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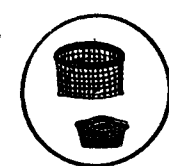
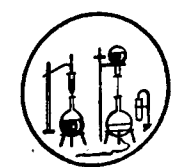
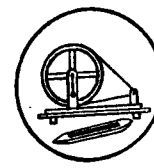
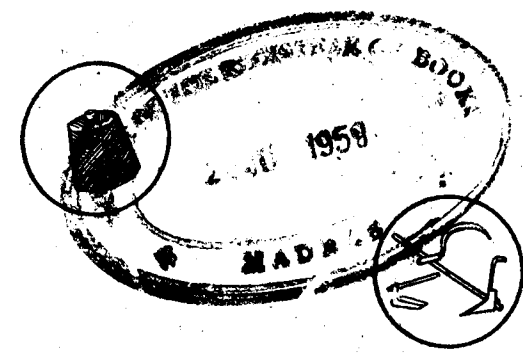
182

Small Industry

EDITOR I. S. RAO

SPECIAL SOUVENIR ISSUE

Vol. III No. 1. 12-6-1959



Encourage Small Scale Industries

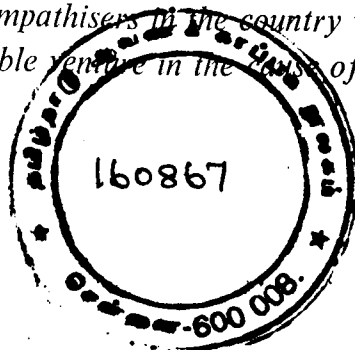
Ourselves

India is on the threshold of Industrial awakening. The Government and their Planning Bodies are rightly bestowing their attention for the rapid Industrialisation of the Country. It is up to the Public to rise up to the desired levels and initiate a drive to achieve the results anticipated. '**Smalindustry**' was started to create the necessary enlightenment in the artisans and small scale Industrialists at village and district levels and assist them to help themselves to solve the unemployment and under-employment.

Heavy Industries that help to raise the standard of living are looked after by the Government and the more enterprising Capitalists. It is the Small-Scale Industrialist that can effectively provide the minimum food for hungry common-man, the bare necessities of clothing, shelter and daily consumable goods for smooth running of life in these underprivileged classes of society. The pleasure is always in the struggle to achieve the ideal object.

'**Smalindustry**' is edited and published by a band of Small-Scale Industrialists in South India who fully realise their own humble position in the Industrial fabric of the country, but yet make bold to add one more journal to the list, their only excuse being their confidence and desire to contribute their little mite to the economic uplift of the teeming millions struggling in poverty in our country.

We sincerely hope that all Small-Scale Industrialists and their sympathisers in the country will co-operate with us and support this noble venture in the cause of the deserving public.



★

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X98.101.06
11.11.81



We want
Rs. 1000 Crores

allotted to
SMALL SCALE INDUSTRIES

in
THIRD FIVE YEAR PLAN

Rs. 20,000 each for 5 Lakhs Villages

Village-war

**Small Scale Industries Provide Opportunities
for Greater Employment**

THIRD ANNIVERSARY CELEBRATIONS SOUVENIR



182

PUBLISHED BY

The Small Scale Industries Association
15, RITCHIE STREET, MADRAS-2.

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VICE-PRESIDENT'S SECRETARIAT,
NEW DELHI

April 11, 1959

Thank you for your
letter of the 31st March, 1959.

I wish your Special
Souvenir issue to be published
in May, 1959, success.

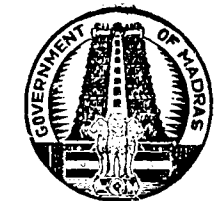
S. RADHAKRISHNAN



RAJ BHAVAN
Malabar Hill,
Bombay 6.
April 13, 1959
Caitra 22, 1881

Referring to your letter dated March 31, 1959, I am to say that the Governor sends his good wishes for the success of the special issue of the magazine 'SMALINDUSTRY' proposed to be published on the occasion of the third anniversary of the Small Scale Industries Association.

K. K. Moghe
SECRETARY
TO THE GOVERNOR, BOMBAY



FORT ST. GEORGE
MADRAS
Camp: Ootacamund,
April 28, 1959

I am very glad to note that you are bringing out a special souvenir of 'Smalindustry' in connection with the third anniversary of your Association. Small Scale Industries have an essential place in country's economy and have to be encouraged in every way. There is much scope for the development of small scale industries which is essential to meet the problem of unemployment as well as to have a large decentralised base for industrial set up.

I wish your Association all success.

K. Kamaraj



Trivandrum,
17th April 1959.

I am glad to learn from your letter of the 31st March that you are bringing out a special souvenir issue of your magazine. I hope that the publication will help the development of small scale industries.

E. M. S. Namboodiripad



FORT ST. GEORGE
MADRAS
6th April 1959

I am glad to learn that on the occasion of the Third Anniversary of your Association you are bringing out a special souvenir. I am aware of the good work that the "Small Industries" is doing. Please accept my congratulations and my best wishes for the future.

U. Krishna Rau



SIR M. VISVESVARAYA, K.C.I.E.

5, Cubbon Road,
Bangalore (1),
10th April 1959

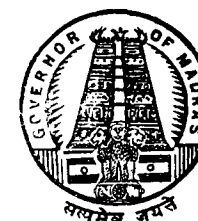
I am in receipt of your letter dated the 31st March last informing me that you propose to bring out a Special Souvenir Issue of your Magazine "Smalindustry" in May 1959.

Small-scale or minor and cottage industries will help to supplement the farmers' earnings from agriculture; worked by skilled craftsmen they can also supply many small component parts for heavy industries.

In the United States of America some of the small-scale industries are treated as part of the agricultural economy of the country.

I send my best wishes for the success of your Special Souvenir Issue.

M. Visvesvaraya



RAJ BHAVAN

Ootacamund,
April 28, 1959.

I am happy to know that a Special Souvenir Issue of the magazine "Smalindustry" will be published in May 1959 on the occasion of the Third Anniversary of the Small Scale Industries Association, Madras. The development of small scale industries is very essential not only to provide employment to a large number of people but also to raise the standard of living of our people. I trust the Special Souvenir will contain useful information for the public.

BISHNURAM MEDHI
GOVERNOR OF MADRAS



FORT ST. GEORGE
MADRAS
Dated 7 - 4 - 1959

I offer to the Small Scale Industries Association my warmest felicitations on the occasion of their third Anniversary Celebrations and I wish the function every success.

M. Bhaktavatsalam
HOME MINISTER, MADRAS.



FORT ST. GEORGE
MADRAS

April 11, 1959

I am glad to hear that the Small Scale Industries Association, Madras will be celebrating its third anniversary soon and on this occasion you are bringing out a special Souvenir Issue of your magazine 'Smalindustry'.

Our Small Scale Industries are doing very valuable work. With the large amount of wealth in this industry we have in our country, I am sure with the industrious work of organisations like you we will make a very good mark both in our country and outside.

Small Scale Industry all of us are greatly interested in and the Government are doing everything possible to help them. I wish the function and the magazine every success.

P. V. Cherian



LAW MINISTER, INDIA
2, Hastings Road,
New Delhi, 9-4-59

I am in receipt of your letter of the 31st March, 1959. I am glad to know that you are bringing out a special Souvenir issue of your magazine 'Smalindustry'. I wish your venture every success and hope that you will be able to serve the cause of Small Industries effectively.

A. K. Sen



MINISTER OF STEEL,
MINES & FUEL,
INDIA.

I am glad to learn that the Small Scale Industries Association, Madras, propose to bring out, in May 1959, a Special Souvenir issue of the magazine 'Smalindustry'. I have every reason to hope that the small scale industries will continue to play an important role in the rapid industrialisation of the country, and in creating more and more avenues of employment in a country faced with the problem of overpopulation.

I take the opportunity of sending my best wishes on this occasion of the 3rd anniversary of the Association.

New Delhi,
April 18. 1959

Swaran Singh



GOVERNMENT OF INDIA
MINISTER, COMMERCE & INDUSTRIES,
NEW DELHI

4th May, 1959.

Small industries have a vital role to play in the economic regeneration of our country particularly in areas which are industrially backward. Building up of big industries depend on a number of factors like availability of raw materials, power, water, etc. But for starting small industries, the foremost need is a spirit of enterprise. I hope an ever increasing number of small entrepreneurs will come forward to avail themselves of the numerous facilities offered by the Government to start small industrial undertakings.

I wish your journal all success.

Lal Bahadur



MINISTER OF
TRANSPORT & COMMUNICATIONS
NEW DELHI

April 9, 1959

I am glad to know that the Small Scale Industries Association, Madras, is celebrating its Third Anniversary in May, 1959. I send my good wishes to the Association on this happy occasion.

S. K. Patil
Minister for Transport & Communications.



MINISTER FOR WORKS,
HOUSING & SUPPLY,
INDIA

New Delhi
April 30, 1959
Vaisakha 10, 1881

I am glad to learn that
Small Scale Industries Association, Madras
is bringing out a special souvenir issue
of its magazine. I send my best wishes
for the success of the venture.

K. C. Reddy



MINISTER FOR LABOUR,
NEW DELHI
23rd April 1959.

There is increasing scope for
small industries in our country. The
sector of village and small industries
is not to be viewed as a static part of
our economy but rather as a progressive
and efficient decentralised sector
which is closely integrated, on the one
hand, with agriculture and, on the
other, with large-scale industry.

I am glad to know of the special
number of 'Smalindustry' coming out on
the occasion of the third anniversary of
the Small-scale Industries Association,
Madras. I send all my good wishes.

H.K.D. Tandon
Private Secretary.

It makes a sad reading in the Reserve Bank report that 14,157 co-operative societies were under liquidation at the end of June 1957 out of which only 2,081 societies were brought under liquidation during 1957—58 and the accounts of 1627 only were finally wound up. It is not wise to keep them in 'mortuary' for such long time not affording opportunity to salvage the best that could be salvaged.

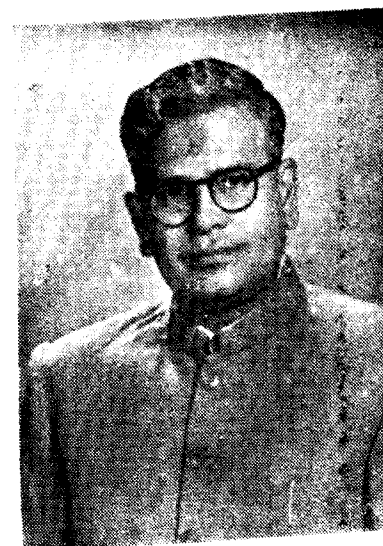
Coming to a resolution of the Congress mentioned earlier, public are not able to understand the exact meaning of a vague term 'as far as possible' added as a rider to the resolution in the form of an amendment. Where there is a will and conviction that the co-operatives are the right panacea for the ills, any policy can be put into execution, particularly, the Industrial Co-operatives. Industrial Co-operatives are primarily meant for workers at all cross sections of an Industry. The idea is that the Financier or the Capitalist is removed and the Government in the form of loans steps in the gap so that all the profits are retained in the co-operative, the affairs are managed by the co-operators and the workers get their better wages. It is a well known fact that there is a dearth for technicians and workers and they are trying to improve their careers and consequently their individual incomes to cope up with the higher costs of living, incidentally if possible to raise their standard of living also. There is nothing wrong in this ambition and the very core of contention for introducing the Socialistic Pattern of Society is also the same. The real workers who happened to train themselves in a particular trade after the first World War and struggled to eke out their livelihood, earning a pittance in the years of depression till the second world war and subsequently till the attainment of Independence and who have helped to train the present generation of young technicians and skilled workers are most hard hit. Every rupee they saved in their meagre earnings to contribute to either Insurance Policy or Provident Fund has come back to them in their old-age unemployment days of hardened currency period only as a rupee not having even one fifth of the purchasing capacity it has had. If only they had the Industrial Co-operatives in those days they could have lived comfortably helping future generations.

Industrial Estates have been formed in different metropolitan cities and mofussil centres and are also going to be increased in future. The Small Scale Industrialist is supposed to have come into existence primarily to create more employment facilities for the unemployed earning his reasonable wages himself. Every thousand rupees invested in the Small Scale Industry in the form of land, buildings, machinery etc., is expected to create employment for one man or woman. A crore of rupees invested is naturally expected to create employment for 10,000 persons. Even major industries of that magnitude are able to employ about 2000 persons. If even 1000 persons are not employed in the entire Industrial Estate, it is not a complimentary situation. The factories are given on a meagre rent which will not bring even 3% return to the Government. Machineries have been supplied at less than 6% interest on hire purchase from out of public Government funds. The working capital is provided by the State Bank of India at less than 6% interest to run the industry. Service Centres, technical experts and a qualified Administrative officer and many more facilities and amenities in the form of consumer co-operative stores etc., are provided by the Government from public funds. Wherever necessary even state-aid in some form or other is offered to Small Scale Industrialist. Where does the financier or capitalist or the proprietor come into the picture? Only entrepreneur is required. What does he expect from the industry except his fair wages for the work he has put in? Are these Industrial Estates the ideal places to start or convert the existing ones as Industrial Co-operatives for actual workers? What other possibility is required for the Government or the Congress to grasp this opportunity when they are sincerely wishing to start Industrial Co-operatives 'as far as possible'? Let us search our hearts without rancour, if we are genuine to do good to the society and uplift the distressed.

Small Scale Industries in Madras State

Hon'ble Minister for Industries and Commerce

Sri R. Venkataraman.

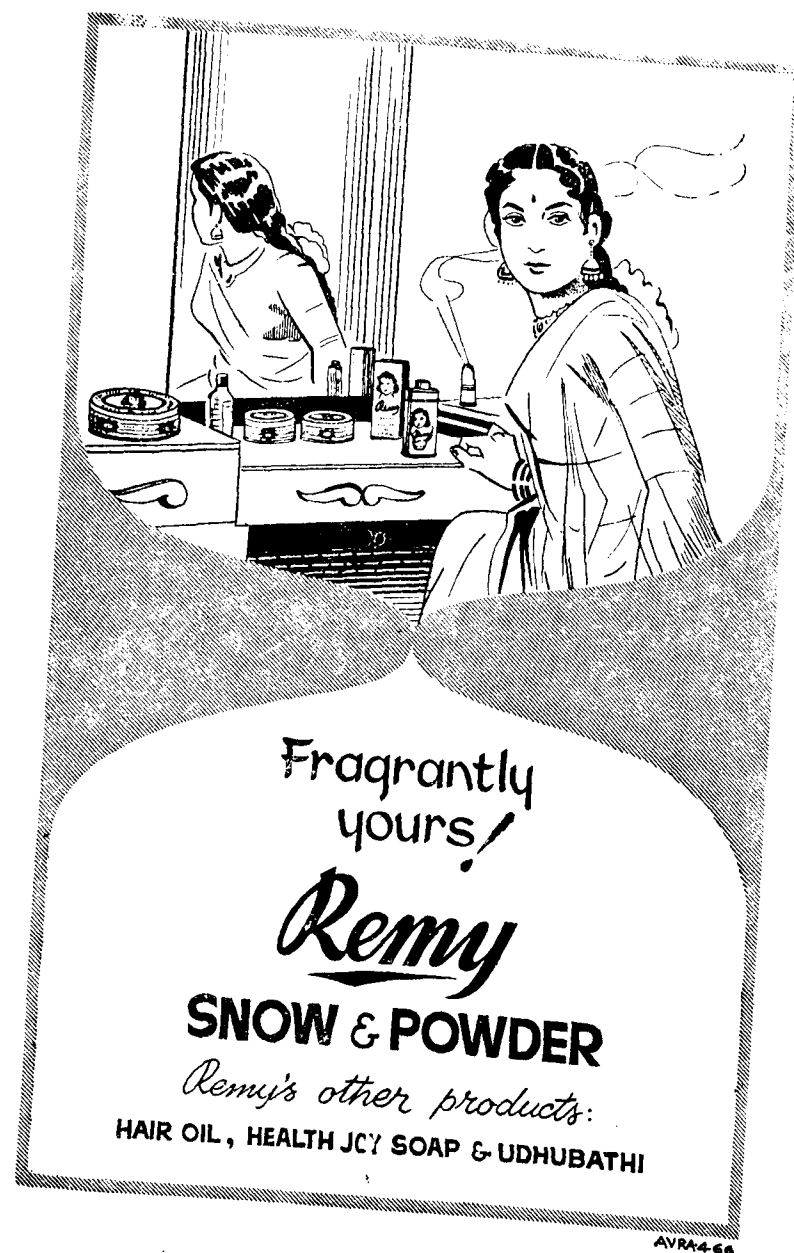


has rightly been assigned a very high priority in the Second Five Year Plan.

Small Scale Industries are of varied types but their common features at present are their urban and semi urban location or use of machines, power and modern techniques. They are run by small entrepreneurs or self-supporting workers and sometimes by Co-operatives. There is no hard and fast definition of Small Scale industry. However, for practical purposes, units employing less than 50 workers if using power or less than 100 persons if not using power and having capital structure less than Rs. 5 lakhs are treated as Small Scale industrial units. This definition is by no means rigid and is applied with certain amount of flexibility.

The principal objectives of the Second Five Year Plan are to secure a sizeable increase in the National income, to bring about rapid industrialisation with particular emphasis on the development of basic and heavy industries, to create a large expansion of the employment opportunities and to reduce inequalities in income and wealth and to secure a more even distribution of economic power. These objectives are inter-related and have to be pursued in a balanced way. Investment in basic industries creates demands for consumer goods but it does not enlarge the supply of consumer goods in the short run nor does it directly absorb any large quantities of labour. A society in which labour is plentiful in relation to capital has to develop the art and technique of using labour intensive modes of production in diverse fields. If unemployment is to be prevented, the absorption of labour becomes an important objective in itself. It is in this context, that the development of small scale industries assumes significance and

The principal needs of small scale industries are training and technical advice in the adoption of improved tools, machines and new techniques, supply of raw materials and power at reasonable rates, supply of adequate finance on fair terms, facilities for importing or purchasing new machines, provision of adequate factory spaces conforming to factory laws and health rules, provision of servicing facilities in operations involving the use of expensive machinery and assistance in the marketing of products. To meet the above requirements, this Govt. has formulated a large number of schemes for starting training, servicing and model production centres, Technical Information Section, Servicing Corporation for supply of raw materials and Industrial Estates and colonies for providing factory space. Technical experts have been appointed in the several branches of the Industries Dept. of this State for giving technical advice and guidance to the Units in the private as well as in the public sector. Bulk provision has also been made by the Govt. for granting loans under the State Aid to Industries; for subsidising power rates; for securing the services



SMALINDUSTRY

of Foreign Experts and for starting Industrial Co-operatives.

The Govt. of India, Ministry of Commerce and Industry have set up the Small Industries Service Institute in Madras to give technical advice and service, free of charge to small industrial units which are not in a position to engage skilled technicians and business consultants of their own. This Institute is manned by technically qualified officers and gives advice as well as practical demonstration to Small units on improved technical processes and use of modern machinery and equipment, gives instruction and advice to small industrialists on proper methods of business management including marketing and acts as Information centre, arranging lectures and talks, publishing bulletins, pamphlets, model schemes etc. for the guidance of small industrialists.

In starting new small scale industries, preference should be given to the manufacture of articles which are in short supply and are at present imported from outside the country which have to be transported from long distances within the country, which have a good export market and for which new and larger demands are anticipated, consequent on overall development and increasing incomes. The main criterion should be that the articles to be manufactured are in good demand and are easily marketable. It will be preferable to start small scale industries in or near smaller towns or places, having good communications, transport facilities, power and water supply, raw materials, skilled labour and as near as possible to consuming centres or marketing centres.

With a view to encourage the establishment of the small scale industries, the Madras Govt. have, with the financial assistance from the Govt. of India, started the following service centres to provide servicing facilities for the small units, which cannot afford to have costly machines of their own :—

1. Service Centre for the manufacture of Hand Tools, Guindy.
2. Service Centre for the manufacture of electrical goods, Guindy.
3. Service Centre for the manufacture of pressed metal products, Madras.
4. Service Centre for the manufacture of brassware and cutlery industry, Kumbakonam.

SMALINDUSTRY

5. Service Centre for the manufacture of farm implements and agricultural machineries at Tiruchirapalli.
6. Service Centre for the manufacture of lock at Dindigul.
7. Service Centre for the manufacture of Hurricane lanterns, Palni.
8. Service Centre for the manufacture of Textile Mill parts, Madurai.
9. Service Centre for wood working and seasoning at Guindy.
10. Service centre for tanning and finishing leather at Vinnamangalam.
11. Service Centre for footwear at Perambur and Pallavaram.
12. Tool room shop, Guindy.
13. Forging and Heat Treatment shop, Guindy.

The Madras Govt. have also started or are establishing, the following model production units, in order to supply certain complicated parts and equipment to the private industry and to encourage them in the adoption of modern methods of manufacture :—

1. Pressure Die-casting Unit, Guindy.
2. Model Foundry, Guindy.
3. Tool Room shop, Erode.
4. Model Bolts and Nuts Factory, Erode.
5. Model Foundry, Erode.
6. Quartz Crushing Plant, Salem.
7. Splints and Vencers Factory, Tiruvottiyur.
8. Wood Seasoning Plants at Pollachi and Tirunelveli.
9. Unit for the manufacture of essential handloom parts, Salem.

Facilities for the training of artisans in the use of improved methods of production and in the use of modern machinery and tools are available in the several units of the Industries Dept. all over the State.

The crux of the problem in the development of small scale industries is the availability of adequate finance at reasonable rates of interest. With this end in view, the provisions of the Madras State Aid to Industries Act have been considerably liberalised with effect from 1-9-1956. The salient features of the liberalisation are that loans are given upto 75 per cent



SUNDARA
RAJAJI NAGAR
PALLAVARAM

24 - 4 - 59.

I have great pleasure in sending my good wishes to the special souvenir issue of the 'Smalindustry'.

I am convinced that small units working with modern industrial technique and mechanical or electrical power have a great part to play in the economic development of India. There is an important tendency in India towards bigger units and labour legislation also tends to discourage small units. These handicaps have to be removed and the greatest possible encouragement should be given to enterprising technicians and middle class businessmen to take to industry through small units.

K. Santhanam

Smalindustry

VOL. III

No. I

JUNE 1959

Industrial Estates vs Industrial Co-operatives

Recent Congress Working Committee passed unanimously a resolution that Industrial Cooperatives should be set up throughout India with an amendment from Sri Jawaharlal Nehru, our Revered Prime Minister, adding, 'as far as possible' to the resolution. The talk of the day is "Co-operation & Co-operative Societies" in all spheres of life. The propaganda is unleashed from all concerned in favour and against setting up of these co-operatives. Co-operative Societies are growing immensely during the past few years. It is claimed that they serve 10.75 crores people. Reserve Bank's report says there are 2.58 lakhs of co-operative societies till the end of June 1958, but that there is no uniform rise in profits. The capital of the Societies is 187 crores while the working capital is nearly 700 crores of Rupees. The figures are very impressive but still there is a feeling that enough good has not been done by these societies and much more could be done. Particularly, Industrial Co-operatives have not come into vogue as popularly as envisaged. Where exactly the snag lies is not understood by the authorities and the public. Dr. V. K. R. V. Rao says that public sector industries should not only earn profits but should also earn maximum profits. Large amounts are loaned to Co-operative Societies and special facilities and amenities for working them have been provided. Recently T. U. C. S. Ltd., Madras, had to borrow more than a crore of rupees to put through the rice procurement programme of the Government of Madras for an allowed profit of Rs. 75,000 only. The General Body refused to sanction the permission to borrow more than the existing limit of 8 times the paid up capital against a request for 16 times the capital. The intervention of the Registrar of Co-operatives is being sought to override the decision of the General Body. It is but natural that Co-operators feel that their absolute rights over their own society and affairs are not there in reality. This attitude is bound to prove detrimental to the new programme, now being launched in the agricultural field for co-operative farms and the opposition gets justification for their contentions.

