

VOLUME VI No. 3

FEBRUARY 18, 1962

MAGHA 29, 1883

25 NAYE PAISE

# YOJANA

JOURNAL PUBLISHED ON BEHALF OF THE PLANNING COMMISSION



ARE YOU LOOKING FOR A JOB?

# A TROUBLED LOOK OF



# THE FACE



Four men in the same boat; but with different chances of jumping off

REASON :

## **A Job, A Better Job, Any Job**

### **AN ESSAY ON THE PROBLEMS OF Job-Seekers, Job-Finders, Job-Givers**

*The Importance of Training for Employment*

In the last ten years 145 lakh new jobs have been created. In the next five, nearly 165 lakh people will find jobs—jobs of all types and levels. Even so there will be a few million others still requiring work. The aim of the Plans is to provide employment for all in the shortest possible time.

Here is Anis Ahmed of Amroha village in Uttar Pradesh who has come to the big city looking for a job. His special qualifications : nil

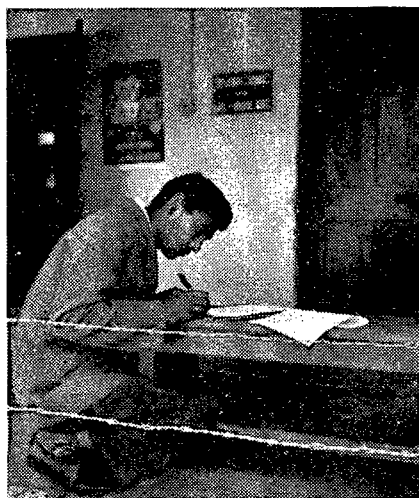
PHOTOGRAPHS : T. S. NAGARAJAN

See Overleaf



**I**N Delhi an unseasonal drizzle, bitter cold, elsewhere sunshine. Rain or shine, the lines form as usual in front of the employment exchanges early in the morning. Long lines. Short lines. Straight lines. Not so straight lines. It all depends on whether they are registering for the job of unskilled labourer, unskilled office worker, clerk or technician.

The procedure of registration is simple and standardised in every one of the 325 employment exchanges and eight university employment bureaux conducted by the National Employment Service throughout the country. You state your qualifications and



experience and the kind of job you want to be considered for and you are given a registration number and trade index number. Everything is

*Left:* Dharam Vir Singh filling in an application for a radiographer's post in a hospital. He is a B.Sc. student. "Why don't you complete your studies?" "How am I sure what I'll get after graduation?"

*Top:* The window opens, and the employment officer reels off a list of the places which need hands. Pencil poised in hand, he asks: "Any takers?" For many of those collecting outside, the jobs may not be good enough.

written down on to your personal index card and from now you are on the Live Register. If you are among the lucky ones who get a job right away, your card goes off the register; if not, you must renew your registration within two months or else you go on to the Dead Register.

This is a rather simplified statement of the work done by the Employment Service. It does not bring into focus the hopes, the fears and ambitions that are centred on each single index card. Nor does it highlight the understanding and expertise requir-

## Jobs by Choice, Not Chance

ed of the officials to help the 18 lakh job seekers registered today with employment exchanges.

But how do the job seekers, the job finders and the job givers fit into the scheme of things?

India has an employment problem, an old, large and complex problem with subtle shades of unemployment and under-employment. The accepted employment strategy is to relieve the pressure on the land by providing as many new jobs as possible in non-agricultural occupations; in new and expanding industries, in construction, in railways and transport, in posts and telegraphs, in mining, in Government service and in other lines. The most effective incentive is to offer regular, wage-paid employment as an alternative to taking a share in the agricultural produce of the family land. Families grow larger. Even if agricultural production shows some increase, each person's share steadily grows smaller. As the economists would put it, we have started the Third Plan with a back-log of 9 million unemployed and can expect another 17 million persons to enter the labour force during the Plan period. Continuing the earlier strategy, if we are to hold the employment line, we must provide jobs for at least the *equivalent* of the number of new entrants. In the Second Plan, we provided about 8 million jobs against the original target of 10 million. The task during the Third

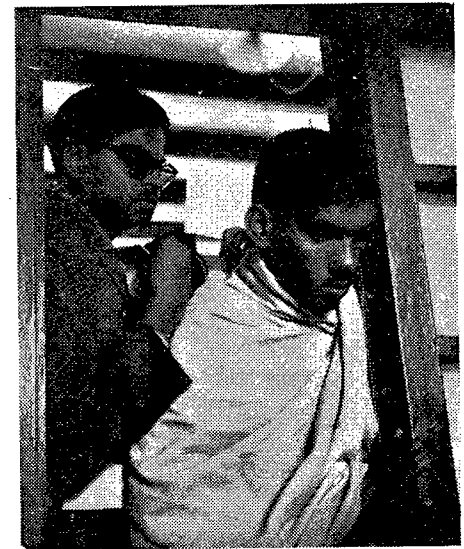
Sriram has a degree in commerce. His ambition is to become a business executive. He talks over his chances with an employment officer.



At left is Sukhvir Singh. He has held jobs before, and is now ready for any job. At centre is Gurudev Singh. His problem is that he has to produce a certificate of work experience from his employers.

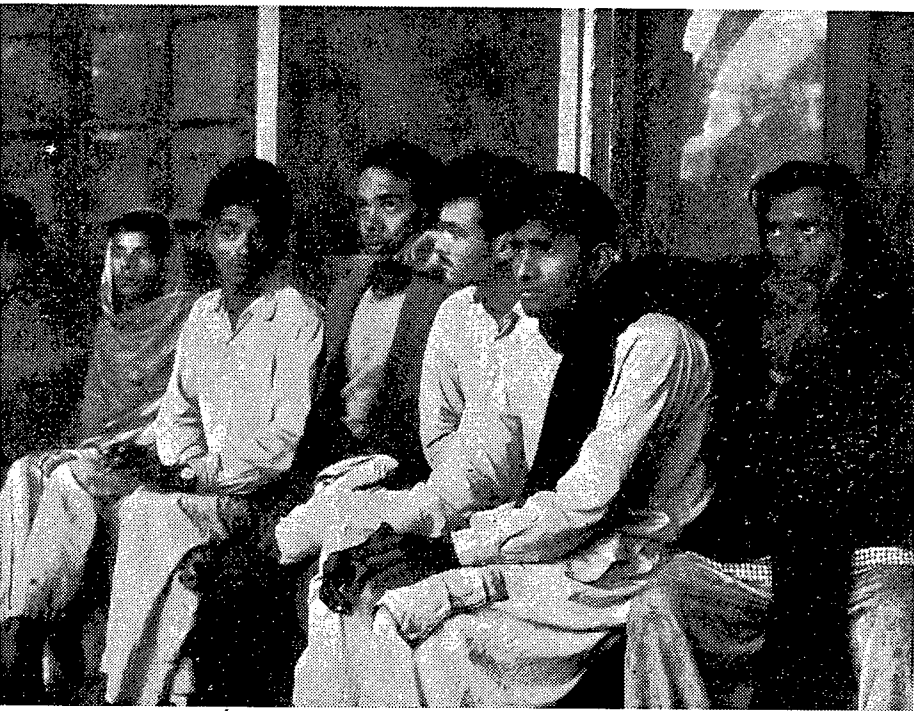
Plan is much larger and we have to find 10.5 million jobs in non-agricultural occupations, another 3.5 million in agriculture and 2.5 million jobs through the rural works programme during the slack season.

The key word "equivalent" has been given in italics in the preceding paragraph because the employment service deals with both new entrants and the back-log. The basic task of the employment officer is to match men against the available jobs. The Live Register shows surpluses and shortages side by side. It must be very frustrating for the employment officer to cancel a number of vacancies because he cannot put up a suitable candidate from among the job seekers queuing up before him. New and growing industries demand men with specialised training and experience; the few technicians that are waiting between jobs are snapped



Two who want to be on the Live Register—which means re-registering every two months.





In the hall of an employment office. A vacancy has been notified. Each of these people will be called and told the conditions. If they are willing, they have to say so in writing.

up quickly by the employer. It is the fresher with no experience and training and the man with a type of experience that is no longer wanted that make up the bulk of the slow moving groups. Of the 18 lakh on the live Register, 13 lakh are freshers.

The slogan of the National Employment Service that is prominently displayed in every exchange is "A Free and Impartial Service". A service, to be free and impartial, must have standardised policy and procedures in dealing with the lakhs that register with the exchanges. There are two books that are the standard equipment on the table of every employment officer, the *N.E.S. Manual of Instructions* and the *National Classification of Occupations*. In the preface of the Manual there are two vital sentences: "Rules are made for men and not men for rules. The Manual is intended to serve the changing needs of the people."

The organisation was started as far back as 1945 to help in the resettlement of ex-servicemen and today it serves the entire community. It is this emphasis on flexibility which enables the Service to react quickly and assist, for example, in the reabsorbing of skilled and experienced workers as one construction project tapers off and another project



A stack of cards and the story of a hundred lives. A clerk is checking details to find out how many can meet the employer's specifications.

gathers momentum. Or to set up exchanges to cope with employment problems arising out of retrenchment in the textile industry or with the distinct problems of surplus tea garden labour, coal miners, and the physically handicapped.

The Manual is comprehensive. It tells one how to register employ-

ment seekers, how to submit them against vacancies notified by employers and how to assign priority to special classes of applicants including women, displaced persons, retrenched government servants, scheduled castes or tribes applicants, Anglo-Indians, ex-service personnel and others. In addition to the procedures of registration and submission, the employment officer is required to keep in touch with employers and with changes in the local employment market.

The recent Compulsory Notification of Vacancies Act enables him to secure a complete idea of vacancies as they arise in the public sector along with a fair idea of private sector vacancies; steps are being taken to improve this coverage. The related programme is handled by the Employment Market Information Units that are steadily being built up in most exchanges; quarterly employment market reports are now being received regularly and are expected to help fill in the changing details

of the general employment picture.

The companion volume of the Manual is the National Classification of Occupations, on the basis of which every job seeker is fitted into an index card. The card is actually an envelope which contains all the relevant details about the individual, such as, age, qualifications, experience

and job preference on the outer covers and the related correspondence is slipped into the envelope. There is a comprehensive five-digit code. Its index starts with 'A' for Abdar (code No.920.30) and ends with 'Z' for Zoologist, general (code No.020.60). But all these cards and codes do not distract attention from the fact that the employment problem is in essence the problem of individuals who require work and need help in getting it.

Take a typical entry from the list filled up by the clerk at the re-registration window:

Syed Aziz Husain  
24.3.61  
S0/1811/61  
X00.10/6  
29.1.62

This tells you that Husain is a matriculate, without any job experience, has not passed a typing test and wants to be a clerk.

Prem Singh  
7.8.61  
Sup/1660/61  
X00.10/8  
1.2.62

Prem Singh has precisely the same qualification as Husain but is prepared to accept a job as a peon. The former has been on the Live Register from March, 1961, the latter from August. Perhaps Prem Singh has no one to support him, during the waiting period or perhaps he has a number of dependants or perhaps he has made a more realistic assessment of his talents and training.

The employment officer has a feel of the local employment situation. He can give realistic advice to the applicants on the chances of recruitment. Take the job of a typist clerk. Every matriculate who applies for a clerical vacancy claims he has just started learning typing. Yet in November, 1961, a number of such vacancies were cancelled, because there were no people with the required qualification. Trade testing is a developing feature of the Employment Service. It is easy to check whether a typist or a stenographer or

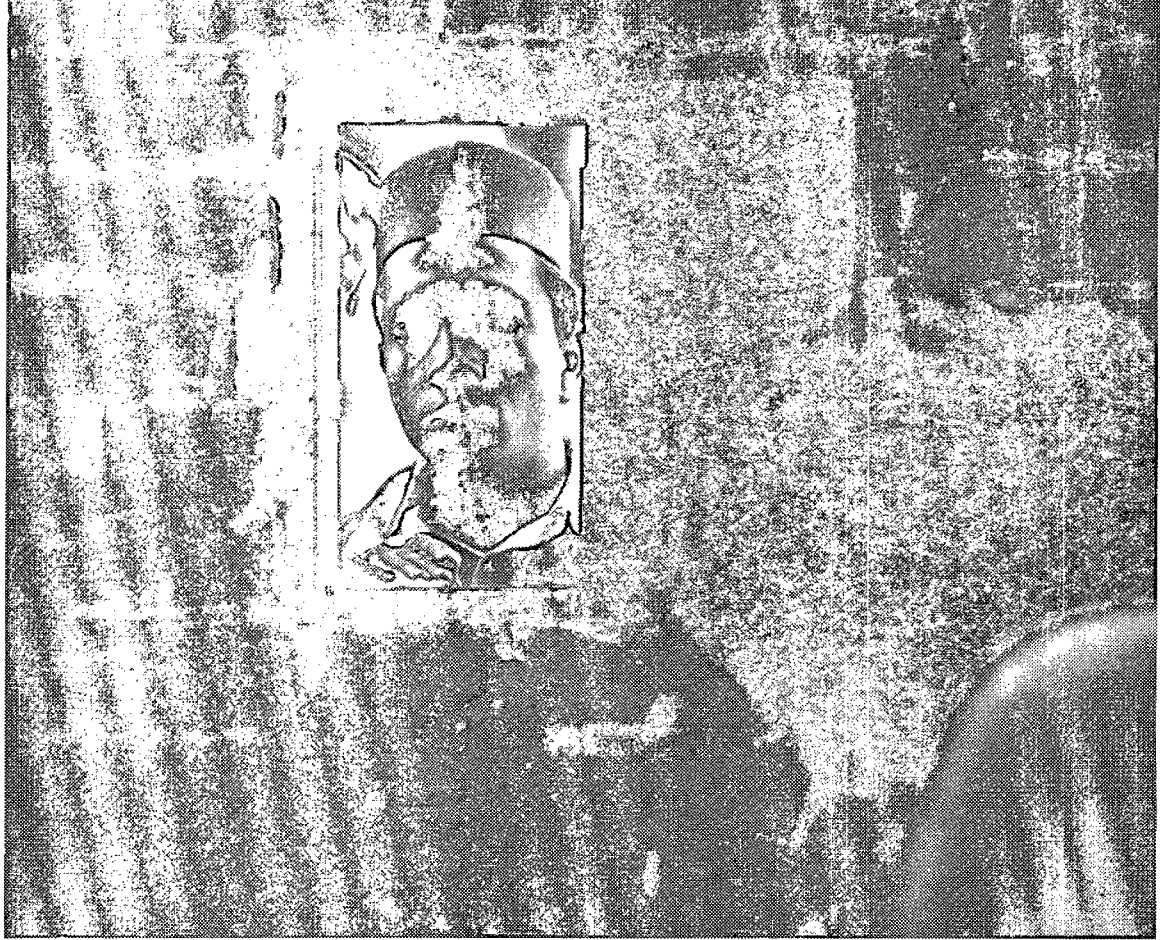
a telephone operator has acquired the necessary speed and proficiency by putting him through a simple test. It is a little more difficult when it comes to testing blacksmiths, carpenters, or spray-painters. It is necessary to make sure that the applicant is exactly what he claims to be.

