

Print India

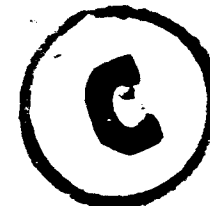
July - 1958

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No: 3, 4, 6

No. 1



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1/2/58

Printindia

A MONTHLY SURVEY OF THE GRAPHIC ARTS INDUSTRIES PUBLISHING, ETC.

2374



LY 1968

RE. 1

A KUBERA
PUBLICATION

Printers All Over India Appreciate RAINBOW'S CUSTOMER SERVICE

Here's how they react to our technical bulletins:-

PRASAD PROCESS PRIVATE LTD.
MADRAS-26 28th May, 1958.
".... Needless to say, you have done a real service in the cause of furthering the progress of offset printing in this country. If you don't mind, would you kindly send us half a dozen more sets of these bulletins for use in our various departments."

SHIV-RAJ FINE ART LITHO - WORKS
NAGPUR-2 19th May, 1958.
"We heartily congratulate you for printing such bulletins in the service of Indian printers. Since these bulletins are to be used for our technical staff, we would feel highly obliged if you kindly send us a set of 4 each for their use."

GOVERNMENT OF INDIA.
INDIA SECURITY PRESS.
NASIK ROAD. 5th June, 1958.
"I acknowledge with thanks the receipt of one set of eight technical bulletins on Offset Printing and problems, forwarded with your letter dated 23-5-1958. As these appear to be of very good use for our technical staff, I shall be glad if you would send us Twenty-Five sets."

THE RAVI VARMA FINE ART LITHOGRAPHIC WORKS
MALAVLI 17th May, 1958.
"We thank you for your letter dated 8th instant. We have received the bulletins also. These bulletins will no doubt be of much help to us and we thank you once again for sending these to us."

THE EAGLE LITHOGRAPHING CO., PRIVATE LTD.
CALCUTTA-14 27th May, 1958.
"You have done very good work for the Lithographers who do not have the opportunity to subscribe to the L.T.F. The books are very easy to follow. We wish to congratulate you upon the excellent compilation."

Our Research Department is at the service of printers without any obligation whatever.
CONSULT US ON ANY PRINTING INK PROBLEM

RAINBOW INK & VARNISH MFG. CO. (PRIVATE) LTD.

TARDEO, BOMBAY-7

Phones: { Factory : 88101
Office : 42471

Grams : "RAINBOINK"

The Editor invites articles on printing and allied industries for publication in the magazine. Articles should be of a good standard and should be neatly typed on one side of the paper only. Payment will be made after publication for the articles published as per the rates agreed upon by the Editor.

Estd. 1953

Printindia

A Monthly Survey of The Graphic Arts Industries, Publishing, etc.

Managing Editor
TEMPORAU

VOL. 10]

JULY 1958

[No. 3

In this issue....

- ★ It's Time For Work
- ★ Layouts and Lettering
- ★ Transfer Pictures Printing
- ★ Regional School of Printing
- ★ More Light Please!
- ★ Transfer Papers for Litho Printing
- ★ Glimpses of Graphic Arts-History
- ★ Folding Machines
- ★ From the Editor's Pocket-book
- ★ Regular Features

ANNUAL SUBSCRIPTION RATES

INDIA	Rs. 10/-
PAKISTAN	Rs. 10/-
Ceylon	Rs. 10/-
BURMA	Rs. 12/-
U. K.	£ 1
U. S. A.	\$ 3

News & Views etc. etc. etc.

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PRINTINDIA

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INDIA
Grams: VASUNDHI Phone: 3006

PRINTINDIA is Published
on the 10th of every month

Printindia magazine sells throughout India and in many foreign countries. As a medium of publicity, its pull in the printing, publishing and allied trades is enormous. World famous manufacturers and advertising agencies have already been utilizing this magazine for high-potential trade publicity campaigns

When a printer buys **GANGES INKS**

HE CAN BE SURE THE QUALITY IS THE **BEST** BECAUSE:

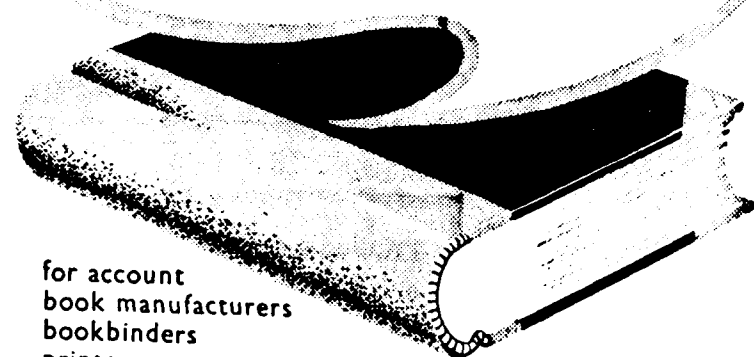
- THE FINEST INGREDIENTS ARE CHOSEN
- TECHNICAL KNOWLEDGE & EXPERIENCE ARE EMPLOYED
- AND ABOVE ALL

THE BEST MACHINERY IS USED

POWERFUL MODERN GRINDING MILLS PERFORM THE PRECISION GRINDING WHICH ALONE CAN PRODUCE A REALLY FINE INK

THIS IS GANGES'
GUARANTEE TO THE PRINTER

STANDARD MILLS
book-binding cloth

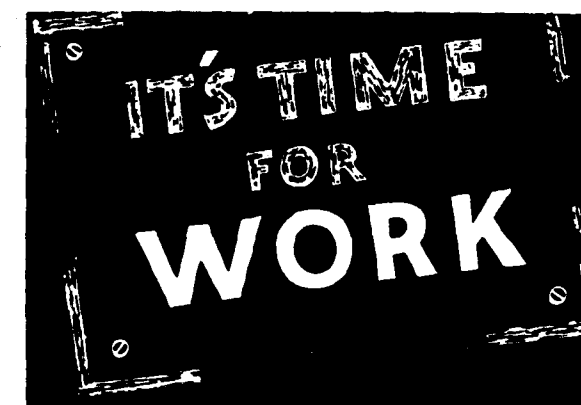


for account
book manufacturers
bookbinders
printers

THE STANDARD MILLS CO. LTD. New Parbhadevi Road, Bombay 28

SM-S-S

EDITORIAL



Reverend Thomas Malthus wrote one and a half centuries ago: Food is necessary for the existence of Man. Passion between sexes will always remain. Population will increase.

Nowhere else this is more true than in India. The Malthusian fear has become a fact. But Science and Technology have answered this. There will be little danger of misery from too rapid an increase of population.

In addition to Malthus, there were others who forecast mass unemployment due to satiation of wants. This again has been proved to be a fallacy. Satiety is a relative matter and it is a gradual process. But, there is one condition: the people must be fit to do the allotted tasks. Training will give them the skill and association, the temperament.

Thanks to the Congress example in days gone by, Indian labour is strike-minded. Our country has lost many crores by the Tisco and Dockworkers strikes. By the threatened strike of Post & Telegraphs Worker sometime ago, we have lost several lakhs. This is not all. Indian labour has lost the will to work. Its discipline has reached zero level. Fanned by misguided enthusiasm, it erupts as sporadic strikes.

However ambitious our plans, with such a type of labour, the nation can never progress. Many nations may come to our aid. But the indiscipline which is eating into our vitals can never be put out except from within. Our national character has revealed itself!

At a time when exports and hard currency earnings are vital, came the dockworkers' strike. The strike dealt a blow at our very economy. Even with normal exports, it was a problem to maintain the little reserve that we have in foreign currency. With all the ports clogged and paralysed, our very trade lay prostrate.

If this is the idea of democracy, then it must be a peculiar brand. The strike wave has swept the printing industry too. It was not spectacular nor was of an All India character. As thousands of private press proprietors are the sufferers the Govt don't care about it. But the malady is worth the study. The remedy should not be the appeasement of all unreasonable demands. It should be in the nature of improving the climate of labour.

Gutenberg could have scarcely conceived the present outcome when he introduced the movable type. Did he know for instance that it is now economically impossible to print and publish a good book that is liked only by a few.

Today's printing press operate at a speed of 3,000 impressions per hour. It prints 32 or 64 pages per impression. But each forme must be made ready before the press starts running. This make-ready may take from four to twelve hours, depending upon the nature and complexity of the forme. Devoting several hours to making ready a job that would run only 30 minutes may appear to be economic insanity. But the same amount of make-ready is required even for a run of 50,000.

The early printers could not have also envisaged Rotary presses of to-day printing more than 1,000 copies a minute. Similarly the outlook of the labour has also changed. The press-owners had to change their out-of-date views about their workers. The human element has come to be considered as one of the most (if not the most) important factor in production.

The State, which has done much to pamper the labour, has done nothing to ameliorate the conditions obtaining in presses. The Government of the day do not seem to have realized the difficulties of dealing with labour. The long path to tribunals, appeals to

courts and other legal remedies, but worsen the employer-employee relationship. Once the labour understand that a strike will bring the management on to its knees, then indiscriminate strikes are resorted to. The present-day attitude of the labour is helped by the unhelpful attitude of the Government.

Strike is considered by labour experts as an outmoded weapon. But one should realize that *even an outmoded weapon is better than no weapon*. Hence, we see that many industrial labour on the strikepath. If strike is out of date, no up-to-date substitute has been found in its place.

Good public relations, a cordial atmosphere inside the press, prompt attention to grievances of the workers, a sympathetic supervisory staff, careful handling of difficult situations will all pave the way towards a strikeless era.

The loss to the workers, to the industry and the community at large, due to strikes, should make all concerned think. Thinking, they could arrive at the only conclusion.

Strike is war. It wastes the energies of the victor and the vanquished. Besides, the people are also affected. None gains by a strike. The situation but becomes worse than what it was before the

strike. Just as no war ends all wars, no strike ends future strikes. In fact, the effect of a strike is to lead to further strikes.

In India, we have many difficulties. Some relate to the Printing Industry. Labour relations is a big difficulty. Unless respect for work is instilled into labour, our year of production will be punctuated with strikes and lockouts. Good counsel, sound advice, fairplay and justice in labour deals will tend to minimise strikes.

The slogan today should be "To Work, To Work". A decade has passed. Our independence has not been consolidated. Industrial strife is not conducive to a growing economy. Peaceful labour is a sine qua non to economic independence.

People who have witnessed strikes (with or without bloodshed) will see the futility of these. Those that have seen lockouts (with or without financial loss) will realise the shortsightedness of these.

Employers and employees of the Graphic Arts Industry who have the larger interests at heart should discourage disunity. United, they should march towards an era of peace and progress. *It's time for work!*

PRINTING QUIZ

By

CHESTER FURBUSH

Foreman, Stanford University Press, U.S.A.

ARE THESE TRUE OR FALSE?

I LITHOGRAPHY

1. Fountain solution is used to prevent roller friction. 2. A high pH solution retards drying of ink. 3. The solution often mixes with the paper and forms an emulsion. 4. Joggers are used to prevent sheets from curling. 5. All Litho inks are opaque. 6. Asphaltum is used to preserve the image of an offset plate for reprinting. 7. Kerosene is a good solution for washing the blanket on a Litho press. 8. When setting rollers on Litho press, set them up hard for good printing of solids. 9. For good Register on Litho press, care must be given to side guide, gripper and gripper bite, tail brushes and cylinder brush. 10. Excessive back cylinder pressure should be applied when tinting occurs.

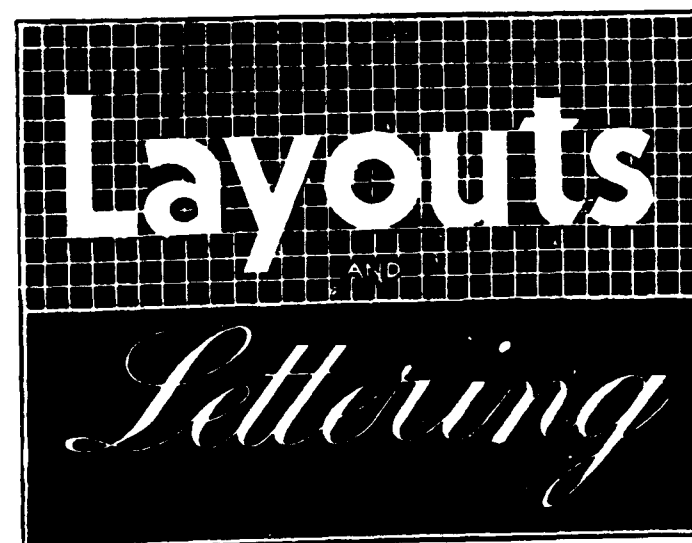
II LETTERPRESS

1. Schoo-flies are part of equipment to keep flies out of the ink fountain. 2. Static eliminators are used to pull the static electricity from sheets when leaving feeder on cylinder presses. 3. All material in a combination form are exactly typehigh. 4. Never attempt to advance the cylinder of a Kelley Press. 5. The term "short" means a soft ink. 6. Add heavy varnish to make an ink lift. 7. An opaque colored ink is essential when printing on colored stock. 8. Blue and yellow halftone tints should be used to produce a transparent green on coated paper. 9. The most satisfactory temperature at which good printing can be done is 85°; excepting during color work when it should be 85° to 90°. 10. The most used screen for coated stocks of average good quality is 133 line screen.

ANSWERS- 1. 3, 4, 5, 8, 10 False. 2, 6, 9 True.

II. 1, 3, 5, 9 False. Rest True.

Courtesy Pacific Printer, Publisher & Lithographer.



By

SRI RAMAKRISHNA NARAYANAN

Every kind of production requires planning. Printing is no exception. A well-printed work is only a well-planned print. In this monthly feature, outstanding pieces of publicity matter will be reviewed. The healthy criticism offered in these columns is only with a view to improve the quality of typographical arrangement as well as the choice of type faces

'TIMES OF INDIA' CHANGES ITS TYPOGRAPHICAL GARB

It is now nearly six months since "The Hindu" switched over to front page news from front page advertisements and changed the Title in the mast-head from Old English to plain Roman.

For two and a half months now, the "Times of India", Bombay, appears in a new typographical garb. The old Excelsior family used as column type has given place to Times new Roman

series. But Century series continue to dominate the headlines. We may expect the headlines also to change into a new series, in a while.

AIR INDIA INTERNATIONAL

Celebrated its tenth anniversary recently, on June 8th. Four ads, all worthy and individually noteworthy of the august occasion appeared in our newspapers. One of these is of AII itself, the others being BOAC, Burmah Shell and Stanvac.

BOAC—10 x 3 cols. consisted of a fairly big illustration in brush of a (BOAC) hostess pecking at the forehead of the demure All Maharajah, standing on a raised platform (pedestal), hands folded. 10 candles in the birthday cake signified ten years of AII service. At the top was the copy: two lines of Baskerville Italic "Happy Birthday from" and the name BOAC in the usual way. This ad had much to appeal. BURMAH SHELL Aviation Service: 13 x 3 cols.: A tinted door-



Birthday Cake, Candles & Beautiful Hostess.

way, with "Air India International" in Times Bold on the door-top, the copy being enclosed in the framework of the door. The Times Bold upper lower headline asks: May we come in? The text takes pains to narrate how AII has built up its reputation and how Shell Aviation Service is associated with the same, ending up with a separate line "Many Happy Returns, Air India International!" Gothic Condensed Cap line "Burmah-Shell Aviation Service concludes this interesting ad with the AII symbol.

AII's own ad was of 10 x 3 cols with ten parcels of various shapes and designs with the Maharajah atop, feathered, moustached and garlanded, in typical birthday mood. The whimsically lettered headline says "Gift Rapt." The Times italic text which follows is asymmetrically indented ending with the AII Centaur and lettering as usual. Although one would doubt the accuracy of the word "Rapt" instead of "Wrapt", the comical element dominates the whole piece making it a stunner.

STANVAC: 8 x 8 cols.—For once, Famous flying horse does not fly but stands on its hind legs, carrying the garland in its forelegs ready poised to garland the All Maharajah looking awe, arms heaped in a "namaste" seated on a cushioned table. The four-line copy is hand-lettered with Times Italic caps for "Greetings" and Times Italic lower case for "on its 10th Anniversary". It ends with the Gill Cap line and the flying horse

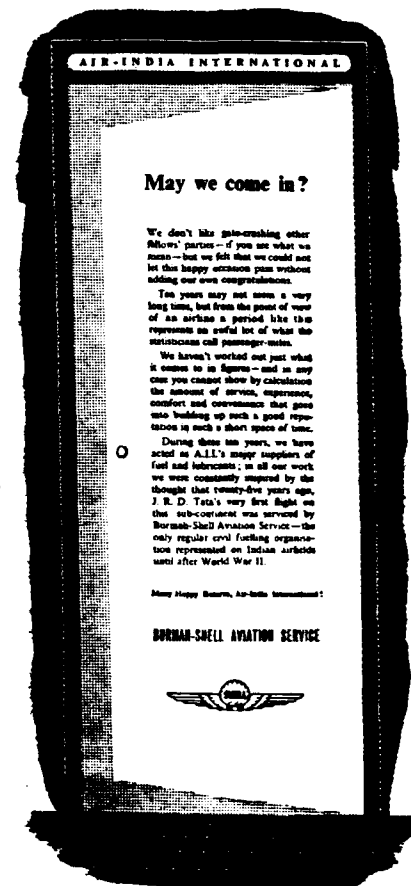


Horse, Garland, Greeting

emblem of Stanvac. Horse in brush-work is very dynamic.

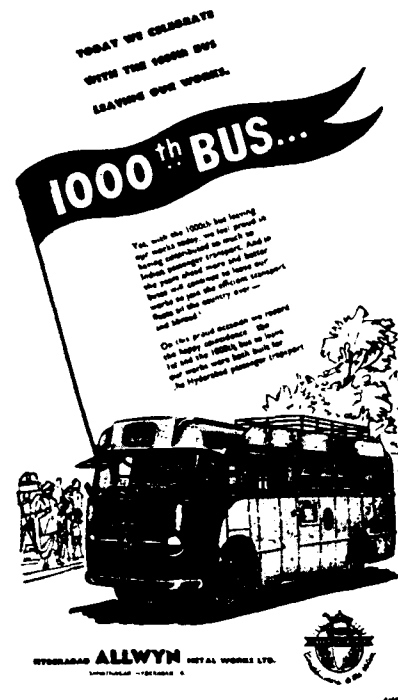
Taking leave of Air India International for the present and wishing it many happy returns, we turn to Indian Industries, of which we have this month: Allwyn, Ashok Leyland, Bata, Madura Mills, Mukand Steel Works, and Orient General Industries.

ALLWYN: 10 x 3 cols.—Everest. The 1000th Bus to come out of Hyderabad Allwyn Metal Works, who make steel furniture too, is celebrated in this ad. There is the flag motif very effectively used with the matter put at an appropriate angle. (Gill Italic would have been more appropriate to the angle and the flag aloft) There is the bus in wash with surrounding line blocks. The flag-pole rising from the top of the bus has the flag across the ad with "1000th Bus"



Shell Comes into Air India

in reverse forming the title for this piece. Gill Medium is used for the text, Gill Heavy for the rest. There



Thousandth Bus on the Road

is the coach emblem at the right corner. This is a very well designed piece of publicity.

ASHOK LEYLAND: 12 x 3 cols.—JWT: Among the manufacturers of automobiles in India, Madras boasts of two, one to the north and the other to its south: The Ashok Leyland at Ennore and the Standard at Vandalur.

A camel carrying a lone passenger and an elephant with a handful of regal personalia are underlined with "Built to carry more passengers" in Gill Bold. Three Gill Bold condensed lines announce "Leyland Comet-the big chassis for the big job. The word "big" alone is tinted with outershading. The two column matter in Gill followed by the italic caption in Bookman face tell more about the Comet. Then there is the road scene with a Leyland dominating the whole. The Ashok Leyland emblem is tucked away in the right corner, the

address line and Main Dealers following suit. A workmanlike ad well featured.

BATA-11 x 3 cols. The biggest shoe manufacturers, Bata, does its own advertising, in a very decent way indeed. The one reproduced here about Ambassador is designed in very good taste. The frame, the shoes placed at two different angles, the three crowns to the left, Five lines of Garamond italic (perhaps Plantin italic would have withstood the stereo typing and other obstacles to clarity), four lines of Garamond forming the text and ending with "Bata" in usual hand-lettered heavy script and "Ambassador" hand-lettered in upright heavy script. The bleeding of illustrations and typography are excellent.

MUKAND IRON & STEEL WORKS LTD:

Tints and shades have been employed to present two wheels and the back of a goods wagon. The



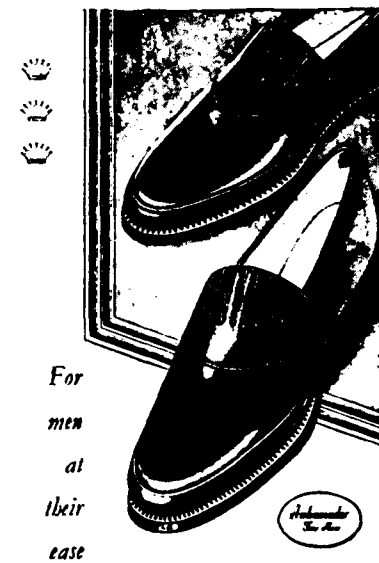
LEYLAND COMET
THE BIG CHASSIS
FOR THE BIG JOB



Big Bus is a Big Job

PRINT INDIA

close up of the loco wheels starts the ad leading to the headline, very interestingly put in Times



Bata Ambassador
Beautiful Bata

Bold "Where there's a wheel there's a way....." and in smaller size "...and progress too" The left flush Times copy follows. Note the headline runs all along across the matter leaving the text deeply indented all the way. The rear view of the bogie at the right corner sort of balances the top loco wheels. This solus ad is neatly designed and well presented

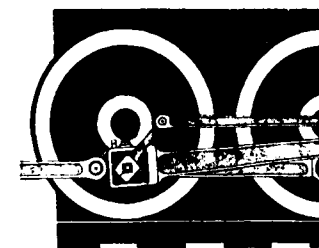
MADURA MILLS CO. LTD: This leading concern has of late giving illustrated insertions. But we would have preferred lesser elements. There is a tendency apparent to utilize every inch of space bought! Less copy, more white, would have made all the difference between an indifferently designed ad and a carefully presented publicity piece. There is the yarn border having the title in two lines. Minerva is used for the text. The illustrations are so arranged to

provide space for copy on top and bottom. There is the slab serif reverse 'Madura Mills Co. Ltd' with a clothlike background deckle. The calligraphic Gothic-like handlettering for the heading is good.

ORIENT GENERAL INDUSTRIES LTD: 10 x 3 cols. ASP A tone illustration with a line frame, is of the Orient fan. The Gill Heavy "A Portrait of" and flowing script "Perfection" form the headline. Times Roman text with the second paragraph cut in to allow the Orient Fans reverse panel, ends with Gill Bold italic "Years ahead in look and performance." Gill is used for name and address. A very well designed ad of Orient which, incidentally manufactures motors also.

NOTABLE AMONG THE NEW

BURMAH SHELL 11 x 3 cols.—An advertisement headed "Hot and strong and quick", in Times Bold with "Quick" in same series italic. There was a good illustration of a man pouring; the text was in two columns of Times Roman with space in the first column to allow



Where there's a wheel there's a way...

...and progress too!

You'd be surprised how many wheels—cars in steel by MILLAND—are turning in India this very minute and every minute of the day. Great driving wheels for locomotives, small wheels for tractors and colliery engines, and rugged wheels for cranes—used in industries like mining, sugar, cement and quarrying.

From MILLAND comes a steady supply not only of wheels but also castings and forgings of all kinds of steel—strong for bridges and girders, for cranes, for heavy machinery, for cranes and engines.

So call on MILLAND for steel castings and forgings of all kinds of steel.



March of Steel & Wheel

an illustration of a Burmah-Shell truck. "Bitumen by" in Gill italic and "Burmah-Shell" in Gill Heavy



Much Crowded Madura Mills

and "for better roads" in Gill italic again.

A striking illustration of tree stripped bare on a desolate land, in a 12 x 4 ad in the series "Shell Chemicals can save the crops and Foreign Exchange too". The heading is "The locust has passed the way" with a locust illustration. The text is about Shell's Aldrin which helps fight the pest.

GKW-10 x 3 cols. ad headed "Iron Dowels at Deogarh" was about the 5th century experiment in holding the blocks with iron dowels, another in the series linking the ancient with the modern. Layout and types were as in previous advts. An 8 x 3 cols. advt about Nettlefolds Hypodermic needles illustrated needles, conditioning the placing of the headline (in Verona). Times Series was used for text and address. Everest.

HOERE MILLER-12 x 2 cols. and 8 x 3 cols were about their Salva Mattress for sleeping luxury. Illustrations were in crayon and line and well done. Bodoni, Times and Futura types were used.

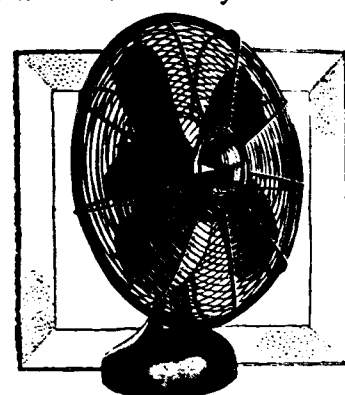
R. Syn.

SARABHAI CHEMICALS-9 x 3 cols. The new series headed "From experience comes faith..." in Gill bold had good illustrations: a boy trying to catch a crab." The text began "This little scientist is showing the basic principle of scientific research..." "Try it and see". The occasion was the centenary of Squibbs, USA, whose products are manufactured in India by Sarabhai Chemicals. Below the Squibb emblem was a line "A century of experience builds faith." This and the headline complement each other and help the text in Times Roman.

SHILPI

S.E. RLY are going all out against ticketless travel or so it seems. One is entitled "Keep one eye open." There was a big bold brush illustration doing just that. There was a hand at the bugle, in bold dry brush. "When you see a tick-

less traveller "Call for the checking staff." in Gill Heavy balance the



A PORTRAIT OF *Perfection*

It takes much longer to produce a perfect fan than it does to produce a cheap one. Here you find the fruit of the combined efforts of many highly skilled people such as designers, draftsmen and workmen whose minds and hands produce new materials and the best possible components of an Orient fan. The fan that has been designed to meet a wide range of needs for perfection.

In Orient's history much thought goes into planning and research—planning the kind of fan that will serve you most, and the search for ways and means to make it. New methods are constantly being replaced by newer methods resulting in fans of remarkable performance—unimpeachable design.

Years ahead in look and performance

ORIENT GENERAL INDUSTRIES LTD.

Headquarters: 8/9, HINDUSTAN BUILDING LTD., 4, Seagram Street, Madras. Phone: 3445.

Also available on New Purchase for Madras Residents only from INDIA'S LEADING JOURNAL ON PAPER, 81, MINT ROAD, FORT, BOMBAY-1.

Lesson in Perfection

boldly drawn illustration. Text etc. in Gill series. If our public can be educated, these two ads should do that.

Ind. Pub. Bu.

SUHRID GEIGY: On the occasion of the 200th Anniversary of Geigy, a series of 10 x 4 cols. has come out. "When Geigy was founded 1758", says one. There were silhouette style illustrations explaining parts of text, about personages, events, etc. of the time. Gothic series was used throughout.

TATA-FISON continue their ads about insecticides, fungicides, germicides etc. These combine humorous drawings with catchy headlines, plus funny copy and get a lot of attention which is the basic aim of all ads. All these ads end with "As.....said to.....Tata Fison will be the death of us."

DJK

TRANSFER PICTURES Printing

By

SRI S. PURUSHOTHAM

Pictures please people. Transfer pictures are all the more pleasing. You have some share in its transfer. You have the choice of the place to which it is to be transferred. Transfer pictures have a thousand uses. Their manufacture forms a specialised branch of the graphic arts industry

Hitherto, no authoritative works of reference are available in this country on subjects relating to paper and pulp conversion and paper products making. Scattered articles on subjects do not throw much light on techniques of manufacture and the processes involved. Paper is not only used for printing writing and wrapping, but also, for decoration, protection, etc.

Thanks to advances made in research, naturally occurring substances, which are scarce are being gradually replaced by synthetic substances. Chemistry has played a dominant role in bringing out new materials and finding other uses for existing materials.

Paper was produced by hand in the initial stages. Such manufacture was naturally limited to single sheets, and the finishing operations of coating and sizing were simple and almost primitive. Prior to 1456, there were no types and hence what little of printing there was, was produced from woodcuts or similar engravings. Carbon black and vegetable oil served to make the ink, although a little later mineral oil was mixed. Pigments in those days were vermilion, cinabar, cobalt, copper oxide, indigo

(which was available in plenty in India) etc.

Printing was no easy task, what with the irregular surface of hand-made paper, shallow surface of the wood-cuts, more shallow wood engravings, absence of inking roller and so on. The coarseness of the paper was smoothened by burnishing with a stone. Hammer glazing was introduced in 1540 and later superseded by calendering rolls in 1720.

SPECIALTY PAPERS

What we call specialty papers were practically unknown in Europe in those days, although the Chinese were using wall papers calling it *paper hangings*. In 1620, wall papers came to France. The first purely decorative application of paper was the production of wall papers. Plain paper was used for printing the wall paper designs at first. Later, in order to give a grounding or base coating and preserve the brilliancy of the hue as, coating was used from glue and pigments. This coating was brushed on to the paper prior to printing. This served as a base for further printing operation.

ENTER THE MACHINE

In 1800, the paper-making machine made its appearance and a continuous web in contradistinction to small sheets hitherto made, was the product. In 1806, the cylinder type of paper-making machine was invented. Coated papers came and these were used for labels, fancy papers and wall papers. In 1650 Gravure was introduced and in 1800 came lithography. But prior to 1500, coated and printed playing cards were being used. Today, a dozen or more kinds of coated papers are available. There are the dull-coated or matt-finished papers, twin-wire papers, gummed papers, mica-coated papers, varnished papers, lacquered or plastic-coated papers. Roll or spray coating employing air knives are employed now instead of the brush coating of olden days. Tunnel driers instead of festoon drying for better and quicker drying have been introduced.

Paper converting industry has now taken up the manufacture of paper drapes, shelf-papers, lamp shades, simulated leather-finish papers, laminated paper, synthetic-resin and rubber saturated papers. These are useful as covers, inner lining for shoes, displays, chair and seat coverings, handbags and for belts.

THE BEGINNING OF DECAL

In transfer-picture printing, paper is only a medium or carrier of the design which may be transferred on to paper wood, plastics, glass, tin or other material.

Rothmuller was an Austrian who is credited with the invention of the transfer-picture printing. He used mainly lithography to print his transfers in the year 1826. He employed colours as well and successfully transferred the print to tin, wood, waxed cloth and other surfaces where printing will be impos-

buy & sell
through

THE
PAPER MARKETING NEWS
81, MINT ROAD FORT, BOMBAY-1

Grams : VARSITAP
Phone : 263257

INDIA'S LEADING JOURNAL ON
PAPER, BOARDS, STATIONERY
AND
THE GRAPHIC ARTS INDUSTRY

sible. A water-soluble coating was given to the base paper and the colours were printed in reverse order. A coating of white pigment was given over the printing which gave the illustration a background when transferred. The object to which the print is to be transferred is first coated with copal varnish or resin. The back of the transfer picture was moistened and the image transferred to the surface where it remained fixed.

In Germany, Chinaware and toys were decorated by means of such transferring. Only in the early 1900s the name decalcomania was used. "Decal" means transfer or "off the paper" and "mania" means "craze". The advantages of decalcomania over hand decoration or other methods of reproduction lie in the ease of application, flexibility in use, economy. Today, decalcomania process is employed for ceramics or glazed pottery, wood, ivory, glass, plastics, trademarks designs, window signs, trucks and mobile equipment. From small stamps to giant designs for transferring on to trucks and planes show the range of sizes available. In short, whatever cannot be fed to the printing machine for printing on, can be decorated with decalcomania.

PRESENT DAY PROCESS

At the present day, one or more layers of ink forming a design or picture is built up on a special paper. Sometimes cloth backed paper is also used. The image of printing ink, lacquer or synthetic enamel forms itself into a homogeneous film. This is called the decal and is later transferred to the desired surface. Lithographic, letterpress, gravure and silk-screen are employed for printing the design. From 3 to 25 impressions can be made to form the desired design or picture. There are special heat-

resistent, fast-to-light and weather-proof pictures too. At first a lacquer base is given to the paper on which the picture is printed. Again a lacquer coating is given. Thus the decal is virtually sandwiched between two layers which form the protective coating.

TWO VARIETIES

There are two varieties of decalcomania prints: One is applied to the surface by moistening a gummed layer on the inside face and attaching the transfer picture to the surface. Varnish or shellac may also be applied to the surface and the face pasted on the object. The paper back is now sponged with water and the same is thus released. The print alone adheres to the surface on which transferred.

The second type of transfer picture is called the "slide-off" transfer. This type of picture is floated on water. The print is now separated from its paper backing. By self adherence or by the use of adhesives, the print is transferred to the desired surface. The print is to be soaked in water for a few seconds to free the print from the paper back. If soaking is overdone the adhesive is washed off and the print will not adhere to the surface.

Transfers can be applied face-up or face down. When a print is to be viewed through a glass, a face-down print is preferred. In this type the background coating is printed first and the other colours follow in proper sequence.

Opaque backgrounds require the face-up transfer. The usual order is followed in printing the various colours forming the design. The opaque background is printed last and this will form the base for the print after transferring.

Another type is the double type which can be viewed either from the back or the front of a glass to which the transfer has been attached.

In this, one set of impressions are printed in the usual way. Now a series of opaque tints are given to form a background. Then the impressions are repeated backwards to enable it to be viewed from the opposite side also. An adhesive is also applied finally to use this transfer as a slide off type, or a direct transfer to transparent glass.

During the printing process of transfer pictures, much care and a well-equipped air-conditioned pressroom are necessary. Perfect register of colours and brilliancy as well as depth of colour are called for in a successful decalcomania printing.

SPECIAL PAPER

The base paper may be a single sheet on which the prints and coating are applied. It may also be tissue pasted to the base sheet. This lamination of a tissue to a heavier stock eliminates curling which is a bugbear in decal printing. Dimensional changes are also obviated in the laminated type of base paper. The paper is usually an absorbent, open, unsized sheet, with uniform colour, formulation of fibres and surface properties. It should have a high degree of wet-strength, as otherwise during the process of transferring by moistening, the paper will go off into bits resulting in the transfer being unsuccessful. 50 to 100 lb. Double Royal is the usual substance needed. In order to release the print readily when moistened, the base paper can be a water-leaf for easy penetration of water through its fibre.

COATING

A water-soluble and ink-receptive coating is given to the printing side of the base paper. This coating forms the base for the printing operations. When this coating is wetted with warm water, it begins to dissolve and

(Continued on page 18)

REGIONAL SCHOOL of PRINTING

Printing is a craft that requires sound training. There are few training schools with the back-ground of the Regional School of Printing at Madras. Sponsored by the Ministry of Scientific Research, Govt of India and managed by the Director of Technical Education, Madras, it has made a mark in Technical training in Graphic Art.

The thirty-year old Regional School of Printing, Madras, caters not only to the Southern Region comprising of the four states of Andhra Pradesh, Kerala, Madras and Mysore, but also to the distant states of Assam, Madhya Pradesh, Orissa, as well as to the friendly neighbouring countries like Ceylon, Burma, Malaya, etc. Now, housed in its own building, this premier institution of India, trains young men for the 25,000 printing houses in India, in ten different specialised branches of the Graphic Arts, like Hand Composing, Typography, Display, Layout and Lettering, Machine work, Book Binding, Package Manufacture, Camera Operation, Process Engraving, Mechanical Composition, such as the Linotype, Monotype, Lithographic Art, Lithographic Plate-making technique, Lithographic and offset Printing, etc. One of the oldest to prepare qualified young men for supervisory posts at various levels in the Printing industry, the Madras School is proud that scores of its alumni hold responsible posts from Press Superintendent, Aden British Settlement to Superintendent, Govt.

Central Press, Kerala. There are many who are managers of Govt. of India Presses, Simla, Delhi, Aligarh, Nasik, etc. In the private sector too there are hundreds who have gone through this school.

Since three years when All India Certificate Courses were introduced, many reputable presses like Imperial Tobacco Co., came forward with paid apprenticeships to



Govt of Madras have appointed Sri V. K. Sriramulu as the Principal

the students. It is unfortunate that the Southern Railway press, itself a Govt. of India unit, refuses their workers to attend the evening classes. Dozens of students are unable to avail themselves of the golden opportunity of getting the training facilities available close at hand. We hope that the Railway Board will see that all desirous of attending the part time courses are permitted to do so.

At last the Regional School has its own buildings. The very people who stood in the way of getting such a separate building now declare that because of them and them alone, the building has been allotted. Be that as it may, the next hurdle is to get the full complement equipment, machinery, etc. for the various courses. Thanks to the import restrictions, the picture of the future is not very bright in this respect.

We hope that organizations like the Ford Foundation, Rockefeller Foundation, Asia Foundation, Nuffield Foundation and similar munificent bodies will come forward to help the Regional School of Printing Madras, with the latest equipment, machines, precision instruments, testing apparatus for its laboratory and latest technical books for its library.

The Government of Madras and the Government of India should, for their part, see that all facilities are given for the proper growth of the institution on healthy lines. The first task should be to clear the compound of other institutions like the Industrial Training Centre, Strathie Indl. Workshop, etc. which have nothing in common with the Regional School of Printing. These units will on the other hand be a positive hindrance to the development of the Regional School of Printing. Until the entire compound is allotted to the Printing School,

the problem of accommodation and proper atmosphere will be there. We hope that the All India Council of Technical Education will pay attention to this school and see that it develops unhampered by vicious atmosphere.

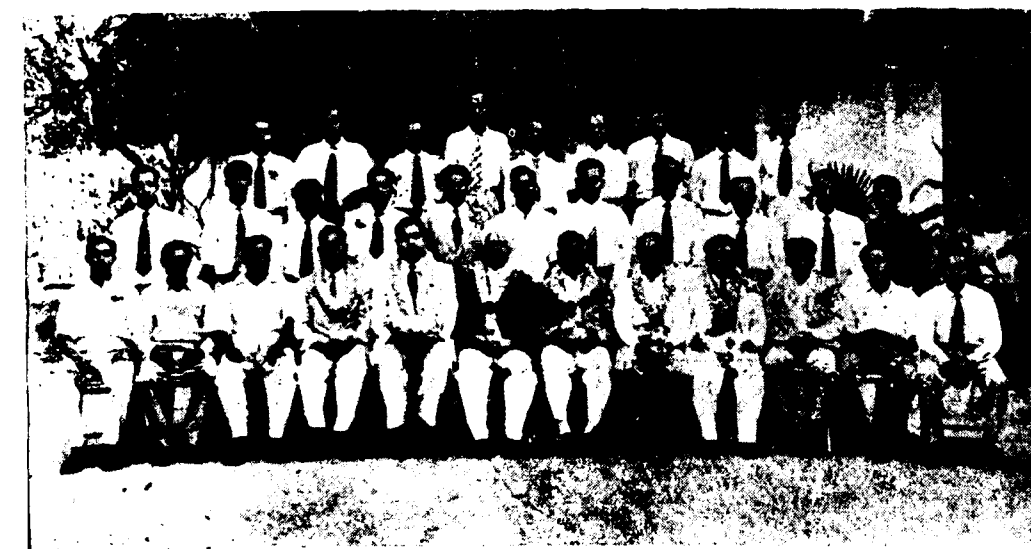
The Govt. of Madras should be congratulated on their right choice of Principal for this institution. Sri V. K. Sriramulu is not new to Printing and Printers of India. Graduating from the Presidency College, Madras University, Sri

VKS joined the Printing Section of the Central Polytechnic (now developed into the Regional School of Printing, Madras). He studied assiduously for five long years and was awarded the Diploma of Licentiate in Printing Technology. He

was absorbed in many of the leading printing establishments as Supervisor, such as Indian Express, Madras, Central Co-operative Press, Govt. Press, Madras, etc. Soon his *alma mater* demanded his

services. He joined the Printing Section of the Central Polytechnic as Assistant Lecturer and soon rose to the position of the Head of Section of Printing Technology. He was responsible for the recommendation of the Madras Govt. to develop the Printing Section into

an independent Regional School of Printing. The All India Council for Technical Education accepted the recommendations of the Govt. of Madras and in August 1955, Sri M. Bakthavatsalam, the then Indu



The First Batch of the All India Certificate Courses in Printing and Allied Technology: (Top) Linotype & Intertype Students. (Bottom) Students of Hand Composition, Layout & Typography course.

(Top) Staff & Students of Letterpress Printing, Makeready Technique & Colour Printing Course including Automatic Machine Operation. (Bottom) Combined Group Photograph of Lithography & Offset Printing Course, Lithographic Stone & Platemaking Course and Process Camera Operation Technique for both relief and planographic plates, both dry and wet plate preparation technique course, with the Chief Guest Sri Braganza, Asst. Production Manager, Imperial Tobacco Co., Ltd., Madras.

stries Minister, inaugurated the Regional School, Madras.

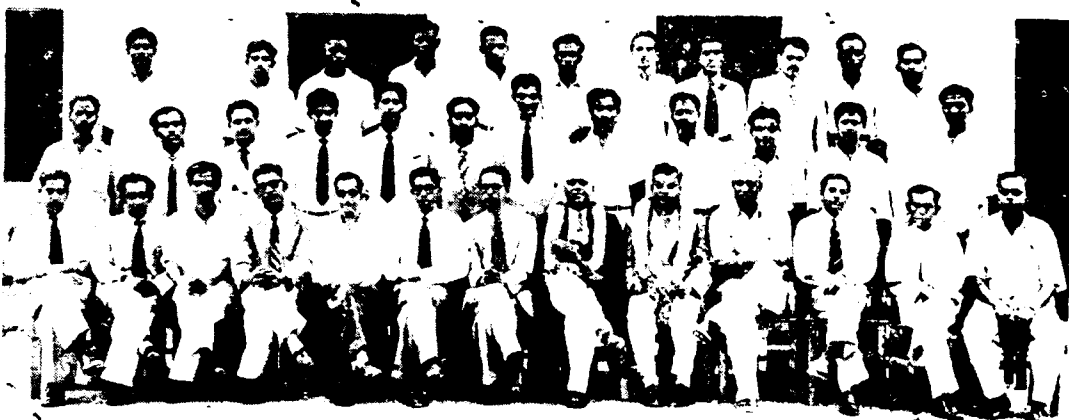
A vigorous worker, with a mechanical bent of mind, Sri V. K. Sriramulu is performing his duties with a missionary zeal. His one thought is the development of the Regional School. His one aim in life is to

make the Madras School as the Central School of Advanced Printing Technology for the whole of India.

In building a good reputation Sri VKS has played a vital rôle. In organizing, maintaining the standards of teaching and practical

training, he has a personal part.

In the task of training good technicians for the important industry of printing, all the printers of India should give their unstinted co-operation and unreserved encouragement to this premier institution of our country.



Students of the Comprehensive Diploma Course of Licentiate in Printing Technology for Supervisors, Superintendents, Managers, Foreman and other Supervisory staff. (Top) Students of Three Years Full Time LPT Diploma Course with staff and Principal of the Regional School of Printing, Madras. (Bottom) Students of the Five Years Part Time LPT Diploma Course, most of whom are already apprentices in reputable Printing Establishments.

More LIGHT Please!

By

SRI R. SIVA, B. Sc.

Let there be light: Light is necessary for work. Darkness is the negation of progress. More illumination, less glare, will mean the least waste of time and labour. In harnessing nature, light should not be neglected. Where natural light is not available, artificial illumination should be resorted to

ROLE OF MAN

Industry to-day does not comprehend man as just another factor of production. The emphasis is now on human relations. Operatives are no longer mere automatons. Machines may work irrespective of the conditions obtaining in factories. But human beings, being what they are, cannot be expected to be blind to the environment.

The quantity and quality of output are directly affected by the provision or failure to provide amenities. When man is physically and mentally comfortable, it can be reasonably expected of him to give his best. There is less conscious effort when the conditions of working are good.

Work is dependent on sight. This is not only true in hand composition, Linotype and Monotype, but also in judging makeready in machine, block-making, binding and despatch.

PART OF VISION

Physical action is always preceded and accompanied by work for our eyes. It may be the hard hand composing or the comparatively easy feeding of paper into a press. Mental action is invariably conditioned by what one sees (or what one is able to see). No job for which vision is needed can be executed with optimum efficiency unless the operative can gather quickly and accurately visual infor-

mation that is needed. Although visual power is dependent on physiological factors, it is also dependent upon conditions of lighting.

The prevailing conditions of lighting and the stimulus intensity characterising the field of vision are important for our latent visual capacities to operate. For example the illumination in a composing section may be excellent. But the room may be full of glare, shadows, unnecessary materials huddled, which interfere with the visual capacity of the compositor.

LIGHTING CONDITIONS

The conditions necessary for lighting varies from industry to industry. The coal miner may be satisfied with a ray of light to do his job but the jewel-maker may not be satisfied with the same amount of light. In the same industry, the requirements of lighting varies from one department to another. What is good enough for the warehouse or the folding department may not be adequate for composing or for proof correcting.

It should not be understood however that good lighting will automatically make for good production. Good lighting is conducive but not compulsive to productivity. The will of the worker should always be there. In good light we may reasonably expect him to do good work and quick work without undue strain. In bad light-

ing conditions, there is not the ghost of a chance that the best operative can turn out even a modicum of the amount or quality of normal production. The fact remains that good lighting is an incentive and a direct improvement of the environmental efficiency for the visual system of the operative.

ELATION

If a compositor can see easily what should be seen at a glance, there will be a saving of time. If he cannot see a character even after prolonged and repeated inspection, much visual effort and spoilt work in the shape of corrections will certainly result. Good lighting will make more time available and good work executed. There is a feeling of elation and well being in a well-lighted composing room as there is depression in a dark dingy cell mis-called composing room.

Cheerfulness, vivacity, invigoration, which are produced by environmental brightness evoke general response towards better productivity. On the other hand, inadequate lighting conditions produce visual acuity. It is impossible for the compositor to decipher the character without peering or gazing at it. This in turn produces soon relaxation of concentration. Then the operative becomes easily fatigued, thanks to the strain imposed by the bad illumination.

NO GENERAL COMMON STANDARDS

Field experiments in various industries have revealed that each industry and each branch requires peculiar conditions of lighting. No common standards of lighting can therefore be prescribed in general.

Along with illumination, the subject of glare and shadows are to be taken into consideration in

providing the environmental brightness essential for smooth flow of accurate production.

Glare, its incidence and its elimination have been exercising the minds of illumination engineers for a long time now. The result is the reduction of glare in the light source. Suitable screening and diffusing media are used to reduce glare to a very negligible quantity. Certain classes of glare are reduced only by surface treatment.

In order to observe detail with clarity, it becomes necessary for contrast in the field of view. Degrees of brightness and colour are employed to provide the needed contrast in the field of vision. Illuminating selected articles in the surrounding area will produce contrast. Local lighting and brightness contrasts are other means to this end. A coloured background against which the work can be seen in silhouette is yet another method of affording contrast.

It is a fallacy to say that light colours are out of place for factory interiors. Light colours bring reflection of light, illumination from a given system is increased, a light, airy and cheerful atmosphere is

created. Work there, is no more a toil but a pleasure, thanks to the colour scheme which is increasingly adopted in all industries.

AGE AND LIGHT

As the man ages, the lighting needs also increase. This factor should not be neglected in a room where elderly or old people work. Hence, lighting should not only be suitable for the particular operation or process, but also of the operative, his area and requirement. Older people require stronger illumination of work. Increased lighting is much more effective where an old worker is concerned than a young adult.

In a press well lighted, the advantages are obvious. Maintenance is easy. Breakdowns are rare and can be quickly reconditioned. There is less wastage of time, materials and labour. The risk of accidents is eliminated as operatives can walk about with confidence, seeing their way about and avoiding danger zones and hazards. Manual performance tends to increase due to the psychologically better atmosphere created by good lighting. The health and morale of the worker is

also toned up with good lighting conditions. Where precision work is concerned such as with an engraver, prolonged working in ill-lighted dumps, will bring in its wake defective eye sight and other physiological ailments.

In the west, standard factory lighting practice has been adopted. Lighting installations are continuously being made better and more comfortable as a result of constant research and experiments in the illumination engineering field.

FACTORY ACT

The Indian Factory Act, 1948 makes but a passing reference to lighting. The West Bengal Factory Rules, 1949, goes a little further and says that there should be lighting of not less than 3 foot candles measured in the horizontal plane at a level of 3 feet above the floor level. This is less than half recommended in western countries.

DAYLIGHT

It is a pity that India which is in the tropics and which can boast of a plentiful supply of daylight all the year round has not made use of natural light in its factories. Large presses like the Government Press, Madras, have made use of the north skylight. From the north skylight, greater illumination values are obtained by receiving light from a greater area of the sky, and more windows can be arranged in this way. Direct sunlight and the consequent heat and glare are also avoided.

Diffused daylight is what is required and direct sunlight should be avoided. Light control and proper supplementing of natural light are the two things that are called for in tropical daylight schemes. The winter months provide uncertain light and provision has to be made for this too.

In many large presses, like the Railway Press, night shifts have

(Continued on page 20)

TRANSFER PAPERS for LITHO PRINTING

By

Sri Bimal C. DATTA, B.A., Dip. Tech. (Leeds) F.R.G.S. A.R. P.S. (London).

In our country Lithography is a comparatively new development that is making rapid progress in the printing trade. This ever-increasing demand for Lithographic reproduction has its reasons. To start with, we may put that there is a freedom in this technique of 'Drawn' lithography of which a good copyist can produce many effects to suit the needs of the customer when a highly finished original is not available

Again the reproduction of master image i.e. original, is best possible with the aid of Transfer Paper. It was Originally meant to aid the artist or writer to express their artistic impulse, when no photographic aid is available.

The process of hand transferring has the most economical advantage of forming multiple images of a master image to avoid long runs. It also saves wastage of paper. It still flourishes against the modern introduction of Photo-Composing or 'Step and Repeat Machines.' Thus hand transferring has established itself as one of the respected crafts in the lithographic reproduction processes.

To suit different varieties of lithographic jobs, various kinds of transfer papers are made on suitable base paper of even texture with coating of composition prepared from many materials, viz. flour, starch, gelatine, glue, plaster of Paris or stucco, flake-white, gamboge, etc. with water, gum solution and syrup. The essential qualities of a transfer paper are (a) that it must stick to the stone or plate on the first pull passing through a press under pressure, (b) that it must not absorb or change the greasy nature of the transfer ink and, (c) it must soften easily when damped and leave the coating composition and ink on the stone or plate and may then be lifted easily.

There are various kinds of transfer papers e.g. (a) paper used for drawing or writing on, with the liquid transfer ink or (litho writing ink); (b) grained or Chalk transfer paper used for drawing on, with lithographic chalk; (c) Copper plate or steel plates transfer paper and (d) Miscellaneous Transfer papers used for stone, zinc or aluminium plates.

(a) *Paper used for drawing or writing on with liquid transfer ink*:- The paper should have a smooth surface and be of a hard nature only capable of being written and should be strongly adhesive. To prepare the coating, dissolve 5 ozs. of gelatine in 2 quarts of hot water; and 4 ozs. Flake-white in a small quantity of water and add 1 oz. of gamboge in 40 ozs. of cold water. (b) *Mix Plaster of Paris*-4 ozs. glycerine, 1½ ozs. stiff flour paste 11b. in 12 ozs. of water; Coat the paste, using a broad camel hair brush. Hang the sheets to dry. Glaze it by passing through a press over a heated copper plate litho stone. It is used for autographic transfers and architectural plans transfers.

(b) *Grained or Chalk transfer paper* is used for drawing on with lithographic chalk for transferring to stone or plate. It is made by coating on a best quality of thick wove paper with the following compositions:-
Stucco 1/2 lb.- Starch 1/4 lb.
Flour 1/2 lb.- Glue 1 oz.
A thick coating of composition is required so that the grained plate

does not perforate it when pulled through press for graining. To obtain this, put on two or three coats. Various grains are obtained by passing through the copper plate press under heavy pressure on copper or steel plates and even from grained stones. The composition must not be too hard, if so, the drawing is apt to smudge in transferring. It must have also general quality of adhesiveness.

