

PRINTING

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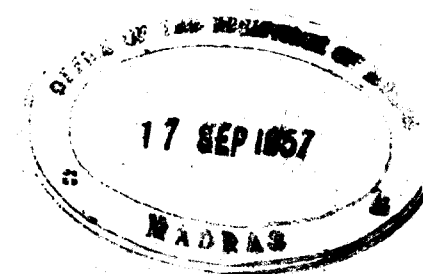
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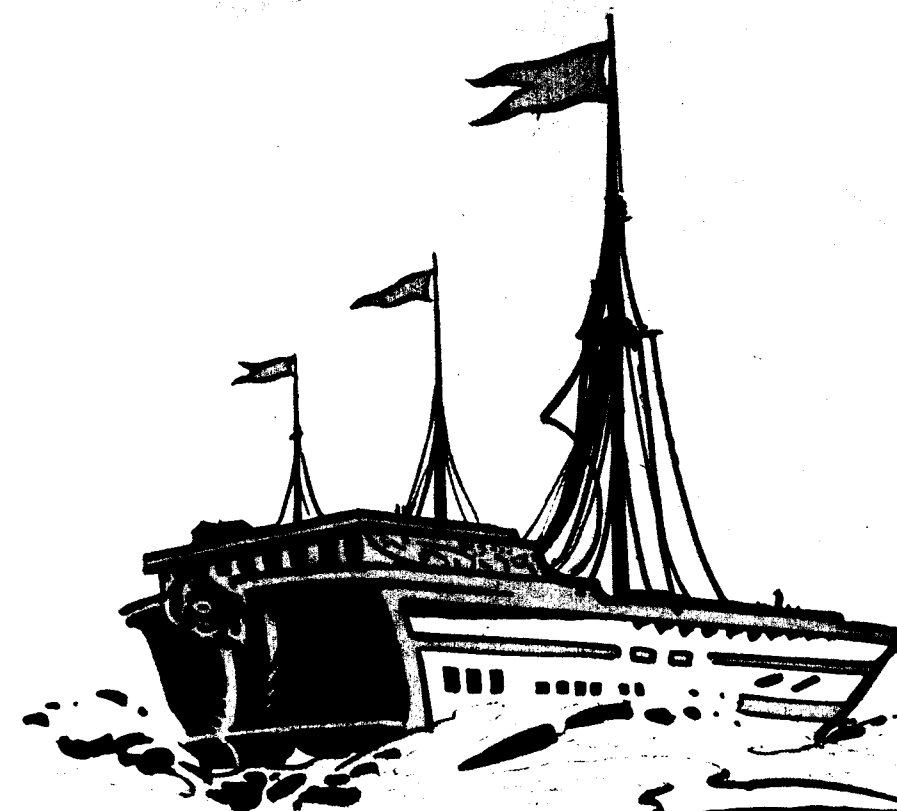
A MONTHLY SURVEY OF THE GRAPHIC ARTS INDUSTRIES, PUBLISHING, ETC.