We have also written earlier that the Co-operative Societies, particularly the House Building Societies are more advantageous to the influential and the rich than the deserving middle class and working class who cannot afford the funds. The House-building Co-operative Society in Gandhinagar is a solid example where many rich people have the houses on low interest and utilise their funds elsewhere at very high rates of interest and/or for profits in business and industries. There are other co-operative societies which seem to have been started for particular type of persons, like Harijans or ex-service men who are not actually interested in working the same and would like to sit and run them as chottah proprietors engaging other casual temporary labour or piece-workers who do not have even minor benefits of regular labour in regular industries. Unfortunately these co-operatives are confined only to the particular class of people and so others cannot join. If certain of these defects, if at all can be eliminated, are eliminated, probably, they may work admirably for all concerned. But that is a very big if existing which has to be overcome with all sincerity and zeal of the co-operators and the authorities cutting down the red-tape and delay.

TIRUPATI

IN ANDHRA PRADESH

Is Making Rapid Progress Socially & Industrially

**VERY SOON IT WILL BE A HIGHLY
ADVANCED CENTRE FOR EDUCATION,
FINE ARTS AND SMALL SCALE
INDUSTRIES UNDER THE ABLE
LEADERSHIP OF OUR BELOVED**

HON. CHIEF MINISTER

SRI SANJIVA REDDY

INSERTED BY

SRI BALAJI INDUSTRIES

TIRUPATI (A. P.)

MAUFACTURERS OF SPECTACLE FRAMES & WALL CLOCKS ETC.

*Those who are interested in starting Small Scale Industries
at Tirupati, can write to the Secretary, Andhra Industrial
Development Corporation, Tirupati (A. P.)
for detailed information & consultation.*

of the net value of the assets offered as security, the additional assets to be created out of the loan to be sanctioned are also taken into account and the rate of interest chargeable on loans not exceeding Rs. 50,000/- has been reduced to 3% per annum. The rate of interest for industrial co-operatives is only 2½% p.a. The officers of the Industries Dept. have been delegated greater powers for sanctioning loans, in order to expedite the issue of loans. A provision of Rs. 125.80 lakhs has been made in the second Five Year Plan for State Aid to private sector. During the first three years of the plan, a sum of Rs. 61 lakhs has been disbursed by the Industries Dept. The Industries Dept. entertains applications for loans not exceeding Rs. 1 lakh, ordinarily for long term or medium term loans, for construction of factories or purchase of machinery and tools etc. and only in special cases, for working capital.

The Madras Industrial Investment Corporation Ltd., supplies medium and long term credit for amounts extending even upto Rs. 10 lakhs. The State Bank, Co-operative Banks and Commercial Banks ordinarily supply short term credit on the pledge of stock-in-trade to whom the Small scale industries can look forward for their short term credit requirements. In collaboration with the industries dept. the M.I.I.C. Ltd., Small Industries Service Institute and the Reserve Bank of India, the State Bank of India have worked out and are implementing a "Pilot scheme" to meet the credit requirements of small industries in Madras, Coimbatore, Madurai, Tiruchirapalli, Erode, Virudhunagar, Dindigul, Salem, and Tiruppur. The Scheme is being extended by stages to some more towns.

The Govt. of India are implementing with the assistance of the State Industries Dept. the scheme for the supply of machines to small scale industries on hire purchase basis. This scheme is operated in Madras State by the National Small Industries Corporation (Private) Ltd., Madras-6. The applicant need pay only 10 per cent of the price of machinery as earnest money, if the cost of machinery does not exceed Rs. 2,000/- and 20 percent when the cost exceeds Rs. 2,000/-. In the case of special purposes machines, 25 per cent to 40 per cent may have to be paid as earnest money.

In addition to all these facilities, the Madras Govt. have started Industrial Estates

at Guindy, Madurai, Erode, Virudhunagar and are starting small Industrial Estates at Pettai (Tirunelveli), Tiruchirapalli, Marthandam and Tanjore in order to provide developed and planned sites with properly designed and ready built factories of different sizes conforming to municipal and factory laws available for modest rent to small scale industries with roads and other communication facilities, water and electricity connections. The Industrial Estates are intended to relieve the industrialists of all the initial difficulties and worries in setting up their factories with scarcity of capital, long delays, expense and troubles involved in acquiring suitable sites, in obtaining approval for plans, permission and licences from various authorities, in securing building materials, power and water supply. The Govt. are charging only a subsidised rent for the factory spaces in the Industrial Estates calculated at the rate of 8 nP. per sq. ft. of covered area at Guindy, at 6 nP. in the Industrial Estate at Madurai, Virudhunagar, Erode, Tiruchirapalli and Pettai and at 4 nP. in the Industrial Estate at Marthandam.

The Industrial Estates at Guindy and Madurai were inaugurated by the Prime Minister of India in January, 1958 and April, 1959 respectively. The Industrial Estate at Guindy is considered to be the best in whole of India. The establishment of these Industrial Estates is a land-mark in the industrialisation of the Madras State.

Summing up, the Madras Govt. have started 270 industrial units in all the districts of this State, costing Rs. 434 lakhs. 349 Industrial Co-operative Societies have been newly started during the last three years and financial assistance to the extent of Rs. 70 lakhs has been given. The working of the departmental units and the industrial Co-operatives in such a large number should generate the necessary incentive and enthusiasm among the entrepreneurs to start many more small scale Industries in this State. I hope the Madras Small Scale Industries Association will publicise the various facilities extended by the Govt. by way of loans, training of artisans, provision of factory spaces, supply of machines on hire purchase basis and help the Govt. to attain their cherished objective of rapid industrialisation of the Madras State.

BHARAT MINERALS SERVE INDUSTRIES

ASBESTOS MAGNESIA 85	HARD SETTING COMPOSITION
PUMICE STONE	PUMICE POWDER
OCHRES	OXIDES
BENTOCILAY	GRAPHITE/PLUMBAGO
PLASTER OF PARIS	OXIDES CEMENT
CHINA CLAY	TALC POWDER
MANGANESE DIOXIDE	GLASS POWDER
BARYTES POWDER	CALCIUM CARBONATE
EMERY POWDER	GYPSUM
MAGNESIUM CARBONATE	BELGIUM WHITING Etc.

OXYCHLORIDE FLOORING COMPOSITIONS
HARDONATE—CONCRETE HARDNER
ACTIFULL—ACTIVATED FULLER'S EARTH

for use in:

Paint Manufacturing, Tile Manufacturing, Match Factories,
Building Construction, Pencil Factories, Rubber Factories,
Leather Factories, Toilet & Sundry Manufacturing,
Pottery & Ceramic Works, Enamel Works,
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Small Industries

BY A. BOSE

Small industries as distinct from handicrafts and cottage industries, constitute an integral part of the national economy. Adoption of mass production technique for consumer goods having volatile and variegated nature of demand is fraught with undue risks as it ties up capital in block and prevents short period adjustment of production to dynamic changes in demand. Small industries with wide dose of dispersion contain the potentialities of arresting the mounting volume of unemployment and under-employment and as ancillaries also serve as a great stabiliser of the country's economy.

Small units are management-wise, more advantageous and there is scope of greater personal supervision. They can avoid labour disputes and develop good labour-management relations. Small units located in or near small towns raise no problem of good housing and slum clearance. They also provide greater opportunities to the middle class intelligentsia since they rest on improved techniques and demand a comparatively high level of training and education. They reduce cost of production through economy in overheads. Technologically also they insulate large industries from the burden of overequipment.

Foreign Experience

Small-scale industries are not peculiar to the Indian economy alone. They have a permanent place in the

framework of many well developed economies. In Japan, small industries are divided into two groups, viz. (i) old and new under the control of large financiers and (ii) contracted industries manufacturing components and parts required by large industries. The former type comprises mainly cottage industries based on traditional techniques. The contracted industries play a dominant part in the economy of the country. In Japan, the degree of dependence on the contracted industries on the part of large-scale industries is as high as 70 per cent, for example 3 motor car industries and 6 wire-communication industries have 394 and 237 contracted industries respectively. To a great extent, small industries in Japan are related to the export market because capacity in the home market is comparatively limited.

Small industries of India may broadly be divided into three categories, viz. (i) those in which small scale production has certain advantages over mass production like locks and padlocks, wax candles, buttons, etc; (ii) those in which small scale units manufacture certain parts under contract with the corresponding large-scale units, e.g., bicycle parts, sewing machine parts, electrical goods, etc., and (iii) those in which small-scale units have to meet competition from large scale units, for example, handloom.

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Plan Approach

The policy which, in large measure, is now being followed in India is designed to balance the capital intensity of the plan by labour intensive techniques within the limits set by the considerations of efficiency. Particular importance has, therefore, been attached to the development of small industries. The plan visualised a common production programme for every industry. In some cases, the essential points in such a programme were that the supply of the basic raw material should be assured, a sphere of production earmarked and perhaps a small cess assessed on large-scale industry either to reduce difference in cost of production between the two sectors or to provide funds for improving efficiency and organisation of the small-scale sector. In other cases, the programme was mainly to integrate and co-ordinate the production of two corresponding sectors. Reservation of spheres of production was the underlying principle in both the cases. The Plan also accepted the recommendations of the Stores Purchase Committee for price preference to be granted to the small scale units and what is more, certain items for Government requirement were to be purchased from the small-scale sector. Under the Plan further expansion of production in large-scale sector of leather footwear, matches, sport goods, pencils, chalk, trolled, a list of 42 agricultural crayons candles etc., was conimplements was reserved for manufacture by the small-scale units. A study of the possibility of replacing imports was also made. Emphasis was laid on creation of new centres for industries, research and training. Government had also accepted the recommendations of the International Planning Team on Small

Industries and had set up a number of regional Small Industries Service Institute and National Small Industries Corporation for organising development of small industries on healthy lines.

The Second Five-Year Plan laid further emphasis on the development of small industries and allocated Rs. 610 million against an expenditure of about Rs. 50 million in the First Plan period. The programme under the Plan and problems connected with their implementation have been reviewed by the Village and Small Industries Committee, popularly known as Karve Committee. The Committee recommended measures for setting up a pyramid of industry broad-based on a progressive rural economy' and for securing to the small units economies of large-scale through technical improvement, community service workshops and co-operative working. The Industrial Policy Resolution of 1956 also advocated support to small industries through measures like differential taxation and direct subsidies.

The Plan has attached greater importance to the development of such industries as (i) bicycles, (ii) sewing machines, (iii) hurricane lanterns, (iv) agricultural implements, (v) plastics, (vi) cutlery, (vii) fruit products, (viii) sports goods, (ix) leather footwear, etc. During 1957-58 about 478 schemes for the development of small industries were sanctioned by the Central Government. Under the scheme, Rs. 42.08 lakhs had been sanctioned for West Bengal, the amounts sanctioned in this regard for U P., Bihar and Madras being Rs. 55.65, Rs. 51.91 and Rs. 65 lakhs respectively.

State Plan

Besides the Central Plan, States have their own plans for the develop-

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ment of small industries. The objective of the State Plan in West Bengal is to develop a decentralised sector of small and village industries through a chain of Industrial Estates at Kalyani, Siliguri, Baruipur, Howrah and Saktigarh and the newly built townships in Community Development Projects. Under the First Plan about Rs. 120 lakhs was spent on village and small industries. During the Plan a number of industrial co-operatives were organised and attention was mainly concentrated on Khadi and certain village industries like (a) Mat, (b) Gur and (c) Hand-made paper, etc. Out of the total estimated outlay of Rs. 774 lakhs for the development of small-scale and village industries, the Second Plan provides Rs. 133.08 lakhs for small industries like food processing, mechanical toys, footwear, cutlery, surgical instruments, ceramics, stove enamelling and electro-plating etc.

There is no doubt, however, that such steps have injected life into many traditional small industries and have also helped many infant engineering industries to grow into adulthood. Encouraged by the great fillip given to them by the import restriction, small-scale units are now manufacturing many new items which were previously imported, for example, mechanical action toys, pressure sensitive adhesive tapes, moisture meters, microscopes, welding machines, pyrometers etc.

Many of them are again using imported primary products like specialised types of steel for magnets, spring stripes, non-ferrous metals like copper and tin, special types of glass like milk glass, optical glass and various chemicals to produce numerous finished products previously imported. Production of small-scale units is also

replacing imported stuffs at a fast rate. Mention may, in particular, be made of items like spare parts and accessories of machines and engineering products, surgical instruments, sports goods, leather manufactures, umbrella fittings, industrial fasteners, automobile batteries, certain types of machine tools and so on.

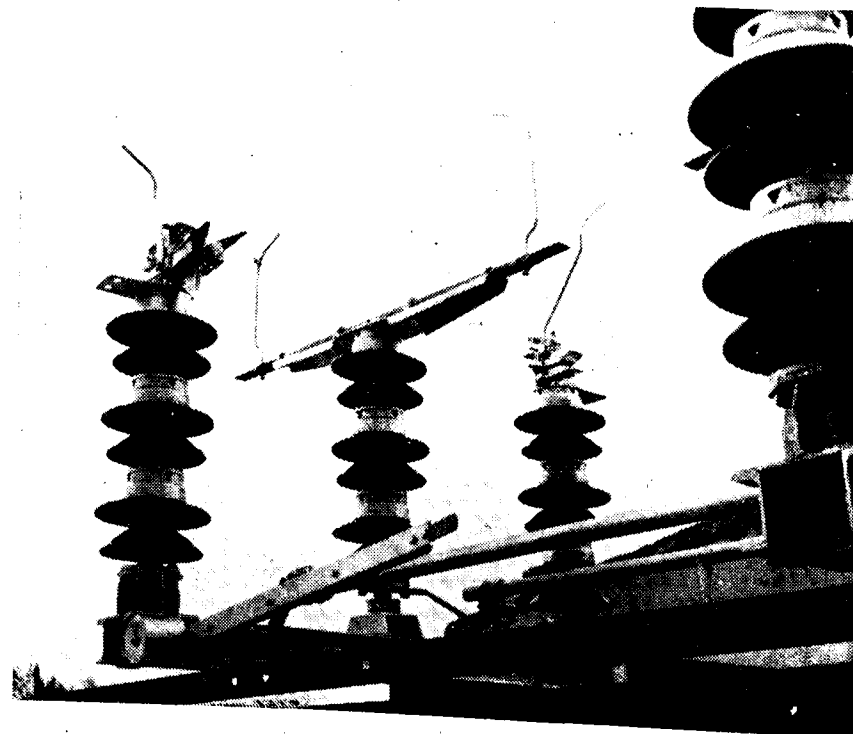
Contribution of small industries to export promotion also deserves special appreciation of the products that figure in exports, mention may be made of hurricane lanterns, coir products, sports goods, leather footwear, leather art goods, fruit products and some engineering items. The National Small Industries Corporation has also selected leather footwears, wollen and cottage hosiery, sports goods, coir products, builders, hardware and engineering goods for export promotion. If proper facilities are arranged in the form of special import licence for the imported raw material contents of exportable products, supply of information about foreign market conditions, establishments of sales emporia in foreign countries and other fiscal and monetary incentives, small industries can sizeably enhance export earnings.

In West Bengal

In West Bengal small industries have a significant contribution to employment and earnings vis-a-vis organised industries. This is amply evidenced by facts collected as early as 1954. The small industries of the State offered employment to 9.5 lakhs while the organised sector industries could employ only 6.3 lakhs. The value added by manufacture was also pretty significant, being of the order of Rs 48 crores. Needless to mention that these industries have considerably added to the diversification of output.

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Indigenous Fountainpen Ink Industry

By NANI GOPAL MAITRA, M. Sc., J. P.

Manufacture of the Fountainpen Ink first started in India in 1922-24 as a part of the struggle for the freedom. The Boycott Movement launched by the Father of the Nation as a weapon for freeing the country from foreign pens acted as a fillip to the indigenous industries. The youth of India, particularly of Bengal, began to think that something must be done to make the nation, independent in the field of her economy. As a part of that effort that without any capital except inspiration, love for the nation and without taking into account the possible difficulties which might come in the way of fulfilling their objectives, a few of inspiring young men, jumped into the struggle of ousting foreign ink that was a monopoly in the market at that time.

The beginning of the ink industry was naturally very small, while the task was enormous. Most of the people in those days, especially the intellectuals and upper strata of the society had a particular fascination for foreign products. This had to be fought against. In case of fountain pen ink particularly, the propaganda of foreign manufacturers had been

and speedy disposal of applications, particularly under the State Aid to Industries Act and the State Financial Corporation. The Government should also encourage scheduled bank to re-orient their lending policies and advance credit to small units against raw materials and block assets.

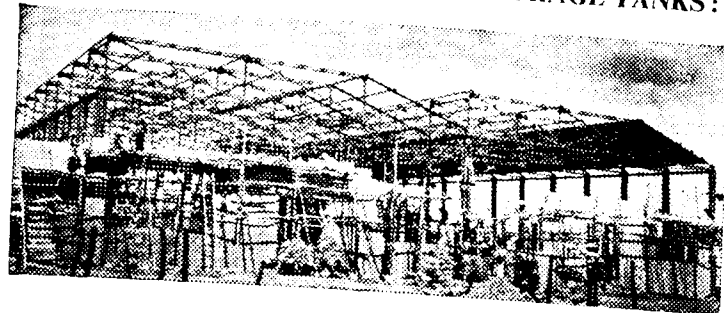
successfully made to create a sort of strong prejudice in the mind of the fountainpen users. Many years passed to change the mind of people. But untiring research work in the laboratory and consequent gradual improvement of the product by some enterprisers on the one hand and their incessant propaganda and individual persuasion on the other began to bear fruit. The national minded men started using indigenous ink and showed slow but steady progress.

The World War II gave an opportunity to the industry. The import of foreign inks was not possible and people had to depend on the indigenous inks. The industry really rendered a very useful service during those days of shortage of ink. It not only met the country's demand but also supplied the needs of military personnel of the Middle East. But there was shortage of raw materials also, making it very difficult for the quality ink makers to supply their demand. These quality ink manufacturers got their reward after the War.

After the War the progress of the indigenous Fountainpen Ink Industry was good. Many people came out of their prejudice and the sale of Indian product improved.

When in 1947, India won Independence, every one thought that national industry would develop in full swing. But soon after Independence, the Government of India allowed unrestricted import of foreign inks. As a

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result, Indian markets were flooded, so to say, with these products, and indigenous industry met a hard hit. When strong protest was made all over India against the policy of the Government, tariff enquiry was held and on their recommendation a tariff protection was granted for three years and the import restricted.

But the Government was not sincere in its move. This was proved by the fact that some foreign industrialists were allowed to establish factories within the country to start ink manufacturing. In doing this, the Government did not deem it even proper to discuss the matter with the Tariff Commission.

The act was against the policy of the Government for inviting foreign capital as was revealed later by the observation of the Tariff Commission.

We do not know, even now what had happened behind the curtain at that time for which the Government had to take such a wrong step. But thanks to the enterprisers as well as the people of India that indigenous units of the industry have not only been able to baffle the attempts of the foreign industrialists to usurp the field of this industry with the help of our own Government. In spite of so many inks of "foreign" brands being manufactured in India since then, the indigenous brands are definitely holding the grip in the market, showing nakedly that foreign capital and establishments need not be invited in this sphere.

As a matter of fact, the quality of indigenous ink, has been proved to be not at all inferior to foreign inks, if not superior to them.

The test carried out by the Central Glass & Ceramic Research Institute to

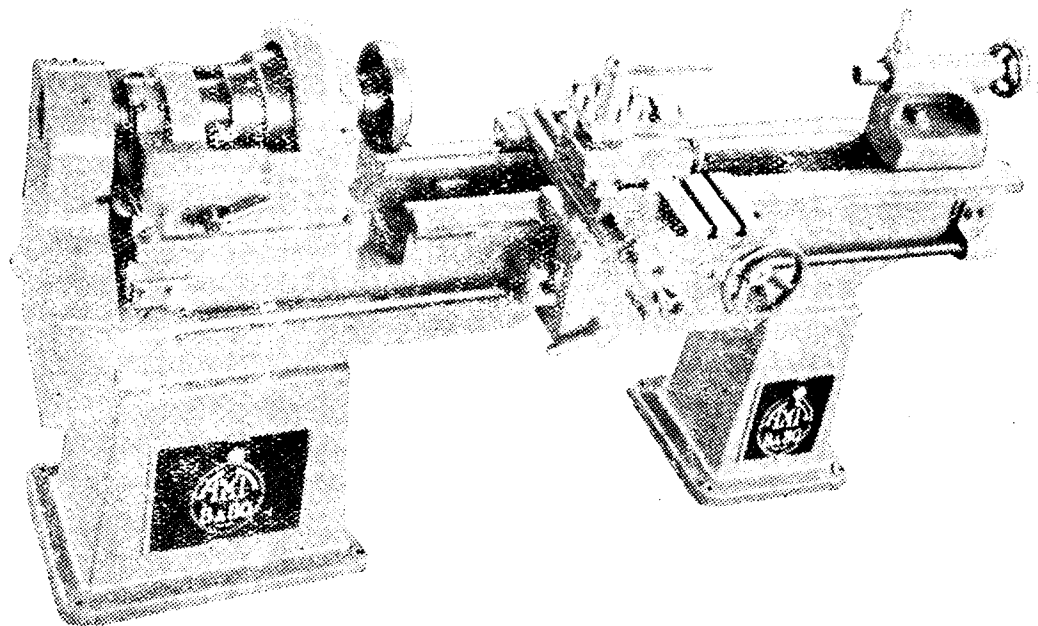
find the suitability of Glass container for keeping fountain pen ink has also revealed to superiority of certain Indian brands of Inks in matters of keeping quality, total solids and iron contents

In recent years the quality of indigenous ink has further developed on account of introduction of ink-solvents in certain brands. Even fastidious users of very costly pens know today that a particular pen need not be filled with the ink made by that particular, Pen Company and sometimes it writes better with a good ink made by a concern who has gained adequate experience and technique in the ink industry.

One fact still remains that the big foreign establishments who have taken root in Indian soil on the plea of manufacture of pen or whatever may be and have started competing in ink with indigenous sectors are going to stay and will always be a danger to the purely national concerns because of their enormous capital and other resources unless Government is convinced to restrict their manufacture in the sphere of pen only in which they are specialised. The struggle of indigenous Fountain Pen Industry which it launched more than thirty years ago has not ended and only has changed its phase. Other difficulties have also crept in and only combined efforts can solve it. One difficulty the ink manufacturers are facing today is due to the complete ban on the import of ink-blue, essential for the manufacture of ink, in favour of only one indigenous producer. The concern which is manufacturing ink-blue in India is quite unable to supply the country's need and as such not only production has been hampered, but also the price of ink-blue has shot up

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The major problems confronting small industries in general relate to the following: (i) Marketing, (ii) Technical know-how and quality control, (iii) Procurement of raw materials, (iv) Financial help.

Problems of marketing are simplified to the extent small-scale units are developed as ancillaries of large-scale units. But progress of the ancillary sector has, however, been halting since the participation of large-scale industries has so far been discouraging. The attempts of the Government agencies in encouraging the larger units to farm out contracts for ancillaries to small units have been quite helpful to those industries. The price preference scheme as a stopgap arrangement is also commendable. Even so, many small scale units experience difficulty to market their products either in competition with larger industries or as a result of unhealthy competition among the units in the same industry.

Recently, the Small Industries Service Institutes have taken up a programme of market research to assist the small units in ascertaining the consumer reactions to their products. While all the steps taken by the Central Government have yet to find their full expression in State policy, the procedure of purchase followed by the State Departments hardly suits the small units. Delay in payment of bills by the Government and the Railways is also an issue of immediate consideration. If the National Small Industries Corporation undertake to pay a portion of the bills as soon as goods are delivered, it may render a great service to the innumerable small units who shall thus be encouraged to participate in large numbers in Government tenders.

Serious efforts should be made for standardisation and improvement of the quality of small products. The recommendation of the Japanese National Committee of the International Chamber of Commerce for establishment of 'Regional Project Plants' in various countries for providing technical training and demonstration to small industries deserves special attention. In this context, the Industrial Estate Scheme already launched is to be welcome. The Industrial Extension Service, which operates through the agencies of the Regional Service Institutes, have been rendering on the spot technical advice to small units. The training course in business management organised by the institute has proved quite popular. Steps need now be taken to set up organisations for quality marking and testing facilities at nominal or no charge.

The small Industries have also been suffering from utter inadequacy of raw materials—both imported as well as indigenous. To remedy the present handicap, a system of allocation through the association is suggested, for this purpose a bulk quota may be allotted in favour of the Associations representing the industries for redistribution according to certain accepted principles.