Take the case of Sukhvir Singh. He is no fresher and has worked for about five years as an accounts clerk in a co-operative department. He is not so young either—a married man with a wife who has a teaching job. He says he gave up his last job in order to take his B. Com. degree but

failed to get admission. He hopes to try again next year but till then he wants a job, any job. He is prepared to join what he calls a 'work camp', no salary, just food, clothing and shelter. But is he prepared to move out of Delhi? The answer is a firm 'No'. Gurudev Singh is lean, wears glasses and looks something of a scholar. He says he has worked for three years as a time keeper in a large construction firm. That should be enough to get him a good job quickly, except for the fact that he cannot produce a certificate of work experience.



Chaina Ram opens the gate of the Subzimandi exchange in Delhi to greet the early birds who hope to be sent off as day-wage workers. Contractors of many kinds tell the exchanges of their requirements of casual labour.



Nothing has turned up in the past few weeks, but today may be another day, the window to a new life.

Shawls, caps, mufflers, umbrellas, sneezes and coughs—they are all there. Some are never too old to work.

The technical categories present a similar problem. Here you find index card after index card, qualified with the phrase "For Government Service Only". This clearly indicates that the job seeker is already in private service but is seeking a rise and the security of a permanent job. The list includes composers, fitters, mechanics, turners and others. This is the sort of applicant that clutters up the register with those who are already employed and cannot be submitted against vacancies notified by private employers.

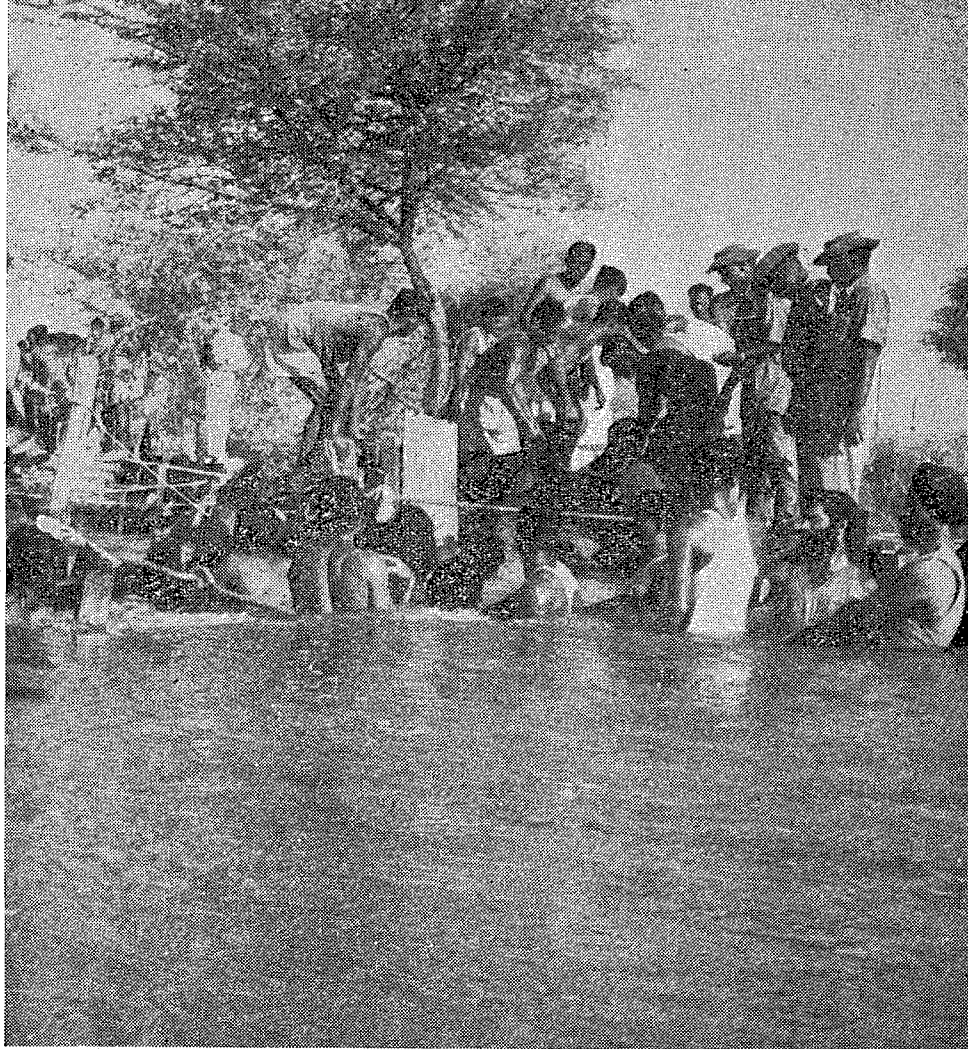
The other factor which serves to confuse Live Register statistics is the relative immobility of certain groups of job seekers. Educated women are an example. Few of them are prepared to leave the family roof. Parents might agree to send their daughters to a teachers' training college in another city for a period for study, especially if she can't get admission in a local college. But a job away from home is a long-term proposition that they cannot accept. Further, with the standardisation of

salary scales, there is little incentive offered that will encourage people to move to out-of-the-way places where jobs are more readily available. Clerical and supervisory workers prove to be the most immobile.

It is here that the employment exchange official can serve as a guide and adviser. Vocational guidance and employment counselling now form part of the work of the exchanges. But, with the present staff and work-loads, these are not being done in an effective way. The officials have barely time to size up the applicants' aptitudes. Even when he attempts it, the applicants themselves are indifferent. They want a job, not advice. It is in the eight university employment bureaux that the situation approaches the ideal. These bureaux cater for a smaller number and a select clientele of graduates and post-graduates. Their aspirations are much higher and more specialised and the employment officer has to search much farther afield for suitable employers and

*(Continued on page 21)*





# Punjab Fights Against Waterlogging

SAVING 30 LAKH ACRES OF LAND FROM THE TRICKY FLOOD THAT CREEPS UP FROM BELOW

NARINDAR SINGH

OF all the problems faced by agriculture in the Punjab, the waterlogging of extensive areas is perhaps the most acute.

Canal irrigation, lack of corresponding drainage facilities, a cycle of unusually heavy rains in recent years and various obstructions to natural surface run-off, have all combined to raise the subsoil water table to a dangerous level. Vast areas in the districts of Amritsar, Gurdaspur, Ferozepur, Jullundur,

Kapurthala and Rohtak have been rendered unfit for farming and for habitation. Not uncommonly one comes across water which has collected on the surface. A ten-square-mile area near Bhindwasa village in Rohtak district, to give a random example, has become a lake since 1960, surrounding ten villages with stagnant waters. It is a natural depression into which the notorious Drain No. 8 empties surplus waters from the Rohtak, Ambala and Karnal districts.

A total of 3.1 million acres, or one-seventh of the entire cultivable area in Punjab, is heavily waterlogged in the sense that there is either surface accumulation of water or the water table is less than five feet

(Continued on page 9)

*I am grateful to Mr. M.L. Talwar, Executive Engineer, Rajasthan Feeder Project, on whose extensive experience of anti-waterlogging work I was able to draw so much in the writing of this article. I must add, however, that any faults in the article are to be attributed to me and not to him.—Author.*

*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 7 cents	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-6.

All business inquiries are to be sent to the Business Manager at this address. Direct subscribers are advised to send their subscriptions preferably by postal order.

**IN THIS ISSUE**

<b>A Job, A Better Job, Any Job</b>	<b>1</b>
—A Survey of Employment	
<b>Punjab Fights Against Waterlogging</b>	<b>7</b>
—Narindar Singh	
<b>Side Track</b>	<b>12</b>
<b>Hamara Hindustan</b>	<b>13</b>
<b>Foreign Aid</b>	<b>14</b>
—Dr J. Krishnaswamy	
<b>Recent Work in Indology</b>	<b>18</b>
—Dr R. N. Dandekar	
<b>Over To You</b>	<b>20</b>
<b>You Ask Us</b>	<b>23</b>
<b>As The Plan Moves</b>	<b>25</b>
<b>Farming Notes</b>	<b>27</b>
<b>Drums of Manipur</b>	<b>Cover iv</b>
—Pride of Place	

**NEXT ISSUE**

**AGRICULTURE IN UNITED STATES**

M. S. Sivaraman

**RURAL WORKS PROJECTS**

# OF WORK AND GROWTH

**I**N the preceding pages you have seen faces of people looking for jobs, and marked the look of hope and despair, anticipation and anguish on them. Not all these people, it must be noted, are actually without work; some are only trying to find better jobs. But we must also remember that for every person who goes to an employment exchange there are many who lack the push and energy even to do so.

To see a jobless man is only less disturbing than to be jobless oneself. On seeing the photographs some must have felt: "There, but for the grace of God, go I."

Talk of unemployment always raises questions, some angry, about what we as a nation are doing about it. The answer is simple: the whole Plan. The Plan as a whole, and some parts of it specially, are designed to increase employment opportunities. Deliberately rejecting the possibility of increase in production at the expense of creation of more employment, our Plan has opted for programmes which simultaneously increase production and employment. Agricultural expansion and industrial expansion thus mean more goods and products *and* more jobs. The social service programmes mean more amenities for the people *and* more jobs.

In the last ten years about 145 lakh new jobs have been created. It is true that the number of the unemployed has also grown. This is due partly to the high rate at which our population is increasing, and partly to the fact that more and more people are giving up the protection of the joint family and moving out in search of full-time jobs. The conversion of hidden under-employment into open unemployment is evidence of a more general desire for self-improvement and is thus a sign that development is taking place.

There are backward countries with total employment; there are advanced countries with unemployment. The high level of unemployment in our country is the result of a large population, limited land, inadequate industries, lack of funds and growing expectations. The challenge of the Plan is to see that industries grow faster than the population and people's demands.

It takes money to create a job. And jobs have to fit in with individuals' differing abilities and wishes and national needs. There is no job that can suit all, even as there is no boot which can fit all feet. To create jobs of different kinds in sufficient numbers is a long and hard process.

An essential part of this process is training. As *Yojana* has said earlier, it is not enough to have a job for every man; it is equally important to have the right man for the job. The purpose of the Plan will not be served by merely providing jobs to people; the Plan must manage to get more out of people who have jobs. In forthcoming issues of *Yojana* we hope to present photographic essays—like the present essay on employment seekers—on how people are being trained to be better workers.

The entire picture of opportunities is going to change in the next fifteen years. In the last ten years we were busy building the basic industries—which are precisely those where investment is high and direct employment is low. But the basic industries give birth to other industries which offer large employment opportunities. In the next five years alone 165 lakh jobs will newly come into being. The worker with some skill need fear no unemployment. As for the unskilled rural labour, the Plan has taken up the rural works programme specially to absorb them. By a combination of these forces and programmes, we shall be able to burn up the back-log of unemployment in the next ten to fifteen years and also be able to have jobs ready for those who come of age and ask for them.

# Waterlogging in the Punjab

(Continued from page 7)

below the surface. The following figures showing the position before and after the monsoons indicate a steadily worsening situation. The area with a higher subsoil water table has been increasing and that with a deeper one has been shrinking:

involved can be had from the hypothesis that the absorption losses in the Rajasthan Main Canal, if it were left unlined, would be 3,400 cft. per second on the assumption of normal (and not the actual sandy) soil conditions. After lining, the

	June Measurement				Area in thousand acres (Rounded) October Measurement			
	a	b	c	d	a	b	c	d
1953	—	38	1454	3024	5	747	2396	2362
1955	—	112	1742	2924	79	2391	2314	1269
1957	—	521	3022	2492	47	2029	2991	1677
1959	2	522	3576	2647	78	3046	3041	1311

- (a) Area with surface accumulation of water up to 5 feet.
- (b) Area with subsoil level up to 5 feet.
- (c) Area with subsoil level between 5 and 10 feet.
- (d) Area with subsoil level between 10 and 15 feet.

Source : The Third Five-Year Plan (Punjab State)

## Causes

PERCOLATION of water through unlined water channels is the most obvious though not the only cause. Under normal soil conditions absorption losses in an earthen channel amount to 8 cft. per second per million square feet of wetted perimeter. An idea of the loss

loss would be reduced to 500 cft. per second. Perfectly impervious canals are not economically feasible. Though waters thus saved can irrigate additional area, lining in Punjab is suggested not so much to conserve water as to reduce waterlogging.

But some seepage seems inevitable



Villagers placing sandbags to protect the rail track near Rohtak

if canal irrigation is undertaken at all. For even if all the channels from the main canals to the water courses serving individual fields were made 100 per cent impervious, considerable absorption below the root zone would still take place in the fields irrigated. It is estimated that "out of the total quantity of water that enters canal at the head, 17 per cent is lost by way of absorption and evaporation in the main canal and branches, 8 per cent in the distributaries and 'minors' and 20 per cent in the water courses. Of the water that ultimately reaches the field, as much as 30 per cent is lost by way of absorption in the regions below the root zone of the crops", (Dr. K.N. Raj: *Some Economic Aspects of the Bhakra Nangal Project*, p. 92).

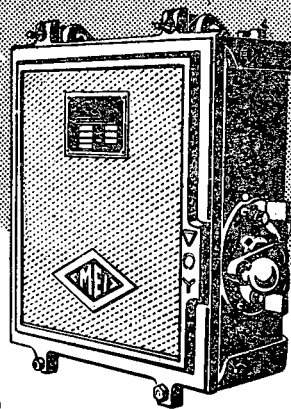
In the case of the Sidhwan Bet in Ludhiana District, however, the subsoil water table kept rising even after some distributaries of the Sidhwan Branch of the Sirhind Canal were shut down in the mid-fifties. The subsoil water came to within three feet of the surface over an area of 45 square miles. It came closer still over a smaller area. Cultivation practically disappeared, sharply indicating the prospects for the rest of Punjab, if nothing was done soon enough. What happened in this case was that the Sidhwan Branch (started in 1952) and its distributaries had cut across the natural surface run off from the Belt into the Sutlej River. Drainage siphons were not provided for and rainwater lost an outlet. Deep infiltration and evaporation being too slow to remove the impounded water, heavy rains made it worse still.

Rains in the Punjab have been heavy in recent years, as a comparison of post-1947 averages and maxima over various tracts with the respective pre-1947 averages will indicate (see page 11).

Given such a wet cycle and blocking up of natural surface drainage by canals, railway tracks, roads and even village paths, it would have been surprising indeed if vast areas had escaped waterlogging. For while the input of water into the soil increased, adequate outlets for it were not only not created, but the old ones were blocked out also.

