

A MONTHLY JOURNAL

EDITOR: P. S. PILLAI, M. A.

Vol. II
No. 4

JANUARY 1952.

REPUBLIC
ISSUE

223
1.52

NO DARK SECRET
SHROUDS THIS

302
Soaring Curve

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6 Simple Reasons

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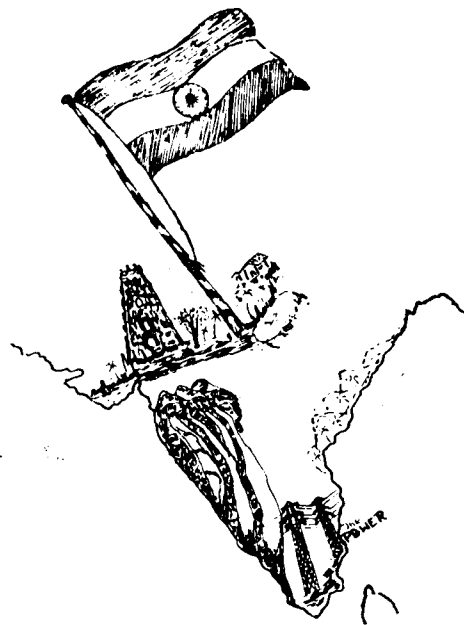
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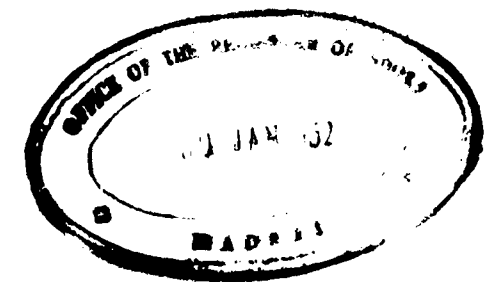
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Blessed be the Universe
Blessed be the Republic
Blessed be the People—

Jai Hind !



A Prayer

Praise be to the Power,
Oh! wonderful genie—Electric,
We are thankful for your great deeds,
Eternal, everlasting, you spread
far and near,
Really you have put us all in
comfort & joy—

On this solemn occasion remember the friendship and goodwill which we all enjoy between man and man. The power has many friends—hopes to gather more. To them all we say

“ Happy year.”

January — 1952					
Sun	6	13	20	27	
Mon	7	14	21	28	
Tue	1	8	15	22	29
Wed	2	9	16	23	30
Thu	3	10	17	24	31
Fri	4	11	18	25	
Sat	5	12	19	26	

And a Pledge

We the people of the World, do hereby solemnly resolve to secure and share among all its citizens:

Power — for comfort and convenience,

Plenty — in production and Distribution through power,

Peace — out of plenty.

MESSAGES.

P. S. Kumaraswami Raja,

Chief Minister of Madras.

MADRAS,
24—11—1951.

I am glad that the special issue of the Journal, “ The Power ” is going to be published in January 1952 as the Republic Day Number. The Journal is serving as a useful organ of the Madras Electric Trades Association. With the increasing importance of electricity as a device to promote prosperity, the Madras Electric Trades Association will have an increasingly great part to play, and with it this Journal too. I wish that the New Year 1952 shall be a year of good luck to the Journal and also to the Association.

(Sd.) P. S. Kumaraswami Raja.

M. Bhaktavatsalam,

Minister for Public Works.

MADRAS,
3—12—1951.

“ I welcome with pleasure the ushering in of “ Power ” (Republic Number). It is a good sign of the future that our people in the towns and villages are rapidly becoming electricity-minded and are realising that electricity is real power and is a potent instrument for the production of wealth. I have no doubt that your “ Power ” will give the people valuable guidance. I offer you my heart-felt felicitations.”

(Sd.) M. Bhaktavatsalam.

Kasturi Srinivasan,

Managing Editor, The Hindu.

MADRAS,
24—11—1951.

I am glad to learn that you are bringing out a special Republic Day Number of “ The Power,” containing many articles dealing with the industrial development of India. I wish the special Number in particular and the Journal in general every success.

Thanking you,

(Sd.) K. Srinivasan.

C. M. Kothari,

*President, Federation of Indian
Chambers of commerce & industry,*

MADRAS,
3—12—1951.

It is a happy idea of yours to bring forth a magazine exclusively devoted to power. Everyone knows that the present industrial age is built on power and our future depends on the successful exploitation of our natural resources. In India it is necessary to instruct the lay public on the potentialities of harnessing power to our rural economy and I congratulate you on your effort to popularise the idea of power being applied to our agriculture.

(Sd.) C. M. Kothari.



C. Rajam,

India Company Ltd.

MADRAS,

3—12—1951.

I am indeed very happy to know that "The Power" will be coming out with a Special Number on the eve of the Republic Day in January 1952. During the short span of over an year, this infant Magazine has been doing a really magnificent job and I have found the monthly issues to be of absorbing interest. In this age of electricity a Journal of this type can not only help to place before the layman the diverse uses of electricity and electrical appliances, but also, give the Electrical Trade innumerable facilities. I am sure, "power," as the mouth-piece of the Madras Electric Trades Association will grow from strength to strength and fulfil its ideals in a worthy way.

Wishing the "Power" all prosperity,

(Sd.) C. Rajam.

G. D. Naidu,

COIMBATORE,

4—12—1951.

I like to mention here that the Journal like "Power" is a mostly needed food for the hunger youngsters who are to make the country as one of the leading countries. Unfortunately in our country there are no sufficient support for such valuable Journals now. I hope hereafter our youngsters will spend their leisure time, even if it is a minute, in such journals like yours. Instead of spending their valuable time available in their young age in reading fictions and such other tasty nude and seminude magazines, the youngsters should digest the magazines like yours and absorb the knowledge spread out with great interest and efforts.

I hope the journal "Power" has got a future.

(Sd.) G. D. Naidu.

Justice A. S. P. Ayyar,

M.A., I.C.S., F.R.S.L.
Bar-At-Law.

MADRAS,

12—12—1951.

Your request for a message to your Republic number just to hand. Here it is. "The Power" is a new type of magazine needed in our young Indian Republic. Gandhiji, the Father of the Nation, opened our temples to Harijans, a feat which the Buddha could not achieve; he and Patel merged the States, and made India one unit, a feat which Asoka could not achieve; he made Delhi, Agra and Allahabad free of foreign rule which had cursed them for a thousand years, a feat which Sivaji could not achieve; he made England quit India, and gained Swaraj for us, without the loss of a single life, a feat which nobody has achieved in history so far. But he has only begun the work of gaining *Power* for the country. We have to complete his task and achieve *real power* by establishing *social, intellectual, economic and cultural* freedom without which mere *political* freedom is meaningless, and by wiping out Illiteracy, Poverty, Communalism, Corruption, Black-marketing and unashamed Careerism. "The Power" is doing some propaganda for that. So it is that I wish it success. Rightly it wants to hitch the old with the new, the bullock cart with the tractor and the dynamo, for, as the poet Thompson has sung:—

"The ev'r-new weaveth the ev'r-old,
Ever telling the never-told."

(Sd.) A. S. P. AYYAR.

Y. A. Fazalbhoj,

General Radio & Appliances Limited.

BOMBAY,

7—12—1951.

It is indeed welcome news to hear that the "Power" is bringing out its January 1952 issue as a Republic Number with special articles and features.

As Mr. G. D. Clifford, Secretary-General of the British Institution of Radio Engineers rightly stressed at a recent meeting in Bombay, the circulation of Technical Journals stands at a very low figure in our country. Indian Journals, especially those concerned with the Electrical Trade and Industry are indeed very few and it is therefore a matter of gratification that the "Power" which I believe was started just over a year back, is doing useful service by serving the interests of the Electrical Trade and Industry.

I trust that the "Power" will continue to play its role and win the admiration of its widening circle of readers.

I wish the Journal all success.

(Sd.) Y. A. FAZALBHOY.

V. V. Giri

MADRAS.

21—12—1951.

I am glad to know that "The Power" is proposing to publish a Republic Number. Power plays a very important part in these days of vast and rapid progress in every sphere and I am sure, the journal "The Power" will be of great advantage to the public. I wish the journal all success.

(Sd.) V. V. Giri.

*Sri la sri
Subramania Pandarasannadhi Ayl.*

Adhinakartha, Tiruvavadhuthurai mutt.

TIRUVAVADUTHURAI

(TANJORE DT.)

28--12--1951.

Modern world has been characterised by advancement in science at a rapid rate. Man has conquered space. Attempts to find out the speech of the people in the Mars are being made. Great heights have been conquered as is evidenced by the various expeditions to conquer the Everest and the heights of the Karakoram. Transport facilities have increased tremendously and the Aeroplane has brought distant places on the Globe very near us.

At the root of all these inventions lies, energy, especially electrical energy which has been made use of by man. Generation of electricity from water power has opened immense potentialities for the development of the country in all its aspects. It has helped the spread of Science.

Even in every day life, science has permeated. In the matter of housing comforts and food, electricity is being greatly used. If this energy is harnessed properly shortage in food can be solved. Agriculture can be improved by application of scientific appliances. Industries can be made to yield accelerated production. The economic uplift of the country can thus be realised.

It is sometimes thought that after all this development in science is only the result of contact with the West. But this is only partially true. In our ancient classics in Sanskrit and Tamil, we have instances where, proofs for scientific development are found. The Pushpakavimanam, the modern Aeroplane, is frequently mentioned in the Ramayana. Dasa-ratha is said to have ascended the heights and fought with Asuras in Heaven. Rama is said to have flown to Ayodhya in a Vimana. Only the details as to how such Vimanas could be constructed are not found in such works. In course of time, even that amount of scientific knowledge had receded to the back-ground, because, our ancients were inclined Spiritually, rather than Materially. They realised that the development of science would not be an unmixed blessing.

That view has been proved by the use to which scientific inventions have been put in the modern world. In the modern world science has placed in the hands of man the means for making life easy and comfortable. At the same time, it has given him means of destroying himself. So Humanity must know how to control the energy and the power which it had brought with it. Otherwise the world will become a prey to destruction, in a short time. Man must not yield to the temptation of using the ill-imitable forces of destruction, placed in his hands by science, for the extinction of man-kind. Instead the energy should be employed for creative purposes resulting in unlimited production of necessities of lives, so that Humanity will get plenty and live at peace. Thus a right use of the inventions in Science will lead to a better social and economic order of Society in the world and the goal of a contented universe will be achieved. Only the Goddess of Knowledge must condescend to bless man with what is necessary for using science for the benefit of mankind, namely, wisdom, and create in him a keener sense of the importance of spirituality.

This journal, has as its aim, the Creation of a great stimulus in research in the field of electricity. So this will certainly conduce to the spread of knowledge in electricity which, tempered with wise use by mankind, will lead to the happiness of human beings.

Hence this journal deserves to be encouraged and We bless it on the occasion of the issue of the Republic Number.

தருமபுர ஆதினம்

ஸ்ரீ-ல-ஸ்ரீ சுப்பிரமணிய தேசிக ஞானசம்பந்த
பரமாசாரிய சுவாமிகள்.

தருமபுரம், மாயூரம் P.O.
28-12-'51.

ஞாலம் நிற்புகழே மிகவேண்டும் தென்

ஆலவாயில் உறையும் ஆதியே

சக்தி அருவமானது, செயலால் அறியப்படுவது. எல்லாவற்றையும் இயக்குவது. கடவுட் சக்தி இயங்காமல் இயங்கி எல்லாவற்றையும் இயக்குவது. அது சித் சக்தி எனப்படும். ஜட சக்தியை இயக்குவது சித்சக்தியே. இன்றைய விஞ்ஞான உலகில் காணப்படும் விசேஷம் எல்லாம் ஜடசக்தியின் விளைவே. ஜட சக்தியை இயக்குவது சித்சக்தியே. சித்சக்தியை தியானத்தால் அடையலாம். ஜடசக்தியை ஊன்றிப் பார்ப்பதால் அடையலாம். சுருங்கச் சொன்னால் சித் சக்தியும் ஜட சக்தியும் தியான பலன் என்பதை நாம் மறத்தலாகாது. ஜடசக்தியின் ஆற்றலைக் கொண்டு மனிதன் சுபோகங்களை அனுவிப்பது போல சித்சக்தி வினாடைய ஆற்றலை அறிவதற்கும் ஏதுவாகக் கொள்ள வேண்டும். இதிலே விஞ்ஞான மெய்ஞ்ஞானங்களின் தொடர்பு. இந்த பலர் என்னும் மலர் தயான சக்தியைப் பெருக்கி ஜடசக்தியின் உயிலாக சித்சக்தியை எய்த எமது ஆன்மார்த்த நூர்த்தியாகிய சொசலிங்கப் பெருமான் அருட் சக்தியை வேண்டுகின்றோம்.



WORLD - WIDE
JOURNAL



PUBLISHED MONTHLY



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THE POWER

Vol. II
No. 4

January, 1952

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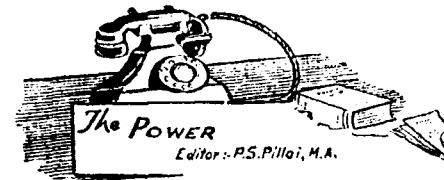
POWER

Vol. II

January, 1952

No. 4

We need peace and champion the cause of peace—



BALANCE SHEET OF 1951

January 26th, 1950 was memorable day in the age long history of India, as it marked the inauguration of the Indian Republic. Power passed over into the hands of the people. And India has now been brought into a kind of uniformity comprising of nine provinces, eight centrally administered areas, seven state unions formed by the merger of big and small states and Mysore, Kashmir and Hyderabad remaining as such. Since then she has advanced a long way sweeping aside the numerous obstacles facing a new-born nation.

In taking stock of India's achievements in 1951, in the political, economic, and industrial and trade fields, there are as usual wide gulf between expectations and achievements. In setting side by side the plus and minus items, allowance should be made for the difficulties; there may be black chapters as well as bright

ones. On the whole we may be proud of a good record to our credit.

In the political and economic fields we shall not indulge too far, for they are not our domain. India's position in international matters is marked by a heightened prestige and she has become a factor to be reckoned with. The credit goes more to the personal prestige of the Prime Minister, Pandit Nehru with all his reputation for sincerity and breadth of vision. The emergence of a single political entity out of the multitude of separate state is a tribute to the Government of India's vision and statesmanship. To-day the Indian Army, Navy and Air Force are the best integrated and most efficient organ of Government. Law and Order and its maintenance in the face of growing political and economical difficulties reflect credit on Government. Railway Transport and Posts and Telegraphs are as efficient as at any previous time in India in spite of unprecedented difficulties—wear and tear of equipment due to last war, rising costs and large volume of traffic. The Kashmir issue remains unsolved for the last four years. In finance, we have succeeded in every time a run away inflation of the kind which has occurred in other countries. It has been inherited out of the last war and it has been difficult to check it due to international causes beyond our control.