It is time that the Government have made various provisions for financial accommodation. The Pilot Scheme of the State Bank of India and the lending policies of the the State Board of Industries and the Financial Corporation are well known. The State Bank has also been advancing 100 per cent of the cost of raw materials on orders booked through the National Small Industries Corporation. What, however, still remains to be done is the simplifications of cumbersome procedure

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SUGARCANE WASTE FURNISHES HOMES, BUILD ROADS

[This article will be of interest to those who wish to start a Soft-Board Industry in the
South - Madras State is prepared to encourage private sector to develop — Editor]

The southern state of Louisiana is famed for many things—for its colourful Mardi Gras, its jazz and "Dixieland" music, its huge plantations and its cotton and sugarcane industries. But in recent months, Louisiana has added still another industrial accomplishment, one that is felt by Americans in nearly all walks of life. In a sense it has come as a revolution from a wastepile of previously unwanted materials—bagasse—the tough-fibered sugarcane after the sweet juices have been squeezed out.

Bagasse once was burned in the furnaces that supply power to the huge sugar refineries around New Orleans. Now Americans literally drive over it on their highways, live in it in their homes, wrap articles in it, use it to keep warm and even eat food from it. The revolution in the bagasse waste pile has come about as a result of the chemist's test tube and economic conditions.

more than double the landed cost of foreign ink-blue. We urge the Government to allow partial import of this essential material so that the ink industry may not further suffer.

Apart from the struggle the industry has been making for its very existence, it must launch a bigger and more serious struggle to find market abroad, specially in Near and Far East.

Putting the sugarcane waste material to better use than burning it started back in 1921 when the Celotex Corporation began to manufacture a rough insulating board from it. Then in 1932, at two U.S. Department of Agriculture laboratories in the mid-west, research went forward on using bagasse to make plastics. But the large market for the sugar-cane waste the making of paper, was not to come until much later.

Although a method for making bagasse paper pulp had been discovered as early as 1879 it was only in 1936 that there were men who thought they could foresee the time when bagasse would compete with wood in making products. They were right too, for as the supply of timber in the U.S. diminished in relation to the demands of an increasing population and broadening economy, bagasse began to gain in importance. In 1947, the Louisiana Sugar Producer's Club noted that bagasse was available in more dry fibre each year than could be produced on most timberland in the United States in ten years.

The trend towards bagasse as a substitute for wood pulp became so apparent that in 1953, the Valite Corporation (part of the Balentine Pulp and Paper Company) constructed the first of its paper-making plants at Lockport, Louisiana. Its annual output is in excess of 25,000 tons of bagasse paper.

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Across the Mississippi River from New Orleans at Marerro, Louisiana, is the huge Celotex Corporation whose products, made of bagasse, are now used in most modern American homes. The once drab sheets and blocks of Celotex are now used in huge quantities for finishing room interiors and for quieting sounds in such public places as restaurants, conference rooms and auditoriums as well as radio and television broadcasting studios.

Another material made from bagasse is expansion filler which goes into miles of concrete highway construction. Impregnated with asphalt it is used to separate sections of new concrete to allow for climatic expansion and contraction.

But it is in field of plastics that the once useless bagasse has scored its highest revolutionary gains. Reduced to resin through chemical processes, bagasse now goes into products that range from silent, tough, machine

gears to phonograph records. The long list of bagasse resin products includes such item as electrical fixtures, gaskets, fan blades, plastic safety helmets, bottle caps and steam iron handles.

Will the use of bagasse to make better and cheaper products spread to many parts of the world where sugarcane waste fibre is plentiful? It is a matter of economics, according to Edward L. Powell, executive vice-president of the Valentine Pulp and Paper Company.

Putting bagasse to use profitably simply means producing products from it that will sell competitively with those produced from wood pulp or some other locally available pulp source.

In India, where sugarcane first grew and subsequently made its way to Europe and thence to the Western hemisphere, six times as much bagasse is produced as in the southern U.S. coast area. But India also has such possible pulp sources as bamboo and sabai grass which may prove a cheaper source of pulp than bagasse.

Powell believes that the biggest potential for bagasse exists in the tropics and semi tropic areas where there is no satisfactory wood pulp source but where sugarcane has been traditionally cultivated.



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SPORTS GOODS INDUSTRY

By A. T. Chandramohan

Lights burn late into the night in Sports Town, a suburb of Jullundnr City. where India's new foreign exchange earner is growing up. (We exported sports goods worth Rs. 8.38 lakh during the first ten months of 1958). What was called Boota Mandi, a dusty, rather derelict colony, now is an important centre of the sports goods industry. Here, whole families work together, each specialising in one or two items such as hockey sticks, footballs, etc. There are two hundred small units at work, each consisting of five or six families.

Nearby, in Basti Nau, another suburb of Jullundur, a hundred families specialise in making shuttlecocks for badminton. The feathers come from Calcutta and abroad.

Other units, all over the country in widely-scattered towns, hum with activity producing sports goods which are absorbed fully, either by the growing demand inside the country or abroad.

Out of the pangs of Partition was born the Indian sports goods industry and within seven years it was meeting practically the entire internal demand of sports and games, except for a few items like golf clubs and high quality tennis rackets, which had to be imported.

Annual output of Rs. One Crore

Today, about 300 small-scale industrial units are manufacturing Rs. 1

crore worth of sports goods every year. including equipment for games and physical culture, outfit for players and play-ground requisites. Only one large unit is functioning in this sphere, manufacturing tennis balls.

To have a comparative idea of how far the industry has progressed, it would be enough to point out that in pre-partitioned India (at Sialkot), the total production was worth no more than Rs. 1 crore, and the sale was mostly based on cheapness of rates.

Before Partition, the entire industry was located in Sialkot, now in west Pakistan. After Partition, a number of sports goods manufacturers migrated to India leaving behind all their assets, including well-equipped factories, large numbers of skilled workers (mostly Muslim) and well-established business connections.

These energetic industrialists settled down at Jullundur, Meerut, Delhi and various other centres, brought together refugee craftsmen, trained up new ones, found out new sources for supply of raw materials and set up new factories. New business relationships and channels of trade were built up.

Refugee Craftsmen

In the Punjab, particularly, the industry has helped to re-establish the life pattern of several hundred refugee families, who now live and work together as they used to in their old town of Sialkot. It has given them a conti-

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nunity of occupation and security in new surroundings. Here, fathers and sons, in fact whole families, work together so that the traditional standards of craftsmanship are maintained.

More than 90 per cent of the displaced sports goods manufacturers have been provided with residential accommodation, in Jullundur, Meerut, Delhi and other places. Loans have been given to them under the various schemes of the union Rehabilitation Ministry and under the State Aid to Industries Act.

High Quality

The present emphasis on high quality is something new. Government's policy of restricting imports of sports goods on quota basis helped towards this trend.

Competition from the old established industry in Pakistan with its emphasis on cheapness was another factor; so was the laying down of standards by the Indian Standards Institution.

A survey of the present position of the industry has been carried out under the guidance of an expert from the Ford Foundation and the recommendations made by the survey team are being implemented by the Central and State Governments.

Plantation of mulberry and willow timber, essential in the manufacture of hockey sticks and cricket bats has already been started by the Punjab and Uttar Pradesh Governments. It is also proposed to send sports goods manufacturers for training to the U.K. and Australia.

Exports

An Export Promotion Council has been set up for the industry. There

is a ready market for Indian sports goods in Ceylon, where with every improvement in quality, the sale of our goods has been increasing. India is almost the sole supplier to Ceylon of cricket stumps and wickets, carrom boards, hockey sticks and balls, cricket bats and balls, tennis, volleyball and badminton nets, footballs, volleyballs, rugger balls and others. India also supplies tennis and badminton rackets.

The requisites of the following games are manufactured in India: football, volleyball, basket ball, base ball, rugby, cricket, hockey, tennis, badminton, squash golf, deck tennis, table tennis, water polo, angling, billiards, cards (playing boards and bridge tables), carrom, darts and chess.

The sports goods industry has given impetus to several subsidiary cottage industries, such as football and volleyball inflators, made of metal, rubber toys and dolls, cups, medals and shields and sports hosiery.

The future of the industry is bright. There are at present about three crore students in our schools, colleges and universities and at a modest estimate of one rupee worth of sports goods a year per student, there will be need of sports goods worth Rs. 3 crore. According to the census report of 1951, there are over 20 crore people in India between the ages of five and thirty-five, quite a large number of whom might be interested in sports. At the same rate we will find that the requirements will go up twenty times, creating additional employment for nearly a lakh of workers.—

("Yojana")



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CONSORTIUM TO FINANCE MEDIUM INDUSTRIES PLAN UNDER STUDY

The formation of a consortium of banks to underwrite new capital issues and provide finance to medium industries with a capital below Rs. 50 lakhs was considered during the discussions of the Standing Committee of the Central Advisory Council of Industries here today.

The suggestion, made by Mr. G. D. Birla, is reported to have secured general support in the committee.

Members were of the view that the maintenance of overall improvement in industrial production and development was the result of the collaboration between the private and the public sectors functioning as part of the national sector.

Two subjects which secured considerable attention were the development of machine, building industries and the expansion of fertiliser production.

It was suggested that the target for the latter under the Plan, which is four lakh tons in terms of nitrogen, should be raised to a million tons, to be achieved by 1962.

Machinery Needs

Mr. Manubhai Shah, Minister for Industry, assured the committee that several proposals were under study for increasing indigenous fertiliser production capacity.

He also pointed out that a Central Design Institute was proposed to be set up at Ranchi with Soviet assistance to train highly qualified technicians for designing machinery.

A panel has also been constituted with Mr. L. K. Jha as chairman to study the machinery requirements of the Second and Third Plans and six standing committees were being set up for various industries. At least 80 percent of the country's requirements of machinery will be met by indigenous production by the end of the Third Plan.

Earlier, Mr. Manubhai Shah, who presided, observed that the index of industrial production in the first nine months of 1958 was at 142.8 as against 137.1 in 1957 and there was a general increase, except in cotton textiles and sugar.

Industrial Estate Near Delhi

One more industrial estate near Delhi is springing up. The Delhi Development Authority has decided to provide 900 acres of land for the construction of an "Industrial Empire" 12 miles away from Delhi. The industrialists desirous of starting new ventures will be provided all amenities.

Already the Okhla Industrial Estate is fast developing and is expanding its units.

The idea of the Development Authority in constructing these industrial estates is to create employment opportunities for thousands of educated unemployed in Delhi.

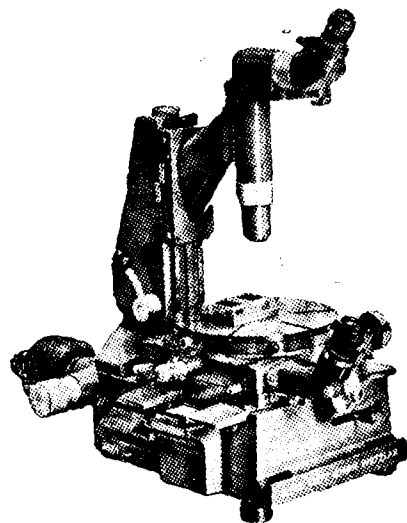
The Capital's expansion as an industrial town is also being considered by the top officials of the Development Authority and the Industrial Advisory Board.

[Let us hope they do not become imperialistic in outlook also. Let not the empire build colonies also-Editor]

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BLAST FURNACE

A Modern blast furnace is a cylindrically tall furnace about 100-110 feet high. It has got a diameter varying from 14-27 feet at different levels. The maximum diameter is at the bottom where the wind is blown through the tuyeres and gradually narrows at the top where charging of the materials is made. All around the furnace, there are 14-18 tuyeres depending upon the size of the furnace. The lower portion of the furnace is cooled by inserting water cooling plates in order to give extra strength to the refractory lining with which the furnace is lined.

The furnace is charged automatically by skip cars running on the inclined skip way. On the top, there are two bells, one small and the other big, which open inside the furnace intermittently to let the charge inside the furnace, without allowing the outgoing gases to escape into the atmosphere. About 50,000 to 120,000 cu. ft. of hot blast per minute is blown into the furnace at a pressure of 15 to 25 lbs. per square inch. The temperature of the hot blast is about 500-700°C. Whereas the charge takes about 12-14 hours to descend to the hearth of the furnace, the wind hardly takes a fraction of a minute to pass through. The amount of gases going out of the furnace is 13-15 million cu. ft. per hour. the gases are led through

the uptakes from the top of the furnace to the dust catchers, where considerable portion of the dust is removed. The gases are further cleaned in the gas cleaning plant, equipped with washers and electrical precipitators. A part of the cleaned gas is utilized in heating of stoves, the remaining finds its use in gas engines, coke ovens and reheating furnaces.

There is one hole at the bottom to take out the liquid iron and two holes at a higher level at different angles to tap the slag from furnace. The liquid iron is tapped into ladles and is either taken to the big casting machine or to the open hearth shops. Slag which amounts to about 1000 lbs. per ton of pig iron is also taken into the ladles and is either dumped into slag yard, or utilized as road ballast, roofing and other uses.

When the furnace is newly got ready, it requires 7-10 days to dry it of all moisture contained in the bricks, 2 days for filling up and lighting it up. Once the furnace is lighted, it goes on working continuously for 7-9 years and finally, when it is shut down for repairs, 7-10 days are required with two pumps delivering 10,000 gallons of water per hour to quench it fully. After the furnace is relined and the necessary repairs are made, it is again ready for another long campaign.

Courtesy: INDUSTRIAL INDIA

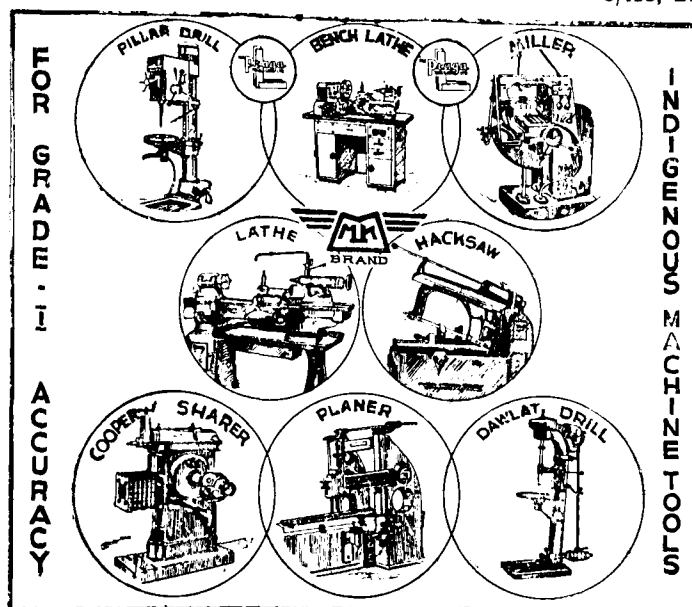
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Small Scale Industries

Technical Advice Available

The Small Industries Service Institute of the Government of India, Trivandrum, prepares model schemes and technical bulletins for the use of intending manufacturers. The Model schemes indicate the type of machinery, the amount of raw material and also working capital required for starting a particular industry.

During December 1958, the Small Industries Service Institute at Trivandrum, prepared a model scheme for

Pressed Palocks. The institute also prepared during the month about 25 drawings covering tooling for stainless steel sauce pan, planishing die for tiffin plates, finger clamps, hubs for gang splitter etc.

'Tool Rooms in Industry' and 'Presses used in conjunction with the Press tools' are two technical bulletins prepared by the institute during the month.

The institute has also brought out a publication entitled 'Guide for small industries in Kerala.'

Ivory Ball with 26 Balls within

Delhi Craftsman's New Creation

A Delhi craftsman, Bhagat Bhim Sen who has trained most of the Capital's ivory craftsmen during the past 22 years, has now created a superb specimen of intricate carving and craftsmanship.

This is a ball of only $4\frac{1}{2}$ " diameter which has within it 26 balls, one inside the other'. In 1955, he had fashioned a ball of the same diameter which had 25 balls inside, surpassing the earlier Chinese record of a ball of 6" diameter with 24 balls inside.

The balls are ingeniously carved from the outside, all the balls, including the outermost one, remaining whole

and entire and the innermost one being carved first. All the inside balls are separate from each other.

Both the ball and the column, carry intricate carvings of flowers and Jali work (figtree).

Delhi has for centuries been a centre of our ivory crafts and Bhagat Bhim Sen has once again established its lead over other centres not only in Rajasthan, Kerala and Mysore, but also in other countries where ivory carving is done.

The ball, with its supporting column, is now on display at the Handicrafts Pavilion in the "India 1958" Exhibition.

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SMALINDUSTRY

Small Units in the Capital Goods Sector Their Role in a Developing Economy

Madav Vijayendra Rao

The problem of small scale industry as a technological alternative, in a country suffering from a dearth of capital and an excess of labour, which Professor P. C. Mahalanobis discussed in his paper on "The Approach of Operational Research to Planning in India," has led to an interesting if not particularly truthful controversy on this aspect of development planning. While the discussion has alternated between such sophisticated extremes as Gandhian exuberance and statistical mysticism, it never seems to have come round to considering the more mundane possibility of small industry playing a constructive role in the capital-goods sector of the economy. The recent Chinese example in the field of pig-iron and steel, seems to have woken up Indian planners to the startled realization that big units may not, perhaps, be divinely ordained for the production of capitalgoods.

The object of this note is, therefore to consider the possible role that could be played by this sector of power and rationalised small scale machine industries in the wider context of Indian economic development. Its empirical basis is a survey carried out by the author in the summer of 1958, of twenty five such units, selected at random and covering three centres in the Punjab. These units, most of whom, within the jurisdiction of the Factory Act, varied in size from firms representing an investment of Rs. 30,000 to firms representing investment of Rs. 1,50,000 (size being defined in terms of the amount of investment in machines and fixed equipment). The corresponding labour force employed, varied in size from 9 workers in the case of the smallest unit to 45 workers in the case of the largest unit.

Highly Dynamic

These firms, the majority of whom just manage to survive, exhibit almost all the characteristics that one associates with early capitalism. They are, in the main, highly dynamic economic quantities, with a great capacity for adaptation, a high degree of tech-

nical innovation, an impressive rate of capital formation and an entrepreneurial attitude that is grounded on thrift and is oriented towards the long run considerations of growth rather than quick short run profits. One observes, to a surprising degree, the prevalence of an industrial capitalist psychology among these small chaps, as opposed to the commercial attitudes that are more prevalent among the big ones.

In considering the issue in its most general form, it might be useful if we set out the questions for which an answer would have to be sought. In the first place, what do these industries produce and what is the range of their products? In what sense could the products be termed capital-goods and in what way could these be considered as making a significant addition to the stock of capital-goods in the economy? Secondly we would have to examine the employment potential of these industries. In other words, how much investment is required to generate a given volume of employment in this sector of the economy? Thirdly, what is the latent potential of these industries? Are they economic units in the sense that they can survive and grow on their own or do they have it to be subsidised? Fourthly, and this we consider to be the important question, what is the nature of the demand for these products? Does a market for these products exist that is non competitive with the products of large scale machine industries? Fifthly, what is the export potential of these industries? And finally, if by this stage one has established that these small machine industries have a claim to our attention, an analysis of the causes of their growth and of the impediments to their further growth, both quantitative as well as qualitative.

Wide Range of Capital Goods

The field covered by these questions is a very large one, and we do not presume in the course of this short article to essay a complete answer. Our intention is to establish two

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propositions. The first is that, in development planning the concept of small industry becomes meaningful in economic terms only if we consider it as being made up of two related sectors, the one producing capital equipment and the other utilising that equipment for the production of consumer goods and services. And the second is that, in the course discussions on development planning it is rewarding to consider small industry not so much as a technological alternative as a means for additional capital formation. It is not our intention to examine the ideological pros and cons of small scale industry.

The industries to which we have been making reference so far produce a variety of capital goods, ranging from agricultural implements to lathes. Whether or not they can be classified as capital goods may be gleaned from the following list of products, of the units surveyed. These products are: (1) Ball Bearing Brackets; (2) Circulating Pumps; (3) Band Saw Machines; (4) Planning Machines of various sizes; (5) Lathes of various sizes; (6) Log Band Mills; (7) Chaff-cutters; (8) Sugarcane Crushers; (9) Fly Presses; (10) Power Presses; (11) Power and Treadle Shearing Guillotines; (12) Trolley Machines; (13) Dog Chucks of various sizes; (14) Oil Expellers and their spare parts; (15) Paper Cutting Machines; (16) Electrically Welded Drums; (17) Vices; (18) Ploughs, Hoes, Shovels, Axes, etc.; (19) Nuts and Bolts of various sizes; (20) Fruit Juice Machines; (21) Ice-Cream Freezers; (22) Domestic and Commercial Coffee Grinders; (23) Gun Metal Pipe Fittings; (24) Die Handles; (25) Die Collets; (26) Frames for Thread Cutters; (27) Pipe Threading Dies; (28) Drill Sleeves; (29) Tap Handles; (30) Pipe Sockets; (31) Tube Well Strainers; (32) Drilling Machines of various sizes; (33) Shaping Machines; (34) Spinning Lathes; (35) Rice Hulling and Rice Polishing Machines; (36) Water Turbines; (37) Emery Paper; (38) Tea Plantation Machinery; (39) Cast-iron Pulleys; (40) Vertical and Horizontal Log Mills and (41) Grinding Machines.

Maximum Plough-back

Most of the machine tools listed above are ingenious adaptations and imitations of foreign machines, and one sees in this phenomenon a striking similarity to Japanese industrial development. Their quality, in terms of precision is not very high, though it is capable of considerable improvement, and even as it is

there exists a great demand for them. And what is particularly impressive is that none of the units that we observed, were dependent upon any form of official assistances. They have been built, out of the personal savings of their proprietors—most of whom started their career as machinist—hard work, and an almost complete reinvestment of profits (net of a bare living wage for the proprietor and his family).*

What then is the structure of these industries? Specialisation, we observed, tended to take place at two levels. Thus not only does each centre tend to specialise in the production of specific items, but further more, within each centre there occurs a horizontal disintegration of production processes, so that one firm may just make lathe frames, another may prepare its moulds and so on. By and large additions to capital stock occur not through the purchase of equipment as much as by the diversion of part of the firm's output to its capital stock, instead of its being offered for sale. Most of these firms possess the ability to, and actually do reproduce their plant and are, therefore, characterised by direct capital formation. On comparing the firms ranging in size from the Rs 30,000 unit to the Rs 1,50,000 unit, we came to the conclusion that the amount of investment needed per worker is approximately Rs. 3,000. This is a fairly high capital-labour ratio but the industries in question are machine-goods industries, and in relative terms, if one compares it with the corresponding ratio in the large scale machine goods industries, it does not appear to be particularly high.

Fully Competitive

These machine tools, as we had stated earlier, are not high precision products. But the fact that one machine is more precise than another does not necessarily mean, that from an economic point of view, it is a more worthwhile proposition. For, the degree of precision that is required of a machine is a function of the nature of the product is intended to be produced. Not all commodities require to be produced by high precision machines, and to use expensive and highly accurate machines for those that do not, is at best an economic waste. The sector that we have been making

* For an excellent socio economic survey of Punjab's small industry, see "Small Industry in a North Indian Town" by James T. Macrory, published by the Ministry of Commerce.

precision of the products depends upon the precision of these original machines such that precision breeds precision and imprecision, imprecision. Furthermore the parts that have to be precise are generally few in number. Thus in a lathe, we gathered, for obtaining precision products, the parts that have to be precise are (1) the lead screw; (2) the spindle; and (3) the gears. We see no reason why the State cannot produce these items on high precision equipment and then sell them to these firms on a no profit-no loss basis. That way a progressive upgrading of quality becomes possible.

One further point regarding technical assistance. Most of these centres have a large number foundry establishments, where smelting etc is done on the basis of the crudest trial and

error method. Surely it is not difficult to give them information on points such as these. As a matter of fact what we visualise are Small Technical Institutes staffed by sympathetic experts and possessing essential high precision equipment that these units cannot afford, and which they can use. This is what was implicit in the Soviet Machine Tractor Stations for agriculture, and that is what is implicit in the Chinese Technical Institutes for small industry. Development really, is less a function of models and pious wishes, and more a function of good organisation, good execution and a refusal to be dogmatically and snobbishly orthodox.

