

ALL-INDIA PRINTERS' CONFERENCE AND EXHIBITION—SIXTH SESSION

ORGANISERS :

*The Coimbatore & Nilgiris Districts Master Printers' Association,
7/453, Cross-cut Road, Coimbatore.*

To All Printers

The Sixth Session of the All India Printers' Conference and Exhibition will be held this year at Coimbatore from 19th April 1958 under the auspices of the Coimbatore and the Nilgiris Districts Master Printers' Association. The open session of the Conference will be held for three days from 19th April and the Exhibition will continue for three weeks.

As in the previous sessions of the All India Printers' Conference, a competition in printing, process-engraving, book binding, etc., will be held. A list of subjects for competition is given in Appendix A. Articles submitted for competition will be limited to production completed during and after 1957. They should be sent to the Hony. Secretary, The Coimbatore and the Nilgiris Districts Master Printers' Association, so as to reach him on or before 20th March 1958.

Coimbatore being one of the most important cities in the South, the Conference is sure to attract a large number of delegates from all over the country. It is proposed to hold a day's session of the Conference at Ootacamund.

There are a number of good hotels, both vegetarian and non-vegetarian. The number of delegates who would be attending the Conference from the various Associations and the type of accommodation and food they will require may be intimated to the organisers early enough.

Delegation fee for Associations affiliated to the All India Federation of Master Printers will be, as usual, Rs. 100 for 5 members, and Rs. 10 for every additional member and Rs. 25 for every individual member. Delegation fee may please be sent so as to reach the Organisers on or before 7th April 1958.

As usual, a Souvenir will be published at the inauguration of the Conference which will contain articles of interest to printing industry. It is needless to mention that an advertisement in this Souvenir will have a good publicity value since it will reach every printer worth his name in the country.

The advertisement tariff and other particulars relating to the Souvenir are given in Appendix B.

Intending exhibitors and advertisers are requested to contact very early the Hony. Secretary, The Coimbatore and Nilgiris Districts Master Printers' Association, 7/453, Cross-cut Road, Coimbatore.

APPENDIX A

LIST OF SUBJECTS ON WHICH PRIZES ARE TO BE AWARDED

LETTERPRESS PRINTING

1. Books-General
2. Books-Children
3. Magazines
4. Direct Mail Publicity
5. Calendars
6. Cartons and Packages
7. Labels
8. Letter-Heads

OFFSET

1. Direct Mail Publicity
2. Calendars
3. Posters
4. Labels
5. Cartons

BINDING

Well Bound Books

"DIE-EMBOSSING

Die-Embossing Jobs

PROCESS

Results of Blocks with
Originals

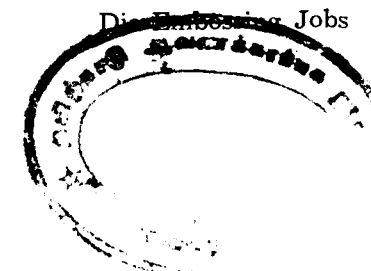
S.C. MAZUMDAR ROLLING SHIELD

(Instituted by the Association of Master Printers, West Bengal):—for best book printed on Indian made paper.

RULES AND REGULATIONS OF THE COMPETITION

1. Printers and allied industrialists, willing to send exhibits shall have to send two copies of each exhibit, but in case of Books, only one copy will have to be sent.
2. Screening of exhibits will be at the sole discretion of the Exhibition Committee. The Committee will not be bound to assign any reason for rejection of any exhibit.
3. Exhibits will not be returned.
4. Entries to the competition will be limited to production completed during and after 1957.
5. All exhibits are to be sent to the Hony. Secretary, The Coimbatore and Nilgiris Districts Master Printers' Association, 7/453, Cross-cut Road, Coimbatore, so as to reach him on or before 20th March 1958.
6. Exhibits shall have to be sent well-packed in cases or packages, so that no damage is done in transit.
7. Exhibits must reach the Committee freight *pre-paid*.
8. Intending competitors must mention the particular category under which they want to compete.
9. No entry fee will be charged for the exhibits.
10. Entrants in Colour Process Block Section shall have to submit original art work together with progressives. Originals will be returned to the senders as soon as the panel of judges has examined them.

(Continued on page 11)



(Cut this out and keep it in your Pressroom)

LUBRICOAT CARTON INKS

A major problem in the formulation of abrasion-resisting inks for the printing of carton and other packaging materials, is to produce inks which form a tough film which possesses sufficient surface 'slip' to withstand the severe test of modern high speed package-forming machinery and subsequent rough handling in use, and yet has good acceptance for overprinting. By the use of special materials in their Lubriccoat range of Offset-litho and letterpress inks Coates have produced abrasion-resistant inks which dry very hard, have good 'slip', overprint well on each other and are quicksetting or absorbent stocks. Gloss Lubriccoat Inks also can be supplied for suitable stocks.

The depth of colour obtained on a wide variety of stocks, the controlled water-resistance and trouble free press handling achieved with Lubriccoat Offset-litho Inks are a considerable advance on abrasion-resistant Offset-litho Inks of the conventional wax-plus-resin type, and are of great significance when cartons are to be printed by offset-lithography.

PAPER

Lubriccoat Inks are formulated to print on most types of paper and board normally used for offset-litho or letterpress printing. The nature of the stock can affect both the speed of setting of the ink and the finish of the dried print. A sufficient sample of the proposed stock should be submitted to Coates with the enquiry, to ensure that all necessary adjustments to the ink can be made.

DRYING

Lubriccoat Inks are formulated for each specific job, and it is therefore not usually necessary for the Printer to add driers. On most absorbent coated stocks the inks will set, and prints can be handled or backed up 30-60 minutes after impression, depending on the degree of finish of the ink and absorbency of the stock. A unique form of controlled oxidation drying takes place after setting and the inks dry overnight, but prints achieve maximum hardness and abrasion-resistance 48 hours after printing. It is this controlled oxidation drying in two phases that is one of the special features of Lubriccoat Inks, and from it they derive their outstanding abrasion-resistance.

REDUCTION

Lubriccoat Inks are formulated for the specific requirements of each job, with particular regard to stock, machine speed etc., and should therefore be used straight from the tin without further reduction. If reduction is considered essential, small quantities of Genolin Gold Seal Thin Litho Varnish may be used.

OFFSET-LITHO BLANKETS AND ROLLERS

Synthetic blankets and rollers are recommended.

COATES INKS FOR GOOD PRINTING

A PRINTER LOOKS AT PLANNED PROGRESS IN BOOK PRODUCTION*

S. N. GUHA RAY

As in other fields, the business of book publishing has got a tremendous impetus in India since independence. But though it is a very complicated business, no formal training in this line is available anywhere in the East. Any one and everyone can become a publisher. As a result the complexity of the problem is in daily increase and the one-man publisher is finding his living daily becoming precarious.

It is a mistaken idea that the ownership of a printing business is a great help. More often than not it is otherwise; it is a handicap.

The business of book production does not end with the production of the book itself; nor does it begin with it. As Chandler B Grannis says in the opening paragraph of his *What happens in Book publishing*:

"Publishing... is to make public, to send forth among the public—the words and pictures that creative minds have produced, that editors have worked over, that printers have reproduced... To perform an editorial service alone, whether at a risk or fee, is not to publish; to purchase printing and binding services alone is not to publish; to promote sale is not, in itself, to publish; to distribute author's printed product is not, in itself, to publish. Book publishing is to do all of these things, in an integrated process... It is the whole intellectual and business procedure of selecting and arranging to make a book and of promoting its ultimate use."

The above is a very succinct exposition of modern book publishing and when we ponder over the implications of the above statement we can appreciate the reasons why the one-man publishers find their business precarious. No one of the single items beginning from

* Paper read at the Seminar on Book Production at Hyderabad on 2nd February 1958.

selecting the book and the promotion of its ultimate use can claim preponderance over the other. It is in the nature of the publishing business that each individual performing a particular function must do all other aspects of the work and be able to see the entire project as a co-ordinated whole. No matter what a man's direct job is, in a publishing organisation, he must know about what his other colleague is doing. A specialist around a publishing business, as the President of the National Book League said once, is a nuisance.

In this article, I am dealing mainly about the production, the printing side of the business. It is the concern of both the publisher and the printer that the book should come out of the press in scheduled time and produced neatly. Though this sounds quite simple and business-like both the publisher and the printer know that between the entry of a manuscript in the press and its coming out as a printed book there are a number of operations which are as complex as time-killing.

The perfect production of a book requires the collaboration and integrated co-operation of several agencies, viz., the publisher represented by his editorial staff, the author, the illustrator and the printer. If all these people know their own jobs and co-operate as a team then the production of the book becomes smooth and perfect. The copy editor must be a person who knows the intricacies of the printing so that as soon as the manuscript or 'copy', as we call it in our peculiar parlance, is received from the author, he should go through it with extreme care and mark out all details in it to make it suitable for the printer. The co-operation of the illustrator is necessary in the preparation of the press copy for obvious reasons. The illustrator goes through the text first and selects with the

editor the type, number and nature of illustrations that should go into the book. Of course, the budget very often limits the number and quality of the illustrations. The printer's function is to find out the reproduction suitability of the illustrations. He will co-operate with the editor in fixing the format of the book, the measure, i.e. the width of a line and the depth of the printed matter in the page, the type face and size not only of the text matter but also of chapter heads and other sub-heads. Of the captions and legends of illustrations, the placement of the latter, the screen and other technical details of the illustrations, etc.

I have been told that this Seminar is not going to deal with the marketing side of book production though personally I think that the problem of marketing a book is the most serious of all the problems that confront a publisher. And the time has already arrived when the marketing problem should be studied closely and seriously. The publisher should no longer look after direct or indirect subsidies from Government or semi-government organisations nor can he depend on the few booksellers in the various cities. Every producer should not only aim at taking his publication to the door of the consumer but should also take the help of a marketing-specialist to find out how best this can be done. A marketing expert, whenever available, should be consulted along with the illustrator and the printer about the marketable points of a publication to which the production manager should give due attention.

The future of book production in the East is very bright. With all the National Governments making an intensive propaganda for reducing illiteracy in their countries, the producer of books now-a-days has a very prolific and prospective field lying before him, provided he knows how to do his job best. The days of quacks are fast disappearing. And he must adopt proper scientific methods of production. The same thing applies to the printer also. To be successful in

his business he, too, should devote his attention to the art and science of printing. The business of smearing a white sheet of paper with some black or coloured ink has definitely disappeared from our country and any one sticking fast and rigid to those days is doomed. But in a sense a printer in India in these days is luckier than his compatriots of pre-independence days. The days of unskilled printer are fast disappearing. Four Regional Schools of Printing Technology sponsored under the first Five Year Plan, in Calcutta, Madras, Bombay and Allahabad have already started functioning. Another School in Delhi is also expected to be started soon. While craftsmen in different branches of printing are being trained in these schools at present, the Advanced Certificate Course which aims at the training of junior executives, will be functioning from the next year. A Central School of Printing

is also being established to give higher training in Printers' Science and Graphic reproduction. The institute will also serve as a research centre of the graphic arts industry. All the regional Schools have in their night section taken up the task of giving scientific training in the art and science of printing to the apprentices and journeymen already employed in the printing presses. This has started influencing the quality of our printing already and it would be no gainsaying the fact that within the next five years the printing industry of India will be able to shake off the trammels of old ignorant handicaps. It is also necessary that Indian printing has to shake off its trammels soon to enable it to meet successfully the demand of book production as also all types of commercial printing. Both these are progressing at an increasing tempo and the printer has to rise to the occasion.