(Continued on page 11)

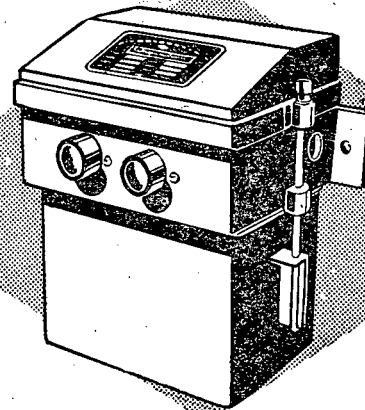
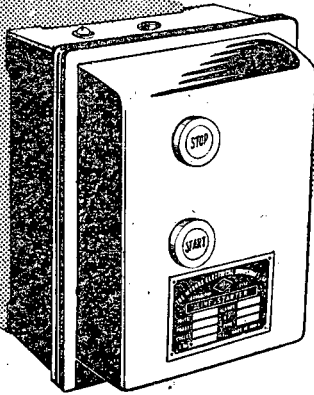
ME-1A



▲ Air Break Hand Operated Star-delta Starters; upto 20 H.P.

▲ Direct-on-line AC Motor Control Starters; upto 20 H.P.

▼ Oil-immersed Direct-on-line Starters; upto 15 H.P.



*Dependable*

**A.C. MOTOR**

# **STARTERS**

**with Single Phasing Preventive Relay**

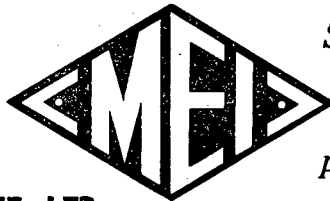
Manufactured by:

**THE MYSORE ELECTRICAL INDUSTRIES LTD., Bangalore 21.**

Sales & Service:



**(BOMBAY) PVT. LTD.**



*Safest for  
everything  
in electric  
power control*

43, FORBES STREET, FORT, BOMBAY 1.

Branch and Associated Offices:

I.A.E.C. (BOMBAY) PRIVATE LTD. "K" Block, Chawdhary Building, Connaught Circus, New Delhi.

I.A.E.C. (HYDERABAD) LTD. Barman Buildings, Gunfoundry, Hyderabad.

I.A.E.C. (CALCUTTA) PRIVATE LTD. 5, Mission Row, Calcutta 1.

I.A.E.C. (MADRAS) PRIVATE LTD. 'Dinroze Estate', 2/17-G, Mount Road, Madras 2.

I.A.E.C. (MYSORE) PRIVATE LTD. 54-55 Silver Jubilee Park Road, Bangalore City.

## Rainfall in inches

	Average rainfall during the monsoon period before 1947	Average rainfall during the monsoon period after 1947	The worst rainfall during the monsoon period after 1947
Upper Bari Doab Canal Tract	23	34	54
Sirhind-Ferozepur Tract	21	22	40
Ghaggar Tract	15	22	39
Western Jamuna Canal Tract	23	31	56

### Effects

**W**ATERLOGGING does considerable damage to agriculture. In some cases land may have to be abandoned altogether. It is not possible properly to prepare the waterlogged soil for sowing. Further, since wet soil is both cold and compact, healthy germination of the seeds and proper spreading out of the roots are hindered. Air content in saturated soils being low, crop roots get suffocated for lack of sufficient oxygen. Organic matter decomposes and putrefies, producing carbon dioxide and hydrogen sulphide and thus resulting in toxicity. Finally, the additions to the subsoil storage dilute the soluble nitrates present in the soil, so that plant roots do not get enough vital nitrogen. Only stunted, yellowish crops can grow, if at all. As the subsoil level rises, the nitrates also come up, thus making the afflicted land 'thur'-infested.\*

Water is thus a problem in both scarcity and abundance. Whether the area becomes 'thur'-infested or is reduced to a malarial swamp depending upon its chemical properties, people must abandon it sooner or later, as they had done in Sidhwan Bet till the last year's reclamation drive. People are migrating from parts of Amritsar and Gurdaspur to safer areas in the Punjab, Rajasthan and U.P. Mass migration of a demoralised peasantry creates a social problem.

\*The electric disturbances in the atmosphere convert the nitrogen in the air into nitric acid. Rains wash the acid down into the soil, where it reacts with the calcium and barium present there (mainly calcium) and converts them into their soluble nitrates. It is these nitrates that supply nitrogen to plant roots, or cause 'thur', as the case may be.

# FIGHT AGAINST WATERLOGGING

(Continued from page 9)

**A** TWO-TIER programme to check further additions to, and the draining away of, existing accumulation below and above the surface is indicated. The Punjab Government has drawn up two master plans to control floods and remove waterlogging which will cost Rs. 28.44 crore and Rs. 61 crore respectively. In the latter plan, Rs. 5.74 crore have been earmarked for reclaiming 'thur'-infested lands. It is not intended here to go into the administrative and other details of the two plans separately. The programme has been viewed as a whole. Measures to control floods automatically help to control waterlogging and *vice versa*; the latter, because flood water is spread over a wider area if it is already waterlogged. A drier area can withstand floods better since it can absorb more water in an emergency. Likewise, when waters of the Sutlej, for example, get impounded above the Bhakra Dam, the dried up river below Rupar will begin to serve as a natural seepage drain for the surrounding area.

It is in this context that the two master plans need be appreciated. The first phase of the flood control programme has been completed with the construction of 265-mile long embankments along the river banks and the excavation of drains of a total length of 2,200 miles. The Third Plan makes an allocation of Rs. 12 crore for this purpose. This includes expenditure on the canalising of 'choes'—flashy and unpredictable hill torrents emanating from the lower Shiwalik hills—and the excavation of more drains and construction and reconditioning of anti-flood works.

Measures to reduce waterlogging include lining of 1,260 miles of canals and distributaries, installation of 5,000 shallow tube wells, excavation of 5,500 miles of seepage drains, and construction of drainage siphons at suitable places under the canals, and bridges under roads and railway

tracks. But since even lined canals must let some water seep through them, it is advisable to excavate small ditches one on each side, running parallel to the major canals and branches. This involves additional outlays, no doubt. Land alone constitutes about a fifth of the cost of anti-waterlogging works, and half of it will be met by farmers themselves out of the common pool set aside during the consolidation of holdings operations. In addition, a good deal of slush work involved can be done only by specialised machinery. To procure the unskilled labour required, the Compulsory Service Act, 1960, has been enacted. The original directive of the Government banning the hiring of labour to excavate drains has been withdrawn and the reclamation work in the Sidhwan Bet area was done by paid workers. But farmers are seen to be reluctant to let any drain pass through their respective lands.

### Pilot Schemes

Six pilot anti-waterlogging schemes covering the worst affected areas in Hansi, Sangrur, Sunam, Zira, Fazilka and Amritsar are scheduled to be completed before the monsoon of 1962. Of these the Fazilka scheme will cover 53,000 acres and will cost Rs. 21 lakh, and the Zira scheme will cover 277,000 acres and cost Rs. 53 lakh. These pilot regions comprise compact blocs of ten to 20 square miles each.

It is not possible to explain the techniques of drainage works within the compass of a brief article. One may broadly state, however, that as a drain goes deeper it sucks in water from the surrounding area. Real success lies in making drainage a permanent feature of agriculture. Canal irrigation is useful only if maximum *effective* intake of water is combined with speedy removal of excess water. Water thus drained is *not* water wasted. For it never *was* available for plant nourishment. Air replaces the water drained, improving the oxygen content in, and the texture of, the soil. Internal natural drainage is not always good enough. Large investments on water supplies to the farm will thus have been wasted if not supplemented by simultaneous outlays incurred to drain excess water away from the farm.

## Eating & Floating

THE old rules of drama in our country tabooed eating on the stage. It was considered vulgar. In our less inhibited days the act of eating is not only the focus of public policies but the mainstay of much of our advertising trade. Those who felt that the Madras State float in the Republic Day parade—which showed schoolchildren at their midday meals, a movement of which Madras is proud—ought to remember that the way to the heart is through the stomach. Few fond parents would disapprove of the spectacle. As for rule-bound bachelors and wry spinners, let them fend for themselves.

## 'The Times' Survey

COINCIDING with our Republic Day, *The Times* of London has published a "Survey of India". It takes up 24 of its sumptuous pages. Supplements are seldom read right through but this one attracts attention, because the topics, pictures and authors are well chosen. Remembering who are the people who read *The Times*, we should be grateful that such a thing has been published. Some of the articles at least should leave behind a sediment of new understanding, and raise doubts even in shut minds.

The world asks two questions about India: Will it hold together? And will it succeed in pulling itself up to the level of a modern nation? Selig Harrison popularised the belief that India might save itself from falling apart only at the cost of exchanging its present democratic set-up for some form of authoritarianism. In regard to the development plans and pace also there have been degrees of scepticism. The editorial note in the *Survey* starts with a reference to the commonly presumed competition between Communist China and democratic India and wisely goes on to add that the very fact that India is open to study earns for its experiments less attention in detail. But India has an advantage which China lacks—its own objective critics and analysts of a society in flux. It is

these objective critics that have been invited to write for the *Survey*.

Among the topics examined in these thirty articles are Centre-State relations, the adult-franchise parliamentary system, caste, the growth of entrepreneurship and managerial skills, the two sectors, the stir in rural India, food and numbers. The Prime Minister starts off the discussion with a short, vigorous and confident message. He finds the Indian scene a promising one, and he hopes that the people of England will soon appreciate, despite the conflict over the Congo and Goa, what India stands for.

Conflict between India and the West, inherent in a situation in which India is resolved to walk an unaligned road, erupted into new prominence over Goa. Mr. B. G. Verghese makes a forceful rebuttal of the charge of aggression against India. He sees the evolution of foreign policy in the last fifteen years as progress from innocence to maturity, 'China's perfidy' having been India's 'tree of knowledge'. The internal political forces are assessed in two articles. Mr. Pran Chopra refers to the complex shifts in the balance between the States and the Centre. It is his view that there is growing assertiveness on the part of the States, balanced only by the economic levers that the Centre holds. Mr. Chopra expects a new national coherence emerging even with the decline in the centralising power of the Congress. Less optimistic is the article "Languages Hinder National Unity" which points out the intermingling of caste and power motives in the linguistic urge. The shadow that caste throws on elections and administration and the new tensions in the countryside are themes chosen by Professor M. N. Srinivas and Dr. B. N. Ganguli.

Mr. H. Venkatasubbiah traces the influence of the British Left on Indian socialism and draws attention to the fact of the national consensus in favour of a mixed economy. He, Mr. Maurice Zinkin and Mr. P. N. Dhar also refer to the growth of a new entrepreneurial class. There is,



## IGNORAMAN

Wants to Know

If the Ashta Grahas  
Have Affected  
Plan Resources

however, no article giving a conspectus of our industrial progress (or an evaluation of planning as such) comparable to Dr. Raj's assessment of the food problem. Dr. Raj demands that the achievements be recognised. There is a continuing pressure on food supply, no doubt, but this is due to the increase in incomes resulting from development and not merely to the rate of growth of population. This pressure may continue for some years, for 'it is a symptom of a developing economy and not a mark of distress of a people haunted by the Malthusian spectre'.

In thirty articles or fewer than 50,000 words it is wrong to expect our problems and achievements to be listed. Education and employment, for example, are among the misses. But let us be grateful for what there is.

## Tamil Pioneer

MR C.R. SRINIVASAN, editor and industrialist who died recently, had the pioneer's enthusiasm for many things. He was interested in reforming the Tamil script, and his 'Swadesamitran' was the first Tamil newspaper to use the linotype. Another field in which he made a mark was in writing about economics in the mother-tongue. Those who know say that he had only one equal in this—R.K. Shanmukham Chetty.

Quake ? Death ? Accident ?

TALISMANS

Serve You Better Than Insurance Premiums

MODERN TALISMAN MFG. CO.

Ankhon me Mitti Gali, Delhi-6

THE SCARE

A PANIC A WEEK KEEPS  
THE PANDAS SLEEK

ADBHUT GHEE

Ideal for Havans

Untouchable by Human Hand

VOL. I. NO. —

NEW DELHI, FEBRUARY 6, 1962

PRICE —

EDITORIAL

WE BELIEVE

It is all right for the few self-styled leaders of opinion and for the atheistic press, which, more than any other human institution, is responsible for the decline and fall of our ancient faith, to say that events—or, rather, non-events—have belied the forebodings of disaster. By implication they question the sanctified wisdom of the seers who see far into time and space. In these days of little wisdom, even urchins who have mastered a little mathematics mumble about time and space. What is astrology but the study of Time and Space? Nay, the fact that no catastrophe took place during the last fortnight does not in the least shake us in our beliefs; rather they redound to the credit and spiritual merit of the true believers, whose exertions warded off the certain visitations of celestial ire.

Having said this, we also demand from the press, especially the foreign press, due apologies for the wilful vilification of the exalted profession of astrology in our country. No astrologer of India ever predicted the end of the world. It is nothing but irresponsible calumny to say that such a thing was foretold. It may be true that there was no agreement among the astrologers of our country as to what would actually happen. But this should be counted a virtue rather than a failure: for does it not demonstrate that the science of astrology is truly democratic?

FORECASTS PROVED CORRECT!

World-wide Conspiracy  
To Suppress News

BELIEVERS' SPOKESMAN FLAYS LEADERS

Addressing a crowded press conference, Shri Agyan Das, Secretary-General of the All-India Moodha Bhakti Samaj, today roundly accused Governments, newspapers, broadcasting organisations and other agencies throughout the world of suppressing news of the dire events which did take place during the conjunction of the 'Ashta Grahas' during the dates corresponding to February 3 and February 5, 1962.

He also declared that it was the combined prayers of the believers that had toned down the calamities.

Asked by a cantankerous correspondent whether these statements were not contradictory, Shri Agyan Das declared, amidst applause from the members of the Samaj, that he saw no contradiction.

Pressed to name the 'dire events' that had taken place, Shri Agyan Das said that it was for the enemies of astrology to come out with the news they had suppressed. He would however, say that an earthquake had taken place between 0 and 360 degrees longitude.

*A Correspondent* : But you people had forecast the deaths of some important people.

*Shri Agyan Das* : It is a fact that Sarvashri— and— have been called to their heavenly abode.

*Another Correspondent* : But they addressed election meetings yesterday. How do you explain it?

*Shri Agyan Das* : I am not called upon to explain anything. According to our estimates they are dead, although it is possible that the actual stoppage of their physical activities might take place later.

*Question* : This is all baffling.  
*Shri Agyan Das* : It is not in the least baffling to those who are scientifically trained. Have you not heard of post-dated cheques?

*Question* : You referred to science. But isn't it true that astrologers deny science?

Worse Coming!

A conjunction of grahas much more perilous than the one which occurred will take place on September 30, 2020. In addition to all the nine 'grahas' being in the House of Cancer, the day will be unique in that it will have a total eclipse of the sun in the day and that of the moon at night.

