of co-operation and small-scale industries in economic development", *Co-operative Information* (1), 1957: 70-73.
10. KASLIWAL, K.C., "Development of small-scale industries: role of the National Small Industries Corporation", *A.I.C.C., Economic Review* 11(1), 1 May 1959: 8-9, 23.
11. LAKHOTIA, R.N., "Small-scale industries and the government", *Indian Journal of Commerce* 12(4) Dec. 1959: 53-65.
12. LANKA SUNDARAM., "Credit facilities for small industries (editorial)", *Commerce and Industry* 55(7), 15 Feb. 1961: 1.
13. PALIT, S.K., "Role of small industries in Indian economy", *Indian Journal of Economics* 38(150), Jan. 1958: 307-311.
14. PATEL, B.P., "Financing of small-scale industries" *Journal of the Indian Institute of Bankers* 30(2), Apr., 1959: 124-133.
15. RAJ, K.N., "Smalll-scale industries: problem of technological change", *Economic Weekly* 8(14,15) 7, 14 Apr. 1956: 420-421 and 435-438.
16. RAO, M.V., "Small units in the capital goods sector", *Economic Weekly* 11(13), Mar. 28, 1959: 441-445.
17. RAO, U., "The economic implication of the small-scale organisation", *Indian Journal of Commerce* 12(4) Dec. 1959: 89-99.
18. SARKAR, S.B., "Role of industrial estates: an appraisal", *A.I.C.C. Economic Review*, 6 Jan. 1961: 69-72.
19. SAXENA, S.B., "Role of cottage and small-scale industries in economic development", *Economic Papers* 1(2), Sep. 1956: 25-52.
20. SHAH, C.K., "Commercial banks and finance for small industries in India", *Journal of the Indian Institute of Bankers* Oct. 1957: 1-9.
21. SHUKLA, S.M., *Cottage and small-scale industries in India: an advanced critical study.* Agra Navyug Sahitya Sadan, 1955. 16 p.
22. SINGH, B., "Capital intensity of the small-scale industries", *Journal of the Vikram University* 2(4), Nov. 146-151.
23. "Small-scale industries: mechanisation of small units", *The Eastern Economist*, 37(16), 20 Oct, 1961: 746, 748.
24. THAPAR, S.D., "Small-scale vs. large-scale industries", *Economic Weekly Annual Number*, Jan. 1958: 165-166.
25. WYNNE ROBERTS, C.R., "Management in small-scale industry", *Khadi Gramodyog* 2(2) Nov, 1955, 38-41.

This reading list has been prepared by the UNESCO Research Centre, New Delhi.

———

BOOKS RECEIVED

World Perspectives in Education by Edmund J. King (Methuen, distributed in India by Asia) 380 pages, 30s.

Case Problems in Business Management by V.S.R. Murty (Asia), Rs 15.

Village Government in India by Ralph H. Retzloff (Asia), 140 pages, Rs 10

Measurements of Production and Productivity in Indian Industry by G.C. Beri (Asia), 177 pages, Rs 12.

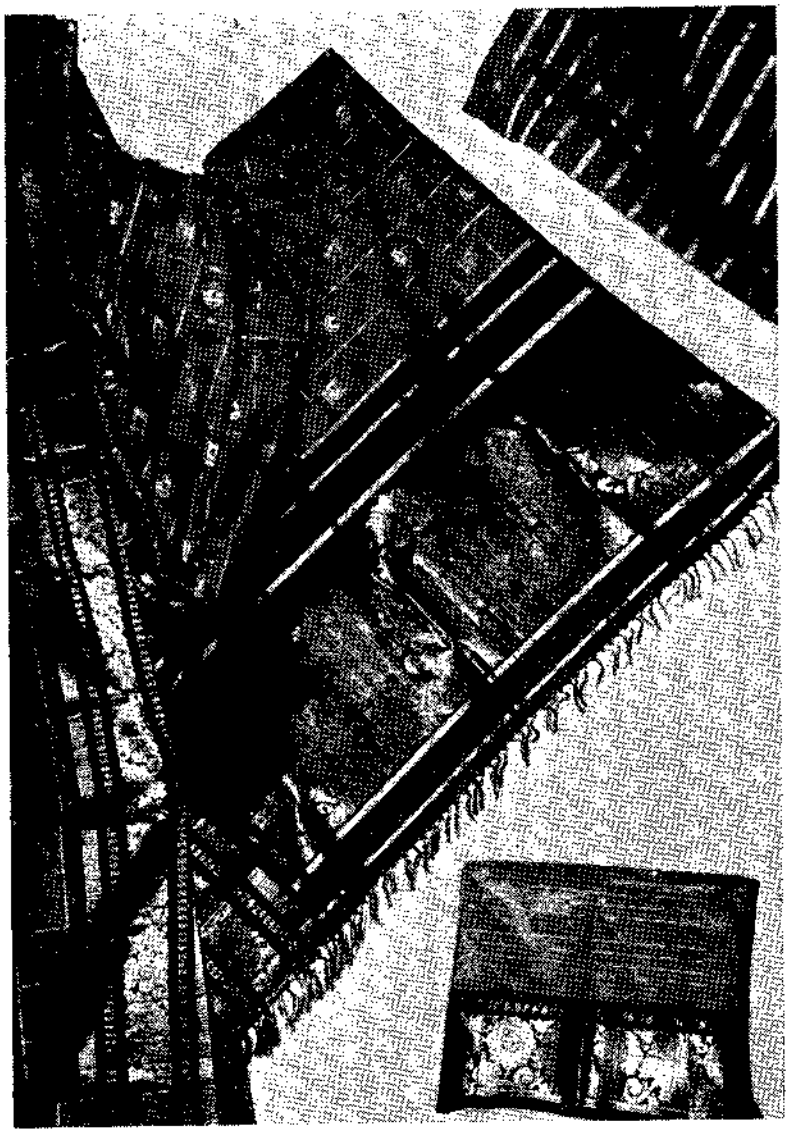
Talks on Planning by P.C. Mahalanobis (Asia), 159 pages, Rs 14.