The handicaps which face an Indian printer may be classified broadly into two divisions: one, special handicaps which are peculiar to this country, and secondly, handicaps through which the world printing industry is passing. Of the first, I have touched only one aspect, viz., lack of trained personnel and how we have been tackling the problem through our Schools of Printing Technology. Our other problem mainly revolves round the country's overall deficiency in the heavy industrial manufacturing line. We have to depend for our printing and allied industrial machines on the outside world. Though we have solved our problem of ordinary quality printing paper and board to a large extent, we have still to depend on the European countries for every sheet of coated art paper and board which our printers have to use for illustrations and other high quality jobs. Not that our paper mills

cannot produce these, but they find it more lucrative to produce the cheaper varieties and so we are perforce to depend on foreign manufacturers for our art papers and boards. Then comes the question of process materials, like films, plates, chemicals as also process copper and zinc sheets which are necessary for our Process-engraving and Photo-offset printing. Only a few of the chemicals are being manufactured in the country, but for most of our requirements we have to depend on the foreign manufacturers entirely. It is high-time that our industrialists should give their attention to this line.

Of the printing industries' second handicap, which though universal, is still to some extent peculiar to India, is the multiplicity of scripts or languages. This problem is not only a great barrier to the literary progress of our country but also a great handicap to the printing industry itself. In the European and American countries though there are quite a large number of languages like English, French, German, Swedish, Italian, Spanish, Portuguese etc. the script is one—English or as well call it Roman, barring, of course, the Slavonic or Russian script, whose field is quite limited. Except a few accented letters, the Roman script is most used in Europe (excluding Russia) and in the American countries. But in India we have to tussle with a number of scripts. In Northern India there are Bengali, Oriya, Hindi, Gurumukhi and Arabic scripts; in the Western region we have Marathi and Gujarati scripts and again in the South we have Tamil, Telugu, Kannada and Malayalam, each one with a separate script and language. As printers, we are concerned with the script alone and this diversity stands in the way of the development of the scripts. Today we have a wonderful series of display and text types in the Roman letters and every day we find the genius of a type designer finding expression in the pages of a type catalogue. But in India this is almost impossible. The huge cost of cut-

ting a new series of display or text types is a deterrent factor as the field of consumption is limited. It is only in Hindi that a few type-founders like Sree Type Foundry or Gujarati Type Foundry are making experiments. May I throw out a suggestion to the experts to think about reducing the large number of scripts of the country to only two,—Devanagari for the Northern and Western India and Tamil for South India? Almost all the North and West Indian scripts like Assamese and Bengali (both of which have the same scripts), Hindi, Gurumukhi, Marathi and Gujarati emanate from Brahmi, mother of Devanagari, which is not only the mother of these languages but also of the scripts. (Even Oriya, and Burmese and possibly Telugu, Kannada and Malayalam emanate from Brahmi script according to some authorities.) If we can reduce all the various scripts now prevalent in India to Devanagari and Tamil, we think the printing industry of the country will receive a great impetus. The difficulties created by the diverse number of scripts and languages prevalent will be greatly reduced if we can reduce our scripts to two. Most of us know two or three languages including English, all of which have different scripts. It would therefore be much easier for everyone of us if the hurdle of learning different scripts can be crossed easily. One learning the Devanagari script can easily learn Hindi or Bengali or Assamese or Marathi or Gujarati as phonetically and derivatively all these and several other languages flow from Sanskrit, the mother language. Same thing may be said of Tamil. And as in Tamil, Telugu, Kannada and Malayalam we have a large number of words from Sanskrit and as Dravidian civilisation during its contact with the Aryan civilisation absorbed much of the mythological and religious trends of the latter, the cultural backgrounds of both the civilisations are almost the same. Just as many Aryan customs have impregnated the Dravidian civilisation so we find how heavily the Aryan civilisation

has been influenced by the older civilisation of the South. It is, therefore, I believe, much easier for a boy of South India to learn any of the Northern literatures, the moment he can cross the barrier of the Devanagari Script and the same is true of a North Indian boy.

But, I am afraid, I am encroaching on an arena, which is out of bounds for a mere printer. But you all know that printing being the handmaid of all arts and civilisation, just as a poor maternity nurse has access to the child, which she helped to be born, in its every stage of life, in its young or old age, in its poverty and affluence, so has a printer the privileged liberty to encroach on every field.

This reduction of the large number of Indian scripts to two will help the printing and consequently the publishing industries of India immensely. I commend this to the leaders of the country.

The next thing which naturally suggests to a printer from Northern India like me is the very large number of letters which a compositor has to handle. In the place of 70 or 80 letters of Roman, our type cases have to accommodate nearly 480 letters. Every compositor has to manoeuvre with such a large number of letters. The inventive genius of a group of litterateur, artist and printer of Bengal under the guidance of that great printer, the late Sri S. C. Mazumdar, led to the reduction of the number of Bengali matrices to 269 from the usual 480, which made its use possible in the Linotype and Monotype composing machines. Sri Mazumdar before his untimely death had also perfected a system with which he was confident of the use of the Bengali script in the standard 90-channel Linecasting machines, without the use of side magazines. We have reduced the Hindi and Bengali letters suitably for their use in mechanical composing machines. But the hand compositor has still to struggle with his four cases. *These must be reduced to two.*

A Salute to Competition!

"My competitors do more for me than my friends do; my friends are too polite to point out my weaknesses but my competitors go to great expense to advertise them.

"My competitors are efficient, diligent, and attentive; they make me search for ways to improve my products and my services.

"My competitors would take my business away from me if they could; this keeps me alert to hold what I have.

"If I had no competitors I would be lazy; incompetent, inattentive; I need the discipline they force upon me. I salute my competitors; they have been good to me.

"God bless them all".

So says a brother Manufacturer with which we heartily agree.

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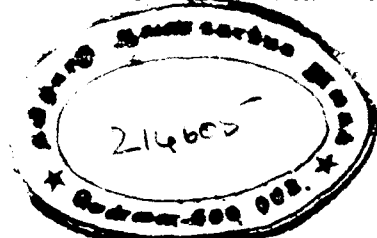
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N. S. S.



Another problem which suggests to me affects the entire world of printing industry, i.e. the type height and type measure. At present two measurements are in vogue: anglo-saxon, i.e. the Point system and the Cicero or Didot, which is prevalent in the European and Latin-American countries. This has affected the printing industry of the world in various ways—in the free circulation of the machines (both printing and composing) and in the free use of types. Both these systems are not based on any accurate and recognised linear measure like Metric or Inch. In the Scandinavian countries effort is being made to replace the Didot type measure by one based on metric linear measure. The problem was discussed in the Eighth International Congress of Printers held in Venice in 1955 but nothing tangible has come out of those discussions. It is high time that the printers, printing machine manufacturers and type-founders sit together and fix up the matter once for all.

The type metal, the alloy made of lead, antimony and tin, is a heavy, and cumbersome material, which has also a tendency to affect the health of the large number of careless compositors, has served its purpose so long quite well. As a matter of fact no other metal or alloy of metal has yet been found, which has all the qualities necessary. But can we not hope that in these days of various plastics, we will find one day a synthetic product, which is light and hard, moulds easily, takes and transfers the ink to the paper and is economical for throwing out after the end of its useful life like a sheet of film, or liable to remoulding? Of course, in these days of advanced technology celluloid film is gradually replacing lead from the melting pot of mechanical composing machines but our engineers have to look for a substance, which suits our type cases to improve the modern composing room.

The demand for a large quantity of books which everyone of us is

envisaging, must lead to the manufacture of a variable size web-fed Rotary printing machine, both in Letterpress and Offset. For mass production of books, Rotary machines are obvious choice but at present they are limited to the production of only one size of books. Efforts are being made to produce variable size Rotaries for some time but so far those produced have not been commercially popular. We hope for a better and economical machine. Photo-offset is decidedly the ideal process of printing for producing printed materials on a mass scale. In this process also a variable size Rotary printing press will prove a great boon. In the flatbed letterpress printing machines, the Perfector presses, which print two sides of a sheet at a time, have a great future but their cost today is prohibitive.

The problem of make-ready in a printing press is a time-killing headache to the printer everywhere in the world in spite of many pre-makeready presses and equipments having come to the aid of the printer. As precision is the ultimate word in makeready may we not depend on our engineers to evolve a printing press which will make up for all the deficiencies of the machine and type and banish this headache for all time to come?

In the reproduction of illustrations, automatic machines have appeared, which have a great scope. At present their function being limited, they are mostly preferred in newspaper offices.

There is great progress in the printing technology and I have every faith we will find publishers and printers taking the fullest advantage of all this progress. We also hope our industrialists will have the help of our engineers and technologists in producing the machines and equipments which will lead to better, quicker and cheaper production of printing materials.

Let the participants in the Seminar work for progressive book production and help to reduce the illiteracy problem of the country.

Sooner or Later

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IN AN

INTERTYPE

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PHOTOGRAPHIC ILLUSTRATIONS FOR BOOKS*

S. RAMU

Before starting on the aspect of photography for illustrations, two or three things are taken for granted by the sponsors of this Seminar and most others.

One, that books, children's books, text-books, novels, technical books, all sorts of books, are necessary. At least in this great country, which can boast of a civilization far in advance of many other countries from where we are now learning about modern methods of book production and the kind, our ancients evidently did not think of printing as an important adjunct to the furtherance of knowledge. With a civilization dating back to perhaps 4000 B.C., India has given to its vast population Vedas, Upanishads, the Puranas like the Mahabharata and Ramayana, Sankara's Advaita Philosophy and a host of other things. "In 200 B.C. the percentage of literacy was higher than today. It is said in Bengal for instance, before the coming of the British, there were 80,000 schools, one to every four hundred of population." Children went to school at the age of five and after sixteen to the great universities in Benares, Taxila, Vidarbha, Ajanta, Ujjain and Nalanda. India, through the ages, has produced some of the best brains in practically every aspect of life—but all this without the printed book. So I would humbly suggest a study in the ancient methods of imparting education without books, in spite of the fact that all of us have taken for granted that printed books are a necessity.

Two, that illustrations are necessary for books are also taken for granted. In the great Mahabharata and Ramayana, or in the poems of Kalidasa or Panchatantra, there were no illustrations—but the

* Paper read at the Seminar on Book Production at Hyderabad on 2nd February 1958.

image produced on every Indian child's mind is more explicit than any modern illustrator can hope to achieve. But, still we have got the fixed belief that one illustration is better than ten thousand words, without questioning it seriously.

Three, that for illustrations for books, photographs are good. We are also accepting this without much argument, instead of a line drawing or a wash drawing, a painting in full colours or a woodcut.

I suppose it is due to the urgency of our requirements and the economics connected with it that we want to use a lot of books, that we want to illustrate these books, and that we want to use photographs for illustrations.

Naturally black and white photographs are much cheaper than drawings and other illustrations and can be had much quicker. The modern colour photographs are very much cheaper and quicker than oil paintings or water colour sketches or poster coloured illustrations.

I suppose others before me would have explained what the photographs should represent in illustrating books. There must be an idea in the picture, there should be interest and there must be an impact.