To transfer "chalk transfer paper" (when the artist has finished his drawing on the paper using ink and chalk for solid and lighter tints), place the paper in the damp book until the composition is just sticky. Avoid getting too damp. Transfer in the usual way by alternate clamping and pulling through the press. When the transferring is complete, soak plate or stone with gum sol. Then sponge lightly to prevent the chalk washing off.

(c) *Copper Plate Transfer Preparation*:- Mix up a composition of equal parts of plaster of Paris and flour. To mix up plaster, put a little into a clean bowl and mix into a smooth paste with water. If it shows any tendency to set hard, add a little more water quickly. Continue to mix in the plaster, adding the water as required until the whole is mixed up. If stirred continuously for about 20 minutes, the tendency to set hard will be destroyed. Mix the flour into a paste with cold water and boil until it thickens. The plaster and paste are then mixed together, and if desired a little colouring matter be added. The whole composition is then thinned down. It can easily be applied with a brush and sieved through a muslin cloth.

This composition must be applied with a broad camel hair brush to a soft wove paper, and then the sheet must be hung up to dry. Another coating is then put on in the same way when dry. The sheets are put under a weight to keep flat.

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Transfer Pictures Printing (Continued from page 10)

released the print. In order to reduce curling, the coating is applied to the felt side of the sheet. The coating should be very smooth and should be uniform without the formation of any ridges. The equipment used for such coating are brush, roll, air-blade, etc. Starch and gum arabic are used for the coating. Albumen, glycerine and starch are a variation of the above. Egg albumen alone can also be used, but it is very costly. Starch and dextrose can also be used but not very effective. Whatever coating is used, it should be thick. It must produce a printing surface, but remain distinctly separate. Over this coating is generally given a lacquer coating, either white or coloured. This second coating may also be left out. The paper when coated should be passed through calendars for smoothening out.

Coated papers should be stored carefully, wrapped up in moisture-

proof covers. Otherwise they have a tendency to badly curl, absorbing moisture. It will be difficult to handle, once it curls, and registration will be a headache while printing various colours. A film of gelatin is coated on the other side of the coated paper to prevent curling. Atmospheric moisture is thus excluded and the moisture already present in the paper will remain there. The recipe for this is:-

Gelatin 10 parts
Water and methyl alcohol (3:2) 90 parts
(Ethyl alcohol, acetone, tertiary butyl alcohol or other water-miscible solvents can also be used.)

The gelatin coating is applied by a roller maintaining the temperature at 115 degrees F. Only in this temperature the desired solubility and solution viscosity can be obtained. By this coating, the stresses are balanced and water absorption is prevented. This

coating readily dissolves in warm water while the transfer is applied to the surface.

Alternatively, the print is made on a waxed or non-adhereing surface. The finished print is coated with a water-soluble adhesive. The transfer-paper is caused to adhere to this coating. Thus, printing is done not on a base paper coated with starch or other substances which makes the paper curly and dimensionally unstable leading to register difficulties. Printing in this case is carried on normally on a dimensionally stable surface. The transfer paper is adhered to it to serve merely as a carrier.

In Calcutta and Bombay, transfer picture printing is done on a liberal scale. Transferring for industrial uses is done by "Brass-fers" in Bangalore, Mysore State. There is considerable scope for exploiting this field of specialty printing instead of becoming one more competitor in the general job or book printing line.

GLIMPSES OF GRAPHIC ARTS HISTORY

By
SRI HARI

History is an absorbing branch of knowledge. Graphic Arts is an attractive field of human endeavour. Graphic Arts History, therefore, promises to be an interesting and beneficial source of information. A brief survey of important events in the Printing and Allied field is presented for our readers. From Gutenberg to Mergenthaler, from Stanhope to Koenig and from Egypt's Papyrus to Fourdrienier's paper it is a proud record of achievements

Earliest printing known to man was by means of engraved stones in China about 150 A. D. The characters were duplicated or reproduced by means of rubbing for the impression on engraved stones.

Engraved blocks of wood were used in Japan by about 700 A. D. One million Buddhist images were printed by this method.

In 1294, Persia was printing money by this method. Egypt was also making wood block prints. Block printing in Europe began about the year 1400. Knives and chisels were used for making blocks. The difference between Oriental Printing in China, Japan, Persia and Egypt and that of Europe lay in the inks used. Orientals used water colour inks while Europeans used oily inks. Intaglio engraving on metal was first used in 1440. The part of the plate which prints the design was cut out of the metal with a graver. Steel engraving came into use by 1808. Bank notes were printed by this method until recently.

Stipple engraving or dotted plates for printing were used by about 1500.

From 1439, Johann Gutenberg of Mainz, Austria, experimented on movable types and in 1450 perfected his invention. Thy first book printed from these movable types was the 42-line Bible (1452). The Chinese practised printing from a negative relief for about 1000 years from 594 A. D. Their method of rubbing off impressions from a wood block had spread along the caravan routes to the west, where block prints and block books were well known at the time of Gutenberg.

The invention of paper has also come from China where they made the first printing paper. Earlier the Egyptians had the papyrus in place of paper from which the name itself originated.

The first printing press in England was set up by William Caxton in 1473. The first book printed in England was The History of Troy.

William Ged of Edinburgh invented Stereotyping in 1690. Lord Stanhope invented the Hand Press in 1804 which printed 30 sheets per hour.

Koenig's steam Press was adopted by the Times of London which printed 1,100 copies per hour.

The first rotary press was invented which printed 24,000 copies per hour.

Type casting machine was invented by Dr. Wm. Church which cast 20,000 letters in an 8-hour day.

Cloth binding came into use replacing costly leather binding. Machine binding came in 1830.

French physicist Reaumur recommended wood pulp for making paper in 1719 and in 1840 the first wood pulp paper was produced.

Esparto grass paper was made for the Times, London.

Printing from stone by a special process called Lithography was invented by Alois Senefelder of Munich, Austria in 1800.

In 1826 J. N. Neipiece of France invented Photogravure.

In 1852 Fox Talbot of USA perfected another process similar to that of the above.

In 1872, Edwards perfected the process of Collotype invented by a Frenchman A. L. Poitevin. Aquatone, a modification of collotype was invented by Robert John of USA in 1923.

Linotype (Mechanical composing machine) was invented by Ottmar Mergenthaler in 1886. This produces lines of type called "slugs."

Monotype was invented by Tolbert Lanston of USA in 1897.

Stencil Screen Process or Silk Screen Printing was invented in 1928.

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More Light Please!

(Continued from page 16)

come to stay. Lighting during nights is an important problem closely linked with production.

The factory design should take into consideration lighting requirements. Modern factories have built-in illumination, free from the customary glare and shadow of the common type shaded incandescent lamps.

PLAN FOR LIGHT

While planning a press, there should be ample window area, skylights, monitors and the like to allow unhampered daylight. It should be remembered there is as yet no substitute for good daylight. Bad design of the skylight and improper positioning of windows will retard production. Roofs and walls should have proper reflection. Reflection is not to be confused with glare, which is positively harmful. Glass windows, skylight panes should be cleaned and maintained in proper condition in order to allow light to diffuse through. Improperly maintained window negatives the advantages of light.

If there is a relatively bright light source within the view of the operative as in the case of arc lamps in camera room or in the type foundry, it will retard work.

The minimum standards prescribed by the London Illumination Engineering Society is 60 per cent of the maximum. Dust collecting in shades and bulbs reduce the already available illumination. Hence it cannot be over-emphasized that just as windows should be kept clean to allow natural light during day time. The bulbs, tubes, shades and other items of lighting should be kept scrupulously clean. Dust should not be allowed to accumulate on shades. Walls and ceilings should be white-washed and coloured with pleasing colours

to afford good reflection without creating undue glare. Shadow of the lighting, machines or the machine minder should not fall on the printed sheet or on the feed board.

Light should fall on the work i. e., the printed sheet or the copy in the case of the compositor and on the machine. It should not fall on the worker or on his eyes, which will interfere with his work.

There are many presses where due to overloading the lights are dimmer than their wattage. In these cases, the dissipation of power in lamps will be insufficient. Naked bulbs are glare-producing and the available light is wasted in unwanted places for want of proper reflectors and diffusers. Dark walls and ceilings absorb the light rather than reflect them to the required places. This shows that proper electrical lighting equipment plus white-washing and painting are necessary.

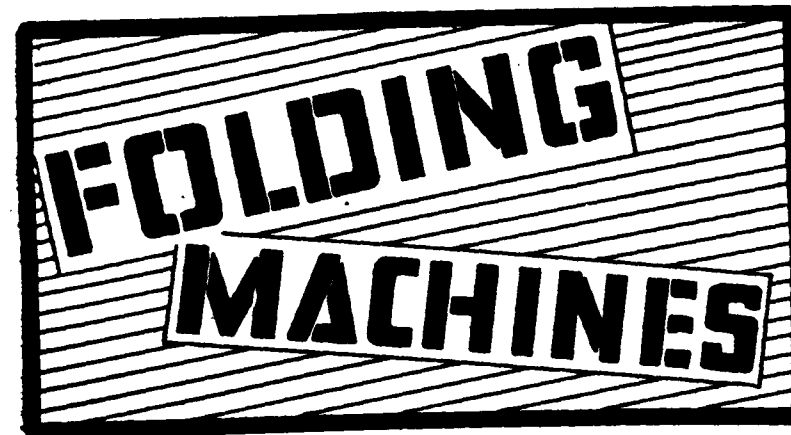
LIGHTING REQUIREMENTS

In the composing department including the Linotype and Mono type 25 lumens per sq. ft. are recommended. Local lighting is also necessary for these departments in consideration of the accuracy and nature of the process. About 20 lumens are adequate for the Rotary Press, although a little more is called for in block-making, block finishing such as bevelling, routing, planing, plate cutting, plate etching etc. departments. The platen press will be adequately lighted with 10 lumens per sq ft while a little more is called for in cylinder machine department. (Lumens represent the intensity of illumination.) Local lighting and isolation is necessary for camera work, routing, engraving etching, etc. departments, partly to avoid the undesirable bright lighting and partly for supplementing the general light source to avoid shadows falling on the work.

The above facts regarding lighting requirements in the various sections of the Printing Industry, should be a pointer to our presses. To start with, they are not planned, let alone lighting, as regards even ventilation. The cramped floor space reminds us of the early days of Industrial Revolution. With such sub-human conditions in our presses, one may ask, what is the use of stressing on the lighting conditions alone. Light is not a luxury. It is more a necessary in which the management should be genuinely interested. Bad lighting soon reflects in bad work, spoiled paper and ink, damaged machinery, accidents and injuries, even loss of life. All these results which naturally flow from bad lighting cannot be ignored by any right-thinking employer, however much selfish and self-centred he may be.

There are many who do not utilize the available natural light. The reason may be ignorance, indifference or total callousness for the welfare of the workers. Men working in dark dingy composing rooms will soon develop defective vision. Many operatives will be lost in this way. This is a case of avoidable loss to the firm.

Indian printing presses are very badly off with regard to natural and artificial lighting. As most of them are in rented buildings, they cannot alter the design of the building to get more light into the workrooms. As regards artificial illumination, bare bulbs suspended from their conducting material, which are the most unsatisfactory from the point of view of safety, adequacy and quality of illumination, are used. Over-zealous press proprietors have liberally made use of tube lighting or diffused lighting. Too much of lighting may not be a blessing but too little lighting is an undisguised curse.



By
SRI R. RAGHUPATHY

PRINTINDIA has in the past reviewed the working of various brands of Folding Machines. Folding by hand is much in vogue in this country and hence, small printers may look askance at suggestions to spend money on this process which apparently can be done by hand. But folding machines do not cost much and are a good investment. Here is a popular make of folding machine

Folding machines are of two principal kinds, namely the Plate or Buckle Folder which is suitable for parallel folds, folders, brochures and the like which have many folds in the same direction. Various popular brands of this Plate Folder are available in the market from United Kingdom and from the continent. In this type of folding machine the paper to be folded comes in and is stopped by a plate. This makes the paper buckle or fold into two. Then a series of conveyor rollers take charge and take the sheet that has been once folded to another folding unit with plate. The same operation is repeated. This process of folding is repeated until the required number of folds are obtained.

Another kind of folding machine is the knife folder. This is simpler and more used for book work, unlike folders, there are no parallel folds. Every fold is on the other direction to the previous one. When a sheet is folded lengthwise first and then folded breadthwise and then lengthwise alternately,

the type of folding is called angle fold. Knife folders are suitable for this kind of work. In working, the paper is received into the machine and reaches the top of two rollers. A blunt blade or knife descends on the sheet between the two rollers and a fold is effected. The folded sheet is then conveyed to another unit having a pair of rollers and a blunt knife blade. By descending of the blade on the paper another fold is effected. This process is repeated until the number of folds required is effected. Due to the blunt knife operating for each fold, this type of folding machine is known as knife folder. This is suitable for book work.

In the modern day, there is yet another type of folding machine which combines the knife and buckle or plate types. These will perform with equal efficiency either book work or pamphlet or folder work. That is the third type of folding machine is suitable for angular as well as parallel folds. Whatever kind of folding machine is employed, an automatic feeder

will help quicken the process of folding. Hand feeding will restrict the number of folds as it is conditioned by the speed of the feeder. The full capacity of the folder cannot be utilised by hand feeding although slow folding machines are available. Slow folding machines will defeat the very object of machine folding.

Cundall is a very popular brand and is bound to meet the requirements of the Indian Printing industry in folding various kinds of printed work. Laborious hand folding operation, the attendant inaccuracy and soiling of leaves, the limitations of manual labour can all be avoided by using this machine.

CUNDALL PAPER FOLDING MACHINES

With a century of experience to draw upon and remembering that the knife system is the only one that will fold any class of paper from Bible to thick antiques, the Cundall Universal Folding Machine, it was decided to combine Buckle Plates for parallel folds, for compactness and cost, and the more reliable knife for all right angle folds. This design gives a good range of the most useful folds used in the Printing Trade.

At the same time the ease with which a job can be set was given special attention, that is why it was decided to use a knife wherever right angle folds are to be made.

By this system, the sheet after being folded by the first buckle plate is completely re-registered on the folded edge of the sheet before a right angle fold is made by the knife. Any error shown at the lay edges of the sheet does not affect the accuracy of the fold, as it does when the edges of the sheet are registered on the stop of a right angle buckle plate.

A further point, which is often overlooked, is the speed of the right angle rolls. A knife folds in the centre of the width of the sheet and so the rolls only have to deal with half the sheet width. Whereas a buckle fold has to move the sheet its full width sideways before even starting to fold; so the rollers have to run more than twice as fast, to clear the incoming sheet if they are fed head to tail.

The first fold rollers of any machine can generally deal with about 300 feet of paper per minute. This means that with a buckle fold at the right angle section of the machine the paper must be run sideways at a speed of at least 600 feet per minute; and as much as 800 feet if the sheet is wider than it is long. This speed makes it very much more difficult to handle, and wear of of bearings and rolls is a serious problem.

It is a well known fact that rotary stacking of buckle folded work is a poor substitute for cam-operated packers. Cam-operated packers can only be synchronised with a knife. These will receive folded work and accurately knock up the sections into a neat pile which is not disturbed by any break in feeding.

Anyone who has experience of rotary stacking especially on small work, which has three or four folds in it, will know that it is impossible to keep the delivery pile in order. In fact it is more than a full time job to knock up work from the delivery tray.

Cundall Universal Folders were the first machines to be fitted with register wheels running on a feed band and set at a small angle to bring the sheet up to the feed guide and so give automatic side register to right or left hand-lay.

Feed bands have been found to be much more efficient than rollers

in carrying the sheet forward on the self-registering feed table. There is a good deal of slip on the friction drive band generally fitted under a roller table and also between the steel rolls and the sheet.

When a continuous suction wheel feeder was fitted to a roller feed table it was found that the sheet lost speed of travel over the rollers and the feeder had to be slowed down by 20 per cent; because although the surface speed of the feeder drum was the same as that of the folding rollers the head of one sheet was crowding the tail of the other on the feed table. This proved the inefficiency of the roller table.

The complete perforating unit can be removed from the Machine very easily and cutters or perforators replaced in a few minutes. Three different pitches of perforators are supplied with each machine as well as cutters and scorers.

A clutch drive, controlled from the feeding position, enables the operator to start the motor without any load and to stop the machine at any point when setting up.

The Cundall Book Folder is a knife machine throughout, and will fold nearly any class of paper. It is fitted with four right angle folds with extra folds for double sixteen and double thirty-two page work and is supplied with all necessary perforators and slitters.

The outstanding feature of its design is the open arrangement of each deck giving complete accessibility at all folds; no other make of Book Folder can compare with the Cundall design.

Three main side members are used to give a spiral layout of the folding decks instead of the more usual box type construction with all the working parts inside, making them difficult to get at.

The Cundall patent roller mountings are unique; all shafts and rolls

can be easily removed complete with the ball bearings, without dismantling any details or exposing any of the grease contained in the mountings.

The sheet is automatically registered at each fold and can be pulled to either right or left hand lay at the first fold.

Ball smoothers, and steady brushes have been specially designed to fit on the adjustable smoother bars with the lock screws is saved by the ease with which fittings can be put on at any point along the bars to suit any size of sheet.

The cam shaft can be taken out of the machine complete with all ball bearing and cams. This is a useful point when machines are sent abroad, because the setting of the cams need never be disturbed.

All folded work is delivered into automatic packer trays, these do not need any adjustment for the different sizes of work.

The tapes are mounted on adjustable fittings with automatic spring tension slides, which move in or out on a straight line, thus maintaining the correct height of the tapes above the decks and between each other.

Sole Agents for these Machines in India:

Messrs. Indo-Europa Trading Co.
9, Dalal Street, Fort, Bombay 1.

PRINTINDIA

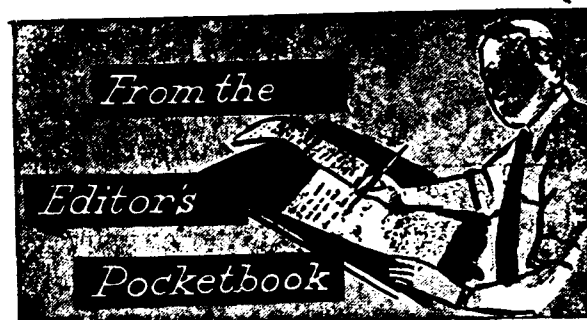
is sold

at all leading

Railway

Book Stalls

PRINTINDIA



WORKING JOURNALISTS' WAGES

On June 14, 1958 the President of the Indian Republic promulgated an ordinance called The Working Journalists (Fixation of Rates of Wages) Ordinance, 1958, to provide for the fixing of rates of wages for working journalists. The ordinance came into force at once. A committee of five is constituted to recommend rates of wages in respect of journalists in the light of the Supreme Court Judgment relating to the wage board decisions and taking into consideration other relevant factors and considerations.

The Union Labour Minister Sri Gulzarilal Nanda said at that time that the ordinance was necessitated as the efforts of Govt to arrive at an agreement with the proprietors of newspapers had failed. The Minister expected the committee to finish its work in about three months' time.

We await with interest the outcome of this move and how far it is going to solve the problem of working journalists. The problem of other workers, such as the press workers connected with the newspaper industry, still remains to be solved, nay, not even attempted.

PAPER PROBLEM

With the imports completely clamped tight, the prospect of getting good quality paper has receded far into the dim unforeseeable future. The Indian Mills and dealers in paper are making much hay while the sun shines! With the prices spiralling up, the market out of control, the qualities unreliably out of the ordinary, the paper kings are riding roughshod on the poor printers and print consumers.

The All India Master Printers' Federation has always a grouse against Indian Paper Makers as it has a weakness for foreign paper. At the April 1958 Printers' Conference, the AIFMP, in a harshly worded resolution called upon our Socialist Govt. to nationalise the Paper Making Industry. The Govt. in their turn have come out with some measures to curb rising prices and bring sanity to paper-makers and paper dealers. The matter is to be referred to the Tariff Commission for price control and any other

suitable step to discourage malpractices in paper-selling.

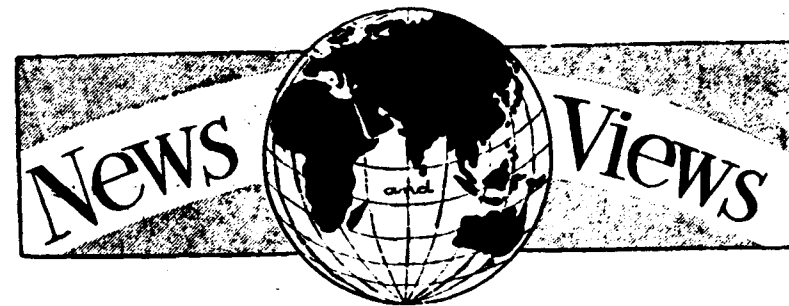
Meanwhile Indian paper users have little realised the gravity of the situation and continue to waste paper, and misuse costly and rare varieties and heavy substance stock for trivial matter. In consonance with this shortsightedness, there has been no concerted measure to grow more fibre-yielding trees, not a programme to show that the authorities realise that thousands of tons of trees are used every month to produce our country's paper. If none wakes up, soon we will find our forests denuded and our mills left without raw material to feed their giant machinery. Then the Printers will be left without any paper to print for their customers. We are supposed to be living in a planned economy. We wonder what has happened to planting fibre-yielding trees, looking after them and maintaining sufficient stock of timber for our paper mills.

Paper Makers' Associations in the country should present the Govt a detailed comprehensive plan for afforestation and conservation of raw material for the paper making industry.

A nation-wide campaign to economize paper and use it only when absolutely necessary and then only the particular quality to use only appropriate to the purpose. Indiscriminate wastage of paper will shut out important printed literature, books, newspapers and other means of communication, knowledge and dissemination of information.

FEDERATION BULLETIN

In its issue of May 1958 (Volume 3, No. 10), the *Bulletin* of the All India Federation of Master Printers appeals to all printers to co-operate in the task of informing and inspiring the votaries of the Printing Craft, in this vast sub-continent. The editor of the monthly organ of India's only Printers' organization promises more new features in the forthcoming numbers, with the common aim of ameliorating the lot of printers and improving the quality of print. The *Bulletin*, which at first started emanating from Saraswathi Press, Calcutta, changed its locale to Madras (Central Art Press & later Associated Printers), is now printed and published by the President of the All India Federation of Master Printers, Sri S. Ramu at The Commercial Printing Press Private Ltd, 34-38, Bank St., Fort, Bombay. The issue under review contains an excellent article by Sri. S. K. Banerji, besides an account of Drupa Fair by the Hony Genl Secy of the Federation, activities of West Bengal Master Printers, Welcome Address to Drupa by Mr. H.A. Sternberg and Estimating & Costing Examination syllabus conducted by the British Federation of Master Printers.



ANDHRA TEXT BOOKS NATIONALIZED

On May 16 1958, the chief Minister, Andhra Pradesh, Sri N. Sanjiva Reddi inaugurated the Text Books Nationalization Scheme, which is being introduced stage by stage. According to this scheme of nationalization, the Andhra Pradesh Govt. exclusively print and publish text books for the fifth class in the areas under Osmania, Venkateswara and Andhra Universities, separately. The books for all the schools in the state for Class Five were written under the special direction of the Govt. and printed in their own press. A special Text Book printing plant is under erection in Hyderabad. Two lakhs ten thousand copies have been printed now in the Kurnool Press. The price of each copy is 60 naye Paise. and this scheme costs the exchequer Rs. 5 lakhs.

Explaining the objects of nationalizing text books in Andhra, the Chief Minister said that they have not undertaken the same with a view to earn profits or to stifle private publishers but in the larger interests of students. All profits accruing will be spent for the improvement of books and development of schools.

Although nationalization is bound to affect some people, the Govt. cannot abandon any scheme which will bring the greatest good to a large number of people. The Govt. will publish good text books at a low price and make them easily available to all.

The Education Minister Sri S. B. P. Pattabhirama Rao said that the aim was to rescue schools from the unhealthy business atmosphere and improve the educational standard by publishing good text books. The private publishing concerns have still a wide field left to them, namely, higher literature, popular and general reading books, etc. which they could develop for their own benefit.

PRODUCTION OF NEWSPAPERS

The transmission and reproduction of newspaper text at astronomical speed was envisaged which was stated in a report at the 11th Congress of the International Publishers' Federation.

The report prepared by Mr. Robert Holmberg, Managing Director of Information of Copenhagen, was presented in his absence from the working session of the Congress by Mr. Orla Rode, General Manager of the Danish newspaper, *Politiken*.

It recommended the establishment of an International Technical Institute to study new development in electronics and their application to newspaper production and asked if newspapers should keep the ordinary printing method and lose the race or fight for the right to communicate news through the new method.

The report said the American electronic system "chacattone" made it possible to transmit 10,000 letters per second to newspapers for reproduction. The "erographic"

method allowed transmission direct to the printing plant of the future which would consist of a row of machines like television sets with the paper running in front of each to produce 90,000 copies an hour.

When the Conference ended on June 7, most of the delegates attended a traditional Japanese drama play.

INDIAN SOCIETY OF ADVERTISERS

The Indian Society of Advertisers has elected Sri Chinubhai Kilachand as the Chairman of the Society.

REGIONAL SCHOOL OF PRINTING, MADRAS

In the Technological Diploma Board Examinations held this April, 17 candidates appeared for the Licentiate in Printing Technology Examination Part Time and all of them came out successful. In Full Time Printing Technology Diploma Course, 22 students appeared and only ten passed. Four private candidates appeared for the LPT Diploma examination and two were successful. One was Sri Nand Kishore, from Govt of India Press, New Delhi.

Eight candidates appeared for Composing and Proof Reading Examination Part Time and all but one passed. Ten candidates appeared for the Machine Minding and binding Examination and all except one were successful.

For the All India Certificate Courses introduced in 1955 by the Govt of India, 45 students appeared and all of them except two passed, six of them in First Class. The Candidates were specialising eight in Hand Composing, 9 in Linotype, 7 in Letterpress Printing, 9 in Process Camera operation Technique, 9 in Lithographic and Offset Printing and 2 in Offset Plate-making.

Let Fine Printing
be your Ambassador!
For Attractive Design
and Excellent Execution
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Kubera Printers (Private) Ltd.,
THE HOUSE OF MASTER PRINTERS
21, SUNKURAMA CHETTY STREET, MADRAS-1.
PHONE: 3006 GRAMS: VASUNIDHI

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PRINTING
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50 YEARS IN THE SERVICE OF THE PRINTERS

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A GREAT NAME IN
FINE FINISHED TYPES

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PRINTING TYPES IN 14 LANGUAGES

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SUPPLIERS OF PRINTERS' REQUISITES



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SWADESI TYPE FOUNDRY

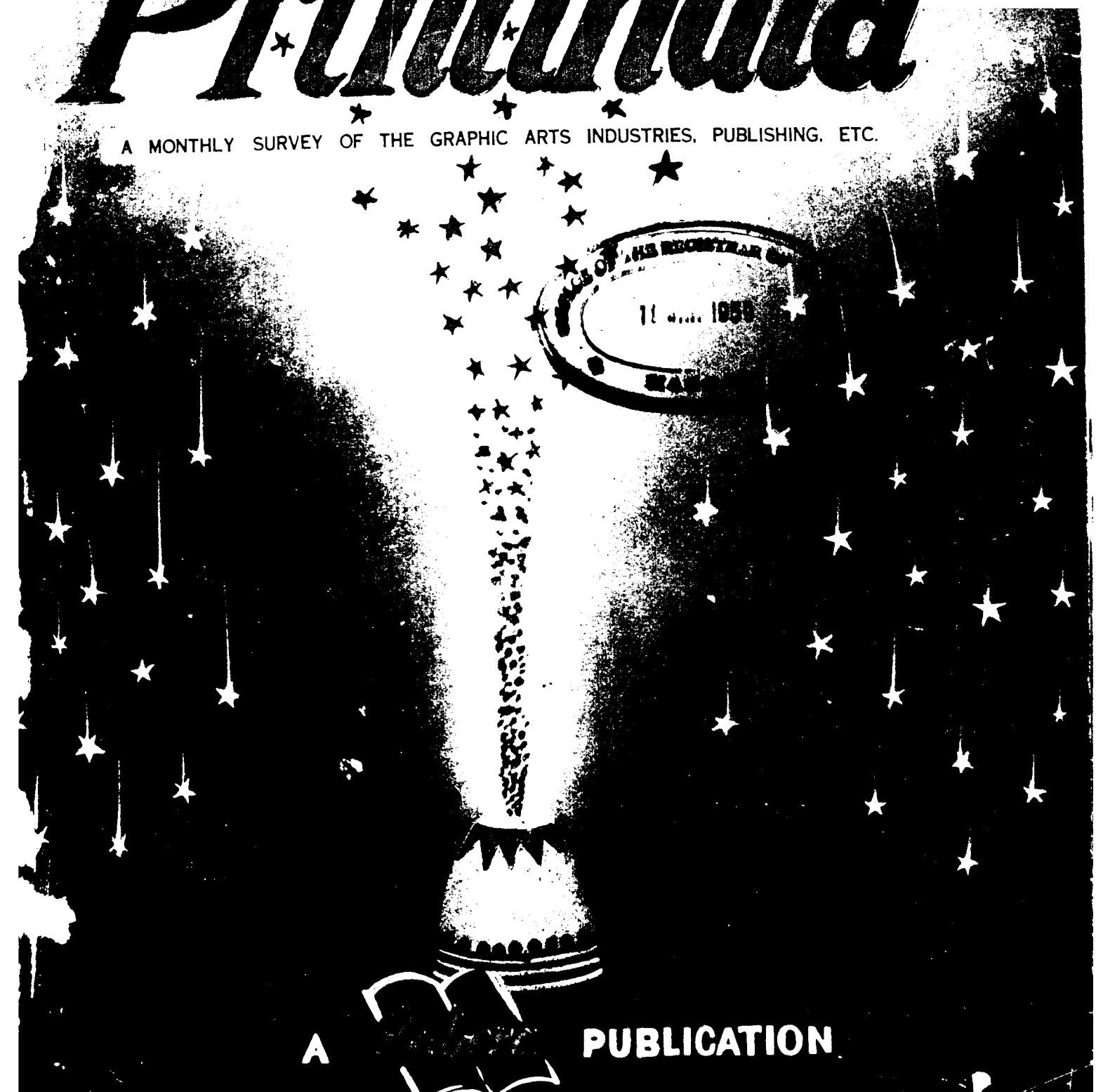
CHINTADRIPET

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MADRAS-2

Printindia

A MONTHLY SURVEY OF THE GRAPHIC ARTS INDUSTRIES, PUBLISHING, ETC.



JULY 1958

Printers All Over India Appreciate RAINBOW'S CUSTOMER SERVICE

Here's how they react to our technical bulletins:-

PRASAD PROCESS PRIVATE LTD.
MADRAS-24 28th May, 1958.

"... Needless to say, you have done a real service in the cause of furthering the progress of offset printing in this country. If you don't mind, would you kindly send us half a dozen more sets of these bulletins for use in our various departments."

SHIV-RAJ FINE ART LITHO - WORKS
NAGPUR-2 19th May, 1958.

"We heartily congratulate you for printing such bulletins in the service of Indian printers. Since these bulletins are to be used for our technical staff, we would feel highly obliged if you kindly send us a set of 4 each for their use."

GOVERNMENT OF INDIA.
INDIA SECURITY PRESS.
NASIK ROAD.

5th June, 1958.

"I acknowledge with thanks the receipt of one set of eight technical bulletins on Offset Printing and problems, forwarded with your letter dated 23-5-1958. As these appear to be of very good use for our technical staff, I shall be glad if you would send us Twenty-Five sets."

THE RAVI VARMA FINE ART LITHOGRAPHIC WORKS
MALAVLI 17th May, 1958.

"We thank you for your letter dated 8th instant. We have received the bulletins also. These bulletins will no doubt be of much help to us and we thank you once again for sending these to us."

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"You have done very good work for the Lithographers who do not have the opportunity to subscribe to the L.T.F. The books are very easy to follow. We wish to congratulate you upon the excellent compilation."

Our Research Department is at the service of printers without any obligation whatever.
CONSULT US ON ANY PRINTING INK PROBLEM

RAINBOW INK & VARNISH MFG. CO. (PRIVATE) LTD.

TARDEO, BOMBAY-7

*Phones: { Factory : 88101
Office : 42471

*Grams : "RAINBOINK"

GREETINGS & GOOD WISHES

I am glad to note that *Printindia* is entering its sixth year and I send my best wishes to the special birthday number you are bringing out in November to mark the occasion.

K. SRINIVASAN
Editor, "The Hindu."

Wishing *Printindia* continued success.

S. RAMU
General Manager
Commercial Printing Press, Bombay.
President, All India Federation of Master Printers.

I am glad to learn that *Printindia* will be bringing out a special Birthday Number in November 1958.

Printindia is playing a very important role in the advancement of the printers of India in more than one direction. Its technical articles, pointed criticism of policies which are adverse to the printers, its suggestions for the printing fraternity as a whole, and more than anything else, in spite of all odds, maintaining a continuous publication are all worthy of the notice of printers.

It is only with the appreciative co-operation of the Printers, and the support of the Printers' providers, that a useful periodical like this can keep up its standard. I am sure the fullest support will be given to *Printindia*.

I would also request *Printindia* to have its headings for articles, layout of the pages and the cover designed specially by reputed layout men and typographers, to serve as an example to printers.

I extend my best wishes to *Printindia* on its sixth anniversary.

Printindia has rendered wonderful service to the entire graphic industry of this country during the last five years. Its editorials have been bold and without any bias. The contributions in its pages are useful and a printer who is interested in improving his quality must have found them helpful.

I wish *Printindia* a long and useful life in the service of the Graphic Arts Industry of India.

S. N. GUHA RAY
Director-in-charge
Sri Saraswathi Press, Calcutta.

I am glad to learn that *Printindia* will start its sixth year of printing from November 1958. The objects for which *Printindia* was started remain as important as, nay more so, to-day than what it was six years ago. This is because technological advancements in the Graphic Arts have been proceeding so fast in recent years that it is becoming increasingly difficult for the understanding not only of the

common printers but also of the master printers, to adapt itself to their implications and applications in the trade. With this end in view *Printindia* has been doing quite satisfactory work in the field of printing and I wish *Printindia* may witness an evergrowing return of its birthday attended with prosperity in its circulation and popularity amongst its readers.

H. GHOSH
Managing Director
Indian Press, Allahabad.

On your sixth year of publication, I want to extend to you our good wishes. and many happy returns.

Within a few years of your inception, you have become a vital force for good in matters concerned with the Graphic Arts Industry. It has been a real privilege to be associated with you during these last six years, and I wish you all luck.

N. L. CONTRACTOR
Managing Director
Rainbow Ink & Varnish Mfg. Co. Ltd.,
Bombay.

I am extremely happy that *Printindia* is entering its sixth year and that you propose bringing out a Special Birthday Number to mark the occasion. I have had the privilege of following this magazine very closely since its inception and I can say with confidence that it has done yeoman service to the industry it represents about which the sponsors can really be proud of. I am sure it will fulfil this purpose in a bigger and nobler way in the years to come. I wish the magazine continued success.

K. C. RAMAN
Production Manager
Times of India Press, Bombay.

(Continued on page 19)

NOVEMBER 1958

581.11. No. 1. November

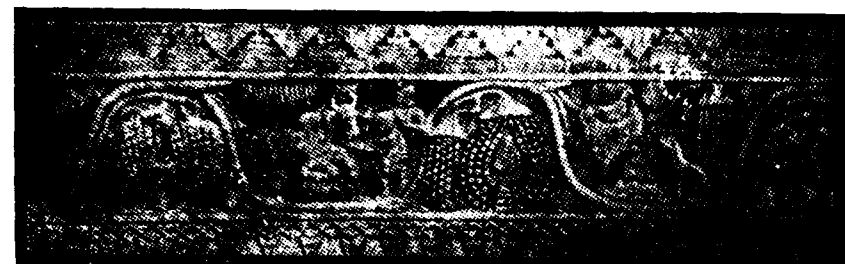


showmanship
in words
and
pictures

COLOURFUL pictures on a cave wall, graceful hieroglyphs on a crumbling pillar—ideas handed down the centuries through a variety of significant symbols and media—all express, interpret and present the thoughts of some memorable civilization.

Today, the heritage of India's tradition and culture has gained a new meaning through her own printing skill. The printed word and picture offer a wider scope of expression through an eloquent range of typography and colour reproductions, opening the minds of people to the past, present and future.

With her own words and pictures, India impresses her ideas at home and abroad through the showmanship of good printing.



● BHARHUT STUPA, BALUSTRADE RELIEF, Early 1 century B.C.

good printing
tells a
better story

PSSP 5



Sree Saraswaty Press Ltd.

32 UPPER CIRCULAR ROAD, CALCUTTA

Layouts and Lettering

By

SRI RAMAKRISHNA NARAYANAN

Every kind of production requires planning. Printing is no exception. A well-printed work is only a well-planned print. In this monthly feature, outstanding pieces of publicity matter will be reviewed. The healthy criticism offered in these columns is only with a view to improve the quality of typographical arrangement as well as the choice of type faces

BIRTHDAY REMINDERS

Hundred and five years of Indian Railways, Ten years of Air India International, Five Years of *Printindia*! Birthdays come around and when they do, it is time for reminiscence, reflection and rejoicing. There are plans for further progress. On this occasion of the Sixth Birthday of *Printindia*, we look back and find the industries listed below have been reviewed in this column.

Aluminium Industries, Kundara, Allwyn (Hyderabad), Annapurna Metalworks Ltd., Calcutta, Arvind Boards and paper Products, Bilmora, Ashok Leyland, Madras, Bata Shoe Co., Batanagar, Binny's Eng. Works, Madras, Camlin Private Ltd., Bombay, Chloride and Exide Batteries, Eastern Ltd., Dunlop Rubber Works, EMC Calcutta, Gordon Woodroffe Co., Madras, Guest, Keen Williams, Hindustan Motors, Hooghly Docking Works, Hyderabad Asbestos,

Indian Iron & Steel Co. Ltd., Indian Tube Co. Ltd., Jenson & Nicholson, Kirloskar Bros., Ltd., Kirloskar Electric Works, Madura Mills, Mukand Iron & Steel Works, Ltd., Mysore Iron & Steel Works, Mysore Kirloskar, National Carbon, Orient General Industries, Philips (India) Ltd., Rayala Corporation, Shalimar Paint, Sundaram Industries, Tata Iron & Steel Works Ltd., Texmaco, TI Cycles (India) Ltd., Travancore Rayons.

Readers will note that the coverage above has been over quite a wide field, but it is far from complete. It is our endeavour to make it as comprehensive as possible in the issues ahead.

JETRAVEL

BOAC and Pan American have been publicising with splash about the pure jet-age in commercial air travel. Comet IV is the pride of BOAC and Boeing 707 is the feather in Pan American's cap. None could have missed Pan American's

advertisements (of half page) headed "First jet on the Atlantic, First on the Pacific, First in Latin America, First round the World." Small Sans Italic Caps and in condensed sans hand lettered type "Pan American starts first jet service to USA, October 27*" The star at the end was for "subject to Govt approval."

The first week of October saw a scoop, literally! The BOAC had half a page advertisement headed "First ever Atlantic jet service (in Gothic upper lower but shaded). The text of 8 lines was in Plantin and mentioned the fact of BOAC inaugurating the first ever pure jet service across the Atlantic (in both directions) and emphasized "The pure-Jet age has arrived" in Gothic condensed types. The letters BOAC were in usual style was followed by "World leader in jet travel." Formerly it was "Air Travel."

During the same period, when Pan American is scheduled to begin its flight, we may expect a full page advertisement. Judging by the previous volume of ads a coincidence will be that the International Air Transport Association was meeting in Delhi.

Air India International too have ordered for Boeing 707 jets, but only by the end of 1959 or so, they will arrive. And so on to "Jet-age"!

NEW HORIZONS

Last month Horizon Cigarettes were launched with eclat by Clarion, Calcutta, who handled the publicity of Delhi & Orient Tobacco. This month, another new product, a baby soap has been put on the market with great pomp and publicity, by D. J. Keymer, Bombay, on behalf of Dumex. Something unique about this baby soap publicity was, in the same issue there

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*Grams: "RAINBOINK"

GREETINGS & GOOD WISHES

I am glad to note that *Printindia* is entering its sixth year and I send my best wishes to the special birthday number you are bringing out in November to mark the occasion.

K. SRINIVASAN
Editor, "The Hindu."

Wishing *Printindia* continued success.

S. RAMU
General Manager
Commercial Printing Press, Bombay.
President, All India Federation of Master Printers.

I am glad to learn that *Printindia* will be bringing out a special Birthday Number in November 1958.

Printindia is playing a very important role in the advancement of the printers of India in more than one direction. Its technical articles, pointed criticism of policies which are adverse to the printers, its suggestions for the printing fraternity as a whole, and more than anything else, in spite of all odds, maintaining a continuous publication are all worthy of the notice of printers.

It is only with the appreciative co-operation of the Printers, and the support of the Printers' providers, that a useful periodical like this can keep up its standard. I am sure the fullest support will be given to *Printindia*.

I would also request *Printindia* to have its headings for articles, layout of the pages and the cover designed specially by reputed layout men and typographers, to serve as an example to printers.

I extend my best wishes to *Printindia* on its sixth anniversary.

Printindia has rendered wonderful service to the entire graphic industry of this country during the last five years. Its editorials have been bold and without any bias. The contributions in its pages are useful and a printer who is interested in improving his quality must have found them helpful.

I wish *Printindia* a long and useful life in the service of the Graphic Arts Industry of India.

S. N. GUHA RAY
Director-in-charge
Sri Saraswathi Press, Calcutta.

I am glad to learn that *Printindia* will start its sixth year of printing from November 1958. The objects for which *Printindia* was started remain as important as, nay more so, to-day than what it was six years ago. This is because technological advancements in the Graphic Arts have been proceeding so fast in recent years that it is becoming increasingly difficult for the understanding not only of the

common printers but also of the master printers, to adapt itself to their implications and applications in the trade. With this end in view *Printindia* has been doing quite satisfactory work in the field of printing and I wish *Printindia* may witness an evergrowing return of its birthday attended with prosperity in its circulation and popularity amongst its readers.

H. GHOSH
Managing Director
Indian Press, Allahabad.

On your sixth year of publication, I want to extend to you our good wishes and many happy returns.

Within a few years of your inception, you have become a vital force for good in matters concerned with the Graphic Arts Industry. It has been a real privilege to be associated with you during these last six years, and I wish you all luck.

N. L. CONTRACTOR
Managing Director
Rainbow Ink & Varnish Mfg. Co. Ltd., Bombay.

I am extremely happy that *Printindia* is entering its sixth year and that you propose bringing out a Special Birthday Number to mark the occasion. I have had the privilege of following this magazine very closely since its inception and I can say with confidence that it has done yeoman service to the industry it represents about which the sponsors can really be proud of. I am sure it will fulfil this purpose in a bigger and nobler way in the years to come. I wish the magazine continued success.

K. C. RAMAN
Production Manager
Times of India Press, Bombay.

(Continued on page 19)

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56111. No. 1. November

were four advertisements of a generous size, located on different pages. The first five-column one was featured in uneven handlettered type. "At last." There was the illustration of an out-stretched hand in halftone and a thick rule at the bottom. The second was a 10 x 2 column, which was bigger one said "At last, a Soap" in the same style lettering. There was the illustration of a smiling baby (a rare phenomenon these days, what with the scarcity of baby foods and beverages) with outstretched hand, bubbles near the hand accentuated the soap idea, and a thick rule at the bottom.

The third ad was 15 x 3 cols. saying "At last a soap worth wading for" with the illustration of baby, bubble and all. The last one was a full four-column one. To the previous words are added "Dumex (Gill Heavy Caps) Baby soap" (Sans lettering same as "At last"). In the middle is the scraperboard illustration of the soap itself, very neatly done with bubbles, wrapper etc. Baby and the bathtub are done in halftone, same size as the three column ad. Four lines of Times Roman from the text at left. Two lines of Gill Medium above the thick rule, for name and address of the firm. We look forward to such grand introduction of good products by pleasing publicity. One thing stands out. None is niggardly of space these days.

BHARAT BIJLEE

In 7 x 2 col., this forms part of the many "drives", such as Machine tool drive, Textile drive and now the Agricultural drive I. Bharat Bijlee Emblem starts the ad. at the right top. The eye is thence directed to short lengths of five vertical lines and a longer one of a bold grain stalk motif alternately. The second grain stalk points into a pump illustration, half line and

tint; and overlapping a part of it at the bottom is the motor (manufactured for the particular drive)

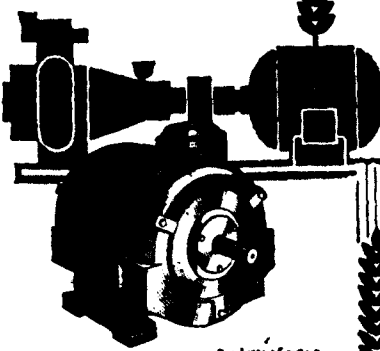
AGRICULTURAL DRIVES

BHARAT BIJLEE

PUMP MOTORS

Divis proof, durability, reliability, speedily engineered to serve agriculture and the nation.

This is only one of the applications for which BIJLEE motors are specially designed and made. In addition to a wide range of standard motors there is a BIJLEE motor specially suitable for every purpose in industry and agriculture.



Manufactured by: BHARAT BIJLEE LTD. 100, NAGAR, BOMBAY 22

Products of over a decade's experience in motor manufacturing.

Direct Drive by Bharat Bijlee

done in scraperboard. The headline at left top is in hand-written sans in three lines of varying thickness. Below these are three lines of Times Bold, and six of Times Roman, all right flush lines. Below the motor illustration are three lines of name and address in Gill light and three more lines in Times italic left flush of their 10 years experience. The layout and illustrations are appropriate for the theme and is well done.

Studio Ratan Batra

GO SAFE WITH GODREJ

6 x 3 cols. Godrej have been pioneering in goods covering a wide range from steel safes to soaps. Their typewriter is the first to be made in India and perhaps the only one. "Navtal" brass padlock is the subject of the piece reviewed here. In a rounded rectangle is the Godrej emblem, reversed. The

two-line head says "Navtal" which dominates. At the middle left is the line and headed illustration of the lock and keys, placed aslant, slightly. The Gill Medium left flush lines form the text for this advertisement. Note that this is arranged in such a way as to be parallel with the end of the lock. The qualities of "Navtal" are emphasized in four starred lines. Gill bold is used for sizes and prices, Gill italic for availability. Another Godrej emblem complete the ad. The emblem at the top and the emblem at the bottom are so positioned in relation to the text illustration and headline, that the advertisement as a whole is nicely balanced.

Eastern Psychograph

NOTABLE AMONG THE MANY

AIR INDIA INTERNATIONAL 7 x 4 col. A heavy outline caricature of India's Finance Minister followed by the Maharajah loaded with moneybags make a humorous theme in this. Times Italic uneven indented lines form the text. The ad was timed for the landing of Morarjibhai at Bombay from USA. JWT

ALUMINIUM INDUSTRIES LTD. 9 x 4 col. On the day of the inauguration of the Periyar project, this ad was released. A stipple drawing of the stream below the Dam with the text in Gill Medium left flush, ALIND'S part in Gill Italic and below these in tined outline, ALIND'S supply to the projects so far, with the name and address in Gill complete this nice advertisement, Clarion

ARVIND BOARDS 8 x 3 col. "Ashvaraj Boards" are the subject of the ad. Three Ashvaraj logos are at the top. Baskerville text follows about how Ashvaraj boards improve the quality of board products, which are pictured below,

such as Books, cartons, tubes etc. The Ashvaraj Horse and Logo near left bottom is followed by the name and address in Gill. Shilpi

ASSAM OIL 12 x 4 col. entitled "Men & Oil", the first shows the geologist (in Plantin italic caps) at right top a line and shade the outline illustration of one of the geologists with hands holding a piece of rock enclosed by heavy rule. A microscope is in front of him. There is a fine scraperboard study of hands and rock. The Plantin text is in two columns. Hand-lettered heavy Sans are used for "Assam Oil" and Gothic Condensed for "A full scale petroleum industry." There is a small illustration of the installation at left bottom. A line of Plantin Italic and the emblem of BOC complete the first in this interesting new series. DJK

BURMAH SHELL 12 x 4 col. ad strikes a new line for plenty of white space and for the brevity of the text. Only ten words are used in this. There are illustrations of playing cards superimposed with tins of X-100, X-100 multigrade, 2T and Rotella. Subsequent ads feature the same cards and tins at different positions. DJK

GUEST, KEEN WILLIAMS 10 x 3 cols. Shadowless dome at Tanjore is the piece in their series

Godrej present

NAV-TAL

the new brass padlock

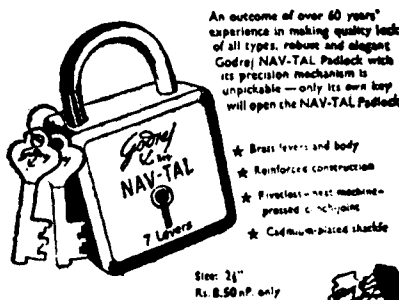
An outcome of over 60 years' experience in making quality locks of all types, robust and elegant Godrej NAV-TAL Padlock with its precision mechanism is unpickable — only its own key will open the NAV-TAL Padlock.

- * Brass lever and body
- * Reinforced construction
- * Pinlock — test machine — pressed C.S. type
- * Cadmium-plated shackle

Size: 2 1/2" H. B. 50 up only

Available at Godrej Showrooms and Stockists, Hardware Stores...

Godrej Lock — Key to Safety



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Old and new. The Brahadiswara temple dome does not cast its shadow in the ground anywhere, but is so positioned to cast the shadow in the gopuram itself. Everest

HORIZON CIGARETTES 10 x 3 cols. Having introduced the cigarettes, a new series entitled "A man with a plan" in Bembo italic with an illustration of the man with the cigarette, drawing and in the background the product of handiwork and at right bottom is the Horizon pack "Reach for..." etc right flush lines of Bembo form the text.

HANDLOOM HOUSE 8 x 3 col. A lady in the handloom sari is featured, all smiles. Text at top in thin Gothic uneven lines. Address etc below, text in Gill. Shilpi

INDIAN TUBE 8 x 3 col. There is a big illustration of a transformer (line and tint), a big black circle at left top has "transformer cooling tubes" in white brush lettering with an arrow pointing to the transformer tube. Text in Gill left flush. "Indian Tube" in Cartoon Bold. Clarion

LARSON & TOUBRO LIMITED: Half page ad dominated by a scraperboard illustration of the L & T Silkeborg Milk Pasteuriser. There are the smiling boy and girl with milk bottles in their hands "1,50,000 seers of milk per day!" Text in two columns is about the part L & T are playing in helping Indian Dairy farm, etc. There is the L & T trademark name and address at bottom left. Times series are used. JWT

METAL BOX: Two ads, one in 12 x 4 col with the title "who'd have thought that the cashewnut is India's largest dollar earner?" in Perpetua. There is a brush illustration of a port with a wheel barrow of cashew cases in front.

Text is in two columns of Perpetua about how cashew is packed in boxes made by Metal Box co.

At last... a Soap worth wading for...

DUMEX baby soap



Brilliant Campaign for Baby Soap There is then the MB 25 years logo., name and address completing the ad.

The other is 8 x 6 col. headed "Picked in April. What will this mango taste like in December?" There is the illustration of a picture smiling, mango in hand a branch of mango to lend some picturesqueness. The two-col. Perpetua text speaks of how fruits like mangoes can be packed for use in a later part of the year by MB cans etc.

(Continued on page 28)

*we create
Beauty in colours*

Simplicity in layouts

*Personality in
PACKAGING*



DIAMOND PRODUCTS LIMITED

PRODUCERS OF MODERN PACKAGING

A Subsidiary of
JARDINE HENDERSON LTD.
4, CLIVE ROW, CALCUTTA-1.

Orissa Printers' Conference

By

SRI S. N. GUHA RAY

Regional Printing Associations should be encouraged. Orissa is now coming up with a powerful printers' organization fully representative of the region. Sri S. N. Guha Ray, well known for his service for printers has delivered this presidential address to the Orissa Printers.