A Study of Prostitutes in Bombay by S.D. Punekar and Kamala Rao (Allied Publishers, Bombay), 246 pages, Rs 12.50.

Agricultural Workshop Equipment, Materials and Procedures by D.N. Kherdekar (Directorate of Extension, Ministry of Food and Agriculture), 65 pages, Rs 5.

Earth and Rockfill Dam Engineering by George F. Sowers (Asia), 283 pages, Rs. 20.

REGD. NO. D-876



PRIDE OF PLACE

SARIS OF ARNI

THE town of Arni in the North Arcot District of Madras State is famous as a weaving centre of both cotton and silk fabrics. Kancheepuram and Arni are more or less the twin centres in the South for silk production. The connoisseur of silk seldom looks beyond these two centres whenever occasions arise for the purchase of rich, ornamental and festive saris.

The one great feature of the Arni saris is durability. Varieties from the plainest to the most intricate designs (with and without lace) are woven in all required measures—from five to nine yards. Arni is situated in a rural area and wages are moderate. This factor helps to keep the prices moderate—which makes the product all the more popular. A plain sari of six yards could be got for Rs 45. With lace and intricate designs the price could go up to Rs 325! Thus, there is ample choice to suit the needs of all classes of people and for all occasions.

Arni saris, patronised widely in the South, are made popular elsewhere by the South Indians living in Bombay, Bangalore and other places.

QUOTATION BOX

The fact that most newspapers (in India) were of the serious kind was, he thought, a tribute to the Indian people's intelligence.

—"The Statesman" reporting an interview with Mr Roy Thomson, the Canadian and British press magnate

When one reads proper names included in the news items in the papers about people convicted for stealing or rash driving or other such offences brought before the magistrates of the City of Madras or elsewhere, one has to take a lot of care and time to find out whether a name prominently set out in the para is that of the criminal or of the magistrate. There is really no reason why the name of the magistrate should be given at all in reporting such cases.

—Mr C. Rajagopala in a letter to "The Hindu"

Overjoyed at the compensation of Rs 2 lakh paid to him by the Government for land acquired, a tribal of Ani village, near Hatia (Bihar), nearly came to grief.

His first reaction to the news of the windfall was to jump into a nearby well. But friends rescued him immediately. The land is part of the area being acquired by the Government at Hatia for setting up plants of the Heavy Engineering Corporation.

—A report in "The Hindustan Times"

During his conversation with Mr Krishnamachari, Mikoyan was in a characteristically witty mood. When the Minister without Portfolio expressed pleasure over the fact that former Russian Chief Engineer at Bhilai had now become a Deputy Premier in the Soviet Union, Mikoyan pointed out that the former Economic Counsellor at the Russian Embassy in New Delhi had become Deputy Chairman of the State Committee for Foreign Economic Relations, and added: Whoever works in India, gets promotion. I think I should also do a posting here."

—A report in "The Statesman"

New Delhi's housing programme for government employees provides an interesting illustration of how socialism works in practice. Thousands of staff quarters are being constructed for low-paid employees at distances from seven to ten miles from their place of work, the secretariat. But for officers and those drawing a salary of Rs 800 and above, flats are to be provided within a radius of four miles.

—"Sentinel" in "Swarajya"

Printed at The Caxton Press Private Ltd., New Delhi, and Published by the Director, The Publications Division, Delhi-6.
Chief Editor : H. Y. Sharada Prasad