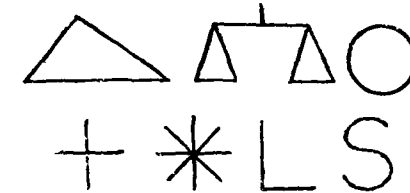
The idea in the picture could illustrate good habits, present good manners, depict chivalry, bravery, or cultivate aesthetic sense by presenting beautiful flowers, scenery, artistic forms and so on. The idea could also be the portraits of great men, important events or the explanation of some action.

Interest is created by familiarity and novelty. A scene or a situation must be familiar to the reader so that he can take interest in the photograph. To hold that interest, there must be an element of novelty or originality in the photograph.

Impact may be explained as a

peculiar feature which emphasises some aspect of life and incident.

The next thing is to see that the picture conforms to some simple forms of the laws of composition. There are some basic forms like :



The important elements must be fitted in such a way that it conforms to one or more of many basic compositions. This "Composing" of a picture may be done while the photograph is taken or can be properly composed from the photograph with the aid of two "L" shaped cardboards or metal cut outs. In this way, a pleasing picture may be produced which may be vertical, horizontal or square. Normally, horizontal pictures suggest placidity and peace and vertical pictures strength and stability. Diagonal elements in the picture indicate action and energy, but must have a support.

Then the lighting of the picture is important. Where force and drama have to be depicted, the picture must be of a low key, i.e., it must be a contrasting picture with vast masses of black and patches of strong high light showing plenty of harsh details. For suggesting a poet or a child or delicate womanhood, a soft picture of high key is indicated. For taking photographs of flowers and flower gardens, against-the-light pictures are very effective. In portraiture and other big objects, the lighting must bring out the modelling and texture very nicely.

The size of the picture must have a relation to the size of the book. In a 10" x 15" book, a small illustration of a man in 1" x 1" will be horrible. Equally for a 7 x 5 book, a flush cut illustration measuring 5 x 5 leaving 2" for text and margin will be ridiculous. Anyway there is no set rule for this. Eye—a trained eye—is the best judge.

Next to the size of the photograph, in relation to the text, is the quality of the photograph in relation to the typography. If a light type like Caslon O.S. or Goudy O.S. is used, the photograph should not be dark. There must be an overall softness to match with the light grey mass of the type. If the setting is in Bodoni Bold or Cloister Bold, the photographs must be heavy to match with the type matter. It is superfluous to mention that the photographs throughout a book must be more or less of one quality—not a mixture of high key and low key pictures.

Regarding the width of photographs, in books of a very serene nature, it is better to keep them to the width of the type matter. Flush-cut pictures, that is photographs extending to the margins are not usually used in books of a serious nature.

In books for the younger ones, a certain amount of liberty regarding the size of pictures could be taken. Pictures can be large just like large types for text. Care should be taken in all details in the picture since children are very observant of very minute details.

Flush-cut or bleed pictures have come to stay as a modern refinement. But they should be resorted to with discretion. Badly trained designers overdo the bleeding of pictures. When pictures are used as flush-cut, there must be variety and harmony. If one is used horizontally, another may be used vertically, but they should balance perfectly. When photographs are used to cut flush on two adjacent sides only, the size of the picture in comparison to the size of the page must be such that the overall balance is maintained.

The habit of using outline, for pictures, is due to a lack of knowledge of composition. If pictures are composed properly, there is no need to have lines to hold the pictures together.

Photographs for text-books are reproduced mainly by two processes—Letterpress and Offset.

Gravure is used only by one press in India and that also for calendars and for a weekly magazine.

Out of the two processes, letterpress is used much more than offset in this country for text-books. In letterpress, if coated paper is used, fine screen blocks 133 to 120 line can be used for blocks. If super-calendered or imitation art paper is used, 80 to 100 line screen can be used for blocks. If machine finished or coarser paper like newsprint is used 60 line screen block can be used. When coarse screen blocks are used, details will not come out as much as fine screen blocks. Both for fine and coarse screen blocks, the original photographs must be quite sharp. The tonal range must be quite good. In all cases before being set for reproduction, pictures must be sized properly and spotted. Very often retouching of the negatives or the finishing of photographs will be necessary. Especially in the case of machinery, furniture, etc., there will be unwanted glare, shadows without details, want of clear outline, and so on. These will have to be touched. While making blocks, a certain amount of alteration in tone can be done. Portions can be made lighter by etching or slightly darker by painting up before etching. Proper instructions will have to be given to the block-maker for this. Special effects can be obtained by joining and super-imposing of photographs. Sometimes, line designs are drawn over photographs, before block-making. Negatives and positives are sandwiched slightly out of register to produce relief effect. Unusual effects can be produced by using different type of screens in the camera, like mezzolint, grapholine, etc. By using special slits in the lens of the process camera, various effects can be produced like lines instead of dots in the reproduction, different types of dots, etc. Before sending photographs for reproduction, how much they have to be enlarged or reduced have to be indicated.

For reproduction by offset process, the original must be as sharp as for the letterpress. Fine screen

can be used even for rough papers; details will be retained in the reproduction even on rough papers. Since in offset printing, a certain amount of water emulsifies with the printing ink, and the image is first made on rubber which again imparts the image on to paper, blacks tend to grey a little and the dots get a certain amount of softness. So the dense blocks won't be as crisp as in letterpress normally. But highlights of a halftone picture can be completely white, whereas in letterpress you will have a pin point dots in the high-light area.

The great advantage of offset for reproduction is using a cheaper rougher paper for fine screen work, duplicating number of pictures easily and a faster running machine and very little makeready on the machine. For longer runs, offset is definitely cheaper.

For both offset and letterpress reproduction, it is preferable to have the photograph on a glossy paper. When such an original is lit up by the arc lamp of the camera, the reflectance is much higher and the reproduction will be very good. In the photographs, it is always advisable to avoid vast areas of dark shadows without relieving white spots, especially for offset reproduction. The result will be disappointing. There must always be spots of highlight in shadow areas to relieve the eye. If you want sparkling reproductions, dispersal of the volume of highlights and shadows is necessary.

For reproduction of colour transparencies, care must be taken to see that they are absolutely sharp. Normally, the colours being more concentrated, for the naked eye,

the transparencies look quite good. But when enlarged, they look terrible. The best practice is to blow them up through a magnifying glass and see whether they are sharp. Secondly, though they are usually colourful, unless they are exposed correctly and processed properly, colour rendition in transparencies is not accurate. Usually when making separation plates for positives, a certain amount of detail is lost owing to improper filtration in the camera. Modern methods of masking rectifies this defect to a certain extent. But a skilful colour etcher is essential for a proper reproduction.

The photograph may be good, the plate may be excellent, the paper may be first-class, still the reproduction will be hopeless, if the printer does not do proper makeready on the machines, does not adjust his rollers properly and take the correct ink. Metal mounting, pre-makeready technique, ink testing are all aids for better work and cheaper production.

When huge editions are to be printed or when original blocks have to be preserved, plates will have to be duplicated. Stereotyping, Electrotyping and Plastic Stereos are the solution for these.

In addition to the conventional Process camera which is being mainly used for making screen negatives for block making or offset, recent introductions are electronic instruments which produce blocks by scanning of lights. Machines of this type are Scanagraver, Klischograph, Elgrama, etc. Newer processes are being perfected like the Coloblock system based on the old Collotype process.

Before closing, we might touch upon the comparative cost of the two processes, letterpress and offset for reproduction.

Taking two machines of the same size, one offset and one letterpress, the price is more or less the same. As such, the factors going into the cost of production—depreciation, interest on capital, will be same. Since both occupy more or less the same amount of space, rent will be same. Power consumption is also same. So also will be the mainten-

ance. Wages and salaries will be slightly higher for offset, since there are not so many machines yet. But extra wages will not affect the overall cost of production very much.

Comparing the running speed of the machines, the offset Rotary is much faster than the letterpress cylinder—more than double. Even the new letterpress where curved stereo is used instead of a flat forme, the speed is 20 to 30% less than offset.

In makeready time, offset scores tremendously over the letterpress. In this country, since the majority of printing presses have not got a proper costing system, they do not understand about true cost. In spite of the above factors, the rate of charges per 1,000 pulls is being charged much higher for offset than for letterpress, whereas it should be the other way round.

Just before printing, let us compare block-making, mounting and imposing for letterpress as against negative-positive making, laying out, printing down and deep-etching for offset.

The cost of 16-gauge copper sheet is much higher than 25 thou. zinc plate. The printing down time is same, but the etching time is much less in offset. The comparative wages of the fine etcher in block-making to the wages of the dot etcher in offset is same. So there again the offset process is cheaper for plate making than letterpress block-making.

As for the paper, we have already pointed out that on a rough finish paper, fine half tone screens can be printed. There again there will be a saving of 15 to 30% on paper for text-books.

The one complaint that was all along made against offset was that there was a soft overall haziness as against the crispness of letterpress. With modern development in ink making, with more concentrated colours, deep-etch process of plate making and the introduction of litho finish papers, sometimes it will be difficult to say which is letterpress and which is offset.

We have not troubled about

photogravure for reproduction as we pointed out earlier that there is only one press doing photogravure. All over the world, the focus is on offset. Letterpress is striving to maintain its hold. No great effort is being made in the advanced countries to push up photogravure. In spite of some minor drawbacks, we are of the opinion, in course of time, photogravure will become as popular as offset, if not more, by its sheer quality of reproduction, speed and low cost for long runs. Let us be watchful.

(Continued from page 3)

APPENDIX B

Rates of Advertisement

FOR THE

SOUVENIR
(in English)

OF THE

ALL INDIA PRINTERS' CONFERENCE & EXHIBITION SIXTH SESSION 1958

INSIDE ORDINARY PAGES

Ordinary Page (Printed in black)	Rs.
Full Page	200
Half Page	125
Per additional Colour 25% Extra	

COVERS

2nd and 3rd Covers	300
Facing Editorial Full Page	250
Inset (Per Single Sheet)	200
4th page Cover	400

MECHANICAL DATA

Size	— Demy
	— quarto
Printed Area	— 6" X 8"
Columns to a page	— 2
Half-tone Screen	— 133

Advertisement charges must accompany 'Copy'. Payments are to be made in favour of the Coimbatore Nilgiri Districts Master Printers' Association, 7/453, Cross-cut Road, Coimbatore.

WANTED

A SET 120 AND 150 RULING PHOTOGRAPHIC SCREENS, EITHER CIRCULAR OR RECTANGULAR
(with 3 or 4 angles)
FOR A 32" X 32" CAMERA

Kindly Contact
Post Box No. 726
CALCUTTA 1

Review

THE GRAPHIC ARTS HANDBOOK AND DIARY 1958

The Graphic Arts Handbook is really a printer's vade-mecum and "Typotech" should be congratulated in publishing such a useful book. This is the only book dealing in detail with the problems handled by the printer everyday and is profusely illustrated. It is priced Rs. 10, the Handbook alone costing Rs. 7.50.

The book opens with the section on typography giving parts of a type character, examples of several faces and several sizes of types.

The publishers next describe mechanical typesetting with the Linotype, Intertype, the Ludlow, and the Monotype and refer to the latest trends, viz. photo composition.

Next is treated the very important subject of maintenance of line casting machines. The author gives the operator details of a maintenance routine time table which may be usefully adopted by all printers.

The next topic dealt with is the method of calculation of the weight of type and the weight of leads. In this connection a number of tables are given—one showing the approximate number of leads to a pound and the approximate number of ens and ems to square inches of type, the approximate number of lines containing a thousand ens. There is also a table of the physical properties of type metals.