The debit side of the picture in these two fields cannot but be reckoned with. The average citizen is prepared to follow Government's

lead all the more because it is his own. But he will not like to stand the lack of a clear cut lead from his Government. Our foreign policy is described as neutrality. Can this be in practice maintained? It is a debatable point in case a war really breaks out. On the financial side the capital side should be met by fresh resources—namely, additional taxation. The main burden of taxes falls on the middle class, which is already groaning under existing ones and high cost of living. The production and development schemes of the Government on hand now take time to come into operation and thereby lessen inflation. The crux of the problem of public finance in India to-day is expenditure, and to effect savings there should be strict control and regulations on the part of the Government. The food problem of the country has now become the ghost for the Government Gods. The increased production and better procurement should be intensified to save the country from starvation and death, here and there.

After the Political Independence, the next stage of our journey was the fight against poverty, unemployment, production and distribution. This battle against the economic and industrial ills continues to be waged. Prices are rising up, our housewives know it, the indices confirm it. Production is not enough to meet the demand. The ideological confusion on the part of the Government about Industrial and Trade policies, combined with the plethora of legislative enactments during the few years and the consequent encroachment into the sphere of private enterprises appear to circumscribe the freedom and initiative of industrialists in the country. Have not private enterprises like well-established industries in textiles, sugar, paper, coal, iron and steel demonstrated that they have technique, capacity, resources and experience to deliver the goods? Yes, they did. But the flow of capital for industrial investments has been affected due to Government's too much interference. The curtailment of profits pro-

vides no incentive and taxation takes away a large portion of the capital that should go for replacement and rehabilitation. The day of large investments by ruling princes and business magnates is well nigh over and to-day is one of average investor who is unable to save much but who looks for safety. As regards foreign capital, incidents like Abadan and the Iranian Oil nationalisation law, the growing apprehension of world war and the wild speeches of our socialists and communists about appropriation without compensation will certainly bar the way. Labour will be serving itself best by the observance of greater regularity, discipline and meticulous care in the discharge of its duties.

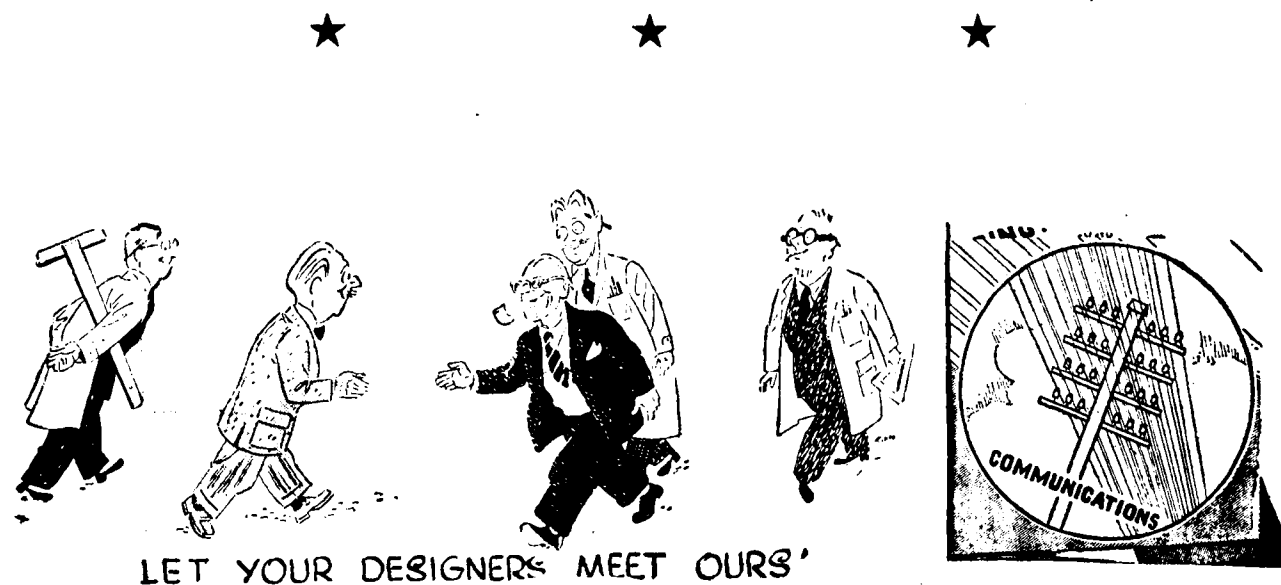
Increased industrialisation is the passport to the country's prosperity; by it the general wealth of the country and the standard of living are raised. The immense materials and resources that we have at our command must be harnessed for large scale and small scale industries. Towards the end of the session last year the present Indian Parliament adopted the report of the Planning Commission which describes a plan for the nation's development under the auspices of the Government. Space forbids to enter into its elaborate details. In short the five year plan leaves the development of industries in the private enterprise, but the state will control, regulate and direct. The Planning Commission specially recommended the enactment of the Industries (Development and Regulation) Bill which was passed. The different states are already implementing plans of their own as more or less, mere continuation of the National Plan—Irrigation and Power development with special emphasis on rural electrification looming large in the implementation of such plans. Regarding Madras, the National plan envisages an expenditure by the state to the extent of Rs. 137/-crores in 5 years, of which the Central Government's assistance will be about Rs. 30/-Crores. Inter alia, the Thungabhadra multipurpose project, the Bhavani and

Malampuzha irrigation projects, the Machkund and Moyar hydro-electric projects and the Madras thermal plant extension schemes are some of the major items of this programme now under progress. They are expected to be completed within 2 years and to bring under irrigation about one million acres of additional land and also double the power generated by the state.

The last year's chart in Trade and Industry was on the ascent with the scope of improvement based on suggestions pointed above. About forty important industries including Coal, Steel, Cement, Paper, Diesel Engines, Electric Motors, Electric Transformers, Machine tools, have registered an upward trend in production in 1951. For example production in diesel engines have increased in the first six months of the year under review to 3327 as against 1909 during the same period in 1950; in electric motors to 66.9 thousands H.P. as against 35.09 thousands H.P.; in electric transformers to 99.3 thousand K.W. as against

109.1 thousands; in belting 326 tons as against 255 tons; and in machine tools 23.1 lakhs of rupees as against 12.8 lakhs. The position happens to be reverse, for example, in electric lamps due of failure of gas supply, Bare copper conductor due to shortage of imported electrolytic Copper.

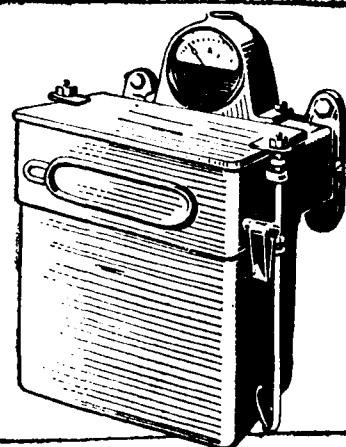
The great family of peoples enjoying equal rights, political, economical and cultural are at the moment facing the free general elections in the country. Some new people combined with the old will govern us. But the elector who is in the majority of cases ill-informed, should realise that it is his or her duty to elect strong, independent, capable men and administrators to help the country, to lead the country wise and well — legislators who go slow with their imitation welfare schemes and who will stress first on industrialisation as the fountain source of wealth. It is up to them to choose their representative men and women who will prove worthy of the constitution they are to work, and worthy of the great cause they are to serve.



LET YOUR DESIGNERS MEET OURS'

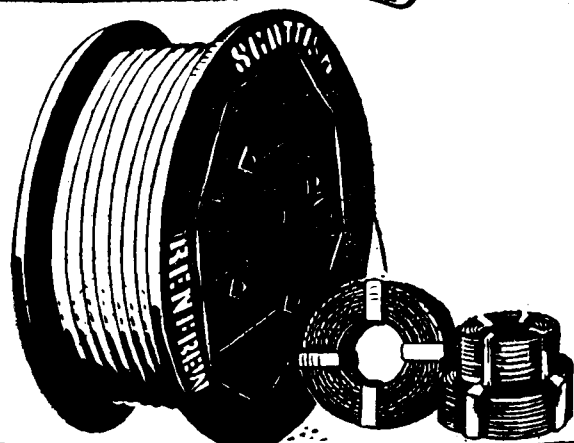
BROWN BOVERI

STARTERS FOR
MOTORS



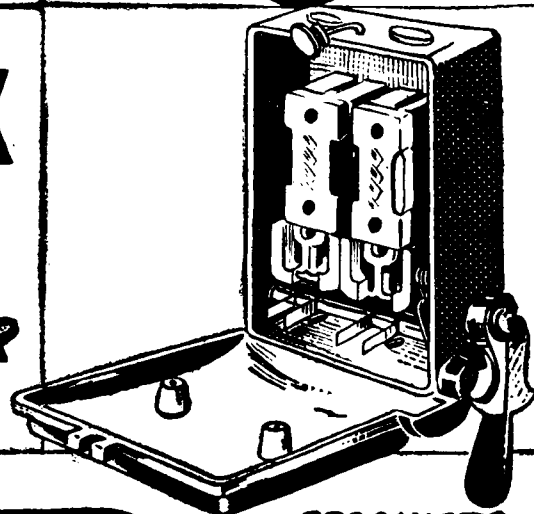
SCOTTISH CABLES

UNDERGROUND.
POWER CABLES



SIMPLEX

IRON CLAD
SWITCH GEAR



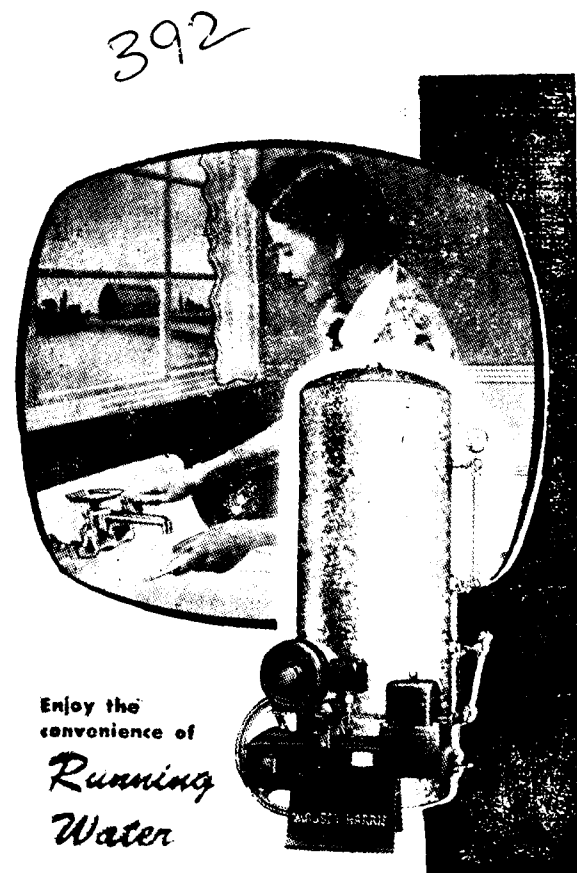
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Picture Studies—2

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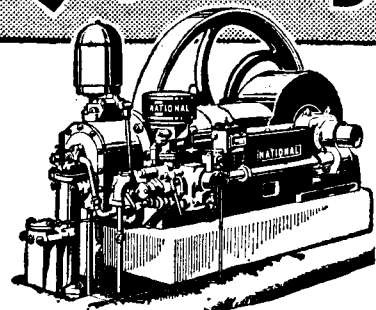


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Special Article--I

Nationalisation of Industry

BY

MR. S. V. GANAPATHI. A.M.I.E.E.

This is an oft debated subject which claims as many adherents to speak in its favour as against it and both sections have arguments in support of their cause. This subject is not only debated and discussed in this country but the world over and as is often the case, nothing conclusive is arrived at. The reason for this is quite apparent as each section argues from a different standpoint and would not appreciate the other point of view. Anyhow let us examine the question in a dispassionate manner.

In the first place, we have to admit that the question cannot be tackled on an all-world basis, as no two countries are alike in development politically, economically or otherwise and no two of them have like problems. Every factor that plays a part in the organisation and development of industries, such as the capital market, labour market both mental and manual, the type of people having enterprise, the character of the Government and so forth, differs widely from country to country, so that it would be absurd to discuss the question except with reference to a particular country and its industrial advancement. What may be good in Russia or U.S.A. would not be good enough for India. Let us therefore confine our attention to our own country.

The next point to be settled, before taking up the subject for discussion, is with regard to the class of industries to be considered. We certainly have no interest in organising and establishing every kind of industry that is established in some part of the world or other. Our attention has largely to be confined, if we are wise, to industries utilising the raw materials available in this country. That would narrow down the problem to the consideration

of the most fruitful industries. We leave out of account such industries as have a strategic value, as also those which are necessitated by threat of war, and which cannot therefore form part of the subject under discussion. The available raw materials then would form the basis for determining which are the industries to be established at all in this country. Having fixed up the type and magnitude of the industries to be promoted we shall next have to consider with regard to each industry whether nationalisation or private enterprise would be better in the larger interests of the country. No one would deny that certain industries can be initiated only by the state and that there are others which private enterprise alone can tackle. Industries requiring large capital investments and which are slow in yielding profits, can be tackled by the states only. Competitive goods requiring enterprise and salesmanship could be tackled by private enterprise alone; the state by its very nature is ill-equipped and unsuited for such industries. So then certain industries by their very nature more or less determine who would be most competent to initiate them.

Let us now consider what factors brought about the interference of the State industrial enterprises in competition with private individual or corporate bodies. Till recent times private enterprise had the fullest freedom and the idea of a State interesting itself in industrial or commercial enterprises was unthinkable. The state would have looked down upon such a proposal; it would have been considered too demeaning for the state to engage itself in such pursuits. How has this change in idea been brought about? By private enterprise having tried to appropriate all the profits to

itself. It did not attempt to share the profits equitably with others. If the interests of those, who had in some measure contributed to bring about those profits, had equally well been kept in mind, then there would have been no change in idea. Kings abused their powers and position and were replaced by an oligarchy and this oligarchy by a similar abuse made room for a democracy. We are now in the period of democracy abusing its powers to make way for mob rule. Individual enterprise and then corporate enterprise all went the same way, namely, exploiting the masses for the benefit of a few.