(Details and prognostications of leading *gyotishis* inside)

*Shri Agyan Das* : On the contrary we maintain that it is we who are scientific. Science means the study of the occult, it means refusing

(Continued on page —)

Be Kind to Astrologers

The national executive of the Society for Prevention of Cruelty to Astrologers met in an extraordinary session at Banaras and passed the following resolution:

This extraordinary meeting of the national executive of the Society for Prevention of Cruelty to Astrologers is outraged by the dastardly attacks perpetrated on astrologers in Agra. It declares with all the emphasis at its command that it bodes ill for the future of our democracy if astrologers whose only thought is for the safety and well-being of our world and thereby of our country and thereby of our Republican Constitution are

manhandling for the supposed crime of carrying on their profession, a right guaranteed to them under Section 19(b) of the aforementioned Constitution. Having always believed that of the two cardinal principles taught by the Father of the Nation, namely truth and non-violence, the second is even more important than the first, the executive of the S.P.C.A. appeals to the people to abjure recourse to direct action. It is not enough that mutual tolerance and coexistence that India preaches are subjected to harassment and adopted only in international relations; they are to be practised even more in the domestic sphere.

Unadulterated Lie !

Shri Adhamachar, Executive Vice-President of the National Ghee Mixers' Association, characterised as an unadulterated lie the allegation that the "ashtagraha yoga" was an advertisement stunt on be-

half of *ghee* merchants. He said: "When, owing to the increase in purchasing power, demand for *ghee* has long ago outrun supply, it is inconceivable that the *ghee* trade should have recourse to so-called stunts."



## ***AND HOW IT IS HELPING OUR DEVELOPMENT PLANS***

**Dr. J. KRISHNASWAMY**

# F

INDIA has been receiving assistance from foreign countries and the development Plans in many forms and technical aid, supply of agricultural and local currency assistance on imported commodities. In the initial stages of assistance was rather small and was limited to a few selected countries, apart from the Bank of Reconstruction and Development (popularly called the World Bank). However, it has considerably increased in the number of friendly countries rendering aid and assistance.

In broad terms, foreign aid utilized during the First Plan period was 6 per cent of the total investment. The proportion was about 13 per cent in the Second Plan excluding Public Law 480 from the United States of America. In the Third Plan, foreign aid will constitute about a fourth of the total investment foreseen in the Plan period.

### **During The First Plan**

Total external assistance authorized during the First Plan period together with the undrawn I.B.R.D. loans sanctioned prior to the commencement of the Plan, amounted to Rs. 378 crore. Of this about Rs. 200 crore was put to use of over the Plan period leaving a balance of about Rs. 181 crore as carry-over. (For details see Statement I at the end of the Report.)

Foreign assistance helped India build her steel plants at Bhilai, Rourkela and Durgapur, which together now produce 6 million tons of steel. At left are seen technicians at Bhilai, symbol of Soviet help.



# REIGN AID

om friendly  
nk for her  
s economic  
commodities  
e proceeds of  
the quantity  
from only a  
International  
nt (I.B.R.D.,  
t years, how-  
the circle of  
a has greatly

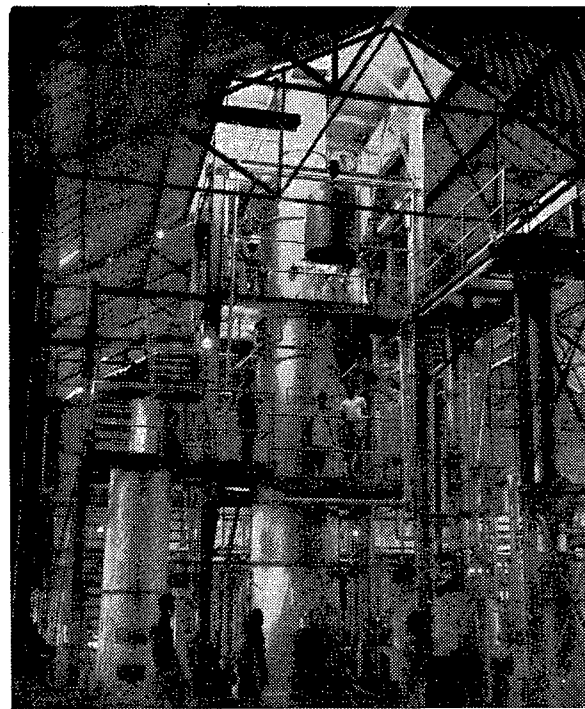
e First Plan  
e economy.  
the Second  
n the United  
nal assistance  
f investment

ng the First  
tion of the  
51 amounted  
e were made  
ent balance  
Second Plan.

The assistance made available by friendly countries and the World Bank during the Second Plan was much larger. In the middle of the Second Five Year Plan period, when India was confronted by serious difficulties on account of a shortage of foreign exchange, the World Bank convened a meeting of countries with whom India had placed most of the orders for equipment to the Second Plan projects to consider financial assistance to complete the Second Plan. Since then, this consortium of countries—popularly known as the 'Aid India' Club—has been meeting from time to time and discussing the kind of aid which each country can provide to ensure that India's development is not impeded for lack of external assistance.

## The Second Plan Total

The total authorisations during the Second Plan, excluding assistance in the form of P.L. 480 commodities and also loans and credits specifically earmarked for Third Plan projects, amounted to Rs. 1,078 crore. Including the carry-over of Rs. 181 crore from the First Plan, the total availability of external assistance for the Second Plan amounted to Rs. 1,260 crore. The utilisation of aid up to the end of the Second Plan amounted to Rs. 890 crore, leaving an unspent balance of about Rs. 370 crore as carry-over to the Third Plan. The details of the assistance (according to source) available during the Second Plan and the actual utilisation are shown in Statement II at the end of the article.



In the search for new fuel materials, lignite is found a competent substitute for coal. An Integrated Project, based on lignite, is being constructed at Neyveli in Madras.

Night and day, work goes on at the river valley projects to irrigate our thirsty lands and illuminate our villages and cities. The picture below left shows penstocks being laid for the Ribhand power house in U.P. Both Neyveli and Ribhand projects have received U.S. help.

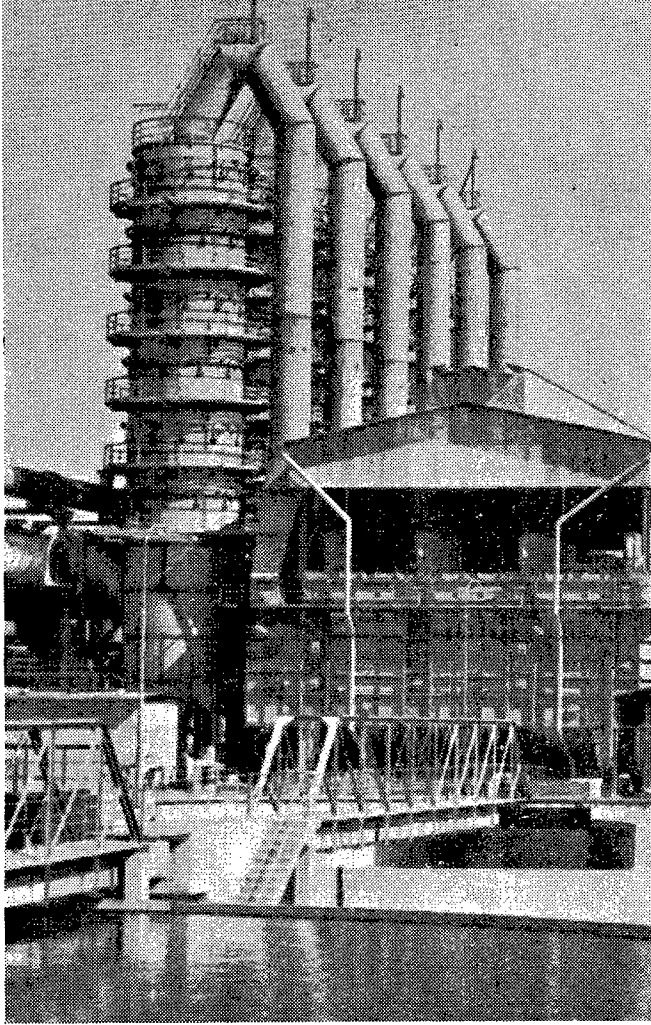
## World Bank Loans

Loans from the I.B.R.D. are granted only to finance foreign exchange requirements of specific projects of reconstruction or development after a thorough study of their merits and relative efficiency. The assistance is generally confined to railways, river valley projects, generation of electricity, production of steel, development of ports, etc. The rate of interest charged by I.B.R.D. varies from  $3\frac{1}{2}$  to  $6\frac{1}{4}$  per cent and the maturity period of loans usually varies from 10 to over 25 years. A grace period of three to five years is allowed so that the completed project may come into full operation before repayment of the principal amount starts.

## Other Dollar Credits

Development Loan Fund (D.L.F.) loans have a wider coverage which includes rail and road transport, equipment for a number of industries such as textile, sugar, paper and paperboard, steel for both public and private sectors, power projects, etc.

The World Bank and D.L.F. are the only agencies from which loans received are not tied to country-of-origin purchase and can be utilised in the purchase of machinery, equipment and other goods from any part of the globe. But in October, 1959, D.L.F. had decided that U.S. dollar aid has to be used for purchases of goods and services of U.S. origin. To avoid undue hardship, D.L.F. has exempted those projects or programmes which have reached an advanced point of consideration under its previous policies. The loans received from D.L.F. can be repaid in rupees and period of repayment extends from 15 to 20 years. The interest charged generally varies from  $3\frac{1}{2}$  to  $5\frac{3}{4}$  per cent.



A section of the Rourkela works, West German help.

depending upon whether the loans are for utility or non-utility purpose.

The credit extended by the Export-Import Bank of U.S.A. is generally available for procurement in U.S.A. of capital equipment. It carries the interest of  $5\frac{1}{2}$  per cent and is for a term of about sixteen years. The loan has to be repaid in dollars.

### Soviet Assistance

Assistance from U.S.S.R. has been directed towards basic and heavy industries and development projects such as the Bhilai Plant, the Heavy Machine Building Plant, the Coal Mining Machinery Plant, the Neyveli Lignite and other fuel projects, the drugs projects, manufacture of heavy electrical equipment and exploration and refining of oil. The credits are both project-tied and restricted to country-of-origin purchase. The aid includes technical assistance for the first stages of development of the projects and also training facilities in U.S.S.R. The loans are generally repayable over a period of 12 years and carry an interest rate of  $2\frac{1}{2}$  per cent. U.S.S.R. is also willing to repayment in rupees which are used for purchase of Indian goods.

### Aid From Germany and U.K.

West Germany and the United Kingdom have extended credits for the purchase of capital goods and

equipment. Part of the aid received from the U.K. is project-tied, for example, the Durgapur Steel Plant. British credits are for periods varying from three to 15 years and interest on them is due at the interest rate applied by the U.K. Treasury at the time of drawal plus one quarter of one per cent per annum. In the case of Germany (as with the Rourkela credit) the rate of interest is 6 per cent in addition to an administrative charge of 0.3 per cent. Part of the aid received from U.K. and West Germany is not tied to specific projects and has provided a measure of contingent support to India's balance of payments during the Second Plan.

### Yen Credit From Japan

The first yen credit from Japan (amounting to Rs. 23.8 crore) has been allocated for import of equipment in both public and private sectors. Public sector programmes benefiting from the yen credit include power projects, the National Coal Development Corporation, the Rajasthan Canal Project, small-scale industries and road projects. Japanese credit is on the standard rate of interest chargeable by the World Bank on global basis ( $5\frac{3}{4}$  % to 6 %) and the period of repayment extends to 13 years. The second yen credit amounting to about Rs. 3.81 crore is earmarked for the Orissa iron ore project.

### P.L. 480 and Other Aid

Besides all these loans and credits, India has also received aid under the Technical Co-operation Agreement signed between India and the U.S.A. on January 5, 1952. Various commodities and equipment have been received under this programme. Moreover, a number of philanthropic organisations like the Ford Foundation and the Rockefeller Foundation of U.S.A. and the Nuffield Foundation of U.K. have extended considerable assistance to India.

In addition to the assistance mentioned above substantial aid in the form of agricultural commodities such as wheat, rice, cotton, tobacco and dairy products have also been received from the United States Government under Public Law 480. Under this Act passed by the U.S. Congress in 1954, the U.S. Government enters into agreements with foreign countries for the sale of certain surplus agricultural products and accepts payment in local currencies. The Act also enables the use of the proceeds for development projects in the recipient countries to help them to execute their development programmes.

While India receives essential imports like food grains and cotton under the P.L. 480 programme from U.S.A. against payments in rupees in India, the generated rupees are, to a large extent, made available to Government of India to meet the rupee expenditure of development projects.

### 'Aid India' Club's Offer

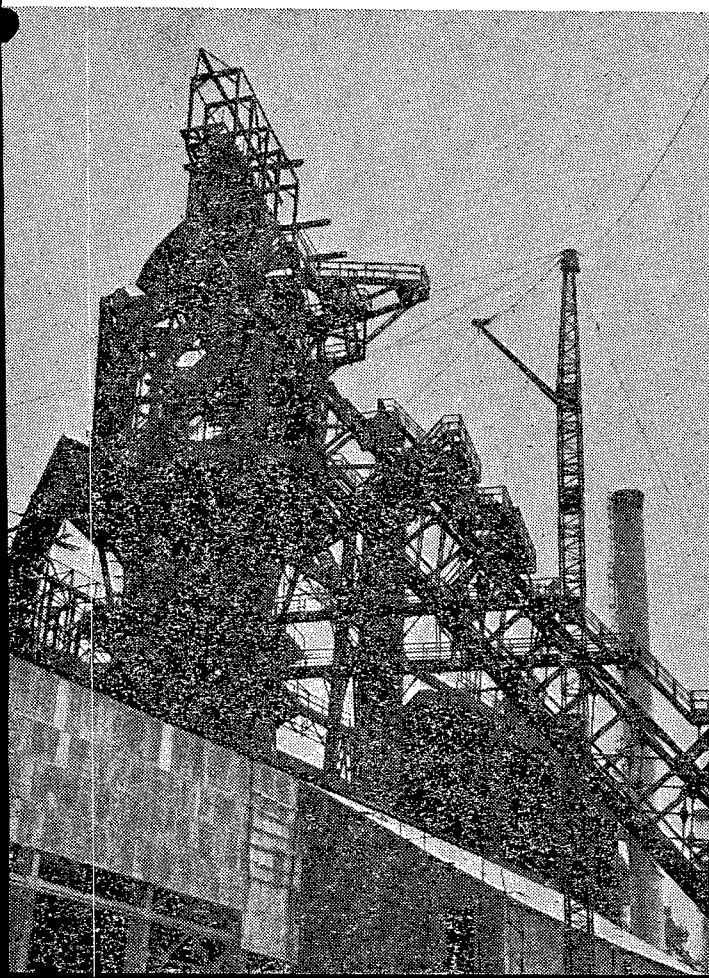
At the start of the Third Plan, India had a carry-forward of Rs. 370 crore of aid for Second Plan projects which are to be completed during the Third Plan period. In addition, India had concluded agreements for credits totalling Rs. 350 crore. The country-by-country break-up of these credits is as follows : U.S.S.R.—Rs. 238 crore; Czechoslovakia—Rs. 23 crore; Yugoslavia—Rs. 19 crore; Poland—Rs. 14 crore; Switzerland—Rs. 11 crore; USA (Exim Bank)—Rs. 24 crore; and Italy (ENI credit)—Rs. 21 crore.