I must confess that I was rather taken aback when the call came to me from my brother-printers of Orissa to preside over this, the first Session of the Orissa Printers' Conference. We, the printers of India, are holding State Conferences occasionally but I do not remember of an occasion when some one from outside the State has been invited to preside over such functions. So when the call came to me to preside over this session I felt rather perplexed. I did not know what to do. This offer should have gone to some friend here in Orissa—there are many in this State, who are worthier than I do to adorn this most coveted honour, which the master printers of a State can accord to one of their confreres. But the call was insistent and I had no option but to accept it. I will not waste your time in saying how grateful I am for the honour. I am grateful and I say so from the core of my heart.

Standing here in the nerve centre of Kalinga, the State known throughout the centuries for its art, craft and sculpture as evinced in the millennium-old civilisation at Ratnagiri, at Konarak and Bhubaneswara; here where the world-conquering forces of Chandasoka were halted by the valiant army of Kalinga; here where the art and culture of North India has mingled as in a vignettted study with that of South India; here where the great revolutionary Jatindra Nath Mukherjee, 'Bagha Jatin' met the British rifles at the bank of the Buri Balam

at Balasore; here where Netaji Subhas Chandra Bose first saw the light of the day and passed his early years—I really feel unnerved to address you. If I falter, I do crave your indulgence.

To a student of modern history and economics it is no wonder that Orissa with its wonderful seaboard, the chain of mighty rivers, its mineral and forest wealth is backward in its industrial life. This backwardness is traceable to the deliberate policy of our last British masters. All students of history know that nowhere in India did the British meet such stiff resistance as in Orissa. Every village became a Stalingrad and ultimately they had to concede territorial autonomy to a large number of the local potentates. It was natural that the British administrators could not forgive the valiant Oriyans and so this State, so richly endowed by nature in everything—in art and craft, in minerals and forests—was an example of under-development during the British days.

There is nothing surprising, therefore, that printing industry is still undeveloped in this part of the country. Printing being a service industry depends entirely for its uplift on mass literacy and industrial development of a region. Under the Five year plans, Orissa is on its way to great industrialisation. The Hirakud Dam, which is nearing completion will supply sufficient electricity for rapid industrial development. Cement, paper

and other industries are progressing rapidly. Printing industry too will naturally come in to its own.

At present there are about 200 printing presses in Orissa, of which nearly 100 are to be found in Cuttack alone, the rest in Berhampore, Puri, Balasore and other stations. But except the Government printing Press none of them boasts of modern equipment. All of them suffer from lack of orders resulting in consequent cut-throat competition. Many of them depend on Government jobs; text books and occasional job work are also the mainstay of most. But at present the demand is so small that not all the printers can make their both ends meet far less to instal new and modern equipment. But I am certain that these days of despondency are almost over. Already there is an increased demand of printed materials from the various Government and autonomous bodies as also from the general public in the shape of school text books. Under the leadership of a man like your Chief Minister, Dr. Harekrushna Mahtab, the State is advancing rapidly in education and in industry. It is therefore, high time that you shall have to consider your future programme of expansion.

The sympathy and support which this Conference has received from men like Dr. Harekrushna Mahtab, Pandit Nilkantha Das, Shri Radhanath Rath and others are proof positive of the importance which they give to the printing industry of the country. And I am certain that under their leadership the Printing industry of Orissa will assume its rightful place in the social and industrial life of the country.

One of the greatest handicaps towards the rapid development of the printing industry of Orissa is the lack of mechanical compo-

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sition. Neither the Linotype, Inter-type nor the Monotype people have given their attention to the production of Oriya matrices as they do not think that investment in this line will be economical. Here I think the Orissa Government should step in. If they place an order for say a dozen mechanical composing machines using Oriya matrices, then I am certain that some of

these mechanical composing machine makers will come forward to produce Oriya matrices.

Friends, I will now deal with some of the problems which are of an all-India import. These affect the entire Printing industry of India. Many of these have been discussed by the eminent members of Governing Council of the All India Federation of Master Printers these two

days. I will briefly deal with some of them.

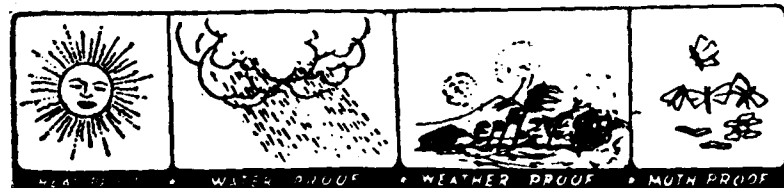
The first problem from which the the entire Printing industry of India suffers is lack of technical personnel. Most of us, printing press owners, had no previous training to run a business nor the technical know-how of running a printing shop. We have, of course learnt our trade the hard way. But in these days of technological advance, it is next to impossible to run the Printing business, which is one of the most difficult technical industries, in a rule of thumb manner. If, we are really serious to develop and expand our business, we must employ technically trained men. Fortunately the Government of India and the State Governments are now devoting special attention towards the training of technical personnel for the Printing industry. Four regional Schools of Printing technology, in Calcutta, Bombay, Madras and Allahabad have started functioning. The School in Calcutta is meant for the Eastern zone, i.e. West Bengal, Orissa, Bihar, Assam, Manipur and Tripura. All these States are entitled to send a fixed quota of students to this school. The first batch of successful students have come out this year from the Calcutta School for Eastern Zone. I would like you to take in employment these youngmen as apprentices. Of course, this year only one student of Orissa has come out successful of the two who appeared in the final examination. But what I want to impress on you is to send your own boys to this School of yours for getting necessary training. There is a Students' hostel attached to the School, so the problem of accommodation will not worry any. I would also request your State Government to arrange for apprenticeship training of the boys who come out successful in the

(Continued on page 20)

GLASS - O - LAC & SYNTHO-GLOSS

Non-yellowing Varnish for
PLAYING CARDS

Ideal for Black Centre Art Cards



Also Picture Varnishes

Litho Varnishes, Offset Varnishes

and Printing Inks



Free technical service



Manufactured By

Bharat Varnish Mfg. Co.

Agra Road, Ghatkopar, BOMBAY 39

Grams: BHARAT (Ghatkopar)

::

Phone: 67279



the life blood of Civilization

By

SRI T. RAMA

A little drop of printing ink makes a million people think! So printing is the link between ink and human thinking. Ink is a wonder material of modern era of which every printer should know. Here is thrown an illuminating light about the little known, but vital fluid, which is the very life-blood of civilization. But for these three letters "INK", human knowledge will die ere it is born. It wouldn't fly as it does now, at 64,000 copies an hour

OLD INKS

The first printing ink was made from soot and oil. With the advance in other fields of printing, faster presses demanded quicker drying ink and a better quality ink: Something more stable, more bright, without causing the many working troubles. Ink-maker was far from a chemist in olden days, when leather balls were used for inking the fume in the old iron hand press. The boy who did this was called the baller and he used to make monks and friars, in the course of his uneven inking. Monks meant brighter patches of uneven ink, while friars are the grey patches suffering from insufficient inking. From the balls of leather filled with sawdust, came treacle rollers, then the gluc-glycerine rollers and now the plastic rollers and the rubber rollers for

fast running rotaries. All-weather rollers are now common, which can be universally used for all presses.

NATURE OF INK

Modern Rotaries are custom built. Modern Inks are tailor made. These mean the same thing: There is no ink which can be used on any paper, on any machine for drying within any time. Each quality of ink is manufactured to suit a particular set of conditions. A platen machine requires one quality of ink, the cylinder machine requires a different quality of ink and the rotary machine requires a third quality of ink. Again, a type form needs one kind of ink and the halftone blocks require a different consistency of ink. Besides, the newsprint prints well in a particular variety of ink, and the art paper prints well only

with a particular quality of ink, while a cover paper or bond required an entirely different quality. So, then, inks are not only different in colour, but also in quality to suit varying conditions of printing surfaces, different speeds, different papers etc. Today inks are manufactured for printing not only on various varieties of paper, but also on cloth, glass, wood, metal, rubber, plastics and ceramics (Potteryware).

QUALITIES OF PIGMENTS

Printing Ink is different from writing ink. The latter is made with water, myrobolams, etc. Printing ink has a liquid part and a solid part. The solid part is the colouring matter or the pigment. A number of sources are there for printing ink pigments. It may be vegetable, animal, organic or inorganic. Various metallic chemicals are examples of inorganic pigments. Lead and molybdate chromes, iron blues, chemically iron ferricyanide complex, copper phthalocanine blues, zinc and titanium oxides are the widely used inorganic pigments.

In order to convert organic substances into pigments, dyes are treated with re-agents. Lake pigments, pigment toners, pigment dyestuffs and phosphomolybdotungstic acid dye complexes or fanal toners are examples of organic pigments.

The pigments should be capable of giving good colour strength or hiding power but the most important property is the dispersing property. It should be capable being dispersed into a fine powder. Here the particle size is very important as otherwise, fine halftone ink will be unobtainable.

The liquid portion of the ink is called the medium. This is usually Linseed oil, Chinawood oil, Tung oil, Rosin oil or mineral oils. These are polymerised or combined

with natural or synthetic resins to make them fit as a medium for the dispersion of the pigment.

Printing ink contains not only the solid pigment dispersed in the liquid medium which is usually linseed oil or mineral oil, but also various substances such as driers. As drying is an important factor in every quality of ink, chemicals, usually metallic substances, such as lead, manganese or cobalt are added to accelerate drying. Driers are usually metallic salts. These are of linoleic or naphthenic acids. Whenever some special properties are required in the ink, starches, wetting agents, resins, etc. are added. These substances bestow qualities such as gloss, scratch-proofness, adhesion, etc.

NEWS INKS

Special mention should be made of news inks as they are made to be used in fast running rotary presses. They have no time to dry and the stock is absorbent. It has to be printed on both sides simultaneously. Black ink is generally used for printing newspapers. A solution of oil and resin may be the vehicle while the pigment may be lamp black. This is obtained by incomplete combustion of oils. Restriction of the supply of air produces soot or black powder called lamp black. Gas black is obtained by burning natural gas. These gases are usually from petroleum. Gas blacks are noted for their loss of gloss and extremely small particle size. Toners are generally used for black inks, as it is practically impossible to achieve a jet black from black pigments alone. Some black pigments have a gray undertone and others blue, but not black. Blue or violet pigments are mixed to obtain optically strong black colour. Dyes are stronger and more economical than pigments. When using

dyes however, the danger of strike through looms large which needs controlling. The USA manufacturers sometimes dispense with toning altogether due to the dangers in dyes creating strike through. But then, strike through is not due to dyes alone. Vehicle also plays its ignoble part. Thinner oils may not strike through as thicker ones.

During refining petroleum, mineral oils are obtained. A viscous mineral oil is chosen as the vehicle. Slower machines require thicker oils and faster ones free flowing oils. Mineral oils are noted for their lack of wetting quality. Due to the cost of resin oil, the proportion is being lessened although it is ideal for inks. Thin oils tend to evaporate in the machine room causing drying problems on the forme or plate and the rollers and ducts.

Mixing and dispersion are the two processes undergone by all inks. The first is well understood but the second is more often misunderstood and is more popularly known as grinding. What actually happens is dispersal of the pigment into its finest particle. No crushing takes place in the mill.

Heavy duty mixers knead the mixture forming it into a thick paste. Fast mixers may be used to get the dispersion to the required degree. The mixed substance is passed through a mill for refining. Due to friction created between the grinding bar and the roll, it is water cooled and an even temperature maintained to prevent distortion.

INK PROBLEMS

Printing and Allied Trades Research Association, Surrey, England, have manufactured a model ink distribution system used in inking experiments. By adding certain agents to news inks, ink flying can be avoided. For two

years experiments were conducted and finally suitable agents were found out to avoid ink misting on fast running machines. Atmospheric conditions, roller settings, ink film thickness were varied and analysed to reach the root of ink flying trouble. The apparatus used for conducting these experiments had a part of rollers which can be run within a wide range of speeds. A current of air draws droplets of ink flying off the rollers and collect them on filter papers. The papers are weighed to find the amount of ink flying. Film thickness and speed are two factors that influence ink flying. When these two variables are increased flying also increases.

During the letterpress conference held by Patra last year, it was decided that paper makers and ink makers should meet to discuss common problems of manufacturing materials suitable for each. Tests should be conducted for printability of paper and ink and for avoiding the various working difficulties met with during printing.

HALFTONE INKS

Only quality inks specially manufactured for such printing should be used for printing halftones. The ink should be tested for suitability to the paper stock being used for printing halftones. Job inks are unsuitable for halftones. The ink must be stiffer for platen halftone printing. It should be more full bodied than those required for cylinder presses. When ordering inks, it is wise to mention that they are to be used on platen presses to enable the inkmaker to formulate such a consistency of ink. Rich in pigment and stiff inks are the right kind for platens. Breaking off short when taken on the palette knife, platen ink will flow smoothly.

Sometimes it is necessary to dope the ink when it picks or plucks the paper. Reducers may be used to reduce tackiness of ink. Excessive reducing will cause a greasy ink and it will never settle on the paper, causing rubbing off or chalkiness.

When the ink is gray and mottled, the ink is weak in pigment or colour strength. Although such an ink may be found suitable for cylinder printing, it is not so for platens. Mottlesome ink can be improved by the addition of a small quantity of powdered rice flour or cornstarch. Ink consistency is improved in this fashion. A black offset ink if added in small quantities may also improve. 2 to 3 per cent of ink paste may be added to prevent plucking or picking. Too long an ink makes the forme stick to the paper and in this case too, the ink should be reduced. Thinner ink of the same colour may be mixed to reduce tackiness. A bond ink may be reduced with a job or halftone ink.

Proper selection of raw material is pre-requisite for manufacture of good quality ink. Samples are tested in laboratories and graded and indexed. Substances known under the same name are found to vary vastly in their chemical properties if they come from different manufacturers. Colourable imitations are rife. Therefore, the ink-maker has a well-equipped laboratory with modern precision testing instruments to test and satisfy that he is using a right pigment, a suitable toner, proper extender, appropriate drier, etc. The quantity of the various raw materials is also important and they are weighed, worked and standardized for various qualities and grades of ink.

Inks are also sharply divided according to the processes. We

have relief processes such as the letterpress, flexography, etc. The intaglio process such as gravure, die-stamping, copper plate printing etc. Then there is the planographic process such as lithography, direct and offset, on stone and on zinc or aluminium, collotype or gelatine printing. Each requires a different constituent with different properties. To quote an instance, for photogravure printing from copper cylinders having etched ink cells of varying depths according to tonal gradation, a very fluid volatile ink is necessary. The volatile substance is recovered on evaporation and used again. Solvents are used for gravure and flexographic aniline inks. These solvents are usually petroleum products or coal-tar by-products. Sometimes alcohol or ether can also be used although they are costly. The quantity of the solvent is determined in relation to evaporating properties, solubility of the resistant and also the cost factor.

Certain properties are common for letterpress and lithographic (direct) process inks. Both should be long. Long ink means one which could be taken on a palette knife, when long unbroken strings will appear. Short ink is one which when lifted appears in broken strings of very short length. Both should be tacky. Tackiness is that property which makes the palette knife give a sticky sound when pressed and lifted on a mixing ink slab. Both typographic and lithographic inks should have a good flow. Similar pigments are used for both, although lithographic pigments should not be affected by water. Offset inks should be short and buttery with great colour strength. The remarks short and buttery apply to platen inks also as there are no arrangements for elaborate distribution over a wide area on platens as on a cylinder

machine. Therefore a long ink will not print well in a platen.

The various substances they go to make ink are first put into a mixer and after several hours are put through a three roll mill or unitary mill. These are tested by a grinding gauge for proper consistency. Some inks may after grinding be put through the mixer once again.

For making gravure inks and aniline inks, for flexographic or rubber stereo printing, dyes are dispersed with pigments and extenders in a varnish. This varnish consists of natural or synthetic resins. These resins in turn are dissolved in a suitable solvent or a combination of several solvents. A double purpose is served by the resin. It acts as a flow-giving agent and also acts as a binder. When choosing solvents for inks, care should be taken to study their evaporation rate, toxicity, power to dissolve resins and last but not least the cost factor. A costly solvent will not be an economical proposition.

Alcohol or denatured spirit is the usual solvent for aniline or flexographic inks. But for gravure inks petroleum or coal-tar products, alcohol or ether may be used.

Printing Ink is manufactured to suit the speed of the printing machine also. Therefore problems multiply when the speed of the machine goes up. Ink flying, ink misting, set-off, ink drying on the rollers are all problems associated with fast printing. Anti-set off compounds, quick drying driers, free flowing varnish and little tack are the requirements for inks for fast machines.

SPECIAL EFFECTS

Resins of various qualities are incorporated in the medium for

imparting special qualities to the finished ink. Examples may be cited in the following:—

Short oil Alkyd combined with phenolics to impart adhesion to plastic and for quick setting.

Hard and high melting phenolic or maleic resins for gloss ink.

Long oil alkyd resins for scum resistance in offset inks and trouble free working.

Printing inks dry by any one or more of the following processes:—

Penetration into the paper fibre, or absorption into paper, Oxidization with the atmosphere, evaporation.

News inks dry entirely by absorption. Newsprint is an absorbent paper and the thin fluid mineral oil ink penetrates into the paper leaving the pigment dry on the surface. But a letterpress cylinder ink dries partially by penetration and partly by oxidation. At first the thinner portions of the vehicle penetrates into the paper and now the ink is said to have "set." A few hours later the rest of the vehicle oxidizes and the solid pigment is left on the surface.

Oxidation is catalyzed by the driers which act as the catalytic agent. Thus the ink polymerises or becomes thick.

Drying depends not only on the furnish and the finish of the paper but also the conditions of printing, the machine-room temperature etc. The following substances accelerate the drying rate: Dehydrated Castor oils and Tung oils dry at a faster rate than linseed oil. Resins increase the drying rate. Phthalocyanine blues, iron and chromes increase the drying rate. The following retard or slow down drying:

Mineral oils
Extenders like alumina
Fanal toners
Some black pigments

A lower atmospheric temperature slows down drying. So is a higher humidity responsible for slow drying. Acidity in the paper from pH4 slows down drying. In humid weather, this is noticeable, when the paper takes a lot of time to dry, sometimes extending to several days. Lithographers are confronted with the problem of

non-drying in humid weather, as already paper absorbs a lot of moisture.

Drying is not a problem for gravure and aniline inks where volatile solvents are used as the vehicle. These dry by evaporation for the most part with a little penetration, wherever the surface allows it. As no oils are used in gravure and aniline inks, but only solid resins, when the solvent goes off, a thin film of the resin is left. This binds the pigments as otherwise, the printing can be easily rubbed off. Screen printing inks on the other hand dry by not only evaporation, but also by oxidation and absorption where possible.

THE MODERN TREND

In the race against time, ink manufacturers have produced such inks as heat set inks, cold set inks, moisture set inks. These for the most part employ heating the forme, the rollers, the duct etc., so that when the ink so heated touches the cold paper, it freezes and dries instantaneously. Some employ steam or spray on the paper web so that the resinous ink solidifies on touching paper. Sometimes the web of paper is heated to dry the ink the instant it touches the hot paper. In all these, chemical reactions are set up to solidify the ink particle. These are used for the fast running rotary machines, as elaborate heating and cooling devices are needed.

Inks called by the trade name quickset, veloset, etc., contain an almost solidly heavy varnish dispersed in a thin oil. When printed, thin varnish is absorbed leaving the thick varnish with pigments and extenders on the surface. Generally quickset inks are used to print tri-colour on coated papers. These are not good for absorbent stock.

New Universal Gray Contact Screen

By

HERBST & JLLIG, GERMANY

The use of contact screen for perfect reproduction of continuous tone copy is on the increase. The new gray contact screen is another step forward to perfect reproduction in the graphic arts. Faster and more flexible, the gray screen is a boon to letterpress and litho printers.

Contact screening in photo-reproduction is of constant increasing importance. This technique not only allows perfect reproduction of tonal values, but also retains the highly desired typical qualities of the screen dot in later processing, even if bigger dot reductions are made.

This universal gray contact screen is a new, single-type screen used by all branches of the graphic arts to produce halftones from continuous tone copy. It is used interchangeably in the lithographic, engraving, plate making, and silk screening industries.

The universal contact screen is used in the same manner, as conventional gray litho or engraving contact screens with white light, arc lights, etc. for the main and flash exposures, and developing by eye. The Universal contact screen is characterized by giving undistorted tone reproduction, tiny, hard, shadow and highlight dots, fast exposures, and by giving neutral to colour.

Control of the desired results may be obtained by varying the main and flash exposure times and developing 2—4 minutes to suit one's requirements.

DIFFERENCE

The Universal contact screen differs from conventional litho-only and engraving-only contact screens, in the arrangement of the dots in the screen, and in the transparency of the clear areas. In conventional

contact screens the dots are arranged on a chessboard pattern. In the universal contact screen the dots are almost circular and are arranged in an in-line pattern, one along side of the other, and one above and below the other.

As with conventional contact screens, the Universal contact screen gives the conventional chessboard pattern of dots in the resulting halftone. With the conventional chessboard contact screen one finds the approximate 50% dots spread out over a broad tone range. Such a contact screen does not give a true rendering and the screen is said to be "lazy working", as it has too much elbow-room for fixing down a precise result in advance. The Universal contact screen, however, is sensitive to the smallest change in density of the original and it shows this sensitivity by changing the dot size accordingly. It is therefore the first screen for giving a precise result in advance and therefore uncertainties are excluded. To work by a plan fixed down, is therefore possible.

An exact identity of the screen cannot be given by photographic enlargement.

ADVANTAGES

The features of the Universal contact screen which make it superior to conventional contact screens are the following:—

1. It is used interchangeably for lithography and photo engraving.

2. It is fast shooting.
3. It covers a greater range of density, embracing all steps of the standard gray scale.
4. It is transparent, like glass cross-lined screens, and can therefore be used to produce screened negatives from a coloured copy.
5. The Universal contact screen creates changes in contrast proportionately through all steps of the gray scale and not, as with conventional contact screens, by distorting the tone at one end of the scale.
6. Tone reproduction characteristics of the Universal contact screen are not affected by the density of the screen. A lighter screen merely shoots faster.
7. Tiny transparent areas of the screen permit the darkest portions of the copy to come through to the sensitive film.
8. Contrast may be varied within normal limits without loss of middle tone values.
9. Tiny, sharp, hard, shadow and highlight dots are easily obtained without distorted tone reproduction.
10. Since the screens do not contain colour-imparting dyes, which tend to streak if wetted, they may be washed with an aqueous solution of neutral detergent in the same manner as any other delicate negative. Consequently, under comparable conditions they last longer.
11. Controlled density of the Universal contact screen assures uniform exposures from one screen to the next.

With the Universal contact screen, normal flash exposures hardly affect the highlight areas controlled by the main exposure. This is due to the character of the screen dot to maintain a very sharp image. Using the Universal contact

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screen and normal copy for example, the main exposure results in the enlargement of the shadow dot by about $\frac{1}{4}\%$ as measured by the densitometer. With the conventional contact screen, however, the shadow dot may be enlarged by as much as 20%. Tone values created by the main exposure therefore, are almost unaffected by the shadow dot flash exposures.

Large lens openings may be used for shorter exposures without loss of detail. Control of the main exposure and flash exposure times together with development by eye, will give the desired litho or engraving type halftone. In general, shorter exposures with longer developing times are suggested for obtaining litho-type halftone-negatives.

BEST RESULTS

Conventional contact equipment can be used with the Universal contact screen comprising either a

process camera equipped with a vacuum back, or an enlarger and vacuum table. In the former, the Universal contact screen is placed on the camera vacuum back in contact with the sensitive film, emulsion to emulsion and exposed to the copy on the copyboard. When the enlarger is used, the copy is projected through the enlarger on to the vacuum table which holds the screen in contact with the sensitive film, again emulsion to emulsion. *For best results it is important that fresh solutions of the film manufacturer's recommended developer be used at all times.*

Universal gray contact screens are used interchangeably for the production of superior lithographic and photo engraving halftones.

For lithography they are capable of producing greater contrast than conventional litho-only contact screens. With different exposure and

development times, these same screens produce low contrast halftone negatives, ideal for engraving purposes with full retention of detail values.

Universal contact screens are almost the perfect screening medium. The basic advantages are:

1. The usual two or three different tonalities (gradations), given with the conventional chessboard contact screens, are eliminated through the use of an Universal contact screen.
2. Faster exposures, with greater production and lower costs.
3. Neutral to color, in angled rulings, ideal for colour process work.
4. Greater density range coverage.
5. Produces halftones from yellow-chrome and coloured copy for black and white reproduction.

(Continued on page 28)

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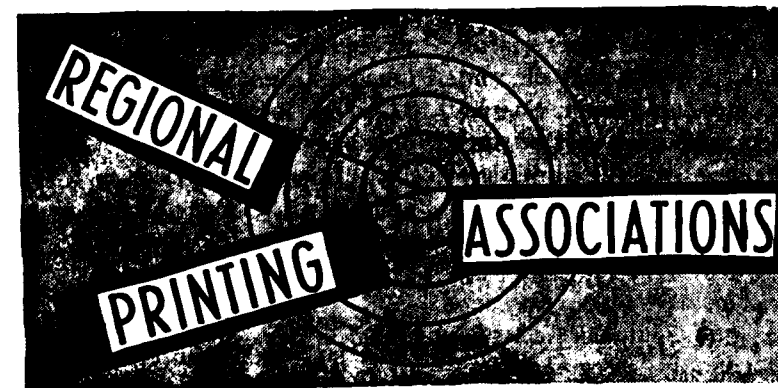
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The third session of the Delhi Printers' Conference was held on the 14th of October 1958 on the airy and well-lit terrace of the office premises of the Delhi Printers' Association under a beautifully decorated shamiana. It was inaugurated by Dr. Yudhvir Singh, Chairman of the Industrial Advisory Board of the Delhi Administration and was presided over by Sri S. Ramu, President of the All India Federation of Master Printers.

Proceedings opened with the Bandemataram song by the Gandharva Mahavidyalaya Party of New Delhi.

Messages of fraternal greetings received from brother printers from India and abroad and their Associations were read by Shri Vedavrata, Hony. General Secretary of the Delhi Printers' Association. Other messages received and read on this occasion included inter alia those from:—

Shri Gulzari Lal Nanda,
Union Minister for Labour & Employment.

Sri B. V. Keskar,
Union Minister for Information & Broadcasting.

Sri K. C. Reddy,
Union Minister for Housing, Works & Supply.

Sri Nityanand Kanungo,
Union Minister for Commerce.

Sri A. D. Pandit,
Chief Commissioner of Delhi.

Smt. Aruna Asaf Ali,
Mayor of Delhi.

Before the inauguration of the Conference Shri Vedavrata, Hony. General Secretary, of the Delhi Printers' Association presented his Annual Report which comprehensively listed achievements, failures and activities of the Association in various spheres and threw lucid light on problems currently facing printers of Delhi.

Dr. Yudhvir Singh while inaugurating the Conference congratulated printers of Delhi for their organisation and work done by their Association. He specially welcomed the contact between Delhi Printers' Association and the Delhi Press Workers' Union. He assured printers of Delhi to look into their difficulties and problems and assured of his help in all reasonable matters. He announced that two representatives nominated by the Delhi Printers' Association will be taken on the Committee formed by the Delhi Administration to examine the effect of various labour and other social laws on small industries and units. He made a fervent appeal to printers of Delhi in particular and all printers in general to raise the standard of printing and forge healthy trade conventions. He emphasised the importance and powerful position of presses in the country's cultural and economic advancement and noted with satisfaction that printers

were alive to their duties and responsibilities.

Sri S. Ramu in his neatly prepared presidential address detailed some of the problems and difficulties facing printers of India. He advised printers to have an introspective look and set their house in order. He made a fervent appeal to printers to play their part properly in the reconstruction of the country.

Ten resolutions on important problems facing printers of Delhi in particular and other printers in general were passed unanimously.

Dr. Yudhvir Singh performed the opening ceremony of the new office premises of the Delhi Printers' Association and the Printers' Library and Reading Room therein. He and Sri Ramu greatly admired this move of the Delhi Association and hoped that it would be emulated by others also.

Greetings & Good Wishes

(Continued from page 5)

On behalf of my Company, I offer my hearty congratulations to *Printindia* for having completed the fifth year of its existence, by rendering valuable service to the Printing Industry. As there are very few instructive and technical monthly publications, dealing with the problems of our numerous Printer friends, I sincerely hope that you will continue to serve the Industry for years to come.

P. N. SEAL

K. N. Seal & Company, Calcutta.

★

We are glad that your esteemed publication will be completing during this month five years of successful service to the graphic arts industry. Please accept our heartiest congratulations and sincere good wishes for its continued prosperity.

K. L. NAGANATH

The East Asiatic Company (India)
Private Ltd., Madras.

Orissa Printers' Conference (Continued from page 12)

Government Printing establishment at Cuttack. Unless this is done the aims and objects of the Planning Commission who adumbrated this programme of establishment of Printing Schools will remain unfulfilled. I draw the attention of the relevant department to this lacunae.

Our next problem is scarcity of paper and its high price. What with the strictest restriction placed on the import of foreign paper and board on the one hand and what with "commandeering" by the Governments of over 50% - 60% of paper produced in the larger Indian Mills on the other hand, the Printing Industry is now faced with a critical situation. I have deliberately used the word "commandeering" though I know technically this is not a correct term. Most of you might be aware that Titaghur Paper Mills Co. Ltd. and the Bengal Paper Mills Co., the largest of the Indian mills, have by a recent notification made a heavy cut in their supplies to their accredited distributors. This is because of fresh demands from the Union and various State Governments. If the Government takes the major portion of the production of the mills, then the printers, the largest consumers, have to starve. In this connection, may I draw the attention of the Government to a very important tactics of the paper mills, which is also a cause of the great scarcity of paper. While the major demand is for thin weight paper, many of the mills resort to producing heavy weight paper and board. This is one of the reasons for the chronic scarcity of ordinary variety of printing papers, used by the printers and publishers. The production of heavy weight materials may satisfy the Statistical Department of the Planning Com-

mission but it not only does not solve the problem of paper scarcity but also helps anti-social elements recently introduced by a class of millowners, who have created their own channels of distribution of produced goods and purchase of raw materials, forsaking the old established distributors and purchasing mediums. The Development Wing of the Union Ministry of Commerce and Industry must look into this and fix a quota for manufacture of popular thin weight papers.

The import policy of the Government has also created a havoc in the entire industrial field of the country. Almost absolute restriction of the import of coated paper has created a serious situation for the printers of illustrations and is also creating unemployment in the growing process-engraving industry. Most of the coated paper used nowadays are meant to help tourism as also for earning foreign exchange through the publication of books on Oriental art and sculpture. The Indian mills have not yet produced a suitable paper for the reproduction of fine screen halftone blocks. So a limited import of coated paper and boards is essentially necessary. It is a pity that the recommendations of the State Directorate of Industries in these matters are mostly honoured by the Chief Controller of Imports by flouting.

STATE HELP

I take this opportunity to draw the attention of the Government of Orissa to render adequate financial assistance to the Printing industry. The literacy and educational programme of the Government needs a well-developed printing industry in the State. No Government Printing establishment can cope with the growing demand of supplying text books and other literature in a State where the spread of education is the first charge of the Government. The

State Aid to the Industries Act of Orissa has helped many small and medium size industries in the State. I do not know if the Printing industry of the State has benefited from it. I hope the State will see that the administration of the aid is done in a sympathetic way.

Friends, I have already taken quite a long time. Before I conclude, I would exhort you to make your Orissa Printing Pressowners Association stronger by joining it and taking active interest in its affairs. This is the age of organisation. Unless you can organise yourselves, no power on earth can protect your interests or solve your problems. The All India Federation of Master printers is rendering yeoman service towards organising the printing industry of India; it has rendered and is rendering conspicuous service to the greater interests of the industry. As a chain is as strong as its individual link, I would earnestly request you to strengthen your own Association. Your relation with the Association should not cease with paying your subscription but you should continue to take regular and sustained interest in its activities. In these days of strife and struggle, the printers must act in unison. Printing technology is a difficult and a highly progressive subject. If we want to survive, we have to be alert in everything connected with the industry, both in its technical as also its business side. And I have every faith in the master printers of this ancient and glorious land of Kalinga, that just as in the olden days their forefathers had enriched the arts and crafts of the nation, their successors will not fail them in producing beautiful printing in the near future.

I thank you, gentlemen, again for giving me a patient hearing and for your cordial welcome in your midst.

Scarcity of Paper

By

SRI S. N. GUHA RAY

Director-in-charge, Sree Saraswathy Press Ltd., Calcutta

India may need food. But what she more urgently needs is paper, food for thought, diet of the intellectual and the ration of the educationist. Without this raw material, no constructive work can be carried on. Whether it is building bridges, dams, multi-purpose projects, or poetry, art, medicine, industry or business, paper is the foundation on which even the plan is laid. Indeed, paper is the sine qua non of all modern progress. Read what Sri Guha Ray says in this memorandum, reproduced below.

WITHOUT HAMLET

The Ministry of Commerce and Industry had recently invited the representatives of the paper mills and discussed with them about the present scarcity of paper. A brief handout from the Ministry states that the mill-owners assured the Government that they would keep a check on their distributors, presumably to stabilise the price. The presumption is that it is the distributors alone who are responsible for the present scarcity and high prices. It is not known what other matters transpired in the Conference: nor the Government has taken the public into confidence about the various interests who attended the Conference. Evidently the largest consuming interest, the All India Federation of Master Printers, was not invited to send its representatives to the Conference. But in spite of all these deficiencies it is a hopeful sign that the authorities have become conscious of the paper situation.

THE CAUSES

It is high time that an analysis should be made to find out the causes of the present scarcity and the consequent rise in the prices of various kinds of paper and board. It is known to all that due to the failure of supply of paper in proper time this year, the entire School

Text book Season suffered in all the States starting from Assam to Kerala. It is also well known that the next College-book Season will also suffer because of the scarcity of paper. It is not only the text books which have suffered but our cultural and industrial activities have received the greatest set-back because of the acute shortage and consequent rise in the price of paper. Are the distributors the only persons who are responsible for this?

The cause of this scarcity is not very hard to find. A simple cause of this scarcity is the increased demand for paper and board after we attained freedom. There has been rapid expansion of mass literacy on the one hand while on the other the quick industrialisation of the country is also responsible for the increased consumption of paper and board. It is also true that the Indian Paper Mills have failed to reach the target of production of the First Five-Year Plan in spite of their having received unstinted support from every quarter. They have been allowed to increase the price of their products any time they have desired, the Government having kept their eyes shut on the recommendations of the Tariff Commission. There has been no dearth of orders. Financial help in the form of Government loans

and import restrictions together with enhancement of Customs Duty and imposition of Excise Duty on imported paper and board have always been at the command of the Indian Paper Mills. Quality of products has never been a bugbear with our paper mills. And still in spite of all these, the latter have failed the country, failed the nation.

ARTIFICIAL?

There are various causes which are operating behind this scarcity, which some cynic may dub as artificial scarcity created for the benefit of some selfseeking vested interests. I am not a cynic and naturally do not subscribe to such opinion. May be, there is an iota of truth in this cynicism but that should not bias our views. Of course, the scarcity of white printing paper during the last School-book Season cannot be explained in any way. The mills know before-hand when the printers require paper for printing text-books and every year they are prepared to meet them. There is yet no explanation why our mills failed this year during this peak period of demand. They cannot plead ignorance nor can they point out any *force majeure* cause, like labour unrest or such other matters, for their failure in supplying the regular demand. I do not know whether this point was raised by the Government at the Conference and what the reply of the mills was. The paper consuming public will be very glad to learn from the Government the reply of the mills on this point. Many would also like to know why the mills have not arranged for regular supply during the current College-book Season.

GOVT. INDENTS

One of the stock replies of some of the mills to the complaint of

A Memorandum submitted to Shri Lal Bahadur Shastri, Minister, Commerce & Industry, Govt. of India, New Delhi.

NOVEMBER 1958

PRINTINDIA

irregular supply of paper is that the Governments—Central and States—never stagger their demands in a regular way. The complaint is that for the first three or more months of the financial year, i.e. from April to June, almost no Government Department places any indent on the Mills and after that each Department vies with one another to rush its orders. For a brief period this rush is followed by a lull and then just before the closing of the financial year, a plethora of orders is rushed to the mills. This spasmodic conduct of the Government Directorates naturally upsets all production programmes of the mills and consequently causes great hardship to the public as also to the Government. Several years ago, I had raised this point before the Controller of Printing, Government of India and was assured that the Government would always stagger their orders throughout the year in such a balanced way that no extra strain is put on the production programme of the mills. I do not know what the reply of the Government is to this point. Most of the Government Printing Contractors know how they are starved for work for the first five to six months from the commencement of the financial year and how at the eleventh hour orders are rushed on.

BLACKEST MARKET

As the Government is the largest single purchaser of paper in the country, the Ministry of Commerce & Industry must take some steps, effective steps, with all the Government Directorates to stagger their demands on the mills and the Printers in such a way that everyone can maintain his production programme smoothly. Unless the Ministries of Finance and Commerce & Industry can make

their influence felt in this respect on the Government Directorates—Central and State—consuming large quantities of paper, there will exist scarcity of paper with consequent flourishing Black Market.

UNEQUAL TO THE TASK

Another cause of scarcity of paper and the rise in its price will be found in the drastic restriction in the import of foreign paper and board. These items had always acted as a check on the scarcity of paper and increase in the price of the indigenous varieties and also reacted favourably on the Indian quality. Now with the forced retirement of the foreign varieties, the Indian Mills are called to meet this shortage, which they are unable to do. As a result of the import restrictions, the Indian paper distributors are faced with a serious predicament. They are unable to maintain their previous staff which used to handle both foreign and Indian varieties. The mills, who give a trade discount to their recognised distributors also allow them to charge a commission of 7½% on their customers. So long, the distributors had not charged this commission but now they have started charging them to meet their surplus establishment charges. This is one of the causes of the rise in price of paper and board.

IRREGULAR SUPPLY

The irregularity in the supply from the mills is one of the most important reasons for scarcity. The distributors place their indents monthly with the mills but the latter never inform the delivery date. Sometimes deliveries are made within a fortnight but instances may be cited in galore when the mills have not cared to reply as to delivery date even after six

months. Irregular supply of paper naturally upsets the market and leads to unsocial activity.

SELLING TACTICS

Another cause of scarcity and black market will be found in the policy of some of the mills in linking of some qualities. They just force the consumer to buy a certain percentage of slow-selling quality of goods if he places orders for a rapid-selling item. As a result the distributor is forced to charge a higher rate for the popular item to cover his loss for selling the slow-selling goods, which most often he has to sell at a price lower than the control rate.

It is really surprising that while the entire nation is bent upon increasing production, the two most important mills of West Bengal have reduced the quota of their distributors by 40%. This is also an important cause for upsetting the entire paper market.

Shri Morarji Desai, as Commerce Minister, had issued an appeal to all 'to hold the price line'. It would be interesting to know how his appeal has acted in the Paper market. It has become a regular habit of some of the Mills to change the name of a particular brand and charge more. The Development Wing must be aware of this trick. What has it done to counteract this?

Unless the Government takes a firm decision to stop all black-marketing, this scarcity of paper will continue to grow and will ultimately create a serious situation. The alarming growth of a certain type of businessman must be checked at once. The days of complacency are over but has the Development Wing the guts to tackle the problem?

Glimpses of GRAPHIC ARTS HISTORY

By
SRI S. GIRI

We are all students of history. The rise and fall of nations are but landmarks of history. For the growth of graphic arts, there is much to be learnt from its history. Present is but the echo of the past and future lies in the bowels of the present. Here is given a picture of the progress made in our industry from the earliest times to date

It was in 105 A.D. that paper was invented in China. In 175 A. D. this knowledge travelled with the Arab conquest of Samarkhand. In 1100, this knowledge reached Fez and in 1391 in Nuremberg where the first paper mill was established. Paper is thus the power behind the invention of printing.

In A. D. 594, the Chinese invented the Art of Printing. Earlier than the eighth century the Diamond Sutra was printed in China. This was a Buddhist work. Movable types were in use in early China and Korea. These were made of a number of materials, such as wood, earthenware, bronze etc. Due to multiplicity of characters, it was perhaps found well nigh impossible to resort to movable type at that stage of development in China and Korea. These early efforts therefore appear to have died as impossible. In A. D. 800 the Caroline minuscule was introduced which is now called lower case letter. Prior to this there were only capital letters and no space was used between words. As the knowledge of paper making reached Fez, by 1100 and Nurem-

berg in 1391, it was in 1440 that Johann Gutenberg invented movable type, as well as a mould for casting characters in metal from female dies. He used a viscous ink that would adhere to metal type and a wine press. 1470 is the year when German printers set up a press at Sorbonne. Nicolas Jenson brought out the first Roman type. In 1476 Caxton established the first printing press in England.

Side by side with printing, typography or letter forms were also progressing. So in 1499, we see the Aldine form of Roman, what we call as old face born, thanks to Aldus Manutius who is credited with the designing of the italic face. In 1702, the stiff modern began to appear. In 1757, John Baskerville printed his first book.

Meanwhile paper was progressing and the first web was made by Robert in France and Fourdrinier brothers in England in 1803. Earlier Earl Stanhope brought out the first Iron Press in 1800. Stereotyping also developed from the same year. The same year Aloys Senefelder of Prague, Czechoslovakia invented the process of Lithography.

By 1814, 1,000 copies per hour could be printed, thanks to the Koenig's flat bed press used by the Times of London. The former output was a mere 300 per hour. In 1848 came the first rotary and the Hoe press was born in 1856. Wood pulp afforded cheap paper and Keller of Germany was responsible for the same. The year was 1840. In 1822 to 1886, attempts to mechanise typesetting were made.

In the year 1556, India printed the first book in Goa. This was in the Portuguese language, being a work of philosophy. This was called "Conclusoes". The next year St. Xavier's Catechism was printed in the same place. Thus religious books were the first to be printed in this country. Thus fathers of Indian Printing are Brother John of Bustamante (assisted by) John Quinquencio, Joannes Gonsalves and other Indians who remain anonymous till this day. In the New York Library is preserved a rare 12mo volume entitled "Compendio Spiritual de Vida Christao". The date of printing or rather the year is given as 1561. In about the same period other books in Portuguese were printed in Goa.

St. Xavier's "Doctrina Christao" was translated into Tamil in 1557 and printed here. In 1579, the same was reprinted. The West Coast of India has a place of renown for printing in the early days, called Ambalakkadu. This is in Kerala in the former state of Cochin, near Trichur. It was here in the year 1577, the first Tamil types were cut. In those days there was a common script for Malayalam and Tamil.

Wooden Tamil Types were cut by Ignatius Aichamoni for a Tamil Portuguese dictionary. The Ambalakkadu type factory was destroyed during Tippu's invasion of the south. This is said to be the reason why no printing of Ambalak-

kadu has survived till today, although there is mention of the same by many authorities on the subject. In 1678, some Malayalam types were cast in Holland to print a book entitled Hortis Indicis Malabaricis.

In 1708, a translation of the New Testament was printed by Ziegenblag but it took three years to complete the work, i. e., till 1711. This German pioneer was responsible to cast the first Tamil types and tried to perfect the forms of letters by sending them to his native country. In the east coast is a town called Tranquebar, near Mayavaram. Here the same German started the first paper manufacturing plant.

BIRTH OF THE DIOCESAN PRESS

Fabricius was a great Tamil Scholar residing at Vepery. When the English captured Pondicherry from the French, a press fell to their lot. This press was entrusted to the scholar Fabricius which is now called the Diocesan Press, Madras. The first hymn books and the first English-Tamil Dictionary were printed here in Diocesan Press. The first Tamil types of Madras were cast here too. Till 1870, the same types were used. By the year 1863, Madras had as many as ten printing presses, which was a big number in those days. In 1862, the Tamil Lexicon was completed and type was designed by the famous printer Hunt.

In 1778, the first Bengali Book was printed. This was Haffed's Grammar of the Bengali Language, printed at Andrews Press, Hooghly. Charles Wilkins cut the Bengali types for this famous work, with his own hands. No wonder Wilkins is hailed as the "Caxton of Bengal". An associate of Wilkins was Panchanan Karimkhar who gained the knowledge of type cutting and taught many others the art of type

cutting. In 1785, the Bengali translation of the Impey Code was printed at East India Company's Press and in 1791 many Bengali translation of Government regulations were printed in the Government Press. About the year 1799, the first Bengali - English Dictionary was printed by H. P. Forster. In the Dutch Settlement of Serampore, the celebrated Dr. William Carey set up a press to print Bengali works such as the translation of New Testament, in 1801. William Carey's son Felix Carey and his colleague Ward were associated in the production. In 1798, itself, a Bengali Type foundry was established at Calcutta by the Chela of Wilkins, Panchanan. Panchanan, with the help of Carey, who enticed him from Calcutta, started a foundry and cut types in many Indian languages and his punches number over 700 in Devanagiri. Panchanan's kinsman Manohar collaborated with him and after Panchanan's death, cut elegant types in Bengali, Arabic, Persian, etc. The Serampore Press became famous, what with over 200,000 volumes in forty different languages many of them original works on various subjects, printed from type specially cut for the first time in India. Marathi and Assamese were first printed in India, at the Serampore Press. The first Hindi works were printed at the Fort William College Press.

The earliest Marathi printed book is the Hortis Indicis Malabaricis of the year 1678. In 1792 was started the pioneer newspaper of Bombay, the *Bombay Courier*. It gave three language editions, i.e. English, Marathi and Gujarati. In 1810, the Marathi Dictionary came out of the Serampore Press.

About the year 1797, one B. J. Chappin brought out the first Gujarati types in Bombay. In 1808 came the first Gujarati Book. It

may surprise many to know that Chatrapathi Shivaji Maharaj was the first press owner in India. Although he is credited to be the first Indian who thought of the advantages of owning a printing press, he did not live to have it worked. In 1674 this press was sold by Shivaji to a Gujarati gentleman by name Parekh. The latter improved the press with the help of an English expert.

From now on presses, newspapers and magazines began to appear in many parts of the country. Much quality printing was executed at these early presses. Some of their publications will compare well with modern printing, although the early printers had to fight against many odds. They had no precision instruments, perfected materials, power run machines. Still, with their craftsmanship they have achieved many excellent specimens of printed work, which remain a constant reminder to our printers.

It was in the year 1884 that Ottmar Mergenthaler brought out the line composing machine called Linotype. This machine more than anything else revolutionised printing in general and newspaper typesetting in particular. Five years later, in 1889 Mergenthaler perfected his last Linotype which resembles in the main the modern Linotypes. In 1898 the Mergenthaler Co. introduced what we now know as Duplex matrices (two letter matrices) which put double the number of characters at the disposal of the Linotype operator. In 1901, the first electric motors to be attached to Linotypes went into operation. This again increased the speed and operation facility. In 1928, W. A. Dwiggin, noted typographer joined the Mergenthaler Linotype Co. The year 1932 is a notable year in the evolution of Linotype. For in this year

the self-quadder was brought out and also the teletype-setter which sets today 20,000 ens per hour.

In 1941 the Linotype cut the Fairfield type face.

In 1912, the first Intertype Machine was demonstrated in the USA. by the International Typecasting Company.

In 1931, quadding and self-centring system was adopted by the Intertype. In 1935, Vogue type face was cut by the Intertype Corporation. In 1936, Intertype launched research programme for photo-setter.

In 1946, Intertype Photosetter was tested in the United States Government Printing Office, New York and found very satisfactory. But only in 1950 the Intertype Photosetter was demonstrated to the public. In 1957 April, the Intertype Photosetter was demonstrated to the Printers of India at the Printing Exhibition, New Delhi. Many statesmen including the Prime Minister Nehru appreciated the far-reaching advances made in the Intertype Photosetter shown for the first time in the Indian sub-continent. Mr. C.L. Boileau, Export Manager, Intertype, gave technical lecture on the occasion.

In 1913, the first Ludlow machine was installed in Chicago in a newspaper plant.

MONOTYPE

Although Tolbert Lanston invented Monotype and applied for a US patent for his invention as early as 1885, it was Linn Boyd Benton, who revolutionized punch cutting by his ingenious punch cutting machine. This replaced the laborious time consuming engraving of punches by hand and striking a matrix. This was a boon to all line and type casting machines which were and which are in existence. Again in the year 1890, L. B. Benton designed the Century type face for the Century

magazine. This type face is used in many newspapers with good results. For example, *The Hindu*, Madras uses Century for its headings. In 1900, the new model of Monotype was developed. Many improvements were made in this new model and all drawbacks removed. This new model is almost the same in the main with the present day Monotype machines. Many famous type faces were revived by the Monotype Corporation. Such a one was the Baskerville revived by Monotype in the year 1924, and in 1927 Perpetua of Eric Gill. Two years' later, Monotype was instrumental in cutting Bruce Roger's Centaur type face known for its beauty and delicacy. In 1957, the first Monophoto machine was installed in Philadelphia.

PRINTING MACHINES

The year 1885 is rich with many innovations for platen presses. There was a roll-fed platen press to speed up printing. This was by Wellington P. Kidder of Boston, USA. The popular Chandler & Price, the bread and Butter machine of every job printer throughout the world, began in 1885, in Cleveland, Ohio. The Colt's Armory platen, of the Art Platen class, was brought out in the same year by John Thomson.

The 1880s are also famous for many notable improvements in newspaper printing. For instance, in 1886 Goss Printing Press Co., started manufacturing rotaries for the newspaper trade. Since then Goss has become a by-word in the newspaper world for its speed and efficiency. The following year R. Hoe brought out the 32-page newspaper with two folders. This is landmark in newspaper production. In 1890, Cottrell brought out the first web perfected press. Till 1898, quick change of web reels on newspaper rotaries was not possible. There was consequent delay in production. This

was successfully solved by the invention of Henry A. Wise Wood by a quick-change device which is widely used today. In 1901, Hoe brought their mammoth 96-page newspaper rotary, which touched the all-time high in newspaper bulk. In the same year, we see Cottrell bringing his multi-colour web press. Earlier in 1899, the *Saturday Evening Post* appeared with a three-colour cover and a three-colour advertisement. It was the first newspaper which boasted in those days a multi-colour cover. In 1907, a new Goss folder was put into the market which claimed a 50 per cent increase in the newspaper production. The next year, i.e., in 1908, Hoe brought the camless folder. In the same year, Goss brought out the tubular press unlike the semi-circular stereoplates used till then, and in the next year Goss brought the unit style newspaper press. This makes increasing or decreasing the number of pages very easy. Expansion is no problem, as you can build more units as you go along. Many larger newspaper combines, having many branches in various parts of the country, dismantle some units and ship them to other centres for incorporation there. Until 1917 wet flog was used in making stereo plates. In that year Wood Flog Corporation of Amercia erected their mill for dry flog making. In 1926, Cottrell built its four colour web perfecting press. A decade later, the same firm introduced the first double four-colour web press. This press had heating and cooling system to accelerate drying of ink instantaneously on paper which facilitated the perfection of the web. The next year the same firm acquired the Claybourn process of makeready. Two years later, Goss developed magazine rotaries with jaw type of folders. These machines were capable of printing two and four colours

at high speeds. In 1945, Cottrell joined suit in establishing magazine rotaries. By now magazine rotaries had become not so uncommon, and rotary web printing was not the exclusive field of newspapers alone. At the present day, web presses are used for book printing also, in addition to packing and paper converting by adopting flexography.

AUTOMATIC FEEDERS

In the year 1891, Robert Miehl of Chicago invented a two revolution machine, which has gained much popularity in our day for its speed and precision, inking power and impression strength, sheet control and other exclusive features. Six years later in 1897, Dexter brought the first automatic feeder, primarily intended for folding machines of the same name. In 1907, Cottrell evolved the four-colour press with single impression cylinder around which other plate cylinders were built. In 1909, the first suction pile feeder was introduced by Harris for their Harris presses. In 1913, the first automatic feeder for platen machines was introduced by the Miller printing Machinery Co. In 1917, Dexter built the first combing pile feeder. In 1919, Kluge automatic feeders for platen presses were manufactured. In the same year, the first Dexter suction pile feeder was also built. In 1922, the Craftsmen Platens were put into the market by Chandler & Price Co., USA. In 1924, automatically fed Miehl Presses appeared.