—(By acknowledgement to the
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SMALINDUSTRY

Small Business Plays Vital Role in U. S. Economy

The visit of the U.S. Small Industries Exhibit to Madras in September will help to dispel a widespread misconception that big business alone thrives in America.

Often forgotten in discussion of the modern American economy is the fact that big manufacture in mass production depends upon thousands of small enterprises. Thus, one automobile manufacturer brings parts from 500,000 small businesses employing from three to thirty workers.

In fact, the great majority of firms in the United States are small. There are an estimated four and half million businesses in the U. S. and three-fifths of them employ less than four persons each.

The United States Department of Commerce for many years defined small business to include the following: manufacturing plants with 100 employees or less; wholesale establishments with less than \$200,000 annual net sales retail stores, service establishments hotels, places of amusement and construction companies, with annual net sales or receipts of less than \$50,000.

To the average man, the term "small business" probably means almost any type of business that is locally owned and in which the owner is in charge of operations. Such businesses would include a family operated farm, the local bank in a small community, a grocery or drug store with a few employees, a machine shop or manufacturing plant with one or two dozen employees.

The small business is the economic seed bed from which rises the majority of new ideas, new methods and invention. The United States Patent Office records reveal that of all the patents issued between 1921 and 1948, 43 per cent went to individuals and 34.5 per cent to small and medium enterprises. Hence, from an economic viewpoint, the small business and individual enterprise which account for 77 per cent of all patents are of the highest importance.

Another outcome of the enormous growth of small business is the wide range of commodities and services available to the consumer.

If there were only a few large companies bent on efficiency and mass production there would be no question but that the range of goods and services made available would be reduced. Having a great variety of producers in competition with one another, the tendency for commodities and services to multiply in number, design and quality, is truly great.

In order to penetrate the market each producer endeavors to give high value for the consumer's money. Out of this multitudinous effort come new ideas, new products, improved raw materials and better service.

From the point of view of the individual worker, there are significant economic advantages in the existence of many small businesses in his community. They provide numerous employment opportunities and choices.

If business were confined to a few large companies, the opportunities for self-employment, self-direction and self-realization would be reduced. The man with ideas, ambition and small capital would not have an opportunity to try out his ideas and satisfy his ambitions and use his capital. Also, the young man just out of school will not have the opportunity to develop for himself a place in the economic life of the community.

A multitude of small businesses in manufacturing, service and distribution also lend color and variety to the community and they go far in assuring the preservation of independent thinking and responsibility in a community so essential in a democratic nation.

On the other hand, while a free society provides freedom of opportunity, it does not guarantee success to all who enter into business. Because success depends primarily upon judgment, managerial skill and experience, a great majority of business failures in the U. S. occur among firms less than five years old.

Since one of the primary problems of small business is inadequate management skill, methods for improving managerial knowhow are increasingly being resorted to in the United States.

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a reference to, caters to a market that demands lathes and other machine tools, but not high precision ones. This market is the one that consists predominantly of small scale consumer goods industries and services.

We thus observe a demand-supply relationship between large-scale capital-goods industries and large-scale consumer-goods industries on the one hand, and a similar relationship between small scale capital goods industries and small scale consumer goods industries on the other. Therefore, if we accept the argument—explicit in the Second Five Year Plan—that small scale consumer goods industries occupy a definitive place in the Indian economy, then by the same logic we are bound to accept the existence of small scale machine industries. They supply the equipment, for a small scale consumer goods sector that is represented, not by wooden charkhas but by small, powered and rationalised units. The market for these small machine-tools is therefore basically non-competitive with the market for high precision machine-tools, and hence a comparison on ground of precision is not valid. What is admissible, however, is a comparison on grounds of productivity, and that too, only where the two sectors overlap. We gained the impression that the small units were not at all scared of any competition that they might face from the large units.

Definite Export Potential

These industries are therefore less of a technological alternative and more of a definite sector on their own right, opening out a new market, and one must not allow considerations of technological snobbery to stand in the way of economic facts. They have, in addition, a definite export potential; firstly because they are durable capital-goods and secondly because they are cheap, and their potential markets are the underdeveloped economies of South-East Asia, Africa and the Middle East. As a matter of fact a good number of these machine-tools are already being exported by trading concerns that buy them from the small producers, put on their own trade mark and then send them out. Since the main criteria adopted by Professor Mahalanobis in distinguishing between Sector C1 and Sector C2, were the high productivity of capital and high employment potential in Sector C2, it would have been appropriate if he had made a similar break-

down of the capital-goods sector—his sector K into K1 and K2*†.

If we accept the essentials of the argument that has been stated so far, then the next question that poses itself would relate to the type of measures that would have to be taken to promote the growth of the small machine industries. The problems of these industries, resolve themselves into two major difficulties, the first being a shortage of working capital and the second being the need for technical assistance. The shortage of working capital means that the stamina of these firms in the face of a slackening of demand is very low indeed. If they are lucky, they may have customers who advance them cash on account. Generally, however, this is not the case and when the slightest fluctuation occurs, many units—otherwise sound—disappear. Most of them refuse to consider the State Bank which, as one entrepreneur put it, is the citadel of orthodox high finance, where sound conservative banking principles in the truest British tradition are sought to be applied to these unfortunates. Red tapism, bureaucracy and the arrogance of officialdom all serve to keep these small entrepreneurs well away from the State Bank. Much the same is true of the small Industries Department, where one observed not so much the lack of ideas as the inability to execute what ideas are already there on paper. We would suggest in this connection the setting up of a marketing organisation for these machine tools somewhat along the lines of what is being done for Khadi products.

Technical Requirements

When one examines their need for technical advice, certain interesting facts emerge. Of these there are two which we think merit attention. The first is, that every such unit can be reduced in terms of its machine-stock to the bare minimum that is necessary for production to take place. These essential machines are: (1) a lathe machine; (2) a shaping machine; (3) a grinding machine and (4) a drilling machine. With these four, the firm can not only produce for the market, it can also reproduce its capital-equipment. The

* "The approach of Operational Research to Planning in India".

† I am indebted to Professor K. N. Raj of the Delhi School of Economics who first suggested what I was struggling to express.

Government agencies help businessmen acquire training in administrative management, training which so many time means the differences between business success and business failure.

For instance, the Small Business Administration has helped nearly 13,500 small businessmen and women obtain training in management in 155 co-operating educational institution under a program first launched in 1954.

"The courses sponsored by the Small Business Administration are still a relatively new approach to the problems of small business concerns", says SBA Administrator Wendell B. Barnes. "But the enthusiastic response of businessmen and educator in the United States indicates that they are a practical and effective form of assistance."

American businessmen and women have registered for the SBA-sponsored management courses in increasing numbers every year since they were started. In the school year ended June 1958, more than 4,700 small business executives attended 155 management courses in 97 leading educational institutions. The

SBA-sponsored courses are generally evening sessions conducted for eight weeks, which cover many different types of management functions.

Under its technical assistance program, the International Co-operation Administration of the U. S. Government is sponsoring management training courses in a number of foreign countries as well. This ICA program is particularly active in countries of the newly developing areas of the world such as India, Iran, Turkey, Jordan, Iraq, Pakistan and Indonesia.

In the American economy, big business and Small business are generally not directly complementary. Many of the big business establishments are primarily assemblers of the countless products and part of small concerns.

In brief, small business has certain functions to perform in which it has advantages over larger-scale operations and conversely, there are other areas of production where large-scale units have definite advantages. And the ultimate arbiter of the destinies of either is the American consumer.

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words are faint"

* * *

It is always claimed by progressive intelligentia that our India is now in the midst of far-reaching economic, political, social, religious and spiritual changes. But in fact, all countries in the world are in the same condition of change. The difference may be that in other countries the changes are taking place step by step progressively either for considered good or bad, depending on their individualistic ideologies. Whereas in India the hyper enthusiastic top elderly leaders who fought brave battles in the struggle for Independence are racing against time to achieve some imaginary objectives, for the so-called common good of the liberated independent public, during the short balance of their life times. They are impatient to understand the reasoning behind the arguments put forth by the equally intelligent and well-meaning persons in opposition. They are keeping their heads above the high clouds looking on the top of the clouds the glorious panorama but blind to the scared public on the firm earth with throbbing hearts anticipating the impending evil from the hovering dark clouds, the intensity of which is seen clearer below than above. The privileged aristocratic leaders who already realised their greatness themselves and who are drunk with power and hero-worship from persons of mediocre intelligence, look down upon the public sympathetically with assumed airs to uplift them and do good to them. They consider themselves the chosen men of God sent specially by Him to socially and economically uplift the degenerated public, who are mul-

tiplying themselves without sense of shame or responsibility and without the specific sanction of the Almighty or the all-mighty of the land called State, the sovereignty of which is grabbed by the few in the name of the teeming gullible millions who bartered away their emblem of power and token of sovereignty for a nominal consideration for cash or kind without future thoughts of consequences.

In the light of the present set-up of the world, the countries and their respective Governments, and the helpless citizens and the doubtful existence of the super-natural Omnipotent and Omnipresent Almighty God whose actions are always inscrutable and irrational to the living public, let us imagine the 'Ramarajya' days, the puranic and mythologic days and even the vedic times to which 'horrid hellish days' our present leaders probably abhor to lead the public in these secular socialistic-patterns-of-Society-formation days. What was considered bad to a certain section of society in those good old days is also bad in these days. Rama of those days may be Ravana of these days. 'Dharmaraja' of those days may be 'Duryodhana' of these days. Why go to those thousands of years to understand the simple life now pervading whether it be by the light of the absolute rationalism of the science and mathematics or the darkness of the mythical idealistic and spiritualistic metaphysics of the older saints? Consider the pre-first war, the pre-second war and the present times and find out whether there is an iota of change in the common outlook of the ruled or the rulers. The causes of the wars are still there now. The progressive civilization appears to be as retrograde as before to the really sincere thinking public. The Stalins and Hitlers and Mussolinis replaced the previous war criminals. Now we know who are replacing the pre-second war criminals, the pre-independent rulers of the slave countries, the pre-enlightened capitalists of the economically down-trodden and the under-developed

explanation of conical shapes, one can very imagine the line at infinity to be the Almighty God and all of us as normal 'Conical', not comical, figures in different planes.

(7) The real necessity in present life is not to struggle for individual benefit or happiness but to struggle for a life that makes as many as possible happier than what they are. This can be done only by practising ethical way of life with character.

Let not the cohesion of joint family with God give place to the adhesion of doubtful co-operators working for the uplift of non-co-operators in the depraved Society devoid of God-hood.

"For Forms of Government let fools contest
Whatever is best administered, is best"
"Political rights however rightly framed
will not elevate a people individually
depraved"

* * *

"Hail, social life! into thy pleasing bounds"
Again I come to pay the common stock
My share of service, and, in glad return
To taste thy comforts, thy protected joys."

* * *

[The idea might be that a dose of Cynicism
may do good to the over-enthusiastic optimists.
—Ed.]

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Short Story:

Bleedings from the Heart

[The characters in this story are all imaginary and do not particularly or imaginatively refer to any specific individual or company]

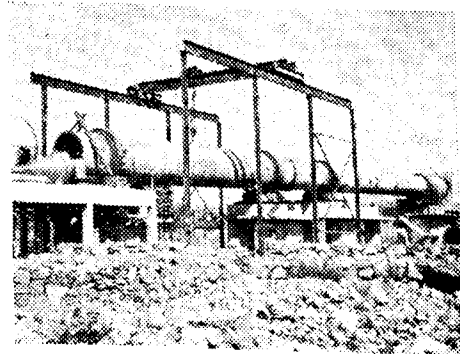
— Smaliman.

I was a Stenographer under an irresponsible, irritating, uneducated merchant who has neither the magnanimity to pay me more and keep the wolf off my threshold nor the intelligence or mind to educate me in the lines of business to find better prospects in life. I could take his dictation in twice the longest of long hands but still be not satisfied with the expression or the contents. But still the business is done. Profits must have been earned though not clearly visible to the employees. Life was discouraging and unbearable, not so much for want of money but for an opportunity to express an imaginary greatness in me which has been growing at my nerves through my wife who always sees red in the neighbour's apparant affluence.

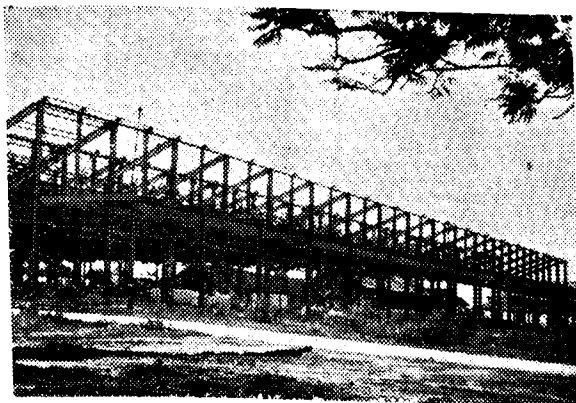
The inevitable has happened. I resigned and got my fifty precious chips for the month to go and enough dead-time available to chew the thoughts of starting a Small Scale Industry. My wife was constantly encouraging me as she had a windfall from the death of a grand-ma of a couple of thousands and a good omen of a growing child in her body, substantiating my being employed as a husband to her by all the rituals and paraphernalia of a sacred marriage, supposed to have been made in heaven but in reality a hell on earth. Woman, thou art misery! Nagging is her special forte. Termagancy is a natural jewel in her character.

Soliciting with tears or entreating with lust or bargaining on barter system or playing on my weakness are her trump cards to win the game with me. But she is a lovable young woman who has All-in-one Lakshmi, Saraswathi, Parvathi, Chandika, Mandodary, Hidimbi, and Sikhandi, good enough for a combination name of a company.

So also is my choice of Small Scale Industry. The slogan is a good one. 'To create more employment' including, ofcourse, myself. For every Rs. 1,000 invested one atleast should preferably be employed. To start with, my wife has two thousand rupees but even though she has all the qualifications, probably better than me, she has not the necessary standing as yet in society. It is to get that, I have to become instrumental and take up yet another unpleasant employment under the same termagant employer. Having not been qualified to any special trade or profession except 'Shorthand' I allowed my imagination to go riot and travel sky-high into realms of phenoyl, inks, soaps, perfumes, Hair oils, all-cure medicines, tin cans, kitchen-ware, house-hold hardware, ready-made garments, appalam and pickles, radios domestic appliances electric accessories and motors, furit-canning, barbed wire and wire products, transformers, light-fittings, stainless steel ware and general Engineering workshops and foundries. That was the unfortunate day when my wife purchased from a street vendor



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countries, the precursors of the continuous revolutions for constant changes either by force or by Satyagraha.

Human nature being what it is, if we have absolute trust in and understanding of the super-natural force called 'God' of any name or form or power or energy imagined in the light of each individualistic understanding, there are certain basic facts to be realised by all hands mathematically, spiritually, historically and by experience of the law of nature. They are, that energy in all forms is constant, motive life-force that can be created or existing in all forms is constant. Forces and Energy being constant effects are constant. The arithmetical sums of all is also constant. The understanding will be comprehensive if the selected hypotheses are with respect to animate and inanimate objects of the universe. The effects are logically consequential to causes in whatever form they may be. The nett happiness is also constant as the nett misery is. Fatalism is as real as the concrete visible results of an experiment in Laboratory. The deductions or conclusions vary. Hence the doubts and unknown quantities are still persisting. This is the main cause of perpetual life even though individual life is mortal and temporary. If atomic energy is released, equivalent other energies are suppressed. If the 'mind' cannot function and act, the materials will become the tools and instruments to act. If forests and woods are cut and raised to the ground, the birds and pests may increase. If they also are destroyed the humanity may increase by leaps and bounds un-understandably. If humanity also is reduced by massacres in wars or by family planning, the disease-borne bacteria may increase. If these also are successfully killed individually, the kingdoms under sea and above in the air may again come up. This constant struggle appears only to be the purpose in life to keep it ever-lasting. For this, our vast universe is not considered sufficient. The peep into the other worlds is in progress. One's own life gives enough

pleasures and head-aches but still curiosity and misplaced energy constantly keeps men poking into others' affairs, all for the good of others!

Now the conclusions of the above hallucinations are patently visible, atleast to me. They are;

(1) There is nothing like absolute suffering.

(2) There is no need for sympathy for a living being, whether it be an animal, bird or human-being or tree.

(3) There is nothing like solving the problems of human beings and any attempt will only create more.

(4) Employed or unemployed, happy or miserable, large or small Scale industry, profit or loss, Haves or have-nots, capitalists or socialists or communists, Theistic or atheistic, God-possessed or devil-possessed, palace or cottage, Atom-bomb struck or scorpion bitten, Railway accident or hand-cart run-over, ruler or the ruled, peasant or an economist, Scientist or a mystic, warrior or a satyagrahi, old-man or youth, Teacher or the taught, higher caste or lower caste, Doctor or the patient, father or son, chaste or unchaste, and finally the imagined God or his follower-disciple, are all relative terms, carrying no absolute meaning for all times and for all circumstances.

(5) The God is like the line at infinity which takes different positions as vanishing lines in different planes to transform straight lines, circles, ellipses, parabolas and hyperbolas from one plane to other innumerable planes in this mathematically set universe which has a rhythm of its own in its progress to its ultimate objective, achieved by constant projections of the conics from one plane to another.

(6) The 'karma' theory of life is exactly akin to the above vanishing line theory of the projective geometry. If imaginary points like W & W' could be imagined for proper

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a tin can at Rs. 3/- and felt she was cheated. Immediately, finding that I was hanging heavy on her without work or leisure, she packed me off to the market to collect all the statistics regarding the tin can industry. Unfortunately the statistics proved on paper that there is 100% profit on straight business and 300% profit on crooked business of selling import licences and other benefits at premium without processing the raw material and that, taking advantage of all the amenities provided to Small Scale Industrialists by Government and Banks, about Rs. 1000 can be earned per month instead of the till-then-deserving Rs. 50 per month. That is how the Industry was selected and the life-partners have gone ahead as business-partners, one working while the other is sleeping but nagging.

Money is made better than it is earned in a very short time. The standard of living increased in my house though not in my employees' houses. Employees, few and far between, have gone to the lower rung of the ladder. My intelligence and capacity increased with the progress of business and rising status as employer. The wheel of fate is taking a turn. The money is rolling alright. The commitments are increasing. Money is being spent before it is actually accounted for. Life is pleasant to count the chicken before they are hatched. It is a bug-bear to put down the income and expenditure. It is a pleasure to be pen-happy with signatures on cheque-leaves. Controls on loop-holes in labour, lethargy and purchase of materials are tightened. Naye paise are not allowed to be lost without my knowledge. I adapted the shoes of my terma-

gant nagging wife for those of employer. Before the happiness is fully experienced hovering-dark-clouds are seen in the yonder. The creditors started frowning and seem to wait at street corners to way-lay me. The labour got tutored to be extra-intelligent and started imagining profits from my standard of living. This has become a night-mare. There is no peace of mind. Every day's life has become a perpetual struggle for a triple crown, one to get raw materials cringing with wringing hands all and sundry, another to get the orders and the third to execute the orders. Crowning all these is the headache of collecting the dues and paying the creditors and banks overdraft-accounts. Added to this maddening fast-life hurry and turmoil involving rupees and naye paise for our grand paid-up capital of two lakhs naye paise (thanks to the new denomination to provide added glory of lakhs) my memsaheb's needs are mounting sky-scraper high leaving me in a deep infernal pit struggling to make up the difference. The nerves have become so tight that I started imagining what happens if they give way and snap. This process has further tightened the flimsy nerves which finally gave up their resistance-That is all-A loud scream and fall.

My beloved wife picked me up with blood streaking down the temple-Her glass bangles on the right hand are broken and are glistening on the bed against rays of morning sun-that too on Friday! Alas, a bad omen in my unemployed days! I asked for the tin-can to go to....

[and ruminate on the unpleasant dream probably! Ed.]



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were consulted on designs for tapestries and with the most skilled needlewomen in the world to work for them, the organisation went into wholesale production.

The output today is sold in many lands. Her Late Majesty Queen Mary sent tapestry work—this was before she had finished her famous carpet—and quilting came from miners' wives.

Experts Scrutinize Samples

A staff of about 50 women deal with the knitting and tapestry in the organisation headquarters which are above those of the Women's Voluntary Services, in London. There are about 4,500 knitters on their books and they are the best in Britain. It is not easy to get work accepted by Women's Home Industries—the samples submitted are scrutinized by a panel of experts. Even when each garment which has been ordered is received, a judge ensures that every detail is perfect. Every knitter is paid a rate for each knitted ounce, taking into consideration the intricacy of design.

Most of the designing is done at headquarters and it takes three months to get a new model circulated. Any order accepted is completed in two months. The latest model in their showroom combine artistry with elegance. Attention is paid to the line of each garment: the technique of knitting "on the cross" is used to ensure a perfect fit.

There is the first knitted dress sponsored by the organisation—an ideal garment for air travellers since it weighs under seven ounces. Its skirt has been knitted with an intricate lace

design and looks like a cobweb—it is mounted on fine net and there is a lace cape to complete it. Mrs. Roosevelt admired this model when she was in London recently and placed the first order. The first suit produced by Women's Home Industries was made with knitted pleats which will never lose their shape.

Knitted bed-jackets are considered so glamorous by some women abroad that they wear them as evening coats. Scottish workers excel in knitting tartans—any plaid can be copied and the sweaters and waistcoats they make are so fine that they look like woven materials.

Tapestry Work

Another busy department of Women's Home industries is devoted to tapestry work. Orders are taken for any article of this category—from gay spectacle-cases to rugs which are works of art. Or the work is prepared for clients to do themselves in their own homes. Artists prepare the designs and the staff transfer them to the canvas and sometimes paint them so that with skilfully selected wools, the workers receive full guidance. The tapestry workers each complete so many squares of a rug which is then finished at headquarters.

One of the loveliest smaller rugs being made is designed with arum and madonna lilies on a lime ground. Another—the Cluny rug—composed of 77 squares enclosed in a decorated border, shows predominating colours of china blue, coral and beige. Each square is worked with a different design: rabbits, a squirrel, greyhounds and birds are interspersed between the floral squares and the whole has the

SMALINDUSTRY

atmosphere of a medieval pastoral scene.

The kettle holder rug is a replica of a Victorian one. It is composed of 86 squares, framed in a floral border. Each square is six inches by five inches and they are all worked round a central decorative motif which is the size of 12 squares.

The colouring on each square is different and has an amusing design. Here one sees a ruined abbey or a

"stately home of England": there, the Prince of Wales' feathers or a large seashell. There are a cat and a dog, resembling the china figure made of them at the period: dainty Dresden china figures are placed between romantic little posies. Faithful mirror of the tastes and fashions of mid-Victorian times, the rug even shows the outline of the Crystal Palace, the great glass building which was removed to the outskirts of London after it had housed the Great Exhibition in Hyde Park in 1851.



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Screw Industry Grows Steadily

Enough Raw Material Not Available

The wood screw industry in India has been making steady progress. Although the industry was first developed during war-time in the Amritsar area in the Punjab, it subsequently expanded and grew in other parts of the country also, such as U.P., W. Bengal, Bombay and Madras. There are at present 57 units, both big and small, all over the country. The organised manufacturers as sponsored by the Development Wing are only 26. The estimated total production of wood screws in 1958 is of the order of 8.1 million gross, as against no more than 703,000 gross in 1950. Similarly, the production of machine screws has gone up from 160 thousand gross in 1950 to two million in 1957. According to Mr. D. V. Virmani, President, Screw Manufacturers Association the current rate of production appears to be in excess of the demand, but this may prove to be a passing phase in view of the rapid growth in construction activities in the country. In his speech at the annual meeting of the Association held at New Delhi a fortnight ago, Mr. Virmani dealt with the industry's progress and its problems. Although this is a small industry, it is a vital one, for wood screws are indispensable to the economic progress of a country.

Accordingly, a reference to the points made by Mr. Virmani will be useful.

The Tariff Commission had estimated the annual rated capacity (on single-shift basis) of the units manufacturing wood screws at 6.9 million gross (3,450 tons) and 13.8 million gross (6,900 tons) on two-shift basis. Mr. Virmani considered this as a very modest estimate as the capacity of ten out of nineteen units on the Central list alone account for 5.76 million gross (2,880 tons). Besides, there are many small units, getting their quota of raw materials from the State Government, which have not been included in the estimate of the Tariff Commission. Mr. Virmani estimated the domestic demand for wood screws at 3,500 tons. He was, therefore, of the view that there was hardly any scope for further expansion of the industry at present. In any case, he urged the Government to register all unlicensed units with the Development Wing so that one could get a precise picture of the capacity and production of screw industry.