But if the masses had been adequately fed, clothed and housed, no change in outlook would have arisen. What the private enterprise tried to deny to its fellow workers was brought about by world events. The growing poverty of the masses, the march of events in the outside world, the expanding means of communication, the spread of education, and above all the flaunting of the wealth by the rich before the ill-fed masses, inevitably contributed to a deep agitation in the consciousness of the masses. And on the part of the State it was becoming more difficult to govern. As if in synchronism the governing of the state had come into the hands of demagogues and they could retain their places only by making a show of attending to the needs of the masses. State interference had become a necessity both to protect the masses from being exploited by the more fortunate few and to keep itself in power. To put the matter briefly, world events brought about a welcome change in relieving the suffering of the masses and abuse of its place of vantage by private enterprise accelerated the process.

Let us next consider what the present state of industrial management in our country

is. In quite a large number of corporate enterprises, both industrial and commercial, opportunists are in control rather than the industrially minded people. People with great push and some knowledge of company promotion have acquired control of many an industrial enterprise. And industrially minded people have neither the push nor have they the temperament to promote such enterprises. The result is that most industries are mismanaged and if some have shown successful records they are in spite of them.

Then again every private enterprise now looks to Government aid in some shape or other. Government's participation in the capital, Government's patronage, Government's help in giving protection by imposing heavy duties on imported goods and removing all duties on imported raw materials and component parts and even more is expected. Where does the private enterprise come in under these conditions? But such a state of affairs is noticeable even in highly industrialised countries. The reason is that times have changed considerably in the last 50 years. Even joint-stock enterprise is proving to be incapable of running many industries. Enterprises have to be on the national level if they have to survive. That is the tendency of the time all the world over.

So nationalisation of all large scale industries seems to be inevitable. However much we may cry aloud and protest and do what we like, we cannot stem the tide. What needs careful thought is how best to manage such enterprises. Governments cannot run them efficiently. What is required of those in the conduct of such enterprises is "common good" and not self-advancement. If everyone worked for the common good, there would be no problems in the world.



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* A Mock Trial

BY

COURTESY OF HON. A. S. P. IYER

(The court assembles. There is a Full Bench of three judges, Consisting of Philosophy, Culture and Intuition, j.j., with Judge Philosophy as the President. The court is crowded with Advocates and members of the public. The usher of the court announces:—"The Judges of the Supreme Court of Time have assembled in full session". The Sergeant enters with the accused, Science, who sits down on a chair in the dock),

(Electricity is called - as a defence witness)

Defence counsel: Tell the court what you know about this accused.

Electricity: Before the accused began his activities, people were troubled with candle lights, that went out, with oil lamps and hurricane lanterns which emitted a bad smell, and country torches which set fire to thatched sheds; but after the accused began his activities, clean and beautiful electric torches and lights came into vogue. Nights were converted into days, by electric moons and people could work all through the nights for manufacturing munitions. Rocks, which could not be blasted by thousands of men, are blasted by a single electric machine. Hidden things in the human bodies which could not be seen by the most powerful eye are exhibited clearly by X-Ray. The Telegraph, the Radio, the Telephone and Television have made human lives enjoyable and pleasant and speeded up contracts and increased trade. Refrigerators have made it possible to eat fruits all through the year. Even corpses can be kept well preserved for 30 or 40 years, like Lenin's in Moscow.....

Public Prosecutor: Speaking of these "good things," have you done anything to popularise television in India?

Electricity: No.

Public Prosecutor: Why are you withholding a good thing from this great and ancient country?

Electricity: Because I am not supplied with the necessary funds.

Public Prosecutor: May I take it, then, that you are a mercenary, and not a champion of human happiness, as you pretended a while ago?

Electricity: I submit that I am not a mercenary. But I require funds just as much as you do. Before and after this accused began his operations, nothing was done for nothing.

Public Prosecutor: What about the electric tote? Do you defend it also?

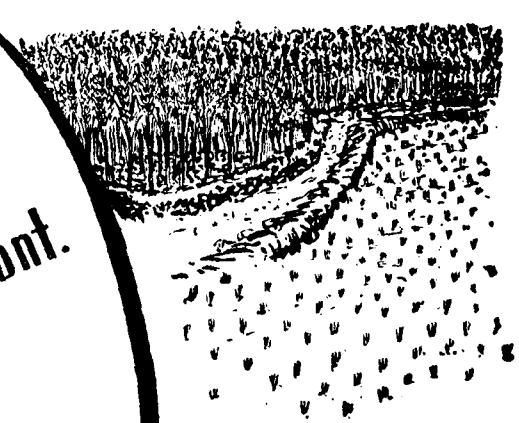
Electricity: I don't. It is people like you who defend it. In fact, by completely replacing horse power, I shall, eventually, cause horses to go out of use and put a stop to the races.

Judge Culture: Electric motor-car races will then take their place. -(Laughter)

(Electricity is discharged. The case is closed)

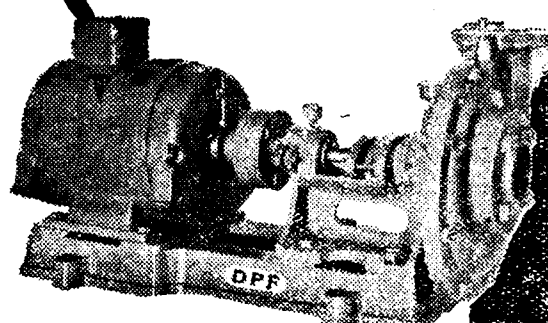
(Science is set at liberty. The court rises)
The End.

*Reproduced from "The Trial of Science for the Murder of Humanity" by Hon. Justice A. S. P. Iyer, M. A., I. C. S.



DPF PUMPS

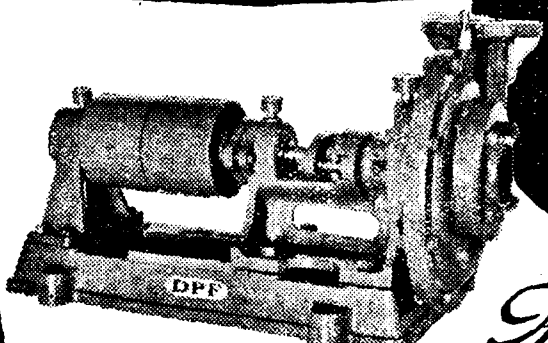
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The scientific outlook which pervades every phase of life in the world to-day is indicated by the current popular use of the phrase, "That is unscientific" in criticising any ill-thought out action or opinion.

The resulting improvement of living standards among the agricultural as well as industrial population powerfully stimulates the demand for more scientific knowledge. In this situation, science is no longer looked upon as an esoteric activity reserved for the leisure class, but as a public enterprise to be shared by all the people who raise their voice in positive demands in every walk of life. This new attitude among mankind makes the scientists masters who are to make science serve the needs of the people.

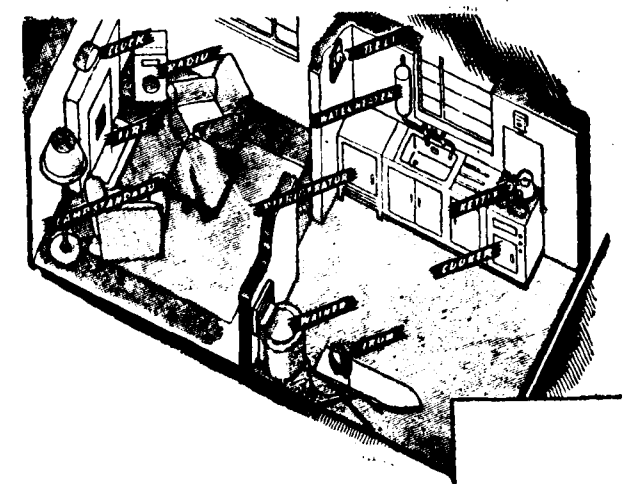
Any sound national plan for the promotion of scientific activity must function on supplementary levels of training specialists in all the science groups and of expanding the science popularisation propaganda, of running successful exhibitions of giving publicity through journalism or reorganising scientific institutions for the purpose of scientific research, and of similar other activities.

In this scientific age, many and varied are the application and romance of electricity—lighting, cooking, refrigeration, radio, television, x-ray, gardening, farming, industries, Tractor, Telephone, Telegraphy and so on.

Science serves man. But the value of this service is not inherent in science itself but is to be determined by the use to which science is put. Science draws nations into closer neighbourhood with one another in this atomic age, but alas! with no real and effective unity. And however much statesmen, scientists and scholars might try, they may not succeed unless the organised religions help us to overcome the obstacles which stand in the way of the new fellowship and for the new world order.



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CHOOSE YOUR FARM POWER

BY

CHAVALLI P. SASTRY

Bsc., Agri., M.S. (Minn),

Assoc. Mem. A.S.A.E.

(Agricultural Engineer, Jayems Engineering Co., Madras.)

Tractors and agricultural implements are now fast appearing on the scene of Indian agriculture; and Indian farmers are taking to the mechanization of agriculture, slowly but surely. With the various types of Tractors and agricultural implements available in the market, the farmers are now faced with the perplexing problem of choosing the right farm power to suit their particular needs.

Each farm is an individual problem when its power requirements and choice of equipment are being considered. Personal factor plays a very important role in the choice of power. Some agriculturists are mechanically inclined, while some others are not. Difference in type of farming and the different practices followed for the various crops are to be considered also. Size of the farm, topography and soil conditions are of minor consideration except in extreme cases. With the numerous types and styles of wheels and lug equipment available for most of the tractors, there is no longer any question concerning the adaptability of the tractor to the most adverse soil conditions. Available capital, relative cost of labour and the various kinds of available power are the other points to be considered in choosing the right power for the farm.

In selecting the proper kind of power for a farm, one should consider the various jobs, both tractive, and stationary, which are likely to develop. If a tractor of certain type is well suited to handling the majority of these jobs, it should prove to be the right and profitable

investment. Care should be taken to see that the machine is used for the maximum number of hours. In other words, the greater the number of working hours, the lower the cost per Horse-power hour of power developed. Possibilities of doing some custom work for the neighbours should always be taken into consideration, since the custom work performed during the idle period of his farm, is always a profit for one, and helps in using the maximum power developed at the lowest cost per H.P.—Hour. The purchase of a tractor always means a reduction in the manual requirements of the farm, since the tractor and implement can be operated and controlled by one man. The livestock can be disposed off and the amount received from the sale contributes to the initial cost of the tractor and implements. The use of a tractor permits an increase in the size of the farm, as the tractor can perform more work in a given time with less of man labour. Tractor use often materially increases the crop yield because a better seedbed may be prepared and the crop may be planted at the proper time in the season. Tractor use also means that if the operator is incapable of handling his machine, the results are far from satisfactory. This does not mean that unusual mechanical skill is necessary in order to secure good results with a tractor, but it does mean that one man who likes machinery will frequently have greater success with a tractor than another who is not so inclined to it.

Perhaps, the first consideration in selecting an agricultural machine is its adaptability.

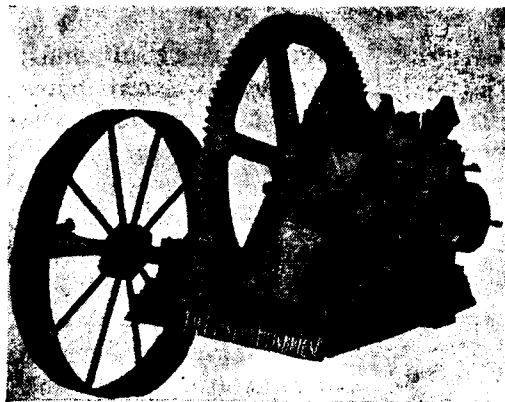
The machine should be able to do the desired work successfully, under the working conditions. Adaptability is proved only by trial, and in case of untried machine, should be a feature of the purchase agreement; because, agricultural conditions, soils and crops vary so much that a machine found to be successful under one condition may completely fail in another.

The size of the machine, type, initial cost shall all be considered in determining the suitability of any machine. The machine should be mechanically efficient, save money and improve the character of labour. In addition to the efficient use of good materials in an agricultural machine, due provision must be made for the adjustment and replacement of all wearing parts. The interchangeability of all parts is essential.

Many manufacturers take pride to see their products give complete satisfaction and such a policy ought to be valued highly by the purchaser of any agricultural machine. Manu-

facturers are generally careful to see their products are marked with emblems of trademarks. Thus certain brands have become the bona fide evidence of merit. Although reliability indicates the resources of the manufacturers, there are many small concerns who give their clients excellent service. The agricultural equipment dealer is in a position to give valuable service to purchaser of the agricultural machine, by instructing in operation, supplying spare parts, repairing and overhauling machines. The success of some machines in certain localities is due to almost wholly to the dealer in giving the right service in getting the machine started, while in some localities the machine fails due to lack of service.

The ease of operation, of repair and adjustment should be considered in the selection of an agricultural machine; and, lastly, no small consideration in the purchase of a machine is its appearance, for it has been established that there is a very definite relationship between pride of ownership, workmanship and appearance.



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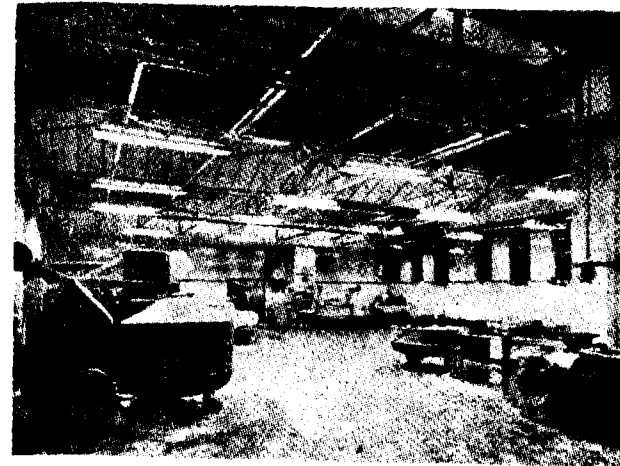
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Picture Studies—3



Light & Life

"Lead, kindly Light, amidst the encircling gloom
Lead Thou me on;

The night is dark and I am far from home,
Lead thou me on;

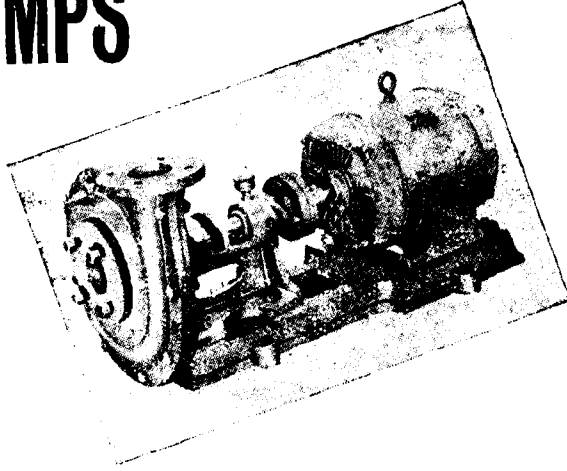
Keep Thou my feet, I do not ask to see

The distant scene; one step enough for me."