PICTORIAL REPRODUCTION

The modern halftone process owes its origin to Frederic E. Ives, who brought out the cross-lined screen in 1886. But for this, photographic reproduction of continuous tone copy would have become impossible. In 1888, Ives published his pin hole theory of dot formation. This was the year when

Eastman Kodak perfected his roll film and box camera, at Rochester, New York. So, we see the producer of the photograph, and the reproducer in graphic art vie with each other in bringing new inventions. Fourteen years later, a New York photographer by name William Kurtz in collaboration with Dr. Ernest Vogel of Berlin developed the three colour halftone process. The *Boston Engraver and Printer* appeared with a tri-colour halftone reproduction by Dr. Kurtz. In 1894, Max Levy propounded his diffraction theory of dot formation in halftone printing.

In 1904 Ira W. Rubel of New Jersey invented the offset lithographic press. In the same year the gravure press was also introduced in USA. Responsible for this were Herman Horn and Harry Lithgoe. The press was named Reich Rotogravure Press. In 1906 Harris Offset machines appeared in the market. In 1910 William C. Huebner evolved the photographic typesetting machine adopting the lithographic process for photographic reproduction. In 1923 the *Penrose Annual* carried sample settings of the photosetting machine of Arthur Dutton called Photoline. The next year the Lithographic Technical Foundation of USA, a body of experts doing research for the lithographic industry, was incorporated. In 1926, flexographic printing and water-colour printing were developed by Jean Berte. In the same year bakelite plastic plates were introduced.

In 1928, I. G. Farben proposed that magnesium is a suitable metal and perhaps superior to zinc for photoengraving. In 1931, the LTF developed the paper hygroscope, a precision instrument very useful for offset printers. The next year LTF developed pH control and introduced the use of Baume Hydrometer for offset printing.

A notable invention was made in 1936 with the bimetallic plate of Aller. In 1938 Xerography was invented by Chester A. Carlson. In 1939, LTF invented an instrument for testing inks in operational conditions, and this was called the Inkometer. In 1943, Kodak magenta contact screens were put on the market and the magnesium alloy was accepted as good for photoengraving. In 1949 pre-sensitized litho plates came into use.

In the 1950s much headway was made by electronic scanners and electronic engraving machines such as the Fairchild Scan-a-Graver and Scan-a-Sizer, Rudolf Hell's Klischograph and the Vario Klischograph, etc.

India too is progressing. It has a giant photogravure plant in Bombay and one in Nasik. Many offset printers flourish in Calcutta, Bombay, Nagpur and Madras. Their work is of a very high order. Screen Printing has also come to India and is practised with success for luminous window bills, showcards, posters and the like.

In paper conversion too, India has made vast strides. Pioneering firms like the Diamond Products of Calcutta have made a mark in making cartons, plastic bags, gum strips, tags, etc. to meet the increasing demands of manufacturers in India.

Our newspapers come with multi-colour advertisements and many supplements. Indian magazines too are well dressed in their typographical garb and colour is not wanting. A magazine rotary was installed recently by a Tamil Weekly in Madras. A weekly is printed by the offset process with marvellous results at Madras.

Many house organs have sprung up and all of them are very well produced. Direct Mail advertising, one-time neglected, is coming into its own.



F. & D. BROWNIE

The discovery some years ago that certain synthetic resins had the ability of removing the bases and radicles from water by an exchange of ions brought about a new conception in water treatment practice. Previously the removal of the bases calcium and magnesium by replacing them with the element sodium had been accepted as standard practice in the base exchange softening of water. It was ascertained, however, that if water were passed through a column of one of the synthetic resins in the hydrogen form and then through a column of another resin in the hydroxyl form, the resultant exchange removed not only the bases calcium, magnesium and sodium but the sulphuric, hydrochloric and nitric acid radicles as well, thus producing a pure salt-free water without the necessity of evaporation and condensation.

These synthetic resins therefore possessed marked advantages over the clays and sands which had hitherto been used for the treatment of water but, owing to their high cost, and low efficiency, the process remained in abeyance. Since 1945, however, great advances have been made in the manufacture of synthetic resins so that production of pure water by this new process of de-ionisation, undoubtedly one of the most outstanding developments in modern water treatment, has now become a sound

and attractive commercial proposition.

In the Solobed system of de-ionisation which has been developed by the Paterson Engineering Company (India) (Private) Ltd., P. O. Box 680, Calcutta, a water of greater purity than distilled water is obtained and since the use of fuel in any form is not involved, the production costs are generally much less than that of distillation. The

two types of resins, in bead shaped particles, are mixed together in one vessel. In the smallest unit this is a transparent plastic cylinder and the valves are polythene or ebonite; the tanks for preparing the regenerant solutions are also made from transparent plastic. Thus, there is no metal in contact with the water which is an important point since the water is so pure that the most minute traces of contaminants have a marked effect on its purity. In the larger installations, the cylinders are made of steel, lined with acid-resisting material with windows through which the separation and re-mixing processes can be observed.

For controlling the rate of flow and checking the quantity treated, the water is metered on entering the unit and an instrument on the outlet measures its resistance to

(Continued on page 30)



Paterson Solobed Ionizer

New Universal Gray Contact Screen

(Continued from page 18)

6. Filters and yellow light during the contact screening process for control are not needed.
7. Ideal for making highlight (drop-out) negatives.
8. Uses only one short main exposure. Control with flash exposure Developing by eye.
9. Superior tone reproduction and detail values.
10. Available in a complete range of rulings, sizes and angles at low costs.
11. Low investment.

It becomes more and more popular nowadays to combine contact screening with direct masking of continuous halftone-negatives or positives. Practical experience with conventional pneumatic copying apparatuses for contact screening, finally gave an impulse to create a special pneumatic screen-holder.

It is offered under the trade mark.

"UNIVERSAL MAKOR MASKING SCREEN-HOLDER"

With this equipment, it is possible to utilize all advantages given with the Universal contact screens fully. The precision of the equipment permits direct masking of continuous-halftone negatives or positives, having different tone scales. Such a direct procedure is the quickest way for obtaining continuous-halftone extracts. The following screening of such an extract with the Universal contact screen can be executed within a few minutes. Defect in masking can totally be eliminated. The equipment is of such a skilled construction that contact difficulties, iris formation, (Newton rings), contact spots, are eliminated.

The "Universal Makor" equipment consists of a suction table, the Universal Makor light source unit and a motor vacuum pump.

The suction table can be fully used for contact screening and masking independently from the Makor light source unit, but also in conjunction with an enlarger, such as a vertical projection camera.

Exposures are made directly on the film without any additional transparent layers between the light source and the film. The obtained vacuum of low degree guarantees absolute flatness of the film. A vacuum gauge is fitted for accurate control of the vacuum. The several suction chambers can be controlled individually by means of independent stop cocks. The table can be used for a maximum size of 16 x 20 inches. As the most important arrangement for masking, precision register lays are fitted for each size 5 x 7, 7 x 9, 9 x 12 inches with two register pins, and for each size of 12 x 16 and 16 x 20 inches with four register holes.

A film punch with precision lays for sizes 5 x 7, 7 x 9 and 9 x 12 is furnished.

Every Universal contact screen cut in circular shape can be used, allowing a rotation of the screen in four different angles. The screen is sucked down also to the table by means of the vacuum pump via an independent suction chamber. It can be set to special marks provided on the table.

A book-like opening frame rubber seal, allows accurate inserting of the mounting foil, which is sucked down as well to the table by means of the vacuum-pump via an independent suction chamber.

The Universal Makor light source unit is a well shaped supplement to the Makor table. By its use a lot of work can be taken away from an enlarger. It is a bench type unit and of such dimensions that the Makor table can be combined with it, so that both will become a single unit. The unit accommodates an adjustable light source, the main

switch and a slot for insertion of filters. This arrangement guarantees a smooth working and high efficiency.

Four drawers are fitted for the depositing of sensitized films and Universal contact screens. The Makor Masking Screen Holder can be delivered without the table and drawers.

The motor vacuum pump Vaco II is a compact self-containing unit. It is normally available for 220/380 volts 3-phase or 220 volts single phase AC.

The Universal Makor equipment is a first class supplement to the Universal contact screen in comparison with all other contact screens, as it permits one to profit by all the advantages given by the Universal contact screen.

Layouts and Lettering

(Continued from page 9)

TATA FISON 10 x 4 col. Three more ads in the same style as their predecessors in the series. Fun, there is, in illustration and text in Baskerville.

TEA BOARD: A first class scraperboard illustration is the highlight of this ad. There is the tree with a kettle boiling at the foot of it. Four lines of Goudy form the text in left flush lines telling about picnic and tea driving the tea car out of every one. The teaman says "I am Tea. I am your friend and your friend's friend"

P. Syn.

TATA STEEL: A half page ad to commemorate the new blast furnace, the sixth which went into commission recently. This is headed "Jamshedpur's new blast furnace, one of the largest in the world" in Erbar. The text is in two columns of Verona, the good old type. "Tata Steel on two million tons". All these enclosed by the illustration in line of the works with the new furnace in chalk, making it prominent.



ECONOMIC GLUEING BY FRITZ HUMMEL, GERMANY

1% of the paper can be saved by reducing the overlap width of the longitudinal glue seam to approx. 3/8" by means of a device for the automatic lateral regulation of the longitudinal glue line and the web of paper on tubing and bag making machines. The paper edge is mechanically traced by a guide shoe which is under slight spring pressure. This shoe is mounted in a tracer head with two contacts which are released through the slightest lateral movement of the web of paper of the guide shoe and which adjusts axially the tracing head as well as the longitudinal glue discs through a control unit. Therefore, the tracer head and the longitudinal glue disc follow each lateral movement of the web, so that the set distance of the longitudinal glue strip from the edge of the web remains constant. As the lateral movement of the glue discs is limited, the control unit causes limit switches to go into action as soon as the range of lateral adjustment is exceeded. Two further limit switches act through an appropriate control unit, and through a worm gear cause the variable motor on the roller stand to effect a lateral movement of the unrolling shaft carrying the paper reel in an opposite direction to the longitudinal glue disc, until the original situation is restored.

The automatic control relieves operating personnel, who can now

concentrate on other more important points, and among further advantages is the reduction of scrap.

The economy glueing unit manufactured by Messrs. Gartemann & Hollmann, Bielefeld and patented by them, can be incorporated in all tubing machines of any make. Even existing plant can be adapted with only small structural alterations.

DELHI PRINTERS MEET

Dr. Yudhvir Singh, Chairman of the Industrial Advisory Board, Delhi, on Tuesday, the 14th October, inaugurated the third annual conference of the Delhi Printers' Association at New Central Market, New Delhi.

He also declared open on the occasion a library and reading room of the Association.

Speaking at the function Dr. Yudhvir Singh congratulated the Association and its office bearers for the success it has achieved. He said that he would be much pleased if all the presses in the capital be-



Shri Vedavrata, Hony. General Secretary, presenting the Annual Report

come its members and urged the active members to put in all efforts to reach this goal.

During his speech he commented on some of the points raised earlier by the General Secretary in his annual report. He hoped that the job presses in old Delhi would not have to observe a weekly holiday, when the power supply position improved. Meanwhile, he assured the Association of its full co-operation in this matter and said that the Electricity Board authorities might be persuaded to the working of presses in old Delhi upto 2 p.m. on Tuesdays if they observed their close-day on Sundays.

He, further said, that two representatives nominated by the Delhi Printers' Association will be taken on the Committee formed by the Delhi Administration to examine the effect of various labour laws on small industries.

Describing the importance and the powerful position of presses in the country's cultural, educational and economic advancement, he made a fervent appeal to printers to raise the standard of printing and forge healthy trade conventions.

Towards the end of his speech, he expressed satisfaction at the improved and better relations existing between the press owners and workers. He wished and hoped that these will go on improving gradually by mutual understanding and goodwill.

Concluding his speech, he, once again, expressed his satisfaction at the working of the Association at the able hands of its office bearers and wished it further success and prosperity.

SUNCO STATIC ELIMINATORS

Whitefriars Press Ltd., Tonbridge, Kent, in collaboration with Sheridan Ltd., the makers of Sunco Static Eliminators have struck upon

a practical solution to static trouble. Static is completely and satisfactorily eliminated in large press rooms with this device. There are no huge costs of fitting every machine with a static eliminator. Static is rarely present on all machines at one time. Each of Whitefriars' machines (Quad Demy Miehles, Eight-Crown Miehles, Dawson Two-revolutions) have been fitted with clamps, connections and wiring accessories for mounting the eliminators. When static appears, an applicator bar can be slid into the already situated clamps a power unit connected to the waiting plug and within minutes, the machine is working at its original efficiency.

Whitefriars have six sets of equipment so that up to six machines affected by static anywhere may be simultaneously treated without any inconvenience being felt.

From Our London
Correspondent
(Continued from page 27)

electrical current. This is the only satisfactory way of instantly determining the purity of the water and the instrument can be pre-set to give audible or visual warning when the resins are becoming exhausted.

The resins are regenerated with dilute acid and alkali solutions. The flow of water is first reversed; since one resin is lighter than the other, this has the effect of separating the two types. Dilute caustic soda is introduced at the top of the unit, passes through the upper resin and out at the interface. This resin is then rinsed with water in the same direction to remove excess alkali. Dilute hydrochloric or sulphuric acid is then introduced at the interface, passes through the lower resin and out at the bottom of the unit; this is followed by rinse water in the same direction.

Finally the resins are remixed by means of compressed air introduced at the bottom of the cylinder; the resins readily mix.

The resins used in the Solobed de-ionisation plants are the most efficient available. Each particle is in bead form which has obvious hydraulic advantages; both resins are also stable over the full pH range. For treating waters containing organic matter in solution, porous varieties of the resins are employed: these are unaffected by the impurities, which are washed out during regeneration.

Wherever pure or distilled water is essential or desirable for a process, Solobed de-ionisation provides an economical solution to the problem besides producing water many times purer than is possible from single distillation. The process is invaluable for the treatment of boiler feed water and is also extensively used in the Printing and allied industries.

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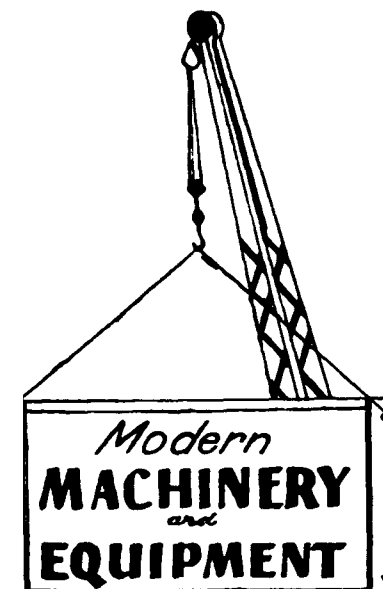
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INDIA'S LEADING JOURNAL ON
PAPER, BOARDS, STATIONERY
AND
THE GRAPHIC ARTS INDUSTRY



Printing machinery manufacturers and dealers may utilise this column to announce their latest machinery and equipment to be reviewed by our expert. Full specifications and technical data should be forwarded with good photographs wherever possible to the Editor

SCOTT VICKERS ROTARIES

Scott Vickers folder with its 3 to 2 ratio folding and cutting cylinders provide excellent facilities for handling with equal efficiency, light and heavy products both broadsheet and tabloid (folio). These folders can also be arranged with quarter page folding mechanisms when specified. Web control throughout the press ensures an easy flow of each individual web into the folder.

Efficient lubrication is provided throughout the press by oil bath, automatic circulation, and individual grease points. Colour can be provided on Scott Vickers Press by the following:

- Individual colour cylinder running against selected impression cylinders of the black units.
- Converting the black units, using reversible drives and portable or built-in colour fountains.

or user imposed colour units.

- Colour couples arranged vertically or horizontally.

Additional facilities for colour positioning can be provided by upper formers, any windows or page wide angle bars. Devices for printing late news, editions seals, headline strips, besides many other features including means for stitching tabloid products can be supplied with press or incorporated later.

WASTE DETECTOR

Vale Sales Co., 129, Brockley Rise, London, S. E. 23 is introducing an automatic cutout to the Vale Trimmer to save spoilage on production. Fitted to the end of the stitcher, this automatic cutout will reject imperfect material before passing under the stitched head. It can also be fitted to front of fore-edge knife and directly on the head and tail knives and will detect any bad material passing through the machine. Fura Bookbinding Co., Wembley, have this equipment under constant working conditions for 12 months and it has kept down finishing spoilage to .03 per thousand which compares favourably with the general spoilage in warehouses.

MALCOM WADE INKS

Rapidset Process inks made by Malcom Wade and Co., 45, Rosebery Avenue, London, E C 1, possess a unique flexibility of operation and their quick setting properties minimize set off and permit superimposition at intervals of one hour. These inks are so flexible that the colours can be printed equally well over prolonged periods also without the risk of crystallization. Quite a number of shades are available as well as BS. 1480 and other alternative shades suitable for art paper, chromo and uncoated papers of average absorbency.

MINTITE ROLLERS

Louis Minton Ltd., Manchester, prepare patent rollers for letter-

press, litho printing and damping. Their rollers are said to outlast the life of the machine while guaranteeing clearer and sharper printing. As for dampers manufactured by Messrs Louis Minton, moisture is correctly controlled by adjustment and latest method of production guarantees no swelling at ends. Special grade rollers and available for printing, varnishing, waxing, coating, embossing on paper, metal, board, plastic, glass, wood, foil etc. Their covered rollers are available for trial runs and their rollers are capable of repair without recovering.

CROSLAND CUTTING AND CREASING FORMES

William Crosland of Woodley, U.K., have one piece cutting formes. These keep knives true and straight and prevent bending and distortion. Regular average runs exceed 500,000 impressions and each one is found to be accurate to the finest detail. As only the finest precision steel cutting rules are used in the manufacture of Crosland formes, minimum makeready is required and storage is simplified by their light weight and large formes need no separate steel chase.

GREETINGS

Many happy returns and best wishes for the year to follow.

GRAPHICUS

★

Congratulations on your Sixth Anniversary of Publication.

Mr. J. D. BARTON
Hooghly Ink Co. Ltd.

In these pages "Graphicus", an expert in the printing and allied industries, solves month by month Pressroom Problems of the printers. All questions may be addressed to "GRAPHICUS", CO PRINTINDIA

225 Q: We are printing a fortnightly magazine, the circulation of which runs to about 94,000 copies per issue. The magazine is 96 pages Demy Octavo, some pages double colour and the cover tricolour wire stitched. Although we have a couple of automatics we find that the issues could not be brought out on time and are forced to give our formes to other city printers for printing them. A suggestion was received for printing the formes on a newspaper rotary in a daily office. This, when experimented, was not suitable as regards the quality of printing. We understand that there are suitable magazine rotaries. Can you throw light whether it is feasible to bring a periodical like ours by printing it on a special rotary, whether our circulation will be enough and what will be the price range of such a rotary? How many months will it take for manufacturing or assembling a rotary to our specifications?

A. You must certainly obtain a suitable Rotary machine for printing your magazine. In order to maintain the quality standard of your cover, it might be necessary to print this separately; this would however add to the cost. The cost of a suitable magazine Rotary complete with colour units, casting equipment and the necessary auxiliary equipment to print a 16 page signature, delivered slit and folded at a rate of 100,000 signatures per day approximately, would be in the region of Rs. 2,50,000. The question of economy in using a Rotary depends on the comparative cost of printing by Rotary including depreciation and interest on the investment against your present costs. The

delivery time for such a machine will depend on the manufacturers and it will also be necessary to obtain an import licence for the machine. I suggest you write to the leading Printing Machinery Agents for details.

226 Q: We are consuming a couple of tons of inks per annum in our giant offset printing establishment. Of late, we have found the cost of ink, especially of special grades, have risen phenomenally. A suggestion has been thrown in by pigment and varnish suppliers as well as machinery dealers, that we can economically buy a three-roll mill and a mixer to supply ourselves with our requirements of ink. These will amply pay for themselves in the long run. At the same time we can get the inks in the manner we want at the time we want. We, however, are prone to think, the ink maker is the proper person to do his job and not a printer. What do you, as a technician of a long standing, advise us?

A. The price of printing inks depends entirely on the costs of raw materials and labour. The ink manufacturers in India are producing excellent printing inks at very reasonable prices and, as you so aptly remark, are the proper people to produce such a specialised item. Those who recommend printers to manufacture their own inks are probably considering their recommendation from the point of view of selling a piece of machinery. It is significant that even Government, which are by far the largest individual consumers of printing ink, do not manufacture their own. Money which you would spend on a ink mill and the necessary stocks of raw material can better be spent on Printing Equipment to improve your press.

Printed and Published by V. S. N. Murthi for the Proprietors, Messrs Kubera Enterprises (Private) Ltd., at Kubera Printers (Private) Ltd., 'Kubera Buildings' 21, Sunkurama Chetty Street, Madras-1. Managing Editor: TEMPORAU

Let Fine Printing
be your Ambassador!
For Attractive Design
and Excellent Execution
you can depend on

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A SPECIALITY**

50 YEARS IN THE SERVICE OF THE PRINTERS

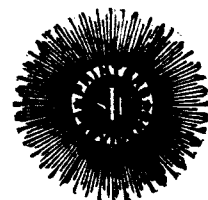
A GREAT NAME IN
FINE FINISHED TYPES

Manufacturers of
PRINTING TYPES IN 14 LANGUAGES

TAMIL, TELUGU, ENGLISH, GRANTHAM, MALAYALAM, CANA-
RESE, HINDI, SANSKRIT, MARATHI, DEVANAGARI, GUJARATHI,
URUDU, ORIYA & SINHALESE
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**HALF-TONE, LINE &
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SUPPLIERS OF PRINTERS' REQUISITES



ESTD. 1906

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Printers All Over India Appreciate RAINBOW'S CUSTOMER SERVICE

Here's how they react to our technical bulletins:-

PRASAD PROCESS PRIVATE LTD.
MADRAS-24 28th May, 1958.
"... Needless to say, you have done a real service in the cause of furthering the progress of offset printing in this country.
If you don't mind, would you kindly send us half a dozen more sets of these bulletins for use in our various departments."

FINE ART SHIV-RAJ LITHO - WORKS
NAGPUR-2 19th May, 1958.
"... We heartily congratulate you for printing such bulletins in the service of Indian printers. Since these bulletins are to be used for our technical staff, we would feel highly obliged if you kindly send us a set of 4 each for their use."

GOVERNMENT OF INDIA.
INDIA SECURITY PRESS.
NASIK ROAD.
5th June, 1958.
"... I acknowledge with thanks the receipt of one set of eight technical bulletins on Offset Printing and problems, forwarded with your letter dated 23-5-1958. As these appear to be of very good use for our technical staff, I shall be glad if you would send us Twenty-Five sets."

THE RAVI VARMA FINE ART LITHOGRAPHIC WORKS
MALAYLI 17th May, 1958.
"... We thank you for your letter dated 8th instant. We have received the bulletins also. These bulletins will no doubt be of much help to us and we thank you once again for sending these to us."

THE EAGLE LITHOGRAPHING CO., PRIVATE LTD.
CALCUTTA-14 27th May, 1958.
"... You have done very good work for the Lithographers who do not have the opportunity to subscribe to the I.T.F. The books are very easy to follow. We wish to congratulate you upon the excellent compilation."

Our Research Department is at the service of printers without any obligation whatever.
CONSULT US ON ANY PRINTING INK PROBLEM
RAINBOW INK & VARNISH MFG. CO. (PRIVATE) LTD.
TARDEO, BOMBAY-7

Phones: { Factory : 88101
Office : 42471

Grams: "RAINBOINK"

Estd. 1953

Printindia

A Monthly Survey of The Graphic Arts Industries, Publishing, etc.

Managing Editor
TEMPORAU

VOL. 10]

OCTOBER 1958

[No. 6

In this issue....

- ★ The Elusive Material
- ★ Layouts and Lettering
- ★ Hair Lines in Line Casting
- ★ Peep into a Press
- ★ Measure by Metre
- ★ Inside a Newspaper Press
- ★ Price Paid for Paper
- ★ Regular Features

Modern Machinery and Equipment
News & Views etc. etc. etc.

ANNUAL SUBSCRIPTION RATES

INDIA	Rs. 10/-
PAKISTAN	Rs. 10/-
Ceylon	Rs. 10/-
BURMA	Rs. 12/-
U. K.	\$ 1
U. S. A.	\$ 3

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INDIA
Grams: VASUNIDHI Phone: 3006

PRINTINDIA is Published
on the 16th of every month

Printindia magazine sells throughout India and in many foreign countries. As a medium of publicity, its pull in the printing, publishing and allied trades is enormous. World famous manufacturers and advertising agencies have already been utilizing this magazine for high-potential trade publicity campaigns

WE SUPPLY!

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PRINTING INKS: Letterpress, Litho and Offset
ZINC SHEETS: Highly polished for Process and Offset
GUMMED TAPES: German 'Butterfly' brand
EMERY AND SAND PAPER: 'Sword' Brand

Against Indents

PAPER: All varieties including newsprint in reels or sheets
CHEMICALS: Iron & Steel, Match Chemicals
PRINTING MACHINES of all kinds



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THE PAPER MARKETING NEWS

81, MINT ROAD

::

FORT, BOMBAY-I

INDIA'S LEADING JOURNAL ON
PAPER, BOARDS, STATIONERY
AND
THE GRAPHIC ARTS INDUSTRY

EDITORIAL

THE ELUSIVE MATERIAL

PALMYRA ERA

India always likes the agitational approach for solving her problems. Whether it is linguistic problem or the states reorganization, or other things of public importance, people agitate in the press, in the legislature, on the platform, and bring to the notice of the people who are oblivious of the seriousness of the situation. But somehow, as regards paper our people are patiently silent. Is it that the situation is not bad as it is painted? In fact, the situation is far worse than what one would admit. If the present situation is allowed to continue, many printers will not continue as printers. The palmyra age would have begun. The era of paper would have ended.

The Import Policy of the Government of India had always been an enigma. As regards paper, the Govt.'s policy is a myth. There are three acts in the tragedy of paper. The first is systematically encouraging the taste of the people for foreign paper. So cultivated, this preference or weakness for foreign bonds and imported art, has made us solely dependent on other countries for our daily requirements.

The second stage is neglecting Indian products. Ignoring Indian Mills, their requirements, their expansions and their interests.

Having fed the appetite of the Indian consumer for foreign varieties of paper on the one hand and having starved the indigenous mills, there emerges the third step.

Clamp all imports. This is a deathly blow dealt on a vital industry. There we are, at the dead end. We can go nowhere and there is nowhere to go.

The Govt have referred the matter to the Tariff Commission. This is a step in the unknown direction.

Sri Guha Ray has given the Minister of Commerce and Industries a weighty memorandum. The Govt will send a reply in due course.

The All India Federation of Master Printers has asked the Govt to take over all the Paper

Cloth is cheaper than paper. Were it not for the difficulties in printing on cloth, all our books will not only be bound in cloth but *printed* on cloth!

A sheet of Double Demy Art Paper costs Annas twelve and a ream costs Rs. 375. This price is not stationary. It is increasing every minute.

As a consequence, paper market today is a hotbed of malpractices. Everything mean, base and unsocial is practised with nonchalance in paper-selling today. The worst part of it is that the paper people are getting away with it!

India appears to be a virgin ground where any business can be practised in any manner with impunity. Even bootleggers appear to be reasonable when compared with the prices demanded for paper. Black-marketing appears almost a virtue, if one considers the atrocities committed by the paper traders.

ONE MORE BLOW

To the ills that afflict the printers, one more is now added. The scarcity of paper is not as bad as when you find paper exorbitant. As the printer prints on paper, the detrimental fluctuations in paper prices are practically running him out of business. The shooting of paper prices shoots the printer out of his press. One looks with nostalgia the days when the Egyptians wrote on papyrus and the Indians on palmyra leaf. In fact, attempts should be made to revive the palmyra leaf-writing or even printing on it. For one thing, it will be consistent with the Indian Govt Policy of encouraging cottage industry. (Cottages are made of palmyra leaf roofs.) For another, sooner or later, we will be running out of our timber or forest resources. And willy-nilly we have to fall back on primitive writing material.

What has been done to combat the price spiralling of paper? What steps have been taken to fight malpractices in the material market? What is the organization of printers doing? What is the Paper Mills Association doing? What have the Govt done in the matter?

Mills and run it themselves as a nationalised industry. We do not know whether this resolution means what it says in so many words. The resolution was passed in April. If anything, the prices have shot up at a far faster rate after that. Perhaps this is the reply of the paper people for the precious resolution!

WELCOME FOREIGN STUFF

The charge levelled on the average Indian is that he likes foreign goods. The average printer likes foreign paper, foreign ink, foreign boards, foreign machines (there being no Indian printing machine for the present, except a couple of platens and half a dozen varieties of cutting machines with foreign blades). The printers' organization is composed of average printers. The organization has a weakness for foreign boards, foreign roller composition, perhaps foreign ink and foreign paper. From the Bombay Conference, five years ago, not a year passes without a resolution regarding paper being put on paper. The effects of these resolutions have not been perceptible to the naked eye. But there have always been some after-effects, adverse after-effects.

For any freedom-loving citizen, nationalization of an industry is not to be equated with efficient production much less efficient distribution. The Indian Paper Mills are efficient. For, are we not using the paper they are making? The malady lies more in distribution than in production. Some sort of control after freezing all stocks of paper, may restore sanity.

COOL DECISIONS

Anger has never solved any problems. The AIFMP resolution for nationalization of paper industry is angrily worded. Excitement has never produced any results. It blurs the issue and clouds the vision. Coolheadedness is called for in facing the problem posed by the paper market as it is today.

Paper scarcity is not a passing phase. It has come to stay. Any haphazard solution or improvisation will not answer the situation. A permanent solution has to be found out.

THE WAY OUT

A high-power commission of experts in the paper-making, paper-dealing, printing and publishing industries, with Government representatives, including the forest and agriculture ministries should examine the whole question of:—

1. Fibre resources in India for paper-making
2. Present capacity of paper mills
3. Present demand of paper in the country
4. Production potential of paper in the expanded units and new units
5. Expected increase in paper consumption due to nation-building and industrial activities
6. Measures to be taken to stabilise prices, to control qualities, to ensure proper distribution, to prevent malpractices and to ensure adequate supplies for all printers and paper users
7. What quantity and what qualities are to be imported from other countries and from what countries?
8. Steps to improve fibre resources by a programme of growing trees on a scale equal to the demand of paper.
9. Research to find new substitutes for conventional fibre yielding materials such as rag, wood, grass, bamboo, bagasse, sabai, etc.

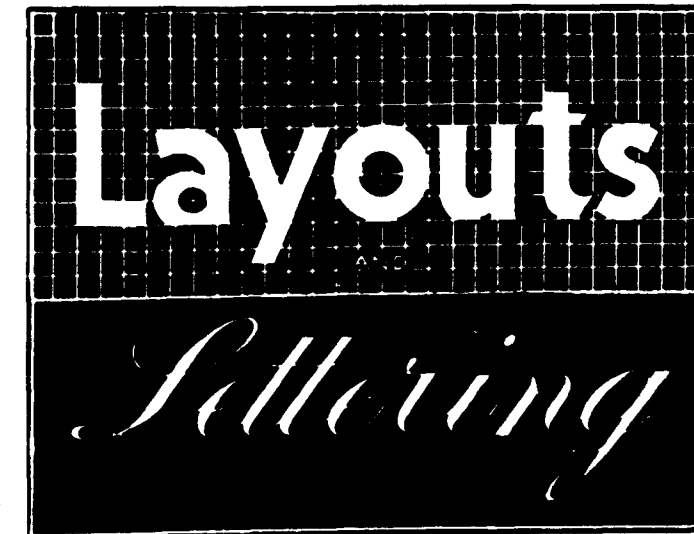
All these and other connected points should be considered after collecting information and analysing all the factors contributing to the present crisis in printing industry.

This commission should be constituted quickly and start work immediately and decide within a reasonable time. An interim arrangement should be put into force forthwith to pool the existing stock of rare qualities of imported paper.

We expect the Government of the day which has a responsibility towards the printing industry, a vital service industry, to wake up and act before the situation deteriorates beyond repair.

The elusive material, that is paper, is worth its weight in gold in the India today. It is not only the Government that can do something in the matter of scarcity of paper and the dearth of the article. The paper-using public can co-operate with the traders by economizing the use of rare varieties. The paper dealers can try and be reasonable. The Paper Mills can accelerate production of popular varieties of paper.

Whatever is done to alleviate the distress caused, it should be done quickly. No one can be indifferent to the crisis that is brewing.



By

SRI RAMAKRISHNA NARAYANAN

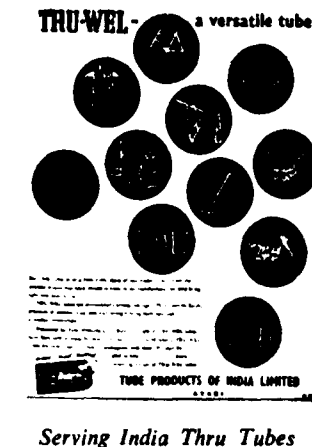
Every kind of production requires planning. Printing is no exception. A well-printed work is only a well-planned print. In this monthly feature, outstanding pieces of publicity matter will be reviewed. The healthy criticism offered in these columns is only with a view to improve the quality of typographical arrangement as well as the choice of type faces

The role of advertising in earning foreign exchange was discussed in the August issue of *Printindia*. For the introduction of metric system of weights and measures from October 1st, advertising has a role to play in educating the public. The Directorate of Advertising and Visual Publicity, Govt of India have been issuing advertisements about the new units of measures and weights. During the last weeks of August came one asking, "What is the metric system?" This 12 inch x 4 column piece dealt with the metre and the equivalents in the linear foot. In the last week of September came the "First Phase" dealing with weights. In this palams were shown with respective equivalents in grams, visces with kilograms and maunds and candy into kilograms.

SOMETHING NEW

In the private sector, Delhi and Orient Tobacco Co. Private Ltd. launched a powerful campaign with

a series of first class ads for their "Horizon Cigarettes". Clarion Advertising of Calcutta designed this excellent series of advertisements spearheading with the September 3rd number. In this first of the series spread out in a lavish space of 18 inch x 6 columns, there are two Bodoni lines at the top "Here's your" introducing the product. There is a 10 x 11 inch enlargement of the cigarette pack illustration below this. The product is in neat hand



lettered design "Horizon". "Straightcut Virginia" is in the same style as "Horizon" in expanded characters.

As the width of the pack is more than the height, it fully justifies that it is a 20's. An abstract or futuristic design of horizon in the middle is followed by "Straightcut Virginia" at the bottom in caps in the same style as "Horizon" in a smaller size. Below the big illustration at left are four lines in Bodoni italic lower. The first three lines emphasize the "new" in Beton Heavy of the cigarette and the pack. The last line is the price. In a background at the bottom is the pack with stars and cigarettes set against the black background. There are the words "Reach for your" in Bodoni lower with stars at the top and "Horizon cigarettes" with the former in handlettering and the latter in Bodoni. The two lines with the strip are featured in most of the shops selling Horizon cigarettes. Two lines about availability and name in small Baskerville complete the advertisement.

As an introduction of a new product, the Horizon is tops in advertising in the amount of space used, and the effectiveness of the design. This first advertisement was followed by a 12 x 5 col on the 4th, 10 x 4 col. on the 8th, 11th and 15th and a 10 x 3 col. on the 18th.

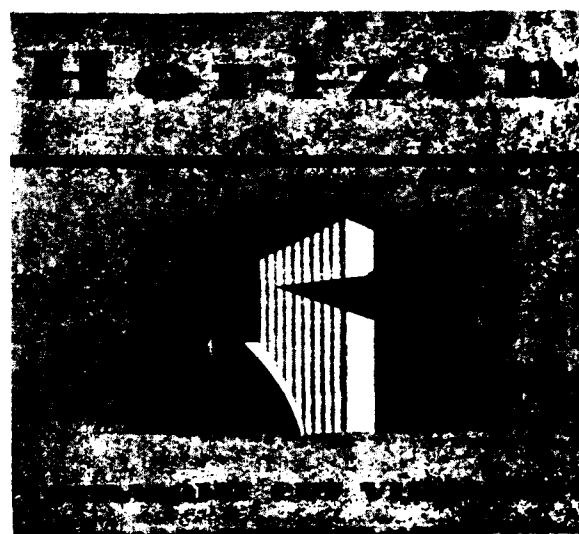
To catch up with the Indian Industries series from where we left it last month, here are two. Metal Box Co. of India (JWT) and the Tube Products of India Ltd.

Here is a 16 inch x 5 column advertisement issued on the occasion of the completion of 25 years in India. The style of the brush illustration is casual but expertly done. This is of a board meeting, presumably, the one in which it was decided to start an overseas branch of the Metal Box Co. The Perpetua

line says "Twenty-five years ago" after the illustration. The text is in two columns in the type face Perpetua. The first paragraph is in italics of the same type. It recounts that at a time of depression back in the 1930's, the parent firm decided on the establishment of the Indian counterpart. (To digress, "while good business wondered," it was foresight and faith that helped Metal Box to take this decision. That depression would not last for ever, this is foresight. That India would emerge into an Industrial nation leaving behind economic torpor holding out rich prospects for the packaging industry, this is faith. There is no doubt then as to the soundness and wisdom of the decision taken by men at the helm of affairs of this illustrious firm.)

Following the text is the Logo-type of the Metal Box Co. Note

here's
your



new cigarettes in a
new flip-lid crush-proof
twenty pack

Tuesday for the paper



Horizon cigarettes

New Horizons in Publicity

the pleasing design for the "25 years" worked out. Gill Heavy lower is the type used for the same and the address is in Pepetua.

A very satisfying advertisement. Here are many happy returns for the occasion to Metal Box Co., Ltd.,
JWT

TUBE PRODUCTS OF INDIA LTD

Compared to Metal Box, the Tube Products of India are newcomers to the industrial field. This is another of the many Indo-British collaborative commercial ventures which are bearing fruit. The Avadi firm is working in association with Tube Products Ltd, Oldbury, England.

This is a 10 inch x 4 column advertisement. In the usual style is "Truvel" at the top. In Gill Condensed Lower is "A versatile Tube." Note the eleven black circles of about 2 1/4" with a truvel product in

each. Bicycle, Boiler, Bus/Rail coach body, Escalator, Hospital furniture, Office furniture, Floor cleaner, Tram, Motor Cycle, Sola,

Transformer are all products in which tubes are used. These help the reader in understanding the rather wide application of tube products. Times Roman uneven line text is at the right. There is a tag at right bottom about Truvel and to the right name and address in Gill Bold Caps. There is a rule rounding off at the bottom. Here's a neat ad well done.
JWT

NOTABLE AMONG THE NEW

AIR INDIA INTERNATIONAL: 8 x 3 cols. The Gothic Expanded heading says, "Shocks and Stares" with an illustration of Old Mother Hubbard staring at the empty show window (Ronald Searle Style). There is the Times Roman Text with bold on advantages of flying goods by AII.

6 x 4 cols. The Gothic Condensed heading says "So—Ho Wonderful!" There is a tip top waiter on the march. Right flush Times Roman lines form the text this time. There is a slogan at left in Gothic condensed: "Fly it. They will buy it!" (Good allegory and a pat at the back for the copy writer and the slogan coiner!) Note the small blurb about 7 flights a week to London.

6 x 4 cols. There's the Jap lady with an umbrella. Framed by the umbrella stand the words "Tokyo" Jap style lettering, all curves and taper. Gill italic uneven lines form the text for this advertisement.

6 x 4 cols. Maharajah, crawling and smiling with 4 kala bears on his back at the bottom. In Gothic condensed and handlettering is the headline "For a four star recipe to Sydney." Gill Italic left flush lines form the text. In all the ads there

is the Air India International monogram.

BATA: 11 x 2 cols. "Long Life" Pattern of shoes are well illustrated and excellently laid out. Text is in Times, the top headline is in tinted Gill condensed type.

BEST & Co.: 6 x 2 cols. Evans Lifts are progressively manufactured at Madras. This is the announcement for the same. There is a neat tone illustration with a black strip jutting out "Evans lifts now manufactured in India." Gill Sans series are used throughout except for Evans Lift, Ltd., and address which are set in Times. Neat. DJK

BHART BIJLEE: 6 x 2 cols. Two ads so far of textile drives. There is a neat scraperboard illustration of motor, with application of the same in industry in shaded white outline. Times series are used.

Studio Ratan Batra

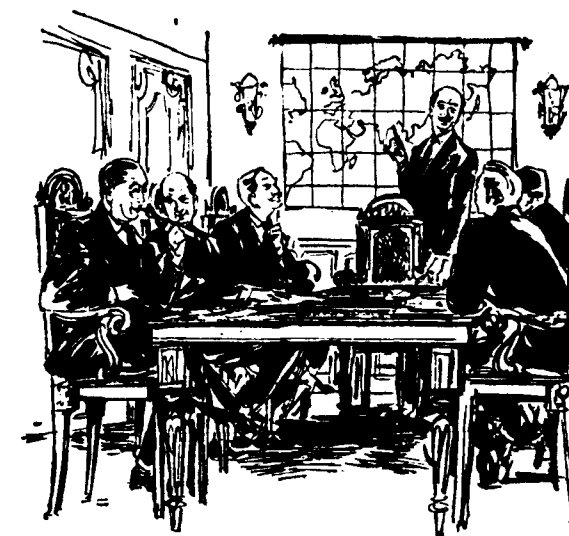
BINANI METAL WORKS: Continue their 10 x 2 col. ads of vignette drawing in uneven fairly heavy outlines. Gill series are used except for names which are set in Gothic Condensed Caps. Everest.

BOAC: 10 x 3 cols. There are 4 diagonal white streaks in a dotted screen of 5 x 3 cols. This is an appropriate illustration for "BOAC streaks ahead in Jet Liner Travel" which is the heading in Garamond. There are 4 small neat illustrations at left: Britannia, Boeing 707, Comet IV and Vickers VC-10. DJK

BOURN VITA: 8 x 6 cols. A series of new ads, with the theme "For strength and vigour Bourn Vita made by Cadbury's." There is a hospital-doctor background illustration in the first ad. The headline says "On duty 24 hrs a day every day of the week...Drinks Bourn Vita" in Times Bold. The second ad featured "Hard Labour isn't easy...Construction man." There is the background of Dam.

Both had the Times Roman right flush text stressing the above theme.

CITY MOTOR SERVICE: Neatly done ad of a delivery van for Horlicks 4 x 2 cols. This emphasis.



Twenty-five years ago ...

Twenty-five years ago... the world is still reeling from the shock of the great economic depression... everywhere industrialists are on the defensive, playing safe and so the Metal Box Company Ltd, London, decide to establish their first overseas company, The Metal Box Company of India Ltd... What fortuitously during this time... as all good and common businessmen.

... might have been indicated. Over 6000 workers are employed in five up-to-date Metal Box factories strategically located in different parts of India. More than 1000 packers and manufacturers will over the next years of production every year produced by Metal Box (India) Ltd., tubes, closures and polyethylene bags. The Metal Box Company of India Ltd have earned a place of importance in India's economy.

As India's resurgent economy expands rapidly, an increasingly greater, more complex burden will have to be borne by the packaging industry. As leaders in the field, Metal Box are ready to meet the challenge of the future with all their resources and in their experience.

Today twenty five years later that faith and fore-



The Metal Box Company of India Ltd.

Batavia House, 40, The Esplanade, Calcutta

Branches and offices at

CALCUTTA - BOMBAY - MADRAS - DELHI - MANGALORE

Birth of The Metal Box

CAMEL INK: 2 x 2 cols. The border is uneven line, bold outline. There is the drawing of the youngster stepping out for school. Two lines of Garamond italic say "The best medium for trouble-free writing." Camel ink is in reverse, bottle illustration, logotype, name and address. Everest

CALTEX: 9 x 2 cols. Tone illustration of bullock cart loaded to the full with Caltex truck in the background. The heading is "New caravans in old setting." There are two circles, one of the world and the other of Caltex. The text is at right in Times Roman LAS

sizes "Body builders" of any kind on any chassis. Gill series are used with quite some parts in reverse.

Efficient

EMC: 8 x 3 cols. Big illustration of wire coil encloses the headline. Gill Sans is used throughout. But there are four lines at the top in the good old Granby, which is hard to find in these Gill Times.

JWT

FRANCIS KLEIN & CO: 6 x 2 cols. This ad is about "Rupmann" industrial furnaces. The layout is neat, good illustration, Gill series are used.

GLAXO LABS: Two 2 x 2 col advertisements, one fully typeset about dentists recommending Codo-pyrin for toothache; the other about doctors recommending it for pain, feverishness and headache with an illustration of the tube and tablets. Gill Series are used in both the advertisements. LAS

Both Ostermilk and Glaxo advertisements are continuing. The former has a big photo of the face and the latter a full illustration of a baby inside waved uneven lines.

HANDLOOM HOUSE: 8 x 4 cols. A smiling woman in five different sizes placed in five different places with part of the same face at the right bottom was the feature. There were five lines of text. "There are few sights more refreshing than a cool and happy woman in a light-as-air cotton handloom sari (in Cartoon, with the last three words in caps and the rest lower)." This advertisement of the Handloom House was different as usual.

SHILPI

HAWKER-SIDDELEY: One 10½" x 8 column advertisement is about the new Argosy Turboprop Freighter coach; the big illustration of the aircraft and the same series of type throughout were the two things that stood out in this well laid out advertisement.

The other 10½" x 8 cols advertisement was one more of the series "Management at work"; entitled "On the rails and in the clouds" (in Gothic Expanded); there was a big black rectangle at right, telescoped in its centre, the picture of the rail and cars built at Montreal; at left was an arrow, black, with jet streaks and aircraft. Text in decreasing indention in Baskerville to match the slanting arrow. At the bottom was Hawker Siddeley—one of the world's industrial leaders (in bolder caps and in smaller Gothic

Expanded respectively). There were two lines of small caps representing Hawker Siddeley interests finishing off the striking advertisement.

IMPERIAL CHEMICAL INDUSTRIES 5 x 2 col advertisement was of Paludrine. There was finger motif in black background aptly worded "Stop Malaria with Paludrine" in Granby and Tempo Bold condensed. The ICI Logo was at the right bottom. JWT 4 x 3 col. Advertisement of Duco had a fairly heavy outline car in the middle of which was the Duco paint can in black. On both sides are "the super car finish" (Bodoni Bold Italic) name etc., were in Bodoni. Clarion

8 x 2 cols. advertisement of Terylene was entitled "Indian Fabrics are finer now with" (Gothic condensed). "Terylene polyester ICI fibre (in usual style lettering)." The rest of the advertisement was in Futura. JWT

INDIA CEMENTS 9 x 3 col ad had a tinted illustration of their "Sankar Brand" Portland Cement Bag with an arrow pointing towards it. The word "Announcement!" was in Gothic Condensed below it. The advertisement was about Cement Marketing Company of India taking over the distribution of "Sankar" Brand cement.

INDIAN SUGAR MILLS ASSOCIATION 12 x 4 col. advertisement was entitled "For every rupee of sugar you buy" in Gill Heavy lower. The first may be one of a series of Public Relations advertisements of this association. There was a big tone illustration of a rupee and a line illustration of a weighing balance in line. How that rupee is distributed is told by the side of the rupee. Below this was the closely set text in Times Roman in two columns. At the bottom is "India white Sugar" in Gill Heavy with "white" in out-

line. There was a graph showing production of sugar during the years and the words "vital to India's economy" in Bodoni italic and name of association in Gill.

INDIAN TOOL MANUFACTURERS LTD 6 x 4 cols. The series entitled "Small tools help building a large nation" in Gill Heavy has a neat illustration at the top, with text in Gill Medium and the words emphasized in Gill Bold. There was the Gill italic line "Whatever progress demands—Indian tools supply" and the logo. ASP

JOHNSON & JOHNSON of INDIA 8 x 3 col. The advertisement was about "3 good reasons for using the Tek Tooth Brushes" in Gothic condensed. The figure 3 was emphasized and the illustration was hold in scraperboard medium of the tooth brushes. There was the tone illustration of a lady in smiles. The Gothic Condensed and Gill text was small giving the three reasons. JWT

JYOTI LTD 6 x 2 cols. This was an advertisement of their "Non-Clog" Pumps for sewage stations. There was a heavy, uneven lined illustration of a pipe, valve and all with water indicated in between in wavy lines (as top portion of S). The headline "when it's not just water" is in Times Bold. The Times text is closely set. Illustration of pump and logo, incidentally well done, and conceived in Hindi, starting from a lamp "Jyoti", name is in Gill Heavy. This is a good advertisement making the fullest use of the available space. Everest

MOTOR AND MACHINERY MANUFACTURERS LTD. The 2 x 2 col advertisements of this firm are eye-catching with "MMM" standing out very boldly in them. The other lines in Gill gonically

(Continued on page 18)

Hair Lines in Line Casting

By

SRI S. N. BOSE

An excellent periodical of Bombay has in every one of its pages hair lines. The otherwise good print is spoiled by thin lines appearing between words. Apart from marring the general get-up of the printed page, it interferes with reading too. In this article, the author, a Line-casting Machine Expert for quarter of a century now, examines the cause and cure, prevention and eradication of the disease technically known to the line casting world as "Hairline"

PUSH IN SPACE

There is a mark in the list of proofreader's marks, called "Space risen—Push in". It is often boasted with some truth, that such risen spaces are a feature of the hand composed matter. Mechanically set slug-matter is said to banish such risen spaces.

WHAT ARE HAIRLINES?

Whether spaces rise or not during print, some spaces in slug set matter begin to print. These "spaces that print" are not the smudgy risen space of hand composed type, but a streamlined version. It is slicker, thinner, but is more prevalent throughout the page, than rare risen spaces of the hand composed matter.

These lines which appear where they ought not to appear are called *Hairlines*. These appear due to damaged side walls of the matrix which is used to cast the face of the slug. This may be an over-simplification of the problem of hair-lines. If matrices are properly cleaned and maintained, if magazines are maintained free from dust and foreign matter, if all the parts through which the matrix circulates are dry-lubricated with graphite, if the first elevator carriage is clean and the duplex rails are not binding, if no tight lines are sent, if we clean the matrices properly after a splash, if no damaged spacebands or matrices are used, then and

only then there will be no hair lines to speak of. Therefore it all boils down to matrix maintenance.

CAUSES

Whenever the first elevator does not allow free spreading of the matrices during justification, hair-line may result. Worn mould cam lever rolls and pins may result in this too. One of these rollers rides in the groove in the right hand side of the Driving Gear.

The first elevator should rise during casting at least a distance of .003 inch during justification. Otherwise, the matrices will bind on the rib of the mould and will not have freedom to spread. In this case the centre screw on the first elevator should be set for .010 inch clearance. Mould face, grooves and elevator jaws should be properly cleaned and graphited daily. The pot pump stop or the loose line preventer should be correctly adjusted. It should not allow loose lines to be cast. In that case metal may slip in between matrices and be cast as a hair line. In course of time the side walls also may be damaged.

The mould disc advances two times during a casting cycle. When mould wheel advances the first time for matrix alignment, the clearance should be .010 inch between the vice jaw and the mould. The eccentric in the mould slide lever should be adjusted for this, after removing the first elevator back jaw.

The annoying fins of metal that appear between characters on a slug show in print also. Accumulation of metal on spacebands is a common cause. Careless handling of matrices is another cause of hairlines. A mis-adjusted pot pump stop has already come for our consideration in this connection. Loose lines are another cause for hair lines. The front lug of matrices might have swollen. This binds in the elevator jaw causing improper justification; the mould may come too forward and push the matrices during alignment. A dirty mould face, either due to the front mould wiper not working properly or want of cleaning, is also a cause. A dirty first elevator head and grooves in the mould are also the causes for hair lines. There may be nicks in grooves of mould or in the elevator jaws. There may also be some obstruction for the rising of the space band such as screw projecting from the mould or elevator. The elevator jaws may be too close as not to allow proper spreading of the matrix lines. A sprung back jaw or duplex rail may also cause hair lines. If matrices or spacebands are bent or a kink in the vice closing lever link or spots of metal on ends of vice jaws will all cause hair lines to appear.

Sometimes rounded edges of vice jaws or a slug in the pump lever that stands above the pot pump lever may cause hair lines. If the duplex rail cap is loose then there will be hair lines. Check the screws at the left end of the vise as they may be loose. If the spaceband sleeves are slightly wider than the matrices, then they may hold the matrices away from the mould. In other words, the distance from the index to the casting side of the space band sleeves may be greater than the matrices.