The figures given below shows at a glance the industry's trend of production during the last eight years.

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Women's Home Handicraft Help Britain's Export Trade

Model Of Artistry And Elegance

By

Kathleen Courlander

The needlework that great-grand-mother did is often the most treasured heirloom of her descendants. What justifiable pride they feel when connoisseurs admire its fine stitches and commend the patience and industry of the worker!

Britain's countrywomen have always been famed for the high quality of their handicrafts and traditional skill appears in their modern work. In different parts of the land they are noted for special kinds of handicrafts. Fine lace is still produced, for example, in cottage homes in the counties of Buckinghamshire and Devonshire. Quilting is characteristic of Wales and the North of England, where it is a speciality of Durham miners' wives.

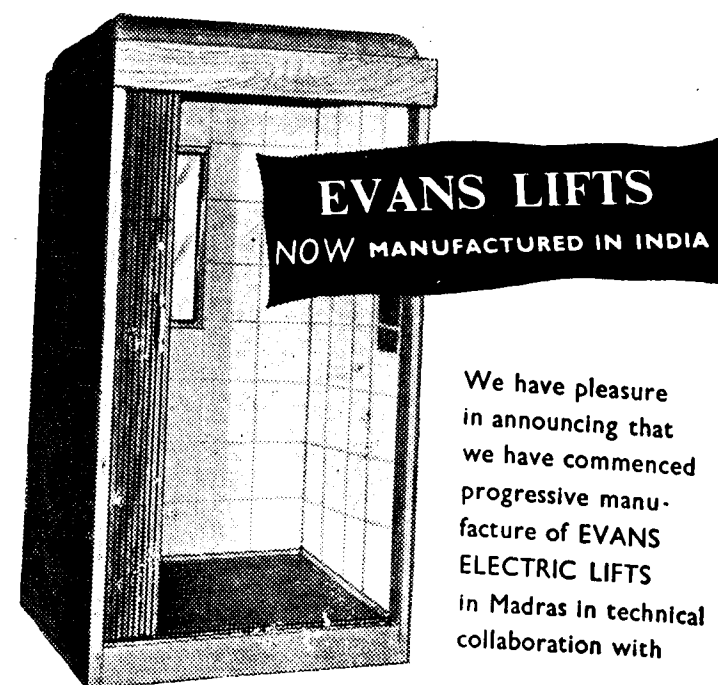
Although both Welsh and Durham countrywomen excel in this art of making raised patterns on textiles, the designs they employ are different so that experts can identify the place of origin from the work. Smocking is another old handicraft which dates from the days when smocks were worn by English countrymen. The design on a smocked garment varies according to the wearer's occupation—ploughman, shepherd and dairy-man all wore

different patterns. Those who wish to smock today usually decorate children's clothes in this way.

National Organisation

Above all, Britain's countrywomen are acknowledged by many to be the champion knitters of the world. It was this understanding of the range and quality of home handicrafts which some years ago led a cottage woman to write a significant letter to the Dowager Lady Reading, Chairman of the Women's Voluntary Services. This correspondent was a first-class knitter and she lived in the English country of Yorkshire where the knitters have always been noted for the textile decoration they put into fishermen's jerseys. The Yorkshire knitter suggested that Britain's home workers should sell their handicrafts overseas.

As the result of this suggestion, Women's Home Industries, Limited, was launched in September, 1947, to produce and export work which could be done by British women in their homes. All Britain was searched by the organisers to find the finest materials to be knitted, smocked and quilted; museums and modern artists



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1953			2,571.6
1954			5,197.2
1955			6,662.4
1956			7,502.4
1957			8,143.2

1958 (upto September) 7,502.4

The foregoing figures represent the production of 19 units which are on the Central list.

There is no doubt that the demand for screws will grow with the development of the country. The second Plan has laid emphasis on the development of heavy engineering industries, machine building industries and building and construction activities. The planners have also realised the need for procuring a wide range of requirements during the Plan from indigenous sources. This will naturally enhance the scope for development of the screw industry in the years to come. In order to enable the screw industry to keep pace with the growing demand, it is imperative that it should be assured of a sufficient and regular supply of steel wire, the principal raw material. Mr. Virmani said that the industry had been getting its requirements of raw materials just sufficient for only one-shift working. He, therefore, wanted the Government to consider how far it would be possible and practicable to allot materials for two-shift working to the industry, as that alone would enable

the industry to operate on a sound and economical basis and consolidate its position. He complained that the Indian Steel and Wire Products Ltd., the only indigenous manufacture of steel wire, is not in a position to provide, in time, the industry with wire in sizes and quantities with the specific chemical composition. This factory, according to him, is in a position to supply only 50 per cent of the industry's requirements of wire. The screw manufacturers had, therefore no choice but to depend on imports. Here again, the manufacturers were not able to get licenses for sufficient quantities of raw materials. He pointed out that many units were still receiving licences on the basis of their old capacity though they had expanded it. He, there, fore, pleaded for an early reassessment of the capacity in all the units engaged in the manufacture of screws.

Another handicap of screw manufacturers was the difficulty in getting import licences. Explaining it, Mr. Virmani observed as follows :

"Recently the Government has announced their new import policy, according to which the screw manufacturers are required to submit indents for importing steel wire through Sponsoring Authorities to the Iron and Steel Control. This would in effect mean that the Government would import materials on their own account by calling for global tenders and distribute the same to the manufacturers. Such a procedure, I consider,

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is hardly fair to the screw industry as this would entail tremendous hardship. Firstly, import by Government will entail delay and this would adversely affect the production and employment in the industry. Secondly, the particular quality of steel, with required specific chemical composition and gauges which are highly essential for the manufacture of screws, can hardly be guaranteed through bulk imports. Another difficulty that would arise is that, in case Government do not allow the required quality and quantity of steel wire to the screw industry, even after accepting indents, then the industry will be placed in a very precarious condition. I would therefore, suggest that screw manufacturers should be allowed to place the indents for their requirements of wire through Government on the producers in foreign countries and open letter of credit in favour of Government."

It is gratifying to heart that, as in the case of a good number of engineering goods, exports of screws also have been going up. The total value of exports of wood screws has increased from no more than Rs. 7,200 in 1957 to Rs. 71,700 in 1958. The leading buyers are in British East Africa and Aden. The reports of the Engineering Export Promotion Council aver that there is good scope for stepping up exports of wood screws, provided the prices are competitive. The biggest competitors are West European countries and China. Mr. Virmani advised the exporters of screws to give a high percentage of Commission over the listed prices to importers. It may be noted that the Reserve Bank of India has permitted the exporters to give the Commission necessary for securing orders from overseas countries.



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Programme for Development of Industrial Co-operatives

Considerable emphasis has been placed on the organisation of industrial co-operatives as a means of promoting village and small-scale industries. Concerted measures by the Central and State Governments in pursuance of this policy have led to the formation of a number of industrial co-operative societies.

The Government has introduced various schemes for providing technical, marketing, financial and organisational assistance to small industrial units including industrial co-operatives.

A programme has been envisaged with the object of making co-ordinated effort in developing selected industrial co-operative societies by providing them various facilities offered by the governmental and other organisations. To give a start to this programme a hundred co-operative societies have been selected (at the rate of about six in each State) for development.

The societies selected under this programme are either of the workshop type where production is carried on in a common workshop by workers who are also members and where the workshop building, tools and equipment, raw materials and finished goods, are owned by the society that pays the workers on monthly or piece goods basis.

Such societies that own a workshop but may be passing on the risks to the members by effecting a book sale of the raw materials or allowing the

members to purchase their own raw materials from the open market, charging them a rental for use of the tools and equipment and purchasing back acceptable finished products, or keep the finished products for sales on consignment basis, or allow the members to effect their own sales directly in the market, are also included under the programme.

The third category which is covered under the programme includes those societies that provide other common facilities like supply of raw materials, provision of credit, marketing etc.

When selecting these societies for development, first preference is given to those where either the society or its members are producing goods of the type which the National Small Industries Corporation can either sell to the Government Departments or through its depots or export to other countries. Another consideration, that is kept in view is that the society or its members are engaged in the manufacture of goods for which technical assistance is readily and easily available from the Small Industries Service Institutes.

After selection of these societies is over, an examination is made of their present activities, financial position, machinery and equipment, production techniques, technical ability of its members and staff, quality of the finished products and efficiency in marketing, so that a definite programme of development is contemplated.

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The object of this developmental programme is to ensure that the society produces quality goods at reasonable cost of production which are saleable. The programme also aims at improving the financial condition of the society so that ultimately it can stand on its own legs. It further envisages that all the members gradually get full employment and that they increase their co-operative activities till they turn into a co-operative workshop.

For the effective implementation of this development programme the various organisations offering different types of facilities put their might. The Small Industries Service Institutes, through the Industrial Extension Service, provide assistance to the societies as well as their individual members in reducing their production costs, successfully utilising available raw materials, improving the quality of the goods and bringing it to the standard patronised by the market, increasing the production of such goods that are readily marketable, and effecting improvements in the production techniques, management and skill of the workers.

The National Small Industries Corporation helps these societies by supplying machinery on hire-purchase and also by providing them facilities in marketing of their products.

The State Directors of Industries assist the societies by providing them reasonable quantity of controlled raw materials, workshop space in Industrial Estates, training facilities for the workers in technical training institutions, use of common facilities workshops, and Government loans under liberalised terms and conditions.

The Registrars of Co-operative Societies in the States provide assis-

tance by encouraging co-operative banks and making the co-operative institutes and other organisations interested in the societies for undertaking programmes of co-operative education.

For better co-ordination between State Directors of Industries, Registrar of Co-operative Societies, Small Industries Service Institutes, National Small Industries Corporation, etc., committees with representatives from all these organisations are being set up in the various States.

In pursuance of the recommendation of the Small-Scale Industries Board, that State Governments should set up at least 50 new industrial cooperatives in each State by the end of 1958-59, steps have already been taken by the States for setting up a larger number of industrial co-operatives.

[Courtesy: Bulletin of Small Industries.]

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Company Scholarship Plan Benefits Sons of Employees

America's need for scientists, engineers and specialists of all kinds continues to multiply with the increasing complexity of industry's tools and production techniques.

In order to maintain a constant flow of young people into the ranks of their employees, many of the nation's employers of labour have initiated a variety of programmes to expand opportunities for higher education.

In the case of the large corporations, these programmes of aid to education often involve expenditures of a million dollars or more annually. Usually, they include direct grants to colleges and universities for scholarships, fellowships and special research projects.

The smaller company, on a more modest scale, generally sets up a special fund to provide a fixed number of undergraduate scholarships each year. These are awarded to deserving secondary school graduates to encourage them to take college courses leading to scientific and engineering careers.

In some cases the programme is given an industrial relations slant by limiting the awards to the sons of employees. An example of this type is the scholarship programme established in 1956 at the Stromberg-Carlson Company of Rochester, New York, a division of the General Dynamics Corporation.

The stated purpose of the programme is "to assist sons of employees of Stromberg-Carlson to obtain undergraduate training in engineering or an allied science."

At present, it makes available two scholarship awards annually for studies at an accredited college or university. Award winners are free to select the institution and to pursue any standard course leading to a bachelor's degree in engineering, physics, chemistry or mathematics, provided it does not exceed five years.

Each scholarship provides for the payment of tuition costs to the college, and for \$250 a year to be paid by the corporation to the scholarship holder. In addition, in the case of privately endowed colleges, the corporation undertakes to "make an unrestricted gift to the institution."

An employee's son or stepson is eligible to apply for a scholarship if his parent is a regular employee of the company on an hourly-rated job and has completed five years of service. Where the parent-employee is on a salaried job, the base salary must not exceed £10,000 per year.

Applicants for the scholarships are required to be enrolled in or to have completed a regular college preparatory course meeting the special requirements for admission to accredited

schools of engineering, and including the study of elementary and intermediate algebra, plane geometry, trigonometry or solid geometry, physics or chemistry, and four years of English.

Nomination for the scholarship awards are made by a scholarship committee on the basis of scholastic standing and leadership qualities. The awards impose no obligations on the recipients to work for the corporation, nor are the winners promised employment. However, the corporation expresses the hope that "many scholarship holders, upon completion of their college courses, may consider employment with one of its divisions."

In 1958, two Rochester secondary school seniors—Harry Green and Lynn Rowell—were winners of the Stromberg-Carlson Scholarships.

Green, an outstanding student, is planning a career in chemical engineering. His father is in charge of the metallurgy group in the company's materials engineering department.

Rowell, who has majored in science and mathematics, has chosen electrical engineering for his advanced studies. His father is a group leader in the coil winding department at Stromberg-Carlson.

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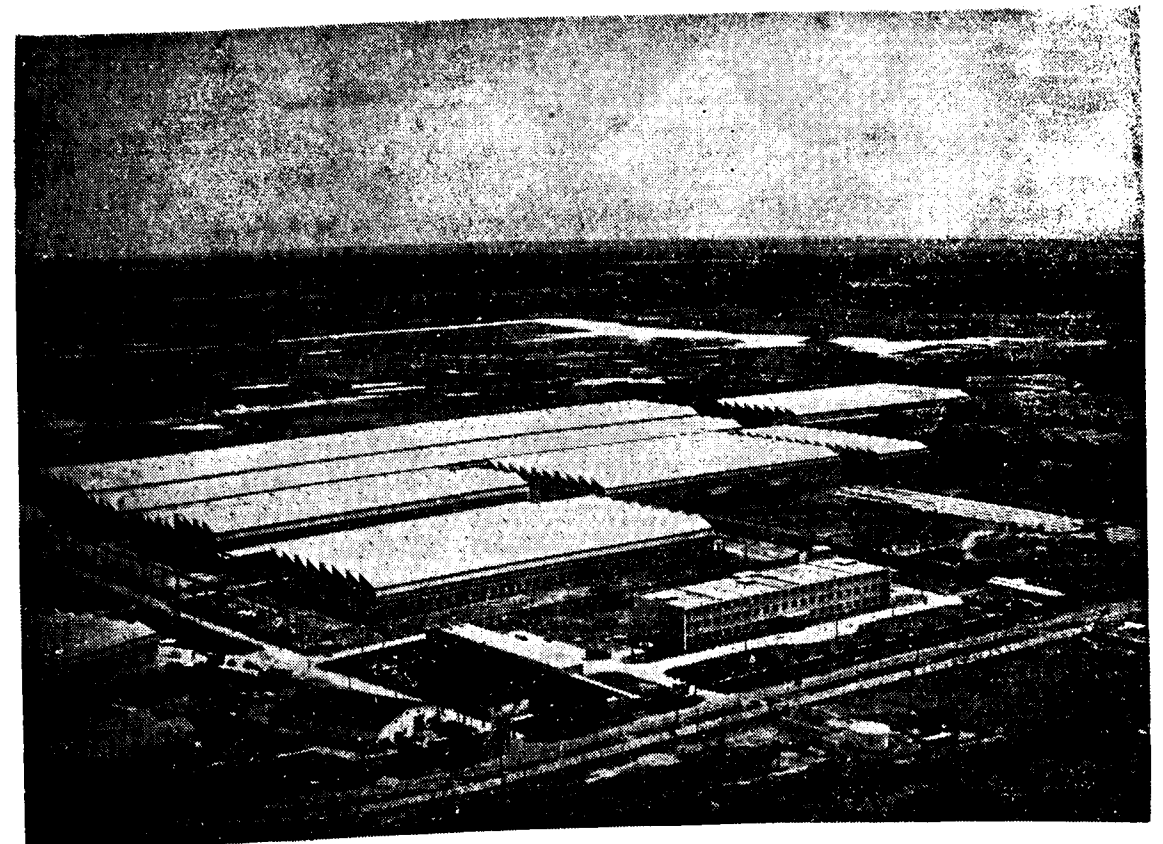
Integral Coach Factory: Its Performance in the last Three Years

K. Swarup, Chief Mechanical Engineer

The Integral Coach Factory was established at a cost of Rs. 7.35 crores in the course of the First Five-Year Plan to meet the requirements of Broad Gauge coaching stock of the Indian Railways. The capacity of the Factory was to be 350 shells for coaches per year on single shift working.

The production in the Factory was inaugurated by the Prime Minister on the 2nd October, 1955. Since then the Factory has made rapid strides. The First Five-year Plan was mostly

directed towards the increase in food production and development of river valley projects. In the core of the Second Five Year Plan, the development of heavy industries and Railways were included. The economic growth in the country has resulted in the large increase in passenger and goods traffic on the railways. This naturally resulted in larger stocks of passenger and goods stock having to be maintained, throwing additional load on the existing railway workshops. The original intention was that the I. C. F. should produce only



The Integral Coach Factory, specially laid out to ensure a smooth production flow, has modern handling facilities and provides good working conditions to the staff.



A staff colony, with modern sanitary facilities, is complete in itself with a School, Park, Post Office and Co-operative Stores.

a landmark in the progress of the Integral Coach Factory and now we are in a position to design other classes of coaches, in light-weight construction, on our own. The design of a first class coach is on hand and very soon we will be designing Postal Vans and Air Conditioned coaches in light-weight construction.

Trained Personnel

The Technical School attached to the Factory has produced the necessary trained personnel required for the increased production from the shell Factory. It is now busy training men required for the Second Shift and for the furnishing unit. Courses have also been organised in the School for training Apprentice Mechanics, who, after their successful completion of apprenticeship, are absorbed in the various supervisory jobs in the shops. Refresher courses are being organised in the School and in the Shops to fit suitable and outstanding workmen in the supervisory and higher supervisory grades, more or less on the same lines

as the "Training Within Industry" scheme, so popular in the Western countries.

Indigenous Content of the Coach

The raw materials, fittings etc., in a shell cost Rs. 58,000/-. Out of this, in the first few batches, raw materials worth Rs. 37,000/- had to be imported. This included steel of requisite weldable quality costing Rs. 19,000/-, the balance being other semi-finished and finished components, castings, etc. Vigorous efforts have led to the location and development of indigenous capacity for the various items originally imported and it has been possible to bring down the imported content by as much as Rs. 10,000/-. The three rolling mills which will be going into production shortly have been contacted to meet our state requirements and from the enquiries so far made no difficulty is anticipated to replace the imported steel by the products from these steel mills. It is expected that in the near future, with the

exception of roller bearings, the coaches will be made from fully indigenous material.

Human Relationship

We are a very happy well-knit family dedicated to the sole task of producing more and more coaches to help in the industrial growth of our country, and this patriotic spirit which is imbued in all the staff has led us to establish good human relationship. There is no class distinction in the Factory, and officers, supervisors, and men mix freely to help each other, not only in their day to day tasks in the factory but also in their general well-being. These are fostered by various means. Besides a good welfare organisation that exists to look after the welfare of the men, we have established a guardianship scheme by which each supervisor in the shops takes charge of 25 to 30 men and looks after their grievances, training, behaviour and discipline. They also go out on picnics once or twice a month, which enables them to come together and discuss their problems informally. The Works Managers along with the Welfare Officer also make a point of meeting the staff in the shops frequently to listen to their grievances and to redress them as far as possible.

A Staff Council also has been formed in which elected representatives of different categories of staff represent the grievances and suggest ways and means of improving the working conditions and production.

A 'Suggestions & Inventions Committee' invites and screens suggestions put forward by the staff. This Suggestions Committee has in the last three years received over 500 suggestions, and prizes amounting to Rs. 1700/- have been awarded to the staff for suggestions likely to improve methods or result in savings.

Besides, a Workers' Canteen is provided which supplies wholesome food to employees at nominal rate and serves them snacks at their places of work.

Staff Colony

A colony with double-storeyed flats has been constructed for housing the essential staff of the Factory. The colony, situated about 3/4 mile from the Factory, contains 438 quarters of various types which have been designed on the most modern lines. All quarters, including those for the lowest paid workers, have electrical and sanitary fittings. The township is provided with filtered water supply, complete underground drainage and good roads. A

children's park and a playground have also been provided. The colony has an Institute attached for the recreation of the staff, a Primary School and a Co-operative Stores.

Staff Benefit Fund

A Staff Benefit Fund has been formed similar to those existing on the railways. A contribution of Rs. 4/- per head or a minimum of Rs. 20,000/- is made to this Staff Benefit Fund every year to encourage the various staff welfare activities. This is disbursed as follows:-

(i) Education of staff and their children	30%
(ii) Recreation and amusement	30%
(iii) Relief of distress among families of employees.	15%
(iv) Schemes for sickness.	10%
(v) Miscellaneous.	15%

Besides these, a well equipped Railway Hospital is available for the I. C. F. employees. Holiday homes have also been organised where staff can go and enjoy a cheap holiday. Besides, special grants are received from the Railway Board for celebration of Independence and Republic Days and also the Railway Week in April every year.

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coach shells, and that the shells should be furnished in the different railway workshops. In 1956, it was found that the railway workshops would not be able to undertake the furnishing work. It was, therefore, decided that during the Second Five-Year Plan, the I. C. F. should be expanded

- (a) to undertake the furnishing of shells by establishing a furnishing annexe at a cost of Rs. 3.69 crores;
- (b) to step up production, working a second shift, at a cost of about Rs. 90 lakhs..

On account of foreign exchange difficulties, work could not be progressed as originally anticipated, but the difficulties are gradually being overcome. The Second Shift has been sanctioned and sanction for the furnishing annexe would be forthcoming.

Performance of I.C.F.

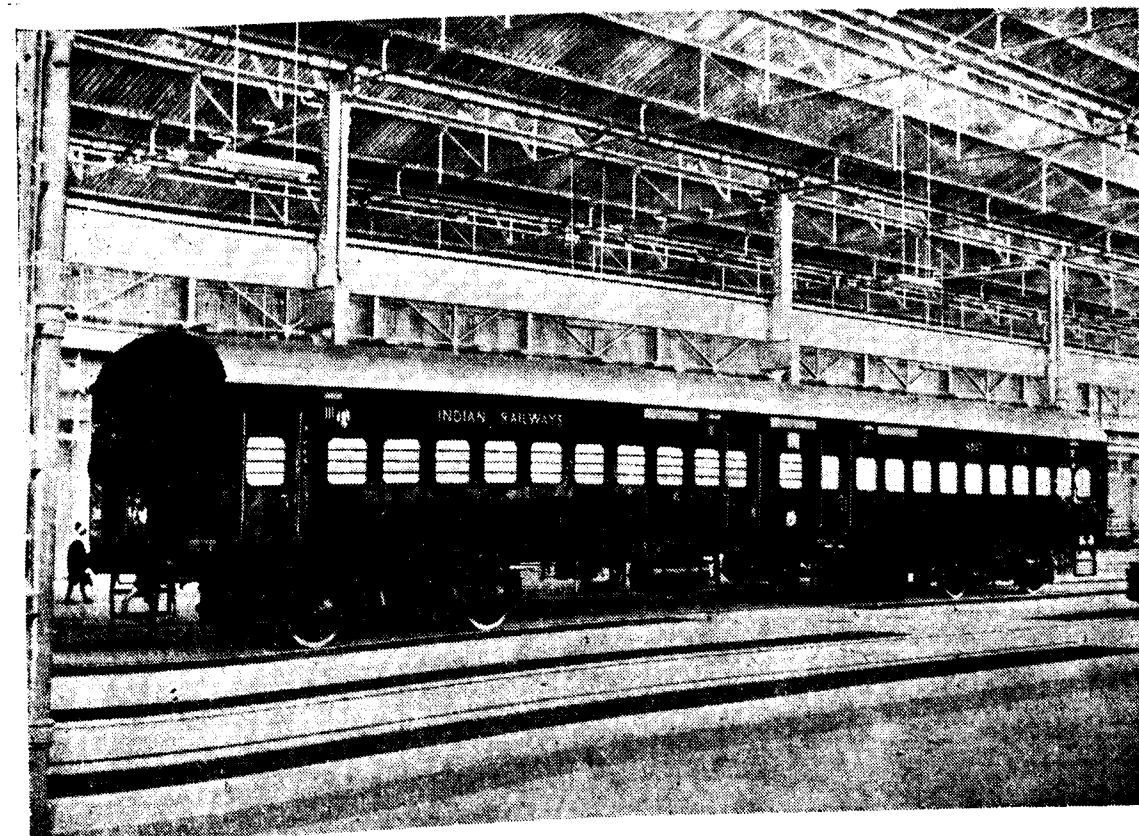
The performance of the I. C. F. from 2nd October, 1955, when the production in the

Factory was inaugurated by the Prime Minister, can be described as most satisfactory. In the very first year, against the original target of 20 and the increased target of 40, I. C. F. produced 43 shells. In the second year, against the increased target of 120, 150 shells were produced; and in the third production year, which ended on 1st October, 1958, I. C. F. produced 308 shells against the target of 240.