At the meeting of the 'Aid India' Club held in May-June 1961, France and the newly-formed Inter-

national Development Association which is an affiliate of the World Bank also joined the Consortium and there were observers from Austria, Denmark, Norway, Sweden and the International Monetary Fund. The total sum of aid promised by the Consortium amounts to Rs. 1,089 crore (\$2,286 million). This amount is intended, in the words of the communique issued after the meeting, "to enable India to launch a Third Five-Year Plan of economic development with confidence in the ultimate development of its objectives". Loan agreements have so far been signed for Rs. 319 crore against the promised assistance for 1961-62 of Rs. 617 crore. This comprises Rs. 59.52 crore (West Germany); Rs. 38.09 crore (Japan); Rs. 60.00 crore (U.K.); Rs. 51.99 crore (U.S.A.); Rs. 50.48 crore (World Bank); Rs. 42.14 crore (I.D.A.) and Rs. 17.14 (Canada).

The 'Aid India' Consortium again met in Washington on January 29-30, 1962 to review the progress made with regard to allocation of funds out of the commitments indicated by the members of the Club in the earlier meeting. The meeting also took a note of the encouraging expansion of India's economy during the past year and progress made with the placing of new orders for programmes and projects in the Plan. The Consortium recognised that further external assistance will be required for implementation of India's development Plans beyond that already committed by the members. The next meeting of the Club is fixed for May and there are promising indications that the balance of the amount needed in 1962-63 will be found.

#### No 3 Blast Furnace of Durgapur, British help.



The Third Five-Year Plan report has placed the external assistance requirements (excluding PL-480 assistance) at Rs 2,600 crore. As against this total, Rs. 1,809 crore are either already available or are in sight. It is hoped that in view of the more sympathetic attitude in the advanced countries towards the economic problems of the developing countries, the entire requirement of external aid set out in the Third Plan will be forthcoming.

#### STATEMENT I EXTERNAL ASSISTANCE AUTHORISED AND UTILISED UP TO THE END OF THE FIRST PLAN (Rs. crore)

Source of Loan/Credit	Authorisation up to the end of the First Plan	Utilisation up to the end of the First Plan	Carryover from First to the Second Plan
<b>A. Loans</b>			
1. I.B.R.D.	57.70	33.82	23.88
2. U.S.A.	117.31	92.60	24.71
3. U.S.S.R.	64.71	—	64.71
<b>Total — A (Loans)</b>	<b>239.72</b>	<b>126.42</b>	<b>113.30</b>
<b>B. Grants</b>			
1. U.S.A.	86.16	42.00	44.16
2. Ford Foundation	5.61	2.26	3.35
3. Norway	0.66	0.66	—
4. Colombo Plan	45.53	25.26	20.27
<b>Total—B (Grants)</b>	<b>137.96</b>	<b>70.18</b>	<b>67.78</b>
<b>Total A+B (Loans &amp; Grants)</b>	<b>377.68</b>	<b>196.60</b>	<b>181.08</b>

Note: The statement excludes P.L. 665 Rupee assistance.

#### STATEMENT II AUTHORISATION AND UTILISATION OF EXTERNAL ASSISTANCE DURING THE SECOND PLAN (Rs. crore)

Source of Loan/Credit	Carryover of external assistance from First to Second Plan	Authorisation during Second Plan	Total available for Second Plan	Utilisation during Second Plan	Balance available for Third Plan
1	2	3	4	5	6
<b>A. Loans</b>					
1. I.B.R.D.	23.88	265.30	289.18	222.79	66.39
2. U.S.A.	24.71	303.86	328.57	152.98	175.59
3. U.S.S.R.	64.71	80.96	145.67	73.22	72.45
4. U.K.	—	122.66	122.66	121.84	0.82
5. West Germany	—	140.06	140.06	126.93	13.13
6. Canada	—	15.71	15.71	15.71	—
7. Japan	—	27.62	27.62	16.01	11.61
<b>Total -A (Loans)</b>	<b>113.30</b>	<b>956.17</b>	<b>1069.47</b>	<b>729.48</b>	<b>339.99</b>
<b>B. Grants</b>					
1. U.S.A.	44.16	44.11	88.27	76.17	12.10
2. Ford Foundation	3.35	10.46	13.81	9.32	4.49
3. Norway	—	1.87	1.87	1.87	—
4. U.S.S.R.	—	1.15	1.15	1.15	—
5. West Germany	—	2.09	2.09	0.61	1.48
6. Colombo Plan	20.27	62.64	82.91	71.07	11.84
<b>Total—B (Grants)</b>	<b>67.78</b>	<b>122.32</b>	<b>190.10</b>	<b>160.19</b>	<b>29.91</b>
<b>Total A+B (Loans and Grants)</b>	<b>181.08</b>	<b>1078.49</b>	<b>1259.57</b>	<b>889.67</b>	<b>369.90</b>

Note: This statement excludes credits from U.S.S.R., Czechoslovakia, Yugoslavia, Poland, Switzerland, and U.S.A. totalling about Rs. 329 crore which are earmarked mainly for Third Plan Projects. It also excludes PL-665 Rupee assistance from U.S.A.

Dr. R. N. DANDEKAR

*The recent progress in Indological studies is summed up for Yojana by Dr. Ramachandra Narayan Dandekar, head of the Department of Sanskrit and Prakrit Languages, University of Poona, who has just been awarded the Padma Bhushan for his distinguished work in this line.*

THE history of Indology is more than a century and a half old. A great volume of our ancient cultural heritage, in the form of its arts and literature, has been brought to light during these one hundred and fifty years by veteran scholars from India and abroad. Studies in Indology have received a great impetus since Independence. It is difficult to survey the vast field of Indological researches in a few pages. However, a review of outstanding researches during the past six years (from 1954 to 1960) is attempted in the following pages. The review, which by no means claims to be exhaustive, is restricted to Vedic, Buddhistic and Jain studies.

In the field of Vedic researches, recently there has been a trend to doubt the original character of the available texts. For instance, it has been averred by Esteller that the present Samhita text of the Rigveda does not represent the original composition of the *Rishi-Kavi* authors, but that it is a version modified by Sakalya. It is suggested that a metrical-rhythmical reconstitution of the Rigveda may lead to its original form. Vishva Bandhu Sastri maintains that the phenomenon of phonetic change has mutilated the Vedic texts, and that the various Vedic recensions have therefore to be treated as only time-worn manuscripts first to be deciphered and then to be studied text-critically.

As for the Atharvaveda, a palm-leaf manuscript of the Paippalada Samhita of that Veda has recently been discovered by Durga Mohan Bhattacharya at Vasudebpur in Orissa. It is written in Oriya script and, though incomplete, is generally correct and in fairly good condition. This discovery has belied the earlier belief, based on the birch-bark manuscript of the Paippalada Samhita from Kashmir, that the followers of the Paippalada school mainly belonged to Kashmir. It can now be shown that the influence of the Paippalada school extended to various parts of India including Gujarat, Utkal and the territories under the rule of the Pala and Sena kings of Bengal.

A thorough-going comparison of the texts of the two Paippalada Samhitas now needs to be undertaken by scholars. One significant fact has, however, come to light even at this stage, namely that the initial *mantra* in the Paippalada Samhita is 'sam no devir' and not 'ye trisaptah', as in the Saunaka Samhita.

AMONG Vedic commentaries, the fourth volume of the *Rigarthadipika* by Madhava, son of Venkataraya, was published a few years back. This volume comprises commentary on books fifth to eighth of the Rigveda. Several minor commentaries on selected portions of Vedic texts have also come to light, some of them dating before Sayana's major work. More important among these minor works are the *Chhandogya-mantra-bhashya* by Gunavishnu, who flourished before the twelfth century A. D., and the *Brahmana-sarvasva* by Halayudha of the twelfth century A. D. The former work explains such Vedic *mantras* as are commonly used in the *grihya* rites of the Samavedins. The latter is a commentary on the Vedic *mantras* of the *grihya* rites for the followers of the *Kanva-Sukla-Yajurveda*. It may be noted that the *Mantrarthatdipika* of Satrugghna of the sixteenth century is mostly based on Halayudha's *Brahmana-sarvasva*. The *Rigarthasara* of Dinakara Bhatta, a commentary on 207 *mantras* from the Rigveda, is another recent discovery.

Two modern critical studies have also recently been written—one by Bhavé on the Soma hymns and the other by Velankar on the Indra hymns, both from the Rigveda. Certain scholars have come forward with a view that the Rigveda consists of various *vidyas* whose object is to explain the cosmic process of creation and dissolution as seen through the triple form of life, mind and matter, or *prana, manas* and *vak*, or Agni, Vayu and Aditya.

Another feature of the modern Vedic studies is the growing awareness among Indian scholars of the validity of Panini's grammar for Vedic interpretation. Contrary to the earlier views of Whitney and Sylvain Levi, it is now claimed that Panini's treatment of Vedic grammar is quite systematic and is based on an intimate knowledge of the Vedic Samhitas.

### Sutra Literature

IN the field of Sutra literature, the *Akshepanavidhi* by Somaditya, a commentary on the *Vaitana-sutra* of the Atharvaveda, was recently brought to light by Durga Mohan Bhattacharya. It indicates that Kausika was the author not only of the *Grihya-sutra* but also of the *Vait-*

*ana-sutra* which constitutes the *Srauta-sutra* of the Atharvaveda. According to Somaditya, only the six *adhya-yas*, known as *Yajnaprayaschitta-sutra* or *Atharvaveda-prayaschittani*, formed the original text of the *Vaitana-sutra*, of which the main source was the *Gopatha-Brahmana*.

An encyclopaedia of Vedic rituals, under the name *Srautakosa*, is under compilation for the past few years. It will comprise two complementary sections, one in Sanskrit and the other in English. The first volume of the Sanskrit section, which was published two years ago, deals with the seven *havis* sacrifices, together with the relevant optional and expiatory rites. Of the corresponding English section, only the first part has so far been published which relates to the formal enkindling of the sacred fires (*Agniyadhana*), the morning and the evening offerings (*Agnihotra*), the new-moon and full-moon sacrifices (*Darsa-Purnamasau*), and the sacrifice of new harvest (*Agrayana*).

The fourth volume of the *Mimamsa-kosa*, compiled by Swami Kevalananda of Wai, was brought out in 1956. The fourth part of the *Upanishatkanda* of the *Dharma-sutra* (from Wai) and a new edition of the 18 Upanishads (from Poona) have also been recently published. The latter two works give indices of words and concepts in the principal Upanishads.

Vedic music has been the subject of research for three scholars. One of them points out that the later modal system (*ragas*) was already present in the music of the Samaveda. Another writer characterises the *archikagana* as monotonic, the *gathikagana* as bitonic, the *Samikagana* as tritonic and the *Svarantara* as quadra-tonic. The third scholar suggests that, in the pre-Vedic period, the enclitic *svarita* must have denoted a middle tone and that its identification with independent circum-flex must have occurred in the historical Vedic period.

### Buddhist Studies

RECENT years have witnessed a striking revival of interest in the history and teachings of Buddhism, particularly on account of the 2500th Buddha-Jayanti which was celebrated on an extensive scale in 1956. A special department for Pali and Buddhist studies was established in Delhi University and revised courses in the subject started in Banaras University. The Government of India, in collaboration with the Bihar Government, sponsored the publication of critical editions of Buddhist scriptures both in Pali and Sanskrit. The editing of the Pali scriptures in about 40 volumes has been entrusted to the Nava-Nalanda Pali Institute. The Sanskrit scriptures are being published in about 25 volumes under the auspices of the Mithila Sanskrit Institute of Darbhanga (Bihar).

The K. P. Jayaswal Institute of Patna, established by the Bihar Government, has been critically studying the treasures of Buddhist Sanskrit manuscripts which have been brought from Tibet. The Institute has undertaken the publication of a series of Tibetan Sanskrit texts on Buddhist logic and philosophy. It consists of works like the *Pramanavarttika* of Dharmakirti, the *Pramanavarttikabhāṣya* of Prajñakārgupta, the *Dharmottarapradīpa* of Durveka, the *Abhidharmakośabhāṣya* of Vasubandhu, the *Abhidharmapradīpa* of

Sanghabhadra, and the Buddhist Tracts of Ratnakirti and Jnanasri.

Among the Tibetan manuscripts in the Jayaswal Institute are also important works like the *Sramanertika*, the *Bhikshuprakirṇaka* and the *Bhikshuniprakirṇaka*, which throw light on the life of Buddhist monks and nuns. Accounts of contemporary India written by Tibetan pilgrims are also a valuable source of information. The English translation of one such account, namely that by Dharmasvamin who visited India between 1234 and 1236 A. D., has been published by the Institute.

Calcutta University has undertaken the edition of the *Yogacharabhumisastra*, and its first part has been published. The Asiatic Society of Bengal has taken up the *Saddharmapundarika* and the *Nagananda* for publication with their Tibetan versions. The Gilgit manuscripts have been published in three volumes of seven parts. Another notable work recently brought out is the *Bauddhagamarthasamgraha*, a source-book for the life and teaching of the Buddha, by P. L. Vaidya. Several other research works have been recently published on the history and philosophy of Buddhism. Among them V. V. Gokhale's paper 'The Vedanta Philosophy Described by Bhavya in Madhyamika-hridaya' claims that Bhavya attempted the first history of Indian philosophy in his *Madhyamika-hridaya*.

### Research in Jainism

THERE are valuable collections of ancient and rare manuscripts on Jainism and Prakrit studies at Jaisalmer in Rajasthan and Pattan in Gujarat. These collections also include some rare works on Buddhist Nyaya and the six Darśanas. These manuscripts are now becoming available for academic study, and the Bharatiya Sanskrit Vidya Mandira of Ahmedabad and the State of Rajasthan have been making photostat copies of important manuscripts among them for research. Two new commentaries on the *Samkhya-sutras*, quite independent of the *Mathara-vritti*, have been discovered at Jaisalmer.