If hair-lines appear only when the lower characters are cast, it means

that dirt has accumulated in the sidewalls opposite to the roman character and while casting the bold or auxiliary character, the matrices are kept separate due to the dirt and thus metal flows between matrices and forms into hair lines. For this, the remedy is to rub the sides of matrices on a cloth spread taut on a chip board. Matrices should be cleaned with high test gasoline.

There are operators who get a kick out of sending lines with one space band or even no space band. Leader line, border lines are sent without any spacebands and get cast for the time being. But they may be permanently damaged. Whenever a full leader line is necessary, the best way is to set the vice jaws a little wider and after getting the required number of leaders or borders, the rest may be used for space bands and spaces.

OTHER CAUSES

So far, we have considered only the causes for damage of side walls

of matrices which in turn cause hair lines. There are some other causes too for hair lines.

The metal may be run too hot for a long time. Stepping on the matrices, holding the hand under the mouth of the magazine channel and emptying the channel, etc. will cause hair lines.

A false wall is gradually created in the matrices. This wall is destroyed when cleaning in gasoline. Then the hairlines result.

It is now well known that during casting the line should be air tight, as otherwise the pumped metal will flow in that direction where there is leakage. There should be no obstruction to the free spread of the matrix line. The following test may be applied:—

Run a reasonably loose line 30 ems wide with 20 spacebands. After sending the line, stop it at the second justification. Try to pull up a spaceband by means of a hook. If it can be pulled up to one or one and a half ems, it is all right.

But, if it is over this, then it is not all right.

REMEDY

When the side walls are damaged, the life of the fount is over and the matrices cannot be used for good class work. As matrices cost today in the neighbourhood of 1.50 nP a matrix, this is a hard pill to swallow.

There is however a remedy, which may be tried not on the matrices, but on the matter with hair lines. A stiff scrubbing brush may be used on the forme after lock up. Brushing up and down the lines may remove the hair lines or at least lessen their height to paper. The forme may also be planed with special planer with a rubber heel.

The spacebands should be graphited after thorough cleaning every eight hour shift. From the foregoing it will be clear that, there are scores of causes for getting hair-lines, but there are few remedies.



By

SRI T. RAMA

Modern Man, who has unravelled mysteries of life in other planets and understood them, fails to understand a fellow mortal, the Printer. It is a paradox that the 20th century citizen who interprets the languages of birds, fishes and even plants, misinterprets Printer's language. Ironically enough, while understanding the most complicated, he is sadly confounded with regard to the commonplace. This is addressed to the customer.

This is written to dispel the darkness that shrouds the Printing Industry, to throw some light on the men of the craft—in a word, to put the printer in proper perspective vis-a-vis the customer.

To understand a craftsman, you have to begin by trying to understand his craft. Let me take you through the various stages your work passes before emerging as a printed product.

MSS

The original you have given us is not always fit for setting straight-away. Hand-written or type-written copy has to be edited; in the case of an advertisement, it has to be planned and 'laid out' on paper. This will give you an idea as to how the final copies will look like. Sometimes you ask for two or three styles of presentation to choose from. 'Lay-outs' in most of these cases will suffice. But, if you are keen on seeing these specimens in type, we could do it for you if you pay the setting charges.

THE COMP

A compositor is not a 'coolie' as he is generally thought to be. He is a highly educated (in his craft) and scientific person however much his exterior may belie this. It is he who gives shape, form and voice to your inarticulate matter. He prepares the printing surface, be it of small type (1/12 of an inch) or big (3 feet) as for gigantic posters; from this surface a large number of copies may be got. The compositor is helped in his task by a legible and well edited copy. Bad manuscripts retard speed, increase the incidence of errors and make monotonous the already laborious task of assembling individual letters into words, lines and pages to form a book. Very rarely, the average reader of a book assesses the enormity of the task of gathering 2,500 to 7,000 characters in a page measuring 4½ in. x 8 in. When you come to know that even the spaces between words, the blanks between lines and the margins around

pages are to be built up by wood and metal blanks of specific measurement, the tediousness, if not the stupendousness, of the operation known as composing may be conjectured. You help us if you are definite about size of type, length of line, style of setting, etc., as your after-thoughts mean considerable time and labour and consequent rise in cost of production. The average speed of a hand compositor is 1,000 characters per hour and he is paid between Rs. 60 and Rs. 100 per month. The speed of a composing machine operator is 5,000 characters per hour. He gets between Rs. 100 and Rs. 180 per month.

ACCURACY

The omissions and commissions of not only the compositor but the inadvertence of the customer (or author) as well are taken care of by our proof reader. A book work is examined by him as many as five times in various stages of printing. He reads on an average 50 pages in an eight hour day, 300 pages in a week. In a mere three-week schedule he would run from cover to cover your 1,000-page Dictionary! As is usually imagined, he is not a 'white-collar' man tied always to the desk and his pen, knowing nothing but spelling and punctuation! A proof reader is an intensely practical man, who has mastered the craft of printing: that is why he is the highest paid technical man in the press barring the executives. Not infrequently the reader points out important flaws in the author's copy. Instead of being thanked for this useful service, it may be resented by the author! Accuracy is important in all things: In printing it is a 'MUST.' Proof reading is a vital link in the chain of printing. When you are stuck up in spelling, ask our reader!

PRINTINDIA

ADVERTISEMENT TARIFF

	CASUAL	CONTRACT*
	Rs.	Rs.
FRONT COVER	500	400
BACK COVER	300	200
2nd OR 3rd COVER	200	150
INSIDE FULL PAGE	150	125
HALF PAGE	75	65
COLUMN INCH RATE (per col. inch)	6	5

Blocks of 125 screens are accepted for the inside pages and 150 screens for the covers

Price per Copy: Re. 1/-
Annual Subscription Rs. 10/-

* Contract means six or more insertions in one year the space for which is reserved in advance and must be consumed within twelve months from the date of reservation

UNNECESSARY CORRECTIONS

Unless you leave the responsibility to us, we send you a proof, after eliminating all errors, for final scrutiny and instructions for 'striking off'. On this proof, corrections which are departures from the original will be charged for. Only at one stage a proof is sent to the author. Further proofs if required, should be paid for. It is worth mentioning, that correcting type matter (hand-set or machine-set) is laborious; and as far as possible the number of corrections should be kept at a minimum, major alterations being avoided. Once the matter is 'made up' into pages and securely 'locked up' in an iron frame, all corrections that will upset the arrangement of the group of pages to be printed at one time are ruled out. This group of pages, technically termed a 'forme', forms a section of 8, 16, 32 or more pages depending upon the size of the paper and the machine, in relation to that of the book page.

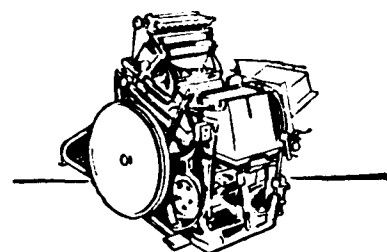
STEP INTO OUR MACHINE ROOM

Matter coming into the machine room is not ready to print from as such. A number of adjustments and manipulations have to be made before accurate printing results. The height of the printing surface composed of anything from 1,000 to 1,00,000 individual types should be uniform. When illustrations are to be printed, they need special treatment. All this keeps the machine waiting and is known as 'make-ready.' On occasions it takes four times the time required to print off the work. The machineman is a skilful mechanic and possesses sound judgment. His knowledge includes operation and maintenance of various types of machines, recognition of varieties of paper and ink, etc.

PRINTER'S MACHINES

All emanate from foreign lands, cost a great deal initially; after World War II machines are rare, printing machines being the rarest. To invest heavily on these and to keep them idle is not sound business. Heavy corrections by the author at the final stage increase machine-hour cost.

Machines are capable of printing as small a job as a visiting card ($2\frac{7}{8} \times 1\frac{1}{4}$ ") upto giant posters (40×30 " or more). Hand-fed machines deliver 1,000 to 2,000 copies per hour. Automatic feeders do the work of human hand at a speed of 5,000 copies per hour. Rotary presses fed with a continuous web of paper several miles long print on both sides of the paper, fold, cut and deliver from 32,000 to 64,000



copies per hour. Tons of paper and hundreds of lb. of ink and brainy machinemen produce newspapers which you take for granted without bestowing a moment's thought on the ingenuity, skill, efficiency and organisation involved in such a production.

The machineman brings together the printing surface, the ink and the paper or other fabric on which the print is to appear. All this is highly scientific and requires considerable experience and 'know-how'.

A machineman is paid between Rs. 80 and Rs. 100 per month.

PAPER & INK

We stock in the press some common denominations of paper used for day to day routine jobs,

which may or may not suit your job. Keep paper ready. Do not run to the paper dealer at the eleventh hour. Better still, hand over the paper with the order to avoid delay and disappointment. Consult us when deciding on the colour, quality, size and substance (weight per ream of 500 sheets) of paper.

Paper costs from As. 14 for ordinary to Rs. 3 for art paper per lb.

Among the materials used to produce print, ink is the least consumed, but should be carefully chosen. The customer may choose the colour of the ink, but he is seldom asked to supply it. The printer has to match the ink to the paper (in quality and colour) to avoid working difficulties, which is another factor in machine delay. A pound of ink (costing about Rs. 4) will cover 10,000 copies of 300 sq. inches overall surface area.

MEET OUR BINDER

Printed sheets are not ready to be handled immediately after leaving the printing machine. The wet ink is a source of danger, and hasty or careless handling will ruin the whole job. In spite of efforts to accelerate the drying process by various methods, good class work is left to dry before they are folded, gathered, sewn and bound—all of which constitute binding. The binder is the nimblest, deft and artistic fellow among craftsmen under the roof of a press. He is the only person who works and still keeps his hands clean (as he has to)!

Please let us know what type of binding you want. Show a sample if possible or we will send you a specimen (or dummy) copy for approval. You may also leave it to us: our binding experts know for instance a 'spiral' or a 'plastoid' binding will suit a catalogue, but not an album; a limp cover will do for a text book while classics

require full cloth gilt, Library editions require Morocco full leather, diaries need rexine, etc.

The binder can make or mar all the care and skill taken since the beginning of the work. Good craftsmanship and neat finish are contributing factors in sales promotion of the volume. A book is as bad as its 'Binding'!

MORE PICTURES

Reproduction of illustrations covers a wide field of various processes, each suitable for a particular kind of original. Plain drawings are made into 'line' blocks, and photographs are processed into 'half-tones'. Wash drawings, oil paintings, pencil sketches come off well in lithography. 'Photogravure' resembles photos with a continuous tone. Even type matter can be combined with illustrations when reproduced by litho or gravure. "Sport and Pastime" of Madras employs lithography, and "Illustrated Weekly of India", Bombay, uses gravure process. The high quality and standard attained and maintained by these famous weeklies are sufficient proofs as to the skill and craftsmanship in India in general and the respective firms in particular.

Here again the original should be fit for reproduction. For line blocks, opaque black (India) ink drawings drawn on white paper, kept flat without folds or creases, are essential. Badly focussed, inadequately or excessively exposed photographs do not reproduce well through half-tone process. Size of originals should allow reduction. A sample of paper on which they will be printed accompanies the original for selection of screens for half-tones.

Blocks are charged at 50 nP. to Re. 1 per square inch by block-makers.

LESS COLOUR PLEASE!

Print in more than one colour, use of colour ink or coloured paper enhances the attractions and increases its value (if also the cost). Restraint is necessary in the use of colour. Excessive use is its abuse and should be guarded against. Leave colour schemes to the expert rather than risk defeat of the very object of the printed matter.

GO TO THE SPECIALIST

There seems to be an impression that every printer can handle all kinds of jobs. While this is not far too wrong as regards routine jobs such as a commercial circular, handbill, visiting card, letterhead and the like, it is safe and economical for both the printer and the customer to entrust work requiring special



equipment and staff to those who understand and undertake such work. Envelope-making requires moulds or 'dies', folding and gumming machines. Labels in large quantities need autofeeders, slitters and gumming appliances. Die-stamping and copper-plate call for men and machines different from letterpress. Large quantities of blank forms like M. O. forms, ration forms, etc., are quickly executed by firms equipped with rotaries performing printing, perforating, slitting, etc., by themselves at great speed. Ticket printing is an entirely different branch. Not many presses can successfully handle volumi-

nous works of reference like the Dictionary or Encyclopaedias, calling for special equipment.

SCIENTIFIC COSTING

Time was when cost meant at best a shrewd guess and at the worst a blind leap in the dark. This left much for higgling and haggling ending in dissatisfaction to both customer and printer. In a scientific age, cost is an arithmetical product derived by summing up various items of expenditure such as wages, materials and labour plus a percentage for profit. The narrow margin of profit in the industry will be evident by observing the low wages of craftsmen and the standard of life of the proprietors. The myth that printers become millionaires overnight is broken by the fact that scores of press-owners are forced to close the show. The customer who is cost-conscious is satisfied with low quality. The demand for cheapness has resulted in constant lowering of standards of the printed product, encouraged the springing up of mushroom print-shops (patronisingly known as 'Gadi-Khana Presses' meaning presses kept in a stable), low-wage rate for craftsmen giving room for infiltration of half-baked work-men, undesirable and unscrupulous elements into the craft, dragging down the dignity of the trade and stultifying the industry.

CUTTING BROTHER'S THROAT

There is something shady when one printer underquotes his brothers-of-the-profession. He may starve the worker, rob the State or ruin the job. Estimates differ from printer to printer. So does the quality of the printed stuff. Remember that the paltry differences in cost cannot adequately repay the integrity and reliability of good printers.

Let me recapitulate briefly some of the points to be borne in mind by a customer.

YOUR CHOICE

Make the best choice of press and materials. Never be satisfied with second-rate ones. More jobs are ruined by bad or unsuitable materials than by the press. Shoddy raw material cannot be transformed into superfine product even by eminent printers. They are no magicians.

TIME, COST, QUALITY

Give the requisite time. Rome was not built in a day. Haste makes waste.

Pay a reasonable cost. You are the ultimate employer. Unless you pay us well, you are grudging the bread for the worker.

Demand the highest in workmanship and finish, accuracy and durability. Be quality-conscious. You, the customer, set the standard; then only we can keep it up.

PRINTER, YOUR FRIEND

It will pay you to consult the printer on matters relating to advertisement campaigns; market research; sales planning and promotion; printing and publishing; and stationery. He has ideas to attain your ideals; his experts will chalk out the programme to achieve your object.

TOWARDS BETTER UNDERSTANDING

Understand the printer—it will help the progress of printing. Upon its progress depends the

growth of other industries, arts, sciences, education—to spread the already known branches of knowledge and intensify the efforts to penetrate the unknown. Printing is a mighty weapon. Use it, but don't abuse it for vilification, false propaganda and other nefarious activities. Help the printer to keep up the dignity of the trade and the national service it is dedicated to.

Coming back to the place where we started, Man is on his way to the Moon. He has sent a satellite to the skies. The Arctic continent is about to be populated. All these are possible with the help of the Art preservative of Arts—Printing. Having understood Printing, Man should understand the Printer, who lives for Printing.

The discerning Printer

Takes great care in Selecting the materials for his work—
FINE PAPER, GOOD INK, CLEAR TYPE

HE USES

GANGES INKS

because he knows he can rely on them for—

- QUALITY
- ECONOMY
- FREEDOM FROM TROUBLE

FACTORIES AT: HOWRAH BOMBAY MADRAS

PRINTINDIA

Measure by Metre

By

MR. R. L. FERNANDO

On October 1, India is supposed to have changed over to the Metric system. In selected areas in state, metric weights and measures become legal. The metric system will be introduced in selected departments and industries like cotton, textiles, iron and steel, engineering, heavy chemicals, paper and cement. It has already been introduced in the Jute industry from 1st July this year. Here is how it all came about

Adopted by 77 countries and optional in 16 countries, the metre has come to India now. As early as 1911, the South Viet Nam, and in 1914 Cambodia are the earliest Asian countries to switch over to the metre. In 1917 Surinam and Philippines followed suit. Nine years later in 1926, Afghanistan was attracted to this system of measurement. It was not till 1930 that China took to the measure of metre. Five years later in 1935, Syria, Iran and the next year, in 1936, Thailand came into the metric fold. In 1938, the newly independent Indonesia welcomed the metre. In 1949, South Korea, in 1952 Japan, in 1954 Israel and Jordan, newly sprung states adopted this.

THE BEGINNING

It was in France after the revolution, that Metre was born, when so many weights and measures confused the Frenchmen. (In France too was born the Point System, very dear to printers all over the world.) True, India would have gone metric as early as 1871 and it is not surprising that it is going metric now. But it is certainly surprising as to how India escaped adopting the metre system of measurement in 1871, when the Govt of the day seriously thought of doing so. In fact, an Act was passed to introduce the metric system. But the Govt. did not implement this piece of legislation.

Even in France, where it was invented in the 18th century in the

wake of the French Revolution, it was only in 1840, that the system could be enforced. Transitional units held sway for quite a long time and these were expressed in terms of metric units. A pound was made equal to 500 grams, divided into 16 ounces, each ounce into 8 gros and each gros in turn into 72 grains.

Once enforced in France, it quickly spread to Germany in 1872, but the UK and USA did not and have not (and will not) adopt the metric system. The farthest they would go was tolerating the metric system and its advantages without giving official recognition. The yard was defined in terms of the metre and the pound in terms of kilogram by the USA. The use of metric system was recognized by law by UK and USA in 1864 and 1866 respectively.

The decimalisation of measures and weights (as well as coinage) has attracted Britishers so much that they have constituted a committee to go into this matter. Headed by Sir Hugh Beaver, this committee will examine and report on the practicability, implications and consequences, both international and domestic. The committee will also study the cost of such a changeover, if and when it is contemplated.

BABEL OF MEASURES

To give an insight into the multiplicity of weights and measures prevalent in India, let us take the results

of a sample survey conducted by the National Sample Survey. The survey covered 1,000 villages and reported that there were as many as 143 different kinds of measurements (and there was no system worth the name in any of them, although they were all based on some ancient type of weights and measures which were good enough for the good old days in the good old country). For land, there were 180 kinds of measures, and for volume about 150 kinds. In maunds alone there were 100 kinds. The standard maund equals 3,200 tolas, yet we have in India maunds ranging from 280 tolas at the one extreme to 8,320 tolas a maund. Again a seer may be anything from 8 tolas to 160 tolas, although a standard seer equals 80 tolas. The metric system is going to change all these.

The ten millionth part of the quadrant of the earth's meridian was taken as the Metre.

The weight of pure water contained on a cube of 0.1 metre on each side was taken as the unit Kilogram.

For capacity measure, the volume of this water was taken and called one Litre.

ADVANTAGES

Scientists opine that the Indian Republic will stand to gain by adopting the metre as the measure. For one thing, there are immense advantages in adopting an international form of measure. For another, as scientific research is international in nature (if not universal) the adoption of agreed standards for all measurable quantities is considered by all men of science essential for a nation's progress.

Length, mass and time are the three irreducible entities accessible to physical observation which resists further analysis, says the eminent physicist Dr. C. V. Raman. He

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says, the ideas and methods of science are directed towards expressing measures of all other physical quantities in terms of the fundamental units of length, mass and time.

Thanks to the scientific stature of France after the Great Revolution, this universal basis of expressing weights and measures in a scientific way was approved by all countries. It will be interesting to know that the principle of this system is that the units should be derived in from nothing but permanent and naturally existing standards. The subsidiary units should be related to the primary unit in multiples of ten or its sub-multiples. Thus the advantages of computation of decimal system has been availed of in the metric system.

As early as 1868, Col. Strachey remarked: The adoption of metric system of weights and measures seems to me of certain utility that I regard its eventual accomplishment as also certain.

No wonder that today three-fourth of the population of the world has adopted the Metric system and are deriving the benefits that naturally flow from the use of such a system.

INCH SCREEN	METRIC SCREEN	SUITABLE FOR PAPER
55	20	Poster
65	30	Rotary newsprint
85	34	Best newsprint
100	40	Super calender
120	48	Imitation Art
133	54	Real Art, enamel, coated
150	60	Real Art
175	70	Best quality Art paper
One English Point	= .013837	inch
One English Point	= .935	didot point
One English Point	= .331	mm
One inch	= 72.254	English points
One inch	= 67.566	Didot points
One didot point	= .3759	mm
One didot point	= 1.070	English points
One didot point	= .0148	inch
One millimetre	= 2.66	didot points
One millimetre	= 2.817	English points

There is no doubt that during the transitional stage, considerable difficulties have to be surmounted. Before the manufacturing industries could adopt this system, it is necessary for the raw material market to adopt this. This is where it should begin. The price and quantities of, say the printer's materials, should be expressed in the metric system.

WHAT METRIC MEANS TO THE PRINTER

Paper should be measured in metre and weighed in grams per square centimetre. Ink too should be sold by the gram and its covering capacity should be expressed not in square inches but in sq. cms. (not per pound but per kilogram. Type metal should be sold not by the ton but by kilogram. Types should be manufactured not by the point system, but by the didot which has relationship to the metre. Point refers to one seventy-second part of the inch, while the didot will refer to 0.3759 millimetre or 1.070 English points.

Blocks should be manufactured not by square inches but to square centimetres. Halftones will have screens not in the familiar 65, 85, 100 to the square inch but as follows:—

Inch screen can be converted into a metric screen equivalent by the following formula:—

$$n \times .463$$

Likewise the metric screen can be converted into its inch screen equivalent by working with:—

$$n \times 2.5399$$

The inch screen is used in the United Kingdom, the Commonwealth countries of Australia, Canada, Pakistan, Ceylon, India etc., the USA and France. The metric screen is used in Germany, Italy, Holland and Switzerland.

THE POINT SYSTEM

Simon Fournier, a Parisian Type Founder evolved the point system. In this the unit is point which is equal to one by seventy-two of an inch. But 72 points, although theoretically equal to an inch, do not make an inch. Thus 72 points equal .99626 of an inch. One inch actually equals 72.25433 points. One em is composed of 12 points or .176044 inch.

THE DIDOT SYSTEM

In the whole of Europe, the Didot system is in vogue. The Didot point is equal to .3759 mm. 8 points are equal to 3.007 mm. One Cicero equals 4.511 mm. One metre equals 2660 points. One mm. equals 2.66 points. Type body is expressed in Didot points. The width of an age is told in Cicero or 12 points. The depth is also in Cicero. The adjoining table will be helpful.

In order to convert English point to Didot

$$n \times .0935$$

To convert Didot points into English points

$$n \times 1.070$$

PAPER SIZES

The standardization of paper is being resisted in this country. Now that the metric system has been ushered, none can think that

(Continued on Page 20)

Inside A Newzealand Newspaper Press

By

SRI R. B. SHARMA

The outside of a newspaper is interesting. The inside of a newspaper printing establishment is more interesting. Here is told a first-hand account of one of the great newspapers of New Zealand

Christchurch Star Sun is the name of the New Zealand daily which recently built a new block of buildings to house its press and offices. Elaborately planned and up to dately equipped, the Christchurch Star Sun is a standing example of thorough planning and splendid execution.

The newspaper occupies 65,000 sq ft of building. The composing room floor provides not only for hand composing but also for mechanical composing on line composing machines, tele-type setting, job stereo moulding, stereo block library, reader's room, cafeteria, etc.

The News Linotype Battery of the Christchurch Star Sun consists of 22 machines including models 8, 14, 31 and two comets, which are the last word in line casting machines. These comets are operated as teletypesetters. There is also a Ludlow for display and headings.

The Advertisement Battery consists of two model 14s, one 36 and one British 48 Linotype Machine, one Ludlow, one All Purpose Linotype, a slug stripper, a Rouse Power Mitrer and trimming saws for every four frames.

Small ads are handled in a special alley, having own make-up and proof press. Connected to copy box by Lamson wire conveyor and to reader's room by a Lamson Tube the problem of unnecessary travel is solved.

In the stereo section, there are three moulding presses, saws, bowlers, planing and casting equipment. Moulded mats go down an elevator to the casting floor in the press room. There they are cast and finished in an L & M Junior Autoplate and shaver situated on press working level.

The hub of the whole project is the latest American designed, but British built Goss Headliner 4 unit Rotary. The speed of the rotary is 52,500 copies of 32 pages per hour, but it is now run at a speed of 45,000 copies per hour. Each unit is of a different colour namely blue, maroon, green and tan, the colours being the choice of press crew. The Press Crew is ably led by the Chief Engineer J R Currie and the press was erected by the Press Room Superintendent T R Broadbat.

In the new press-room a four unit Hoe rotary is to be moved. This has a capacity of 24 eight page units. The 40 ft high roof is lined with acoustic tiles. The din of the old room is notably lessened. As the papers roll off the press, the copies go through the wall into the despatch department in the main building on Igranic Conveyors. Bundles are secured by Signode Packer automatic wire tying machine and roll out to the loading dock of the building.

The Process equipment of the Christchurch Star Sun includes a

Klimsch Darkroom process camera, a three-way vacuum printing down printing down frame, Klimsch auto vertical camera, Hunter Penrose camera, Sirius & Srannteth machine etching baths, rocking baths, a router, a Littlejohn auto plate whirler, an Eickhoff Proof Press Vacuum printing frame with arc lamps.

The main feature of the building is that it is painted with restful colours. The indoor is kept at a pleasant temperature with filtered and thermostatically controlled air.

In order to plan this building, as early as in 1953, several executives were deputed to overseas to study modern plant layout, factory building and economical production arrangements.

The Christchurch Star Sun is a lesson in industrial planning for our industry and is a proof as to how sound planning and plant layout can help proper production.

MAY WE DIS?

Printers' Progress is the House Organ of Leagrave Press Ltd, Lenton, Beds, England. Dennis H Hudson has written an article in this magazine regarding standing matter in printing presses.

Dividing Printing jobs into three groups, he states, that in certain cases, the customer says clearly that there is not going to be a reprint. In this case, the types are released and distributed. The blocks are returned to the customer.

In the second group, the printer is told by the customer that a reprint is likely within a few weeks. In this case, complete formes are filed away or stored away in chase racks or forme racks, on their edges like slices of toast in L-shaped racks. When the order comes, they are printed off. After reprint, the type is released.

In the third case, the customer says that there will be definitely a reprint, but not in the near future.

Formes are unlocked, locking materials such as side sticks, quoins, furniture, chases, etc. are put back to other uses. The pages of type alone are neatly tied with special page cords, so that they may not be broken. The pages are proofed and cleaned and bundled in stout kraft paper on which relevant proofs are pasted for ready identification. A label carrying details of job order No., instructions for reprint etc. is pasted on edge of each packet. Each packet will be about an inch thick, which is the height of type. Every six months, the colour used for labels is changed so that a quick check can be made of the date when each packet is filed. Packets are then stored in racks and their positions recorded on file proofs for ready use.

Tons of metal are kept in store by way of standing matter in this way. After some time the printer finds not only he has to sacrifice space for storing but has a great deal of capital lying idle. Type metal is worth 2 s. 3 d. per lb. A 16 page job of 8 inches x 10 inches uses about 200 lb. of metal. Printer is willing to store type on request of the customer but for this obligation he has to make a small charge as standing matter charges. Finally, Dennis H Hudson declares, "We are not complaining but just explaining."

INDO-GERMAN TRADE TIES

A. Renneisen, Commercial Counsellor of the German Democratic Republic (East Germany) is in New Delhi. He states that there is scope for stepping up trade between India and East Germany. The volume of trade is now of the order of 75 million rupees according to 1957 figure. This could be stepped up to Rs. 200 million.

There is already in force a trade agreement between East Germany

and India, said Mr. Renneisen. But, so far, the balance of trade is in India's favour. Both, are now endeavouring to bring about a balance of trade.

East Germany is willing to buy from India such traditional commodities as iron ore, mica, tea, spices, coffee, coir manufactures, manganese ore, to some extent sheets, textiles and handicrafts while she is in a position to supply to India machinery necessary for the development projects of the country.

The Polygraph organization of East Germany has been supplying popular makes of printing, processing and packaging machinery.

Mr. Renneisen said that India and East Germany were at present negotiating for the setting up of a raw film factory at Ootacamund.

Layouts and Lettering

(Continued from page 8)

to make a wholesome piece of advertisements.

LIFE INSURANCE CORPORATION: A full 4 col and for their second anniversary (last year it was half page landscape) had an illustration of a staircase in brush. The advertisement is entitled "Another step". The text is in Verona Bold left flush lines to match the top part of the staircase. At the bottom is the LIC symbol and name in Old English. ASP

MIDDLE EAST AIRLINES 10½ x 8 cols. The left half is occupied with the line drawings of four cities relating to their earlier ads. These are connected by four circles and the fifth one is for Brussels. The small plane at the right is also connected by the same line linking all the units. To the top of the line is "Brussels International Fair" with Brussels standing out. There are three Gill lines about routes, etc. Times text is

in left flush lines. There was a panel for the MEA logo and "Middle East Airlines" in letters reminiscent of BOAC. DJK

ORIENT GENERAL INDUSTRIES 10 x 3 cols. There are neat scraperboard illustrations of motors which are a feature of the advertisement entitled "Inside Facts reveal". As if to prove the inside with rectangle panels connecting the parts and describing them. "Why Orient Industrial Motors are a source of dependable power" is posed at the bottom with the words "Orient Industrial Motors" in heavier caps. Gill Series are used. This is a bold and striking ad. ASP

PHILIPS INDIA They are continuing their "It is easy to tell who is using Philips Argenta lamps." Contrasting features in illustration namely the top fellow straining in tint with a lad lower down happily knitting leave no doubt as to who is using Argenta. JWT

PLATO PENS: 9 x 2 cols. There was a vertical scraperboard illustration of pen at left pointing to "In" tray, at the right is a heap of papers, in tint, with out tray stippled at the bottom. A happy figure is writing in the middle. The piece entitled "Writing is a pleasure when you write with a" in Times italic. Inside the table is the text etc., The name is in Gill, rest in Times. Shilpi

PARLE PRODUCTS. 6 x 2 cols. There were three ads with the background of Monaco Biscuits in tint. In one, there was a thick outline of a glass of icecream (Ice cream tastes better with Monaco) In the next two glasses in thick outline "with refreshing drinks enjoy" In the third, there was a teapot pouring (when it's tea time). Here is a good idea well executed. Type faces used are Ultra Bodoni, Gill and Times. Everest

Price Paid for Paper

What Price Paper? None can answer this question truthfully. For every minute the prices change for the worse. None knows the correct price. None charges the proper price. Apart from the price in terms of money, there is the price to be paid in searching for the required quality, in unearthing the same and in concluding a deal with the dealer. What was once a world of paper is now a paperless world

The Government of India have referred to the Tariff Commission for its recommendations, the question of determining the fair ex-works prices and selling prices for different varieties of paper manufactured in India.

The Commission will also recommend fair prices to be charged by the wholesalers as well as retailers of paper. Then only the consumers will get a fair deal. But the scope of the present Tariff Commission Enquiry will not include Paper-Board which is a separate commodity forming a class by itself.

The Government met representatives of paper manufacturers, i. e., the two Associations of Paper Manufacturers, The Indian Paper Makers' Association and the Indian Paper Mills' Association, as well as individual manufacturing units. After several meetings with the above representatives, the Government of India have decided to refer the matter of fixing fair prices to be determined on the basis of the recommendation to be made by the Tariff Commission.

The paper industry has however assured the Government that no rise in prices will be made without first referring the matter to the Govt. It is already known that recently the manufacturers increased the price of writing paper by 3.5 nP per pound, thus bringing the price to 83.5 nP per lb. The prices of other varieties of paper are related to the price of writing paper. It was pointed out to the representatives that the previously exist-

ing prices covered the increase in cost of raw materials and wages, they replied that the increases in cost of production have made it necessary to increase the price with effect from 1st April 1958.

In 1948, the Tariff Commission held the previous enquiry into paper manufacture. Since then, the production of paper in India has increased a 100 per cent. Production of paper in 1947 was 2,10,125 tons. Fifteen schemes for starting new paper mills in various parts of the country and many expansion schemes of present units are under various stages of execution. Expansion schemes for Mysore Paper Mills, Andhra Paper Mills, Punalur Paper Mills are delayed due to want of foreign exchange for new equipment, paucity of foreign chemicals, foreign wood pulp, etc. New mills include the one to be set up near Mettupalayam, Madras and Bagasse Mill in Sakkaranagar, Andhra.

WOOD PULP & NEWSPRINT

The Govt. of India have decided that applications for the export of wood pulp and newsprint will be considered on merits, according to the Joint Chief Controller of Exports, Bombay. Export of wood pulp and newsprint is banned at present.

PAPER SCARCITY

Sri Sailendra Nath Guha Ray, Director in Charge, Sree Saraswathy Press Ltd., Calcutta submitted a memorandum to Sri Lal Bahadur Sastri, Union Minister for Commerce and Industries.

In the course of the Memorandum, Sri S. N. Guha Ray, states that the main reasons for the present scarcity of paper is the marked increase in demand for paper and board without a corresponding increase in production. This is in spite of various facilities afforded to the paper mills and were allowed to increase the price of their products any time they desired, contrary to the recommendations of the tariff commission.

The memorandum also suggested that the Government which was the largest single purchasing unit, must take steps to stagger their demands, in such a way that every one could maintain his production programme smoothly. Another cause, the memorandum stated, for the scarcity of paper and the rise in the price was the drastic restriction of import of paper as a result of which local mills were unable to meet the demands. The policy of the mills forcing the consumer to buy a certain percentage of slow selling quality goods whenever he placed orders for rapid-selling items, also had contributed to the unsocial activity.

PRINTINDIA BIRTHDAY SPECIAL November 1958

The next issue will commemorate the Sixth birthday in the service of Graphic Arts

★

A few advertisements from reputable dealers will be accepted

★

CONTACT:

Phone : 3006 Grams : VASUNIDHI

**KUBERA ENTERPRISES
(PRIVATE) LIMITED**

Publishers : PRINTINDIA

KUBERA BUILDINGS

21, Sunkurama Chetty Street Madras-1

Measure by Metre

(Continued from page 16)

standardization can be put off for long for otherwise there will be a lot of confusion in the mills, the paper market, the printshop and every-

where the paper and print go. Let us look at the equivalents of the familiar sizes of paper in millimetres.

From the above it will be clear that some re-thinking is necessary on the part of the paper mills which will be adopting the metric system.

ENGLISH PAPER SIZES PRINTING

	inches		millimetres
Royal	20 x 25		508 x 635
Demy	17½ x 22½		445 x 571
Double Demy	35 x 22½		889 x 572
Crown	15 x 20		381 x 508
Double Crown	30 x 20		762 x 508
Foolscap	13½ x 17		343 x 432
Medium	18 x 23		457 x 584
Imperial	22 x 30		559 x 762

WRITING

Post	15½ x 19		387 x 482
Large Post	16½ x 21		419 x 533
Small Foolscap	13½ x 16½		336 x 419
Small Demy	15½ x 20		394 x 508

GERMAN AND SWISS PAPERS

Normal A1	24 x 33 7/8		610 x 860
Vereinsdruck I	19 5/8 x 29 7/8		500 x 760
„ II	21 5/8 x 33		550 x 840
„ III	25 1/5 x 37		640 x 940
„ IV	27 1/2 x 39 3/8		700 x 1000

Gold Medals



**Over 50 years world's leading
Screen Brands HAAS & KOHINOOR**

Engraved Halftone-Screens

Engraved Rotogravure-Screens
for Paper, Textile, Plastic material

UNIVERSAL-Contact-Screens
interchangeably used for both
Offset and Letterpress procedures

Film Screens, 50 Designs
and Cellophane-Screens for Shadings

Film Screens with dots
in different tones for Letterpress or Offset

HERBST & JLLIG
FRANKFURT A. M. 13, Germany

Awarded by German State

The printers, typefounders, block-makers and finally the machinery manufacturers should re-adjust themselves to fit into the metric picture.

Our text books will have to be re-written giving problems in metric measures and weights. It will take sometime before our children get accustomed to the same.

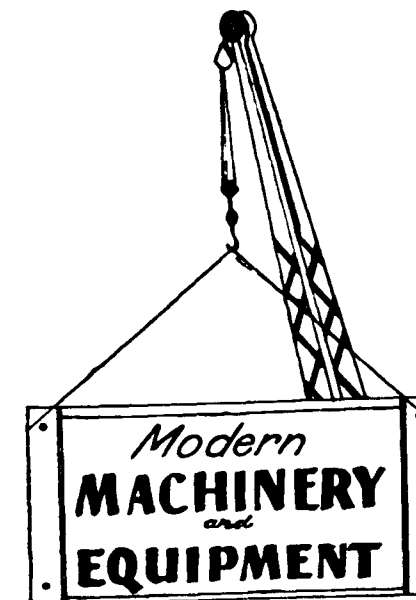
The printers have a great responsibility in adapting themselves to the new system. The typefounder should waste no time in making new punches, matrices, moulds, etc. to suit the new measure.

During the transitional period, it is going to give a headache to all concerned and the public in particular. The social malcontents will make hay while the confusion lasts. No amount of advertisements will be able to convince the public that the metric system is necessary now. Indeed, no argument has convinced that we needed a decimal coinage.

Somehow, changes are made for changes' sake. England and America by retaining their lineal foot or the avoirdupois pound or the pound sterling and dollar have not become third-rate nations. Still they reign supreme. But it should be said the UK, and USA have understood the usefulness of decimal system in measurement and have tolerated the same wherever it existed.

Left with no choice, the Indian printer has to face the issue. We cannot always get the things we like. Therefore we have to like the things we get. We have now got the metric system. Let us make up our mind to like it straightaway although it needs some hard trying on the printer's part.

As one issue leads to another, the standardization of paper also will come and we should take it in our stride and not sulk at it as we are at present doing, inventing excuses for its adoption.



Printing machinery manufacturers and dealers may utilise this column to announce their latest machinery and equipment to be reviewed by our expert. Full specifications and technical data should be forwarded with good photographs wherever possible to the Editor

VANDERCOOK PRE-PRESS TOOLS

Some basic precision tools are needed by the printer. With these, he can test all plates, slugs pages, etc. before make-up and lock up. Plate Gauges, Type Gauge and Slug gauge are essential for testing type height and plate level. Vandercook and Sons, Inc., 900 North Kilpatrick Avenue, Chicago 51, Illinois, USA have brought out some of the latest gauges.

There are three models of Vandercook Plate Gauges available for testing flat plates to 12", 18" and 26" in width, with no limit to length. Two of those can be supplied with curved saddles to measure curved plates as well as flat plates. Each gauge checks plates under printing pressure.

The Vandercook Type Gauge is an indispensable tool for measuring the height of type and slugs. This

is possible to do more quickly and more accurately than with a micrometer.

The Vandercook slug gauge is a complete precision tool which should be in every modern composing room for measuring the thickness of slugs under forme squeeze.

The Vandercook gauges show the height of plate under pressure. The thickness of the packing, patent mounting base, paper and other materials ranging from .001 inch to 1 1/8 inch thick can be tested by these gauges. The simplicity of operation of the gauges is a special feature. No calculation to make to ascertain the thickness of any material. A glance at the large dial gives the exact height or thickness in thousandths of an inch.

The Vandercook & Sons have been specialising on pre-press (formerly called pre-makeready) equipment. The gauges of this firm form part of the pre-press equipment.

GOODYEAR PRODUCTS

The Goodyear Rubber Co. have the following materials for the use of the printer:—

Red and black offset blankets of this firm are very popular for offset printing presses and proof presses. Their durability and fidelity in reproduction and resistance to moisture are all known throughout the Lithographic world.

Goodyear have good engraver's gums, with a hardness range from 25 to 75, of all gauges. Un-vulcanized box-lid gum, un-vulcanized printing plate gum, un-vulcanized stamp gums, un-vulcanized plate backing, stiff plate mounting board cements are other products in the adhesive line.

Friction coated fabrics and adhesive fabrics are also available from Goodyear. Engraver's gum for corrugated box printing is acid resisting and oil-resisting, durable and softer durometer.

ATF DOM CASUAL

The American Typefounders, in their wide repertoire of type faces have one called Dom Casual. Resembling hand lettered characters, Dom Casual alphabets have the new face appeal. It is an artistic and practical combination of strength, liveliness and colour. Its compelling informality lives up to its name, casual. Readers may remember stuffy dowager types with their lorgnettes and their memories. Dom Casual has none of these. It can be escorted into every society for it has a true inspiration to hand lettered versatility and an unusual affinity for other faces.

Yes, Dom Casual has been accepted and appreciated with spontaneity. Dom Casual is available from 18 to 60 pt.

WESTSORB ANTI-VIBRATION MOUNTINGS

The Western Felt Works, Ogden Avenue, Chicago, Illinois, have brought out "Floating Power" machine mounts. All printing presses, folding machines, power cutters, stitchers, casting machines, jogging machines, sewing machines and process camera, if mounted on the Westsorb mountings will work better. This saves machine and floor maintenance labour and time. Printing machines give accurate register and there is less noise in the pressroom. Westsorb pads are cheap, easily and quickly installed and require no holes to drill, just adhesive on top and bottom anchor mounts firmly. Each installation is engineered to suit the particular problem of the machine.

CRAFTSMAN LINING UP TABLES

The Craftsman Line-up Table Corporation, 57-F River Street, Waltham 54, Mass., USA, have brought out two useful lining up tables. These assure precision lining up and pre-registration at economical rates.

The first is the Photo Litho Layout Table. This is for lining up, pre-registration, negative and plate ruling, copy layout, masking and stripping operations, even for opaquing too and for checking up on work in progress. This is a sure way to get precision accuracy, to speed up production and incidentally cutting costs and avoiding wastes.

There are two straight-edges operating on machine-cut geared tracks, vernier dials with calibrations as fine as 100ths, sheet stop guides, grippers, stainless steel scales, special marking devices, all of which make it easy for the operator to turn out the kind of work that will make the work perfect. Craftsman Photo-Litho Tables are available in the following popular sizes:—

28 x 39 inches to 62 x 84 inches five different sizes. The second is the Craftsman Utility Table. This is a compact low price table which can be used with advantage by the letterpress printer, lithographer, offset printer, label and carton-maker and photo-engraver. There are special patented straight edge, with detachable tri-squares permitting working at front or back of the table, combination sliding grippers and sheet stops for holding work downs, working surface quarter inch thick grained glass, 22½ x 28½ inch, all make this a practical table for all-round use for any lining up and pre-registration work in the press or layout studio.

NEW KODALITH ORTHO TYPE 3 FILM

There is a remarkable exposure and developing latitude. This new Type 3 Kodolith emulsion has exceptional latitude in order to get viable negatives from a wide range of exposure and development combinations. This cuts down wastage of negatives and better over-all duality. For line and halftone

work, the image on Type 3 is very good. The dense blacks stand in bold contrast against clear areas.

When size holding is critical, Ortho Type 3 film is very handy. Now this is available not only on conventional low shrink acetate but also on thin base acetate or PB, the improved latitude and image quality of Kodolith Ortho Film, Type 3.

On old type emulsion, the tiny highlight dots block up with over development. Thus in order to maintain highlight detail, a new negative will have to be made. But not with Ortho Type 3. This film and the handling of it do a lot to protect the dot structure. Where ordinary emulsions are wont to destroy quickly halftone highlight detail in the negative, tiny dots becoming pinched, then closing up tight, the Kodolith Ortho Type 3 film helps pinpoint dots open even when negatives are overdeveloped 30 fulls seconds. This is indeed a greater working freedom, which reduces make-overs and assures consistent over-all quality.

Although increased exposure and development latitude are the advantages in Kodolith Ortho Type Film, these are not the only advantages. The superior contrast is there, the dense blacks showing up clean against clear areas in line or halftone negatives. Ortho PB film has the convenience of film as well as dimensional stability.

DU PONT CRONAR FILMS FOR COLOUR SEPARATION

Four new films have been put on the market by Du Pont de Nemours & Co. (Inc.), Photo products Department, Wilmington 98, Delaware, USA. These Cronar films are: Transparency Colour Separation Negative Film .007", Reflection Colour separation Negative film .007", Pan Masking Film .004" Pan Litho film .004".

This line of new films has been developed specifically for use with Cronar Ortho A Litho Film and Cronar Masking Film to give the size holding advantages of Cronar from the first separation to the final halftone. Registration problems are solved, as is the case with changing from one film base to another or from glass to film. Even under temperature-humidity conditions which are not ideal, Cronar films assure register from one step to another.

CRONAR GRAPHIC ARTS FILMS IN USE WITH SEPARATION MASKING TECHNIQUES

Reflection copy, Indirect Separation:

For Separation Negatives, use Cronar Reflection or Transparency.

For positive masks, use Cronar Masking.

For halftones, use Cronar Ortho A Litho (.004 or .007)

Transparency copy, Indirect separation:—

For highlight masks, use Ortho A Litho, .004 or Pan Litho.

For Colour correction masks, use Pan Masking.

For separation negatives, use Transparency.

For halftones use Ortho A Litho .004 or .007.

Reflection copy-Direct separation:—

For camera masks, use Pan masking.

For halftone separation, use Pan Litho.

Transparency copy-Direct Separation:—

For Highlight masks, use Pan Litho

For Corrector masks, use Pan masking

For halftone separation, use Pan Litho.



GRANT MERVAC PRINTING DOWN FRAME

A Table model of the well known Grant Mervac printing down unit is now available to the trade. This desk unit is specially designed for production of small litho plates for the Gestalith, Rotaprint R-40 and Multilith 1250. It offers great advantages to users of "Ozasal" and other presensitized plates. Now, it is possible to expose presensitized plates and process them within a normal table or bench space.

In this desk model of grant Mervac, all operating advantages, of the larger model have been retained. Ease of plate and negative registration, due to novel arrangement of vacuum blanket and glass plate, efficient and perfect contact is maintained by a vacuum blanket and internal pump unit actuated by a fractional horse power motor. Light source consists of six 40 watt 24 inch instant strike fluorescent tubes. These develop intensity of illumination equivalent to 75 amp. arc light. Automatic time switch ensures correct exposure times. Due to the powerful light source, exposure times are considerably shorter than in conventional exposure units. Overall dimensions of Mervac desk model printing down unit are:—

26 inches x 19 inches x 10½ inches, with a printing area of 15" x 10". The unit is encased in sheet steel cabinet sprayed cream. Further particulars regarding the desk

model of Grant Mervac Printing Hown Unit for small offset pre-sensitized plates, can be had from Grant Production Co., Ltd., 4 Rathbone Place, London W-1.

"TIMES" IN PRINTING HISTORY

Derek Whipp in an article in the magazine *Automation* tells about the part played by Printing House square (the abode of *Times*).

A brief backward glance at the things at Printing House Square, will convince that the *Times* was always first in all inventions in printing. This may be an augury for the future. *Times* was the first to use Rotary Press. Two colour printing was featured on the front page as early as 1785. The title appeared in red on public holidays. This reminded people that they need not work on those days. In 1819, John Walters was experimenting with stereotype. In 1909 Monotype Composing machine was installed at the *Times* press. In 1944, the first airmail paper edition was initiated as a daily world service. It is only the *Times*, to have a mobile printing unit in the world which operated during the World War II.

MONOTYPE CASTELLAR

Monotype new Folder on "Castellar" series has come out. This type face was first exhibited at the Graphic 57 exhibition at Lausanne, Switzerland. Although two sizes of this series namely 36 pt and 60 pt are shown at the Lausanne Fair,

this type face is available now in 24 30, 48 and 72 pt sizes. John Peters who designed this type face says, as regards the choice of the name "Castellar" was no mere accident. It would appear that the designer was sojourning in the picturesque region of the Alps Maritimes above Monton. Castellar is a hilltop village high among olive groves and pencil-thin cyprus cover foothills of Alps. In the year 1955, John Peters was staying at Castellar following visits to monument to Augustus Caesar at La Turbie. It was there he made drawings and notes for a titling letter which formed the basis for the present design. This interesting folder on Castellar is available on application to Monotype Corporation, Fetter Lane, London E C 4.

ORTLEB INK AGITATORS

It is necessary to keep the ink in the fountain or duct agitated to prevent gelling. The machine minder or helper generally does the work now and then. When they failed to do it, the uneven inking of the forme transferred to the printed paper comes as a sudden reminder. Ortleb Machinery Co., 3818 Laclede Avenue, St Louis 8, Missouri, USA have brought out an ink agitator which keeps the ink fountain agitated or stirred. Ink costs consequently are claimed to be 10 to 20 per cent lower, the quality of print better, saving of labour, etc. Wastage is avoided, colour uniformity is assured. Ortleb agitators are available for all popular makes of printing machines. It is especially useful on split-fountains for multi-colour runs.

BRUSSELS BOOK EXHIBITION

Early printed books, illuminated manuscripts and fine bindings are included in a Brussels Exhibition of literary treasures from Belgium's

Royal Library, known as Bibliotheque Royale. The Brussels Exhibition of Royal Literary Art Treasure will last till the end of October 1958. This Exhibition features items of a very wide range, from Syracusan Decadrachm of 479 B C to an edition of Kelmscott Press. Visitors are furnished with a luxuriously printed de luxe illustrated catalogue. Brussels Exhibition has been attracting quite a number of visitors, booklovers, connoisseurs of books, bibliophiles etc.

THE COST OF A STRIKE

In May 1958, the works of Tata Iron & Steel Co., Jamshedpur, went on a strike. The nation has lost much due to the ill-advised strike. Four men were killed and 114 persons were injured. Over 400 men were dismissed or discharged. Rs. 25 lakhs wages were lost to the employees. The country lost 335,000 man-days of work and 45,000 tons of steel valued at Rs. 2.75 crores.

Printing Workers, who may be tempted to strike on some pretext or other may pause and think for themselves as to what it costs to indulge in strikes. Strike is certainly an outmoded weapon, the one-time sharpe edge of which is thoroughly blunt by constant abuse to-day. None gains by a strike.

GLASS MARBLES

Size 30 mm Glass Marbles suitable for grainling offset plates are available from ready stock from "Indian Duck Marbles Private Ltd., Ghodbunder Road, Jogheshwari, Bombay-42."

PATRA LETTERPRESS CONFERENCE PROCEEDINGS

The Printing and Allied Trades Research Association, England, the foremost authority in printing problems and their solution held a conference on Newspaper and Rotary Letterpress, last October at Harrogate. The proceedings of the important conference in which

dozens of experts took keen part, have been published in two parts.

Part I covers composing room practice, newspaper block making, foundry, etc. It has 206 pages. Part II is of 228 pages covering colour printing techniques press-room, paper and ink. Between these pages are the verbatim reports of technical papers read at the conference by 27 experts in various fields of Graphic Arts. Each paper is noted for its forthright presentation of problems and fulsome details. After each paper follows discussions in the conference. Detailed recommendations of special discussion groups are also given.

The Proceedings of Patra Letterpress and newspaper Rotary Conference is priced at £1 10s. per volume for members. For non-members this useful publication is £ 2 per volume. This has been printed by Percy Lund Humphries & Co. Ltd, Bradford, England.

The object of the Newspaper and Rotary Letterpress Conference by Patra is to further the knowledge on newspaper production techniques. This knowledge is accessible to everyone reading Patra's excellent Publication.

PULP MAKING UNIT TANJORE

All rag handmade paper can be used for drawing, painting, woodcut block printing, ledger papers, air-mail paper, double lifted double colour paper parted and exchanged paper, photo album paper, cards for die printing and invitation and envelopes and other stationery.

Pulp Making Unit, Vennar Bank, Karanthattangudi P.O., Tanjore, have experience in the manufacture of all rag hand made paper for the past 22 years. Specimens will be sent on application.

The above unit is working as a cottage industry enterprise aided by the State Government and is doing excellent work for the pre-

servation on of the art of paper-making by hand. Situated on the banks of the River Vennar, it has water-supply for its needs.

PRINTMANSHIP

Many of us aspire to become a top printing executive or to reach some high position in the ladder of name, fame and fortune in the printing industry. Before aspiring for such heights, it is well to try and answer the following requisites for reaching dizzy heights:—

Do I have a Creative Imagination?

Can I write quickly, concisely, and accurately working against the clock?

Have I a broad, sound knowledge of printing processes, operations, techniques?

Have I practical experience?

Do I speak fluently and keep the interest of my audience?

Am I physically fit, mentally alert, emotionally mature, socially acceptable, objective in viewing things, just in judgment?

Can I organize people and keep control over them for production purposes?

If you can conscientiously answer 'yes' to all the above questions, then it will not be long before you are blessed with a promotion.