This is followed by a description of the composition of the type-metal, the temperature for different types of composition machines etc.

Next the topic of casting off for book work is taken up and contains very useful suggestions for the printer.

Then follows a chapter on imposition schemes—scheme charts, collation marks and different methods of folding.

Sizes of chases are next described.

The next topic dealt with in detail is of one of great practical

importance in the day-to-day work of printers, viz., symbols for correcting proofs. These can be studied also by others so that printers may not find it difficult while dealing with manuscripts.

A chapter is devoted to the lay of the cases for Bengali, Oriya, Tamil, Telugu, Canarese, Malayalam, Hindi, Gujarati, Urdu & English, followed by the lay of the Key board of Monotype and Linotype.

Paper and the standardisation of its sizes comes next. Then comes presswork, the pressroom being the key department in any printing house.

The subject of inks which is as important as paper if not more, is next taken up. The difficulties about printing inks and their treatment are given in a clear tabular statement together with a note on the method of estimating the amount of ink required for any specific job.

The next subject dealt with in detail is photomechanical reproduction. The technique of colour printing is dealt with with telling illustrations.

This is followed by some mechanical notes and the book closes

with a chapter on electrical notes. A useful diary is attached to the book.

Thus almost all questions on printing are dealt with in the book. As such it can well adorn every printer's shelf.

FOR SALE

One New high-efficiency Double-crown Single-colour OFFSET PRESS 'Aurelia-60' (OMCSA), fully-automatic, ultra-modern, speeds up to 8000 i.p.h., quite recently installed.

Contact

PIKAY CO.

MS Street, Sivakasi.

BRAND NEW MINTITE COVERED ROLLERS FOR DOUBLE DEMY OFFSET MACHINES

Newsom Transfer Press with iron plate bed 34" x 46", Indian make, Paper Waxing and Plate graining machines.

HARISH N. JOG

Post Box 54

SANGLI (S.Ry.)

BE EXACT
ASK FOR



Printing Rollers for all Jobs

Manufactured by

RAWAL RUBBER WORKS (INDIA) PRIVATE LTD.

Jan Mansion

Sir P. MEHTA ROAD, BOMBAY-1

Factory:

Parsee Panchayat Road
ANDHERI.

Grams:

"RUBBERMAN"
Bombay.

Phone:

Office: 262628

Factory: 86765

Agents for South India:

Indo-European Machinery Co.
(Private) Ltd.

KHALEELI MANSION

MOUNT ROAD, MADRAS-2

Gram:

"TYPOGRAPHY"

Phone: 85576

ODDS AND ENDS

Psycho-therapy

Labour is a sore spot in our industries. Men have cudgelled their brains to find out a sure remedy but no recipe has proved infallible so far. Now comes our Commerce and Industries Minister, Sri Morarji Desai with a piece of sound advice. Stressing the importance of the role of a welfare officer, he said that officers engaged in the work of personnel management should not only be completely impartial but also have the fullest sympathy of both management and workers. Otherwise, these officers would not be able to win the confidence of both sides—management and labour—and succeed in the task of maintaining good industrial relations. Quite true.

While inaugurating the 8th All India Conference of the Indian Institute of Personnel Management this month (February) Sri Desai observed in course of his address that labour officers should not think in terms of welfare measures alone. They should consider more the deeper causes for complaint or grievances. Thus it was more a psychological matter than an economic or social one. May the prescription work well!

Sympathy is the best solvent.

Cupboard Love

Trade Unions are supposed to guarantee good industrial relations. But healthy trade unionism is yet to grow in our country. Sri Guljarilal Nanda, Union Labour Minister and Sri V. V. Giri, Ex-Minister of Labour both agree that the trade unions of India are not what they should be.

In reply to Sri Giri's suggestion for abolition of compulsory adjudication of labour disputes, Sri Nanda revealed some unpleasant facts concerning the trade union activities. He alleged that for its strength and sustenance the trade

unions depend upon incitement for getting the support of the workers. He further said that if one union, for example, came to an agreement with the employer for getting five per cent more, another union went to the workers and said that they should have got ten per cent and that the people who had negotiated the agreement had been bribed.

It's really difficult to know friends from foes but the discussion between the ministers, past and present, at the symposium organised by the Indian Institute of personnel management, is illuminating enough.

Know thy friends.

Happy reminiscences

Printers of India got busy for the first time ever an all-India Printers Conference held in Bombay in '53. The printing fraternity responded to the call wonderfully and Bombay paved the way to the Federation of Indian Master Printers.

A modest gentleman from Hyderabad took his seat by me at a party, one of the series given in honour of the delegates. We soon became intimate enough and a pinch of snuff blew whatever stiffness of the first acquaintance. He began to talk and his enthusiasm was boundless. He was dreamer and he dreamt audibly of consolidating the printers of his own state.

The next time I met him at Madras in 1955. The A.I.P.C. was in session and my heart leaped up to see how soon and sure the seed sown in Bombay had sprouted into such a strong sapling. My friend of the snuff box frankly fascinated with the glamour and magnificence, whispered, "We are a small state. How can we aspire to hold such a session in our state!"

Hyderabad did not give up the idea. She called a meeting of the Governing Council to start with.

But they had a strong will and where there is a will there is a way. Coimbatore Conference redeems their unuttered pledges they had cherished in their heart of hearts.

Southward Ho!

Four hundred years ago

Strikes were not an unusual phenomenon in the printing industry even in the distant past. Mr. D. B. Updike, gives an interesting account of a strike that took place in Lyons in France in 1539. Readers may find interest in comparing a modern strike with its century old counterpart!

A number of Lyonesse printers had struck work in April and May 1539. It was so general that the printing industry of the press came to a standstill. "Armed band of strikers marched the streets day and night and attacked masters, police, and officers of the Government".

Yes, they had their charter of demands. They complained that the master-printers supplied them with insufficient food, their wages had been reduced, and that they were not free to do their work as and when they chose! The Seneschal of Lyons, however settled the dispute.

According to terms of settlement, journeymen were forbidden to take any pledge among themselves to gather outside work rooms in larger parties than five, to carry arms or sticks in printing offices or the street, to threaten or beat apprentices or to interfere with them; they were also debarred from labour on festivals and from stopping work on the eve of festivals earlier than was customary, and were not allowed to leave work to go to a baptism or funeral unless it was in the family of their master or mistress! The master printers could take as many apprentices as they chose, but they must give the usual monthly wages to journeymen and feed them properly.

According to history, the printing industry of Lyons was ultimately ruined as a result of this long drawn strike. How very similar to a modern strike both in outlines and in details! Striking!

NEWS & NOTES

The Andhra Pradesh Printers' Association

The Fourth Annual General Body Meeting of the Andhra Pradesh Printers' Association was held on Friday the 31st January 1958, at 4 p.m. at 'Neo Vasanth Vilhar', Abid Road, Hyderabad. Shri A. P. Nagan presided over the meeting.

The managing committee members for the year 1958, were elected as below:—

President :

Shri A. P. Nagan, Osmania Printing Works.

Vice-President :

Shri G. S. Rao, Moses & Co. Hony. General Secretary : Shri Puli Mallikarjun, Mulki Press.

Joint Secretaries :

Shri Ramanuja Chari, Ramanuja Press.

Shri B. V. Hemchander, B. V. R. Balreddy & Co.

Treasurer :

Shri G. Narayan Rao, Lakshmi Art Press.

Members :

Shri K. Narayan Rao, Venkatesh Press.

Shri K. Shankariah, Premier Press.

Shri S. Badey Saheb, Shivaji Press.

Shri Balakrishna Lahoti, Marwadi Press Ltd.

Shri Chandrabhushan, Chandraguptha Press.

Shri G. Lakshmiah, Jyothi Printing Press.

Shri D. Ramaswamy, Bhagyanagar Press.

Shri V. S. Radhakrishna, Venkateswara Printers.

Shri P. Narayanswamy, Ajanta Art Press.

The following names were recommended to represent on the

A.I.F.M.P. Governing Council and General Body.

Governing Council Members :

Shri A. P. Nagan.
" J. R. Bardapurkar.
" Puli Mallikarjun.
" S. Krishna Rao.
" B. V. Hemchander.

General Body Members :

Shri A. P. Nagan.
" J. R. Bardapurkar.
" Puli Mallikarjun.
" S. Krishna Rao.
" B. V. Hemchander.
" N. Appa Rao.
" G. Narayan Rao.
" G. S. Rao.
" Konda Venkiah.
" Munindraji.

Drupa Exhibitors

650 Exhibitors will show their products at DRUPA 1958 which will be held from May 3-16 in Dusseldorf. 135 exhibitors are coming from 14 foreign countries. The range of exhibits from France, U.S.A., Great Britain, Switzerland and Italy will be most prominent. Total covered area amounts to 72,000 square metres which are, now already, completely taken and in addition to this 1,200 square metres of outside space.

By courtesy of *Printing World*.

The World's costliest book

The 12th December 1957 was a red-letter day in the book world when the price of a book went up to £8,330 in Paris. It is a specially printed French edition of 'Adventures of Don Quixote' illustrated with a dozen coloured lithographs by Salvador Dali. It was got up on parchment, the illustrations being in water colour. A second type of edition was got up on Japanese mother-of-pearl vellum costing £833 each copy while a third variety was got up on vellum costing £250 each copy. A cheaper edition of which

there were 118 copies, was sold at £79 each.

Master printer Dominiquy Viglino printed the book in 36 pt. Garamond.

Dali's technique may not be familiar to many. With a thirteenth century gun he aimed lead shots at lithographic stones to cause what he calls 'divine splash'. For causing impressions on zinc and stone, Dali used rhinoceros horns filled with ink-sodden bread-crumbs; egg-shells filled with ink. There is no gainsaying that Salvador Dali is a talented artist.

LETTERS TO THE EDITOR

We reproduce below copy of a letter received from Mrs. James Maclellan, c/o Hooghly Ink Co. P. Ltd., Calcutta.

EDITOR

Dear Sir,

I wish to draw your attention to some misleading information mentioned in the article "Proper press cleaning leads to better production", in the December issue of the "Bulletin". On page 7 under the subtitle "Benzol is a good cleaner" the impression is given that benzine (spelled with an 'i') is identical with benzol or benzene (spelled with an 'e'). This is not correct. benzine and benzol are chemically different, the former denotes certain light petroleum (gasoline) fractions, the latter a compound derived usually from coal.

My point is not the slight difference in spelling but the marked difference in toxicity of these solvents. Although benzol is an extremely powerful solvent for oil, grease etc. and, to some, has a "pleasant odour" it rates as one of the most poisonous of industrial solvents.

Acute poisoning normally would not be met with in printing shops. However, chronic poisoning can easily result in prolonged exposure to benzol fumes even at *relatively low* concentrations. The effects of chronic poisoning are lasting due to the destruction of the blood producing organs.

The dangers of using benzol as a cleaning solvent cannot be over-emphasized.