The discovery in recent years of the three works, the *Dhavalā*, the *Jayadhavalā* and the *Mahabandha*, has led to a close study of the doctrine of Karma, which constitutes a basic tenet of Jainism. These three works were found at Moodbidri in the South. They represent elaborate commentaries on the ancient Sutras of *Satkhandagama* and *Kasaya-prabhrita*, which embody the Jain doctrine of Karma. Although these commentaries belong to the ninth or tenth century A. D., they also incorporate several earlier commentaries in Prakrit and Sanskrit. During the past five years, the *Dhavalā* has been published (with text and Hindi translation) in 16 volumes of 500 pages each; the *Mahabandha* has also been completely published by the Bharatiya Jnanapitha of Banaras; while in the case of the *Jayadhavalā*, only seven volumes have been published. Lately, another work, called *Panchasamgraha*, which contains a number of treatises on the Karma doctrine, has been published with Prakrit and Sanskrit commentaries. Mohanlal Mehta's thesis, the *Jaina Psychology*, attempts a psychological analysis of the doctrine of Karma.

(Continued on next page)

## PRIZE-WINNING CATTLE

I RECENTLY read with interest about the best milk yielding cows and a Murrah buffalo of Rohtak. The owners are to get prizes for their solid contribution in the field of animal husbandry. In this connection, may I request you to publish in your esteemed journal photographs of the milkers and their owners? A short note on the animals and the selection of the breed and the care the owners took in bringing up the animals may also be given.

Simbhaoli (U. P.)

SAJJAN SINGH

## STEEL PLANTS' EARNINGS

THE headline 'Three Steel Plants Earn Rs. 44 Crore' (*Yojana*, December 24, 1961) is misleading. From the text, it appears that the total gross sales of three projects amounted to Rs. 44.22 crore. I am sure that you would agree with me that total gross sales can by no means be taken equivalent of earning. From the text it also appears that there was a loss in operations if all the steel plants are taken together. Your headline thus definitely gives a wrong picture of the text. I sincerely hope that you would avoid using such misleading headlines in future.

Lucknow University

R. L. VARSHNEY

---

## RECENT WORK IN INDOLOGY

(Continued from page 19)

Pandit Mahendrakumar has lately added two more works, namely the *Nyaya-vinischaya* by Vadiraja and the *Siddhivinischaya-tika*, to his series of Jaina texts on Nyaya (logic). The *Nisitha-sutra-bhashya*, a work in Prakrit published from Agra in four volumes, has brought to light the secrets of Jaina monastic life. The *Jambudiva-pannatti-samgaho*, a Prakrit text on Jaina cosmography, has been edited by A. N. Upadhye and H. L. Jain.

The publication of a Prakrit Text Series has recently been undertaken by Muni Sri Punyavijayaji. The *Amgavijaya*, edited by him, has appeared as the first volume. This treatise on the science of divination also supplies information on the age of Kushanas and the Guptas. Muni Sri Jinavijayaji has recently edited and published two interesting works in the Singhi Jaina Series. One of them, the *Jambu-chariyam* of Gunapala of the twelfth century A. D., narrates a tale with a style, and the other, the *Jayapayada-nimitta-sastra* is an ancient work on omens and portents.

The *Kuvalayamala* of Uddyotana (779 A. D.), edited by A. N. Upadhye, is a *champu* which offers a good study in linguistics and history of literature. The didactic tale contains many specimens of contemporary colloquial speech in mixed Sanskrit and Prakrit, with a sprinkling of Apabhramsa. There are passages in Paisachi also. The work also refers to many earlier authors.

## CALCUTTA PORT IMPROVEMENT

IN the article on Calcutta Port (*Yojana*, December 24, 1961) you have only mentioned the Third Plan allocation for the development of the Port. What were the allocations in the earlier two Plans?

Midnapore

A. N. DATTA

The allocation in the First Plan was Rs. 12.09 crore of which the actual expenditure was Rs. 3.44 crore. The figures for the Second Plan were Rs. 28.75 crore and Rs. 15.62 crore respectively.—Ed.

## HOUSING & MIDDLE CLASSES

FROM your leading article (*Yojana*, January 7, 1962) it appears that though the Government realises the importance of housing problem it is not in a position to satisfactorily solve the same immediately. Housing requires larger funds, which can be set apart, as you have observed, "provided we starve other key sectors of our economy and thus delay our march towards a self-generating stage". Quite reasonable. But are we not neglecting an important section of our community by giving priority to the other key sectors? I am referring to the middle-class families living in big cities and urban areas. For instance, in Calcutta, most middle-class families consisting of seven or eight members each have to huddle in one room. Because of their small incomes heads of these families are not in a position to engage a house or even two-room flat. The result is that the children do not breathe the proper atmosphere required for their mental and physical growth. As Mr. C.N. Chittaranjan has observed in his article published elsewhere in the same issue, "The lack of privacy that overcrowding implies leads to psychological tensions and to the breaking up of families. Children not getting the attention they need are apt to tread the path of delinquency". It is therefore clear that, unless we are able to provide suitable housing facilities for the middle-class families, we cannot expect our younger generation to grow into responsible citizens. In other words, the poor and unhealthy conditions as prevail today will only help in creating a section of the community which, instead of being an asset, may ultimately prove a liability.

There is no doubt that housing is a big problem and that it cannot be solved, to quote your words again, "in one grand smash". But certainly all other available resources can also be tapped. For instance, a house-building fund can be raised for each middle-class employee whether government or private, out of the contribution made from his salary every month. With the lump sum amount he gets at the time of his retirement he can build his own house on the land provided by the government at cheap or controlled rates. This is one of the measures that can be taken to solve the housing problem of the middle-class families.

Calcutta.

N. K. BOSE

(Also see page 22)

# A JOB TO DO

(Continued from page 6)

placements. The bureaux can give much more of individual attention in guiding and directing individual talent and energy through personal discussions, talks, seminars and arranging interviews with prospective employers.

This brings us on to the subject of what the employer expects of the exchange. The employer, even when sympathetic, is a realist. He wants a reasonable number of screened and tested candidates to choose from. But the system breaks down when he demands a ready-made candidate who can step directly onto the production line. There are some men of that type waiting between jobs. But the more reasonable thing to do would be to choose a candidate with some potential and build him up through a programme of training on the job. That implies a waiting period and quite a number of employers find this both expensive and time-consuming.

The alternative is to induce a skilled workman to leave his present employer, not realising that such men do not prove stable employees and are likely to leave you badly in the lurch. 'Workman stealing' does not pay. The Employment Service is

strictly neutral as between the worker and the employer. Each exchange has an advisory committee to ensure fairness in submissions.

Let us look a little more closely at the problems of an employment officer. He is the man who has to stand between the job-seeker and the prospective employer. He is usually overworked and understaffed. The building where he works is invariably crowded, often dingy and sometimes even dilapidated. (In Delhi an employment exchange is housed in an ancient Manzil where the mirrors on the wall have been replaced by career posters and job notifications). The waiting halls are dreary, depressing to the morale of both the staff and the job seekers. If we can find neater and more spacious places for the employment offices, work will become more efficient, and the inevitable queues can be controlled better.

The average employment officer can do a lot more if parents and teachers would help in guiding their children and students in the early formative years so that education is consciously directed towards the choice of a future career. There will always be exceptions, but in most

## PLAN QUIZ

1. What is the number of co-operative farming societies in the country?
2. The total investment of American capital in India amounts to (a) Rs. 82 crore, (b) Rs 212 crore, (c) Rs 150 crore.
3. Can you fill in the figures?
  - (a) A comprehensive National Programme for Flood Control was launched in—
  - (b) Since the inception of the programme, —miles of embankments have been completed, affording protection to —acres of land.
  - (c) —towns and —villages have been protected from floods and erosion.
4. What are the main features of the Central Institute for Foundry and Forge Technology proposed in the Third Plan?

(Answers on page 23)

cases such guidance can prevent waste of money, time, energy and heart-break.

Employers, on their part, should not set impossible standards in recruitment and should be prepared to build up young persons through in-plant training. Finally, the employment seeker must use the waiting period to improve his own employability.

## Q U O T A T I O N B O X

The Prime Minister has said that he does not understand how the great planets are interested in human affairs. One might as well ask how the sun is interested in human affairs to cause droughts, floods, tides and sunstrokes.....In discussing natural phenomena one does not talk of interests and motives.

—Mr Sampurnanand

The disparity between highest and lowest incomes, which was one to 110 in 1947, has increased to one to 320—nearly threefold—in the last 14 years.

—Mr Asoka Mehta speaking at an election meeting in Banaras

The Mudaliar Committee report on family planning (suggesting the appointment of a full-time minister for family planning) would lead to

the expansion of the growing family of ministers.

—Mr C. D. Deshmukh

Leadership in the States is disastrously stunted, and politics in the States is reduced to subservience to the Centre. India is too big for any detailed planning from the Centre... The States are the proper units to do the actual work of planning, while the Centre should only lay down broad outlines and co-ordinate the State plans.

—Mr V. P. Menon in "Swarajya"

It might seem that the time was ripe for an enterprising newspaper magnate to organise a sudden breakthrough into the mass circulation field... Yet nobody connected with the newspaper industry expects to see any sensational advance in the next decade. At least two more Five-Year

Plans are needed before a path is cleared for an Indian Northcliffe.

—Mr Evan Charlton in the India Survey of "The Times"

Why do so many members of Parliament remain absent so often? Eleven to five, five—or even six days a week for a few weeks at a stretch—is hardly much of a strain. Perhaps we are ourselves to blame: we disliked the regimen of the House of Commons sessions from early afternoon to late into the night, but copied, and wrote into our Constitution, a low quorum of one-tenth of the total membership. After all the trouble taken...over elections, why should we want our parliamentary business to be disposed of by only some 50 members?

—Mr P. C. Chaudhuri writing on "Ethics and Electoral Democracy" in "Seminar"

## TRAINING VILLAGE LEADERS

THE introduction of Panchayati Raj in some States has given new powers to the villagers. But I have doubts if they are in a position to shoulder the responsibility. I came in contact with the Pradhans and Sarpanches of Mainpuri district, U.P., who recently met in a conference. I feel that if democratic decentralisation is to be made a success, some academic qualification has to be fixed for the Pradhans and Sarpanchas and those who hold responsible positions. Power in the hands of the illiterate is like fire-arms in the possession of those who do not know how to use them. Education gives a sense of responsibility and it is the educated who can make proper use of the powers invested in them.

Since literacy has made great headway there is no reason why educated people should not play a more important part in the new set-up. The higher the post in a Panchayati Raj the higher should be the required standard of education. If, for instance, only graduates are elected as Adhyakshas they are likely to instil a new sense of duty among the rural masses. Similarly those who have passed the high school examination should become Pradhans and Sarpanchas while others with junior school qualification may serve as members. Because of their being educated they will work in a responsible manner in the common interest of the nation as a whole. To make Panchayati Raj a success, powers should be given in the hands of educated and capable men only.

Mainpuri.

PRABHAT CHATURVEDI

## OUTDOOR or INDOOR...

Wire with versatile

### ALIND AL-VINYL!

- Superior to conventional VIR for conduit or casing-and-capping wiring.
- Employs high-conductivity aluminium conductors and polyvinyl chloride (PVC) insulation.
- Conforms to appropriate British and Indian Standards specifications.
- Costs much less.

Now on D G S & D RATE CONTRACT

Approved by the Insurance Association of India, Bombay Regional Council (Fire Sectional Committee), State Electricity Boards and Private Supply Undertakings.



Drop us a line, we'll reply by cable!

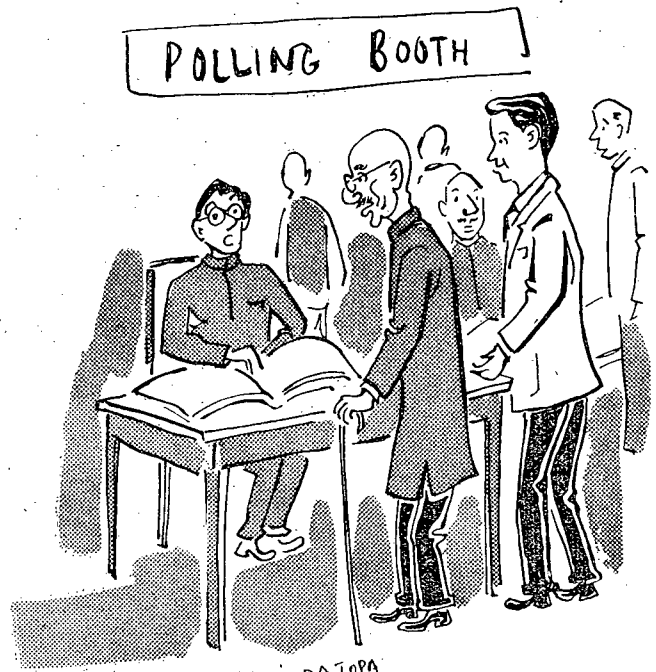


## ALIND

THE ALUMINIUM INDUSTRIES LIMITED  
India's largest manufacturers of  
aluminium conductors and accessories  
Registered Office & Plant No. 1: Kundara  
(Kerala); Plant No. 2: Hirakud (Orissa)  
Managing Agents:  
SESHASAYEE BROS. (TRAV.)  
PRIVATE LIMITED

AL-689

## SHAMBU



If this man who is thirty has one vote, I should have two votes. I am sixty.

## GOA'S SHARE IN OUR FOREIGN TRADE

*QUESTIONS from Mr. Ramesh K. Chahal, Moga (Punjab).*

1. What will be the effect of Goa's integration with India on the structure of our foreign trade?

2. Give the names of the seaports which will be improved or renovated in the Third Plan.

**ANSWERS:** 1. Goa is rich in natural resources, particularly iron ore and manganese, but so far the region has remained underdeveloped. With the development of Goa, the foreign trade of India is bound to increase. The extent of this increase has not yet been adequately assessed. The Government of India has appointed a committee to do so.

Besides, Goa has good natural ports like Marmagao. If these ports are developed, they will serve the trade of the mid-southern parts of the country like southern Maharashtra and Mysore.

2. On the development of ports, the Third Plan states: "The pro-

gramme in the Third Plan provides mainly for the completion of the projects which are already under way and, except for Bombay Port where provision is made for the modernisation and expansion of the docks, no major scheme has been included which may be expected to make any large scale addition to the capacity of existing ports". Two important new schemes are: (1) the construction of an ancillary port at Haldia and (2) the construction of a barrage on the Ganga at Farakka, both aimed at the proper maintenance and preservation of Calcutta Port. Two minor ports,

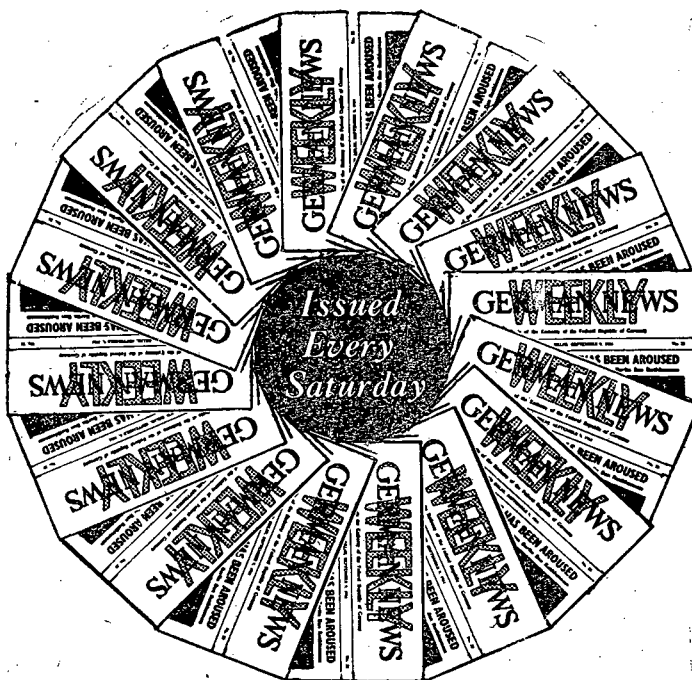
## YOU ASK US

Tuticorin and Mangalore, are being upgraded. Rs. 115 crore have been earmarked for these schemes.