GOSS ROTARIES

A breakdown of the latest tabulation of presses in the mechanical section of the *Editor and Publisher Year-book* still shows that Goss (including Duplex Presses) have 74.9% of all the presses in use in the daily newspapers of the U.S.A. When Canada is included this average still totals 74.5%. Here are the facts.

Goss		74.5%
Hoe		17.1%
Scott		6.1%
Wood		0.6%
Others		1.7%
		<u>100.0%</u>

Let Fine Printing
be your Ambassador!
For Attractive Design
and Excellent Execution
you can depend on

Kubera Printers (Private) Ltd.,
THE HOUSE OF MASTER PRINTERS
21, SUNKURAMA CHETTY STREET, MADRAS-1,
PHONE: 3006 GRAMS: VASUNIDHI

★ COLOUR PRINTING A SPECIALITY

Regd. No. M. 6469

PRINTINDIA

OCTOBER 1958

50 YEARS IN THE SERVICE OF THE PRINTERS

•
A GREAT NAME IN
FINE FINISHED TYPES

•
Manufacturers of

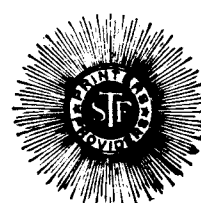
PRINTING TYPES IN 14 LANGUAGES

TAMIL, TELUGU, ENGLISH, GRANTHAM, MALAYALAM, CANA-
RESE, HINDI, SANSKRIT, MARATHI, DEVANAGARI, GUJARATHI,
URUDU, ORIYA & SINHALESE

AND

**HALF-TONE, LINE &
ELECTRO BLOCKS**

•
SUPPLIERS OF PRINTERS' REQUISITES



ESTD. 1906

Grams: BHUVANA

Phone: 84469

SWADESI TYPE FOUNDRY

CHINTADRI PET

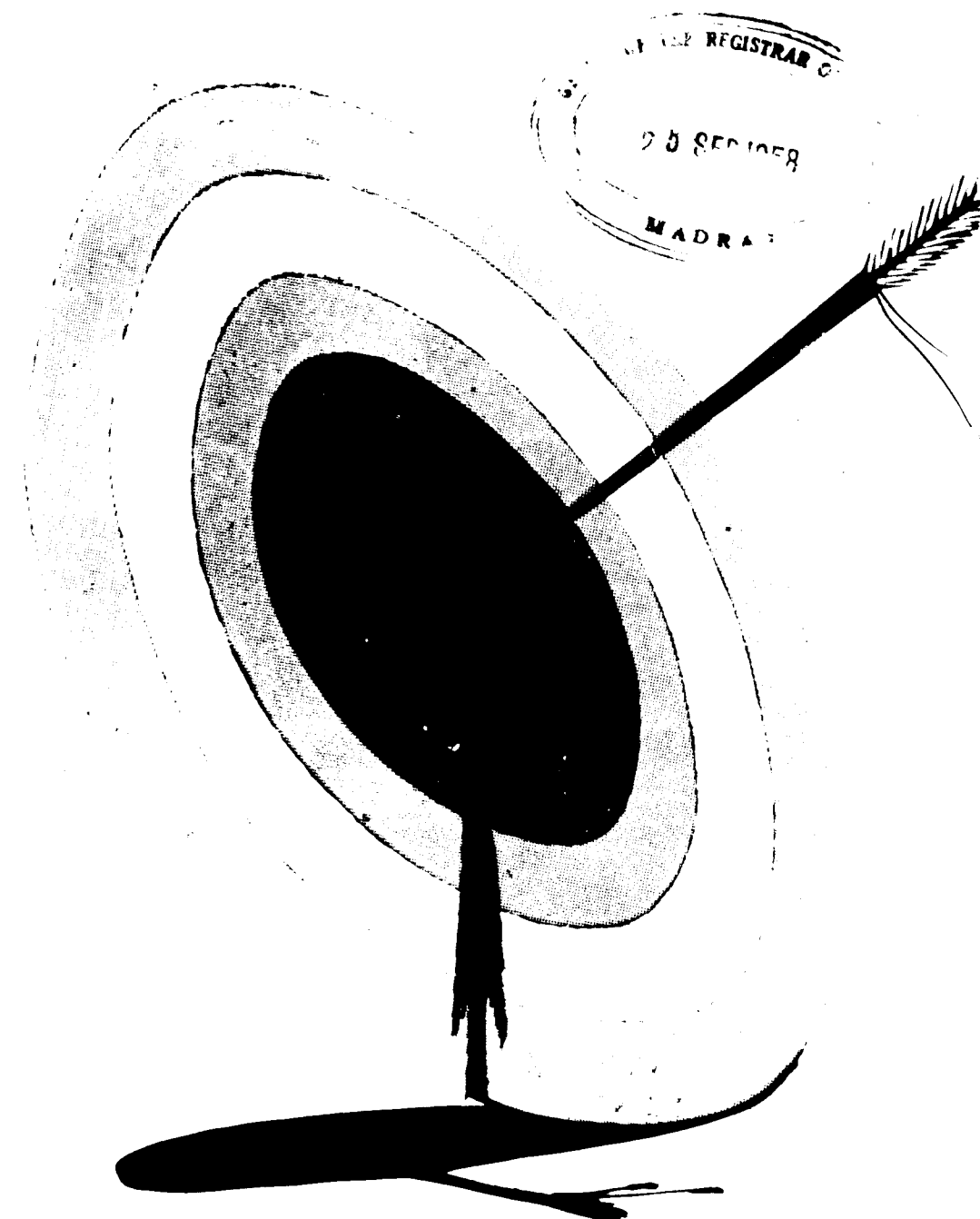
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MADRAS-2

67

Printindia

A MONTHLY SURVEY OF THE GRAPHIC ARTS INDUSTRIES PUBLISHING, ETC.



SEPT. 1958

PRICE RE. 1

A KUBERA
PUBLICATION

Printers All Over India Appreciate RAINBOW'S CUSTOMER SERVICE

Here's how they react to our technical bulletins:-

PRASAD PROCESS PRIVATE LTD.
MADRAS-26 28th May, 1958.
"... Needless to say, you have done a real service in the cause of furthering the progress of offset printing in this country. If you don't mind, would you kindly send us half a dozen more sets of these bulletins for use in our various departments."

SHIV-RAJ FINE ART LITHO - WORKS
NAGPUR-2 19th May, 1958.
"We heartily congratulate you for printing such bulletins in the service of Indian printers. Since these bulletins are to be used for our technical staff, we would feel highly obliged if you kindly send us a set of 4 each for their use."

GOVERNMENT OF INDIA.
INDIA SECURITY PRESS.
NASIK ROAD.
5th June, 1958.
"I acknowledge with thanks the receipt of one set of eight technical bulletins on Offset Printing and problems, forwarded with your letter dated 23-5-1958. As these appear to be of very good use for our technical staff, I shall be glad if you would send us Twenty-Five sets."

THE RAVI VARMA FINE ART LITHOGRAPHIC WORKS
MALAVLI 17th May, 1958.
"We thank you for your letter dated 8th instant. We have received the bulletins also. These bulletins will no doubt be of much help to us and we thank you once again for sending these to us."

THE EAGLE LITHOGRAPHING CO., PRIVATE LTD.
CALCUTTA-14 27th May, 1958.
"You have done very good work for the Lithographers who do not have the opportunity to subscribe to the I.T.F. The books are very easy to follow. We wish to congratulate you upon the excellent compilation."

Our Research Department is at the service of printers without any obligation whatever.
CONSULT US ON ANY PRINTING INK PROBLEM
RAINBOW INK & VARNISH MFG. CO. (PRIVATE) LTD.
TARDEO, BOMBAY-7

Phones: { Factory : 88101
Office : 42471

Grams: "RAINBOINK"

The Editor invites articles on printing and allied industries for publication in this magazine. Articles should be of a good standard and should be neatly typed on one side of the paper only. Payment will be made after publication for the articles published on per the rates agreed upon by the Editor.

Managing Editor
TEMPORAU

Business Manager
V. S. N. Murthi

ANNUAL SUBSCRIPTION RATES	
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SEPTEMBER 1958

[No. 5

In this issue

- ★ Peace for Survival !
- ★ Layouts and Lettering
- ★ At The Drupa 1958
- ★ Training in Graphic Arts
- ★ Nebiolo at the Drupa
- ★ Regional Printing Association
- ★ Printing Industry of America Incorporated
- ★ ATF Typesetter
- ★ Regular Features

Modern Machinery and Equipment
News & Views etc. etc. etc.
Pressroom Problems Solved

Printindia magazine sells throughout India and in many foreign countries. As a medium of publicity, its pull in the printing, publishing and allied trades is enormous. World famous manufacturers and advertising agencies have already been utilizing this magazine for high-potential trade publicity campaigns

Roland Marches On

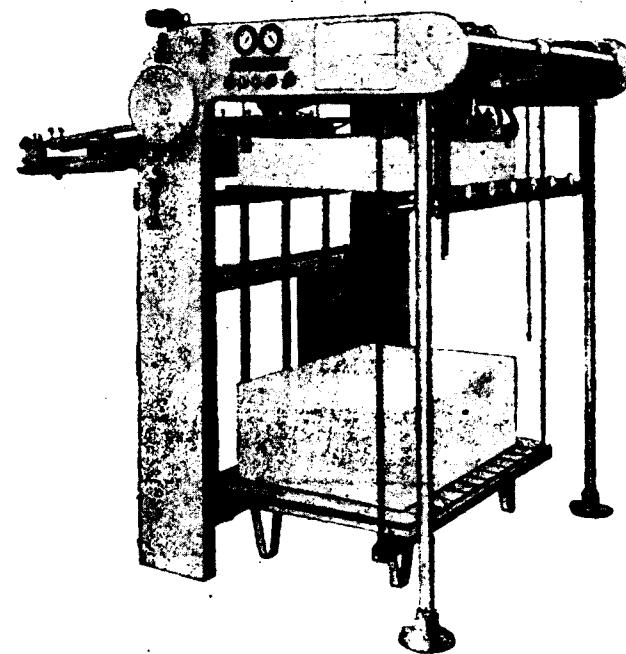
introducing

**REKORD TWO-COLOUR & FOUR-COLOUR PRESSES
IN ALL SIZES OF PARVA & REKORD III**

and

THE NEW PALETTE FEEDER

MABEG *NON STOP*



- New Sheet Separation
- New Automatic Electrical Safety Devices
- Safety Bar at Feed Board
- Double Sheet Detector

For each future PARVA, REKORD & ULTRA

This 4-in-one Feeder gives you :

1 A STANDARD HIGH PILE FEEDER

with normal Pile loading. Piles are moved in one after another, and Press is stopped during changing of Piles.

2 PRE-LOADING AS BY PATERNOSTER DEVICE

while one Pile is running, another is piled up underneath and is moved up by Pile Hoist.

3 CONTINUOUS FEEDING

Piles on standard boards are fed continuously while Press keeps running at production speed.

4 CONTINUOUS FEEDING OF PILES ON PALETTES

Piles on Palettes or Skids can be inserted from 3 sides, and during change the Press can be kept running at full production speed without slowing down.

- Control of Blast and Vacuum
- Operation by one man
- Increased Production up to 20%
- Up to 8,000 Sheets per hour according to Paper size
- Tachometer

Features which make a Roland all the more worth waiting for

Sole Agents:

INDO EUROPEAN MACHINERY CO. PRIVATE LTD.

BOMBAY

CALCUTTA

DELHI

MADRAS



EDITORIAL

PEACE FOR SURVIVAL!

War-mongers think that war is essential for survival. War is deadly, whether hot or cold. Price-war is also deadly to business.

PROFIT IS NOT SIN

There is certainly nothing wrong with the profit motive. This is so much part of free enterprise and the way of free life. When all other business is reaping the rewards of an expanding or developing economy, printing industry alone is showing a decline in earnings. Why?

Is our industry over-equipped? Is there a wild scramble for business to keep the machinery running? No. On the other hand, Printing Industry of India is pitifully under-mechanised. Government of India may think that we have imported all that we want for another five years. But, 90 per cent of our presses are outdated and our methods are outmoded.

MUCH MALIGNED

There is no other legitimate manufacturing process so maligned by the people. These people no doubt put printing products to work. They are ignoble in their relations with their customers.

Is there no one who praises the role of the printer? The people neglect him. The business man just tolerates him as a necessary evil. The Government conveniently ignore him. The politician has to be reminded of the printer's existence. The author thinks printing is a base profession. The publisher looks with contempt on the printer. Well, then, is there no one who loves the printer for the service?

SELF ESTEEM

There is a quality reserved for those whom none love. This rare quality is self-esteem. During the Annual Conferences and Governing Council meetings which link one unsuccessful year with another, pious homilies about the role of the printer and the esteem in which he is (or ought to be) held are repeated parrot fashion by the office bearers of the All India Federation of Master Printers. This is self-love.

HEADACHES

Customers have long treated with scorn the ways of printers. They have never understood

the difficulties of the printer. Is the printer not entitled to his legitimate profit? Can he not expect the customer to have a measure of understanding of his headaches? Just as others have problems with regard to their manufactures, the printer too has his problems. It is as much the duty of the Govt. to help the printer as it is theirs to help other manufacturing industries.

NOT A LUXURY

The days when printing was considered a luxury are happily over. In the field of mass communications, publicity, education, science and art, printing is a hard necessity. Yet, there is much unhealthy competition, for which there seems to be no end. Is there no remedy for this malady which is eating into the heart of our industry? There is a solution for every problem. Can we not find a fool-proof order form, common for all printers? Can we not standardize rates for various classes of orders on a regional basis? A standard form useful to the trade and a protection to conscientious members will go a long way, to avert the rate-war.

The industry should, through its accredited organ, sponsor a printing order form for customer use. It would expose the hidden tricks of the unscrupulous price-cutter. Such a form would lay bare the strategies of these firms who take up work for which they are either ill-equipped or completely un-equipped.

UNIQUE PROCESS

Printing is a unique manufacturing process. Each printed product is made according to the particular customer's wishes. Each job calls for use of diverse equipment in size and scope. This hour it may be a mere call card, the next it will be a folder and then there will be a scientific publication; jobs that require dainty colours and those needing a workmanlike black. There are hard, bold, bombshells and on the other hand light, liking, delicate artistic nicety too. Here is a job which has no deadline. But there is another where time is everything.

HUMAN RELATIONS

Public relations include customer-printer relations. The man who invites a firm to do his printing should try to understand the difficulties

of the printer. The customer should understand his responsibilities to the printer. But competitive and cheap printing has manifested itself to the detriment of the trade and the relations of the trade with the buying public.

PROMISES FOR BREAKING

No businessman who wishes to remain in business can make any promises which he fully knows that cannot be kept. Again, he will be a poor businessman who agrees to work for a price on which he cannot make any profit. No one will accept a work schedule that cannot be kept and which is beyond his capacity, for which his equipment is not suited.

But what do we see? Every hour, every day, canvassers, commission agents, printers themselves, accepting business on the above untenable basis. The theme is to grab the work and think later. Competition is healthy. It is essential for the improvement of quality. Competition, good, healthy, sane and within safe limits is the sine quanon of free enterprise. But, unfair, mean, all-out, exclusive, aggressive, cut-throat competition spells the destruction of the very business it purports to succour. Printers who are unscrupulous, eager to work to keep machines running, to keep employees busy, are wont to

adopt shady practices. They may substitute a cheaper variety of stock for the genuine one, use cheaper inks, employ unskilled workers, may not carry out specifications, and try to dupe the customer every inch down the production line. A good printer who quotes for all these quality materials, work with qualified craftsmen, carried out on reputable makes of machinery, delivered in time, according to specifications, guaranteeing quality and answerable for any mistake, naturally appears to over-quote the unscrupulous cheat.

These basic ills can be remedied, if every printer is guaranteed certain amount of turnover. During peak seasons, the smaller plants should be helped with work. During the lean seasons, all should equitably divide the available printing work. Big and small should find ways and means to stabilise the work-load position and tap new avenues for printing work. Their aim should be to stabilise the feeders of jobs and keep these going, spread out throughout the year. At present, during the publishing and calendar seasons, there is an unprecedented demand. At other periods in our calendar, cut-throat competition reigns supreme. The printers' market suddenly turns into a buyer's market. Some co-operative effort is called for to end this War of Price-cutting. This is a matter of life and death.

When a printer buys **GANGES INKS**

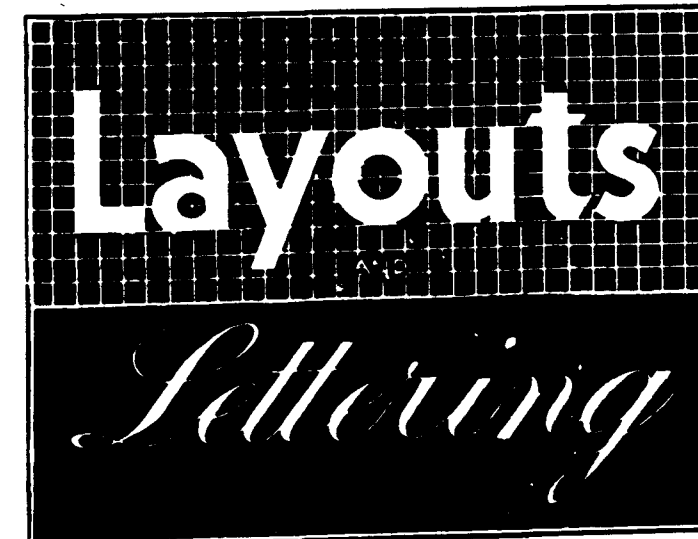
HE CAN BE SURE THE QUALITY IS THE **BEST** BECAUSE:

- THE FINEST INGREDIENTS ARE CHOSEN
- TECHNICAL KNOWLEDGE & EXPERIENCE ARE EMPLOYED
- AND ABOVE ALL

THE BEST MACHINERY IS USED

POWERFUL MODERN GRINDING MILLS PERFORM THE PRECISION GRINDING WHICH ALONE CAN PRODUCE A REALLY FINE INK

THIS IS GANGES' **GUARANTEE TO THE PRINTER**



By

SRI RAMAKRISHNA NARAYANAN

Every kind of production requires planning. Printing is no exception. A well-printed work is only a well-planned print. In this monthly feature, outstanding pieces of publicity matter will be reviewed. The healthy criticism offered in these columns is only with a view to improve the quality of typographical arrangement as well as the choice of type faces

INDEPENDENCE DAY SPECIAL NUMBER

Another independence day has come and gone. A few ads were above the average in the Independence Day Number. The rest consisted of the usual greetings. The noteworthy thing is that most of these greeting ads pledge anew to the customers in the country. How in present state of the country, and the Plan, with most of the targets behind schedule (and perhaps beyond reach), our calendar punctuated with holidays, our newspapers with strikes, lockouts, train disasters, the spiral of inflation and price soaring etc., these pledges will make an interesting study for the serious observer.

Our subject being the display of these advertisements, the following deserve mention:—

CHAMANLAL BROS: 8" x 3 cols. entitled "Sinews of Strength" in Rockwell heavy caps placed vertically left, a drawing of a muscular hand in outline enclosing inside line

drawings of various steel structures, below the "S" in Sinews is a 12 pt. rule horizontally placed with one line crossing it and another, just below, both vertical, helping to connect the headline and the text, name and address portion, which is in Gill series, Medium for text, caps for name, with "C" in a bigger size Rockwell Heavy, address in medium. This advertisement about sinews is striking.

GEOFFREY MANNERS: 11"x4 cols. Two Pillars connected by a top piece are worked in wash. The top piece is entitled "Be Proud" in very bold Chisel upper lower in the space betwixt the two pillars. The text takes the motto in front of Rashtrapathi Bhavan as the theme—

In Thought	FAITH
In Word	WISDOM
In Deed	COURAGE
In Life	SERVICE

The whole of the text is in Mono Bold, with five lines in Garamond below the GM emblem and the

name in Gill Bold Caps. All help an effective Independence Day Ad.

LIPTONS: 8"x3 col. A bold pen and ink illustration is of a cowherd on a buffalo fluting away, with Indian rural life as the background. At the top is a line "Independence Day 1958" in Bembo Italic Lower. At the bottom is a small line "Lipton (India) Limited" in Bembo, "Blenders of Fine tea" in Bembo Italic. This is a very likeable ad. Clarion.

T. I. CYCLES OF INDIA: 10"x3 cols: A good study of a child looking up is topped by eleven lines of type and a monogram of Hercules Cycles beginning with "Heir to a prosperous future" in Times Bold Upper Lower. The text follows in Times Roman, centred lines about all the projects which will make the youngster and others like him have a prosperous future and how T I Cycles are trying their best to help achieve the set targets. JWT

DYER MEAKIN BREWERIES LTD: 12" x 4 cols. A young lady is holding a plate with a lamp at the feet of the National Flag planted in India with "Independence Day" in Gill Sans Condensed "Greetings" in handwritten upright script. The text below this is in Gill Bold. Following the above are the Managing Director's signature at right, Emblem at right, the name and address at bottom in Gill reverse in a rounded rectangle panel and the whole is enclosed by a single line rounded at corners. And from the Public Sector.....

THE GOVERNMENT OF ORISSA-14"x3 cols.: Entitled "The Ancient wheel of Orissa moves again" in Bodoni. A diagonal tapered half-line tint at the middle with a wheel at the top end of it help the head-line. Below the word "the" is a line drawing of the Konarak wheel and between "Orissa" and "moves again" a line illustration

tion of a dam. To the right of the tint are four illustrations of different projects. At the bottom is the in Times Roman text emphasizing the various schemes in hand in the state ending with "Orissa has sprung back to life" in Times Italic. One line "15th August 1958" is in Bodoni and another "issued by" in Times Bold. These complete an advertisement which links the past and present in a graphic way.

NOTABLE AMONG THE NEW
BOAC—10" x 3 col. Announces the appointment of Indian stewardesses on their service to and from India. The bold brush illustration

B.O.A.C.
proudly
announce the
appointment
of
Indian
stewardesses
on their
services to and
from
INDIA



at the right with the lines beginning with BOAC is in usual style lettering placed to the left of the illustration in Bembo italic right flush. At the bottom, the BOAC panel with the Route map and words "World leader in air travel" in Gothic condensed italic, BOAC, as usual, "takes good care of you" again in Gothic condensed italic. The words "British Overseas Airways Corporation" at the bottom of the panel in letter spaced Times Roman completes a fine advertisement.

JOHNSON & JOHNSON: A square dotted screen background

for the whole 8"x3 cols. space of the Ad covered at the top by an uneven black strip containing the name in reverse. At the bottom is a cut out circle to accommodate the main announcement in Gothic Condensed Bold. Then the text comes in Times Roman and Bold. Simple but very bold and effective way of announcing a distributor! The left flush lines of the bottom portion add to the effectiveness of the piece. **JWT**

IN PASSING

BATA—10"x3 cols: A smiling turbaned Indian placed in a half line tint in which is also a small illustration of a Bata shop. To the left of the individual is "This man" in reverse Gill, each letter divided, "is a big customer of of Bata" in Garamond italic lines. The text is in the middle in Garamond. At the bottom is a bold 2½" wide 1½" high rectangle of "Bata" in reverse. And slightly slanting towards the right bottom from the rectangle is "The name millions trust" in small divided letters of Gill condensed caps. This is very well done by Bata's own publicity department.

BROOKE BOND — 14"x4 col. This is entitled "Attention" in tinted Bodoni Bold upper lower, underscored and 11 tinted lines in Bodoni Bold upper lower. Certain words like "Brooke Bond's", "Red Label", "Green Label", "Packets", "More Economical Too", but left black for emphasis. This is an attention getter.

Brooke Bond has also started another series featuring their Bhai Saheb. The first one is headed "Bhai Sahib receives a letter from the chairman." A big face study of the Bhai Saheb and the letter in full are reproduced in this interesting starter of a series.

JWT

CARBORUNDUM UNIVERSAL: 12" col. is entitled "Karupiah the carpenter" This is one of a series (Continued on page 10)



By

SRI S. ABDUL RAHIM

Here is an eye-witness' account of the dynamic exhibits shown at the International Printing Fair at Dusseldorf, West Germany. Although held for two weeks in the month of May, the author recently returned from his western tour is able to give an objective account of this outstanding international event of the year.

This efficiently staged public relations feat was unique in that it had something for everyone, for the small printer, for the medium printer, for the big and the not so big. It had something for the typographer, the typesetter, the letterpress printer, the lithographer, the gravure-minded printers, the screen printer, the flexographer and others in his line. In spite of the foreign exchange difficulty, almost every Indian personality (that is, everyone that counted, including a few who did not count) was there. The generous numbers of machines displayed at Drupa was ample proof of the progress made in the printing and allied fields. Our countrymen who were over-conscious of the language barriers, were amazed at the common language of the Graphic Arts which alone counted for all printers. Of course, the European printing industry is of a different pattern than the Indian printing industry. But there are common trends which could usefully be adapted to our conditions.

DRUPA NOVELTIES

In all exhibitions, it is natural for the visitors to look for something new. There were plenty of new things in the Drupa Exhibition. For instance there was the Uniprint package printing from rubber cylinders. There was the invert halftone gravure which tries to combine the advantages of the halftone dots with the gravure process. This was by Mattenheimer who had exhibited some high polish plating process for copper. The Roca Process for conventional gravure by Bekk & Kaulen showed a process on coated cylinder without the gelatine tissue commonly used.

There was the Swiss firm of Bron colour for electronic illumination for process camera work. This is especially useful for transparencies irrespective of the size of the same, due to the constant light output. Gevaert exhibited a process for making offset duplicate plates (for office machines) from reflex negatives by transfer direct to the specially coated metal plate.

Italy had brought forth a plastic material called Papertex, a synthetic fabric and very good offset litho reproductions were displayed printed on Papertex fabric.

PHOTO MECHANICS AND ELECTRONICS

Many camera manufacturers, metal suppliers and sensitizer dealers were represented at the Drupa. An all plastic etching machine was on show. There was the vertical rotor spray in the etching machine. Working models of electronic scanners and engraving machines constantly reminded of the strides taken by electronics in the printing and photo mechanical fields. Two countries which had stolen a march over the others in the electronic field are Germany and the United Kingdom, although USA, France and Switzerland came very close.

During the Graphic 57, Rudolph Hell's Vario Klischograph and Colourgraph which made the Klischograph more versatile and flexible for change of halftone screen and for colour work, change of size, reduction and enlargement etc., the models were only in semi-operating condition. In the Drupa fair, these were fully operating and attracted quite a crowd. Colour separation and colour correction units were also on display by Rudolph Hell, Kiel, Germany and Crosfield, London, another pioneering firm of electronics. With the emphasis on colour quality reproduction, the Crosfield relies on Hardy-Warzburg principles. This was not without important improvements. The Hell device is primarily a masking unit and somewhat similar to Time-Life colour scanner.

CUTTING MACHINES

Many modern guillotines were on show at the Drupa, with automatic devices for doing a cycle of cutting of various specifications.

SEPTEMBER 1958

PRINTINDIA

Crowds thronged these stalls eagerly watching the automatic cutters going through their routine cutting of different sizes, one after another.

The Daverio Signature conveyer attracted much attention, as it clamps signatures at two ends conveying them with minimum motion to the delivery location.

FLEXOGRAPHIC PRESSES

Rubber stereo rotaries are the craze for aniline web printing for packaging and similar work. While the great number of rubber stereo rotaries were nothing new in construction or operation, there were a couple of machines which extended the rubber stereo printing to the book printing field also. Edel Stahlwerk of Germany have developed magnetic cylinders for printing with rubber stereo plates for bookwork. Increasing evidence of printing on metal foil, film and board was there in Drupa.

NYLON PLATE

The most interesting development was the Nylon plate shown for the first time by the West German Graphic Arts Research Institute, known as Fogra. Under the direction of the distinguished scientist engineer Prof. J. H. Albrecht, the making of the Nylon Plate by a process developed in their Munich laboratory was demonstrated. The Nylon plate process was simple to understand and easy to apply and is of over wide application over a vast field. With offset-type negatives those Fogra Nylon plates could be made in a matter of minutes (say ten minutes).

In essence, nylon-type material was sensitized and contact exposed with the tone negative. Developing with brush for a few minutes after printing down produces a relief image. Now the plate is ready for mounting. Printers using conventional flat formes find this Nylon plates a boon to their type of printing. Although the Fogra Nylon

plates which have revolutionised printing for the small printer, are not yet in a commercially mature stage, they are ready for field testing and standardization after which they will be commercially manufactured for supply throughout the world. Drupa is worth visiting if for nothing else, for improvement in Graphic Arts field such as the Nylon plate for example.

OFFSET TECHNIQUES

The world's smallest offset press was on display at the Drupa. In these days when printers are size conscious and when only Quad Royal machines are considered to be of a proper size, the smallest machine in the world attracted much attention in the most advanced country in the world namely West Germany. Fruhwald and Jager exhibited this small machine of great wonder.

There were many web-fed offset machines and web-fed gravure presses. There were also machines with a common impression cylinder. Swedish, German and Italian manufacturers vied with each other in exhibiting offset and gravure machines at Drupa. For book printing by web offset for short runs there was a Swedish machine on display. This is a blanket to blanket impression type. This machine delivers folded sections of bookwork.

The latest damping technique is by refrigeration of fountain water. This refrigeration unit attached to the offset machine condenses the required moisture by the plate.

LINOFILM

The Linotype Machinery Co.'s film typesetter unit, the Linofilm was demonstrated at the Drupa Fair. Harris Intertype's Fotosetter was also there. Hand Composing room equipment occupied the lion's share of the exhibition space. It was strange in a developed country like Germany, much attention is being given to composing room

equipment than to mechanical gadgets like the film setting machines which are here to oust their counterparts.

A French Typewriter was displayed which set lines of justified matter. There is no need to retype for justifying the matter for offset. There were many models of Photo composing machines or step-and-repeat machines including two using punched cards guaranteeing hair-line register for label printing by offset method. One was from a French manufacturer and the other from an American firm.

LETTERPRESS LANDMARKS

The Heidelberg machines held sway in the letterpress field by exhibiting their two-colour cylinder press. After introducing their crown size model, they have also now the two-colour press. In Europe, letterpress continues to play the dominating role and is not likely to give way to offset process, as is evident elsewhere. Heidelberg machines are responsible for this. An entire building was devoted to Heidelbergs which is an indication of the importance and popularity enjoyed by this premier make of letterpress precision printing machines.

Koenig and Bauer, another old timer in letterpress machine, also exhibited their machines. 4,600 sheets per hour is the speed claimed by the latest Koenig and Bauer conder press. Occupying minimum floor space and with great accessibility features, the Conder has feed and delivery with Registroscope for positioning plates of the press. This stall of the firm of Koenig and Bauer was always full of spectators from all parts of the globe.

The American makes of Miller and Miehle Letterpress machines were also prominently displayed. In fine, the Drupa was a sumptuous fare for all who went to Dusseldorf for a fabulous feast.

Training in Graphic Arts

By

SRI S. S. DESNAVI

Principal, M. H. SABOO NIDDIK POLYTECHNIC, BOMBAY

The printing trade needs attention; it needs much more attention than what it is receiving today. The establishment of Regional Schools of Printing is no doubt, to some extent, an indication of Government's interest but the pace with which progress is being made in this direction betrays their seriousness in their pronouncement

OBSELETE EQUIPMENT

The future of printing is more than assured in this country. The rapid stride by which education is advancing has created today a demand for reading materials far greater than what we had at any other time in the past. Likewise, the expansion of industries and commerce has also created a wider market for the printing industry. In both the fields there is tremendous scope for further demands being created at no far distant date. But, how has the printing industry as a whole reacted to this new opportunity? In some cities of India we do have printing establishments in which the quality of work turned out could be judged to be excellent by any standard of the world. But, unfortunately, it is equally true that by far the overwhelming majority of our printing establishments cannot print materials which would range even near about the lowest quality produced in some of the advanced countries. A major portion of the blame can rightly be apportioned to the out-of-date equipment in our country but any thought of large scale replacement by modern plant would send a cold shiver down the spine of every body. This would involve a substantial amount of foreign exchange which this country could ill-afford for a long time to come. What are we, then, to do in the meantime? Must we allow our standards to fall?

QUALITY MEN

It is a truism to say that as is the case in most of the industries, the quality of work depends upon the quality of men and materials. But when we look at the problem of printing carefully, the plain fact emerges that the quality of men in this trade is the most important single factor. And how sad it is that this factor has all along been neglected in the past and is even today being neglected very much. Again, leaving out the handful of big establishments, one finds to his dismay almost of semi-skilled, ill-trained and an overwhelming majority of almost illiterate workers who handle the production of magazines and books in literature, arts, science and mathematics! It will be agreed that in today's world neither the ability to pick types makes a compositor nor that of passing the needle makes a binder. What is being done to make up this leeway? The Regional Schools would perhaps attract the ambitious young men, well educated, who will aspire to enter the industry in the supervisory cadre of service in big establishments. But will this supervisor be able to make full use of his knowledge and training with the ill-trained and half literate workers? And then, what about the smaller establishments which, perhaps, will not be able to afford to employ the diploma holder from such schools? The answer to these

important questions is: we need to train the worker or, better still, we need trained worker, the compositor, the proof reader, the machine man, the binder etc., all trained in the graphic arts.

WANTED A SURVEY

Some readers may be inclined to answer the questions posed above by saying that there are, in several States, schools of typography which should take care of these problems. But if a survey is made it will not be difficult to discover that the existing provisions for training the worker are hopelessly inadequate and very much ineffective. Where a scheme of apprenticeship in the industry, coupled with imparting of theoretical knowledge is in vogue, there is hardly any correlation between the two. Where both theory and practical have been brought under one roof, the training is devoid of work experience. The situation therefore calls for co-ordinated and concerted efforts on the part of the printing industry on the one hand and the department of technical education of the Government on the other. But what is most important is the fact that the initiative must be taken by the industry. It is not difficult for them to start with a survey in each State of the existing facilities, their scope and limitations and the requirements of the industry. They can then formulate their recommendations for the Government, which, it can reasonably be expected, would be glad to have.

If we believe that printing has now developed into a fine art, India which has an extremely rich heritage of art, should not be found to be lagging behind. We must not miss the opportunity of developing the common man's aesthetic taste in printing; it would be dangerous to allow an attitude of indifference to set in.

Layouts and Lettering (Continued from page 6)

about how their abrasives help the small artisans and skilled craftsmen. The head line is in Gill Medium Condensed caps: The text is in Times with the name in Gill Heavy caps, the address is in Gill medium. There are some lines in Plantin Roman and Italic. DJK

DUNLOP—5"x 4 col.: This is an ad for the opening of a depot at Hyderabad. There are small illustrations of Dunlop utilities like the plane, the truck, the auto, etc., centring on the building illustration. Just above the bottom in Bodoni Bold, with Dunlop in Beton Heavy "Dunlop opens depot at Hyderabad" in two lines, staggered to left and right. Below at the top right is the text in Gill Medium, in left flush lines. The Dunlop emblem follows the text. There is a small italic line in Bodoni "To serve Andhra Pradesh and Mysore". Bodoni caps have been used for the name and address. Clarion

ENGINEERING EXPORT PROMOTION COUNCIL—8" x 2 col.: There is part of a suitcase in thick outline drawing, labels in dotted line on the box and a big tag tied to the box "to West Africa" with the word "Now" before. The text below is in Gill Medium lined right flush synchronizing with the label. The monogram at right bottom and name to the left of it is in Gill Medium capitals and address is in Gill Medium. Clarion

FINLAYS continue their 15" x 2 col ads of their textiles. There is complete tone background with the lines in black. Finlay is in reverse. ASP

FLIT: 6"x 2 col series illustrates humorously and worded accordingly. For instance, there is the swarm of four, wide eyed saying "that's where we used to liveBefore the occupants heard about Flit!" JWT



Rectangle Screen, Round cut-out, Uneven Reverse

GANGES ROPE CO—6" x 2 col. This is entitled "Go gay with Kismet carpets" in Bodoni italic lines. The text is in Gill Medium left flush lines, the illustration is aslant, trademark, name in Gill Bold, address in Gill Medium—All these make it clear that this is Clarion

GLAXO: A new series of 9"x2 col ads. The border is wavy uneven double line. The illustration is fine, of a child. The headline "His mother gives him Glaxo" is in Times Bold. The text is in Garamond, Glaxo, name and tin, booklet free offer in small Garamond, name and address in small Gill. All these are common for the whole series, the layout changed to suit each member of the series.

LAS
GKW: 10" x 3 cols.: The ads featuring the old connecting the new continue. The recent ad feat-

ures the big, 160 ft high Lingaraj temple at Bhubhaneswar. The illustration, text etc are as usual.

They are also continuing their 8"x2 cols ads of their cotters, screws and syringe needles. Everest

METAL DISTRIBUTORS PRIVATE LTD: 10"x 2 cols: Fairly heavy uneven borders have a vignette illustration in the centre. This is the general pattern of their ads. The first vignette features a toddler helped by an older hand. The second one is of a young man at work with a chisel. The heading of the first is "Great Expectations" and that of the second "World of metals" both in Gill Bold. The text at top is Gill Medium in both. The latter part is the same in all ads in the series. There are some lines about how they serve the country as "The largest single distributor of non-ferrous metals." Everest

Nebiolo at the Drupa

If Drupa is a landmark in Graphic Arts History, Nebiolo is the hallmark of excellence in Letterpress machines. The Urania and Saturnia were the two latest models of Nebiolo machines exhibited at the recent Drupa Fair at Dusseldorf. The main features of these two machines are detailed below for the benefit of all printers in this country.

At DRUPA 1958 Societa NEBIOLO presented two absolutely new presses, the two-revolution 31½" x 44 1/8" URANIA and the reduced stop cylinder 25 5/8" x 38" SATURNIA.

Other regular production Nebiolo presses as the 12 5/8" x 17 3/8" SUPER AUDAX, the 17½" x 22½" SUPER EGERIA, the 22" x 31" ATENA, the 22 x 32" Offset INVICTA and the guillotine TNH 117 were shown in operation at the Nebiolo Stand. The stand, elegantly decorated in typical Italian good taste, covered an area of 4,300 square feet. Artistic panels, rich flower stands and multicolor posters contributed to make it particularly attractive. Main attraction there, was the URANIA, a two-revolution letterpress that can be safely described as revolutionary.

DRAWBACKS OF TWO-REV.

If any printer in days past had been asked: what in your opinion are the advantages and the drawbacks of a two revolution press, the inevitable answer would have been: speed is an unquestionable advantage but poor accessibility, costly upkeep, noisiness, dimensions, complicated operation, printing quality and lastly price, are obvious drawbacks.

Now, if we wished to be extremely severe and exacting, we could, perhaps, find some other defects in the URANIA, but the drawbacks we just mentioned simply do not exist. We can even say that all these points have not merely become solved problems for the benefit of the printer, but,

as by magic, transformed in to so many advantages of a two-revolution press of which he could take full advantage in his daily work.

SHORT AND ACCESSIBLE

Let us consider accessibility. To place the forme on the bed, to make corrections on the forme up to gripper edge without moving the chase, to take down and put back the forme inking rollers, to adjust the fountain keys and to carry out other work in the URANIA there is absolutely nothing to open, swing, lift or pull away. A wide space between base and delivery pile, right under the transfer chains, gives the pressman ample room to carry out all these operations. The necessity so far experienced in conventional two revolution presses to pull away the stock pile and in some cases the whole feeder has been eliminated. It should be noted however that in spite of this wide space and in spite of the fact that both feeder and delivery piles extend down to floor level, the URANIA remains one of the shortest presses of its size.

FORCEFUL LUBRICATION

Upkeep should prove considerably reduced, because, on account of the adoption of the crank-connecting rod system for the bed drive, the design of the press has been greatly simplified. The bed run has been shortened and bed weight reduced; pneumatic shock absorbers discarded and their noise done away with. All main driving parts run enclosed in 8 oil-tight compartments. A gear oil

pump provides automatic oil drip lubrication to moving parts enclosed in the two main oil-tight compartments and lubricates several bearings. A small piston oil pump provides force feed lubrication of bed-ways and cylinder journals. Manual lubrication on the part of the pressman, so often either too rich or too poor, has been reduced to a minimum.

ELECTRONIC SHEET CONTROL

Difficulty of operation is not an expression that could be used for the URANIA. The pressman has only two levers to operate; cylinder lifting and lowering are fully automatic and various safety devices control sheet travel from feeder to delivery. Worthy of special note among these devices is the well known Nebiolo electronic double sheet control on the feeder which operates without friction on the paper and is sensitive to paper thickness of 0.01 mm. (0.004")

Fidelity of printing is also beyond doubt. For the first time in the history of the two-revolution press, direct connection between printing cylinder and bed during the whole printing stroke, exactly as found on stop-cylinder presses, has been introduced. Two racks on the bed and two toothed crowns on the cylinder, all helical cut, eliminate all possibility of slippage displacement or slurring, even after years of operation. Ink distribution by means of 13 rollers, 8 rubber and 5 steel rollers with reciprocating motion, permits printing of highest quality work.

The price question cannot be fully discussed here, of course, but the financial aspect of the matter is undoubtedly favoured and eased for the printer by the technical characteristics of the press and its great versatility which allow use in a wide range of different works.

STOP CYLINDER

After the 17½" x 22½" SUPER EGERIA and the 22 x 31" ATENA the new 25 5/8" x 38" SATURNIA completes the series of the Nebiolo reduced-stop cylinder presses. Examining its various parts we can point out the outstanding features of this new press.

ACCURATE FEEDING

The feeder of the Saturnia has a double feeder board which permits to prepare a fresh pile while the press is in operation. Worthy of note is the convenient position of the feeder pile: not too high nor too forward towards the central part of the press. The feeder has movable and independently sprung pick up suckers for better handling of heavy papers. Inserted on a double pneumatic circuit, they ensure regular and even sheet pick up even when some of them are shut off. The sheet picked up by the suckers is transferred to the tapes which in turn transfer it to the register gauges on the impression cylinder. Tape motion is variable and so arranged that the sheet will reach front register gauges at considerably reduced speed. This arrangement and the combined action of the side pull lay and of the cylinder grippers which close on the sheet edge when the cylinder is at rest, contribute to provide hairline register under all working conditions. The pneumatic installation is equipped with a highly efficient and independently driven rotary pump.

TRADITIONAL BED DRIVE

The bed drive is by the classical system already adopted for the Super Egeria and for the Atena: crank, connecting rod, gear wheel under the bed meshing with two racks rigidly fixed one to the bed and the other to the base. The bed slides on four series of harde-

ned steel rollers, cemented and ground, which roll on high resistance steel guides.

Bed and cylinder connection during the printing stroke is by means of two pairs of helical toothed crowns to prevent slack and lateral displacement. Cylinder lifting and lowering are fully automatic and operated by means of an electro-mechanical device of easy and reliable operation. Manual operation is of course also possible by means of a special lever.

IDEAL INKING

The inking system consists of 10 distributing rollers. Of these 5 are steel reciprocating rollers and 3 forme inking rollers.

An important feature of the SATURNIA, found also on other Nebiolo presses, is the way inking roller completely clear the forme after inking it.

This makes it possible for the last inking roller to reload and get a new full supply of ink thus avoiding all inking irregularities, like streaks or ghosting, with heavy formes. The inking system has also a roller wash-up device, set in operation by moving a lever on the control side of the press. The wash-up device is never taken down from the press and slush is collected in an easily removable basin.

DELIVERY ARRANGEMENTS

Delivery consists of a sheet turning drum, a series of tapes and a delivery board.

The sheet turning drum has a 624 mm diameter (29 9/16") that is a diameter 50% larger than the printing cylinder diameter. Contrary to what happens on all conventional stop cylinder presses, this characteristic prevents the tail-end of maximum size sheets to come in contact with the forme during its return stroke; also allows easy handling of heavy cardboard.

Air blast from six blower tubes on the sheet turning drum supports the sheet and prevents contacts of its printed side with press parts. Sheet turning is thus carried out under the best possible conditions.

The sheet is transferred towards the delivery board by means of slow moving tapes which then launch it on the board while a well adjusted air blast cushions its descent, without dragging, on the pile of printed sheets. The delivery board has three-sided jogging; it lowers to floor level and is equipped with castors for easier transportation.

A sheet collecting rack permits to remove the delivery board without stopping the press and sheets collected on it are regularly jogged.

On the SATURNIA all controls have been designed with an eye on ease of operation and on the comfort and safety of the pressman.

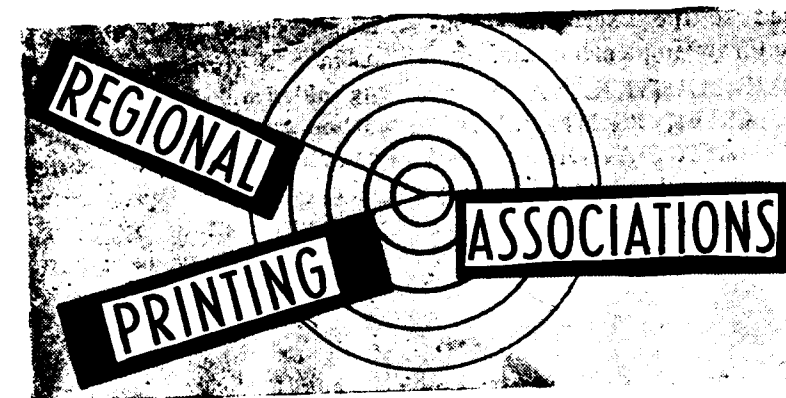
Starting controls, speed regulation, cylinder lifting, pneumatic adjustment controls, vibrator roller and sheet separation controls, all are within easy reach of the pressman.

New electric cylinder contacts, adjustable both for position and thickness of paper, have been installed. On the whole on the SATURNIA we have the following safety devices:

1. Double sheet control
2. Electric contacts on printing cylinder
3. Forme safety catch
4. Electric contacts on delivery tapes
5. Forme-bed safety rack, tripping the press when lifted
6. Limit contact on feeder board
7. Limit contact on delivery board.

As in other Nebiolo presses also in the SATURNIA all main gears run in an oil bath in an oil-tight compartment on the left side

(Continued on Page 18)



Mudran Parishad of Poona has already made a name in printing history, thanks to enterprising veterans like Sri D. D. Gangal. Mudrak Parishad of Bihar at Patna is making head-lines now. Whether it is at Poona in the south or Patna in the north, the common enthusiasm to unite together, to associate for common good, to meet and discuss problems and to forge unity within the organization, seem to be the order of the day for our printers. We welcome to the ranks of Regional Printing Associations, the Mudrak Parishad of Bihar at Patna. In a quarterly meeting held at Patna, sometime back, the following useful resolutions were passed

MUDRAK PARISHAD PATNA

The following resolutions were passed in the quarterly General Meeting of the Mudrak Parishad, Bihar, Patna, held on March 23, 1958.

I. Condolence resolution moved from the chair, all members standing, followed by two minutes silence: Resolved, all standing in prayerful silence for eternal peace to the departed souls, that this General Body of Mudrak Parishad, Bihar, Patna, places on record in great distress and sorrow, the sad demise of (a) Maulana Abu-Kalam Azad, the Education Minister Government of India; and (b) Shri Fazlur Rahman, Director of Public Instruction, Government of Bihar. That the passing away of Maulana Azad is truly a great national calamity and the country has lost in him an erudite scholar and theologian, a seasoned patriot and a valiant fighter for the cause of freedom and a highly polished gentleman above all. Similarly in late Shri Rahman the State has lost a great educationist and an able administrator.

Peace be to the souls of both the deceased!

II. Resolved that this Mudrak Parishad feels legitimately alarmed and concerned at the attitude of our Government and Quasi-Government bodies in getting their huge quantities of printing requirements done elsewhere through the printing presses outside the State of Bihar and thus by-passing and starving the local workers and presses which could ensure as much efficiency and promptness. The Parishad, therefore, requests and invites the attention of the State Government and the Quasi-Government bodies to extend their fullest co-operation and patronage preferably to the printing houses in the State by getting all their printing done locally. Resolved further that this Parishad requests the Government and Quasi-Government bodies to refer in future all their printing requirements to the Parishad also.

III. Resolved that in view of the growing of printing houses and also in view of ever increasing demand on them for more and

more of literature and printing requirements etc., the Government at the Centre be requested to revise and modify their policy in respect of the import of printing machinery and allied materials from abroad by granting import licences direct to the printers and by eliminating the middleman.

IV. Resolved that in view of the acute shortage of expert and technical personnel in the printing industry in this State advantage may be taken of the School of Printing Technology, Calcutta, where although twenty seats are reserved for this State, hardly two have joined it from Bihar. This is due to lack of publicity and Government's apathy in extending stipendiary facilities to the candidates. The Parishad, therefore requests the State Government to take suitable steps at an early date for the training of technical personnel in printing by awarding stipends and giving due publicity for entrance to the School of Printing Technology, Calcutta.

V. Resolved that this Parishad vouchsafes humane and reasonable treatment to the workers in the printing industry and looks upto them to extend their co-operation and willingness in raising the printing standard qualitatively and quantitatively vis-a-vis betterment of their own living conditions.

VI. Resolved that this first quarterly general meeting of the Mudrak Parishad requests all printing houses in the State and particularly those in Patna to join the Parishad, one and all, for the all-round betterment of the industry and their own.

VII. Resolved that with a view to gaining up-to-date knowledge in Printing Technology, this Parishad requests all member presses (and non-members too) to contribute regularly to the official Bulletin

brought out by the Master Printers' Federation and the CHHAPAI KALA from Poona.

VIII. Resolved that this Mudrak Parishad, being the only properly constituted representative body of the Printing presses in Patna and also in view of its affiliation with the Registrar of Trade Unions (being almost finalised), the Government in the Department of labour be requested to recognise the Parishad for all purposes relating to the printing industry in Bihar.

That this Parishad desires to impress upon the Labour authorities and the Press workers that any negotiation through the Parishad will yield quicker and satisfactory results than otherwise as the Parishad values the unstinted co-operation of the workers in the interest of all concerned.

IX. Resolved that a quarterly Bulletin of the Mudrak Parishad be started and that the matter be

referred to the Executive Committee for its implementation.

THE SOUTH KANARA MASTER PRINTERS' ASSOCIATION

The Annual General Body Meeting of the above Association was held recently at the office of the Association at which the following office-bearers were elected for the next year:

President: Sri M. B. Prabhu, B. A., of Mangalore Press, Mangalore.

Vice-President: Sri R. N. Achar, B. A. B. L., of Rashtrabandhur Press, Mangalore.

Treasurer: Sri G. K. Hegde, B. Sc., of The City Press, Ltd., Mangalore.

Secretary: Sri V. D. Kamath, B. Sc. (Ag) of Sharada Press, Mangalore

PRESS RELEASE.

(1) *New Machine for the Production of Continuous Form Sets.*

Maschinenfabrik GOEBEL GmbH of Darmstadt, since long manufacturers of machines for the production of all kinds of business forms,

have designed and built a new machine for processing single zig-zag folded webs with or without carbon paper into continuous form sets, either glued or wire-stitched.

The machine has a maximum working width of 550 mm (abt. 21-5/8") and may be adjusted to any width below that size. Similarly, the distance between the staples may be varied. Production is about 5,000 sets per hour.

(2) *Combination Litho Offset and Letterpress Rotary for the production of Cheques and the like:*

Maschinenfabrik GOEBEL GmbH of Darmstadt recently supplied to an important speciality printing house such a web-fed machine with two litho offset units, two letterpress units for text or number printing and all units necessary for the production of zig-zag folded continuous forms at a speed of upto 50,000 folds per hour. On sheet delivery, up to 18,000 sheets are produced per hour.

Printing Industry of America Incorporated

By

SRI A. K. RAJA

The Printing Industry of America is a national association connected with the Graphic Arts. The Association claims widespread membership from coast to coast in the United States of America and Canada, having on its membership roll more than 72 affiliated local associations. We of the printing industry of India wish that we had a similar organization which is fully representative of the Graphic Arts and allied industries in this part of the world. One can hope that the All India Federation of Master Printers closes its ranks, strengthens its membership and marches forward towards its goal. The goal is bettering the lot of the Indian printer in all its aspects, financial, economic, social, ethical, moral, national and international

Printing Industry of America Incorporated, having its headquarters at 5728 Connecticut Avenue, N.W., Washington 15, D.C., claims more than 5500 companies in membership. In the past decade, the PIA has developed a co-operative team of local organizations, thus making available both local and national association services to all printers in America.