—Newman.



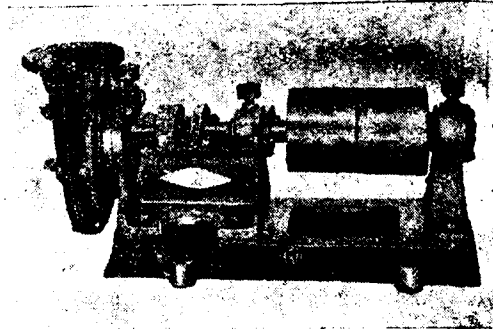
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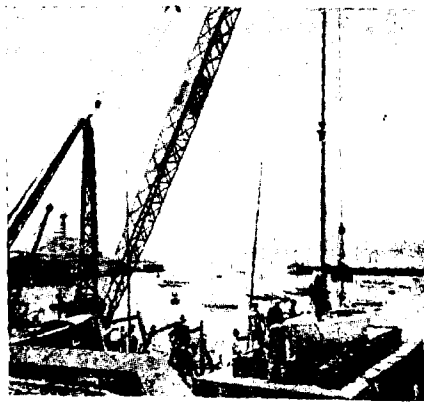
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Pastimes in Pictures— I



The Child is the father of the Man
—Wordsworth

Trade Winds



India may claim to have played its part, though a passive one, in the making of the Commercial, Trade and Industrial Revolution. Beginning from the end of the 15th century, India with its spices, its variety of precious stones and perfumes and fragrant woods, was the goal of the great voyages of exploration and discovery. Christopher Columbus was tempted and inspired in 1491, due to the more convenient water route to India. But Vasco de Gama did the voyage in 1498.

But history invested India with the gentle irony in these great developments; for India's pre-eminent trading position and her fable wealth created the weapon for her own destruction. It brought the East India Company to the land, who sought the expansion of the Indian trade along with the political conquest.

The period of 150 years, between the death of Akbar in 1609 and battle of Plassey in 1757, saw the land marks of the Commercial Revolution. The decisive turns both in politics and commerce had been made. After the battle of Plassey, the trade of India went completely out of Eastern hands. Trade was completely at the mercy of British shipping and Clive in Bengal could dictate terms instead of asking for favours. As the British flag extended its domain, India became increasingly its creature. The commercial revolution was more destructive than the industrial revolution which followed it.

Trade in India did follow the flag. There were records to prove that decline and fall of

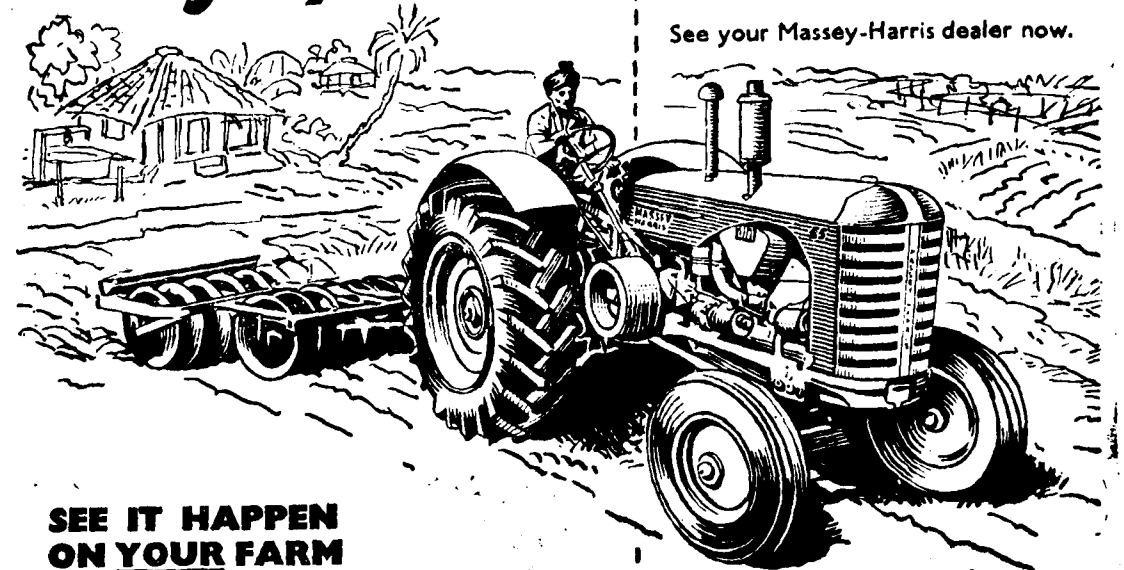
Indian Trade in the Commercial Revolution was more due to the weakness of the East than the misdeeds of the West. In any event, it must be admitted that the increased circulation and systematisation of ideas promoted by trade and travel should not be lost sight of. And India is now firmly a part of a world Economic, Trade and Political systems.

Indian productivity since 1947 has not shown any significant decline though it is still below pre-war. The stagnation of Indian industry except in Electric power Production cries out for explanation, which lies in shortage of raw materials, structure of Indian Industry, absence of economics of large scale, per capita out-put misleading, dearth of men and machines, inflation and wages. The remedy lies in a way in rationalisation. The alternative is suggested to be massive investment from abroad.

There is one 'But' to this fallacy. Let it be known that India attained freedom 4 years ago; but the key branches of her economy are still in the tight grip of British, American and other foreign capitalists who own or control 97% of Indian Oil Industry, 93% of her Match Industry, 87% of her Jute Industry, 86% of her Tea Industry, 73% of her Ore Mining Industry, 62% of her Coal Industry, 54% of Rubber Producing and Distributing Industry and 20% of her Cotton Industry. Truman's celebrated point-4 programme of 'Technical Aid' to under-developed countries is merely a means and weapon to enslave India and the chief channel of American penetration is the International Bank for Reconstruction and Development which is a Wall Street affiliation in disguise. And the development of India's industry is hampered by the denial of machinery and equipment of raw materials being exported and foreign manufactured goods being imported.

The present trend of trade indicates a disturbing level due to many factors beyond our control. The *prima facie* impression is that it has become more difficult to sell and more difficult also to buy — a conclusion which our experts to the hard and soft currency areas seem to confirm. Above all, our destiny is being moulded by events elsewhere.

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Facts & Figures

The worry of an editor—the impression in the popular mind that an editor is an all knowing Person capable of helping people in every way.

The atomic energy has a great future, however distant, as a source of Power for civil use as well as for industrial use.

Britain has the highest daily newspaper circulation with 600 copies for every 1000 inhabitants. India is having only 6 copies on daily news papers per 1000 people.

The Romance of Advertising made Sir Thomas Lipton rise to fame and riches. Through the dealings in tea he became a millionaire and his name is now a household word.

India which had about 75 tractors in use in 1938 has as many as 7500 tractors in 1948.

Electricity has given the doctor a new arm against the ills of humanity by way of violet-ray treatment etc.

The tallest man in the world is Ted Evans (Surrey) and is of height 9 feet 3½ inches. He is only 26 and is still growing.

Stalin seems to be the only complete genius living to-day well versed in the fields of labour, economy, government, law, history, trade, finance, credit, transport, industry, agriculture, painting, music, journalism etc.

The Himalayan Gods wanted electricity and the electrification of Badrinath Temple at a height of 12,000 in the Himalayas was completed.

The judge is the speaking law but the law is a silent judge.

The world's champion cow—a United States Holstein cow—produces daily an average of 44 quarts (app^{ly} 44 seers).

The longest railway bridge in the world is 2½ miles in length—in Nyasaland (Africa.)

The first man to direct thought to the use of electricity for communications was Roger Bacon in 1257 and his reward was he was put in jail for 20 years for dealing in black magic.

If ever a man has grown to his office, it is President Truman of America.

Your vote for whom?

(1) The age of electricity. (2) The Atomic Age.

(3) The age of rockets. (4) The age of jet propulsion.

in the present pageant of power progress.

Malik & Mc. Mohan

M. Malik: Oh, yes. You are the atomic expert.

Mc. Mahon: Yes, that is right

M. Malik: You are the one who wants to go and drop bombs on the kremlin.

Mc. Mahon: That is a lie. The American people have no interest in such things.

M. Malik: The people may not, but the Government does

For the rest, ask the Power—

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Exhaust Fans, Ventilating Units etc.	... Manufactured by Messrs. SUPERVENTS LTD., Kent.
Centrifugal Pumps and Motors	... Manufactured by Messrs. P. S. G. & SONS' CHARITY INDUSTRIAL INSTITUTE, Peelamedu, Coimbatore.
Switchfuse & Motor Controlgear	... Manufactured by Messrs. MIDLAND ELECTRIC MANUFACTURING CO., LTD., Birmingham.

The Centrifugal Pump

In India, Agriculture is the main industry and occupation. Food production lags far behind the country's requirements. The reason is not far to seek ; for the cultivable lands are left in the majority of cases to the vagaries of nature. Due to lack of water and irrigation facilities, about 20% of the even cultivable lands is irrigated by manual and mechanical lifts from wells and tanks.



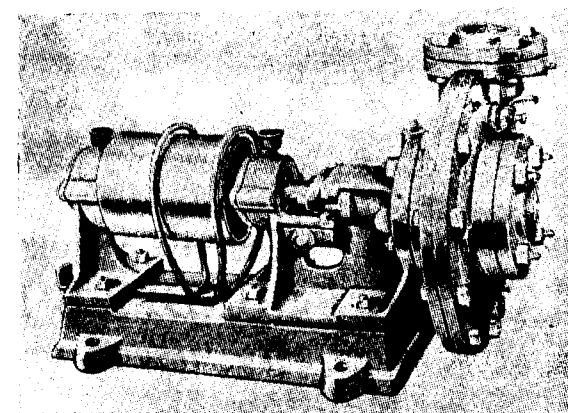
THE PUMP

One of the most interesting scientific advances in this engineering age is the Centrifugal pump. It is indeed a powerful and pioneer design, a simple piece of mechanism to pick up a continued supply of water or liquid to the required head and output for irrigation domestic and commercial uses, when coupled directly or by belt drive with motive power—electric motor or oil engine.

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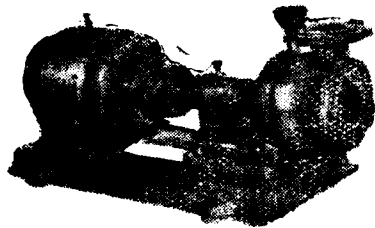
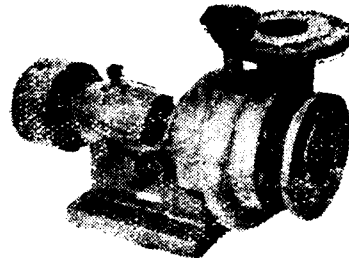
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37

JANUARY, 1952

Special Article—3**Electrical Industry & Business**

BY

C. L. MODI, B.A.

Thanks to the wise initiative of the Madras Government and the foresight of the Electricity Department, the Madras Province is the most electrically developed one in entire India. The Government's various projects which have been completed have all been a success, and those that are under contemplation or nearing completion are bound to be successful also. About twenty years ago, the main motive power running the industries was coal and steam and undoubtedly these have played a very prominent part, but with the advent of electricity it has been found that it is always economical to have the units run by electrical energy.

India is slowly but steadily industrialising herself and Madras Province has her own share, also, but looking at the enormous amount of electrical machinery, equipment and accessories that has still to be imported to meet the demands, it is clear that the initiative of building up of large scale industries in various electrical items is still lacking, though there is no reason for the Business Men to feel that such enterprises would not be successful. We have in the Province factories manufacturing pumps, motors, transformers fuse units etc. but we sadly lack factories for the manufacture of electric wires; underground cables, L.T. and H.T. switchgear, electric bulbs, fluorescent lamps and first grade measuring instruments. Even those industries mentioned above are not what one would call on a very large scale and in any case not sufficient to meet the ever growing demands of the province. Small scale industries may be alright for certain commodities, but when the electrical industries are concerned where precision is required together with large scale production the small indus-

tries cannot but be uneconomic units. The Government is, it is understood, always willing to consider the question of establishing industries in this Province and in many instances are willing to assist financially. Frankly, industries having a capital of less than Rs.20,00,000/- cannot possibly be economical as the overhead charges would be completely out of proportion to the output.

Take for example, in all the well-known electrical manufacturing concerns in the United Kingdom, you would find that they produce the materials on a mass scale—their factories are sufficiently large not only to meet their own country's demand but also demand from major countries of the world. Large scale industries have, also, a further advantage in as much as they could have their own testing laboratories, special technicians trying to improve the quality and the design of the materials from day-to-day incorporating the latest development in the electrical field—this is denied to small industries for want of capital.

In the Madras Province to start with there is an absolute necessity for having factories for the manufacture of wires, underground cables, measuring instruments and motors. The demand for these items is steadily growing and judging from the numerous schemes already in existence and under construction this demand would steadily grow. The present output of motors and other items manufactured in this Province is quite insufficient to meet even a fraction of the demand. Madras City is an ideal place for construction of various factories, it has all the conditions one could ask for railways, the harbour, cheap electricity labour and the like, and whilst cities like

Calcutta and Bombay are humming with activities having quite a number of factories, Madras has very few factories to boast of. It is sincerely hoped that businessmen in this line, and the Government would both co-operate in making this Province a premier one in the manufacture of electrical machinery and other items, just as she is the leader in the hydro-electric projects.

The main need, at present, is for the factories to manufacture Iron Clad Switch and Fuse Gear including low tension oil circuit breakers. There is not a single factory in India which has undertaken the manufacture of this item on a large scale and every year literally lakhs of rupees worth of Iron Clad Switch Gear circuit breakers are imported. It is not very difficult to manufacture those items as most of them are very simple in construction and design and the only thing required is good porcelain for the manufacture of fuse units which could be easily had from places like Travancore and Mysore.

The Oil Circuit Breakers are a bit elaborate in design but here again there is nothing so very technical to present any difficulty in the manufacture.

Another item that could be easily manufactured is the Conduit Pipes and Fittings for which there is an evergrowing domestic and industrial demand. The manufacture of conduit pipes does not require very heavy investment and if a factory is started with about ten lakhs of rupees capital, it would be just able to

meet the demand of the Province, leaving, also a reasonable quantity for export. The process of manufacture of conduit pipes is very simple, it is one of continuous process of cutting of sheets, converting into strips, rolling, welding and Brazing. This item if properly manufactured could be produced at a very cheap cost, are marketed with a very reasonable amount of profit. There are several factories in Calcutta and Bombay, but apparently none in Madras.