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

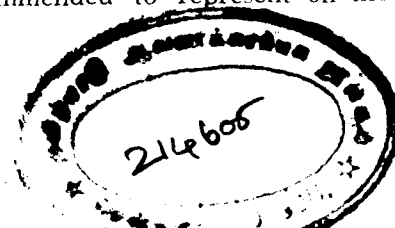
he can rely on them for

QUALITY

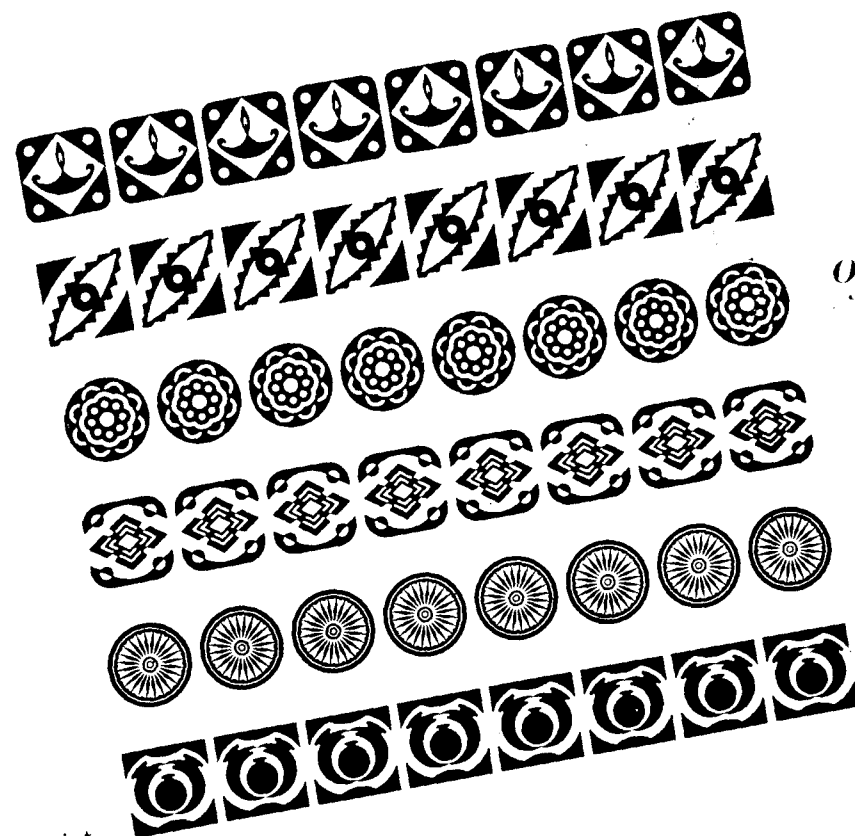
ECONOMY

FREEDOM FROM TROUBLE

Factories at **HOWRAH, BOMBAY, MADRAS**

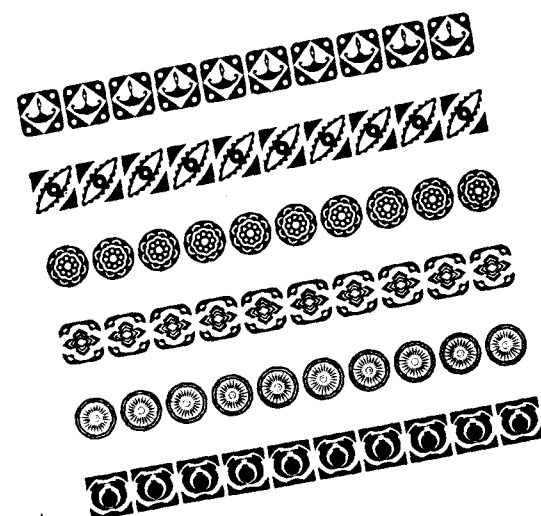


Handwritten notes: 3L, 1443-2, 1950, 1952



36 point

Fig. Trade Mark

MONOTYPE

18 point

THE MONOTYPE CORPORATION LIMITED

8 MISSION ROW EXTENSION

CALCUTTA-1

Annual Subscription : Rs. 5/-

Single Copy : 37 nP.

Published by S. Viswanathan on behalf of the All India Federation of Master Printers and printed by him at The Central Art Press, 'Acton Lodge', 11 McNichol Road, Chetput, Madras-31.

*Just a few
of the hundreds
of Borders*

GIVE US THIS DAY OUR DAILY BREAD

Ever since the Government of India banned the import of paper, the printing and publishing industries have been facing a crisis. That can only be compared with what was experienced during the Second World War. Needless to say that the demand for paper has been increasing owing to the schemes envisaged in the Five Year Plans, such as adult literacy scheme, Government's new undertakings, etc., all of which can be put through only through printed paper. Nevertheless, the paucity of foreign currency has necessitated our Government to ban import of paper leaving the public and the industries concerned to depend upon the indigenous manufacture, although Government knew well enough that our country produces but a fraction of our needs. The result is there has been a very great demand and prices have shot up. Whenever extra paper is required in quantity, the prices shoot up still higher so that the poor printer and publisher has to depend on the mercy of paper merchants for getting their paltry supplies. It is no use blaming the paper merchants as they cannot be expected to close down their establishments because of the temporary ban on import of paper. They have to get along and this they can do only by profits earned by them. They are therefore obliged to make the best out of the limited quantities made available to them. The net result is a steep rise in price.

It is up to us to see who is affected by this. Of course, the public. For, the printer has to charge his customer for what he pays for paper and the printing, though it is not always possible for him nowadays to realise to the full extent what he has paid for the paper as many of his customers cannot afford to pay such steep prices. So, to some extent the printer also suffers. Next to come, or perhaps this category should precede every others, is the publisher, for without paper he cannot produce books and without books students cannot carry on their studies. This would mean increased unemployment even amongst trained personnel as thousands of machines would have to remain idle. So it goes round in a vicious circle. Paper merchants get the dole from the mills and charge heavily for what they sell; the printer pays a higher price and tries to realise it from his customer and the publisher has to manage with whatever stock is made available to him. With the publishing season ahead, we are afraid that unless the Government do something urgently, there will be a crisis unparalleled in the history of our country so far as text-books are concerned as this commodity would become scarce unless paper be made available.

The All India Federation of Master Printers had tried to make representations to the Paper Mills and to the Govt. in this regard

and it is indeed very sad that the peoples' Government have paid no heed to their appeals so far. The Mills, however, deny that there is scarcity of paper and feel that they are not to be blamed at all and that it is want of transport facilities, which really is responsible for the situation.

Unfortunately, paper makers have not thought it time enough to sit down with their customers, the printers, to analyse why and where lies the difficulties in the procurement of paper.

This state of things cannot go on for long. So long as the Government are aware that the production is far below consumption, there is bound to be a rise in price of paper, indigenous or foreign. While in the case of indigenous paper, the price has gone up by about 25%, the price of imported paper has gone up by more than cent per cent because of depleting stock. What would become if the present stock of imported paper is exhausted and what would happen when schools reopen? This can be answered only by the authorities of the Central Government whose duty it should be to see that the necessities of life are provided. Food and clothing of course take priority but food to the mind is equally important. May we hope that the Central Government would realise the urgency of the matter and see that paper is allowed to be imported at least until such time as we are able to produce what we consume. Otherwise one can only see darkness ahead.

SPACE KINDLY DONATED

BY

MAX-DESIGNS & PROCESS WORKS LTD.
345, SAYANI ROAD : PRABHADEVI : DADAR, BOMBAY

PROGRESS AND VALUE OF FUNDAMENTAL SCIENTIFIC RESEARCH FOR THE PRINTING AND ALLIED TRADES

by
GEORGE SCOTT

In walking around "Graphic 1957", one must be impressed by the obvious results of research in machinery and equipment. And no visitor to this exhibition can go away without feeling that there is an important place in our industry for the scientist. In the paper which I submit to you, is given a rough picture of present day developments in a very broad sense. And the earlier part of the paper recounts the growth of the main cooperative research organisations of today.

I am most familiar with our own Association, called the Printing, Packaging and Allied Trades Research Association at Leatherhead in England. But the development of that organisation within the last 30 years probably reflects the extent of the interest in scientific research in our industry in most countries.

Research is the activity of extending the boundaries of knowledge and is undertaken on the one hand by industrial concerns in quest of improvement of their own products, or the development of new ones. Research is also carried on by cooperative Research Associations seeking to help their subscribing members in several ways.

Let us look first at the machinery and material suppliers. How much research do they do? With few exceptions—perhaps in so far as the machinery manufacturers go—not very much. Their activities seem to go largely towards mechanical speeding and movement without much basic foundation knowledge of what the machine has to do. I feel they should make increasing use of Research Associations, and enlist scientific help in the study of their problems, and perhaps initiate more study and research into mechanical movement.

The ink-makers employ large staffs of chemists and carry out a good deal of research themselves.

They work closely with most Research Associations. This is encouraging.

Printers demand better colours, inks which will dry at the right moment and which will run on the faster machines.

Paper makers employ many chemists and also work closely with the scientists, but here too, as Mr. Mayer has said, there is much work to be done.

It is of little use making machines to run faster, if the running ability of the paper and ink cannot be improved alongside.

Looking back over these random and every-day points, there would seem to be a very real common meeting ground in the cooperative research organisations, for the machine maker, the paper maker and the ink maker to meet with the printer, to integrate their developments for the improvement of the process as a whole.

I have said that research associations have three main activities; the first is trouble shooting. That is, dealing with the day to day problems of printers on individual jobs. This good service is vital to keep the membership as an essential part of the organisation. But everything must be done to keep this within limits. So many queries can often be those to which the printers should have the answer if he has properly informed himself of what is going on!

The second job is research in recognised problems—or applied research having in mind a particular application at a foreseeable time. This may affect the whole or part of the industry and the solution to such problems can often be quoted in terms of value to industry. I say "value to industry", because unless a proportion of research is of this type, it is of little value to industry.

to industry, the efforts of our research workers are wasted.

It is easier to talk of recognised problems, but I have often found that when I do not know the answer, it is because I cannot recognise what the problem really is.

Here, I am sure, printers can help our associations to analyse the big problems in terms of their smaller components, and thus help to give clear guidance in preparing programmes in this section of applied research which must be regarded as the backbone of any research programme.

The third section is fundamental or basic research, and has no immediate application.

Broadly, fundamental research is the study of the underlying principles of printing process and machinery, and of the way in which raw materials behave.

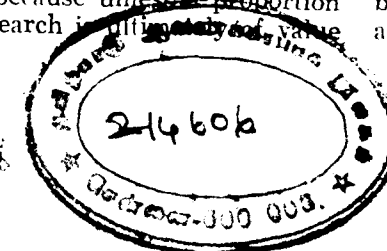
The knowledge gained from these activities can be applied in two different ways: in the first place, the different processes of printing may be brought under better control and paper, ink, and printing surfaces chosen and used more efficiently.

In Britain, it has been found that the traditional craft industries have been able to increase their productivity and maintain better quality when the craftsman's skill is reinforced by a scientific understanding of what he is doing.

In the second place, the principles elucidated may be applied to devising entirely new methods of printing on paper or other materials.

Fundamental research may not have an immediate and direct application on printing, but I am sure it can be of enormous use to machinery manufacturers and suppliers of raw materials in helping to increase the scientific understanding of what is happening.

One cannot match each piece of basic research neatly with its application, for a great part of



(Cut this out and keep it in your Pressroom)

STOVINKS

Tinprinting Inks are Offset Inks possessing special properties. The two most important of these are ADHESION, because it is more difficult to make an Ink 'key' (stick) to tinplate than to paper and TOOLING RESISTANCE because the printed Ink film will be bent, twisted, stretched or crimped as the tinplate is fabricated into containers and caps and the Ink film must stand up to these strains and stresses without cracking or peeling.