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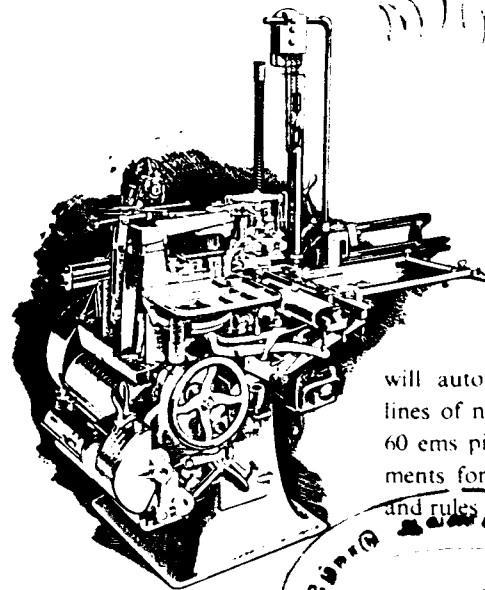
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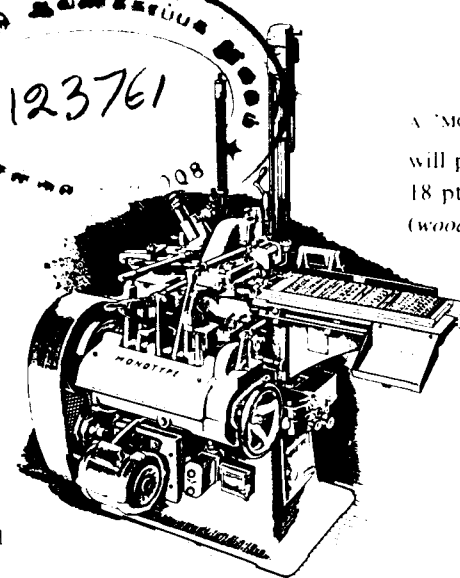
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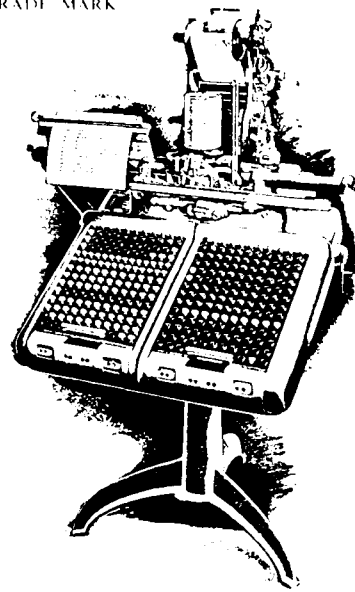
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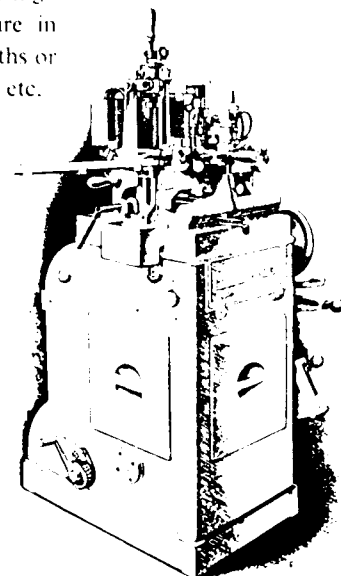
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INDIA	Rs. 10/-
PAKISTAN	Rs. 10/-
CEYLON	Rs. 10/-
BURMA	Rs. 12/-
U. K.	£ 1
U. S. A.	\$ 3

Editorial & Publication Office:
PRINTINDIA

Proprietors
KUBERA ENTERPRISES (Private) Ltd.,
"KUBERA BUILDINGS"
21, Sunkurama Chetty St., Madras-1
INDIA
Grams: VASUNDHI Phone: 3006

PRINTINDIA is Published
on the 10th of every month

Estd. 1953

Printindia

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

VOL. 8]

AUGUST 1957

[No. 4

In this issue....