The manufacture of fluorescent tubes is another item which should definitely find place in the Province; many lakhs of rupees worth of fluorescent tubes are imported every year in this country and for the obvious reason that they are very economic in use once installed giving as much as 200-250% more light with minimum consumption. There is also need for a fairly big electric bulbs factory. We have one already in Mysore State and another one would certainly be able to fulfil the requirements.

The factory for wires and underground cables is of necessity. There are only two major factories in this type both situated at Calcutta and which are not able to meet even a fraction of the demand of the country. One in the line would have noticed that there is always the shortage of wires after the import licence restrictions. Millions of rupees worth of wires and cables are used every year and undoubtedly, therefore, such a factory here should find a potential market for its products.



MOODS & MOVEMENTS—

The art of dancing as old as civilization, is a gift of the gods. From Bengal to Baluchistan, from Himalayas to Ceylon—in this great sub-continent, dances with their gesture, pose, rhythm, music and design of costume, have been handed over from generation to generation.

Nature and religion have been the main inspirations for dancing. They are interwoven. The musicians supply music which creates the mood and supplies the rhythm to which the dancer gives full expression. The musicians improvise on two definite bases—the Raga and Tala. The seven notes of the scale *Sa, Ri*, etc.—are said to be derived from sounds in nature; for *Sa* represents the cry of the peacock, *Ri* the cow calling to her calf etc. In the classical dance the mood is created by movements of the head, by glances and by foot rhythm and the hands are used to convey the details of the story—with refined muscular control.

There are 4 main styles of Indian classical dancing—Bharata Natya, Kathak, Kathakali and Manipuri. The first is Hindu in origin, the second is an intermingling of the Muslim and Hindu culture, the third originates from Malabar and the fourth from Manipur in Assam.

The legends of Lord Krishna of the flute and milk-maid fame give the origin for these dance themes.

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The common consumer is concerned with the utilisation and application of Electricity. This calls for the minimum knowledge and techniques. Every householder and house wife should be in a position to doctor the ordinary ailments of electrical appliances, which are generally of single phase supply before the

Electrical Engineer is called in. Every farmer and factory man should know the minimum technique of operating and rectifying the motive power which are generally of three phase supply before the Electrical Expert comes to the rescue.

Many people are deterred from the study of principles of electricity by an idea that it is something invisible, elusive, dangerous and correspondingly difficult to grapple mentally. This is far from truth, the common consumer should understand the behavior of that invisible "juice" electricity, and the safety rules along with the technical data and tables, and should be well-versed in the case and maintenance of electrical apparatus and appliances, motors and pump-sets which are used in every day life. He cannot avoid knowing it as Electricity does necessarily supplant human power.

26th January.....

On this Republic Day

We hold our land in the heart
More than the land our eyes have seen
And love the goal for which we start
More than the tale of what has been —

Picture Studies—6



COAL MINING



MARINE



CHEMICAL



FOOD AND DRINK



QUARRYING



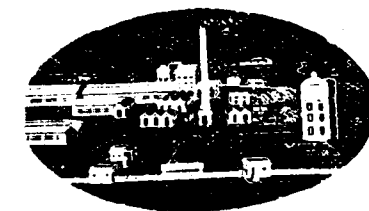
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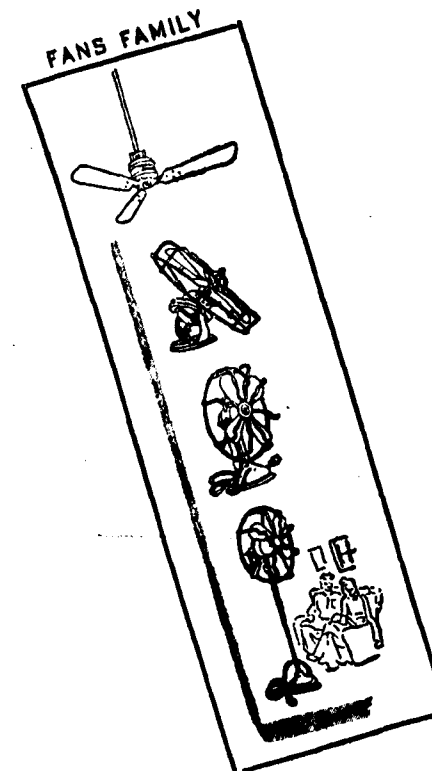
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Picture Studies—7.



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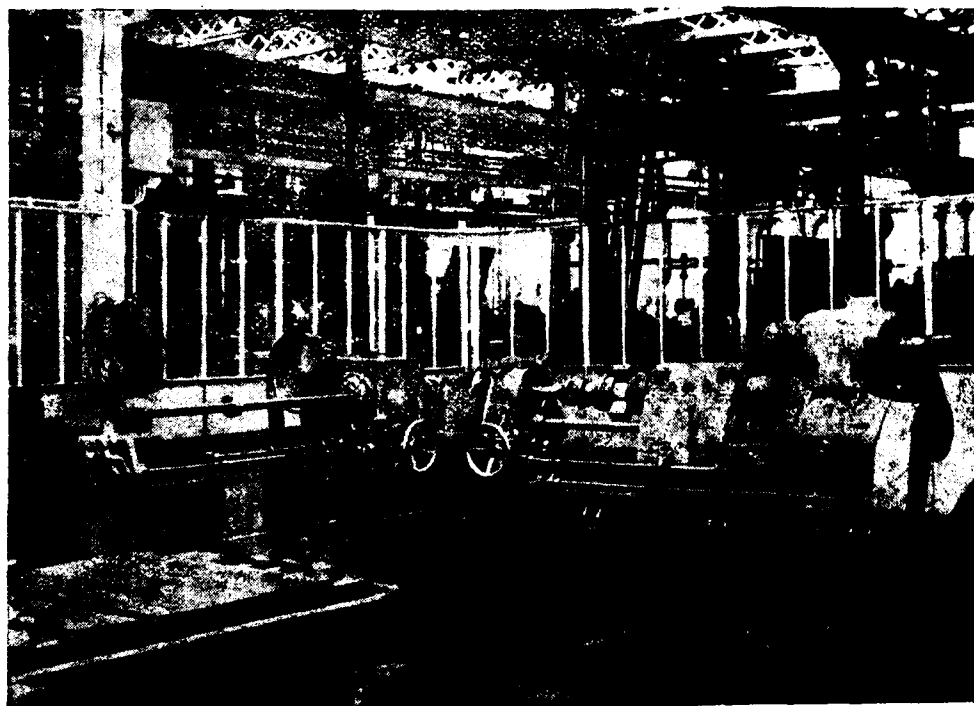
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Special Article—4

* NEW MACHINE SPEEDS ENGINE PRODUCTION.



The National Gas and Oil Engine Co., of Ashton-under-Lyne, has been producing horizontal engines for very many years and evidence of their increasing popularity is shown

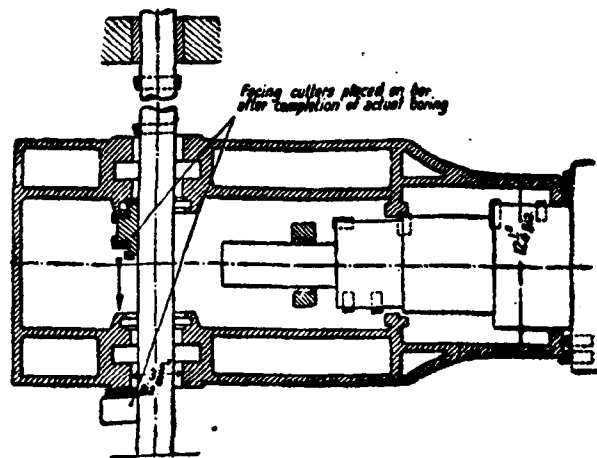


Diagram showing the tooling arrangement for machining the main bearings and cylinder liner. A combined facing and boring head is used for the latter.

by the fact that the past year has seen an almost 100 per cent increase in the number of units of this type built by the company. This increase in popularity, particularly among overseas users, who have to rely mainly on relatively unskilled maintenance personnel, is a lasting testimony to the simple and rugged construction of such units, which continue to be called for by buyers despite the availability of compact, quicker-running verticals with qualities the other engines do not match in full measure. To facilitate increased production and to simplify the machine tool layout in their works, the National Company is developing a number of special-purpose machine tools, the one which forms the subject of the present note being particularly effective in making for more economical production of horizontal engines.

The principle of the new borer (designed and built in the firm's works) is not new—that of using a machine with two heads at an angle of 90 degrees for boring the main bearings and cylinder liner housings at a single setting—but readers will be interested in the means adopted to increase the efficiency of the method. Our illustration shows the new machine, which is a modernised version of one designed at the National works some fifty years ago. This improved machine has effected considerable saving in time and operating effort in the boring of horizontal engine beds. Both parts of the bed are machined simultaneously using multi-tool bars piloted at their outer ends. Gauges for maintaining accurate relationship of the various faces are built into the machine. An air hoist is provided for handling the components and the machine controls are grouped at a single operating position. This, together with the introduction of power traverses for withdrawing the tools, has led to the elimination of all undue manual effort.

The engine beds have, prior to the boring operation, had certain faces milled and holes drilled, enabling location for boring to be taken from these. As will be seen from the illustration, simple clamps fix the bed in the boring fixture. The tools for the cylinder liner housing are mounted on a substantial bar carried in the travelling headstock. This boring bar revolves at 60 r. p.m. and two rates of feed, namely, 0.005 in. per rev. for boring and 0.002 in. per rev. for the facing operation are available. The main bearing tools are carried on a bar which is fed through a fixed headstock by a pusher-head. Spindle speeds of 160 and 120 r.p.m. are provided in this

instance. These permit a speed reduction for the facing operation which succeeds the boring; the two feed rates available are 0.010 in and 0.005 in and the tooling arrangement for all operations is shown in our line illustration.

The boring of the main bearings is a continuous operation, the spacing of the tools and the distance between the bearings being such that no halt is necessary once the operation has started. A double-ended tool roughs the bore with balanced cuts and a single-point tool is used for the finishing cut. The tools are not removed from the bar as slots through the headstock driving sleeve permit their passage. Upon completion of the boring operation the bar is returned by rapid traverse and two facing heads are attached. These permit the outer bearing face and one inner face to be machined by a forward feed, whilst a reverse feed motion machines the other inner face. The rear outer face has been milled at a previous operation. Boring of the cylinder liner housing has been proceeding simultaneously with the above operations. A single combined boring and facing head is used in this instance and for the last half-inch of travel the feed rate is reduced for machining the face against which the breech-end fits.

The machine has proved its worth for it has been in use on production for six months, machining engine beds at described at approximately three times the previous rate. This economy has not been achieved by any drastic alteration in methods, but by reduction of tool handling time, adoption of multi-tooling and attention to operating details.

* Reproduced from "Gas & Oil Power" by kind courtesy of M/s. National Gas & Oil Engine Co., Ltd., England. (Through kind permission of Mr. P. N. Menon, M/s. Best & Company Ltd.)

and working out depreciation on the investment of the bullocks. The above statement proves that the working cost of Tractor scores over the working cost of bullocks-driven. A 30 H.P. Tractor can easily plough about 8 to 10 acres of land evenly per day but a fatty pair of bullocks can plough unevenly about 1½ acres per day.

The above information will give an idea as to what an Iron Horse can do in Modern Times. Let us hope that the Farmers of our Country will soon become Tractor minded and will fall in line with Western Countries, thus bringing down the barren lands into fertile lands in order to grow more and more Food to feed the thousands of hungry people.

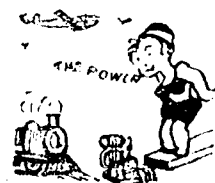


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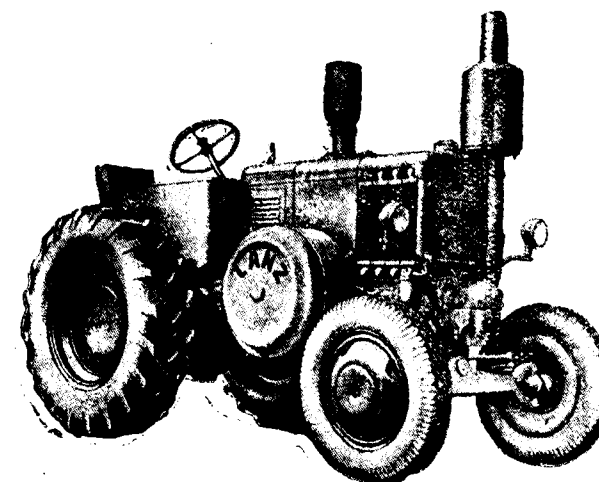
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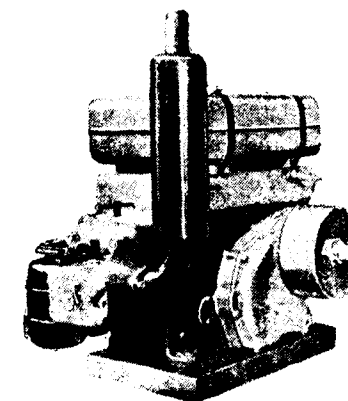
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Here are a few facts about the progress of various countries of the World to-day. Revolutionary changes in the social, economic and political structure have taken place since the last war. The United Nations hope to see established a peace which will afford to all nations the means of dwelling in safety within their own boundaries and which will afford assurance that all men and women in all the lands may live out their lives in freedom from fear and want. There does not seem to be any sign to indicate that the three great powers, Russia, America and Great Britain are seriously reducing their armed forces. The common man asks "Are we to expect another war in which the Russians and the American will shoot atom bombs at each other, which will fall half way on top of us?"

The answer lies in the supersession of National Egotism by a love of Humanity.

Production of Industry over Agriculture—Nationalisation of Coal and electricity generation industries etc. social Services. U. K.

5 years plan of the U. S. S. R.:—Housing Construction, Public Health:—Plan of electricity. Soviet Russia.

Rebuilding of national economy—help from Marshall Plan—Agrarian Reform. —Italy.
Full employment :—Decentralisation of industry—Social Services. —Australia.

Greater productive capacity—Creditor nation—half of rural population—High standard of living. —Canada.

Relief and Rehabilitation of refugees. Difficulties of new born nation—development of industries—Reforms in agriculture. —Pakistan.

Failure of monsoon—Deficiency of food—Development of Electricity—Nationalisation plans—Watch the General Elections. — India.

Schemes of internal production of food—Cement factory, Steel rolling factory, fertiliser factory etc.—better living for people. —Ceylon.