Tinprinting Inks have other peculiarities as well. Offset Inks for paper should have high colour-strength: Offset Inks for Tinprinting *must* have high colour-strength. Tinprinting Inks cannot rely on any absorption-into-the-paper to aid their setting; they have to be put through a hot oven for quick setting. The Ink film must be so constituted that it will be neither too brittle nor too soft as a result of this heat treatment it receives, which is called 'stoving'.

Tinprinting Inks are one of the real tests of Inkmaking and Coates Inkmakers come well out of this test for their STOVINKS are today the most widely used Tinprinting Inks in the Commonwealth, and in India there is scarcely a Tinprinter who does not print with them.

COATES INKS FOR GOOD PRINTING

scientific knowledge has no industrial application, so far perceived.

I have quoted the Lithographic Technical Foundation as covering administration, research and reducing to practise the results of laboratory work and putting this in a form and in such language as can be understood by the workman on the floor of the factory. This is an essential part of such organisations.

Under "Future Developments in the Industry", the paper suggests four main points and trends:

(The obvious developments shown in "Graphic—1957" seem to group well under these four headings).

(a) Nobody will deny the increasing use of photographic processes. You have but to compare the cameras of today with those of ten years ago. And also consider the enormous strides made towards scanning.

(b) In talking amongst printers here it is clear that higher production must be found in greater specialisation. And in Britain we are obviously watching with great interest the moves towards European Free Trade; if this is to become a fact we will certainly be forced to greater specialisation in order to compete.

(c) Under "automation" the exhibition again reflects advances, though I must say fewer than I personally expected.

(d) And we might say that a major part of the conversations between printers, again, is on the subject of photocomposition and its future. This is reflected in several stands of the exhibition.

Two American patents were reported in the LTF Abstracts, and they showed ideas parallel to those running in my own country.

Recognising that the present photocomposition efforts are towards, you might say, photo-type-setting, the next stage, or make-up, could again be considered as photocomposition, and this could also be carried out largely by mechanical means and almost

entirely so, if we are considering straightforward book work.

Immediately one can visualise that the films produced by the photo-type-setting machines are kept in a continuous roll. This is the object of these American patents. It will be possible to make massive economies between photocomposition and offset plates, and it is possible that we can take many a tip from the people who make cinema films at the present time.

In European countries and from a colleague who has just come back from America, I hear the same story of the disconsolate letter-press printer who is unable to find much comfort in the future of that process.

We recently had a big conference in London on rotary letter-press printing. But many people felt, as a result of that, even less impressed with the future of that process, at any rate, on the larger letter-press machines.

The very opposite attitude is taken by the offset printer who not only feels that the offset industry is vigorous and progressive with many new ideas round the corner, but is also encouraged by paper makers paying increasing attention in their efforts to produce paper for offset.

I have heard it expressed freely in several European countries that I visited in April, that offset is becoming regarded as the process for colour work in direct competition with letter-press on art paper, and I should like to hear, at this meeting, what people think of that. I must say that even an opinion was expressed by offset printers and not letterpress printers.

However interesting technically or scientifically any subject may be, we always come back to money which, at any rate in my own country with the tax-inspector lurking round the corner, is most important.

Printers are constantly being invited to contribute more to research institutions. But to encourage them to do this, I feel the associations must realise that the

printer wants to see some returns for his money. To paraphrase a legal term; Research must be done, but research must also seem to be done.

My own view is that it is necessary and worthwhile for printers to contribute more money towards fundamental research. But it is up to those associations to show how printers will get value to their industry.

At the end of this paper I have thought to make some suggestions as to the division of research effort. You will see that the larger proportion I have suggested as research into industry's programme, if you like, to applied research. But industry has got to help vigorously to make this programme, and then keep right behind it and keep it alive.

Under fundamental research I have suggested 10 per cent in effort. Some of you may think that this is not enough. I believe in America that only 5 per cent is at present recognised. But however much is put aside for fundamental research, it does not want to be too much. Otherwise it tends to let industry out of recognising its own problems and demanding effort for the solution of those problems.

I have said that research must not be hidden away in a quiet corner. I am sure this is right and that the associations should come out and give opportunity for discussions with the industry on the current problems, which will again help to provide research programming. As I have suggested right at the end of the paper, I believe it would help printers interested in the future of our industry to appreciate more what is being done and what is going on if there could be a periodical world survey of research activities similar to the programme issued by the Research and Engineering Council in America. This would again seem to give the proper sort of publicity.

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I, **S. Viswanathan**, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Dated 28-2-1958

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Signature of Publisher.

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THE SMALL OFFSET PRESS, ITS FIELD AND ITS POTENTIAL

by
GILBERT W. BASSETT

What is the place of the small offset press in the printing and lithographing industry? Should I consider going into offset with a small size offset press? Does a small press have a place in my plant? These are questions which are asked daily by printers and lithographers throughout the country.

Obviously, there is no one answer which suits all cases, but let's examine the place of the small offset press in three different types of plants.

No. 1 is the strictly letterpress printer contemplating going into offset—should he instal a small offset press? (A small offset press is 14×20 and under in size.) It would seem that this would depend entirely on the nature of the work that he is producing at present.

Most organizations are set up to secure a certain kind of work; and it is very likely that the work they are now getting for letterpress equipment will indicate the kind of work they will get for their offset equipment once it is installed. Therefore, if these plants are now operating 14×20 size letterpress presses, it would seem reasonable that they would have sufficient volume also to operate 14×20 offset equipment.

We do not mean to imply that work should be taken from the letterpress department and put on an offset press, but it would be logical to believe that the offset type work which might come into this plant could be produced on this press.

Secondly, we have the large combination shops. Possibly the smallest size offset press they have at the present time is a 23×29 press, and the largest might well extend up to a 76 inch press. Here the natural reaction is to stay away from 14×20 size

presses entirely. However, it may well be that a 14×20 press would serve a very important and useful function in a plant of this size as a service piece of equipment.

Producing all work requested

To many salesmen the ideal arrangement is to be able to produce all the work that the customer requests. Therefore, having a piece of equipment which will enable them to bid competitively on all kinds of jobs puts the salesmen in a much better position. With a small size offset press they can bid for the 500-1,000 runs which heretofore may have been un-economical to produce on the larger size presses.

Finally, there is the small printer or the letter shop where the 14×20 size offset press is the "bread and butter" machine. Just about every job that comes into this shop is geared to be produced on this size press; therefore, such a shop would probably have three or four small offset presses before going to a larger size press.

Thus it can be seen that in all cases one of the main advantages of the small offset press is a quick-on, quick running feature. The terrific economics of step-and-

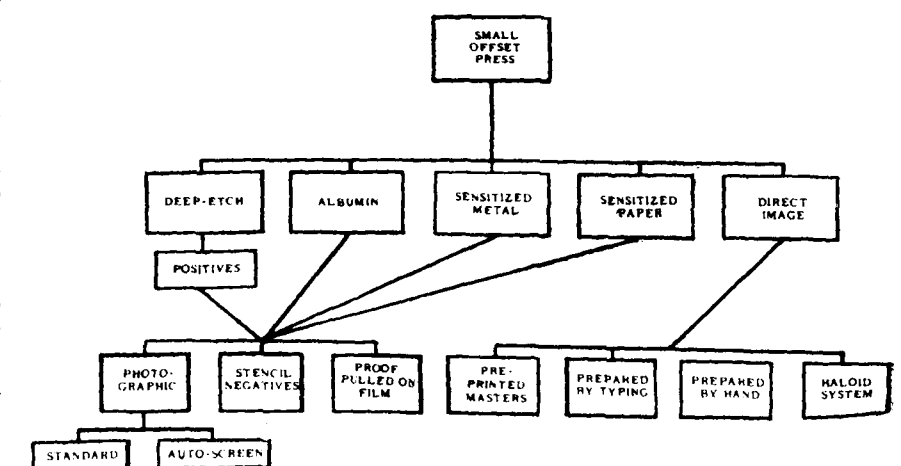
repeat in the offset process make it uneconomical to operate a small press for extremely long runs.

(Immediately, of course, someone will say, "Well, we run 50,000 and 75,000 runs on our small offset press," but this certainly is the exception rather than the rule.)

If the starting time on the small offset press becomes almost as great as the starting time on the larger size press, then there is little economical advantage in it. In every one of the above instances the job must be on, running, and off the press in a minimum amount of time, and, of course, with a minimum cost.

The introduction of presensitized plates and self-contained plate-making units is making it possible for the printer and lithographer to consider competing in fields from which heretofore he has stayed away entirely. By being able to offer the printing buyer a chance to produce all of his work at competitive prices, it becomes possible for the printer to increase his volume of business and thereby increase his profits, and also to develop the confidence of the buyer so that he may give the printer a greater volume of business.

There has been a tendency, in recent years, to shy away from certain kinds of work and refer to it as "duplicating". It would seem that the line between duplicating and printing is relatively



fine and undiscernible, and, therefore, if the printer or lithographer is equipped to produce the marginal printing or duplicating at a profit, it enhances his reputation and permits him to increase his business.

Let's examine some of the kinds of work which can be produced economically on the small offset press. The accompanying chart (page 7) gives a breakdown of the kinds of plates that may be produced, and also some of the copy-preparation methods which may be considered. It would seem advisable to discuss this chart step by step.

The first classification is the deep-etch plate. It is felt that this kind of plate will be run rather infrequently on the small offset press due to the nature of the work for which it is designed. However, such a plate can be run successfully to give the high quality work which is sometimes required on short-run work. This plate is more expensive, requires additional steps in preparation, and additional equipment to make. Therefore, it seems likely that while this plate can be utilized, it will be run only occasionally on the small offset press.

The larger majority of the plates which will be handled on the small offset press will be the surface-type plate; this plate fits into four categories: (1) albumin; (2) sensitized metal; (3) sensitized paper; (4) direct image.

The albumin-type plate has been the mainstay of the lithographic industry, and is well known. To make this plate, a whirler, arc light vacuum frame, and sink are required. A multitude of work can be produced on this particular plate—everything from simple form work to four-colour process work. It is well suited to the kind of work which can be produced on the small offset press since its average life of 50,000 impressions is well over the normal run for the small offset press.

Sensitized Metal Plates

In recent years there have been a number of sensitized metal plates

introduced, including the 3M plate, Enco plate, and Alumilith plate. The introduction of these plates tends to enlarge the field for a small press, since the plates can rapidly be made by use of a closed unit type of exposure frame. Thus, with a minimum of equipment and effort, very fine work can be produced. Obviously plates of this kind tend to expand the market for printing and permit printers to go after work which heretofore they have passed up. Here the length of run is approximately the same as for an albumin plate, and the quality approximately the same. As stated above, the advantages are that for a minimum investment, and with a minimum of problems, high quality results can be achieved at an economical price.

Thus far, we have been discussing only those things which are common to printers today, and which are being utilized on a regular basis. It is believed that through the use of additional kinds of plates and new methods, it is now possible for a printer to go after entirely new fields of business, and thereby increase his volume.

One of the plates which would fit into this category is the sensi-

tized paper plate. Such a plate is limited to 2,500 copies. It is made with a self-contained exposure unit and a single solution. With this plate the printer is able to produce rapidly and economically, a wide range of simple line work—including work reports, letterheads, catalogues, menus, charts and graphs, etc. Such a plate is largely limited to line work, but rough screen halftone work can be done quite satisfactorily.