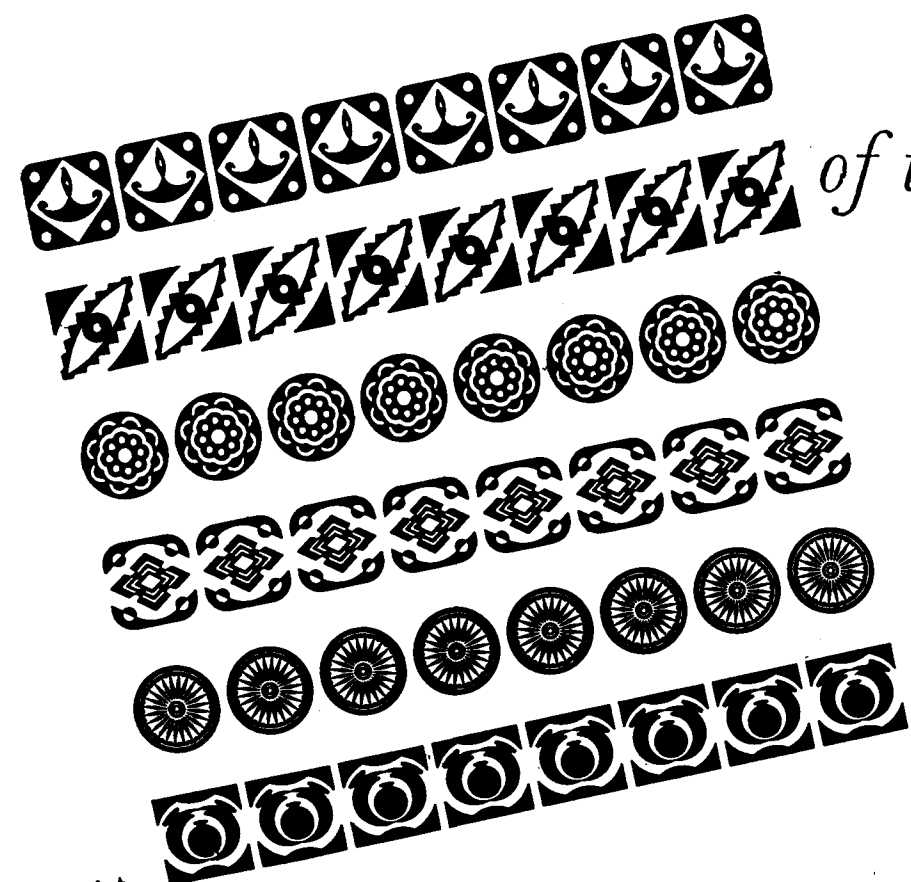
- ★ Autonomy or Anarchy?
- ★ Layouts and Lettering
- ★ Materials Handling
- ★ Direct Photo Composition
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- ★ Planning—Key to Production
- ★ From the Editor's Pocket-Book
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From Our London Correspondent
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Printindia magazine sells throughout India and in many foreign countries. As a medium of publicity, its pull in the printing, publishing and allied trades is enormous. World famous manufacturers and advertising agencies have already been utilizing this magazine for high-potential trade publicity campaigns

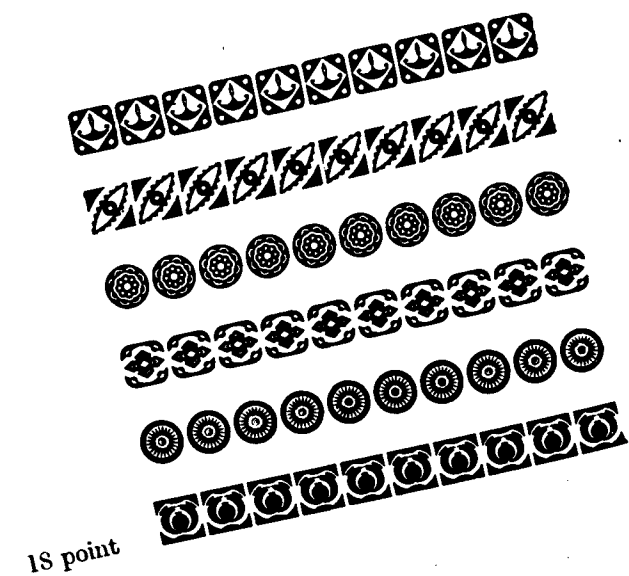
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*Just a few
of the hundreds
of Borders*

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8 MISSION ROW EXTENSION

CALCUTTA-1

EDITORIAL



The Govt of Madras have at last decided to form a separate department for Technical Education. Known as the Directorate of Technical Education, it will implement all the development measures in the Second Five Year Plan so far as they relate to Technical Education. At this juncture, it has become necessary for us to re-examine the position of the Regional School of Printing, Madras.

The 30 year old Regional School of Printing has been of late passing through crisis after crisis. We write this editorial on the eve of another crisis that is brewing. Situated as we are, in a democracy, we still hope that the voice of the people will be heard and answered.

It was in 1954, that the Govt of India accepted the proposal of developing the Printing Section of the Central Polytechnic, Madras, into a Regional School of Printing, for the southern region. Three years have elapsed, but many things still remain undone, due to many speculators and fortune-hunters, official and non-official, exploiting the situation. Whether these social malcontents have gained a foot hold or not, is unimportant. The Regional School has lost all the opportunities of development afforded by the Govt of India.