52
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Special Article—6

REVIVAL OF GERMAN STEAM POWER ENGINEERING.

Borsig A. G.—The Story of a famous enterprise

BY

SHRI K. G. KHOSLA.

[Shri K. G. Khosla and his Company—Khosla & Coy., with its Head-office at New Delhi and branches at Bombay, Calcutta and Madras—are familiar all over India. He has travelled extensively and to-day he is one of the leading importers of heavy machinery for which the Country is in dire necessity. A man of active habits, he is by temperament of friendly disposition. A perfect and polished gentleman with pleasing manners, he is not interested in politics.]



The name of BORSIG is permanently associated with world-wide reputation of German Steam Power Engineering. August Borsig, who was born in Breslau, the Capital of Silesia, now under Polish occupation, was among the first machine-builders in Germany. The works he founded has weathered many a storm of the past hundred years and underwent all the changes resulting from the development of German industry in the course of a century. A carpenter by trade, Borsig took up a job with a German foundry where he soon became the works Manager. In 1836 he founded a firm of his own and in 1838 the first steam engine left his workshop. Machines for weaving mills and sugar factories, later on steam engines, boilers and pumping plants for waterworks were on the firm's early production programme.

The first railway engine was built in 1841. This was the beginning of a unique develop-

ment which was to give this enterprising firm its reputation for years to follow. August Borsig was among the pioneers of locomotive construction. Various extensions were added to his workshops and he had a rolling mill, a hammer works and an open hearth steel works. The middle of that century saw Borsig developing into a big industrial concern and at the same time owning extensive coal fields to become self sufficient in raw materials. The locomotive factory of Borsig's was the biggest in the world at that time.

August Borsig died in 1854 and in 1878 his only son Albert died. The concern was taken over by a Board of Directors with fresh initiative. The old works were replaced later on by a highly modern works erected on the northern outskirts of the Capital. This works was for a long time Berlin's largest and most representative industrial con-

cern. The original manufacturing programme had been greatly extended and fresh enterprises were included in the manufacturing programme of the firm. Complete plants of quite a number of modern industries were constructed.

However, later on with fluctuation of fortune, it was felt necessary to merge with another prospering concern known as Rheinische Metalwarenfabrik, Dusseldorf-Germany, whose trade mark "Rheinmetall", is equally known all over the world. This merger resulted in the Rheinmetall Borsig A.G., a company with a share capital of 75 million DM. This new concern continuously displayed large scale activity and increased the production of machinery, boilers and apparatus right up to the end of the 2nd world war at which time the majority of the shares having passed into the hands of the German Government.

In March 1945, the works plant was bombed out. Unfortunately whatever machines and apparatus were still intact were speedily removed by the Russians in May 1945. The remaining members of the staff began their efforts afresh and from the rubble they put up a modern workshop again. Towards the end of 1945, the West Berlin area came under the control of French Military Government, who suddenly cancelled the production permit at the end of 1946 and a second dismantling order was given. However, very soon the second dismantling order was repealed and Borsig took a new name e.g. "Borsig Aktiengesellschaft".

The Present Works: The Borsig works at present comprises of several machine shops including assembly shop, a boiler and an apparatus shop, a modern foundry with its pattern shop and a drop-forge. The quality of Borsig products is under constant control by their own chemical, metallographic, physical and X-ray laboratories.

During the last 2 normal years previous to the beginning of the world war II, Borsig was leading in the German export of boiler outfits. They had established a tradition by the construction of the first superhigh pressure boiler plant of the world which was supplied to Berlin's power station "West" at that time the largest in Europe. They are still maintaining that tradition and at the present time the firm is occupied with the production of the fourth Benson super boiler for the power station "West" with an hourly output of 3,60,000 lbs. of steam at 2350 lbs. per sq. inch and a temperature of 500°C. Besides the Benson boilers, Borsig's are turning out boilers with a natural circulation system, as radiation, vertical tube, and return tubular types. In furnaces, the modern zonal up-draft chain grate stokers with a vapour output of as much as 1,68,000 lbs. per hour are constructed. Their production Kraemer mill furnaces for brown coal and waste hard coal fuel is a speciality. They have made coal dust furnaces with an hourly output of as much as 3,36,000 lbs. They have specialised pipe and pipe fittings department to meet these high pressure upto 2200 lbs. per square inch and high temperature of 530°C. for steam pipes and of 2,800 lbs. and 200°C. for feed lines. Of course, they are continuing the development towards higher pressure and temperature.

The steam engine construction of the firm is also traditional. Here the stationary triple high-pressure expansion engines with 1400 lbs. pressure and 6,000 HP each for the direct drive of generators may be mentioned, which were delivered by them to the State of Ohio in U.S.A. in 1929. Further development of the stationary fast steam engine is at present in hand. Borsig's also lead in the construction of steam turbines for industrial purposes as reaction, onestage, two stage and condensing turbines. Unification of boiler, pipes, fittings and

turbine construction inside one building makes it possible for Borsig to successfully manage the construction of complete industrial power plants. The marine engineering department has recently turned out a high pressure steam engine with a pressure of 700 lbs. at 400°C. Borsig is at present turning out a steam engine with exhaust turbine and a marine water tube boiler, as a complete outfit with a high thermal efficiency at a low weight per HP output.

Borsig's contribution to the field of refrigeration is also praiseworthy. In the refrigeration department they have made ammonia four cylinder compressor with a refrigeration output of 3,600,000 calories per hour at a temperature difference of minus 10 to plus 25°C—of course the biggest in the world. Borsig also make high pressure compressors

for other gases with capacities upto 5000 lbs. pressure and 300000 cubic feet per minute. Their manufacturing programme also include mammoth pumps for liquids of all descriptions including for sewage. One of the important branches of Borsig's works which though a few decades old is operating with great success. This branch produces outfits and apparatus for the chemical industries, wood impregnating outfits as well as novel machines for production and purification of animal and vegetable fats.

This is the history of an industrial enterprise that cut apart from its former glory, bombed out, dismantled, faced with constant difficulties in its desperate efforts started an enterprise that seemed to be doomed but was able by untiring efforts and loyalty of its staff in the shadow of world politics, to secure its right to live again.



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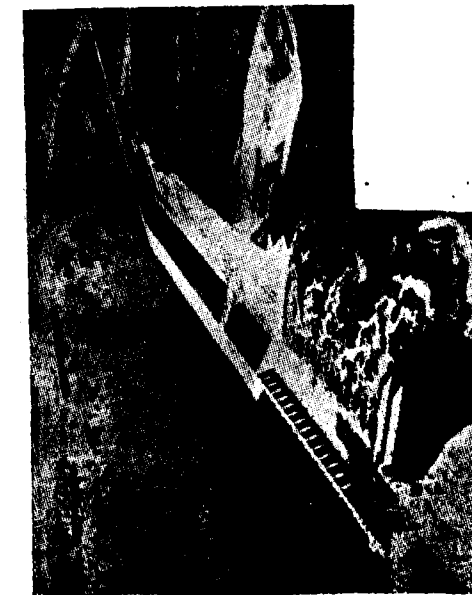
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turbine construction inside one building makes it possible for Borsig to successfully manage the construction of complete industrial power plants. The marine engineering department has recently turned out a high pressure steam engine with a pressure of 700 lbs. at 400°C. Borsig is at present turning out a steam engine with exhaust turbine and a marine water tube boiler, as a complete outfit with a high thermal efficiency at a low weight per HP output.

Borsig's contribution to the field of refrigeration is also praiseworthy. In the refrigeration department they have made ammonia four cylinder compressor with a refrigeration output of 3,600,000 calories per hour at a temperature difference of minus 10 to plus 25°C—of course the biggest in the world. Borsigs also make high pressure compressors

for other gases with capacities upto 5000 lbs. pressure and 300000 cubic feet per minute. Their manufacturing programme also include mammoth pumps for liquids of all descriptions including for sewage. One of the important branches of Borsigs works which though a few decades old is operating with great success. This branch produces outfits and apparatus for the chemical industries, wood impregnating outfits as well as novel machines for production and purification of animal and vegetable fats.

This is the history of an industrial enterprise that cut apart from its former glory, bombed out, dismantled, faced with constant difficulties in its desperate efforts started an enterprise that seemed to be doomed but was able by untiring efforts and loyalty of its staff in the shadow of world politics, to secure its right to live again.



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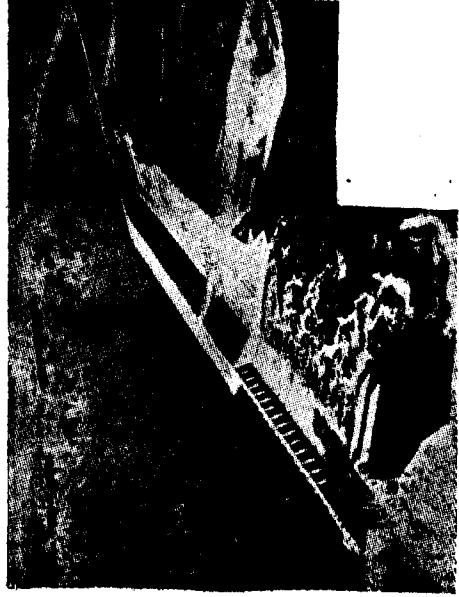
HYDRO-ELECTRIC PROJECTS

India is a land of many and major rivers—the Brahmaputra passing through Assam and Bengal, the Ganges through United Provinces, Bihar and Bengal, the Indus through Central Provinces and Orissa, the Godavari through Hyderabad and Madras, the Cauvery through Mysore and Madras.

We are at present utilising less than 6% of our river waters for irrigation and power generation. We are irrigating only 19% of the total cultivable area. We have now a total installed capacity of about 2 million kilowatts, of which the Hydro-electric power is about 1 million kilowatts.

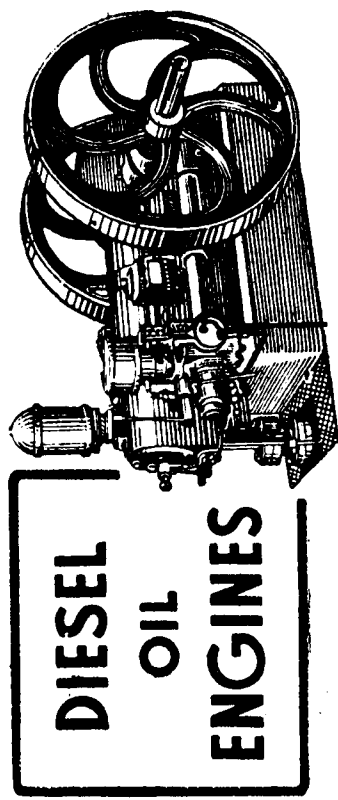
The flood flows remain to be tapped. The only hope of future extension of irrigation as well as hydro-electric power lies in storing these floods by means of dams. Cheap power will be required for irrigation and this will be made available from the schemes for the multipurpose development of our river valleys. We can develop our hydro-electric power somewhere between 40 and 60 million k.w. The total cost of river valley projects which are now under construction or investigation is estimated at Rs. 2000 crores. Our plans are to harness our rivers in the service of the nation.

India has a total area of about 912 million acres of lands and a population of about 350 millions. Rivers when properly harnessed can give plenty of food and ample supply of electric energy to the people for better living and high thinking.



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Compendium on Companies**A CENTENARY**

The Swiss Firm of **Volkart Brothers** celebrated the hundredth anniversary of its foundation on February first 1851. The firm is one of the oldest, if not the oldest, continental merchant house working in India and has contributed in no small measure to the development of direct trade between India and the European Continent. The economic changes and developments which have affected this trade in the course of the last hundred years are reflected in the history of this merchant firm. Originally founded to exchange the raw products of India against the manufactured goods of Europe, Volkart Brothers contribute today also to the industrial development of this country through specialized engineering services and the supply of capital plant, machinery and industrial raw materials.

The enterprise was started by two brothers, merchants of the town of Winterthur in Switzerland, on the same day in Bombay and in Winterthur. Direct trade between India and the Continent of Europe had only been made possible a few years earlier by the repeal of the Navigation Acts, and the two brothers were the first to load ships in continental ports for India and send them back from there with the produce of the East. Today their offices can be found in all great ports in India, Pakistan and Ceylon and in many inland centres.

Throughout its history the firm played a prominent part in the Indian cotton trade. In fact, in many cotton growing districts the buying and marketing methods of cotton can be traced back to principles and methods employed by Volkart Brothers sixty or seventy years ago. Their intimate knowledge of cotton in every phase from the field to the textile mill has been put at the disposal of government or industry on many occasions. Their inland buying organisation, supported by their own ginning and pressing factories, covers every cotton growing district of India and their foreign connections reach most cotton producing and consuming countries. For decades they have been among the leading shippers of Indian cotton.

In the course of time, Volkart Brothers grew into a truly international organisation with branches and corresponding firms in England, Pakistan, Ceylon, China, Japan, the United States, Canada, Brazil, and Germany. Markets have been found and maintained for Indian goods in every part of the world and the imports of the firm come not only from Switzerland or Europe but from the four corners of the world. The parent firm has remained throughout a private partnership, the present partners being the direct descendants of the founders. They have inherited the ideals and the enterprising spirit of the great era of Free Trade, which even in the troubled world of today can contribute to peace and prosperity through a free international exchange of goods, services, ideas and goodwill.

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Special Article—7**FUEL INJECTION EQUIPMENT**

BY

Mr. D. V. D'MONTE,*Proprietor, The Indian Engineering & Trading Co., Madras.*

Although Diesel Engines are very much in the news these days very few really understand or pay serious attention to what may be described as the "heart and soul" of the diesel —the FUEL INJECTION SYSTEM.

Yes, rather high sounding words that one is tempted to ask what this means and in what way does the diesel differ from the petrol engine. Let me explain. In the case of petrol engines, fuel is gasified in a carburettor before it is drawn into the engine cylinder during the suction stroke, together with the air necessary for combustion. In diesel engines, on the other hand, only air is drawn in during the suction stroke, whilst finely distributed fuel oil in the exact quantity required is sprayed into the engine cylinder at the end of the compression stroke.

For these operational differences, there is no need for carburettors, magnetos, sparking plugs etc., in diesel engines. All this equipment is replaced by the FUEL INJECTION SYSTEM which consists of:—

- (a) Injection nozzle and holder
- (b) Fuel pump, which may be single, multi-cylinder or a special type;
- (c) fuel lines
- (d) fuel oil filter.

INJECTOR

The fuel injection system of any diesel engine is an integral part of the engine design. To obtain maximum efficiency, it is essential that the engine is not only supplied with fuel in quantities exactly timed and proportional to the amount of work it is required to do, but

also that it should receive each charge of fuel in a condition that it can be completely consumed, without smoke in the exhaust. This briefly is the function of the injector or atomiser as some may prefer to call it.