These are trade associations made up of companies concerned with the vital task of improving all phases of printing management, such as financial, production, sales and personnel and in meeting the day-to-day local needs of the Graphic Arts Industry in the United States of America and Canada. In all the principal cities in that country there is double value for the membership fee in both the national and in one of the 72 local associations which is available. Programmes and activities of Printing Industry of America are planned and formulated for presentation at the national convention by national leaders drawn from the Graphic Arts Industry. There are also conferences and seminars periodically arranged, by the PIA and its affiliated associations. The local asso-

ciations in turn implement these programmes and services by making them available through local meetings, classes of instruction or through personnel promotion. In addition, many other additional essential local activities are developed.

YARDSTICKS OF MANAGEMENT

Each printer tells the PIA his sales volume for the preceding year and the total number of persons on his payroll. The PIA will send him a tearsheet from "Ratios for printing management". This shows more than 20 yardsticks of printing management. These are based on 682 financial statements of successful printers across the nation. PIA will advise printers the cost of membership both in the Printing Industry of America Inc. and the local or regional association. Membership at large is also arranged for those printers who are residing at a place where there is no local association nearby.

WHAT CAN PIA DO FOR ME?

Printing Industry of America is the largest National trade association representing the Printing and Lithographic Industry with a membership of 5512 companies.

These companies employ well over 1,80,000 persons. These persons work together to improve conditions in the printing industry, to maintain high standards of quality and integrity and above all, to earn the respect and confidence of their customers and clients as successful businessmen engaged in an industry essential to all human activity.

So far so good. But what can PIA do for me? Printing Industry of America do many useful things for the printer. It can tell the printer whether in comparison with other printers, the particular member is making a satisfactory profit in the printing business. It tells whether his costs are out of line and whether production is up to par. By this meaningful comparison the printer begins to re-organize his plant on the lines suggested by the PIA.

As a channel of information, PIA will solve difficult problems which constantly arise in the printing business in the fields of trade customs, trade practices, trade relations. PIA helps the printer to cut through yards of Governmental red tape. It suggests available sources of services and supplies of unusual character. Thus Printing Industry of America Inc. serves as an Information Centre.

The tested methods used by experts in the field of Printing Management, be it finance, sales or production, are made available by PIA to whomsoever the printer designates, either to the printer himself, his son or employee, as the case may be. Thus PIA aids modern management of the printer's plant.

PIA has published several useful text books. These books can be made available for home study use, in local associations classes in many cities or in numerous educational institutions of college level. These text books are no doubt written by

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INDIA'S LEADING JOURNAL ON
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AND
THE GRAPHIC ARTS INDUSTRY

qualified leaders from the nation's most efficient printing establishments. These will be very helpful for training future executives for the industry.

Whenever adverse legislation is introduced in the American Congress, the Printing Industry of America Inc. represents the best interests of the printer. Thus, legislative representation at national level is afforded by PIA.

Perhaps few of us know that a plant with ten mechanical employees should be doing printing work worth 150,000 dollars in volume per annum. And that is roughly equal to Rs. 7,50,000. Is this being turned out? If not, Printing Industry of America does something for the printer and his firm.

CONFERENCES

In the conferences held periodically record enrolment of top management men from all sections of the USA and Canada is a daily feature. Long Range Planning is discussed. Challenging discussions are held

of the printing industry's relationship to other industries and media, particularly in the communication field, on graphic presentation as related to management and on the growth of Graphic Arts Industry.

Panels on various developments in management planning, including new methods and techniques, sales planning, manpower utilization, proper organization of executive functions and times etc. are held during the conferences. Dinner, dances, sports events, printers' nights, special session for ladies are highlights of the social side of the PIA conferences.

IN INDIA

The above detailed information regarding one of the great organizations of Printers in America is given with a view to instil in our organization some of the enthusiasm that others are having in other countries. The All India Federation of Master Printers has in the above a blue print to extend its activities for the

benefit of the printers who are scattered in the length and breadth of this vast sub-continent. Time and again, we have pointed out in our editorial that intensive membership drive, sound organization, healthy activities and broad policies, powerful programme and a band of selfless and enthusiastic workers are required to put more life and zest into our organization.

There is much to be done and this can be done only by an All India Organization like the AIFMP. India is not lacking in brains and given the interest in work and aim to succeed at all costs, nothing is insuperable. The only way to solve all the problems that beset the printing industry is to strengthen the hands of the All India Federation of Master Printers which in turn strengthens the hands of the printers. With this mutual help, the organization on the one hand and the printers on the other will march to greater progress and prosperity hand in hand.

ATF Typesetter

American Typefounders have been bringing many new things for the use of the printers of the world. The newest and by far the lowest in cost for setting text matter or tabular work on film is the ATF Typesetter. This has been recently introduced by American Type Founders. This novel typesetter is now in full production in the ATF Elizabeth plant, 200 Elmora Avenue, Elizabeth, New Jersey, USA.

The American Type Founders Typesetter is a photomechanical system of type setting. There is the optical system and the electro-mechanical devices. This typesetter has two parts, the Keyboard Unit and the Photographic unit. Both are compact desk-top models occupying little floor space and streamlined in design. Modestly priced, these low price models are capable, of producing text matter as well as tabular composition. Their quickness and efficiency in production either on film or photographic paper, make it ready for direct use in making offset litho plates, relief plates or intaglio gravure plates.

A wide variety of popular type faces well known for their clarity and readability are available on the American Type Founders Typesetter. As there are many cold composition systems available to the printer of the modern day, the ATF Typesetter system offers a much simpler, but much superior method of film setting for varied uses. This typesetter's flexibility, versatility and high automatic operational efficiency have endeared it to all users.

CUTTING THE TAPE

The copy to be set is typed on the keyboard unit and the tape is cut simultaneously. This tape can be used any number of times for producing the matter in the photographic unit. Even when you want to change the size or face of type, the same tape could be used. But when changing the size or face of type, the width of line will change. Once a tape is cut, any number of

duplicate tapes can be made in the key-board unit.

CORRECTIONS

At any stage in the operation of the ATF Typesetter, corrections can be made, which is another novel feature of the typesetter. Characters may be deleted, entire lines removed or re-typed while the first type is being cut. If, after the first tape is cut, proof-reading discloses errors, the duplicate tape can have the corrections embodied. The corrections in this case are inserted manually at the appropriate place. In the case of a line or a paragraph, the matter may be typed and spliced in the place in the original tape. A stop code can be punched in the tape, which will automatically stop the photographic unit, permitting the operator to insert heads or processing instructions by using the keyboard in the second unit. Corrections or any changes can be spliced either on the film or on photographic paper.

THE KEYBOARD

The keyboard unit is basically an electric typewriter with modifications and additional code keys. It perforates a common language tape and at the same time reduces a typewritten proof of the copy. Proper codes are available for line justification, centring and left flush or right flush setting. These codes are punched by the operator on the tape. Although these operations are not recorded on the proof, they are however automatically incorporated in the finished product of the photographic unit. Word spacing, justification and letter spacing are

also provided for. If corrections are necessary, entire words or lines can be deleted.

AUTOMATIC PHOTOGRAPHIC UNIT

When the punched tape is fed to the photographic unit, called the Reader unit, all operations are carried out automatically, aided and guided by the punches made on the electric typewriter unit of the ATF Typesetter.

On the photographic reader unit is what is known as vinyl plastic disc. This plastic disc carries two founts of type such as Roman and Bold. Roman and Italic or Light Bold of the same point size. An optical projection system on the photographic unit produces a transparent positive film from the negative characters on the vinyl disc. This vinyl plastic disc is therefore rightly called the heart of the photographic reader unit. Line to line spacing or leading is controlled automatically and there is no necessity to change the tape for altering the leading between the lines or the whites between the type matter.

The photo unit also carries a manual keyboard with which headings, captions, production messages, unjustified composition can be carried out. For any corrections or alterations to be made manually, a stop code on the keyboard unit could be used.

Standard lithographic films and photographic papers and standard chemicals for developing and other supplies are used. In the film magazine up to 40 feet of film or 25 feet of photographic paper could be carried. The roll can be severed and the film receiver removed for developing the exposed portion at any time.

The speed of the keyboard is limited only by the capacity of the operator. The photographic unit, being entirely automatic, operates at a speed of 130 characters per minute.



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Nebiolo at the Drupa

(Continued from page 12)

of the press. A pump placed in the lower part of the oil sump provides drip lubrication to various gears and force feed lubrication to shaft bearings, crank and counter crank shaft bearings. The oil distributing system includes an oil filter which can be easily cleaned without taking it apart. A light signals the regular oil flow.

Auxiliary fully automatic force feed lubrication to printing cylinder journals and to bed ways has also been provided. A separate oil tank has been put for this pump which must be fed with constantly fresh and clean oil. Excess oil from the bed-ways falls to lubricate racks and other gears under the bed. This lubrication, of the greatest importance for press, long life and regular operation, is now made with oil in preference to grease previously used, as grease tends to accumulate and incorporate dirt, lint and other foreign matter.

Also for lubrication therefore has a certain advantage with respect to competing presses with manual and intermittent lubrication.

Further advantage of the SATURNIA with respect to all competing presses is the absolute safety offered to the pressman. All moving or rotating parts are shielded by guards or enclosed in oil-tight compartments. Only the hand-wheel of the flywheel is accessible for manual operation of the press.

OFFSET MACHINE

The Offset OMH INVICTA has been presented with a new feeder capable of high operation speeds with high quality work.

EXCLUSIVE NOVEL FEATURES

It is not inappropriate to speak of new features for the OMH as

new principles, some of which are still exclusive characteristics of Nebiolo equipment, have now for the first time found practical application on this press. All gears of the pick up unit are enclosed in an oil tight compartment and run in an oil bath. Sheet feeding is controlled by a highly sensitive Nebiolo patented electronic device operating without friction on the sheet. Cylinder throw on and throw off are fully automatic and timed to variations of press speed.

Speed regulation is by the most up to date method yet devised for an Offset press and consists of electronic equipment, main advantages of which are: continuous speed regulation, rapid braking action in case of emergency, high electric operational efficiency also at low speeds.

New useful accessories as the constant level water tank and the anti-set-off sprayer, coupled with functional body of modern lines, have added to the high printing possibilities of the press, new qualities of reliabilities and ease of operation.

The ATENA and the SUPER-EGERIA of design similar to that of the SATURNIA, still represent the latest development in the field of stop cylinder presses, a field to which in these last ten years only Nebiolo has contributed something really new, attracting great interest and gaining praise in graphic arts circles. Improved in many parts, equipped with numerous and important accessories like the wash up device, the anti-set-off sprayer and the double feeder board, these two presses need not fear competition for ease of operation and elegance of lines.

During the exhibition, the ATENA printed as a demonstration a 22 x 31 full back ground colour block of a difficult shade that astonished experts. No other press on

the exhibition grounds was printing anything that could be compared with this. The SUPER EGERIA also printed a full background colour block. A four colour reproduction of an old Italian master was also distributed to visitors. All of this confirms that Nebiolo presses can and must chiefly be used for high quality multi-colour work requiring hairline register.

The SUPERAUDAX was kept passing sheets at a constant speed of 5,500 i.p.h.

Sets of printing samples on air mail and tissue papers, size double UNI, four colour works, etc. were distributed as a proof of PVCC printing possibilities.

NEW LINE CASTING MACHINE

Two Nebiolo Associated Companies, Messrs. FRATELLI ANDREOTTI of Milan, manufacturers of rotogravure presses and equipment and Messrs. CO-GRAF, manufacturers of slug-casting machines, also of Milan, had their Stands alongside Nebiolo's.

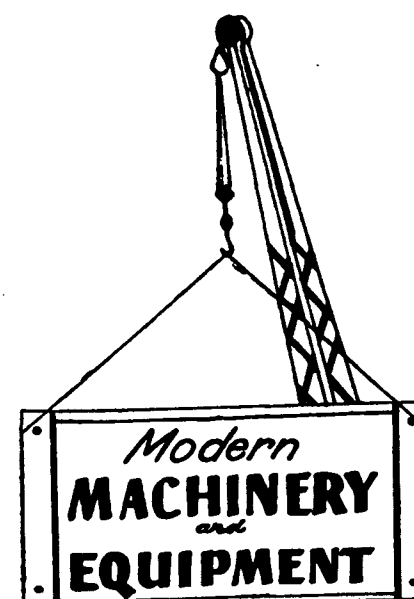
Revolutionizing conventional designs adopted in the past, CO-GRAF designed a simpler, better, safer, more functional and better looking type casting machine which for its outstanding operational features and low cost has gained everybody's praise including that of experts and competing manufacturers present at Drupa.

The machine presented by CO-GRAF is practical and complete: it casts slugs of standard 40 didot em measure (which will probably be standardized at 42 ems for the Anglo-American point system) with a face range from 6 to 72 points.

The advantages of the slug-casting method for rapid composition of display matter from hand set matrices are well known to printers:

Slugs are compact castings: no danger of a single type face or of

(Continued on page 24)



Printing machinery manufacturers and dealers may utilise this column to announce their latest machinery and equipment to be reviewed by our expert. Full specifications and technical data should be forwarded with good photographs wherever possible to the Editor

ROTACUT SHEETING MACHINE

The General paper Trading Co., 13 Sree Charan Lal Rd., Allahabad, have brought out a sheeting machine. This is fully automatic and is capable of handling reels up to four at a time. A ream takes only two minutes to be cut into Quad Crown Size and a Double Crown only one minute. Half-an-hour is required for loading the four reels on the sheeting machine. In a three shift day, about 4 to 5 tons of paper can be sheeted to various desired sizes. Reels up to 36" size can be taken by the Rotacut Sheeting machine.

Only two persons need attend the sheeting machine. Made of best metal, the machine is provided with automatic brakes along with moving device for rolls being cut. There is an automatic counter too. If the gears carrying different numbers are changed, the size is automati-

cally changed. Automatic jogging and piling arrangements are also provided.

By using the Rotacut sheeting machine, considerable amount can be saved on paper costs. The mills supply only in reels and the mills take a long time and charge as much as 9 pies per lb. as cutting charges. Rotacut Sheeting machine is moderately priced at Rs. 6,000 f.o.r. Allahabad. Servicing facilities and guarantees are allowed. Approximate weight of the Rotacut machine is 26 maunds, size of machine 9' x 4½', Floor space required 24'x6', Power ½ Horse Power motor. Standard accessories supplied along with the machine are half ton capacity chain pulley block, cutting knives two, wrenches seven and gears six.

NEW MODEL CHALLENGE PROOF PRESS

MODEL 20 GP Challenge Proof Press has been introduced. This has been designed for the dual purpose of pre-makeready and as repro press. Colour register proofing of platen and cylinder formes can also be handled by this new proof press. Taking formes up to 19½"x23½", the Challenge Proof Press features a type high bed for repro proofing, as an adjustable micrometer front and side lays for close register proofs, automatic impression trip and gripper release and automatic power inking. By the direct image proofing of letterpress formes on this press, duplicator and offset plates also can be produced.

COLOUR ANALYZER

Bausch and Lomb optical Co., USA have brought out a Spectronic Colour Analyzer. This instrument gives readings in percentage of reflectance of printing inks, paints, dyes and other similar products. This has a Spectronic 20 Spectrophotometer and a reflectance attachment. This Spectronic Colour Analyzer projects a spot of light

which gives readings of various sized samples. For large samples, the measure assuring aperture cover swings out of the way. There is a trichromatic chart which allows of the reflectance readings to standard C. I. E. trichroma values.

The measuring reflectance system on this Colour Analyzer is designed as not to affect the accuracy of the reading when chipping, fading of standing of the interior surface is carried out. The Spectronic Colour Analyzer is also provided with a specially developed Power supply which guarantees operation without fluctuation on 50 or 60 cycles. Further particulars can be had from Bausch & Lomb Optical Co., Rochester 2, New York, USA.

TEXT IS PRINTED WITH INVISIBLE LETTERS

Looking into the future, there is Printing with invisible letters in Lithuania's youngest scientific institute. Photo is ready in 5 seconds. There are 12 inventions. What is the secret?

Many centuries have passed since the art of printing was invented. However, only recently has it become known to readers that it is possible to print a text with invisible letters.

Just think of it. Only a few people working in a large print shop do it. There are no type cases, no linotypes but at the same time with every turn of the machine a whole book is printed from beginning to end. A model of such a lightning printing machine exists in Vilnius.

Several years ago Jonas Ziliavicius, a teacher of the Vilnius Teachers Training Institute had the idea: why cannot letters be inscribed on a ferromagnetic film on which music, songs, and speeches are recorded and which we hear daily over the radio. This idea gave birth to Lithuania's youngest institute, the Institute of Electrophysics,

No letters are to be seen on the wide ferromagnetic film. But passing through a special magnetic instrument it receives the contours of invisible letters. The inventive idea developed a special magnetic paint. Under the influence of the magnetic field this paint imprints on the ferromagnetic film the visible impression which under the influence of the electric field can be transmitted to paper.

Thus the entire text is printed. Lead type, machines which existed for centuries and without which it is impossible to think of a printshop will be done away with.

This is only one of the twelve inventions made by J. Zilavicus, the scientist experimenter. In one of the offices we were shown an electrical apparatus which according to its appearance does not differ from an ordinary photo camera. However, it rapidly makes photographs. Within a few seconds a ready photo is received.

This invention is used not only for making imprints. For instance, an accident happens. The life of a person is in danger. A doctor hurries to the scene with a small x-ray

AT THE INSTITUTE
OF ELECTROGRAPHY,
LITHUANIA



Printing with ferromagnetic Film

apparatus. In less than a minute he will already have a picture of what happened to the victim.

The secret of instantaneous photography and roentgenography is not in the apparatus, J. Zilavicus explains, but in the paper the surface of which is covered with a combined semi-conductor layer.

Antanas Pauja, senior mechanic of the laboratory on electronic

simulation, showed us the institute's latest work—an electrostatic machine for the multiplication of pictures. A Pauja places a slide into the machine. Then a paper ribbon is passed through the machine. Prints of the slide are made on the paper by the machine.

This paper ribbon is also covered with a semi-conductor layer. A. Pauja explains: "Passing through the machine, the paper becomes electrified. Here the exposure, the development and fixing takes place. With the help of such a machine several thousands of postcard size photographs can be made in one hour."

This "Miracle" semi-conductor paper outwardly does not differ from clean paper.

The young designers of this institute are at present working on how to introduce most rapidly these innovations into everyday life. They have completed the designs of the country's first machine for the industrial production of semi-conductor paper. This paper will be only slightly more expensive than writing paper and considerably cheaper than photo paper.



PRESS WORKERS' STRIKE IN U. S. DAILY

The *Detroit Free Press* suspended publication on 3rd September 1958 following a strike by press workers. The strike was called over due to the dismissal of a worker who is also a union office bearer. He was dismissed for disobeying the foreman's order fixing lunch periods. Although the publishers of the newspaper offered arbitration, the union declined to accept the offer. The proper method would, according to the publisher, be to seek grievance action in the dispute and not striking work. As the strike was a violation of the paper's contract with the union, the daily has filed a law suit for damages to the tune of one million dollars and also an additional 150,000 dollars damages for every day the strike lasts.

Readers may recall a strike by a section of the workers in *The Hindu*, Madras, under similar circumstances leading to a temporary suspension of publication of the 80 years old daily. On the workers expressing regret, however, *The Hindu* has resumed publication, but not the USA daily.

THE MYSORE PAPER MILLS LIMITED, BANGALORE

At the 23rd Ordinary General Meeting of The Mysore Paper Mills Ltd., Bangalore-9, Sri T. Shamanna, M.A, IAS, delivered an address, extracts of which are reproduced below:—

I am glad to state that production and sales during the year

under review have been quite satisfactory. Last year, our production was 7,500 tons and this year it is 7,300 tons. Our paper making capacity exceeds our bamboo pulp production from 6,000 tons to 7,000 tons. In order to utilize the increased pulp production when achieved, action has been taken to recondition the first paper machine which has worked continuously for over 19 years.

The supply position of chemicals particularly Glauber's salt, caustic soda and liquid chlorine has become very acute. The market condition throughout this year was favourable and continues to be so. Certain import restrictions have been imposed and what is produced in this country is not adequate to meet the increased demand for paper created by developmental activities adumbrated in the Five Year plans. The requirements of the State and Central Governments have increased. In consequence, the tonnage available for civilian consumption is reduced. We are taking steps to organize as equitable a distribution as possible of our products. In this attempt, we have made arrangements, besides sales through normal trade channels for direct supplies from the mills to essential users of paper like textbook publishers, Educational Institutions, co-operative societies and specially to those which are attached to schools or colleges.

POWDERLESS ETCHING

An important new stage in the development of the powderless

etching process has recently taken place as a result of an agreement between The Monotype Corporation Limited, together with its associated companies, and the Dow Chemical Company of the U.S.A.

The agreement is to the following effect:

"The Monotype Corporation Limited of England and The Dow Chemical Company of the U.S.A. announce that they have signed an agreement establishing Monotype as a Master Licensee of the Dow Powderless Etching Process. The agreement authorises Monotype and its associated companies to manufacture and sell powderless etching machines and chemicals covered by the Dow patents.

Under normal licensing procedures, licensed users of the DOW-ETCH Process pay a royalty either directly to Dow or indirectly through a Master Licensee based on the area of commercially-used engraving. This form of licensing will be continued for those who wish it.

Under the terms of the agreement now announced, users can elect for an alternative licensing procedure whereby Monotype will, in effect, pre-pay the royalties on behalf of its customers in reference to the machines and materials used in powderless etching, and sold through the Monotype organisation, whether for use with magnesium or zinc.

Monotype will, in the future, be responsible for the machines now in use by present sub-licensees.

The Dow-Monotype agreement covers all countries in the world with the exception of the U.S.A., Canada, Western Germany, Austria, Switzerland, and has been reached with the approval of the appropriate Master Licensees. Licensing arrangements will be continued by Dow in the U.S.A. and Canada, and by Metallgesellschaft

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interchangeably used for both
Offset and Letterpress procedures

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and Cellophane-Screens for Shadings

Film Screens with dots
in different tones for Letterpress or Offset

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FRANKFURT A. M. B. Germany

in Germany, Austria and Switzerland.

This arrangement is expected to be of real benefit to the Graphic Arts Industry in furthering the application of the techniques of powderless etching."

In making this announcement, The Monotype Corporation wishes to acknowledge its debt to the various firms and companies who have contributed towards the successful development of the powderless etching process, particularly to the Dow Chemical Company who pioneered the way, and to J. Dirats and Company who tackled the problem of applying powderless techniques to the etching of zinc.

The Monotype Corporation first became connected with the powderless etching process in June 1957, when it was announced that its subsidiary company, Pictorial Machinery Limited, would be manufacturing the Dirats Powderless Etcher at its Crawley factory. This machine was shown at both the Graphic '57 and Drupa international exhibitions where it aroused great interest.

Consequent upon the Dow-Monotype agreement, Pictorial Machinery will continue to be responsible for manufacturing powderless etching machines and for distributing them through its own branches and agencies and those of the Monotype Corporation in accordance with the terms of the agreement. The machine will be known as the 'LITHOTEX' Powderless Etcher for the 'DOWETCH' and DIRATS Processes for magnesium and zinc.

The Monotype Corporation recognises that at present zinc and magnesium each has its own particular advantages. At the same time it realises that, in the light of future research and experience in a technique which is comparatively

new, there may be occasion for changes and innovations.

Powderless etching may well prove to be the most significant post-war development in the Graphic Arts Industry, particularly when combined with the filmsetting systems that are now commercially available. The Monotype Corporation will take the keenest interest in its development and looks forward to an active co-operation with existing and future customers in furthering the application of this process to the benefit of the whole of the printing trade.

In this connection the Monotype Corporation is pleased to announce, by agreement with Birmetals Limited, that Mr. Eric Williams joined its staff on the 1st September, 1958. Mr. Williams is already well known amongst Dow users and will be available to advise both existing and future customers on any problems connected with the powderless etching of zinc and magnesium.

All enquiries regarding the 'LITHOTEX' Powderless Etcher should be made to Pictorial Machinery Limited, Kelvin Way, Manor Royal, Crawley, Sussex.

OUR SUBSCRIBERS

Many printers from all parts of India subscribe for *Printindia*. There can be no doubt, from the large volume of mail from our readers, that they are profiting by reading this magazine. To refer to a few of our readers who are printers with distinction, there is the 63 year old S. R. P. Works, Cocanada. This printing and publishing firm has adequate capacity for English, Telugu, Hindi and other language printing. It has the latest ticket printing and numbering electric presses and self feeding cylinder automatic printing machines. S.R.P. Works is indeed producing quality work.

Adarsha Press, Puttur, South Kanara, Mysore State, is another reader, with a printing reputation. In that part of the country, the Adarsha Press, Puttur is well known for its neat printing and prompt delivery and reasonable bills.

Kala Mudranalaya, Near Ritz Theatre, Belgaum, is yet another regular subscriber immensely benefitting by our publication. This press has set up a good business and is widely known for the quality of the job and the high tone of execution.

These are only just three out of the thousands of our regular readers. More about them in the coming issues. Printer readers may write to the editor regarding their views of *Printindia*. Suggestions for improvement of the industry, quality of printing, Good employer employee relations and customer contact, customer understanding, solutions for the problems facing the industry are always welcome.

PRINTERS' DIRECTORY

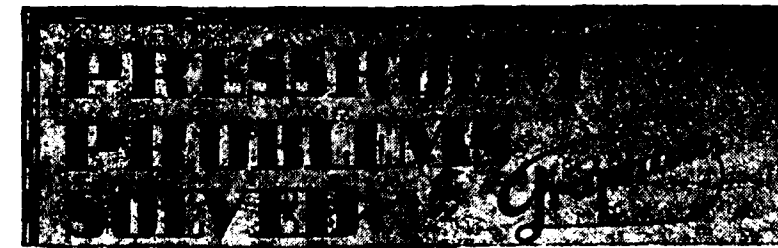
We published a Printers' Directory in 1954. Even four years afterwards there is still demand for copies of the same. For instance, Messrs Wall Grocer & Co. 36, Yusuf Building, 4th Floor, Veer Nariman Road, Bombay-1, write to our printers asking for a copy of the precious Directory. Surely it is a unique publication, first of its kind in this part of the sub-continent!

PRESS EQUIPMENT LIST

The Assistant Controller of Printing, Government of India, New Delhi has called for an up to date list of equipment, machinery, appliances, etc in every press. A detailed pro forma is given which has to be filled in by the printer. Such information when collected,

(Continued on page 24)

PRINTINDIA



223. Q. While printing three colour offset illustrations we find that the standard trichromatic sets supplied by the ink-makers do not yield the desired results. Our offset printer has been using, for instance a red tending towards orange and a blue tending towards green, to get certain reproduction printed according to the customer's O.K'd proofs. Are there not standard tri-colour inks?

A. Tricolour and four-colour printing cannot be *standardised*, each job requires independent and individual treatment to suit the original. In this respect it is the machine man's job to select the particular inks which will give the nearest result to the original. It is therefore necessary to have a fairly wide selection of process inks from which the required colour and *shade* can be selected or mixed at the time of proofing the job, the formula in the case of mixed inks should be carefully noted, and the actual inks used marked on the proof copy kept by the printer. If your illustrations are contained in a regular magazine and you wish to *standardise* on a general purpose ink for these I suggest that you consult your Ink Maker who will advise you and no doubt produce a suitable range of inks for you.

224. Q. Import controls appear to be lasting for some years. Due to import ban, photographic plates are scarce in the market. Being a photo-offset printer, we find it hard to continue our service to our clients. Can you suggest an alternative for using dry plates for offset work? At least for monochrome work, we should be able to use a wet plate negative. But experts opine that it just can't be done. What is your opinion about using wet plates for single colour work, leaving the rare dry plates for register work only?

A. This query highlights a problem which is facing almost every businessman in India

In these pages "Graphicus", an expert in the printing and allied industries, solves month by month Pressroom Problems of the printers. All questions may be addressed to "GRAPHICUS", C.O. PRINTINDIA

to-day and, with the foreign exchange position as it is, the necessity to improvise and find alternative methods and materials becomes an everlasting quest. Therefore this question deserve individual treatment.

Wet Plate Negatives can be used reasonably successfully up to a maximum size of 20"x20" following the normal procedures.

The objection to the use of Wet Plate Negatives is that it is difficult to get the degree of uniformity which is natural for a dry Plate Negative but with reasonable care on the part of a skilled operator it is possible to obtain this necessary uniformity of the image for printing down from plates of up to 20" x 20". Naturally, the smaller the plate, the easier the task and vice versa.

By using the whirler for coating the plate it is possible to use wet plates up to 40 x 40 but this requires a very high degree of skill and experience on the part of the operator and is not generally recommended.

In order to print down a design of over 20" x 20" it is necessary to photograph the original in suitable sections and screen plates, having due regard to the composition of the original when doing so, and to print down plates butted together to the form of the original. It is usually necessary to cover the joints of the plates with black tape or paper and work in the image together by hand after developing machine plate.

There are many other ways of overcoming the shortage of photographic materials; where type matter is to be reproduced by offset, the original type matter can be printed with a suitable black ink by the normal letterpress process on cellophane and the resultant print used in place of or together with the normal Photographic Plate.

An artist can duplicate most monochrome work and even simple multicolour work by hand on to offset plates or a combination of photography, hand worked chromo and the cellophane print can be used.

News and Views

(Continued from page 22)

collated and correlated will form a very useful piece of statistical information and will be the basis for any manufacturing programme of printing machinery and equipment in this country. The general pattern of the existing machinery in the various presses (which number over 25,000) will be known from this information. Printers are requested to send the information to department of Stationery & Printing, Delhi.

REGIONAL PRINTING ASSOCIATIONS

We are printing a useful feature under the above title giving all information of the activities of the various printers' organizations in the country. Some of them have newly sprung up while others have a hoary past and a hectic present. Old or new these organizations are bound to work for the betterment of the printer members. We have always encouraged organizational activity on healthy lines. The Delhi

Printers' Association, 26-A New Central (Shanker) Market, New Delhi, is also a very active limb of the All India Federation of Master Printers. Sri Ratan, office Secretary, informs us that the Delhi Printers' Association will be bringing out a bulletin on its activities and all printing magazines are requested to co-operate with them in bringing out a useful organ, by supplying information vital to the industry. An Editorial Board has been formed for the purpose of bringing out the bulletin. This periodical will be a monthly. The Mudrak Parishad, Patna, Bihar will also bring out such a monthly to disseminate their activities.

Nebiolo at the Drupa

(Continued from page 18)

strip facing material becoming loose and rising above composition level. Type faces always new and clean for every run;

No forme stripping.

To these three advantages CO-GRAF now adds two more, both of particular interest to printers:

Greater ease of composition as the matrices, gathered by hand, are set face-up in a composing stick catering for the entire size range;

Matrices of even size for the entire range, from 6 to 72 point.

For the entire duration of the show Nebiolo's Stand remained the meeting point of graphic arts people arriving from all parts of the world. The Nebiolo Commercial organization, strong of two offices in Italy, five branch offices abroad, Agents and Representatives, remained in force at the disposal of customers and visitors, ready to give information and demonstrate the presses.

All in all the participation of Societa NEBIOLO to DRUPA 1958 proved a great success for this Italian Company, engaged in printing machinery manufacturing since 1890 and a worthy representative of a national industry which is constantly and steadily improving its position on international markets.

PRINTINDIA

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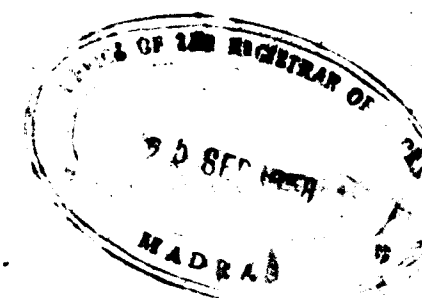
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3. 1958
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".... Needless to say, you have done a real service in the cause of furthering the progress of offset printing in this country.
If you don't mind, would you kindly send us half a dozen more sets of these bulletins for use in our various departments."

SHIV-RAJ FINE ART LITHO - WORKS
NAGPUR-2 19th May, 1958.
"We heartily congratulate you for printing such bulletins in the service of Indian printers. Since these bulletins are to be used for our technical staff, we would feel highly obliged if you kindly send us a set of 4 each for their use."

GOVERNMENT OF INDIA.
INDIA SECURITY PRESS.
NASIK ROAD.
5th June, 1958.
"I acknowledge with thanks the receipt of one set of eight technical bulletins on Offset Printing and problems, forwarded with your letter dated 23-5-1958. As these appear to be of very good use for our technical staff, I shall be glad if you would send us Twenty-Five sets."

THE RAVI VARMA FINE ART LITHOGRAPHIC WORKS
MALAYALI 17th May, 1958.
"We thank you for your letter dated 8th instant. We have received the bulletins also. These bulletins will no doubt be of much help to us and we thank you once again for sending these to us."

THE EAGLE LITHOGRAPHING CO., PRIVATE LTD.
CALCUTTA-14 27th May, 1958.
"You have done very good work for the Lithographers who do not have the opportunity to subscribe to the L.T.F. The books are very easy to follow. We wish to congratulate you upon the excellent compilation."

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Estd. 1953

Printindia

A Monthly Survey of The Graphic Arts Industries, Publishing, etc.

Managing Editor
TEMPORAU

VOL. 10]

AUGUST 1958

[No. 4

In this issue....

- ★ None shall pass this way !
- ★ Layouts and Lettering
- ★ Transfer Papers for Litho Printing
- ★ Working Conditions in Bombay Presses
- ★ Plan for a Streamlined News Composing Room
- ★ Advertising in Japan
- ★ Southern Languages Book Trust
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PAPER, BOARDS, STATIONERY
AND

THE GRAPHIC ARTS INDUSTRY

EDITORIAL

**none
shall
pass
this
way !**

"May I come in?" asks the eager youngster. He has just finished his high school. He doesn't know whether to enter a technical institution, an arts college, or a profession. He is too young to enter a profession just now. Therefore, the alternative left is to join an institution of higher learning. He decides to take up a useful technical line. There are many branches open to him. Which is he to choose? He is in a fix. Finally he decides to join Printing Technology.

Therefore, the youngster eager to join Printing Technology Course asks "May I come in?"

What is the reply he gets? A volley of questions are given as answers: Are you a Backward Community boy? Are you a Scheduled Caste member? Do you belong to Tinnevely or Tanjore District? What are your marks in General Mathematics and General Science? Do you know the printing charges for a forme? All these and many more questions shoot at him. The baffled candidate tries after a fashion to answer some and stall the others.

A month later, too late to join any other course, he is left out in the list of selected candidates for Printing Technology. Not even a letter or any communication that he has not been found fit for admission is sent to him.

The months of June and July every year are a pathetic period for parents with boys of college admissible age. How many certificates, credentials, references and recommendations, a father is asked to get for his son's admission? Yet, the boy may fail to get a seat. It is far easier to get your daughter married without dowry, easier to get an employment with good pay, easier even to get a sleeping berth on the Indian Railways without paying bakshis, than

to get a seat in a technical institution in Madras State. From Cabinet Ministers, Secretaries to Govt., to office chaprassis give recommendatory chits to selection committees and the Heads of departments. The heads of institutions are powerless and are at present only figure-heads, so far as admission is concerned. One cryptic note in an admission form is noteworthy:—

"Canvassing by any candidate will lead to summary rejection of his application." In another place it reads "All the statements are correct and I understand that I am liable to criminal prosecution if any statement is proved to be incorrect."

The plight of students, selected and unselected are very pitiable indeed. We think, we are already benefitting by the II Five Year Plan! Evidently these institutions are earmarked for Backward Classes, Scheduled Castes, persons of certain districts or those who get very high marks in General Science and General mathematics which two subjects incidentally have no bearing on Printing Technology.

In the Regional School of Printing, Madras, there are only 20 seats for Full Time Diploma Candidates. But candidates in hundreds apply for the same and get rejected every year. The 20 seats for Printing Technology Diploma Part Time every year remains unfilled, except for half a dozen or so, who are the rejects of all engineering courses. These unwilling souls drop away after a few months leaving the part time classes, practically vacant. This is not a sane system of admitting candidates for printing technology.

Most of the applicants are sons of press proprietors, master printers, sons of type-foundry

owners and others genuinely interested in the craft. The Regional School of Printing is said to be for the whole region consisting of Andhra Pradesh, Mysore, Kerala and Madras. But it is strange that only candidates with a nativity certificate of Madras State are admitted. Scores of candidates from other states are rejected without even an interview. We had occasion to point out earlier this anachronism in an Independent democracy. Our constitution guarantees freedom for any citizen to move about the Indian Union freely, to study for any branch of knowledge he desires, irrespective of the state to which he belongs. This invidious distinction being made between a Madras and a Non-Madras is, to say the least, unconstitutional, unjust and unpatriotic. In fact, the nativity certificate is an innovation of the past three years. Any state should be proud to take in candidates of another state who come to them attracted by the efficiency of the institution. But we see Madras state rejecting candidates from Kerala for the Printing Diploma Course, simply on the ground of not belonging to Madras.

When are we going to have a rational method of selection? When can we take up the course we want, provided we satisfy the educational minimum standards? When can we expect the admitting authorities to be reasonable in their questions and fair in their selection?

Our democracy and our constitution will be meaningless if a citizen cannot get an admission to a course, although he is qualified, he is prepared to pay the fees and abide by all the conditions.

The Ministry of Education at the State level and the Ministry of Scientific Research and Cultural Affairs, which is responsible for the growth of technical education should take up the matter of admissions to schools and arrive at a foolproof formula for the selection of suitable candidates for Printing Technology Diploma. At present seats in Printing Technology are denied to the most talented, to those who will be really benefited by such training and for whom the institution exists. People from the industry should also wake up to the situation and enlighten the authorities of the vagaries of selection.

We venture to suggest that the Printers' Organization should be taken into confidence in this matter of selection of candidates for admission to courses of Printing Diploma. For after

all, the printers are the section of the public who will benefit by such training. They are the people on whom the responsibility for absorbing the students trained in the craft by offering them suitable opportunities.

The vacancies should be allotted to various outstanding presses in the region. Each press could sponsor one or two candidates for admission to the Diploma course in Printing technology. This would facilitate a fair distribution of the available seats. This will also prevent a number of part time seats being kept vacant as is being done for the past three years.

Candidates from other states should be welcomed and admitted. Inside the Indian Union, there should be no distinction between an Indian Citizen residing in one state and another Indian citizen residing in the frontiers of the state. Are they not both citizens of free India! Inside the state there should not be victimisation of certain so far forward communities. Such anomalous discrimination shuts out talented youngsters and accepts riffaff, simply because they happen to belong to a certain backward or scheduled community, which in Independent India has become the privileged communities.

When one sees the method or absence of method in the selection of candidates to technical institutions in general and to Diploma Courses in the Regional School of Printing in particular, one wonders, whether we are living in a secular state. Has not our Govt become more caste-ridden than during the British regime? Even at the risk of being called unpatriotic, we have to declare that in the matter of admissions as in the matter of appointments and promotions, the State Government is more communal than the most communal party in India or elsewhere. This is a grave matter for the party in power and the Prime Minister of India, as well as his colleagues in the cabinet to ponder. The spectre of communalism is eating into the vitals of the Madras State Government. This is patent in the matter of selections of candidates for technical institutions.

For the question of the eager youngster, the answer is: "Thou shalt not come. For none except the most backward in brains, brawn and resources shall pass this way."

Strange and bitter are the fruits of socialistic pattern, planned economy and Panch Shila!



By

SRI RAMAKRISHNA NARAYANAN

Every kind of production requires planning. Printing is no exception. A well-printed work is only a well-planned print. In this monthly feature, outstanding pieces of publicity matter will be reviewed. The healthy criticism offered in these columns is only with a view to improve the quality of typographical arrangement as well as the choice of type faces

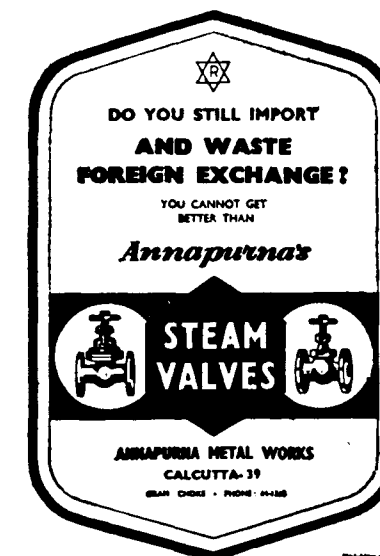
EXPORT PROMOTION AND FOREIGN EXCHANGE

Quite a lot of matter is appearing in our newspapers as well as foreign newspapers about what is known as "foreign exchange crisis" of India. One way to help improve the foreign exchange position or the balance of payment of position is to boost our exports. This has been endorsed by the ministers as well as non-officials like the Chairman of the Indian Society of Advertisers.

Consistent publicity by an organization in this direction is notable by the Engineering Export Promotion Council in Calcutta. Two recent ads of this enterprising organization designed by Clarion Advertising, Calcutta, who have designed others also are presented here.

The first is entitled "Collaboration for trade and "Know-how" in Bodoni italics. Tilted silhouettes of two persons shaking hands (one an

Indian and the other an East Asian presumably) with a valise in the other hand forms the motif for this ad. Each has a smile on his face and the apt heading is in Gill medium centred lines. At the bottom is placed the emblem of the Engineering Export Promotion Council. The name and address



Lesson in Contrast

centred to two column measure are in Bodoni italic and Gill Medium respectively.

The second advertisement is entitled "Not enough pig iron and Steel" in uneven lines of Bodoni italics placed to the left of the line and brush illustration of a hand holding a bar of iron. The text below in uneven left flush Gill Medium lines. To the left of the text is the emblem of the Council. At the bottom in Bodoni Bold and Gill Medium are the two lines of name and address rounded off by the centred 4 pt rule.

These two pieces of publicity are quite good. It is hoped that more advertisement of this nature will be forthcoming for other products in India and abroad.

It should be said here that any export promotion programme should consider the following factors: Only the best quality products are to be exported. This quality should be maintained and not be sporadic. No artificial scarcity should be created once the products are linked nor the quality be allowed to dwindle. After sales servicing and attention should be bestowed on all products requiring these. For this we should always be in the picture. This becomes the role of advertising.

JAPAN SUPPLEMENT

The Hindu brought out a supplement on Industrial Japan on 4th July 1958. Planned with care, this Demi Folio size supplement was a fine number with a cover design depicting five different types of wheels in black, yellow, magenta and blue. Three of the wheels were on one side left and two were on the right side. The heading, lettering, etc. were in the space on right top.

Articles in the Japan Supplement covered various aspects of Industrial Japan stressing Indo-Japanese



the new under-work for Arabid sown breed

ASHVARAJ

Musical result of tempering

It is not mechanical music as organ or music
is, it is music of thought and performance.

Through this modern instrument the quality
of music has been deepened
of maintenance and the inspiration required
of the artist is kept.

Ashvaraj has been used in various settings
as features and accompaniment.

The paper made - design placed
on the top - is known as the Ashvaraj
and most playing is done
on the top - is known as the Ashvaraj
and most playing is done

The making of the Ashvaraj is done
the making of the Ashvaraj is done

THE ARVIDE SQUARES IN PAPER PRODUCTS LTD

Ablly Executed Ashvaraj idea


**GORDON, WOODROFFE &
SONS LIMITED**
CO. (PRIVATE) LTD.
MANCHESTER • ENGLAND
For the Best British Leather Goods




**THEIR WOODROFFE & CO.
(PRIVATE) LTD.**
MANCHESTER • ENGLAND
For the Best British Leather Goods
which are Implying Imports




**GORDON, WOODROFFE &
CO. (PRIVATE) LTD.**
MANCHESTER.
For imports of
Best British National Leather Goods




**GORDON, WOODROFFE & SONS
ARE HELPING TO DEVELOP INDIA'S
LEATHER TRADE AND INDUSTRY**

A big black and white drawing of the head of a horse is the eyecatcher in this



**LEADS
AGAIN
WITH
LK 200 UNIVERSAL CENTRE LATHE**

With the introduction of this versatile lathe "Uggy" machines have opened up new production possibilities for Indian Industries.

Any kind of material could be machined back to rough piece work and in multiple production on the lathe which is economical in operation and suitable for making Viewmeters as well as Plastic Viewfinds.

Other these Special Features and notes for city further information requested.

HEIGHT OF CENTRE	200 mm.
ADJUST BETWEEN CENTRES	1300 mm.
SPINDLE SPEEDS	8
RANGE OF SPEEDS	32 to 1000.

MANUFACTURED BY

THE MYSOOR KIRLOSKAR LTD.,
TARTANPUR P. O., MARGANAH, (HYDRABAD).

SOLE AGENTS:-
BATLIBOI (PRIVATE) LTD.,
SILVER JUBILEE PARK ROAD, BANGALORE 5.

This simple but forceful piece has three outlines of skins, two in tint and one in black. Rules drawn near the bottom of each help divide one associate from the other. The first and third items are all set in right flush lines while the second one is in left flush.

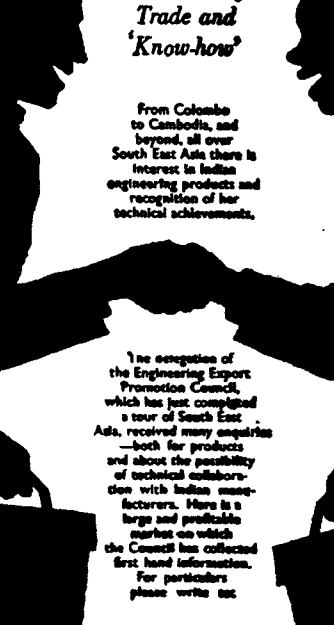
[illegible]

In the Lucknow factory of National Carbon a new flashlight is being manufactured. This advertisement is an introductory piece for this product. The slightly slanting bold illustration of the flashlight in line plus the lines of

*not
enough
pig
iron
and
steel!*

In the present 8 x 4 col series the theme is "Hercules is more than a

ASSAM OIL: 12 x 4 cols.
 "The story of oil" series has concluded with the tenth ad. There



*Collaboration for
Trade and
'Know-how'*

From Colombo to Cambodia, and beyond, all over South East Asia there is interest in Indian engineering products and recognition of her technical achievements.

The evocation of the Engineering Export Promotion Council, which has just completed a tour of South East Asia, received many enquiries —both for products and about the possibility of technical collaboration with Indian manufacturers. Here is a large and profitable market on which the Council has collected first hand information. For particulars please write to:



Engineering Export Promotion Council
Indo Exchange, Calcutta 1

Collaboration for Trade and 'Know-how'

was a line drawing of the pipe line in the last with a Gill Heavy line "Pipelines for oil". Times Roman two column text, Albertus and Gothic for name and address. There was a coupon offer for a bound set of the ten ads forming the series. A good job about oil. DJK

ENGLISH ELECTRIC: 12 x 4 cols.

"Leading the field in every phase of power generation" says the Bodoni italic headline. There are four illustrations of English Electric enterprise very neatly laid out. Nuclear: U.K. Hydro: Hirakud, India. Diesel: Zanzibar, Africa. All had text in Times Roman. Name and address in Bembo as usual. These well presented ads are a proof of the rather wide field of Electraactivity of the famous English Electric Co. Clarion

FINLAY: 14 x 2 cols.

New series. Full wash drawing well done, A saree of a lady, with the reverse rectangle containing Finlay; four lines of elongated Gothic and rather uneven lettered saree in brush complete the ad. ASP

GKW: 8 x 2 cols. the old series continues with Screw, Cotters etc. There is also the series of 10 x 3 cols linking the ancient with the modern. There was the Pallava architecture. Same typography and style of layout. Everest

GEIGY: 11 x 4 cols. There were the four ads about celebrating 200 years. With the continental style of typography, these were like a fresh whiff of air. Good typography with dominant illustrations.

HYDERABAD CHEMICALS: 10 x 3 cols. "Fully tied and secured for good" is the Baskerville Cap title. A line was illustrated to dramatise the headline. The text traced briefly the history of anaesthesia from the time patient were tied with ropes, hit unconscious, deadened with narcotics, up

to the present day when ether is used. This is where the firm comes in. "The largest producers in India of ether" A good idea well executed. PS

IMPERIAL CHEMICALS INDIA: A 10 x 3 col. advertisement of "India welcomes Terylane" in Rockwell Bold caps is shown as part of a newspaper opening. A portion of the masthead and the news below are visible. At the bottom is the news about the new Polyester fibre developed by ICI. More news is to follow. Welcome! JWT

NEW INDIA: 4 x 2 cols. The letter is formed with small squares at left leading to a small Black and white illustration of the head



Forceful Flashlight Piece

office building. In the space remaining, the Goudy headline "Leader in General Insurance" with "New India" in Gill. Bookman face is used for the text. A compact ad in a small space connecting the "L" design with the headline. JWT

RITA MECHANICAL WORKS: 6 x 2 cols. A well drain wash illustration of a lady was illustrated at the Rita sewing machine. Bodoni is used for headline and text. Gill is used for name, address. This

advertisement of Rita is (just Right.

SCISSORS: 8 x 3 cols. "His cigarette is Scissors" is the theme continued. Scraperboard illustration.

SCINDIA: A full 4-col. advertisement was headed "From Today India-USA Fast Cargo Service" with the letters of the two words "India and USA" 2 1/2" high made one mistake the ad to be of TWA. But a glance down at the hips and globe done in nice scraperboard, the Times text with the Scindia Ship trademarks made one catch up with the fact. This forceful mammoth ad was in commemoration of the inauguration of the India-USA fast cargo service on July 1st. There was the line which served as a fitting epilogue: "Scindia ships serve India's needs. May them, full steam ahead! SISTAS

SHELL CHEMICALS: 12 x 4 cols ads "Shell chemicals can save crops and foreign exchange too!" Among two recent ones, one was headed "All packed up.....and everywhere to go." There was the illustration of the train, with the signal down and gunny bags in the foreground done in scraperboard. The two column text in Times Roman below talked about the pest infecting the jute crop and how Shell's Endrin can help not only Jute but foreign exchange too.

The second one featured a perspiring man against a dark background in scraperboard with the title "I have just bitten on a chilli." The Times Roman text about the chilli crop, the pest and Shell's Dieldrin helping.

SOUTH EASTERN RAILWAY continue their 8 x 3 cols informative advts about ticketless travelers. Sometimes the most well known thing needs to be told. Ticketless travelling is such a well-known and oft forgotten thing.

Advertising in Japan

By

MR. S. CHIHARA

Manager, Dentsu Advertising, Tokyo

Indians generally imitate the West. Japan is a proof that East also has progressed. We can take a leaf from the Japanese Book of life and follow in its footsteps. In the field of advertising as in industry, Japan has taken strides greater than any of her Asian Sisters. Advertising in Japan is outlined below in a speech by the Japanese author.

The total national advertising expenditure of Japan last year amounted to 94 billion yen (Rs. 125 crores)—about 1.18 per cent of the total national income, said Mr. S. Chihara, Manager, International Department of Dentsu Advertising, Tokyo, speaking at a reception accorded to him by the members of the Advertising Club at Woodlands Hotel, Mysapore, on 29th July.

Mr. C. M. Sankaralingam, President of the Club, introduced the chief guest to the gathering and said that Japan had developed the advertising business on a par with the advanced countries of the West. Mr. Chihara, he said, was now on a tour of the East Asiatic countries and the Middle East.

RENAISSANCE OF JAPANESE ADVERTISING

Mr. Chihara said that he left his country on June 20 on tour and he had already visited Philippines, Singapore, Indonesia, the Middle-East countries and Ceylon. He said that Japanese advertising was in a backward condition as recently as 20 years ago. Its renaissance was not to come until some time after the war. With the emphasis of post-war production placed on

consumer goods, it was logical that the mass production of standardised articles should begin. It was the introduction of mass production, in any case, that created the necessity of mass distribution methods—in other words, the need for marketing as they understood the term to-day. And advertising was at last considered important enough to warrant the attention of top management instead of being in a category similar to a petty cash expense. There had, consequently, been a steady elevation of advertising practice and the cultural, or educational side of advertising, as well as its economic aspects, had also been coming into focus.