Another kind of plate which at present is rarely used by printers is the direct image plate. Industry and private plants, however, are using this plate in tremendous volume. According to the latest figures, their volume was 40 or 50 times that of all other types of plates combined. Realizing this, some printers are finding it possible to utilize direct-image plates which enable them to offer their customers a complete service, whereby the customer does not install office machines for his general range of duplicating work but lets the printer handle it on a contract basis. This is only one of the many ways in which direct-image plates can be used successfully and economically.

Probably the most common use

for a direct-image plate is pre-printed systems work, whereby the plate is printed usually by letterpress, and then additional data is typed in or written onto the plate as needed, and copies run off for distribution. Copies can range anywhere from ten to 2,500. Speed is the essence in handling work of this kind and, therefore, it is important that the small offset press is able to start in a minimum of time.

A direct example of how this kind of plate can be utilized successfully is that of a printer who prints a hardware price list. The hardware merchandise is listed and printed directly on to direct image plates. On a weekly basis the hardware company writes in the prices as they apply, and then the plates are run by the printer to give the 1,000 copies necessary. In this way an up-to-date price list is maintained without the necessity for resetting the entire job every week. Here is a case where business was developed through the use of direct-image plates, since obviously such a job would probably have been mimeographed or handled in some other fashion if the printer were not able to offer this service.

In addition to preprinting, direct-image plates can be used for direct typing and Varityping. In this manner, such items as form letters, salesmen's news letters, etc. can be produced and copies run off in a minimum of time, and at a minimum of expense. This work is being done to a large extent in private offices, government agencies, and other places. It has been proved many times that such operations are often woefully inefficient. Therefore, the printer who could offer the service and the equipment for such work would be able to give the customer what he wants at a price he can afford to pay, without the necessity of his operating his own small duplicator section.

An additional manner in which direct-image plates can be utilized is that the art work can be drawn directly onto the plates. It offers a chance to design and print such

things as hand-bills, posters, etc. in colour if needed, without the necessity of going to camera and metal plates.

Sometime ago the Haloid Co. of Rochester, N.Y., introduced the Xerox method of making direct-image plates. Through the use of that company's equipment, it is possible to reproduce line work onto a direct-image plate in approximately five minutes, and from this multiple copies can be run. Halftone work has been reproduced in this manner, but as a general rule such reproduction would be limited to line work.

Preparing copy

In addition to the various kinds of plates which might be utilized on the small offset press, it might be wise to consider some of the recent developments in methods of preparing copy before going to the plate. In this group are such items as the Kodak auto-screen film, the stencil negative and proofing on film. The auto-screen film has become fairly well known in the industry since its introduction about a year ago. In this film is incorporated a screen so that the additional step of screening is not required before going to the plate.

The stencil negative is less known in the printing industry and should therefore be thoroughly considered. It is similar to a mimeograph stencil as far as preparation is concerned. The stencil is put into the typewriter and the letter or report is then typed directly on the stencil.

The stencil is then used in the same way that a negative is used to give a sensitized metal, albumin, or sensitized paper plate. Through the use of a stencil negative, form letters and other kinds of typewritten work can be reproduced rapidly. In addition, the printer can give stencils to his customer so that the customer can cut them himself, thereby relieving the printer of any responsibility for errors or omissions. But here the printer still offers the customer the service facilities for reproducing the work.

A year or so ago several men in

the Atlanta area published an article in a trade magazine regarding the possibility of pulling a proof directly onto Kodalith thin base film on a proof press. Using this method, a negative can be made without the use of a camera or a dark room. All that is done is as follows: (1) Using a good stiff-bodied ink, a proof is pulled from the standing form onto the thin base film. (2) The film is completely exposed in daylight. (3) The film is then processed in the normal manner for development. Such a process is limited largely to line work and has one disadvantage: that is, in making the plate the emulsion side of the film is away from the emulsion side of the letters results.

If any of the above markets are to become a part of the printer's business, it becomes necessary for him to be equipped to handle this kind of work readily and efficiently. The growth of the large number of letter shops in recent years indicates a field for such development, since the same equipment is necessary for reproducing short run printing and so-called duplicating work.

It seems obvious that the printer installing small offset equipment will continue to do work largely of the kind he is now producing, such as advertising folders, two-colour and three-colour work, form work jobs, etc. However, he also has the possibility of greatly enhancing his present position with his customers by offering a complete printing service, as well as by creating new markets for the printed product.

Printers priced out of market?

There has been a great deal of talk in recent years about the printer pricing himself out of the market. With the introduction of some of the above techniques, possibly this market can come back to the printer, and at a price which will offer him a chance to make a legitimate profit.

(Continued on page 14)

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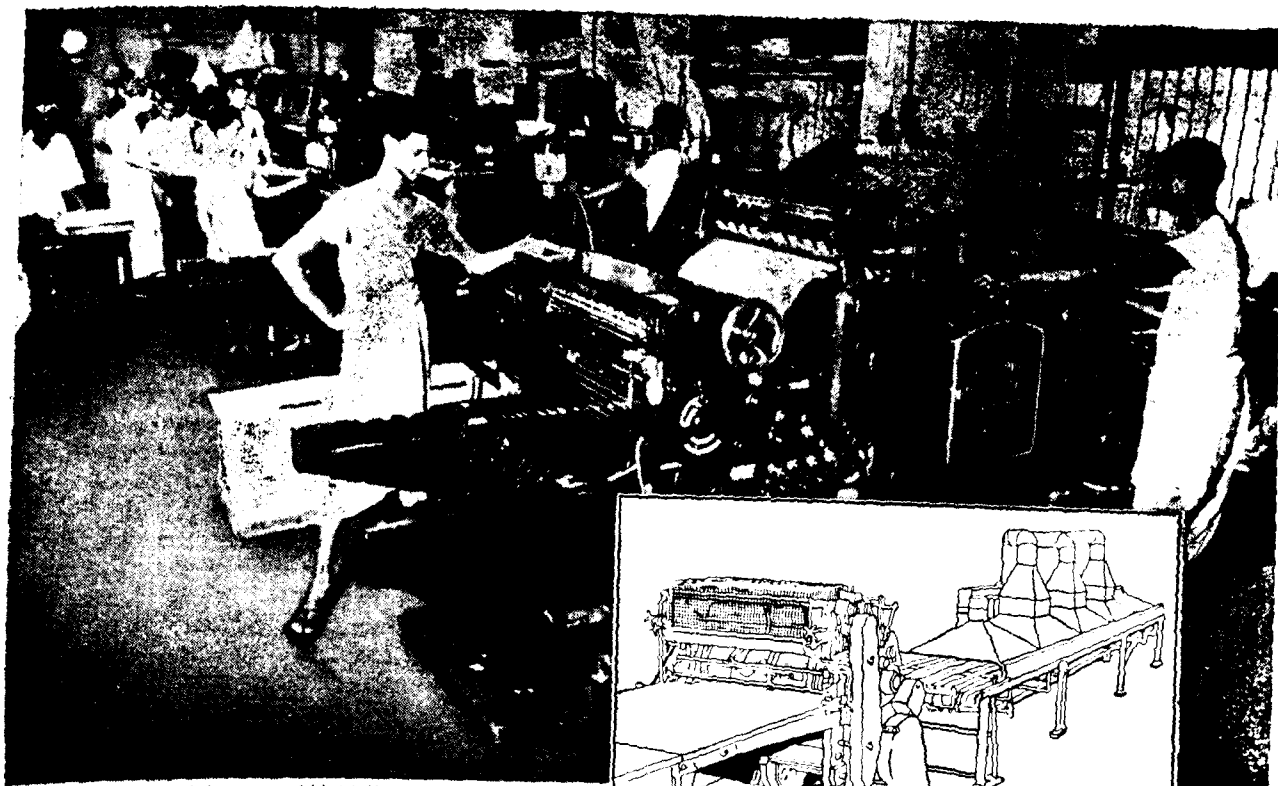
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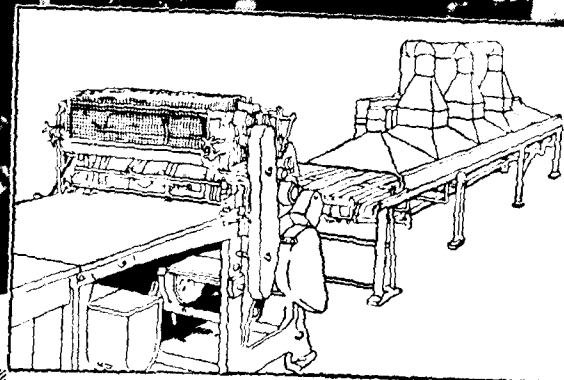
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NEWS & NOTES

'GRASP ALL THE KNOWLEDGE YOU CAN'

A note of caution against self-complacency in the face of revolutionising methods in printing was sounded by Robert Willis, General Secretary of the London Typographical Society, addressing over 400 students and parents at the annual prize distribution at the London School of Printing and Graphic Arts.

'Right from the start of printing we have had these developments; grasp all the knowledge you can about these new techniques which are going to change the industry', so declared Mr. Willis. He emphasized that those responsible for it should ponder over the needs of the present. He then analysed the repercussions which modern trends have on various factors constituting the industry. Regarding apprentices, he felt that though they were living in a press-button age, there was always the need for good craftsmanship and zeal.

The future lay with the students and apprentices of today and it behoved all of them, trade unionists and employers, to ensure full technical facilities in the school. He concluded by saying 'it is not enough that the British printer should have the best equipment and products, but he must have behind him the best craftsmanship and brains'.

Principal Ellis Thirkettle, in his report, disclosed that the volume of school work had enormously increased as also the number of students—wholtime, part-time and evening. Likewise, the number of students who have passed the City and Guilds Examinations also had increased. The School library contains about 12,000 volumes and 200 periodicals.

HERIOT-WATT COLLEGE, EDINBURGH

In a beautiful glass case in this college is preserved a beautiful page of type from the Gutenberg Bible of 1455, the first printed book linking the past with the present. The printing heritage of this college is a remarkable one and one which the college is rightly proud of. Not a little of it is due to the efficient lecturers and instructors of the college. No wonder Scotland continues to hold its place among the printing centres of the world.

There is great demand for printers, lithographers, letterpress machinemen and bookbinders. Frank P. Restall of the Printing Department envisages a still greater demand.

More and more of young men are taking to the industry and the college is able to meet the demand. The college is provided with an exquisite caseroom and up to date Linotype and Monotype machines, lithography and letterpress machinery so that the student attains to a high level of efficiency.

Full-time day courses are available for a limited number of students wishing to take to posts on the managerial side of printing and also for those who wish to supplement their practical experience by a regular course.

The college has devised a complete scheme for younger students with the help of employers and trade unions for the selection and training of apprentices in the various branches of the industry so that they are definitely selected for their ability and systematic training undergone during their apprenticeship. This course may be supplemented by the evening classes course.

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THE AHMEDABAD PRINTING PRESS ASSOCIATION

The following are the newly elected Office-bearers of the Association for 1958.