All too true no doubt—but this involved explanation hardly matters to the Ryot who owns a diesel engine and who is only interested in his engine operating smoothly, continuously and not "letting him down". Unfortunately, as I said before, this complete indifference to the correct understanding and maintenance of the fuel injection system, is the result of breakdown, apart from the cost factor in having to replace a nozzle, pump, or component part through undue interference or absence of knowledge in cleaning and maintenance.

It is not intended to deal here with the various makes and types of fuel injection nozzles, pumps etc., fitted on diesel engines today. All that I am trying to convey is a proper appreciation of the function of the fuel injection system and consequent necessity to handle it carefully. All systems are manufactured to high precision limits and very strict specification and although the equipment as fitted by the engine manufacturer is thoroughly tested, it works under severe conditions and any falling away from the high standard, has an adverse effect on both engine performance and fuel consumption.

Periodical checks of the equipment are therefore essential and in all cases regular testing is essential. In places where a SERVICE STATION is not available or easily accessible, it is advisable for the engine owner, who has more than one diesel engine, to instal a hand-

operated nozzle tester together with a nozzle cleaning outfit. The investment more than pays for itself.

FUEL PUMP

So much for the Injector. We now come to the fuel pump, which contributes equally to the efficiency of the engine. It is essential that the fuel pump delivers a measured quantity of fuel at the correct time. The number of pump elements of the injection pump is equal to the number of cylinders supplied with fuel oil. Each pump element consists of a plunger and a cylinder which is closed on top by a spring loaded delivery valve connected with a pipe delivering fuel to the respective engine cylinder. The quantity of fuel delivered is controlled by a governing "rack" which rotates the plunger during operation in order to change fuel delivery. I am referring here to the common type of C. A. V., BOSCH, SIMMS & BRYCE pumps and not to the types found on Deutz, Yanmar, Guldner engines which are of special design. In the case of multi-cylinder pumps, fitted on transport vehicles, delivery must be balanced for all the elements with an accurate timing relationship. The fuel pump however is not subject to such severe conditions as the injection nozzle, but here again it

is necessary that periodical tests be carried out if efficiency is to be maintained.

FUEL OIL LINES

This varies according to the size of pump. Steel pipes of 6 mm X 1.5 to 6 mm X 2.5 mm are commonly used. The function is just to convey the fuel oil from the filter to the pump and to withstand the high pressure between the pump and injector.

FUEL FILTERS

The purpose of the filter is to eliminate minute particles of foreign matter which might prove detrimental to the pump and nozzles and to remove the air carried along to the fuel. The filter pack or filter element usually consist of several felt pads fitted upon each other. Filter elements should be cleaned only when the power of engines becomes lower.

This briefly is what is meant by the FUEL INJECTION SYSTEM of any diesel engine. Treat your engine carefully and make regular checks on your system. There cannot be a fatal attack of CORONARY THROMBOSIS where engines are concerned! But do your part to your engine and she will not let you down.

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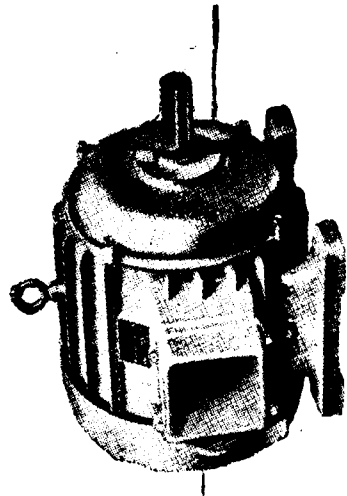
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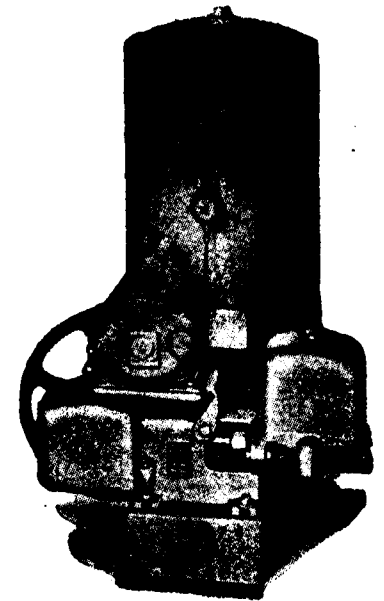
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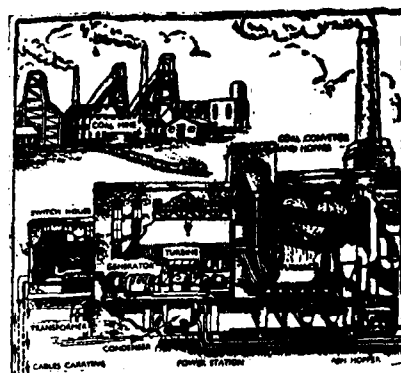
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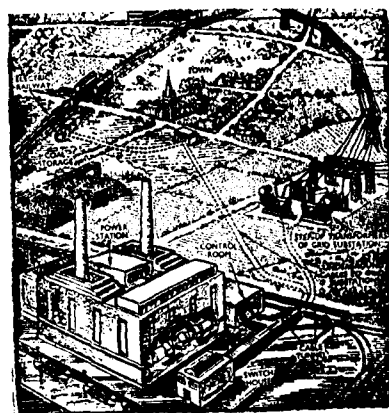
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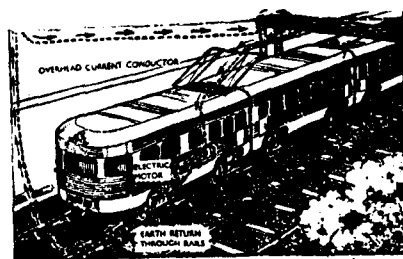
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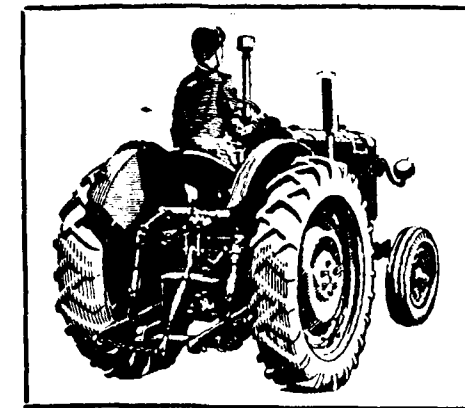
Thought for food is food for thought to-day in India. The country has to produce 4 or 5 million tons of food more than now apart from producing more cotton, jute and sugar.

Enter Tractors — for more acreage, better tillage and better yield, better sowing and greater crops and better reaping with richer harvests.

The days of "crooked stick" called the plough, though cheap to buy or easy to make, will no longer fit in the world picture. The great era of mechanization — tractorization — has already set in;

The Indian peasant is a believer in tradition; he still likes to use methods and implements favoured by his forefathers. Why change? And yet he can be receptive; when after demonstration and explanation and due reflection; he satisfies himself that modern methods and modern equipment will bring improvement in the work and the field, he must give these a fair deal.

*"They are the privileged ones — the men
who keep,
Their Tractors and Trailers upon their
farm,
For God is over every field to teach,
Those with best labour thrive in every
farm" —*



*"Strong and Sturdy, I work on all land,
To produce the food and to protect the good.
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Special Article—8

The Problem of The Nation

BY Mr. H. Narasinga Rao, B. Sc., D. Com. A. I. S. A.

These four years of Freedom in India have seen stupendous changes. Several irreconcilable factors have stood in the way of consolidated progress. Our constitution has laid the foundation of true democracy and has also provided ways and means to secure the solidarity and the national prosperity of the country; and we have pledged ourselves to all our citizens, Justice (social, economic and political) Liberty (of thought, expression, belief, faith and worship) Equality (of status and of opportunity) and Fraternity. These adorable provisions with their high ideals are to be fulfilled more through the spirit in which the constitution is worked and the persons by whom it is worked than the constitution itself.

To discuss a few aspects of this great problem. A democracy cannot be successful unless the average character of the people is sufficiently high. To attain this object, the foremost care of the State is the economic right of the common man; the Government should arrange to secure a living wage for all able bodied persons with free and appropriate choice of employment and thereby give them freedom from want. Society and Government go together, for a corrupt society can only give a corrupt Government and vice versa a corrupt Government corrupts its society. A Government is best which works best and it is men who matter more than rules and regulations. The present inequalities in the emoluments of the employees of the

Central and Provincial Governments should be removed in our free and unified country so as to eliminate the prevailing discontent and to ensure desired loyalty and required efficiency in the rank and file.

India is a land of Agriculture and she cannot afford to neglect her rural reconstruction programme and policy. The Agricultural labour should be better cared for and its disparity with the Industrial labour should be minimised to prevent migration to towns and cities. Ryots and Farmers should be taught the importance of growing food crops in preference to commercial crops in order to save the country from food shortage. Intensive cultivation of existing acreage is more important in increasing the yield than the extensive and expensive cultivation undertaken by the "Grow More Food Campaign". The cattle wealth of the country is more vital and urgent than the tractors. The long and short term policy of collective farming and mechanization of agriculture should also be taken up in increasing the yield by intensive cultivation to get over the immediate food crisis.

The attitude of industrial labour in India for the last one or two decades is another important factor which has created nervousness among the public and particularly the investing public. The standard of life of the industrial worker is very much better than that of the vast army of agricultural workers and of the homeless and diseased whose menace

to society is ever on the increase. Unfortunately the leaders of the labour movement have so far been influenced by sectional interest and have not shown sufficient appreciation of the general economic well-being of the country — that of the middle class. At a time when more production is the crying need, they have deliberately adopted go-slow tactics. The attitude of many of the industrial courts and arbitrators with their diversity of awards more often than not err on the side of confusion and chaos. In short it can be said that labour has received more than its due share.

Is capital on strike? This is the question of the hour. Yes, it is, with show of reason. The causes are not far to seek. The middle man who contributes the major capital for any industry is now really unable to save. The attitude of labour pulls down the energy and enthusiasm of the capitalists to start new industries. There is the increasing burden of

taxation on the part of the Government. To add to all these handicaps, the vague threat of nationalisation has unnerved the investment market.

The above in brief are only a few aspects of the problem facing the nation to-day. At this hour we want leaders in whom higher considerations of patriotism prevail and who are above temptations of office and power: we require men of integrity and honesty, who are prepared to sacrifice their self-interest for the cause of the country. Independence does not mean that every one has a chance to work for one's own personal advantage. As wise men and women, we should conduct ourselves well—whether as rulers or ruled. Truth alone triumphs—which is a part of the emblem of the Republic India. Then only the problem of the new born nation can be solved successfully, and we progress and prosper as a Nation.

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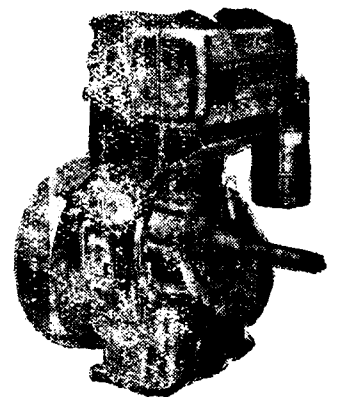
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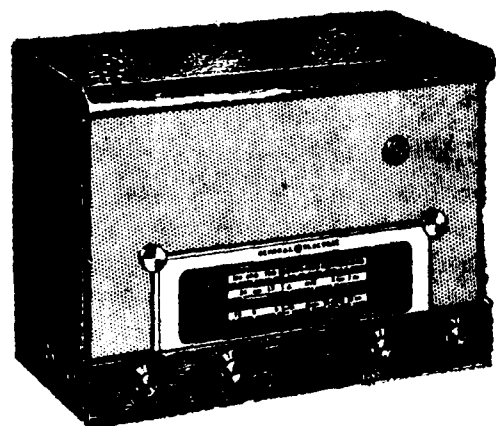
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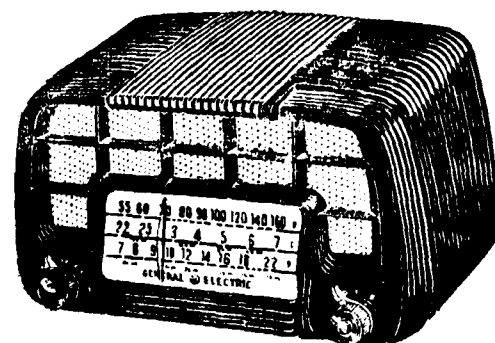


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And here my story begins. No single man could discover me. Many men found a little about me piecemeal during 2000 years and more. Many little facts were pieced together and the full meaning was discovered. The first man watched in fearful admiration, the sharp tongues of lightning lick across the sky. Another part of my beginning began when some one in china found that certain dark and heavy stones had the power of attracting and lifting pieces of iron, another part about 2500 years ago, on the shores of the Aegean Sea, a philosopher of Greece golden age, Thales, absent-mindedly stroked a piece of polished amber. He found that it then drew to itself light objects, such as lint, chaff and feathers. Centuries passed—the age of Aristotle in Greece, of Pliny in Rome, of Roger Bacon and

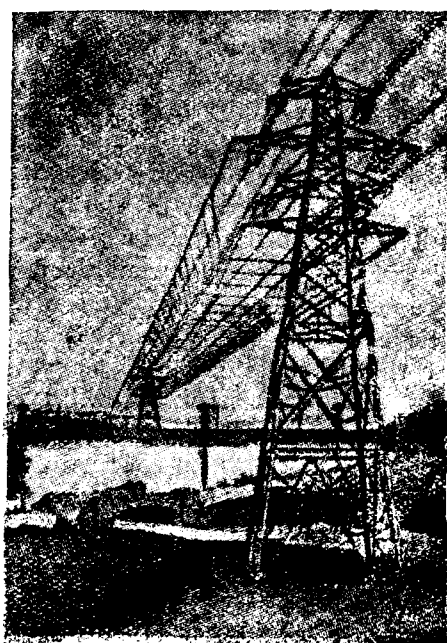
the middle ages. The Renaissance swept across Europe. Science, which had all but stood still for a millennium, began to stir, men found courage to experiment.

Many episodes then happened. In 1752, at Philadelphia, Benjamin Franklin flew a kite to drawn down the lightning of the sky to prove it akin to the electricity made by rubbing amber. Professor Galvani of Italy watched frog's legs twitch. Alessandro Volta constructed the voltaic pile, the first electric battery. And with the development of the battery, I was at last forced from static prison and I could flow wherever wires would lend me. I was then made to pass through a wire, the magnetic compass with its restless needle showed that I could produce magnetism in motion. And with this the third original actor in my story fell into line.