Besides, there is a programme for the development of minor ports at a cost of Rs. 15 crore. It includes development works at Paradip, Neendakara, Karwar, Kakinada, Masulipatam, Cuddalore, Ratnagiri, Redi, Bhavnagar, Porbandar and Okha.

## ANSWERS TO QUIZ

- Up to the end of 1961, 118 co-operative farming societies had been organised under the scheme for pilot projects during the Third Plan. Besides, 269 societies had been organised outside the pilot project areas.
- (a) Rs. 82 crore; this yielded an annual profit of Rs. 2.5 crore which was remitted to the United States during the last four years.
- (a) September 1954.  
(b) 3,300 miles; 66 lakh acres.  
(c) 52 towns and 4,316 villages.
- The Central Institute for Foundry and Forge Technology will be established at Ranchi in Bihar at a cost of Rs 85 lakh and a recurring annual expenditure of Rs 10.5 lakh. The Institute will offer two courses—a post-graduate diploma course for engineers and a certificate course for supervisory technicians, each of 18 months' duration. The Institute will admit 35 graduate engineers and 100 diploma holders every year; later the capacity will be increased to 50 and 150 respectively.



## GERMAN NEWS WEEKLY

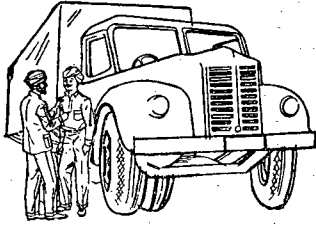
gives you information about political, cultural and economic life in the Federal Republic of Germany.

- Regular Features**
- Political, Cultural and Economic news.
  - Films, Radio, Television and Sports.
  - Travel and holiday.
  - Photographs depicting German way of life.

Annual subscription Rs. 2/-

For your copy of this informative and entertaining illustrated weekly, please write to The Press and Information Office, Embassy of the Federal Republic of Germany, Chanakyapuri, New Delhi-21.

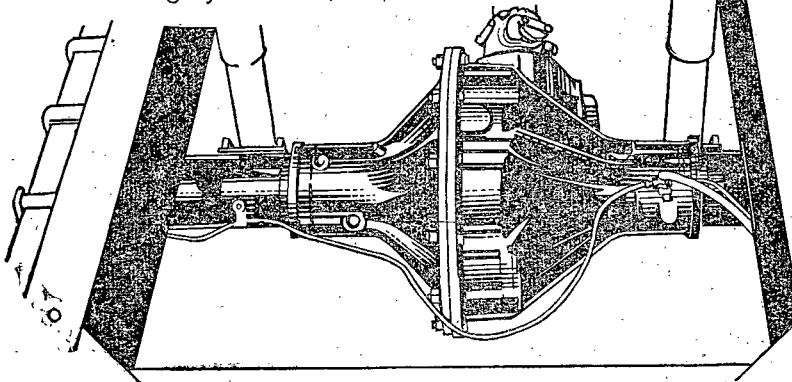
JWT-G.N.W.



## My choice of a truck? **FARGO** of course

Bhaiya, I have been a truck operator long enough to know that there can be no two opinions about the superiority of Fargo trucks. For instance take Axles. A Fargo vehicle is fitted with *Timken* axles now known as *Rockwell Standard* which have a world-wide reputation. These axles have great load carrying capacity and are absolutely dependable—which means a great deal to us truck operators.

There are several other superior features, besides. Taken together they lead to only one conclusion, namely, that the Fargo is a great truck. It is great in hauling power, great in endurance, great in earning capacity. You'll make Fargo your truck, too, I am sure.



# FARGO DIESEL TRUCK

Manufactured by **THE PREMIER AUTOMOBILES LIMITED**, Bombay

SISTA'S-PAL-409

**CONTACT YOUR NEAREST DEALERS**

# FOUR NEW RAIL LINES

**R**AILWAYS and roads are the life-lines of a country's economy. In the absence of adequate communications, even rich resources of a region cannot be properly exploited for development. Konkan, the narrow strip below the Sahya mountains on our west coast, craved long for transport facilities and now it will get them. Work has started on the Bombay-Konkan railway line, which opens the gates to prosperity for Konkan.

The broad-gauge line will connect Diva (near Bombay) with Panvel, Uran and Apta, a distance of 70 kilometres. This is expected to be the first stage of a railway line for the entire coastal strip of Konkan.

The work will cost about Rs. 4 crore and will be completed in three years. A notable feature of the construction will be the use of pre-stressed concrete girders in place of steelgirders.

## AS THE PLAN MOVES

Konkan is rich in rice, fodder, vegetables, fruit and fish. There are vast salt pans near Uran. The area has also great potentialities in manganese, iron ore and other minerals. The hills are a source of hydro-electric power.

The Government of India proposes to set up an Organic Chemicals and Intermediates Plant near Apta and develop the Uran area in near future.

### SALEM—BANGALORE

**W**ORK has also started on the 140-mile metre gauge railway line linking Salem with Bangalore. This fulfils another long-felt need for the industrial advance of the southern region. The rail-link will connect the industrial areas around Bangalore with Cuddalore port through Salem. This will facilitate the movement of lignite from Neyveli to Mysore State and iron ore from Mysore to Salem, where a steel plant is to be set up. It will also

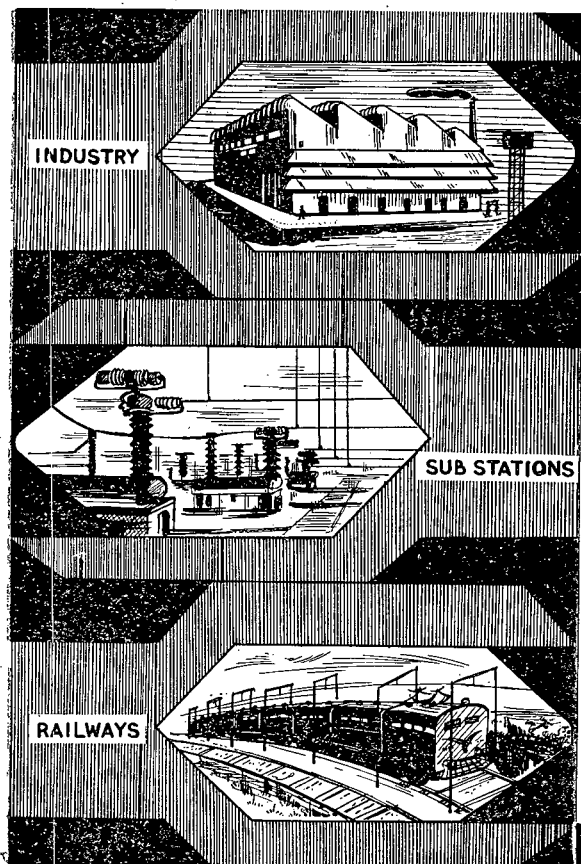
ease the heavy passenger traffic in the area. Estimated to cost Rs. 8 crore, the line is expected to be ready for use by 1965.

### VIRUDHUNAGAR—MANAMADURAI

Work has also started on a 45 mile rail link between Virudhunagar and Manamadurai in Madras State. Expected to be completed in 18 months at a cost of Rs. 2.5 crore, the new line will serve the interior areas of Ramnathpuram district, south of Tiruchirapalli and the hinterland of Tuticorin port.

### LAKHERI—BAYANA

A 117-mile duplicate broad-gauge railway line is to be built between Lakheri and Bayana on the Nagda-Mathura section of the Western Railway. Estimated to cost Rs 10 crore, the new line will serve the cement factories at Sawai Madhopur and Lakheri and the heavy traffic from areas north of Delhi as well as the anticipated traffic of petroleum products from the proposed refineries.



## HEAVY ELECTRICALS

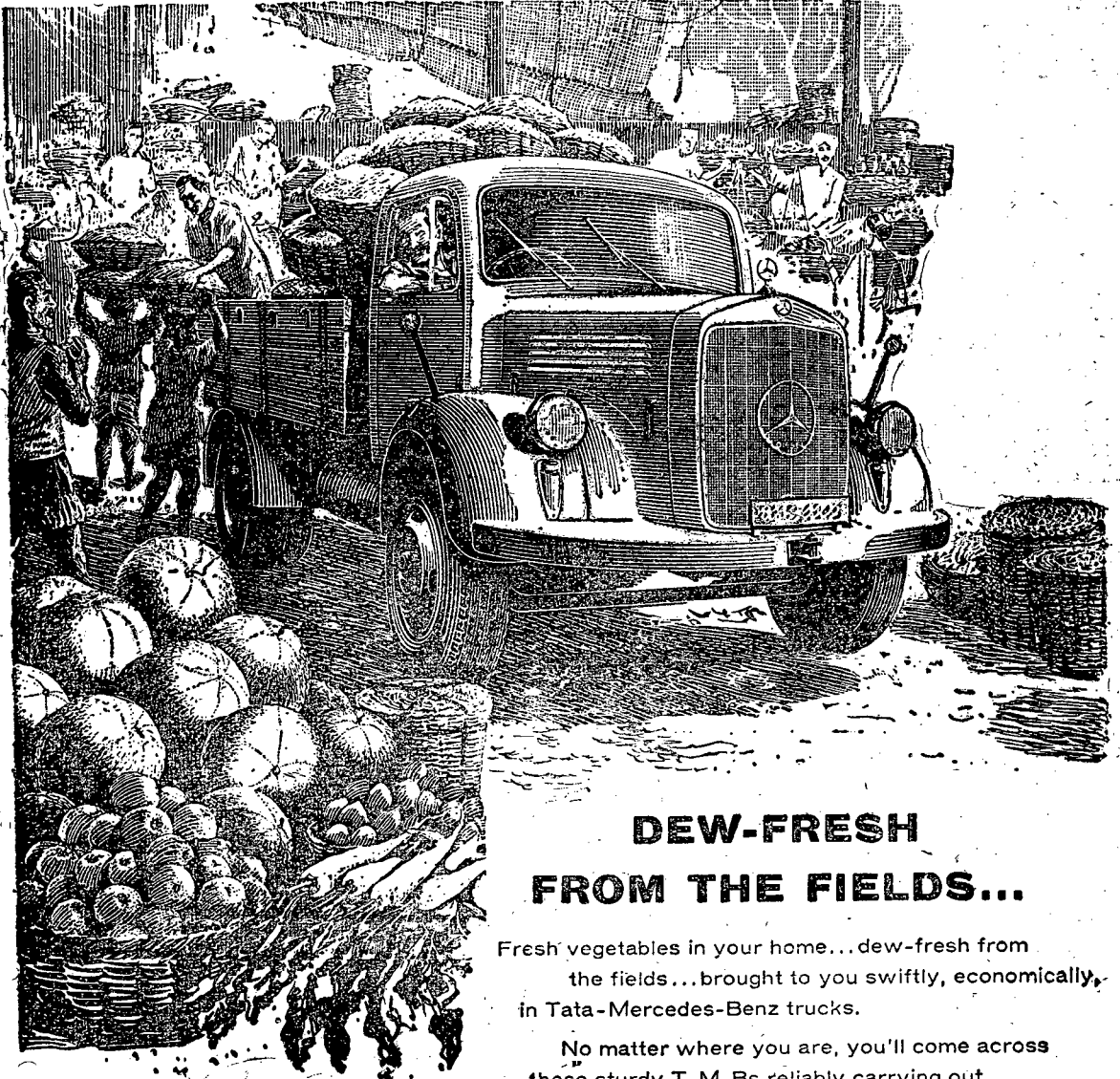
(INDIA) LIMITED, BHOPAL

(A GOVERNMENT OF INDIA UNDERTAKING)

Planned to meet the Country's demands  
for electrical equipment required  
for industrialization.

THE RANGE OF MANUFACTURE INCLUDES :

- Hydraulic & Steam turbines.
- Alternators & Diesel generators.
- Power Transformers upto 400 MVA at 220 kV.
- Switchgear upto 220 kV & 7500 MVA.
- Electric Traction Equipment.
- Capacitors & Synchronous condensers.
- Rectifiers, Welding transformers.
- Industrial motors & Control gear upto 5500 H.P.



**DEW-FRESH  
FROM THE FIELDS...**

Fresh vegetables in your home... dew-fresh from the fields... brought to you swiftly, economically, in Tata-Mercedes-Benz trucks.

No matter where you are, you'll come across these sturdy T-M-Bs reliably carrying out transport jobs — big and small.

**THE STAR THAT  
HAULS A FORTUNE**



**STURDY Tata-Mercedes-Benz**

**vehicles made STURDIER**

**TATA-MERCEDES-BENZ**

**TATA ENGINEERING & LOCOMOTIVE COMPANY LIMITED**  
Automobile Division: 148, Mahatma Gandhi Road, Bombay-1

T. 553A

# Saving

## ARECANUT & COCONUT

### from Pests

THE month of February is normally dry. For arecanut, irrigation work has to be intensified for both the nursery beds and the garden. Seednuts sown in the nursery beds should be watered daily. To control weed growth and retain moisture, nursery beds may be remulched with dry leaves, wherever necessary. Additional shade may also be provided for protecting seedlings against sun scratch. To control mites wettable sulphur (one Kilo in 150 litres) may be frequently sprayed. Harvesting of stray, ripe arecanut bunches available in the gardens will be completed during the month. These can be sun-dried or kept for home consumption.

Summer drought practically sets in during this month. Efforts should be made to conserve the moisture present in the soil and make it available to the coconut palms.

The incidence of black-headed caterpillar pest, common to coconut, generally assumes alarming proportions during the months of February and March. The caterpillars eat the green under-surface of the coconut leaflets, causing a severe set-back to the growth and yield of the palms. The affected as well as the adjoining



A coconut tree being sprayed with D.D.T. The picture on the left shows some diseased palms.

palms may be sprayed with 0.2 per cent D.D.T. twice after every fortnight.