ADVERTISING EXPENDITURE

Japan with a population of 92 millions, had a total national advertising expenditure of 94 billion yen (Rs. 125 crores) last year, nearly 1.18 per cent of the total national income. This figure was still lower than England's 2 per cent or the United States' 3 per cent. But considering that Japan's ratio was only 0.16 per cent ten years ago, the figure to-day represented a seven-fold increase, which came close to being classified as unbelievable. In Japan,

television had a mere 6.5 per cent of the total advertising appropriations and radio but 16 per cent as against the lion's share of 54 per cent enjoyed by newspaper advertising. The total circulation of Japan's daily newspapers amounted to 35 millions. The second medium in order of past importance, that is before the birth of the wave media, was the magazine, which accounted for 5.5 per cent of the total advertising revenue. The recent trend seemed to point out that the reading public preferred weeklies and many of them were highly valued as vehicles for advertising.

COMMERCIAL RADIO

Commercial radio, Mr. Chihara said, was a new arrival. In the past seven years, 40 companies operating 88 stations had been created. At the end of last year there were over 14.5 million receiving sets in the country, meaning that more than 80 per cent of Japanese families owned a radio set. Television, the latest arrival on the scene, had given every indication that it would prove a grave headache to radio. In step with the development of new media, the advertising profession had been also making considerable advance and associations consisting of advertisers, media, representatives, and agency personnel had been formed throughout Japan for the purpose of conducting scientific studies in advertising. There were now 20 such regional associations which were integrated under the Advertising Federation of Japan. The Japan Audit Bureau of Circulations was organised a few years ago and all newspaper publishers, who were members of the Japan Editors' and Publishers' Association, had joined by the beginning of this year.

(Continued on page 16)

AUGUST 1958

PRINTINDIA

Working Conditions in Bombay Presses (Continued from page 12)

and we do not think any rigid rules or directives from the Government are necessary.

According to the nature of employment, work to be done, the position of the concern, such employees do get such consideration in this regard as necessary.

While on this question of the general wage scales, we feel that along with such questions, it is equally necessary for the Government and their Labour Departments to see the minimum returns that such employees give. Unless relatively these things go together, the arrangement seems to be only one-sided and the results by way of production are poor.

In this context, therefore, we might suggest a few instances of the nature of minimum work, that certain employees or employees of certain categories should be expected to give and hence it will go a long way for the better and peaceful working of the Industry if such minimum quantum of work is also decided upon. In the event of this being done, the present day number of disputes will be brought down to a minimum, and we have to very strongly urge to take the following few instances into consideration for laying down a general rule or policy in connection with the Industry.

- (1) Compositors corrected ens to 12 point ens, 750 ens per hour.
- (2) Treadle machine or job work man, 1200 copies per hour with make-ready.
- (3) Cylinder work, book and formes alongwith make ready, 1200 copies per hour.
- (4) Automatic book work and formes, 2500 copies per hour.
- (5) Mono Keyboard Operator, 6000 ens per hour.

(6 & 7) Mono Composing Machine Operator and Lino Operator, 5000 corrected ens per hour.

We have to offer one more suggestion as under:

In case of trade disputes, the employer is not allowed to be represented by a practising lawyer. In view of this, owners of small units are at an extreme disadvantage as they cannot get the services of a proper labour adviser. Hence whenever such conciliation proceedings take place, the owners of all such concerns owing to their unpreparedness, lack of such training and inexperience are unable to represent their case or grounds properly and as a consequence, have to suffer enormously by Awards decided upon by representatives from well organised trade unions. Such trade unions have made it their profession and therefore, they are very well versed in this single matter as against the employers who have to attend to multifarious activities. Even where an employer is able to gain a point, the labour defeats this object by what is known as a "go slow policy" and therefore, the Industry as a whole and the employees in turn also suffer enormously.

It need not be mentioned that a printing press may have only occasionally to attend to actual labour dispute, tribunal proceedings etc., and therefore, his knowledge and experience is comparatively limited. As against this, the organised unions handle this question from day to day and are therefore, well equipped not only with the procedural matters but even with the details of law.

Hence, when the above questions are being considered by the Government, our above few observations may also be taken note of. We mention these solely with the idea of bringing about better day to day relations with the employees in the Printing Industry.

Advertising in Japan (Continued from page 15)

NOVEL WAYS

Replying to questions, Mr. Chihara said that balloon advertising was quite popular in Japan and it was used on special occasions like the anniversary celebration of a firm or the opening of a new branch of a firm. He did not think that advertising through the medium of newspapers would be affected too much by advertising through the medium of television, since Japanese people were very serious readers and they preferred reading to listening or seeing. Answering another question, he said that in Japan there was no tax on advertisement.

Mr. G. Venkatachari of Easterns Advertising, thanked the speaker for having given an interesting account about the advertising business in Japan.

Mr. Chihara was later entertained at dinner at the Kwaliti Restaurant by Mr. C. G. K. Reddi, Public Relations Officer of *The Hindu*, Mr. S. Parthasarathi, one of the proprietors of *The Hindu* and prominent people connected with advertising attended.

PRINTINDIA

is sold

at all leading

Railway

Book Stalls

PRINTINDIA

Working Conditions in Bombay Presses

By

SRI S. MEDI M. C.
Secretary, Bombay Pressowners' Association

Bombay is a thriving city with many presses. Due to want of co-ordination of Govt., Employer and Employee, things have not been as easy as they appear to be. The more hit are the small press-owners. The Press-owners' Association submitted a memorandum to the Government of Bombay some-time back. The following is the text of the memorandum sent to the state Government.

SMALL INDUSTRY

The whole of the Printing Industry is basically and needs to be treated as a service Industry. A fairly large proportion of this service Industry is controlled or managed by the proprietor himself with one or two near relations. On a complete data being available, it will be noticed that the Industry worked by ten people and under, covers a very large percentage. In fact the Printing Industry where the labour employed is over 100 and 500 persons, is extremely small.

Thus the printing presses can be treated only as a small service Industry where the capital employed is either small or is even a borrowed one. This small owner does not also command credit facilities to secure most of his goods. Just as he puts in his own labour in the work, similarly, whatever meager profits he makes are again ploughed

back in the Industry except in a few exceptional instances.

RENTED BUILDINGS

Printers as a class, do not own their own buildings or premises, which only goes to show that the proprietors, owners or organisers of this service Industry are not extraordinarily well off and therefore, the common lot of printing presses is not in a position to bear additional financial levies or burdens.

WAGE SCALES

The employees in the press line are paid the minimum wages as prescribed by the Minimum Wage's Enquiry Committee, even though the Industry considers that scale basis to be on the high side. Where the Industry employs small number of people, further water tight classification by way of occupations is not easy or possible and therefore, in cases where the quantum of labour is small, well defined classes or classification is not possible. Passingly

here we may mention that the present all round wage structure, irrespective of quantum of work or quality of work alone does not give proper incentive or desire for more work. In fact, some formulae on the basis of the outturn of work would work out to the greater advantage of the employees with the guarantee of the minimum wages. This will lead to better results, more production and better pay to deserving persons. Wherever the labour is employed on a larger scale, some broad categories are already evolved and these are covered in the Minimum Wages Enquiry Committee Report. There is no necessity, therefore, going over the same grounds again.

DEARNESS ALLOWANCE

In the Printing Industry, the employees get the total wage amount with full consideration of the dearness allowance. Of course, an Industry of this type cannot be compared to large scale Industries employing thousands of employees like the Textile Industry and if any such standards are thought of for small scale or service Industries like Printing Industry, trade might come to a standstill.

We gather that the Minimum Wages Enquiry Committee have in mind a figure of about Rs. 30/- to Rs. 35/- as dearness allowance and a maximum fixed dearness allowance at this level will more or less adequately meet the present needs.

Special allowances like conveyance, cycle, outdoor or tiffin allowance are not at all common in the Printing Industry. Basis of such allowances also does not exist. In case, in very large concerns where workmen are to be employed for outside errands or outside work they are independently employed on that basis and therefore, there is no common basis for allowance in such cases. However, if the

Government or their Labour Departments have in mind certain additional payment or allowance to be made, when an employee has even to do temporarily work or job of another higher or superior paid employee, it would stand to reason that he may be paid some allowance for the nature of work done.

If the Government will take a broader view of this, it will lead to the training of the employees for the higher wage or work and this, eventually will qualify them for higher wages.

LEAVE

The general consensus of opinion is that the total privilege leave of 15 days as per Fractories Act, Section 79 (Explanation 2) should be observed. This Printing Industry generally has come round to the acceptance of this policy and therefore, even though one may not have fallen in line, will agree to the privilege leave of 15 days.

Any additional leave, called by whatever name we like, like casual or sick leave will throw an additional burden on the Industry, which it cannot bear and therefore, we

are opposed to any further additional leaves, either privilege, casual or sick.

In respect of the sick leave, the advantage the employees should get does go to their share in the Employees State Insurance Scheme and therefore, an additional concession is not considered necessary by us.

HOLIDAYS

Much before the weekly holidays came in, the Trade and Industries in our country used to observe what is known as the "AMAWASYA" holiday. From these 12 days in a year, it has now come to 52 fixed holidays. Besides, there are religious, national and other holidays and in our Industry, minimum number of such holidays observed is 5.

The joint unanimous opinion in respect of the holidays is that the employees should be allowed 7 holidays as may be mutually fixed for the year in advance. It is understood that these 7 holidays should include whatever religious, National or other holidays as could be mutually agreed to. There should, of course, be option both to the management and employees

to adjust the weekly holiday for some other National or religious or other holiday if so mutually desired by either or both.

In short, this is what is known as set off of a holiday by a weekly holiday and in certain cases, this mutual arrangement has succeeded exceedingly and therefore, a general rule on these lines would be extremely desirable.

We understand that there is a move all over the country to reduce the number of holidays and we understand for all other practical purposes, the Government are also moving in that direction. It would therefore, be correct that the number of such paid holidays may not exceed 7.

PROVIDENT FUND

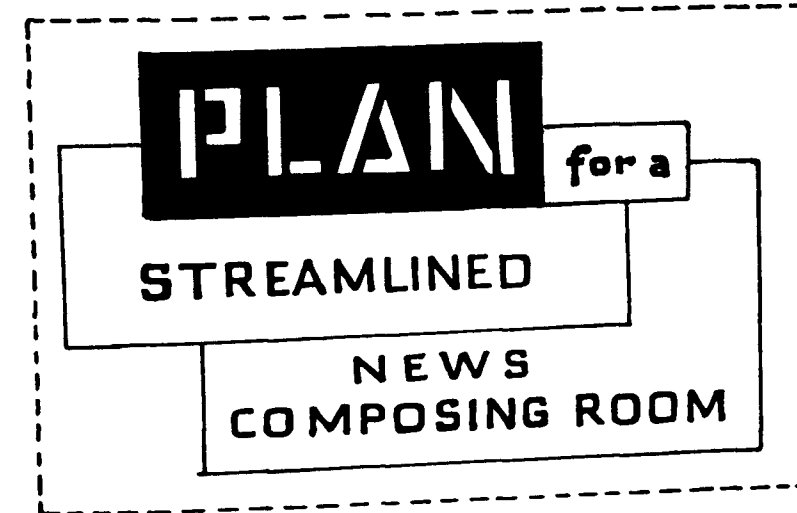
The Industry has laid down by law the introduction of the Provident Fund Scheme, where the labour employed is 50 or over. Therefore, this point is being slowly accepted and incorporated. As regards the benefit of Provident Fund for employees under 50, the time has not still come to immediately adopt this procedure.

The Industry as a whole, is still not in a position to have double or triple benefits like those of Provident Fund, Gratuity etc., and therefore, we, at present, do not consider it fit that there should be any enforcement of gratuity etc., in the present circumstances of the Industry.

As regards other aids, the medical etc., employees get that benefit from the Employees State Insurance Scheme and therefore, a separate question does not arise at the moment.

As regards provision of uniforms or supply of umbrellas, etc., individual concerns can very well take care of this question independently

(Continued on page 16)



By

SRI S. GIRI

We are living in a planned economy. Planning is necessary for economy. In the printing industry, good planning can reduce costs of production, accelerate the rate of production and cut waste. Composing rooms are at present centres of bad planning, avoidable waste and loss of precious time. Let us see if anything can be done for this. And if so, what

If every printer realizes the role of planning, half of the ills that beset our industry will fade away. Planning is thought to be a luxury. Only large offices are said to indulge in it as only they could afford it. This is a fallacy. Planning is not a rigid steel frame or a cut and dry formula blindly applied to some. Planning, by its very nature is flexible and adaptable, with suitable alterations to all presses, irrespective of their size and the nature of work they are turning out. Planning does not involve building a new press or large scale scrapping of existing machinery or the present way of production. It involves though, a little adjustment here and there. People will be surprised at the rich dividends that flow out of such seemingly small adjustment in various departments of the printing establishment.

If printers in general cannot afford to neglect planning, newspaper printers must actively take to planning and constantly review it in the light of later developments

not only in printing technique, remodelled equipment, but also in the very planning technique itself. Every operation in the newspaper printing plant has a time on it and every person should keep up the schedule. One mistake anywhere in the long chain will break the link in the chain leading to timely delivery of the printed newspaper. At a time when newspaper printing and production costs are mounting every day, thanks to unending labour bickerings and journalists war of wages, streamlined planning of newspaper printing room is called for. Every pie saved will go to appease the labour and the working journalists, who for the time appear to be at the very throat of the newspaper industry.

AIM : DECREASING COST

There are three accepted ways to reduce cost of production: Cut wages of operatives, cheapen the product manufactured or increase efficiency in production. The capitalist or the proprietor of a news-

paper in India unfortunately has not within his jurisdiction cutting the wages of his workers. Even for maintaining at the present level, the labour demurs. The second alternative is to cheapen the product. There is no desire to cheapen any newspaper. Already our newspapers are cheap-looking, thanks to Nepa Newsprint, which even the absolutely blind patriot will find unacceptable. On the contrary, every newspaper owner and every newspaper reader wants badly to improve the quality of our newspaper by all possible means at their disposal. There is in fact a constant struggle to improve the quality of our newspapers from all aspects. i.e., typographical, material, news, advertisement, etc. It all now boils down to increasing the efficiency of newspaper production. This is perhaps the only choice left to the Indian newspaper owner to cheapen cost of production. This is the last resource of newspapers. If labour co-operates, the outcome of such co-operation will be profitable not only to the capitalists and labour but also to the newspaper reading public. For then, every copy of printed newspaper will bear the stamp of efficiency. One of the recognized ways of improving efficiency is to streamline the various departments. In this article we are concerned with streamlining the Composing Room.

People little realize that the faulty location of a single piece of equipment will create loss of many man-hours. Take the case of proving press, which should be centrally situated. Or again the galley racks or forme racks. Even a lead cutter or mitreing machine misplaced in a corner will mean minutes of hunting for the operative who wishes to use it immediately. None thinks of these thousands of minutes wasted. When you realize that such waste is avoidable, the seriousness of the problem is driven home.

Gold Medals



**Haas & Koh-i-Noor
Screens**

Awarded by German State

*Over 50 years world's leading
Screen Brands HAAS & KOHINOOR*

Engraved Halftone-Screens

Engraved Rotogravure-Screens
For Paper, Textile, Plastic material

UNIVERSAL-Contact-Screens
interchangeably used for both
Offset and Letterpress procedures

**Film Screens, 50 Designs
and Cellophane-Screens** For Shadings

Film Screens with dots
in different tones for Letterpress or Offset

HERBST & JLLIG
FRANKFURT A. M. 13, Germany

There is an old adage "Make your head save your heels." This is very much applicable for the subject under discussion. The savings effected on unnecessary walking and the time saved consequently can be startling if we use our head properly and to purpose. Lest small composing rooms think that these remarks do not apply to them, let me remind that to maximise efficiency should be the hard necessity of every small office. Are they not struggling for their very existence, by their very size? If they are not efficient, the universal law of survival of the fittest will wipe them away off the map of printing. The small newsprinter has this to contend with: he has no surplus manpower as in a large office to offset waste in time and labour. At production peak hours, small mistakes will upset schedules to a great length. Therefore, the small printer should not think in terms of rupees and naye Paise saved by such adjustments incidental in planning. He should rather visualize the streamlining of production which does not allow many obstacles to arise at peak hours of newspaper production. In an ill-planned composing room, accidents are more the rule than the exception.

Setting up a production line means the location of every piece of equipment so as to coincide with the flow-chart of production. In other words the pieces of equipment should be placed having in mind the sequence of operations that the job is to undergo. The shortest practicable distance should be allowed between pieces of equipment so as to save time and unnecessary walking. When this goal is achieved and to the extent it is achieved, the degree of efficiency will be obtained in production.

In the newspaper composing room, flow of newspaper copy sets the pattern of the plan.

When all copy is translated into type, they tend to converge in the stone or imposing table or earlier in the page make-up table.

For our purposes, copy entering the composing room can be classified in the traditional way. News column matter, classified advertisements, which are akin to news column matter (at least so far as the compositor is concerned) and display advertisements, which form a different class of work is setting and typographical treatment as well as make-up. These travel entirely through different routes to make-up. It is necessary that the routing of column news matter and display advertisement matter be clearly defined and made to stick to those routes. Classified advertisements require very careful watching up as it may cause trouble at the last moment when making up.

Composing room personnel are generally grouped under the three heads as those that handle classified advertisements, those who do display advertisements and those who take up the make-up of column news matter.

NEWS COPY

In foreign newspaper offices we have a copy cutter, who dissects the news into various 'takes'. The news copy consists of news heads that should be set on Ludlow, All Purpose Linotype, Monotype Super-Caster or Intertype or Linotype Display models. There are also News Leads which should be set in a type slightly large than the news matter itself and sometimes in two column size or more. Therefore News Leads are also separated and passed on to those type setting machines which handle those sizes and measures of copy. Thirdly, there are news columns themselves which are given to body measure and body size machines.

After setting the various kinds of copy above described, copy and

their type counterparts meet again. Now proofs are taken and sent to the reader. Meanwhile the type is kept in a correcting random awaiting the readers' corrections. There are two kinds of column matter temporarily stored in what is known as the correction bank. One is current and is to be used for the day's issue. The other is not so current and hence is put apart for the next day or future use. Separate galley racks are allotted for the current or live matter and the future matter.

In the news column section, there should be located a certain number column measure machines, a headletter machine and a proof press with automatic inking. There should also be a correction random with adequate spacing or blanking material of metal. Generally, the headletter machine is placed near the foreman or the supervisor who distributes the various takes of copy. Then comes the lead paragraph machines and then the column matter measure machines and classified ads machines (which mean the same thing). Any matter not conforming to the general pattern of size and measure, such as body box matter etc are termed *freak* and this should be set apart and provided for. Here it should be noted that certain ads require body matter in smaller sizes and this too should be provided for.

It is necessary in large composing rooms to allot a machine for body corrections alone so as not to interrupt fresh setting. Good choice of operators will eventually help in minimising corrections and maximising production. As every worker has to work against time in news offices, it will be prudent to have a stiff recruiting test and only merit should be the criterion

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TRANSFER PAPERS for LITHO PRINTING

By

Sri Bimal C. DATTA, B.A., Dip. Tech. (Leeds) F.R.G.S. A.R. P.S. (London)

Lithography is a very absorbing subject. Bimal C. Datta is a well known authority. This article is the second in the series on the process of transfer, transfer papers, their nature and qualities. A good transfer is a pre-requisite for good printing by lithography. All lithographers will be much benefited by this illuminating article from the popular pen of BCD.

Transfer papers used for lithographic printing for various types of job are usually available from foreign countries. Majority of these papers being "patent make", are of best qualities. But due to the present shortage in the foreign exchange, it is advisable to arrange for making them in our printing establishments. The present short review may help our lithographers to make an effort for preparing Transfer papers.

VARNISH TRANSFER PAPER

Is made by coating a thin bank post paper with copal or Elastic Oak varnish, thinned down with turps, and applied with broad camel hair brush. If desired, it can be sized with a thin solution of glue. It should be used as fresh as possible and must be coated two or three times. The paper is transparent and is suitable for patching up work for colour job. It is mainly used when it is desired to do the transferring dry. Never put it in damp book.

FRENCH TRANSFER PAPER

Is the most important and is largely used for duplicating work for machine printing either from stone or plate. The thinned quality being more transparent is very useful for shining up colour work. They must be pulled dry and must be put on a

damp stone or plate when running down, and not in, damping book. It is quite unsuitable for engraved plates. The paper is made by coating a tough tissue paper with starch paste. It is very adhesive, and is very useful for re-transferring of colour job.

EVER DAMP TRANSFER PAPER

Is made by coating the composition consisting of the following:—

Stucco ½ lb.	Glycerine 2 ozs.
Flour ½ lb.	Gelatine 1 oz.

It is kept in a semi-moist condition by the addition of glycerine and gelatine. Too much glycerine reduces the adhesive properties of the paper, although it keeps it moist for a longer period. Apply two coats to a good hard sized wove paper. It should be kept between sheets of zinc in a cool place to prevent it drying up. It being in moist condition, transfer can be pulled without damping. It will stick to the stone or plate without putting in the damp book when running down again. It requires to be clamped on the back and pulling through in the usual way. A solid transfer can be pulled with less ink. It is also used for stripping and reversing transfers. It is available in two kinds: (a) Opaque and (b) transparent.

SCOTCH TRANSFER PAPER.

A soft sized wove paper is used. The following ingredients are required to make the solution.

Flour - 1 lb. in 6 parts (120 ozs.) of water.

Plaster of Paris - 1 lb. in 6 parts of water.

Glue - 3 ozs.

Gum Sol. (2 ozs. in 8 ozs. of water)

Gum gamboge - 1 oz.

Carbolic acid - 40 drops.

Coat the solution when it is warm and put two coatings one after the other. When dry, glaze the paper by passing through a press on a warm litho polished stone. It can be used to pull transfer from typed matter.

PHOTO TRANSFER PAPER

Photo-Litho transfer Paper is used to take prints from photographic negatives.

The paper is made as follows:—

One part of Nelson's best gelatine is dissolved in ten parts of warm water and sieved through muslin cloth. A fine wove bank post paper is coated by floating the paper in the gelatine bath. Avoid air bubbles. Leave it for drying. The paper is then sensitized by immersing it in 5% solution of Potassium Bichromate. The sheet is then dried in the dark room by squeezing down on a glass or ferrotype plate. It is kept carefully to exclude the light. It will keep good generally for three or four days.

TRANSFERRING METHOD

The transfer paper is placed in contact with the negative in the printing frame and exposed to light. Exposure is sufficient when the design appears in a nut brown on the bright yellow back ground. Then the paper is rolled solid (sparely) with a thin film of transfer ink with a composition or

glazed roller. The paper is then placed in a dish of clean water and all soluble bichromates are washed out in the running water. The wet transfer paper is then placed on a board, a sheet of clean paper laid over, and a glazed roller very lightly rolled across it. This will strip the surplus ink from the swelled parts of the gelatine transfer without taking any from the design which has not swollen in the water. A light rubbing with wet cotton wool will clear up the print. The transfer must be dried before transferring to stone or plate and when re-damping, keep the face as dry as possible. Damp the back to place the transfer in the damp book by placing 4 or 5 sheets of dry paper to cover the face of the gelatine transfer.

TRANSFER INKS

Before we conclude the subject, it is necessary to discuss briefly on

Transfer-Ink which is the most important factor in the smooth working of the process. Generally speaking, each variety of transfer paper requires a different ink mix. The following ingredients are commonly used in making transfer inks viz., tallow, soap, wax, shellac, mastic styrax, Burgundy pitch, turpentine and lamp black.

(a) LITHOGRAPHIC WRITING TRANSFER INK

It is manufactured in the form of cakes out of the following ingredients of equal parts-tallow, soap, shellac, wax and lamp black sufficient to colour. Boiled water or distilled water is best to use for mixing down litho writing ink.

(b) LITHOGRAPHIC CHALKS

Are used for drawing on grained plates and also grained paper. Component parts and their respective qualities are :—

Chalk No.	Wax	Shellac Tallow	Soap	Lamp Black.
I	8	—	6	2
II	8	4	5	3
III	8	4	2	5
IV	8	—	4	6

No. I - suitable for general work on stone or plate and paper.

No. II - hardest (no tallow) and used for drawing on grained paper.

No. III & IV, soft - used for broad and coarse work where fine details are not required.

(c) TRANSFER INKS FOR PLATES is composed of :—

Tallow - ½ lb.; Soap ½ lb. Shellac ½ lb. Lamp Black ½ lb.

As it is a very sticky paste, it does not roll up smoothly unless a little bit of offset press black ink is mixed. For thinning down it is always better to use drops of turpentine or oil of lavender than varnish. In general, the ink to be used should be short, not long.



Among the languages of India, the southern languages hold a spell of their own. They are assured an honoured place among the world languages. The Southern Languages Book Trust has been doing singular service in bringing together the various limbs of the publishing industry for healthy progress. The author, the printer, the publisher and the distributor are all much indebted to the South Indian Languages Book Trust and its ancillary concern, the South Indian Book Industry Council.

On the occasion of his laying down of office as General Manager, Sri G. V. Krupanidhi was entertained by the Southern Languages Book Trust to a farewell dinner at New Woodlands, Mylapore, on Thursday the 17th July 1958. Sri Krupanidhi is taking over the editorship of Deccan Herald, Bangalore.

The function was largely attended by publishers, writers, authors and journalists. Sri C. D. Deshmukh, Chairman of the National Book Trust, Dr. Douglas Ensminger and Miss Jean Joyce of the Ford Foundation, were the distinguished invitees who graced the occasion with their presence.

Sri Govindarajulu, Chairman, Southern Languages Book Trust, traced his acquaintance with Sri Krupanidhi back to the college days and said that he was immensely struck by Sri Krupanidhi's silent devotion to duty, his keen sense of service to the country and above all his utter modesty in not seeking after praise. Sri Govindarajulu said that when the Ford Foundation approached him to shoulder the responsibility for the Trust as Chairman, he was a bit hesitant, but soon got over that feeling when Sri Krupanidhi joined as General Manager.

Sri Govindarajulu spoke of the activities of the Trust during the last two and half years and observed that the achievements should not be judged merely by the number of books published under the Trust's auspices nor even from the extent of loan given to publishers, but by the fact that as a result of the Trust coming into existence authors, publishers, booksellers, and all those connected with the industry have been brought together to work in a friendly co-operative spirit. The entire credit for the effort he said goes to Sri Krupanidhi.

In conclusion Sri Govindarajulu felt that it may be difficult for the Trust to get a General Manager of the calibre of Sri Krupanidhi.

Sri Deshmukh observed that he knew Sri Krupanidhi as a journalist for some time. In recent years he had known Sri Krupanidhi as General Manager of Southern Languages Book Trust. He was personally fascinated by this experiment in producing worthwhile books in the languages at a price which the ordinary citizen can reasonably afford.

Sri Deshmukh referred to the Southern Languages Book Trust and the National Book Trust as twins and remarked that inasmuch

as in the case of twins the baby born later is generally regarded as the elder one, the National Book Trust, which came into being only about year ago should also have a similar status. Since he was asked to be the Chairman of the National Book Trust in addition to being the Chairman of the University Grants Commission his interest in the development of good books has grown. He expressed satisfaction at the work done by the Southern Languages Book Trust and its allied organisation, The Book Industry Council of South India.

Sri Deshmukh concluded by associating himself sincerely with the sentiments expressed by Sri Govindarajulu on Sri Krupanidhi's qualities of head and heart and offered his sincere felicitations on the occasion of his going back to the field of journalism.

Dr. Douglas Ensminger, Representative in India for the Ford Foundation said that he considered it a good fortune to be present on this occasion. He expressed the view that the problems in regard to the production and distribution of books in South India are generally common to the other countries in this part of the world. He was glad that with the assistance the Ford Foundation was able to render, the Southern Languages Book Trust has achieved some positive results in resolving some of the difficulties. The problem of marketing is one that has not yet been adequately solved and he expressed the hope that the Trust is losing the services of such an able and efficient General Manager, and paid a handsome tribute to Mr. Krupanidhi's successful pioneering work in organising the Southern Languages Book Trust on a sound basis.

The Southern Languages Book Trust announced that 53 books
(Continued on page 23)

PRINTINDIA

ADVERTISEMENT TARIFF

	CASUAL	CONTRACT*
	Rs.	Rs.
FRONT COVER	500	400
BACK COVER	300	200
2nd OR 3rd COVER	200	150
INSIDE FULL PAGE	150	125
HALF PNGE	75	65
COLUMN INCH RATE (per col. inch)	6	5

Blocks of 125 screens are accepted for the inside pages and 150 screens for the covers

Price per Copy: Re. 1/-

Annual Subscription Rs. 10/-

* Contract means six or more insertions in one year the space for which is reserved in advance and must be consumed within twelve months from the date of reservation

Plan for a Streamlined News Composing room

(Continued from page 14)

for appointment. Proper training added to the above will pave the way for ideal operatives.

It is usual for the supervisor to distribute the copy himself to headliner and display operators, whereas the news column operators should come and pick up their own copy. This of course involves some travel. Such travel of operators should not be by the back of other operators but by the sides of machines. Adequate moving space should be provided for such travel in the general layout of composing machines.

The best place for the Lightning or Vandercook self-inking proof press will be near the joiner and the correcting random. The proofroom should also be close to the correction random. Where mechanical conveyors are employed it can be a little distance away, where it is not practicable to bring the correction room closer to the proof-reading room.

DISPLAY COPY

The display copy first goes to the layout man. He marks the sizes and measure as well type face. Then the copy goes to the advertisement machines or display machines. After setting the copy and matter meet at the display joiner or make-up man's table.

Advertisement machines require extra magazines and these should be close by on racks. The machines themselves should be close to the ad joiner or make-up hand.

It should be possible for the ad-setters to pick up their copy from near their machines unless copy is distributed to them in their seats.

We have already seen that classified advertisements are set in 5, 5½, 5¾ or sometimes 4¾ point sizes. This can be done on the news

machines. There is sometimes copy which can be classed as semi-display. This is set in slightly larger size than column matter and a border is used around them. This kind of copy should be routed to machines having such moulds, liners and magazines. There may be also classified display which should take the same route as display proper.

Apart from body machines, and display machines, there are Ludlow machines and similar equipment for casting extra large bodies of type and decorative material. These have Mohr saws, mitreing equipment, slug strippers for making the face of heading types level, randoms, proof presses and storing equipment.

Only in large offices separate operatives are assigned for Ludlow, Supercaster of All Purpose Lino-type. In comparatively smaller composing rooms, odd-job men take charge of this work also and deliver the heading type to the advertisement make-up hand. wherever case types are used for display, the cases should be conveniently located near the advertisement make-up section so as to avoid unnecessary and avoidable travel. Mohr saws, Slug strippers, Trim-o-saws, powered mitreing machines should all be located near the ad-assembly men.

Wherever galleys containing advertisement matter are stored, these galley racks should be located nearby and clearly marked with number and letters, so that with the entries on the galley proof one will easily pick up the required advertisement.

At this stage, it needs mention, that the three groups of matter, advertisements, news column matter and column news are to be kept distinctly apart. Then and only then each group will operate efficiently on its own. Mixing one with the other and giving display

matter to a column man and vice versa will delay production. No operators should be disturbed by asking him to set up heading or matter of other size, measure or face. To facilitate this, column machines should have only that size and measure and fount of matrices. This will obviate the temptation to disturb every operator to set captions, heads or other matter not in his line.

As regards heads, captions etc. specific founts and sizes should be used and no departure from the customary size and face is to be allowed except with the express orders of the management.

However much everything is placed around the concerned operative to facilitate easy pick-up and the avoidance of unnecessary travel, travel cannot be eliminated as such. When travel is unavoidable, there should not be obstacles in the way such as pillars and posts, supports, obsolete racks, frames and equipment, unnecessary steps and change in the level of the floor, slippery flooring, scraps of paper or metal dump, etc. This is conditioned by the building plan and subject to this condition, it may be possible to adjust and avoid obstacles in the route of travelling operative.

There is another aspect of these posts and pillars. They may be utilized to place racks by improvising. In making any alterations, no objections should come in the way, such as the long period during which the existing arrangement held sway. In fact, when one tells that a rack or a stone has been there all these years and is good where it is, it becomes necessary for the planner to check several times to see why it should not be altered. Finally the planner will discover that the original placement of the piece of equipment had no reason for its location at all.

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During the early days of this month, the Free World witnessed a regrettable lack of imagination of the party in power in handling labour situation in a welfare state. The whole press of India rose in indignant protest about the failure of the state to afford fundamental protection to person's life, movement and property. Why not a probe into this by an impartial Judge?

RECENT STRIKE IN "THE HINDU"

The Management of The Hindu state:

Many enquiries have been made about the reasons for the regrettable strike by a section of our employees. The following circumstances that led to the strike and later to the ugly incidents that culminated in the suspension of publication of *The Hindu* will be of interest:

On Wednesday, 16th July, the shifts for the following week, and the personnel of each shift, were duly notified according to practice. The personnel of some of the batches were changed. One such, among others, who was shifted from one batch to another, was Lino-Operator T. G. Balasundaram.

He, along with other lino-operators, was given his weekly off day on Saturday, 19th July and was required to come for night duty on the 20th/21st July. But he presented himself for day duty on Saturday, and began to work on a machine. The Supervisor drew his attention to the duty lists and instructed him to take the day off as

notified and commence his night shift from the next day. He refused to obey the notification and the instructions of the Supervisor and insisted on working on that day. He not only disobeyed legitimate orders, but created a commotion at the workspot. It was only after being severely warned by the Office Manager that he left the office. He, however, absented himself from night duty on 20th/21st July without previous permission or intimation. A leave letter which was received at 9 p.m. on Monday, the 21st July, was evidently an afterthought, and in the circumstances, the reasons adduced were not valid.

The Management ordered his suspension on the 21st July and called upon him to submit his explanation for his misconduct. The explanation that was received not being considered satisfactory, an inquiry was instituted on 28th July. During the inquiry, it was borne out, on his own admission, that he came on duty in a shift to which he was not posted, that he insisted on working in that shift in spite of legitimate orders and

instructions, and that he refused to obey his superiors. Despite proof of misconduct, he was not even repentant.

In the circumstances, order for his dismissal was passed on 29th July.

It must be added that before a section of our workers went on strike from the night of 30th/31st July, no reasons were notified to the Management for the abstention from duty.

During the strike and thereafter no precipitate action was taken by the Management. Two days after the commencement of the strike, the strikers were asked individually to submit their explanations for abstaining from duty, and taking part in an illegal strike, and thereby committing misconduct under our Service Rules. In a cyclostyled reply, they stated that "as a protest against the unjustified, provocative action of the Management in terminating the services of Sri T. G. Balasundaram, Vice-President of the Union, which was an act of victimisation, I abstained from work on my own from 30th/31st July 1958. I would request you to immediately re-instate Sri T. G. Balasundaram on which I shall present myself for work", and that "in view of the circumstances which led to my abstention from work, I submit that I have committed no act of misconduct vide Rule 35(ii) of the Service Rules of *The Hindu* nor have I taken part in a strike which is illegal".

It is our conviction based on evidence and law that (i) the dismissal of Lino-Operator Balasundaram was fully justified and according to procedure prescribed by law and (ii) the strike was illegal.

However, on the expression of regret by the lino operator, Balasundaram, he has been taken back in our service.

Plan for a Streamlined News Composing Room

(Continued from page 18)

There may be plenty of reasons why it should not be there at all. This brings us to the question of attitude of the mind of the planner. He should have an open mind, and all his suggestions should be motivated only by one consideration. This is the expeditious production of work and the flow of copy through its logical channel. The restrictions imposed by the structure of the building will always be there. Planning is always easy to implement in a smaller office than in a big office. This is due to the lesser items that are to be located in a convenient way. Only in larger plants, careful measurements with plans of the floor, equipment models and discussion with the various heads of departments on the proposed planning and how it will affect the related departments should all be considered. The responsibility of planning for the smooth flow depends upon the various personnel working in the department and also the supervisory staff. All should share the responsibility for the implementation of the plan and work co-operatively for the smooth-flow of production which is the aim of planning.

When the placing of equipment has been finally decided upon, considering all the contributory factors, there will be no bottlenecks. The flow will be in one direction only, i.e., towards the page-make-up section. All type converges in the page make-up section. From the page make-up section all type proceeds in the shape of pages locked up in steel chases, ready for stereommat preparation. The stereo matrix preparation department, familiarly called in the local news offices as "Winkler" after a brand of matrix moulding press, should be

located nearby, in the direction of flow of work.

PRODUCTION AIDS

In this article on planning, it will not be out of place if mention is made of certain contributing factors in the form of production aids. These aids to speed up the flow of copy.

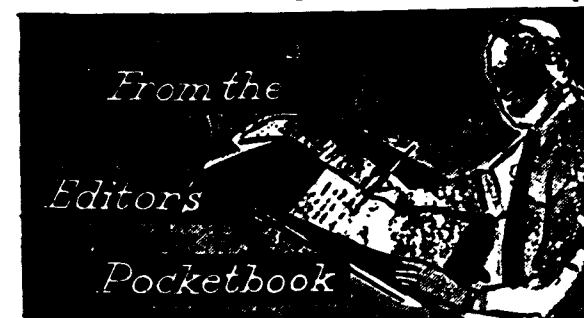
Progressive news composing rooms use mark-up code to denote type faces, similar to make-ready nomenclature used in up to date machine rooms. This accelerates the speed of the copy. Especially in display advertisement copy, the listing type faces used should help the composing in the execution of each advertisement and also in distribution and final check up. A line to be set up in a separate face may have been omitted or set in the same body type. This can be easily detected if a list of all type faces used is given at the bottom of each display advertisement. With such a list of type faces, each operator can set his part and cancel the type face in the list passing the copy on to the next operator.

Copy is generally clipped, hooked and placed in trays or bins. The colour of hooks, clips and bins should correspond to the machine nomenclature for easy identification. The operator can change magazines and keep ready for setting as he can readily make out from the plant identification codes. The mould equipment, liners, etc should be identical on all display machines. This will ensure maximum interchangeability of matrix founts as seems expedient. Founts of matrices should be permanently assigned to certain machines and these should be strictly adhered to. Systematic storing and filing of matrix founts will help change-over. Magazine racks should be labelled on each slot to carry a particular magazine and only that fount should be placed in that slot.

When that magazine is on a machine, it should be left vacant. Indiscriminate storage of matrix founts will defeat the very object of having these spare matrices and will create confusion at the time of tracing particular founts for putting on the machine.

Display advertisement copy, when received, goes first to the layout man. He marks sizes, measures, faces, blanks etc. When cuts are yet to be received, the copy should not be prematurely sent to the composing room. Only when all components to proceed with the full advertisement are received it should go to the composing room.

Whenever latest equipment is installed, it should be brought in line with the general set up or if need be all the other things should be brought in line with the newer equipment to form a homogeneous whole in the production planning. It should be remembered that even the most antiquated piece of equipment, if properly placed in relation to the flow of work, will produce work more efficiently than if dumped in a corner. Of course it cannot be forgotten that in a news printing room, every piece of machinery and equipment should be of modern design well maintained so that it is dependable and will not cause breakdowns and bottlenecks in the flow of production. There are various labour-saving metal furniture, mechanical quoins, locking up and lining up table, pre-make-ready equipment for pre-registration, imposing table with trolley etc., which may be found useful, in conjunction with precision instruments like type high gauge, temperature control for metal pots, analysis of type metal for proper quality and constituents, general cleanliness etc. will pave the way for quicker, more accurate and smoother production. Naturally, the costs will also go down.



"THE HINDU" STRIKE AND AFTER

The month of August in its first week was punctuated with ugly scenes, assaults, intimidations and incitement to violence by some of the workers of *The Hindu* who went on a sudden strike during the last days of last month. The workers who were very peaceful on the first few days of the strike were exasperated by the issues of *The Hindu* regularly appearing on the news-stands in spite of their strike. This resulted in their besieging the offices of the 80 year old daily and in a last bid to coerce the management, indulged in acts of hooliganism which ill becomes any civilized trade union and the people who champion its cause from positions of power should hang their head in shame. Innocent sub-editors and loyal workers were beaten without discrimination resulting in the Management's notifying the suspension of the daily due to failure of the local Government to ensure the safety of life and property of its subjects who were exercising their liberty to go inside the office and work during the strike. Milk vans and delivery vans were smashed and the drivers were manhandled. Finally after 10 days of suspension of the daily which had been appearing daily without a break for the last eighty years, a compromise was made. This compromise is a fitting tribute to the foresight and vision of the management, in spite of grave provocation from the workers' side. All dailies and weeklies wrote eloquent editorials on the righteousness of the management and condemned unequivocally the workers' uncivilized pranks and antics. However, the workers are not to be blamed. They are led like dumb, driven cattle, by selfish political interests. Until the day our workers unions are freed from the clutches of unscrupulous politicians of all shades and colour, sanity will not be restored in labour activities. This is a danger that every industry will have to face, thanks to the pampering of labour by the party in power. The strike of *The Hindu* will be an eye opener for all industrialists, who should not rest until their liberty to carry on their trade with loyal workers is ensured by the Govt. of the day. This is a lesson for all press proprietors

who should heed the warning and read the writing on the wall. They should deal with firmness and justice towards all problems connected with labour. Want of imagination and courage to grapple with the situation has brought about many a casualty in the number of presses.

ADVERTISING IN INDIA

Shri Lal Bahadur Shastri who addressed the Annual meeting of the Indian Society of Advertisers on July 18, 1958 stressed the importance of advertising and the need for training young men in modern advertising technique. The advertising business according to the minister needs a lot of skill, refinement and a deep understanding of humanity to make it a success.

Shri Shastri referred to the preference of English media by advertisers and expressed the view that the development of literacy and the growing benefits from People's plans (which in turn enable people to buy more), the language media were bound to come into their own.

The minister said that the role of advertising in boosting our exports could hardly be over-emphasised and as such felt glad that the Indian Society of Advertisers was giving this question their earnest consideration.

Shri Tulasidas Kilachand, Chairman of The Indian Society of Advertisers, in his speech said that Advertising was the handmaiden of distribution, the role of advertising being not only to help the full utilisation of production existing but also to create new demands and tastes. He quoted the experts of the Ford Foundation that India is potentially the biggest customer market in the world. He emphasized the role of market research and the need to study the foreign markets very carefully for boosting exports and thus help the foreign exchange position.

FOREIGN-PHOEBIA INDICA

A mild stir was created by the ludicrous suggestion of a foreign returned representative of a reputable machinery firm during the Printers' Conference at Coimbatore. The distance of time lends perspective and objectivity to judge the incident now. This indiscrete individual said that India will never attain that amount of technical efficiency so as to manufacture high precision automatic machines similar to the ones made in the continent which is very popular in our country. As there was a furor, friends of the foreign-returned gent hurried to his side to pull him up, before he made further foolish suggestions.



NEWSPRINT FAMINE

The grave situation arising from shortage of newsprint and the difficulties experienced by the smaller language papers were stressed by a deputation which met the Union Minister for Commerce and Industry, recently in Bombay.

Sri Lal Bahadur Shastri and Nityanand Kanungo, Minister for Commerce and Industry and Union Minister for Commerce respectively received the deputationists in the Raj Bhavan, Bombay. Shri A. R. Bhat, President of Indian Language Newspapers' Association and Sri N. L. Shah, Vice President of the same organization, who met the Ministers enlightened him of the difficulties experienced by the language newspapers. They gave constructive suggestions for the improvement in the supply of newsprint, which is unregulated and sporadic at present.

The delegation requested the Union Government to grant import licences to up-country newspapers also on the basis of ten months' stock or in the alternative to keep buffer stock at leading mofussil centres.

The deputationists made the following suggestions for solving the impending newsprint famine in the country :—

The present cut in the newsprint quota is at a flat rate. The cut should be changed into a graduated one. Papers having a half-yearly quota of more than ten tons and which fall within the category of

medium-size newspapers and small newspapers should be given relief. Papers which started recently should be supplied with improved quality of newsprint, i.e., imported newsprint until import licences are issued to them. The quality of newsprint produced at present by the Nepa Mills, is very bad. Immediate steps should be taken to improve the colour and quality of Nepa newsprint. The supply of Nepa newsprint is not anything like regular at the moment. The supply should be made regular in the immediate future.

Finally the delegation suggested to the Ministers that in case there is going to be a ceiling on newspaper consumption, price-page schedule should be brought into force. This will mean relating the price of newspapers to the number of pages they are printing.

It is understood from a handout issued by the Indian Language Newspapers Association that the Ministers gave a patient ear to the valuable suggestions to remedy the difficulties of small language newspapers and assured the deputationists that their difficulties will be looked into and the needful done.

THE HINDU

The Management of *The Hindu* in a statement say :

The attention of the Management of *The Hindu* has been drawn to a statement issued to the press by Messrs. Thambiran and Narasimhan about the strike of a section of our employees.

The Management hold that the dismissal of T. G. Balasundaram, ex-Lino operator was fully justified. The order was served on him after an enquiry made as per prescribed procedure.

The Management have not at any stage sought the help of the Government or the police against "peaceful" picketing. The Management asked only for legitimate protection to enable their staff to attend office and go home after duty in safety. This was denied, resulting in serious injuries to many members of the staff who were either doing their normal duties or who were proceeding to and from their duties in our premises.

The complaint that some workers were being intimidated and forcibly confined and made to work inside the premises is baseless. Workers inside were individually questioned on this matter by Factory Inspectors who frequently visited the premises. They were satisfied that no worker stayed inside against his will nor was any one coerced or over-worked. There was no necessity for any fresh labour to be engaged as, until Saturday, the employees willing to work were going to duty and returning home without being molested. It was only when they were threatened with bodily injury and after several of the employees were severely assaulted and beaten that they had no other option but to stay on in the premises.

When the strikers and their supporters realised that *The Hindu* was being published to schedule, they resorted to violent tactics and set upon members of the staff and transport vehicles, destroying newspaper bundles and interfering with the distribution system in the City. The increasing tempo of violence and destruction and the indifference of the police reached a climax on Monday evening when right in front of the gates, our lorry

was stopped, the driver inside dragged out and beaten badly and the newspaper parcels destroyed. When the police did not give even elementary protection and when hooliganism and violence occurred in their presence and immediate vicinity, the Management took the most painful decision to suspend publication of *The Hindu*, in the interests and the safety of their employees inside the premises.

On Monday evening certain proposals were placed before the representatives of Management by the Minister of Labour. Representatives of the Management returned to their office from the conference with the Minister at 5.30 p.m. The violence that is referred to occurred at about 6 p.m. The abnormal conditions that were created and which continued on Tuesday were not conducive to a calm discussion and consideration of these proposals.

On Wednesday, the Management were asked to attend conciliation proceedings of the "dispute" by the Personal Assistant to the Labour Commissioner. The Management represented to him (1) That the dismissal of T. G. Balasundaram, ex-Lino operator, was fully justified, (2) that the strike was illegal, (3) that conditions of intimidation and violence existed and Government had not restored law and order and in the opinion of the Management the restoration of normalcy was essential before any discussion of those subjects could take place.

But this leaves open the larger question which we mentioned at the beginning, namely, the future of labour management relations in general and maintenance of a sense of security among those who may

have the misfortune to differ from others who may be in positions of influence and power. We have often referred to the unfortunate consequences of labour movements and organisations being led (or rather misled) by persons who have nothing in common with them. We have also warned against labour in the mass being exploited by political parties to strengthen their positions in terms of mere numbers, thanks to the adult franchise which makes it worthwhile to woo labour. Bad in principle as this is, it is fraught with incalculable peril to the development of industrial harmony because of the temptation it offers to political parties to promise workers to get them benefits which they can never get either from the point of the quantum of their effort or from that of the economy of the industries concerned. This has, in turn, led labour organisations themselves to seek affiliations with and aid from whichever political parties would promise them most. It follows that labour organisations, which enjoy the support of the parties which are in power in one or other of the States, have come to believe that they can get special rights and immunities from authority even to the point of getting away with acts of violence. Nor have those in authority been too ready to disabuse these organisations in this respect either by words or by action. This has created an intolerable situation which can do no good either to the labour movement or to the general weal. The time has come for men of goodwill, both official and non-official, to come together and devise ways to stop the rot. The public now have a clear picture of the deterioration that has set in and will doubtless insist on the authorities doing their duty and setting matters right before things get out of hand.

Southern Languages Book Trust

(Continued from page 17)

have so far been published under its auspices by various publishers in South India and that an additional 100 titles are scheduled for publication before the end of 1958.

The books were published in uniform editions of 5000 copies each, mostly at prices ranging from one to two rupees.

The Book Trust described the sale of the books as "encouraging". Incomplete sales reports show average sales of more than 3000 copies for the eight Tamil titles published in May, 1957. Among the Tamil best-sellers were an anthology of "*Rajaji's Fables*" and "*An Anthology of Short Stories*" each of which sold over 4000 copies during the first year following publication. The best-selling Telugu book was "*Chivaraku Migile*", a novel (abridged) by Butchi Babu, which has sold nearly 4000 copies. (The Kannada and Malayalam books) published under the auspices of the Book Trust have not been on the market long enough to make sales figures meaningful. They were released in November and December of last year, respectively).

The Book Trust also announced the retirement of Sri G. V. Krupanidhi who had been General Manager since January, 1956. One of India's outstanding journalists, Sri Krupanidhi served the Trust with great distinction during its important formative years. He explained that he was laying down his office at the Book Trust because he "could no longer resist the alluring smell of a newspaper office". Sri Krupanidhi is resuming his journalistic career. His responsibilities as General Manager have been assigned to the Book Trust's Comptroller, Major G. V. Pai.



In these pages "Graphicus", an expert in the printing and allied industries, solves month by month Pressroom Problems of the printers. All questions may be addressed to "GRAPHICUS", CO PRINTINDIA

221. Q. We are screen printers and we undertake to print all kinds of surfaces through this medium, i.e. silk, plastic, wood, glass, tin etc. The run is restricted to a few thousand, as we do not have mechanical devices for screen printing. We are using at present inks of reputable ink manufacturers. But we find that the cost of ink alone, unlike in other sister processes, runs to a high figure, making the customer suspicious. As you are aware the cost per lb. of good silk screen printing ink, especially with fluorescent pigments, is in the neighbourhood of Rs. 20/-. Cheaper inks are dull and are not worth the trouble of silk screen printing. I request you to advise me whether, in view of the high costs of inks is it possible to use with success paints for other surfaces. Of course, for paper, we shall continue to use good inks.

A. The use of ordinary paint for silk screen work is not recommended, paint being of a very thin consistency, would creep under the screen design and smudge on, spoiling not only the print itself out also the stencil. As far as the cost of silk screen inks are concerned, generally speaking, the prices for these compares very favourably with good quality letterpress inks but naturally since the ink film from silk screen is much heavier than letterpress or offset the consumption of ink is much greater per square inch of coverage. This disadvantage is compensated for, however, by virtue of the fact that for short runs on multicolour showcard and similar work silk screen printing is very much cheaper than the other processes. In the field of printing on such surfaces as glass, metal, wood etc., for short runs it is quite unrivalled in the matter of economy and in some cases the most suitable for long runs as well. A silk screen printer must sum up all the

advantages of the process and specialise in that type of work which suits the process best; in this way competition from the other processes need not be considered.

222. Q. We have some old machines, some of them a quarter century old. These letterpress machines, of stop cylinder and two revolution variety, give quality production. In order to step up the quantity also, we intend attaching automatic feeders. As you know we can attach some of the Universal Feeders of the built-out variety, to these machines which have hitherto been working as hand-fed machines. Our mechanic has thrown an objection to this proposal. According to him, these old machines, although apparently in good working condition, cannot cope up with increased speeds which the attachment of automatic feeders would entail. They would, he avers, give not more than 2,000 copies per hour, for which large outlay is uncalled for. I would very much appreciate your expert counsel in this switching over to automatic feeders.

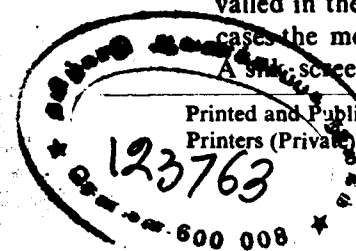
A. Before installing any new plant it is always essential to ascertain the economics and advantages to be gained by so doing. In this case to make the installation of automatic feeders economical it would be necessary to obtain a very considerable increase in output per machine. From what you say in your question I doubt if the machines referred to are capable of printing any faster than they can be fed by hand and to fit automatic feeders would therefore show no advantage at all. I would suggest that, instead of buying feeders as you intend, you purchase some other piece of equipment for your press which will improve and increase the facilities you already have for carrying out your work.

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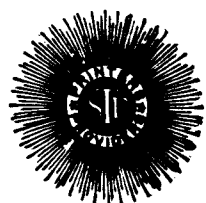
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