Such was the stage of my autobiography when the two scientists Michael Faraday in England and Joseph Henry in America performed in 1831, independently, the experiment that showed that when a piece of metal is moved in the field of influence of a magnet, an electric current is produced in the metal. And this third method of making electricity opened the way for most of the marvels which mysterious force performs to-day. These two men discovered the principle of the electric dynamo and the great generators that make electricity. The first Central station for the commercial distribution of electricity was set going in 1882 by Thomas Edison. It is more than 60 years now since the first crude electric generators began to sing their song. To-day, electric generators are turned by steam turbines, some by water power, and a few by Diesel engines.

For large and important power stations generators of about 50,000 to 75,000 K. W. appear to represent standard practice while smaller stations 30,000 K. W. sets are usually employed. The most usual voltage is of the order of 11,000 volts between terminals. There are many auxiliaries concerning power stations to generate A.C. or D.C. current or to convert the one to the other.

The next task is to transmit this power many miles distant at which the power is required for use in home, farm and factory.



native current is employed for power transmission because the voltage can be easily transformed up to high pressures so as to reduce the current and merely enable conductors of small cross-sectional area to be employed good conductivity of electricity, high mechanical strength and immunity from attack by acids in a polluted atmosphere are the requirements of conductors for over head lines. With special precautions, designs for supports, insulations, inter connections etc. the modern system of transmission of electricity is concentrated on transmission lines. Transformers then come to the aid to give the necessary voltage such as 230 volts for motors. All these are the domain of the engineer indeed. From coal to cables" is my story, in a nutshell, of generation and means of distribution.

You reach out your hand and touch a switch or a starter. I am there. I will be there and everywhere, growing strong on land, water and air, with my romance and realities which you will see as you turn page after page in this "Power."

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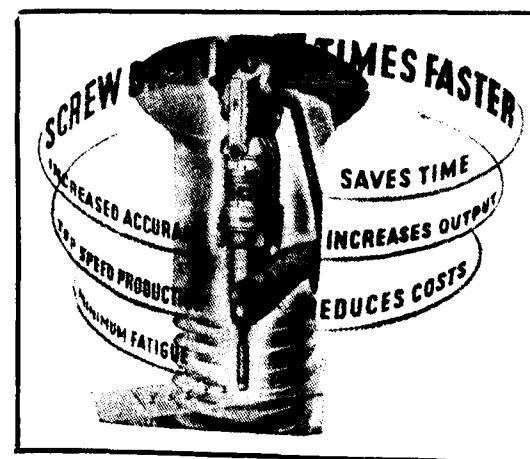
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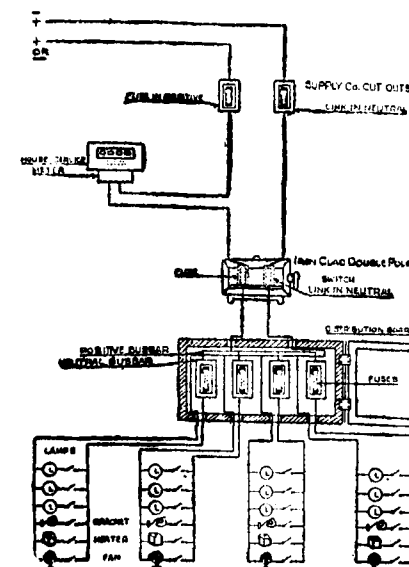
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of the day."

MEN



The man of the moment is Pundit Jawaharlal Nehru. A peer by birth from Kashmir stock, he is now 62. He is essentially western in his politics and outlook. Politics has become a religion with Nehru while Gandhi has stood for the spiritualism of politics. They have influenced each other. Some day some historian of the present times will record their comradeship which was a cardinal factor in the shaping of India's destiny.

All personality is an integrated one. Nehru is one of the bravest of men. His strength is derived from his dynamic words of agitation and motion. His outlook is scientific and modern. A warrior, general and great patriot-

a curious combination of ruthless and soft minds, loved and admired universally, free from sectarian creed, renouncing princely pleasures for country's cause, a diamond looking bright in all settings-this in short is Nehru.

Many more Buddhas, Gandhis and Nehrus keep aloft the torch of wisdom and spread love and peace throughout the world.

Recently he was elected the Congress President and the difficulties of dual leadership have been eliminated. He began to wake up the masses for the forthcoming elections which are being won by the Congress party with an easy walk over the other contesting parties.

Will Nehru become the Prime Minister again?

MATTERS

Korea had focussed the attention of the whole world ever since the bloody war began in June, 1950. The history of Korea dates back over 2000 years. She was under Japan for 35 years after 1910. At the end of World War II in 1945, the country was divided artificially by the 38th parallel and the North and the South were backed up by Russia and United States whose clash in ideologies was deep-rooted. The impact of the Korean war on Indian prices and Governments reactions were features in the Indian Business World-let alone its effect on world Trade. The conflict then continued to be full of hopes and fears. Fresh approaches again and again were made for cease-fire move through U. N. Assembly and otherwise, but in vain. The crossing and recrossing of the 38th parallel took place by both parties. General Douglas Mac Arthur who was in supreme command created a sensation by announcing his own policy to receive a truce offer from the enemy. This caused the dismissal of the General who was succeeded by Ridgway. Later Gen. George Marshall, U. S. Secretary of Defence, paid a surprise visit to the Korean front.

Cease-fire talks commenced in Kaesong to end the fighting. The important features of discussion were the setting up of demilitarised buffer zone and the formation of inspection teams to investigate conditions on either side of this neutral territory. The talks fell through, each party accusing the other of scheming to extend the war. Bombs had begun to drop off. Again negotiations for talks began and reached a satisfactory conclusion as to the proper site for further talk. But substantial progress was not visible.

The world Power conference took place at New Delhi (India) in January last year. It was the first of its kind in Asia. Thirty five nations (of the world) besides the United Nations organisation participated. About 300 engineers from abroad and 400 delegates from India attended. Nearly 180 papers were read by experts, covering on topics like Electricity, Irrigation Large Dams etc. There was also an exhibition which covered many spheres of activity. The conference emphasized the closer interests that should bind men from different parts of the world. It was a focal point for pooling together of the engineering and industrial genius of the world. And the outcome of such conferences would certainly be plenty supporting peace.

The celebration in London last year of the centenary of Reuters Agency was a world event. News Agencies like Reuters, Wolff in Germany and Havas in France made it possible for news papers to reflect the world in miniature. Julius Reuter, the founder, was a German Jew who learnt the trade in Havas in Paris and went to London to make his fortune. Reuter men were the first with the news became a tradition to the agency. In 1910, Reuter had the support of a new enterprise, the Associated Press of India which assisted in the growth of the movement of Indian Independence. In 1941 Reuters ceased to be a private agency and became a Trust which, to-day is co-operatively owned by the Press of Britain, Australia, New Zealand,

India and Ceylon. The Indian Press took over the Associated Press of India as the Press Trust of India and is exchanging news with Reuters.

The Tories in Britain have won over the Labour though with a narrow majority. Winston Churchill has formed his cabinet to rule over his country with her unsatisfactory position in the world affairs, besides domestic issues and problems. Any way he dares to tell history and his people that this is their finest hour.

All is not well with Spain. Franco and his followers are not able to peg down the cost of living due to absence of economic policy. And the Spanish masses demand positive action.

The 4th five-year plan in the Soviet Republic was completed. The production exceeds pre-war level; the number of workers in the national economy is nearly 40 millions, an increase of 7½ millions in 1940. It is clear that the nations of the West are relatively unarmed and weak while Russia and her satellites have large armies being supported by their threat of atomic weapons.

In the middle-east, Persia took the right upon herself to nationalise her oil industry and took over British oil installations in spite of several and repeated protests and appeals by Britain. The practical solution continues to be difficult in spite of the world court's decision and America's interference.

The choice of Egypt towards the East or the West is hanging fire with the proposal of the abrogation of the Anglo-Egyptian Treaty in 1936. Sudan has to decide her fate more with the help of Britain than with that of Egypt who is antagonistic towards her interests.

In open defiance of world opinion, the Malan Government of the Union of South Africa had enforced the Group Areas Act.

(Continued on page 78)

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TO LET

TO LET

Race has been separated from race. Manilal Gandhi has been fighting tooth and nail against this injustice. Alas! the U. N. is incapable of taking any effective action against this infringement of elementary human rights.

The signing of the fair and generous Japanese Peace Treaty in San Francisco by 48 nations and Japan has made the latter a sovereign and independent State among Asian nations. Notable among the classes are (1) the Allied Powers recognise the full sovereignty of the Japanese people over Japan and its territorial waters; (2) the return of the Japanese troops to their homes; and (3) Japan to make necessary reparations. The Korean war combined with the 2000 million dollar direct aid gave a tremendous impetus to Japanese industries and to-day Japan has a favourable balance of trade with most Asian countries.

In a world-wide broadcast on "International Arms Reduction" President Truman appealed to the Soviet Union to accept sweeping and detailed disarmament proposals including the ultimate prohibition of atomic weapons.

The U. S. Aid in sending American food-grains to India was a matter of great importance showing the friendly gesture of President Truman towards India.

The report of the Planning Commission appointed by the Government of India was published and later adopted by the Indian Parliament. It outlined a five-year plan of agricultural, industrial, power and irrigation developments involving a total outlay of 1739 crores of rupees. The share of the Centre and of the States are dealt with in detail and the ways and means of financing were also discussed. Emphasis was laid to maximise production in essential sectors to meet the requirements of the fast growing population, thereby securing social justice. Recommendation was laid on the continuance of private sectors of

industry, undisturbed by threats of nationalisation. On the whole it was supposed to comprise a realistic and practical approach to our economic problems based on resources and projects.

The passing of the Central surplus Budget of India, the Bill to amend the Constitution of India, the Press Bill and the Industries Amendment Bill in the Indian Parliament is worthy of note. The shelving of the Hindu Code Bill was interpreted as a political stunt.

Banking is of great concern to every citizen of this fast running world. After the passing of the Banking Companies Act of 1949, the banking in India has taken a stable shape aided by the control of the Reserve Bank. Cash and credit go hand in hand based on operations circumscribed by the credit pool at the command of the banks. The Reserve Bank's survey of the progress of Indian Banks for the year 1950 reveals the increase of bank deposits, the decline in the number of bank offices and the forging ahead of the co-operative banks to a wider use of bills of exchange. The advantages of modern banking are yet to pass to the countryside in order to stabilise the planned economy.

Many mediators including the last one Dr. Graham came and went regarding the 4 year Kashmir dispute between India and Pakistan. Meanwhile the C. A. of Jammu and Kashmir representing 3 million people was inaugurated in spite of Pakistan's protest. Both the Indian and Pakistan armies are hearing the alertness of the other. The clenched fist has, alas, ended with the assassination of Liaquat Ali Khan, the strongest of Jinnah's followers.

The Columbo Plan for the economic development of South and South East Asia, which was inaugurated, offers solution to the knotty economic problems. India requires Rs. 1840/ crores for her development schemes spread over 6 years of which Rs. 1000 crores are to be

(Continued on page 80)



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raised from internal resources and the balance of Rs. 840 Crores is what India requires from the funds of the Columbo Plan Aid.

The first step towards democracy in Nepal was taken and a new era in its history began with the peoples Government.

India had a favourable balance of Rs. 9.278 Crores in her foreign trade in the first half of 1951. The increase in the value of India's overall trade is partly attributed to the fact that many of the continental countries which were formerly classified as hard currency countries were treated this year as soft currency areas.

The first biggest and cheapest census of the Republic India took place in February, 1951, covering scores of cities, hundreds of towns, and lakhs of villages. The provisional total population of India excluding Jammu and Kashmir State is 351, 891, 624 and represents an increase of about 96 millions increase over the population of 1941. A new economic classification scheme is included in the tabulation.

SPORTS

The first Asian Games took place in Delhi last March. It was attended by 40,000 sports lovers from the 11 Asian countries. It was a fine success and justified Tagore's lines.

"Thou has brought the distant near,
And made a brother of the stranger"

The Indian Table Tennis Team has visibly improved during its recent foreign tour in England and the continent.

The Indian Badminton team led by Devinder Mohan had a successful tour in Australia and Malaya.

India gained experience in cricket against their matches with the Common Wealth team which visited the country last year. The

M.C.C. team from England is now in India, having played already two tests the first at Delhi (drawn) and the second at Bombay (drawn) and the third at Calcutta (drawn). Inspite of the Indian batting strength with Hazare, Merchant, Amarnath and others, our bowling and fielding are poor-miserably poor. Let us all wish good luck to our players.

On an educative tour, the Japanese Hockey team have been playing Test Matches in India. These Hockey Ambassadors had to learn a lot of experience in the game from proven masters our Indian world champions.

ART & PASTIMES

The Indian film industry is the second largest one in the world to-day. It consumes more than 200,000,000 feet of raw film annually, produces between 250 and 300 full length pictures and employs about 100,000 persons. More than 130 crores of rupees are invested in the industry. There are over 2000 cinema halls in the country. Either over-representation or under-presentation seems to be the common feature of the Indian Films. There are still great potentialities which remain untapped in this industry.

Art is indeed greater than artists. The adoption of heavy and clumsy technique of European painting with its scientific paraphernalia of lights and shadows render more harm than good to Indian Art and Painting. Ajanta preserves the picture of a halcyon age, where renunciation and enjoyment are perfectly attained. They have survived weather and criticism and take their place among the immortalities of human creation.

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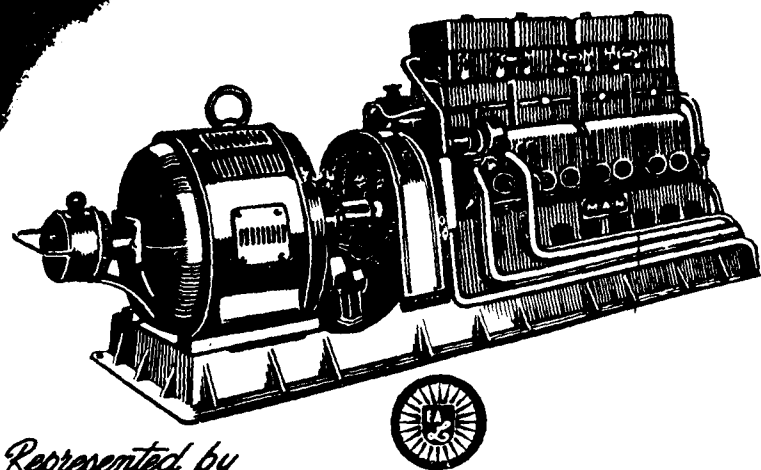
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