In the year April 1958 to March 1959 I. C. F. produced 380 shells against the maximum of 350, production capacity for which was originally planned to be attained in the year October 1959 to September 1960.

From June 1958, all the coaches produced are manufactured from the raw materials, and certain fittings obtained from the trade. There is no more assembly of knocked-down coaches.

Though the permanent furnishing annexe is yet to materialise, furnishing of the shells was started with temporary arrangements, and the I. C. F. was turning out 15 coaches from the



The light-weight coach manufactured in the factory is specially designed to give better riding comfort and protection to passengers in case of accidents.

temporary furnishing unit. The out-turn has since been stepped up to 20.

The performance of I. C. F. can be said to be satisfactory from the following yardsticks also :-

- (1) The cost of the shell has been showing a downward tendency and from the original cost of Rs. 186 thousand it has now come down to Rs. 83 thousand. The Schlieren ex-works price for a similar shell is approximately Rs. 107 thousand, and the imported landed cost amounted to Rs. 175 thousand.
- (2) The man-hours for shell manufacture have gradually come down from 19,648 to 9692. The present figure compares very favourably with the Schlieren man-hours.
- (3) The quality of the shells and coaches produced from I. C. F. compare very

favourably with that of the imported coaches. As a matter of fact, the Swiss Experts are of the opinion that the quality of coaches produced from I. C. F. is better than that of the imported coaches.

Technical 'Know-How'

The technical 'know-how' in the manufacture of Integral Coaches has now been completely assimilated by the Indian engineers and the number of Swiss Experts employed has come down from the original number of 40 to 6. The remaining experts also will be leaving by early 1960. The various sections and shops are fully organised and are doing more than their fair share of work.

The Design Office has designed a new Third Class cum Luggage Van in light-weight construction and a prototype of this was launched on the 3rd January, 1959 by the Deputy Minister of Railways, Shri S. V. Ramaswamy. This is

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ore, traces of which in fertilizers can also easily result in the increased production of several thousands of tons of crops like wheat and rice in our own country, should have been decided by a recent Indo-U. S. Governmental pact, to be exported away to America for a comparative morsel of wheat from that country.

Coming back to the utilisation of agricultural crops and their waste products, one cannot ignore the importance of flowers, fruits, nuts, barks, oil-seeds, tannin materials, natural dyes and drugs and related products. The wastes from each of the above materials is equally valuable as a raw material for conversion into suitable marketable chemicals and other industrial products. In illustration of the latter aspect one may refer to production of essential oils from the materials like orange and lemon peels, production of photographic chemicals from coconut shells and production of Pharmaceuticals from indigenous herbs and roots and so on.

Turning our attention to the field of Forest products, one of the first materials deserving our consideration is the utilisation of timber wastes like saw dust from various sources. This article (Saw dust) is full of potentialities for starting a fine chemical Industry. The field of fuel woods is also capable of leading to a number of Chemical industries like wood distillation and its various by-products. In addition to the above aspects, forest products can give rise to industries, involving substances like gum, resins, tannins and essential oils.

The next broad field of natural products, relates to the products obtainable from

Oceanic sources. For example, the systematic production of Chlorine, bromine, iodine, magnesium, sodium and other materials from the above sources is also of utmost national importance.

Materials like bones, horns, hoofs, skins, dried blood, wool and hair from the animal Kingdom are also capable of yielding precious and valuable industrial products such as Active Charcoal, phosphatic manures, Glue, Tallow and fine chemicals like Organic acids and amino acids.

In addition to the above classified fields of materials, a group of waste products from various factories, like spinning and weaving mills, Tanneries, metal works, Dyeing, works, oil refineries, Soap factories, Railways etc., can also be worked up to yield valuable industrial products.

The above review must convince any industrialist, of the immense scope of increasing our country's wealth by the utilisation of each of their waste products by a programme of detailed investigation at the hands of qualified and competent Research Scientists.

This co-operation cannot be effectively secured through bureaucratic administrative channels, but can be happily realised by individual approach of Patriotic industrialists with competent and Patriotic Scientists of whom there is no dearth in our gifted country.

It is hoped, therefore, that this mutual and effective approach will soon be realised to the great advantage and glory of our country.

- References:** 1. Bolle-Jones, E. W., and Mallikarjuneswara, V. R., Nature (London) Vol. 179, pp 738-739, (1957).
2. Bolle-Jones, E. W., and Mallikarjuneswara, V. R., Journal of the Rubber Research Institute of Malaya (Kuala Lumpur) Vol. 15, pp 128-140, (1957). (Communication No. 311).

Sports

It has been the policy to encourage sports in the factory, as it is felt that sports are necessary to develop team-spirit and *esprit de corps*. In pursuance of this policy, I. C. F. has organised an I. C. F. Sports Club. This Club has been able to build up a formidable Football and Hockey elevens representing I. C. F. In the last year the I. C. F. team won all the four major football tournaments conducted in Madras and were the winners of the semi-finals in the Inter-Railway Football Tournament. In Hockey too, we have had success in the two major Hockey tournaments in Madras. In athletics, laurels have been won in events for women and the I. C. F. representative holds three Inter-Railway records. In other spheres of sports, i.e., cricket, badminton, table tennis, etc., our players are also faring well.

Key to Success

The key to success in the I. C. F. has been team-spirit and enthusiasm. It has been our experience that our workman is second to none when he is given equal opportunities and facilities. The detailed planning and the instructions on methods to be employed have been mostly responsible for the good results so far obtained. We are hoping to soon finalise our Works Studies and Time Studies and introduce incentive system to further improve our working.

From the reports and views of the numerous foreign experts who visited the factory, it is established beyond doubt that the I. C. F. is one of the well-planned and well-run factories in the public sector in India and the Productivity from this factory compares very favourably with that in the Western countries.

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INDUSTRIAL POTENTIALITIES OF INDIA'S RAW MATERIALS AND WASTE PRODUCTS

Sri V. R. Mallikarjuneswara, B. Sc. (Mysore), M. Sc. (Bombay)

Research Chemist and Plant Nutritionist,
Ramaswami Ayyar Research Laboratory,
Malleswaram, Bangalore 3

The high prices in our country, of many articles of commerce and industry, are often attributed to import restrictions due to foreign exchange deficiencies. For example, articles like Activated Carbon, Soda bisulphite, Tannins, Mordants, Textile whitening agents, Dyes, Photographic Chemicals, Pharmaceutical Chemicals etc. (to quote only a few) are all essential requirements for our country's Industries, but unfortunately, these have to be imported from abroad.

To a self-respecting and patriotic scientist, the situation is very sorrowful but not inevitable.

The fact is that neither Professional talent nor laboratory facilities are lacking in this country, thanks to the Republican and independent status of our self-governing country.

But the real pity of it is that neither the Administrative authorities nor the University authorities are encouraging the plentiful young talent available in our Colleges, technical institutions and factories to exploit the rich natural resources of our country's raw materials in the agricultural, mineral, forest and Oceanic fields.

To a student of international economy, the care with which the various fields of technology are organised and developed in other countries like Malaya, Japan, America and Russia from their varying natural assets, the comparative sad plight of our own country's neglected resources in the above fields ought to induce a solemn determination in every patriot to remedy this neglect immediately.

It is essential in this connection, to briefly survey our principal raw materials in the various fields of nature, along with a suggestive indication of their various possible industrial uses in diverse fields of technology.

Starting with the mineral kingdom and confining one's attention only to small scale industries which any intelligent and enthusiastic small capitalist can undertake, one can first mention with great pleasure and confidence the utilisation of even low grade chrome iron ore from which valuable chemicals and pigments like Potassium dichromate and chrome green which have a great demand in our country. In a similar way, even low grade manganese ores can be profitably utilised to make manganous salts and Potassium Permanganate and even valuable artificial fertilizers rich in essential trace-elements. One may likewise mention the case of other minerals like Arsenical ores, Antimony Pigments, lead ores copper ores, Bauxite, Magnesite, Gypsum, phosphatic nodules, Haematite etc. to mention only a few typical cases.

The field of Agricultural crops and their waste products has even a more immense potentiality of increasing the National Wealth. A preliminary consideration in this field of natural products is the importance of synthetic and natural fertilizers necessary for the maximum production of these precious crops. A judicious and calculated inclusion of about a dozen essential mineral elements (some of them only in traces) in the above fertilizer mixtures has been found to lead to a wonderful increase in the yield of the respective crops. For example, supplementing the fertilizer with a trace of cobalt, as shown elsewhere (See ref.) by the writer of this article, results in a spectacular doubling of the yield of a crop like Tomato.

The importance of this subject, well-known to the specialist in this field, is not, however, familiar to the average agriculturist.

In the light of the above facts, it is a great pity that a precious mineral like the manganees

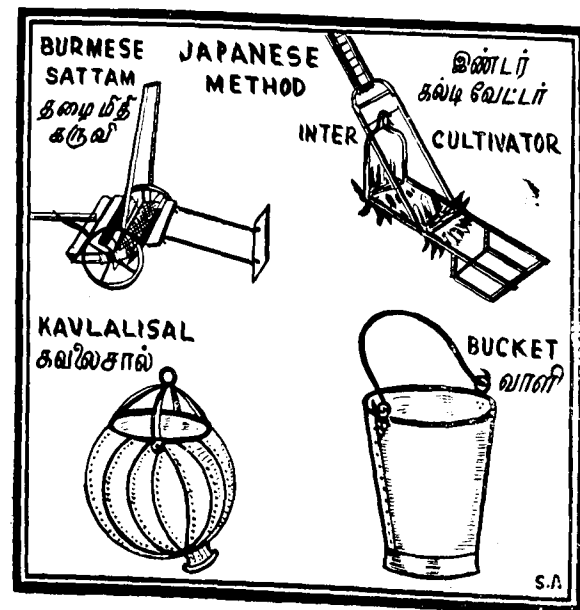
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The Vital Role of Small Industries

By S. Ramanathan.

Although a tardy recognition is now being extended to the role that small scale industries should play in the scheme of Industrialising India, still people talk with an apologetic air whenever referring to this important sphere in the economic set-up. Following the lead of Russia, Indian planners have placed the emphasis on the development of large scale industries in the public sector. Small scale industries have been allotted a less important role and no thought is bestowed yet upon what the effect will be of this ill-balanced growth when once large scale industries in the public sector really materialise and begin production. The under developed sector of small industries will be unable to consume the large volume of produce in the giant public sector and there will be an accumulation of the basic products. Obviously there will be an over-production of iron, steel, cement and other raw materials, not because the quantity produced will not be required for consumption by the people of India still starved for the necessary consumer goods but because the means of converting these basic products into consumer goods will not have been built up. In India, as in most other countries in the free world, such means of conversion into consumer goods consist only of Small Scale Industries. The entire production of consumer goods cannot be switched over to the public sector unless the entire political set up is converted into totalitarian Communism. If India is to have a mixed economy and private

enterprise is to be allowed to play its proper role, as repeated ad nauseam in the speeches of our Ministers and other public men, there should be a more rapid development of small scale industries than is at present provided for.

Consumer goods can be produced only at points nearest to the consumer, by people who study the needs of each locality and who undertake the risk to satisfy such needs by production in the small scale sector. The initiative in the public sector is bound to come from a distant center and should have to filter through an elaborate hierarchy of intermediary bureaucracy which lacks the alertness and the adaptability to cater to the needs of the public with its ever-changing needs and moods.

In this connection I should draw attention to an article by Mr. Ludwig Erhard, West Germany's Minister of Economic Affairs on "How the West can help Asia" in the March 1959 issue of the "Life" magazine. This article is of more than passing interest to us in India because Mr. Erhard, who recently toured through the countries of Asia, is one of the principal architects of West Germany's amazing post-war economic recovery. Sufficient attention has not been paid in India to the factors which contributed to the magic transformation of war-torn shambles in Germany and Japan into modern industrial and residential areas with up-to-date machinery, buildings and amenities. We are far too

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State Bank of India and the Development of Small-Scale Industries

By J. L. Bagga

(Secretary & Treasurer, State Bank of India, Madras.)

The provision of credit facilities to small-scale industries is one of the important developmental activities undertaken by the State Bank of India in recent years. One of the chief impediments to the growth of small-scale industries in the country has been the non-availability of capital-promotional as well as working capital-on assured and easy terms. The 'pilot' scheme for the provision of credit facilities to small-scale industries, sponsored by the Bank, has for its objective the co-ordination of the activities of the different agencies interested in assisting the small-scale sector viz., the State Departments of industries, the State Financial Corporations, the Small Industries Service Institutes, the National Small Industries Corporation, the State Bank of India and, where feasible, co-operative banks. Close co-ordination between the various agencies is an essential feature of the scheme and a three tier machinery has been set up for this purpose, with the local working party at the base, the local co-ordination committee at the regional level and the central co-ordination committee functioning at Bombay.

2. The 'pilot' scheme was inaugurated in the Southern Region in April 1956 at three centres viz, Madras, Coimbatore and Vijayavada and was

extended in June 1957 to nine additional centres viz., Adoni, Hyderabad (Dn.), Visakhapatnam, Madurai, Tiruchirapalli, Bangalore, Hubli, Trivandrum and Kozhikode. In August 1958, the scheme was extended to 14 centres, viz., Rajahmundry, Tenali, Tirupati, Dindigul, Erode, Salem, Tirupur, Viruthunagar, Alleppey, Palghat, Quilon, Trichur, Mangalore and Belgaum. The working of the 'pilot' scheme was analysed in detail by an evaluation team set up by the State Bank of India acting in consultation with the Reserve Bank of India and, pursuant to the recommendations made in their report, the scheme for the provision of credit facilities has been extended to all branches of the Bank since the 1st January 1959.

3. The following facilities are available to small-scale industries under the liberalised scheme drawn up by the Bank:—

- (1) Advances against the pledge of raw materials and goods under the Bank's lock and key.
- (2) Advances against the pledge of raw materials and goods in process not under the Bank's lock and key. Under this type of advances, a watchman is appointed to look after the Bank's

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liable to be carried away by the problematic progress imposed by the Communist rulers of Russia and China and we forget to take account of the solid achievements of the nations which have reached the pinnacles of industrialisation under conditions more difficult than those encountered by the Communists. Says Mr. Erhard:

"While steel works and big plants are of course important, under certain circumstances, there is in my opinion an even more important area in which our aid can help. That is a program of constructing as many as possible, small and medium sized workshops covering the widest range of production."

The thesis that Mr. Erhard advances is that in under-developed countries like India the promotion of small scale industries provides purchasing power for the people and thus helps automatically to increase their level of living. He asserts:

"One of the foremost aims of any economic development effort must be to increase the purchasing power in the hands of the masses. Where economic order prevails purchasing power can spring only from a creation of economic values i.e., the production of goods. As people are productively employed and mass incomes rise all over the country, the same process of production should turn out the goods which they would like to buy from their earnings. Thus it becomes immediately apparent to the worker that his effort will help him to a better life, and it thus makes sense for him to work"

Mr. Erhard pleads for the encouragement of private initiative to go ahead and produce consumer goods whether considered "essential" or not by setting up as many small workshops as possible. Mr. Erhard calls upon entrepreneurs in the western nations to set up businesses of their own in countries like India or to acquire interest in small local firms or to enter into partnership with local businessmen.

The recent statements of President Eisenhower Vice-President Nixon, and other leading statesmen of America support the above diagnosis of Mr. Erhard. A favourable atmosphere has been created in the western world for extending monetary help to small scale industries in India and imparting to them knowledge of the know-how in regard to the starting of these industries. But we in India should not pin our faith on these external aids reaching us in adequate measure and in proper time to meet our crying needs. It is best that patriotic Indians concentrate all their energies on standing upon their own legs and pulling up our small industries by the boot straps, as it were. We must above all get rid of our inferiority complex and discard the notion that the task of building up small industries on which we are engaged is after all a small affair when compared with the giant projects in the public sector. We must educate the people to realise the truth that the products of the spectacular public sector will never reach the masses, will never benefit the individual householder and the house-wife unless they are converted and channelled by small scale industries in order to be fit for popular consumption.

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interests and to maintain a record of the stocks under pledge for the purpose of determining the level of permissible drawings on the account. In special cases, where justified, even the posting of the watchman is dispensed with.

- (3) In cases where it is not feasible for raw materials to be pledged to the Bank, clean advances may be granted against the guarantee of an approved third party, subject, if necessary, to borrower mortgaging his immovable properties as collateral security.
- (4) In special cases, where the security of a pledge of goods or the guarantee of a third party is not forthcoming, unsecured overdrafts may be granted provided the units have firm orders on hand.
- (5) Bills covering the despatch of finished goods are negotiated under a suitable limit fixed for the purpose. Alternatively, unsecured overdrafts are granted pending realisation of the bills, when the payment of the bills is likely to be delayed.
- (6) Opening of letters of credit covering the import of raw materials, with a reduced margin where firm orders for the finished goods have been secured.

4. The chief object of the scheme being to provide cheap institutional credit on easy terms, the need to keep down to the minimum the total cost of borrowing to the industrialist has been prominently kept in view and the

maximum rate of interest for any category of advance has been fixed at 6% per annum. Besides the liberalised scheme, the Bank has evolved an "improvement programme" to be applied to units whose record of performance can be improved upon by providing them with technical assistance; the Small Industries Service Institutes have agreed to render the necessary help in this regard.

5. Concurrently with the extension of the scheme for the provision of credit facilities to small-scale industries to all Branches of the Bank, a scheme for assisting the units obtaining Governmental and other orders under the auspices of the National Small Industries Corporation Private Ltd., has also been put into operation at all Branches of the Bank. Under this scheme, the small-scale units interested in obtaining orders are initially required to register themselves with the National Small Industries Corporation Private Ltd. On receipt of intimation from the Corporation that the tender submitted by a small-scale unit has been accepted, the industrialist concerned may approach the nearest Branch of the State Bank of India for an advance against the specified raw materials required for the purpose of executing the contract; the Bank does not retain any margin in respect of these advances. Special forms of application for loans under the scheme are available at all Branches of the Bank. Small-scale industrialists interested in the scheme may contact the local Branch Agents for further information in regard thereto.

6. One of the recommendations made by the evaluation team, which studied the working of the 'pilot' scheme, was that the Bank should

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grant medium-term advances to units who already have borrowing arrangements with the Bank but require additional finance for modernisation, expansion, etc. This recommendation has been accepted by the Bank and the details in regard to the terms and conditions of such advances are at present being worked out.

7. The success of the Bank's scheme depends, in the last analysis, on the support and co-operation of the small-scale industrialists. It is not always appreciated that the grant of institutional credit involves the completion of certain essential minimum formalities; accustomed as they have been to facile credit from the money-lender, industrialists are apt initially to find these formalities irksome. In this connection I would mention a few examples by way of illustration. It is the normal practice of the Bank, when a loan application is received, to study the position and prospects of the unit in order to arrive at an objective assessment of the merits of the proposal. Many units, I regret to state, do not readily furnish the relevant particulars which attitude, needless to add, delays the grant of an advance. Yet another instance is the reluctance of units to furnish the Bank with regular periodical statements of stocks in the case of open loans. Under this type of advance, the limit for drawings is equated to the value of stocks held by the borrower less margin and stock statements are essential for determining this limit. The Bank's require-

ments in respect of such advances have been reduced to the minimum and small-scale industrialists should agree to comply with them in order that the facility of cheap institutional credit may be made available to them without delay and difficulty.

8. I would, in conclusion, request small-scale industrialists to call at the nearest Branch of the Bank to discuss their problems with the Branch Agent who would be pleased to render them all possible assistance.

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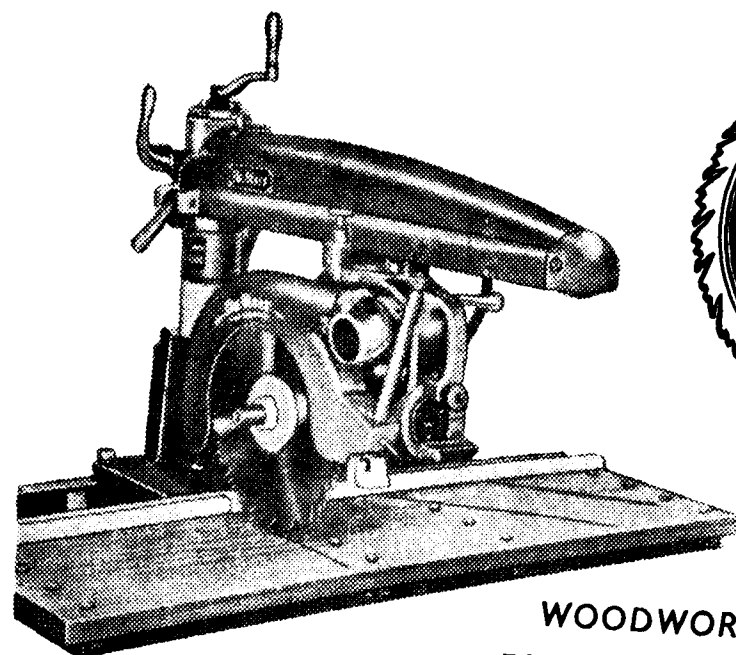
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- b. With Dado tool, attached to the tool head, it can do:
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 - Plough cuts-straight or bevel, including fluting
 - Rabbet cuts-straight or bevel
 - Mortising and tennoning, tongue and grooving and panel raising.
- c. With shaper tool holder attached to the tool head and using appropriate shaper cutters and knives, it can do:

mouldings of innumerable decorative designs, joinings of various types for panelling, cabinet making, picture frames and other ornamental work, besides plain work.

- d. With a facing tool holder attached to the tool head and using appropriate cutting tool, the work piece can be faced or planed to desired thickness.
- e. With drill chuck attachment, drilling work can be done, with the help of appropriate drills. With router-bits attached in place of drills, routing and slot drilling can be done to any outline.
- f. For finishing, disc and drum sanders can be attached to the tool head.
- g. Abrasive wheels can be attached to the tool head for tool sharpening and other work.
- h. The following extra tool attachments driven by the power head are also available.
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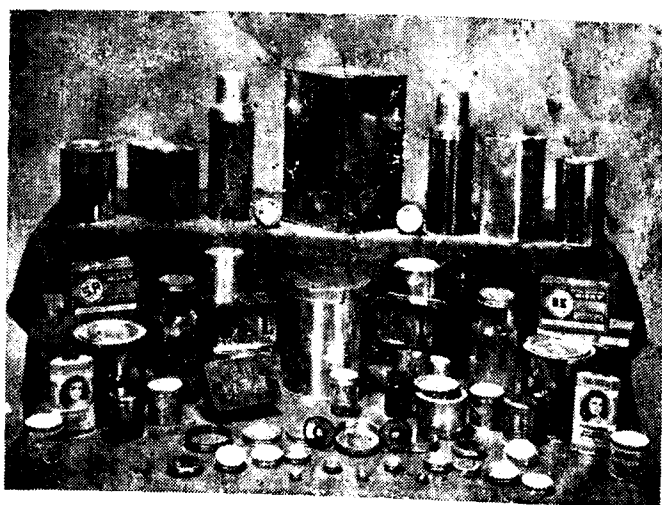
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Co-operation-its Significance and Role In Modern Society

By

S. RAMASESHAN, B.A., B.L., C.A.I.I.B.

[President, Indian Bank Employees' Union, Madras]

Co-operation—Its Meaning :

The talk of co operation is in the air. Service Co-operatives and Co-operative Farming are subjects of discussion and debate both on the platforms and the press. Yet many a protagonist of these high-sounding theories can hardly define the word co-operation.

What is Co-operation ?

It is very difficult to answer this question. Only a negative approach to its definition can adequately illustrate the meaning of the word "co-operation."

The Clerk, the Officer and the Secretary of a Bank co-operate with one another in the discharge of the Bank's work.