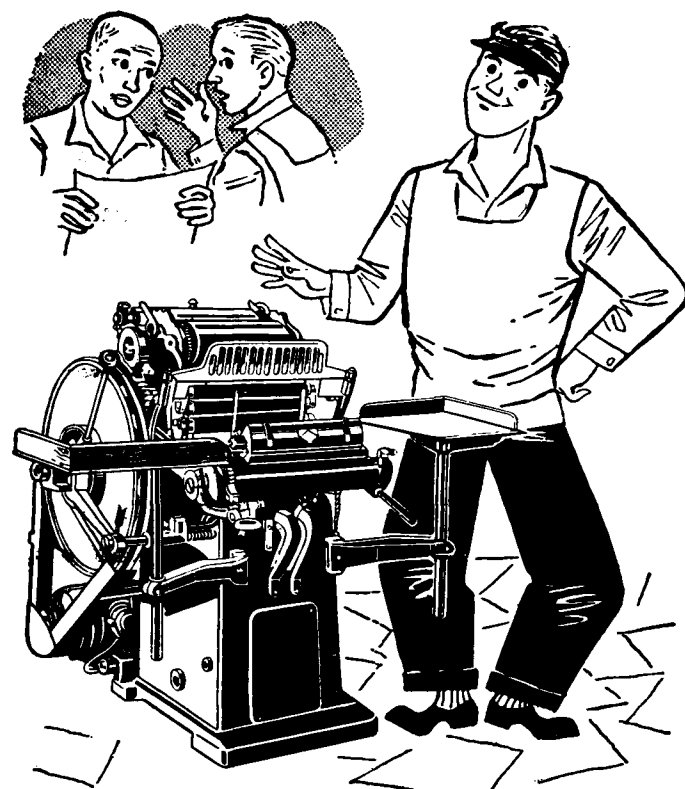
The first problem was that of building a suitable premises for the fast expanding Regional School. The Advisory Committee of the Regional School has been playing with the idea of building at every one of its meeting. It changed its decisions at every sitting confirming the fact that it contains no serious-minded person. Let us consider as to who all constitute the so-called Advisory Committee.

The Advisory Committee to the Regional School of Printing constituted in 1955 consists of two non-officials, two Central Govt nominees and three state Govt officials. All are too busy to

devote any time to the institution for the growth of which they are supposed to advise. The Hon. Minister for Industries should call for a copy of the minutes of the five or six meetings of the Advisory committee so far held to no purpose. It will be illuminating to find therein, many absentees during meetings, that sufficient time is not given for the members to meet on the appointed day, that no useful resolution has been passed up to date, barring some petty bickerings, partisan feelings and other undesirable features like vindictiveness towards RSP staff, etc.

It is time the Govt decided whether there is any necessity for such an advisory committee and if so whether any useful purpose has been served by the present committee, except fermenting ill-feeling among the staff.

The able Director of Industries and Commerce has shown considerable interest in the working of the Regional School of Printing and is instrumental in appointing the experienced staff which mans the institution. Unfortunately the Director's domain is ever expanding. As a consequence, third rate deputies, indifferent to the growth of the RSP, have been entrusted with the task. No wonder the RSP is languishing, although it had a long lead over other states in the matter of training in Printing and Allied Technology with able and experienced staff. He should decide what are the matters that should be put before the advisory committee and what should be decided by the Govt independently. It now transpires that even matters like purchase of library books within the sanctioned amount is routed through the committee who are not competent to judge in the selection of books. The result is that no library books could be bought and the matter is pickled in the archives of the Industries Dept. A line should be drawn beyond which the Advisory Committee is not allowed to interfere in the day to day affairs of the RSP.



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PRIVATE LIMITED**

Printing Machinery Section

Bombay - Madras - Delhi - Calcutta - Bangalore
Secunderabad

It is also necessary to accelerate the development of the school by starting full time certificate courses. The Director of Industries should see that the Central Polytechnic is forthwith shifted to the new Buildings at Guindy. The present premises should be exclusively left to the Regional School of Printing. The Industrial School Section can also be shifted to the Industrial Estate and should not be allowed to come in the way of the progress of the Regional School of Printing. *Facts prove beyond doubt that the present premises, if and when vacated in entirety by others, will be the barest minimum in the matter of accommodation for the growing needs of the Regional School of Printing.* In such vacating there should not be inordinate delay. The matter of equipment and library books should also receive immediate consideration.