- (1) Shri Bachubhai Rawat (President).
- (2) Shri Manilal Mistry (Vice-President).
- (3) Shri Sureshchandra P. Parikh (Hony. Secretary).
- (4) Shri Maganlal M. Purohit (Hony. Secretary).
- (5) Shri Purushottamdas P. Patel (Member, Managing Committee).
- (6) Shri Champaklal Mehta (Member, Managing Committee).
- (7) Shri Chandrakant R. Shah (Member, Managing Committee).
- (8) Shri Ambalal Patel (Member, Managing Committee).
- (9) Shri Raghunathrao Jadav (Member, Managing Committee).
- (10) Shri Govindbhai Patel (Member, Managing Committee).
- (11) Shri Mahipatbhai Patel (Member, Managing Committee).
- (12) Shri Manilal Shah (Member, Managing Committee).
- (13) Shri Shankarlal Thakker (Member, Managing Committee).
- (14) Shri Maneklal Shah (Member, Managing Committee).

THE POONA PRINTING PRESSOWNERS' ASSOCIATION

We are happy to announce that the Association recently moved into its own newly acquired premises, "Mudrak Bhavan". It was opened on 23rd February 1958 by Sriman Baburaoji Danwade, Proprietor of Shivaraj Fine Arts Litho Works, Nagpur. The foundation stone was laid by Sri Fardunji Dorabji Paduraj on 8th June 1957.

Editor

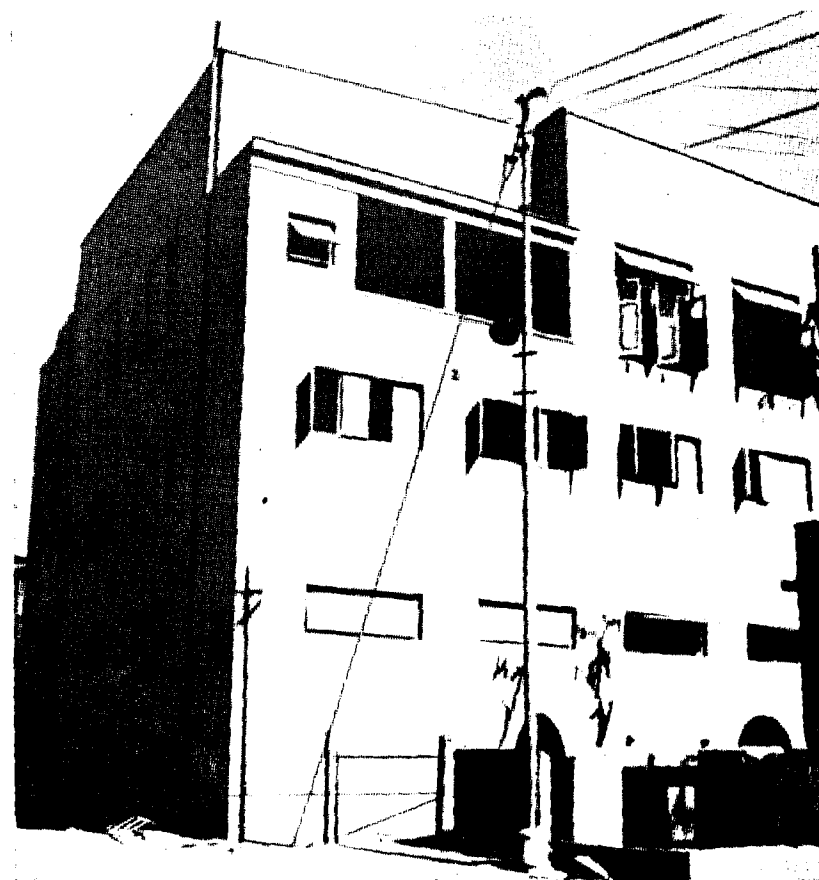
DRUPA 1958

The combined organisations of *The Monotype Corporation Limited* and *Pictorial Machinery Limited*, in association with *Setzmaschinen-Fabrik Monotype G. m.b. H.* of Frankfurt, will be exhibiting at DRUPA on Stand 25 (Hall A).

In view of the increasing world-wide interest in the commercial potentialities of filmsetting, the Corporation will be showing two 'Monophoto' Filmsetters in operation, together with a 'Monophoto' Correction Device and a 'Monotype' Keyboard to be used for filmsetting. There will be an opportunity of seeing something of the wide range of work which these machines are capable of handling, and a number of jobs will be progressed through from the typescript stage to the corrected and developed, direct or

reverse-reading, film or paper positives and negatives.

The field of rotary letterpress and the recent trends towards low-relief letterpress and low-relief offset offer great scope for filmsetting allied with powderless etching. Linking up with the Corporation's Filmsetter will be the first public showing of the new British-built *Lithotex-Dirats Powderless Etcher* by Pictorial Machinery Limited. Designed for the rapid, powderless etching of fast-etching photo-engraving zinc for half-tones, line and combination work to a maximum plate area of 24" x 24", this machine is particularly suited to the processing of dry-offset and rotary letterpress plates. It will be in full operation at DRUPA producing a variety of plates, including some from film originals produced on a 'Monophoto' Filmsetter.



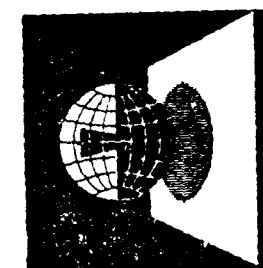
'MUDRAK BHAVAN'

The importance of these two new techniques will not detract from the more conventional and familiar 'Monotype' machines. One of the chief centres of attraction at recent printing exhibitions has been the practical working of a basic 'Monotype' installation, and one corner of the Corporation's Stand will again be given over to a standard Keyboard and Composition Caster. There will be two other Keyboards, a Duplex Keyboard and three more Composition Casters, all fitted with various attachments. One special feature will be a demonstration of the recently-developed 4-line system of mathematical composition, which has aroused great interest among printers of mathematical works. One Composition Caster will be fitted with the Display Type, Lead and Rule Attachment, and another with the Arabic 3-Blade Mould for setting accented Arabic. Two 'Monotype' Super Casters will also be on display, showing the great versatility of this machine in producing type, spacing and mounting material, leads, rules, furniture, etc.

Last but not least in the Corporation's exhibits will be the two popular 'Monotype' Boston stitching machines, the all-purpose No. 7 *Stitcher* and the two or three-headed *Multiple Stitcher*.

First place in the photo-process equipment of Pictorial Machinery Limited will be given to an important new large *Darkroom Precision Colour Camera*, which has recently been designed at the Company's factory at Crawley. Also on display will be the 'Chemco' *Roll-Strip Film Camera*, a unique fast process camera, its high speed being obtained by the absence of visual focussing and the use of strip film.

Other equipment will include the 'Printex *Cadet*' *Printing Down Machine*, fitted with a 3-Phase Arc Lamp, and designed to produce plates up to 56" x 44" (142 x 111 cm) from negatives and positives up to 20" x 16" (50 x 40 cm); the 'Lithotex *Minor*' *Step-and-Repeat Contact Negative Printer*, a dark-room operated



DRUPA 1958

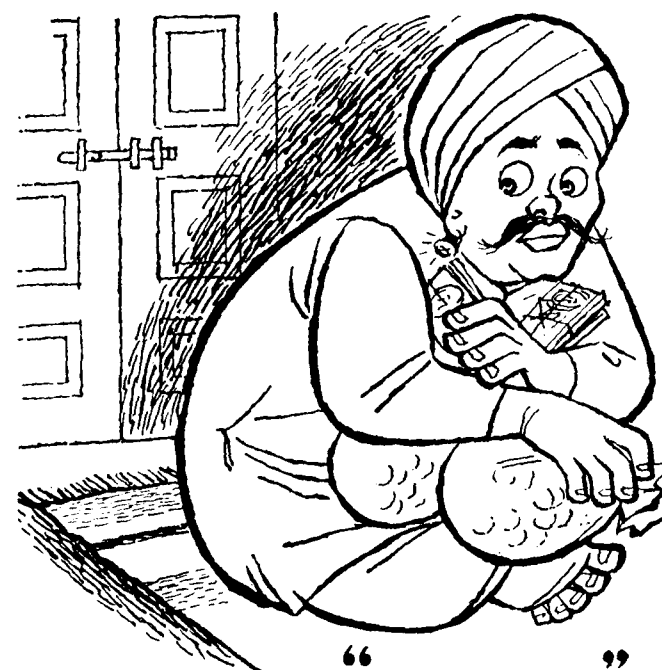
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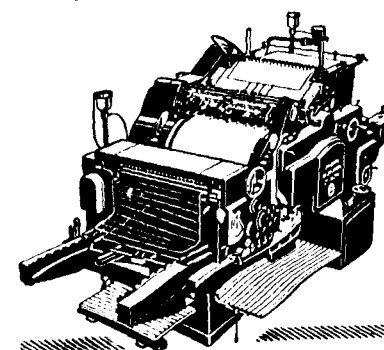
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“the word possesses”

It's doubtful whether such incidental information will help you produce high-quality printing...but the words ORIGINAL HEIDELBERG (no 'ess' in either!) will guarantee you printing quality second to none. For an ORIGINAL HEIDELBERG Press combines versatility with speed and rugged performance. Proof? There are over 80,000 of them in use around the world.

possesses more 'esses' than any other word in the English language.



Three models to choose from:
Platens 10 $\frac{1}{4}$ " x 15", 13 $\frac{3}{8}$ " x 18 $\frac{1}{4}$ " and
the Cylinder Type 21 $\frac{1}{4}$ " x 28 $\frac{1}{4}$ "

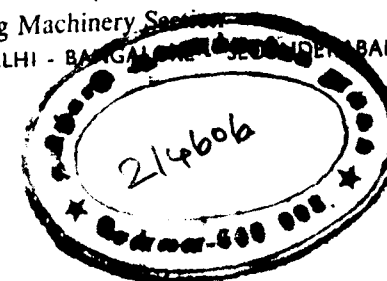
You cannot do today's printing with yesterday's machines and still be in business tomorrow

Heidelberg Agents for Northern, Central and Southern India:

THE EAST ASIATIC CO. (INDIA) PRIVATE LTD.

Printing Machinery Section

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machine designed for speedy production of multiple negatives or positives by contact, on glass or film up to a size of 20" x 16" (50 x 40 cm); the 'Lithotex' Model 'X' Printing Down Frame, the simplest and fastest unit of its kind; and the 'Lithotex' Major Repro-Unit, designed to take negatives up to a maximum of 22" x 18" (56 x 46 cm) with a range of two enlargements and two reductions, ideal for small-offset machine users who want to produce their own printing plates economically.

THE SMALL OFFSET ...

(Continued from page 9)

The economics of this field should be studied very carefully. The largest single charge in the hour rate of any piece of equipment is the labour cost. The difference between a 23 x 29 offset press and a 14 x 20 offset press may not be too great, therefore, it becomes extremely important that the small offset press be made for extremely fast plate changes, as well as for changing sheet sizes quickly. With such features, shortrun work can be on and off the press before it would be running on some of the larger types of presses.

In order to broaden the market, such a press should be capable of handling a wide variety of plates such as deep-etch, albumin, sensitized paper, sensitized metal, and direct-image paper. Since all of the jobs to be handled in this field will probably be very short runs, every minute saved is worthwhile. Therefore, if the press can be made to handle these plates without the necessity for packing, time will be saved on every job.

There is a definite market for the small offset press for the medium to large size combination shop as a service press, to the straight letterpress printer for his introduction to offset, and to the small shop as a "bread and butter" press.

—By Courtesy of the
Inland Printer.

Handwritten notes and stamps at the bottom right of the page, including 'JL', 'MUGB 214606', and '1955'.