The Industrial worker, the Supervisor and the Works Manager co-operate to carry on the work in a factory.

Similarly, the sailors, the engineer and the captain of the ship jointly endeavour to pilot the ship on the high seas.

In all these cases the co-operation shown is not co-operation in the true sense of the term. But it is only mutual assistance to attain a common end. Here, co-operation is given because it is paid for and it is not marked by spontaneity, since the operatives do not own the enterprise. Whereas in a co-operative society, the business of the society is the members' own business.

Unlike in a charitable institution, where there are two distinct classes namely the helper (the rich) and the helped (the poor), in a co-operative society, the members help themselves and are not helped by others. Co-

operation in the technical sense, connotes that the helper and the helped are identical.

In a Labour Union, all labourers co-operate with one another in pursuit of their common objectives. They bargain with their employer to achieve their demands. But this type of co-operation is not what is envisaged by the word "co-operatives".

Similarly Capitalists join together and start commercial corporations and other enterprises with a view to earn profits. Cooperation of this variety is intended to draw more profits from out of others' pockets. It is the co-operation of the rich to become still richer, while "cooperation" visualises the association of the weak to become stronger. Nor is cooperation intended to make one rich at the expense of another. It endeavours to enrich one in company with others. In this process, the middleman between the consumer and the producer is eliminated.

Features of a Co-operative Society:

Several features distinguish a Cooperative Society from the Joint-stock endeavours.

In a Joint-stock company those who have large capital to spare, pool it with a desire to multiply it manifold. Their control of the business is correlated to the capital subscribed by them. They exercise as many votes as they hold shares.

In a cooperative society, people with very little capital join together, not with a view to multiply their capital invested in the association but with a view to satisfy their economic needs. The emphasis is therefore on the "person" and not on the "capital". Consequently, "one member one vote" is the rule in a cooperative society, and dividend

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on share capital is restricted. Restrictions on dividends cut down the motive for profit, which is the driving force in a joint-stock organisation, while bonus on custom and purchases promotes the loyalty of the members to the Cooperative Society and fosters the spirit of mutual service among the members.

In the words of Calvert a co-operative society is "a form of organisation, wherein persons voluntarily associate together as human beings, on a basis of equality, for the promotion of economic interests of themselves."

The Cooperative enterprise is a field not only for the constituents to enjoy the benefits of the Cooperative movement, but also for social-minded individuals to display their talents for common good.

In the present socialistic set-up in the country, when ideas of collective ownership are fast driving out old conceptions of individual proprietorship, Cooperation acts as the connecting link between the two extremes of Capitalism and Communism.

Functions of a Cooperative Movement:

International organizations, seeking to alleviate the economic distress of humanity have focussed their attention on the social and economic achievements of cooperative societies and stressed that Cooperative Movement has a vital role in ushering a new social order.

At its inception, the Cooperative movement was designed to protect the poor and the downtrodden against the avarice of Capitalism and inroads of monopolistic competition. Gradually it extended its sphere of operation to problems of rural economy. Now, the movement is no longer confined to country-side alone. It brings within its ambit all classes of people both rural as well as urban, who want to better their economic lot through voluntary association and collective efforts.

The development of cooperative movement in the Madras State presents a vivid picture of the amplification of the principle of "self-help". Here, the movement has progressed in to directions namely the credit side and the non-credit side. It has not merely languished with the formation of the conventional Credit Societies, engaged in money-lending and extension for credit facilities to the common man. In striking

contrast, the Cooperative Societies in this State have made rapid strides in other spheres of activities.

The Credit wing of the Cooperative Society in this state are:

1. Agricultural Primary Credit Societies.
2. Non-Agricultural Credit Societies.
3. Central Banks and Madras State Cooperative Bank.
4. Land Mortgage Bank.

Then non-credit wing of the Cooperative Society are:

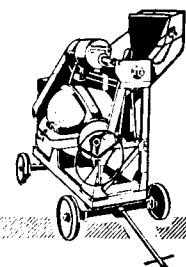
1. Cooperative Marketing Societies.
2. Cooperative Milk supply Societies and Unions.
3. Other Agricultural Producers Societies.
4. Cooperative Weavers' Societies.
5. Cooperative Cottage Industrial Societies.
6. Primary and wholesale Cooperative Stores.
7. Producers-cum-Consumers' Cooperative Stores.
8. Cooperative Labour Contract Societies.
9. Cooperative Housing Societies.

Co-operative Societies have been also formed for Resettlement of Ex-Servicemen and Cooperation has even entered the Insurance Field with the formation of Cooperative Insurance Societies.

Capital is as much necessary for Cooperatives as for other kinds of business. Capital is the result of saving. The Cooperative movement therefore rightly adopts the "principle of thrift" as the sheet-anchor of its varied programmes.

The Cooperative Banking structure is built upon the nucleus of the Reserve Bank serving as the Bankers' Bank. Next to it is the State Cooperative Bank as the apex bank in each State. The District or Urban cooperative Credit Societies or Banks are dependent on this apex bank. The Primary Societies, the last in the hierarchy, function as financing agencies in the rural side and in bigger rural areas as Cooperative Stores. In Urban areas they enlarge their activities in supplying provisions, milk etc. through Co-operative Societies like the T.U.C.S. and Aynavaram Co-operative Milk Supply Union etc. in our State.

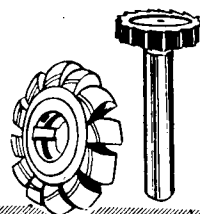
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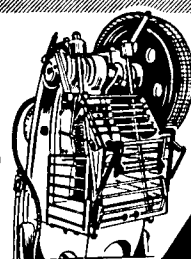
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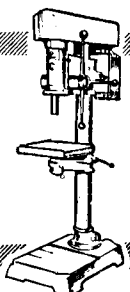
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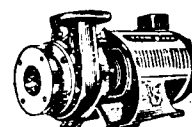
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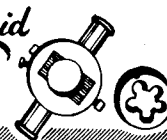
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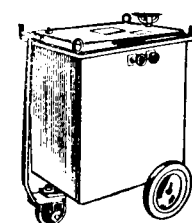
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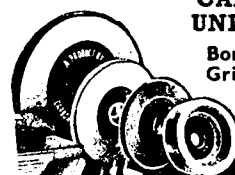


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Co-operatives and Nation Building:

The Planning Commission lays emphasis on Co-operation and states "as an instrument of democratic planning, combining initiative, mutual benefit and social purpose, Co-operation must be an essential feature of the programme for the implementation of the plan."

With its underlying motto "each for all and all for each", Co-operatives encourage collective virtues like thrift, economy and unity.

The several Five Year Plans, evolved by the Government, embody the efforts of millions of people in India to build up a life for themselves and this can be done only through Co-operation.

In the Co-operative framework of Society, by pooling their experience and knowledge and by helping one another, members not only find solutions for individual problems but also become better citizens.

Co-operatives are based on local initiative and public participation. Primary societies of various types, the Central Banks and a large number of apex institutions that now exist in the country are an indispensable instrument of social welfare as well as economic improvement.

The Five Year Plan is based on the universal application of the Co-operative principle for solving all problems of rural and urban life. In fact in all sections of national development, there is scope for a rapid expansion of Co-operative activities. Under the Plan, financial, technical and other assistance has been made available for ensuring the state of progress.

The success of the Co-operatives lies in developing Scientific agriculture, in raising productivity, increasing employment opportunities, augmenting savings. This is the central aim of the various nation-building programmes under the Five Year Plans.

In accordance with the resolutions passed at the Nagpur Congress Session, regarding land organization, Co-operatives and ceilings on land-holdings, Mr. Nehru, who symbolises the socialistic urges of the Common man, fervently calls upon his countrymen for the introduction and development of service co-operatives.

The co-operative form of doing any work is a higher social method than doing it singly. All the Social labour, where society took part were better done on a co-operative way. In our country of small holding and tiny patches of lands, a poor farmer can have the benefits of better ploughs, improved seeds, fertilizers etc., by combining with others in a Co-operative.

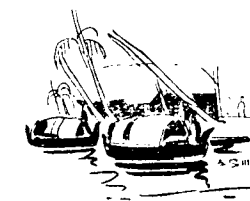
This step towards co-operative farming that the country has taken, is a normal step, quite fitted to the genius and tradition of India and really represents a step advance in Social Organization.

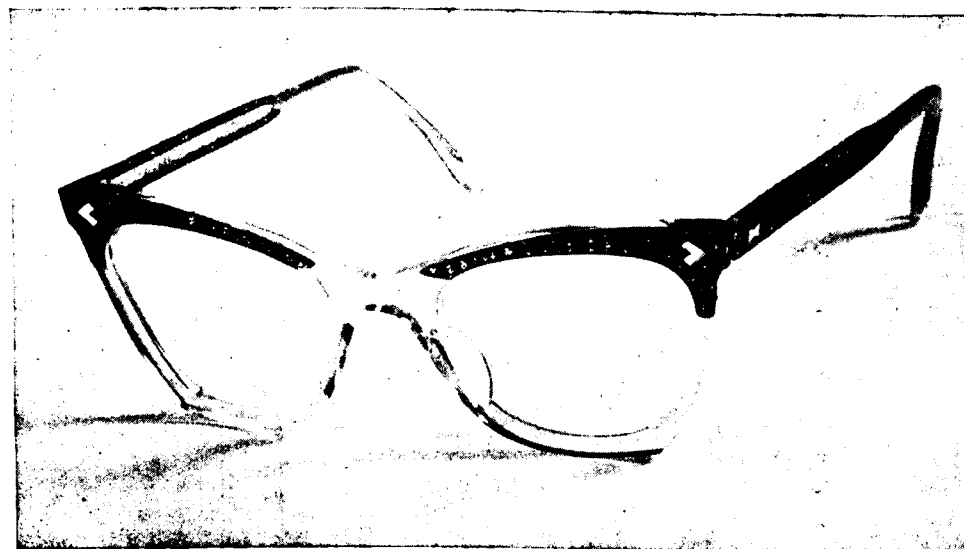
The Nation should set before it the ideal that every family in India should be represented on at least one Co-operative Society.

The basic problem which the Co-operative movement has therefore to solve is that of enabling every family to qualify in its own right by satisfying the economic and other tests laid down to join a Co-operative Society.

The success of Co-operative activities depends upon proper leadership and public co-operation.

If these preliminary requisites can be mobilised through energetic attempts born of patriotic zeal and adequate finance is forthcoming, the scope of the co-operative enterprise is vast and boundless and Co-operation is sure to take the country forward to unlimited progress through the speedy and successful implementation of the several Nation-Building plans.





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AMBAR CHARKHA AND THE UNEMPLOYED

(Specially Contributed)

We are searching for solutions for several problems facing us. We are also anxious to develop the Nation. There are several directions in which development is taking place. But with all these efforts we are faced with the problem of growing population; growing unemployment and under-employment.

The collected data disclose that half of our countrymen, nearly 20 crores in number live on Rs. 14-60 per month and that only 10 or 11 percent of the population of India can afford to spend more than a Rupee per day. An enquiry conducted by the National Sample Survey brought out the fact that 4.5 crores of persons are engaged in gainful work only for 4 hours a day, 2.7 crores work for two hours or less a day and 2 crores work one hour or less per day.

Taking the population as a whole, it has been assessed that nearly 1.2 crores of persons are either unemployed in the technical sense or are grossly under-employed. These people should be provided with employment if the nation as a whole is to prosper. We have to enable them to develop confidence and the spirit of self help.

Spinning is one of the methods by which this can be promoted. To

provide those engaged in spinning with a decent living, the Ambar Charkha has been evolved. Though the earnings out of this may not be much, it teaches the value of self-reliance and makes the individual depend upon himself.

The Traditional Charkha gives partial employment to the under-employed and adds in some measure to the income of the family. But the Ambar Charkha is capable of giving full employment and can thereby contribute to reduce the number of unemployed. It has been found that, if the Ambar Charkha is plied for 8 hours, the worker gets an income of Rs. 1.25. It will be interesting to note that already this Charkha is proving to be a boon to thousands of persons belonging to the poorer sections in society. They are living a new life—a life of hope and honour. This experience should dispel all doubts about the efficiency of the Ambar Charkha and the vital role it is capable of playing if worked properly and efficiently. There is no doubt the Ambar Charkha will go a long way in the economic emancipation of the poor people of our country and will ultimately bring about a welcome change in their lives.

With a view to provide employment to the unemployed, the Government

of Madras have undertaken to implement the Amber Charkha Scheme and it is functioning under the Department of Khadi. This scheme was taken up in the year 1956-57. The main aim of this scheme is to train the unemployed in Ambar spinning and to provide them with their own Ambar sets after the completion of the required training.

For the purposes of giving training in Ambar Spinning, there are 39 Ambar Parishramalayas functioning in the different parts of the State. So far 8006 spinners have been trained by these Parishramalayas. Out of the 8006 persons trained, 7176 persons were

supplied with Ambar Charkha sets on instalment basis. In the year 1958-59 (upto February) 26,04,389 hanks of yarn were produced. 1,21,928 Square yards of Khadi out of pure Ambar yarn and 1,16,954 Sq. yards out of Ambar and Traditional mixed yarn were produced. The spinners were paid Rs. 4,08,369 and the weavers were paid Rs. 1,06,278 towards their wages.

The Ambar Charkha Programme is rapidly expanding and more and more Parishramalayas are to be opened in the coming years. In the year 1959-60 it is proposed to establish 30 more Parishramalayas.

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The All-India Manufacturers' Organization

Some of the Resolutions adopted at the 19th Annual Conference of All-India Manufacturers' Organization held on 11th & 12th March 1959, in Bombay.

"Resources for the Third Five-year Plan"

This Conference of The All-India Manufacturers' Organisation is of the view that the tempo of development of the country's economy should be accelerated further during the Third Five-Year Plan period and that for this purpose a larger financial outlay than in the Second Plan needs to be provided. The Conference urges at the same time that the imbalance noticed in the first two years of the Second Plan between the resources available and the plan expenditure should be avoided to ensure the successful implementation of the Third Plan. It further emphasises that the greatest possible care should be bestowed from now on upon the building up of resources and their proper mobilization for nation-building. It is essential in this context to foster larger capital formation, to step up the rate of investment from internal as well as external sources, to seek closer co-operation of the private sector for utilising all available productive facilities to the maximum extent possible and to avoid or minimise every expenditure which is either wasteful or is not developmental.

In view of the already large volume of deficit financing and the limit of the burden of taxation on organised industries having been reached through such imposts as income-tax, super-tax, taxes on bonus issues and capital gains,

tax on registered firms, heavy excise duties, sales, purchase and local taxes etc., the Conference is of the opinion, that there is no scope for raising more funds through these media during the Third Plan period.

The Conference suggests that greater reliance may be placed on (i) raising more revenue from the agricultural sector, (ii) larger borrowing from the open market, (iii) tapping of small savings, especially by issuing bearer bonds carrying tax-free prizes, (iv) voluntary mobilization of gold in the form of bullion and ornaments by offering reasonably attractive terms; and (v) greater collaboration of the private sector with the public enterprises (excepting those reserved exclusively for the public sector such as defence industries etc.) by allowing the people to invest in the share capital and participate in the management of such public enterprises which should all be registered as Public Joint Stock Companies subject to all the normal regulations applicable to such companies.

The Conference draws the attention of Government to the need for fuller utilization of productive capacity existing in the country for increasing the output of goods already produced as well as for commencing production of new goods, wherever possible, as the same will save expending of resources



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on capacity to be newly licensed and installed.

In view of the creditable performance of the private sector in industry in achieving investment targets in the First Plan as well as in the Second Plan, the Conference is of the view that it should be allowed ample scope for development during the Third Plan and that the existing tax structure should be rationalised both at the Centre and in the States so as to strengthen capital formation and investment potential within the country. The Conference, therefore, urges upon Government to provide the following reliefs and incentives to give a psychological stimulus to investors and corporate enterprise and to induce industries to plough back their earning to foster greater and self-generating development.

- (1) reduction in taxation through [i] grant of special concession for saved and invested income, [ii] lowering of the incidence of taxation on corporations, [iii] abolition of tax on bonus shares, [iv] restoration of production of status quo relating to grossing up and the rates and methods of corporate taxation;
- (2) lightening the incidence of commodity taxation by amalgamating, wherever possible, excise duties sales and purchase taxes, etc. and keeping a reasonably over-all limit on their total incidence;
- (3) laying down a suitable procedure so that basic and essential raw materials required by industries are not burdened by the incidence of import duty, excise duty, sales tax, purchase tax, and local octroi duty;

- (4) discouraging hoarding of gold and silver and preventing diversion of savings to unproductive channels or for speculative purposes,

- (5) restoration of the provisions permitting writing off of double depreciation on new plant and machinery purchased out of profits.

In regard to external resources, the Conference is of the opinion that the inflow of foreign capital should be encouraged in the form of equity capital in Indian enterprises and that all obstacles hindering the flow of such equity capital, e. g., double taxation or a b s e n c e of treaties of friendship, commerce and navigation, etc. should be removed.

The Conference recommends that wherever foreign technical collaboration is found desirable or essential, the payment of suitable and justifiable royalty to such foreign collaborators be permitted and that the rate of the royalty payable should not be lowered because such collaboration is obtained along with equity participation. The Conference also urges abolition of all existing restrictions and disincentives on import of foreign capital earned by Indians abroad so as to facilitate larger inflow of such capital into India. The Conference further stresses that procedural delays related to the processing of all applications for such financial and technical collaboration should be eliminated.

The Conference also emphasises that for earning more foreign exchange by way of exports of manufactured products and increased outflow of traditional items, Government should accept immediately and act on all the recommendations made by the Study Team

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to Europe and more especially on (i) development of export houses which might be allowed to work in collaboration with foreign merchant houses, (ii) strengthening of the present Export Credit Guarantee Scheme in order to cover pre-shipment, post-shipment and fabrication risks and lowering of premium rates under the scheme, and (iii) granting of the top-most priority for the supply of all scarce raw materials like steel required for manufacturing exportable products. The Conference further recommends that Indian export houses and manufacturers be granted requisite foreign exchange for opening branch offices abroad and for propaganda for marketing Indian goods in those countries, wherever a reasonable case is made out which holds promise of earning adequate foreign exchange by such branch offices and propaganda.

The Conference reiterates the belief of the organization that the expansion of the country's economy resulting from the developments in the first two plans and the rationalization of the tax structure as indicated herein would by themselves bring in progressively larger tax revenues to Government than at present.

Mover: Shri Murarji J. Vaidya
Seconder: Shri S. K. Sen

"Employment Potential"

In view of the rapidly growing population and the continuous increase in the masses of the unemployed and under-employed in the country, despite the large employment potential in the fields of industry, agriculture, trade, transport and other services, this Conference of The All India Manufacturers' Organization invites attention of the Government and the people to the need for further development of the eco-

nomy of the country at a more rapid rate. The Conference reiterates and recommends the following measures in this connection :

i) application of modern tools and technology in the fields of production and use of power and techniques like rationalisation, quality control, standardisation, payment by results etc. so as to increase productivity.

ii) provision of incentives to save more and invest more in productive fields.

iii) permitting expansion of industries, wherever products falls short of demand or is intended to make a new and better product.

iv) giving all possible encouragements by Governments to entrepreneurs who risk their capital and provide jobs. In the opinion of this Conference, the lack of appreciation of this particular concept by all concerned has been responsible for the present deterioration in output and employment in a number of industries and the prevalence of high prices and the resultant consumer resistance as such within the country as outside it, leading to dampening of enthusiasm for further expansion for the establishment of new ventures.

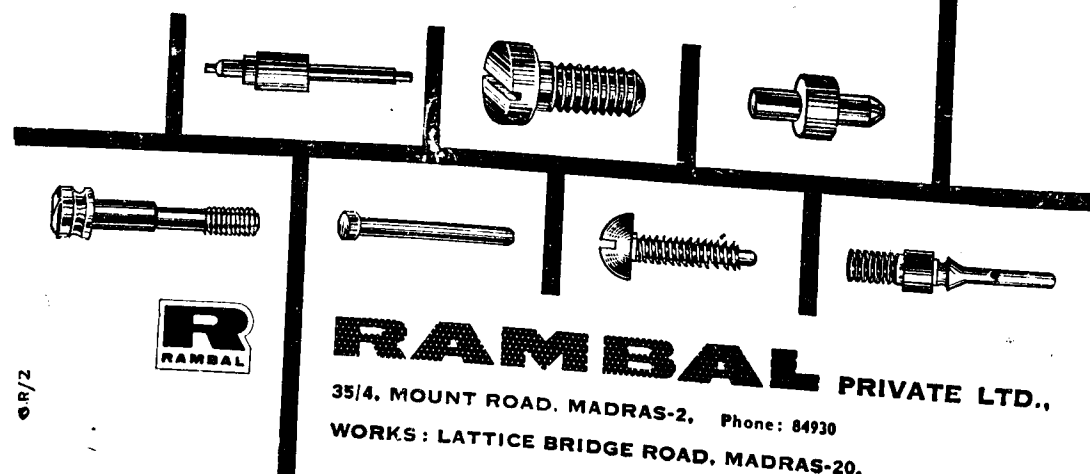
v) placing greater emphasis on increasing employment potential of existing and new enterprises as much as on increasing measures of labour welfare and amenities.

vi) removing all inhibiting factors which discourage potential employers from expanding employment opportunities and for that purpose :

(a) amend the existing provisions in the Industrial Disputes Act (1947) for payment of Retrenchment and Lay-off compensation.

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- (i) by prescribing a minimum complement of 50 workers for a concern to make the workers eligible for retrenchment and lay-off compensation;
 - (ii) by fixing a ceiling of six months wages for retrenchment compensation;
 - (iii) by reducing the quantum of retrenchment to 50 percent in the case of concerns which work at a loss for a continuous period of three years as certified by a chartered firm of auditors or in cases of concerns which have an approved scheme of gratuity;
 - (iv) by giving relief to employers in payment of Retrenchment and lay-off compensation where such retrenchment or lay-off of labour is occasioned by (i) circumstances beyond the control of the management, like natural calamity, indiscipline, violence, etc. on the part of the workers or (ii) economic circumstances, such as shortage of raw materials, import restrictions;
 - (v) by withholding the proposal for increasing contributions under the employees' State Insurance Schemes;
- (b) rationalise the implementation and incidence of social security measures such as Provident Fund, State Insurance, Gratuity, Old Age Insurance, Lay-off and Retrenchment compensation etc. by the amalgamation of all such schemes and inclusion therein of the unemployment insurance scheme based on equal monetary contribution by Government, employers and employees:
- (c) withdraw the proposal to extend the notice period for closure to three months from the existing period of one month.
 - (d) take steps to keep the cost of living within reasonable limits and adopt a uniform method for calculating the cost of living index so as to prevent undue burden on the wage structure of industries.
 - (e) simplify labour legislation by the acceptance and adoption of all precedents laid down by the Supreme Court and the unification of the precedents laid down by various High Courts which are sometimes conflicting.
 - (f) implement the Code of Discipline and the inter-union Code of Conduct.
- and
- (g) encourage Trade Unions without political affiliation.
- In the context of the urgent need to solve the existing unemployment problem and to create millions of new jobs under the Third Five Year plan to provide for the growing population, the Conference is of the view that it is as much the responsibility of labour as of employers and Government to create and maintain an atmosphere conducive

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to provision of new employment opportunities. The Conference therefore appeals to trade unions and employers, Organizations to create conditions favourable to tap the employment potential of the country, particularly by supporting schemes of rationalization, productivity and modernisation of industrial plant and machinery and by maintaining industrial peace through implementation of the code of Discipline and Code of efficiency in the spirit in which they have been evolved.

The Conference also recommends to the Government that in the formulation

of the Third Five Year Plan, due attention and emphasis be also given to the schemes where large scale gainful utilization of our human resources is possible.

The Conference also recommends to the Government to take measures by organising suitable family planning centres to restrict the undue increase of the population in the Country.

Mover: Shri Prabhu V. Mehta

Seconder: Shri Hansraj Gupta.

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The Role of Engineers in Small Scale Industries

By H. K. Mullick, B. Sc., (Eng.)

Proprietor, ACE Engineering Corporation.

India is on the threshold of Industrialization. In the past, only a few big industries were started for which every screw was imported from foreign countries, especially England. After Independence, when India wanted to go ahead with industrialization with some speed, it was found that we could not start any industry, big or small, without importing the required machinery from foreign countries. The result was that our foreign exchange resources got depleted and imports had to be severely restricted.