We hope that the Director rich with organizational experience will not find it difficult to implement our suggestions which are made not against any individual in particular but only with a view to focus the attention of the authorities in what seems to be the blind spot in the technical educational field. In short what we wish is the speedy appropriation of the funds sanctioned by the state and Central Governments for the development of the Regional School of Printing by providing adequate accommodation and equipment, so that the efficient staff can put their heart in the proper training of young men who flock from all parts of this vast sub-continent, nay even from beyond the seas.

We are confident that the Govt are alive to their responsibilities in this respect and that they will not allow selfish interests to acquire a foothold in the administration of the school or petty officials with a narrow mentality to reign roughshod over the institution which has earned already a reputation for its high standard of training, albeit its shortcomings in equipment and buildings.

The Government of India has nominated the Educational Adviser (Technical) for the Southern Region as the nominee of the All India Council for Technical Education. To our knowledge, this officer has not so far contributed towards the fulfilment of the recommendations of the All India Council for Technical Education. If the Govt of India cannot do any better than depute third rate officers to preside over the destinies of Technical Education in Madras State, better they refrain from deputing anybody.

The only useful member is Sri V. M. Philip, but unfortunately he is overpowered by other elements during all the meetings of the committee. It is patent that this committee has been purposely delaying the building of a separate premises for the Regional School, although there was a special member from the Central PWD deputed for this task.

At first it was decided to demolish the Old Civil Jail Buildings opposite the Central Polytechnic and build a tiny structure for RSP. As it encroached a playground and as the site was too small, having no scope for expansion, it was dropped at the subsequent meeting. Meanwhile Govt of India were pressing to go ahead with their original plans for the school. The committee then selected the Textile Institute Buildings for housing the RSP and actually recommended this to Govt. This too became impracticable after a close look at the cracked old building with too many claimants. Finally, the Dept of Industries came to the rescue of the committee. The Central Polytechnic will be built anew at the Industrial Estate, Guindy, now under formation. If, and when the estate materialises, the Central Polytechnic will shift to its new premises. The RSP can have a portion of the old Central Polytechnic, the other portion being left for the Industrial School Section, a legacy of the Polytechnic.

Another year has elapsed. The Committee is still at the same place where it started some years ago. The Regional School is still in a congested corner of the Central Polytechnic. The practical classrooms are too small even for the existing machinery. The students and staff find it hard to get on from day to day. Meanwhile another batch of 100 and odd students have joined the school. This brings the total of the Regional School of Printing alone to over 400. There are 21 classes held daily for the 9 certificate courses. Besides, 8 Printing Diploma classes for Full Time and Part Time students have to be conducted daily. In spite of the school starting early at 8 a.m. and working till 8 p.m. literally round the clock, it is found well nigh impossible to do justice to the syllabus and students. Such acute accommodation difficulty was never felt even in war time.

The second problem is that of equipment. Long ago the full equipment recommended by the All India Experts Committee should have been ordered. Most of the courses at present conducted

are only having a token machine or two. For example, one tiny offset machine is all the equipment for the Lithographic section; only one Linotype machine for Mechanical Composition for I year, II year & III year classes, etc. To complete the equipment as per recommendations of the All India Council of Technical Education is our first duty. But, thanks to the Advisory Committee, all sorts of obstacles were *put*, one after another. It looks as though *they* were waiting for the clamping of imports to *take up* the purchase of equipment for RSP.

For some years to come, there will be no more equipment for the school. The Foreign Exchange position is not a matter that will improve in a month. Thus due to the indifference of the Advisory Committee, the equipment which should have been long ago bought, when there was no license trouble, has been badly handled resulting in the virtual impossibility of getting any more equipment.

Now that the Directorate of Technical Education has been formed, the Govt should review whether it will be necessary to continue a useless committee such as the Advisory Committee for the Regional School, Madras. This is all the more important in view of the formation of the Technical Education Board which will have sufficient members. If, however, the Advisory Committee is found necessary, the Govt should reconstitute the Committee so as to bring in printers of standing and officials of promise. The duration of office of such a committee should also be limited to a year, as at present it is unlimited.