Certain parasites are found to attack the pupae of this pest and destroy them. Liberation of these parasites in the affected gardens will also control the pest. They can be had from the Parasite Breeding Stations at Kasargode in Cannanore district and Razole in East Godavari district. To ensure a steady growth, the channels in the garden should also be cleaned and moist soil placed around the coconut trees.

This is also the time to take care of the harvest of flue-cured tobacco. Orobanché should be

I. C. A. R. AGRICULTURAL  
INFORMATION SERVICE

weeded out and the diseased and mosaic-affected plants removed. The virus-affected plants can be burnt or buried. The bulk of Lanka tobacco becomes ready for topping during this period. For controlling aphids the affected plants can be sprayed with tobacco decoction.

### NEW JUTE STRAINS FOR W. BENGAL & ASSAM

IT is in March that the white variety of jute is sown. A new strain of the Tossa (*C. olitorius*) variety has been successfully evolved by the Jute Agricultural Research Institute. It can be sown as early as March, simultaneously with the White (*C. capsularis*) variety. Since the jute-growers have to sow the existing cultivated varieties of Tossa between mid-May and June, the new strain will help in solving their problem. One aim of the improvement sought by the Institute in its Tossa breeding work has been to evolve a type that can be sown early without the risk of premature flowering so that after the harvest of jute, the land can be released in time for the cultivation of a paddy crop.

The aim has been fulfilled by crossing an improved Tossa variety with another of the exotic type. While the hybrid retains all the known characteristics of Tossa it adds one more—that of growing about the same time of the season as white jute. This new variety now awaits release for large-scale trials under cultivators' conditions.

The Institute has also developed a new branching type of white jute which has the capacity of resisting the anthracnose and stem-rot diseases. In other respects, too, the new strain has established its superiority over the standard D154.

To suit Assam's growing conditions, the Institute has evolved yet another hybrid from a cross between two standard white types. This may succeed in due course in replacing the variety in use now. By pure line selection the Institute has developed a new White type, expected to offer resistance to the common stem-rot disease of jute.



# 3 reasons why Vanaspatti Should Not Be Coloured

The colouration of vanaspatti is being demanded in the name of ghee consumers—on the assumption that it will effectively check the adulteration of ghee. But it is a mistaken belief...an impractical suggestion!

**1. The colour chosen should be irremovable;** otherwise it will serve no useful purpose. The truly fast colours, however, are known to be toxic or cancer-producing. Introduced in vanaspatti, they will be consumed by millions of our people with their every meal!

**2. Ghee made in various parts of India comes in different colours.** Some of these shades are strong enough to hide even deeply coloured vanaspatti...thus defeating the very purpose for which colouration of vanaspatti is being suggested.

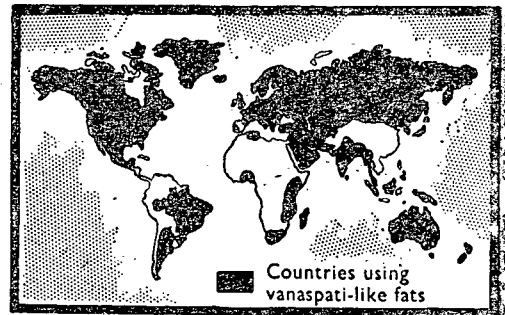
**3. Vanaspatti is NOT the only substance misused in ghee,** but it is by far the safest...a pure food in itself. The other adulterants, like *charbi*, are impure and, therefore, objectionable. And they will be increasingly used if vanaspatti becomes unavailable to the unscrupulous adulterator.

Vanaspatti is a safe, wholesome, nourishing food. And adding a colour to vanaspatti is the same as adulterating one pure food—to save another from adulteration!

## VANASPATTI DOES CONTAIN A SAFE LATENT COLOUR

The sesame oil in vanaspatti is a safe latent colour which shows up *unfailingly* in a simple

chemical test. There is no need for any further colour!



## VANASPATTI-LIKE FATS ARE USED THROUGHOUT THE WORLD

Albania Algeria Argentina Australasia Austria  
Belgium Brazil British East Africa Bulgaria  
Burma Canada Central African Federation  
Czechoslovakia Denmark Ethiopia Finland  
France E. & W Germany Greece Hungary  
India Iran Iraq Ireland Israel Italy Japan  
Libya Malaya Mexico Morocco Netherlands  
Nigeria Norway Pakistan Poland Portugal  
Rumania Saudi Arabia Sweden Switzerland  
Turkey Union of South Africa U.S.S.R.  
U.A.R. U.K. U.S.A. Yemen Yugoslavia.

For more information, please write to:—

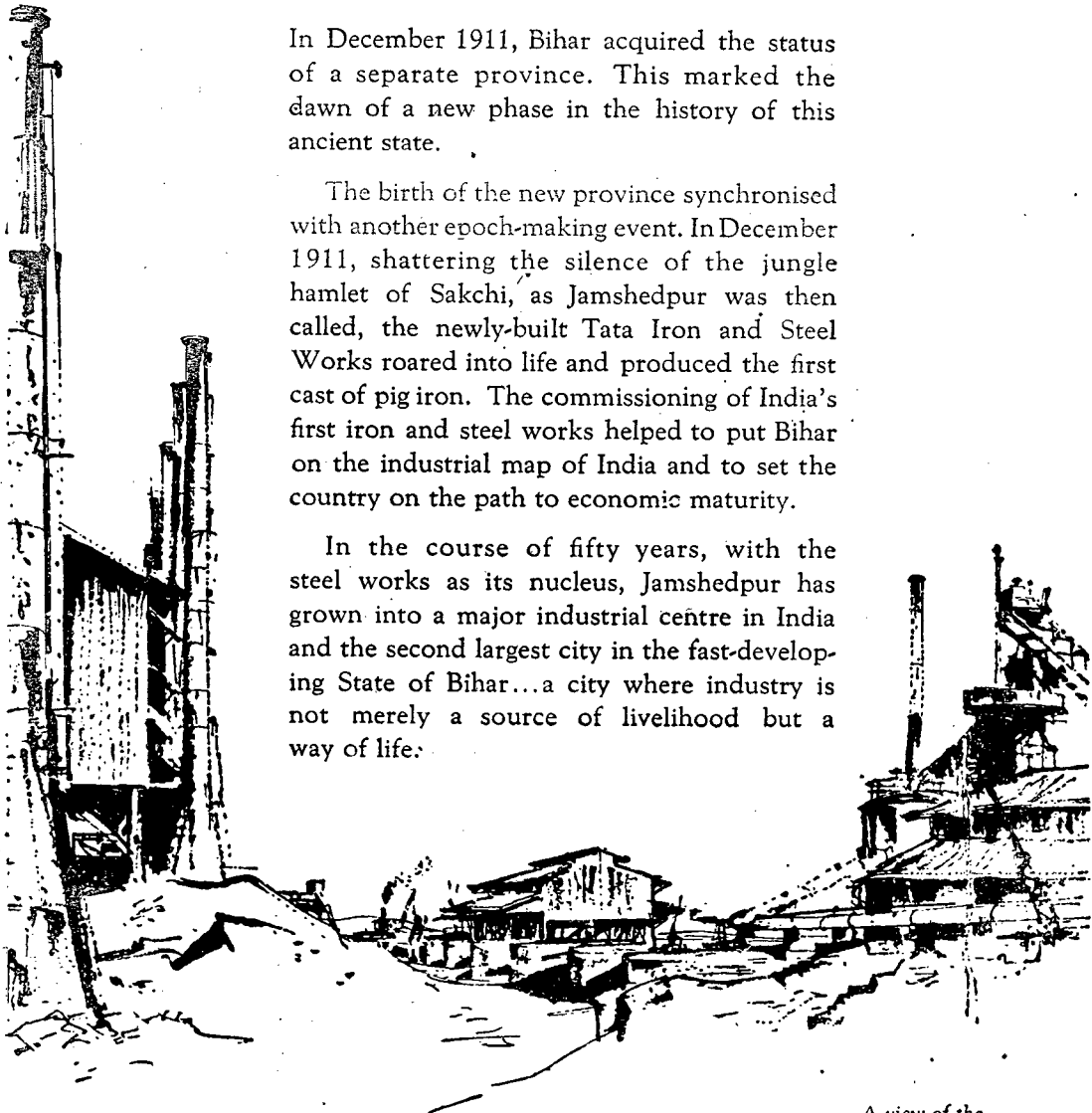
**The Vanaspatti Manufacturers' Association of India**  
India House, Fort Street, Bombay.

## *important beginnings*

In December 1911, Bihar acquired the status of a separate province. This marked the dawn of a new phase in the history of this ancient state.

The birth of the new province synchronised with another epoch-making event. In December 1911, shattering the silence of the jungle hamlet of Sakchi, as Jamshedpur was then called, the newly-built Tata Iron and Steel Works roared into life and produced the first cast of pig iron. The commissioning of India's first iron and steel works helped to put Bihar on the industrial map of India and to set the country on the path to economic maturity.

In the course of fifty years, with the steel works as its nucleus, Jamshedpur has grown into a major industrial centre in India and the second largest city in the fast-developing State of Bihar... a city where industry is not merely a source of livelihood but a way of life.



*A view of the  
Tata Steel Works  
in 1911*

**JAMSHEDPUR** THE STEEL CITY

**T**HE most impressive feature of a Manipuri dance is not the foot-work or even the colourful costume. It is the music produced on the drum that creates the proper atmosphere. Take away the drum, the dance loses half of its exotic charm.

It is played on all festive occasions. Though it resembles the Mridanga used in other parts of the country, the Manipuri drum is made of wood

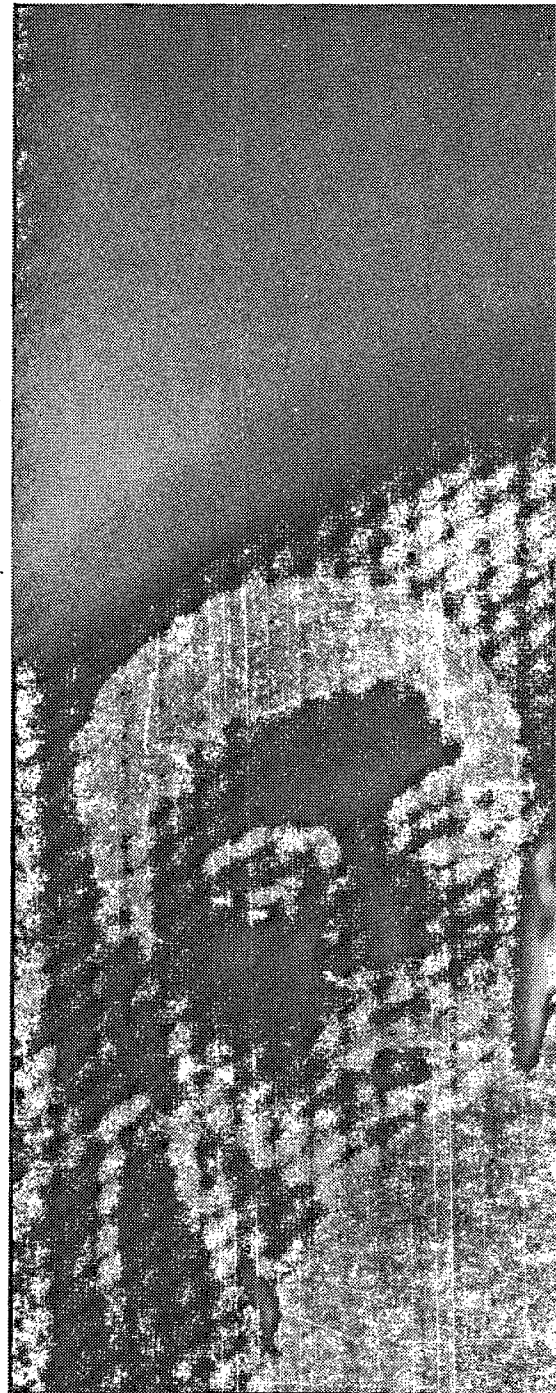


PRIDE  
OF PLACE

**Drums**  
**of**  
**Manipur**

and is smaller in size. Both the leather-discs are fully covered by a layer of paste made of iron dust and rice. When struck by hands it produces a deeper and more vibrating sound than other Mridangas.

The Manipuri drum is not only an accompaniment but the source of Manipuri dance, particularly Ras Leela and Laipou Chonga. To give expression to his feeling of joy the drummer dances to the rhythmic 'bols' produced by his deft fingers, combining a rare grace of movement and gay abandon. A good durable drum made of jackfruit wood costs Rs. 100 to Rs. 150.



# YOJANA



MARCH 4, 1962  
PHALGUNA 13, 1883  
VOL. VI No. 4

## TRAINING OF CRAFTSMEN

JOURNAL PUBLISHED ON BEHALF OF THE PLANNING COMMISSION

SPECIAL  
FEATURE

25 pP.

# TAKIN

## Through Craft Training, an Assured Job in a Growing Nation

A shrewd observer of the Indian scene once remarked that what our economy needs is people of the sergeant-class. We—in industry as well as in agriculture—have generals and colonels and captains on the one hand, and sepoy on the other. But we require more sergeants who will drill the men, keep the equipment in shining order and add to efficiency.

Engineers stand in the same relation to craftsmen as captains to sergeants. Engineers and technologists are being trained in increasing numbers by the polytechnics, the engineering colleges and the institutes of higher technology.

To produce the sergeants for industry is the main aim of the various training programmes that the Government and the different industries have.

Now, with the aid of the Apprentices Act (see page 8) the different training programmes are to be coordinated into a national scheme.

This scheme is required for three main reasons:

- (1) Because our industries are growing at a rapid pace and going to be diversified still further (indeed the Third Plan requires 13 lakh craftsmen);
- (2) Because productivity—that is, output per man, per machine and per unit of capital—must increase; and
- (3) Because we have a whale of an unemployment problem which must be solved.

Please read on.

### *Why Apprenticeship Programme Is Vital*

Photographs by  
T. S. NAGARAJAN



Sardar Dalip Singh, instructor at the Arab-ki-Sarai I.T.I., New Delhi, gives first lessons in carpentry to Gurbachan Singh, son of a Gurudwara 'granthi'.

## Massive Drive to Improve Skills

In the last issue of *Yojana*, speaking of the National Employment Service, we explained how the key to employment lay in increasing one's employability. While secondary education in itself is good and desirable, to be trained for a specific trade is even better.

Apart from the lakhs of unskilled labourers who look out for jobs, we have the special problem of the educated unemployed. These people must wake up to the fact that there is a great and growing demand for craftsmen. The pay of craftsmen, and chances of promotion, are much better than those of the mere matriculates. And a craftsman who has had a good general education has still better chances than one who is almost illiterate.

The main feature in this issue is therefore devoted to training, which is the true complement of employment.



Cover shows Mahesh Chand Sharma, who is training to be a welder. He is a 'matric failed,' but so what? He has a bright future.