It is here that Engineers have their role to play. At this early stage of Industrialization of our country the emphasis should not be on automatic or high speed machines, but on simple indigenous machines. We should design and manufacture the simple machines which are suited to Indian conditions, financial as well as technical. Vast number of our men are unemployed or underemployed. We can give them simple machines for manufacturing small articles.

Undoubtedly, the production capacity of a simple machine will be comparatively much lower than that of an automatic imported machine, but under the circumstances we must carry on with the simple machines till we have developed sufficient technical knowledge and also created sufficient capital for manufacturing the bigger machines. I give below a comparison between an imported and indigenous make machine, in the present state of our industry.

Imported Machines

1. Spending of foreign exchange
2. Difficulty in operating the machine due to shortage of skilled labour
3. High depreciation

4. Difficulty in obtaining spare parts
5. Electric power is needed for which there is already shortage in the city
6. Skilled staff is required for overhauling and repairing the machines

Indigenous Make Machines

1. Saving of foreign exchange
2. Can be easily operated by local workmen with a little training
3. Practically no depreciation
4. Spare parts can be made locally
5. Very little or no electric power is needed for simple machines
6. Semi-Skilled labour can repair and overhaul the machine.

Iron and other raw materials are yet in short supply in our country. It will take some time for our steel plants to go into full production. Till that time we have to carry on with the limited supply of raw materials. Therefore installing an automatic or high speed machine at this stage will be just like having a white elephant at our door. By the time raw material position improves, our workmen would have had sufficient training in the industry and then it will not be difficult for them to operate more complicated machines. By then we will be in a position to manufacture these complicated machines also ourselves and no foreign exchange difficulty will arise nor will we have to go with a begging bowl to the foreign countries.

I shall illustrate by an example. A small scale industrialist has to bend M. S. Bars. He may import a machine which would cost approximately Rs. 10,000/-. Alternatively he

could get a small hand-operated bending machine made in India by a Small Scale Industry for barely Rs. 300/-. He could thus save India's foreign exchange to the value of Rs. 10,000/-. Not only that, fillip would be given to the Indian Industry for manufacturing a simple machine. These Small Machine Manufacturing Concerns can gradually in course of time develop into highly skilled units for manufacturing automatic machines. Besides, this will give employment to a number of unemployed people in India.

In conclusion, I will advise every small scale industrialist to consider these points thoroughly before importing machinery from other countries. India has the ability and capacity to do the job. What is lacking is the encouragement of our skilled people. As our Prime Minister said a few days back "We must not depend upon imports of machines for running our Factories. Take the example of Japan and Russia. They never import the same type of machinery twice. They copy and

manufacture the machines in their own countries. I am convinced that we will not succeed in industrialization till we manufacture the machines in this country. Within the next 3 to 4 years we must be able to manufacture atleast 80% of the machines in India".

India has the necessary raw material and the human labour. If we fully utilize the technical skill of Indian Engineers we need not hanker after foreign exchange. Our aim should be to manufacture more and more small machines on our country and thus increase the production of goods and give employment to more and more people. In this way we will be able to produce more money for the various 5 year plans. The technical people in the Small Scale Industry should come to the forefront of the Nation's March from poverty to prosperity.

Let our Engineers put in their best efforts to achieve this object and thus serve the small scale industrialists and through them the Nation.

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Britain's Rural Industries

G. Bernard Hughes

Rural Britain abounds with small workshops each employing a master man and upto twenty assistants. Their machines—the potter's wheel, turner's lathe, anvil and forge—although formerly of the simplest, have, owing to the extension of electrical services in the countryside, now been replaced by up-to-date and efficient power-driven tools and machinery. These shops are an integral part of the economy providing repair and maintenance services for agriculture and the rural community, and others produce goods with artistry and ease. Such industries, as modern in methods as they are traditional in skills, demonstrate the scope that there is to-day for young workers who seek country employment, and the shrewd adaptable skill that there is among rural craftsmen.

Displays of work, with demonstrations of the process used to-day, were to be seen recently in London at the Country Industries Exhibition, in Holland Park. The exhibition, organised by the Rural Industries Bureau, was contained in a fifteen-bay pavilion section - built from laminated wood and canvas. It was designed so that every corner was adequately illuminated, and was itself entirely a product of rural workshops.

The entrance kiosk, handsomely thatched in Norfolk reed by two of the Bureau's thatching instructors, was a reminder that England finds work for more than eight hundred master thatchers, and it is rarely that

they or any of their men are unemployed: this is exclusive of rick thatchers.

The exhibit displayed a fascinating array of country-made furniture, wrought ironwork, turnery, basketry, pottery, textiles and so on. Much of this work is made individually by craftsmen using traditional raw materials, tools and equipment. The guiding hand of the Rural Industries Bureau has also introduced modern methods such as oxy-acetylene and arc welding to the blacksmith and fibre-glass to the boat-builder.

Country craftsmen were to be seen working at their trades in the pavilion bays, each of which reproduced present-day workshop conditions. The woodworker was seen making furniture; the potter throwing red ware; the saddler making harness from leather; the agricultural engineer operating his power-driven tools; the boat-builder using his traditional skill in constructing a wooden hull; the wheelwright, now a builder of trailers and crafts; the blacksmith, cooper and brickmaker.

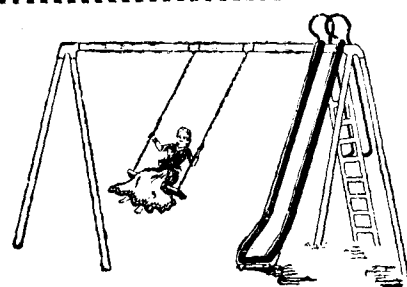
The demonstration workshop devoted to furniture-making well illustrated the revolution brought about by the introduction of new techniques. Twenty-five years ago in country workshops it was usual for any process other than turning, such as sawing, planing and shaping, to be carried out manually; it is now done mechanically in a fraction of the time. Some individuality may be lost, but furni-

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on the occasion of the
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ture-makers and customers have gained

Hand-finished furniture has been the subject of careful study by the Rural Industries Bureau and illustrated designs have been issued complete with working drawings and lists of materials required. Designs are interpreted in accordance with customers' preferences and the wood-worker's skill. The exhibition showed him at work making domestic furniture. The grains of the wood and such details as chamfers, mouldings and fielded panels are given their full decorative value, as enrichment to soundly proportioned designs. Samples of dining-room, sitting-room and bed-room furniture are typical of the simple yet handsome designs produced in country workshops in a quality and at prices that may well be the envy of many a townsman comparing the solid, sturdy structure with flimsy mass-produced furniture in third-rate woods.

The village blacksmith now finds that the oxy-acetylene and arc welder and other modern aids reduce his need of the forge and anvil. But his traditional skill in using hearth with flying sparks and ringing anvil, hammers, tongs, swage blocks and sets, is still needed for the shoeing of horses. The exhibition forge, in a 22-foot square bay, demonstrated the traditional skills of handling iron. Some of the decorative pieces displayed did not come into the category of wrought ironwork: nor did they attempt to imitate this highly-skilled technique. They demonstrated clearly, however, that the assembly by arc welding of standard mild steel sections can produce a pleasing alternative for the modern architect.

A well-composed grille exhibited was constructed from mild steel in flat and round sections. It is so designed that the flat steel is cut and then forged at the hearth and anvil into ornamental shapes with no necessity for actual welding. The cost of this would probably be less than one-sixth of a comparable grille in wrought iron, each unit of which must be forged individually and welded into position.

Demonstrations of oxy-acetylene welding and arc welding were to be seen in the agricultural engineers' workshop, where bar, tube and plate were fabricated. In 1955 the Bureau made the astonishing number of 1,636 visits to country workshops where such welding has been made possible by the introduction of electric power. In operation, too, are lathes, milling machine, pillar drill, bar and tube-bending machine and a variety of portable electric tools. These engineers constitute an efficient country-wide repair service specialising in farm mechanism, such as diesel engines, binders and combine harvesters. Small working parts can be fabricated on the spot when quick replacement is necessary.

The pottery demonstration was confined to red ware or terra-cotta, softer and more porous than earthenware and fired at a lower temperature. This must not be confused with the terra-cotta used for ornamental purposes and approaching stoneware in texture. Country potters are becoming increasingly conscious of the value of mechanism in increasing production and reducing wastage.

The exhibition showed the processes of pottery production and it was fascinating to watch the thrower hurl

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3. Indian Foundry Association, Calcutta.

a lump of clay mixture upon his revolving wheel and with apparent lack of effort raise from it a huge Ali Baba vase. A multitude of goods essential to country-dwellers are made by the potters. Among these are poultry feeders, plant-pots, strawberry-barrels, rhubarb-forcers, milk cooling-pans, chimney-pots and ridge tiles.

The brick-making bay, devoted to the manufacture of hand-moulded bricks, was hung with about forty panels illustrating the textures and colours associated with different countries. Considerable skill is required in setting the moulded bricks in the kiln. A few years ago brick-making by hand moulds was counted one of the exceptionally dirty occupations carried out under unpleasant conditions. Replanning of clay yards, improved methods of clay preparation and drying, and the use of new kilns have changed all this and increased efficiency.

The saddler, a man equally willing to fashion a smart set of harness or to make a broken trace as good as new, was seen stitching away in an atmosphere of leather and tallow, with a set of fifty different specialised tools at his command. The demand for saddlery is considerable and the labour available totally inadequate, and few newcomers are being recruited to the trade. The chief endeavour of the saddler is to combine strength with lightness and convenience. The strongest of leathers, iron, wood and other materials all find their way into a saddle. His greatest worry to-day is the shortage of saddle trees, made of beechwood reinforced with mild steel. The Bureau is experimenting with the possibilities of introducing plastics and adhesive as an alternative to the traditional saddle tree.

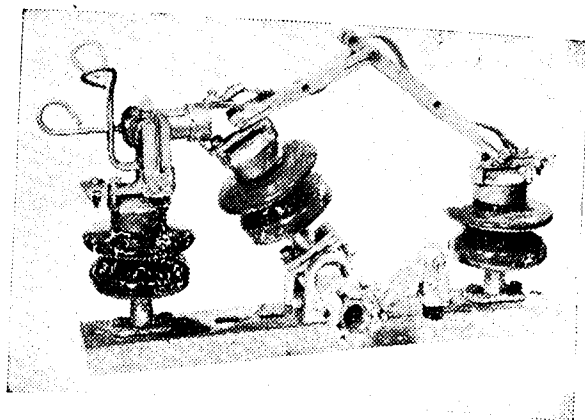
A display of cooperage was one of the most interesting exhibits. Here perfectly-fitting barrels of precise capacity were constructed by craft instinct, with no other guide as to the amount the staves must be tapered to produce a barrel of any desired shape or height, or the angle required for the bevel to result in a specific girth. The use of the double arch, one of the strongest principles of modern engineering, is applied to the design of wooden barrels to-day fundamentally as it was at the time of its invention, 2,500 years ago. The tools of the cooper's craft formed a background to the exhibition cooperage and included a draw-knife, a shave, a joint and a cooper's adze—a short-headed axe with a blade set at right angles to the handle and curving inwards towards it. This is used for cutting or slicing away the surface of the wood.

Boat-building is an unlooked-for aspect of the activities included in rural craftsmanship. This is not, however, surprising when one recollects that a high proportion of the small boat-yards are situated round Britain's coasts and on her river banks in rural areas. The exhibition demonstrated conventional methods of boat-building, but also illustrated notable modern development in the use of fibre-glass reinforced with polyester resin to mould hulls.

Wales produces woollen textiles from the fifty-four wool mills operating on a country industry basis. Knitting wool in the most modern of colours are available. Experience has shown that garments knitted from this wool never become shapeless and are almost everlasting in wear. Knitting too is easier than with other wools.

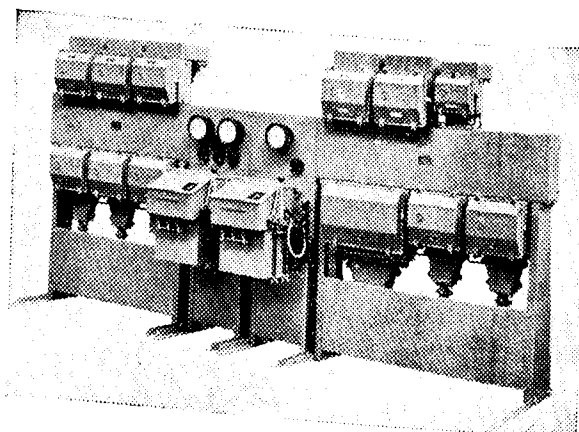
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There is nothing old-fashioned about the designs of Welsh textiles, many of which rival those of 1959 Mayfair. The exhibition displaced traditional Welsh quilts which act as gay bedspreads during the day and blankets at night. The boldly patterned tapestry quilts in golds and blacks, red and greens are handsome and so hard-wearing that in Wales they have even been used as floor coverings. Carmarthen fringed quilts woven in twisted yarn and pattern with broad, contrasting checks are quaint and hard-wearing. Travelling rugs and particularly snug scarves are woven from an improved version of the yarn which made Welsh flannel celebrated.

Basketry is believed to have been the only article of manufacture exported from Britain throughout the 360 years of Roman occupation. Light coracles for river and coastal transport made watertight with animal skins, were sold; coffers and coffins were woven from osiers. The Rural Industries Bureau has assembled an interesting collection of basketry, including hampers and eel-traps, fruit-baskets and trays for country use, with porter's chairs and cat-baskets to interest urban customers. There is also rush floor matting woven in precisely the design to be seen in some Elizabethan paintings.

Shortage of willow tends to make trading difficult and the Bureau is endeavouring to evolve a method

whereby willow processing may be speeded up, enabling white willow for basket-making to be produced out of season.

More than 12 thousand country work-shop owners have found prosperity in expert advice provided by the staff of the Bureau. In addition to imparting technical information, these highly skilled men will assist in searching for suitable materials and supplies and give costing and business advice generally. They are also a source of market intelligence.

(By the kind Courtesy of "Country Life" London through British Information Services.)



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Bulletin of Small Scale Industries Association

(Registered under Societies Act XXI of 1860)

15, RITCHIE STREET, MOUNT ROAD, MADRAS-2

It is with a sense of satisfaction that The Small Scale Industries Association is able to look back on its achievements since its inception three years ago. Thanks to the fillip given by Sri T. K. Palaniappan, I.A.S., the Director of Industries & Commerce, Madras. Our Association came into being in 1956 and by now is able to compress in the small period of about three years a record of work any Association can be proud of.

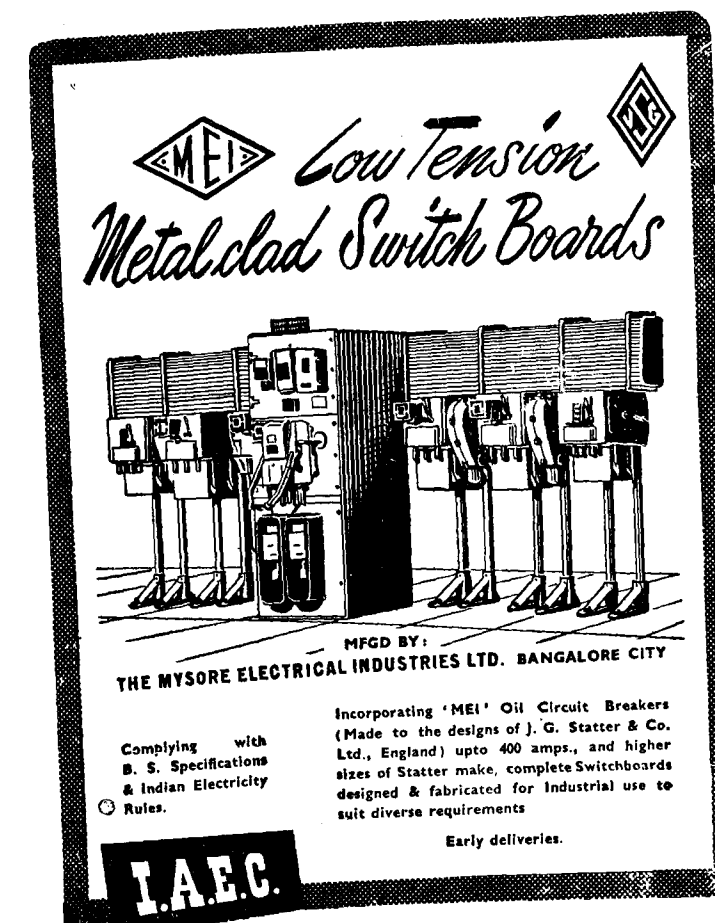
How far have we succeeded in our work and what are our potentialities for the future are matters that we should pause and think over. It is our appeal that more and more members should join our fold and thus strengthen us and also themselves. Even Plato living in Greece when it was divided into city states with a concept of self sufficiency, dared not overlook the fact that man is after all a dependent being and in society and mutual help alone lies his strength. More so in the case of institutions. Further the Small Scale Industries are yet in their infancy and a fostering care to channel their resources on right and useful lines is quite essential.

Our main objects are:

1. To promote and protect the Small scale industries in South India.

2. To create and encourage a fellow feeling and co-operation among manufacturers and consumers in these industries and to evolve a common policy on all subjects involving their common interest.
3. To maintain a Library of books, publications and literature on Small Scale Industries.
4. To open, conduct, and run a Printing Press and publish periodicals.
5. To open, organise and conduct Emporiums and to conduct and partake in Exhibitions.
6. To make representations for and on behalf of the members of the Association in Public Bodies, Quasi-Government bodies etc.
7. To produce, print, publish, circulate and distribute at equitable prices such literary, scientific and technical materials in the shape of books, periodicals, journals, circular letters etc., and any such thing as may be found necessary for the fulfilment of the objects heretofore written etc.

The establishment of permanent showrooms for the exhibition of the products of the small scale industries in the heart of the city to begin with,



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to act as liaison between Government Departments and member industrialists, to contact Banks etc., for capital and the transport Authorities for securing important and assured markets for the goods, to expand our activities to outlying areas and reach all mofussil stations, to start employment exchange of artisan centres are all in our programme and with the co-operation of the members, the support of the Government of India and the State Government, the helping hand the Banking Corporation, especially the State Bank of India, willing to extend by its Pilot Scheme and with the co-operation of the consumer public, we hope to reach our goal with confidence.

We may also mention here that our technical Library & Reading Room was opened by Hon'ble Sri Bakthavatsalam B.A., B.L., Minister, on 12-1-'57

The Small Scale Industries Association is maintaining in its office Application forms for State Aid, State Bank of India's Pilot Scheme and Hire Purchase Loan from National Small Industries Corporation, and also the Technical Information Literature regarding the activities of the Small Industries Service Institutes. The Association has been serving to its best capacity the members and also safeguarding their legitimate rights at the concerned quarters. There is no doubt that the members are greatly benefited by these activities and the membership is continually increasing month after month strengthening the Association and encouraging it to expand the activities with greater pace and speed. Our Association has been reorganised and given representation on The Board of Industries, The Small Scale Industries and Handicrafts Board and our co-operation is

sought by the Indian Standards Institution and National Productivity Council.

The membership fee is Rs. 12 per year with an initial enrolment fee Rs. 10.00 and Life Membership Rs. 150.00

This Association is the only well-established Association with a good record to be proud of, catering to the needs of existing Small Scale Industrialists and new entrepreneurs. Service on right lines is our motto and whatever we have done so far was well appreciated. Our thanks are due to the members and patrons of Small Scale Industries and the well-wishers of unemployed who have extended their co-operation whole-heartedly and we now, with confidence, march for better achievements.

"Smalindustry" magazine was started quite early in the career of the Association. The periodical has been doing its little bit of service by expressing the views of the public without fear or favour and is spreading widely the benefits offered by the State & Central Government. It has become a forum for small Scale Industrialists to talk to others in the trade and the Government and the public — The readers know better than us.

We are happy that we continue to get full co-operation from the State and Central Governments and the various foreign Embassies and Trade Consulates apart from other Associations of Foreign Chambers and others connected with trade and industry. As usual all upto-date information concerning trade and industry published by those bodies are promptly conveyed to all the members.

A Small Scale Industry is defined as one employing upto 50 persons per shift using power and employing 100

The Small Scale Industries Association, Madras.

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THE SMALL SCALE INDUSTRIES ASSOCIATION, MADRAS

(REGD. UNDER SOCIETIES ACT XXI OF 1860)

MEMBERSHIP APPLICATION FORM

The Hon. General Secretary,
The Small Scale Industries Association,
15, Ritchie St., Mount Road, Madras-2.

Dear Sir,

I/We desire to be enrolled as a member of The Small Scale Industries Association, Madras, sending herewith the annual subscription of Rs. 12/- for the year along with enrolment fee of Rs. 10/- or Life membership Rs. 150/- which please acknowledge.

I/We agree to abide by the Memorandum and Articles of Association for the time being in force.

Yours faithfully,

Date.....

Signature.....

The following particulars are to be filled in by the applicant :

1. Name under which the membership is intended
2. Name & address of the Factory
3. Office address to which communication is desired to be sent together with telegraphic address and telephone number.
4. Nature of the Industry and the products manufactured
5. Whether non-power or power
6. Corporation or Municipal Licence No.
7. Number of workers employed
8. Whether Joint Stock Company or Private Limited Company or private firm or individual
9. Name of representatives to be registered
10. Year of Starting Business
11. Whether Capital invested exceeds 5 lakhs
12. Names of the other organisations of which the applicant is Member

Introduced by.....

Signature.....

Businessmen's Convention of South India

Sri K. V. Srinivasan, President of the Southern India Chamber of Commerce and Chairman of the Reception Committee writes to the Small Scale Industries Association, Madras 2, that the Businessmen's Convention of South India will be held on 17th, 18th & 19th July 1959 at Rajaji Hall along with the Zonal Council meeting of the South Indian Chambers of Commerce.

A Souvenir on the occasion will be published. Advertisements from businessmen are requested. **Delegates:** Those of our members who wish to attend as delegates are requested to forward the applications through the Small Scale Industries Association along with delegate fee of Rs. 15.

Resolutions to be proposed have to be sent in advance to the Sub-Com-

mittee. Accommodation for delegates is being arranged at the cost of the delegates at local Hotels. Visits to various factories in and around the city are also organised.

Full particulars can be had from the Small Scale Industries Association, Madras 2, or the Southern India Chamber of Commerce, Madras-1.

Extract from a letter received from Small Industries Service Institute, Madras, dated 30th May 1959 :

The Standing Committee on Hire Purchase has decided to include Cold Storage Equipment among the machinery supplied by the National Small Industries Corporation under their Hire Purchase Scheme, on condition that all applications for such plants, irrespective of their value, be referred to them for consideration and decision.

*we, the printers of this souvenir
send our greetings to
all the members of the
small scale industries association, madras
on this auspicious day
of the third anniversary of the
small scale industries association*



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In this connection we have to note the Remarks of Mr. Alfred F. Kickbusch, Trade Commissioner, Federal Republic of Germany, Madras, who says that we do not have a system of labour apprentice skill as in Europe. Yet the concentration of technical institutions like Polytechnique and the working of the Small Scale Industries themselves are sure to create a good labour force, a good augury for the industrial future of our land now considered only agricultural. We may add also that an indirect result of the expansion of the small scale industries units to semi urban and rural areas is to see that

labour is not concentrated in the selected metropolis with all its attendant evils of over-crowding, slums, ill-health and heavy cost of living. Further the rural landlord and industrialist keeps up the tone of the agricultural life at its usual pitch and what he lends to the small scale industry is a good investment for capital that will otherwise be idle.

All the Small Scale Industrialists are cordially invited to join our Association and help us in the noble venture for the expansion of this wing of the Industry. "Union does everything when it is perfect. It satisfies needs, foresees the wishes and becomes a constant fortune".

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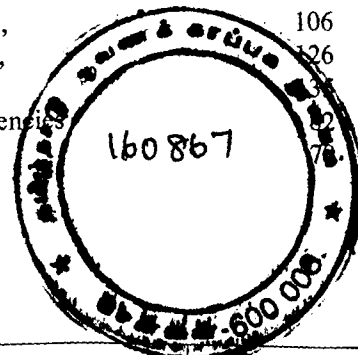
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