In a recent communication, one of the non-official members of the Committee has demanded the constitution of an autonomous body and place the Regional School of Printing under it. The Govt of Madras are too shrewd to allow this. What the member wants is *a stranglehold on the affairs of the school. He wants the powers of hiring and firing the staff of the RSP. He wants the powers to buy any equipment that pleases his fancy. In short, he wants to run the Regional School of Printing as his private shop.* No sane person will agree to this, much less any Government.

Under the cloak of "autonomous body" the member wants to bring anarchy to the administration of the Regional School of Printing. Making common cause with a few elements, he wishes to

bring the school under his thumb and run it as his private show. This shall not happen. The printers of Madras will see to it.

We have stressed in these columns the necessity for proper training in Graphic Arts. The printing Industry will immensely benefit by it. Proper training begins with a good and spacious building, built to plan and capable of expansion. Without proper accommodation everything else will be a waste. We have waited three years for the authorities to make up their mind for providing decent accommodation for the RSP. But they are still at it. Meanwhile, the students from various states suffer. There is no hostel too for these students.

As regards equipment too, there is a minimum below which no school can be run. Ways and means should be found to import these essential items of equipment for the Regional School. There is no dearth of funds, as adequate provision has been made by the Govt at the time of starting. This question of import licenses and foreign exchange should somehow be solved to pave the way for procuring the essential barest minimum of requirements for the Regional School. Some

equipment is now available from certain dealers from ready stock. Why don't the authorities buy them for the school immediately?

It is time that the authorities took up in right earnest the twin problem of accommodation and equipment for the Regional School. They should not allow selfish people to dilly-dally with the recommendations laid down by the All India Council for Technical Education. All the good work that is done by the School goes to waste without proper accommodation and adequate equipment. We hope and trust that the new technical education board will personally investigate these two problems and arrange for a speedy building and equipment programme.

Madras has always stood at the forefront of development in every sphere. It shall not lag behind other states in the matter of providing accommodation and equipment for the Regional School of Printing also. The name of this institution is familiar from Delhi to Cape Comorin for the quality of training imparted and the high standard attained by the students. Let not its fair name be besmirched by the lethargy of a committee.

Layouts AND Setting

By

SRI RAMAKRISHNA NARAYANAN

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

JOURNALISTS' WAGE

None thought that the Journalists' Wage Board decisions would be accepted without even a murmur. But we were not prepared for the abrupt turn of events which took place. So it seems to us that the decisions have brought forth more problems than they were able to solve. The efforts of the Minister for Labour to bring about an amicable settlement have failed. The IENS-IFWJ joint committee was dead before it was born.

The matter is sub-judice at the moment, Sri Ramanath Goenka having obtained a stay order against the implementation of the decisions of the Wage Board. By next month the verdict of the Supreme Court would be out.

Who could deny that an atmosphere of unrest and agitation is not conducive to the growth of the Newspaper Industry? This was what Sri Nanda said. We hope that this climate will give place to one of goodwill and harmony, soon.

OUR TEXTILES

We, in India, are proud of many achievements. The strides made by our Textile Industry is one of our post-Independence achievements. For, was not the target set down in the First Five Year Plan for textile production over-reached?

A good many advertisements pertaining to textile industry catch our eyes, if we glance through our files. To do justice to all these



Neat nylon knocks!

advertisements will be a well nigh impossible task. In fact, they will occupy more than one article.

Hence a representative selection of seven of the various mills have been reviewed in this issue reserving for a future occasion—the rest.

Look at four of these: One common feature strikes, that of a lady being employed: two sitting and two standing.

JAI JAIFABS (5 x 3 cols.)

Nylon clad figure is nice to look at with the reverse "Jaifabs" hand-lettered oval placed right of the lady above the centre.

With these main features, the ad goes ahead to get the maximum attention from news readers.

To the top of the oval, two pen line drawn lovely ladies start the piece with "lovely, isn't it?" in upright brush script done neatly. The answer is in Gill Sans condensed: It's Nylon by Jaifabs. The text is set left flush uneven indentation in Times Roman, followed by the lines in italic and three more in Gill condensed caps describing three varieties. There is a smaller Gothic italic after each. The name is in Gill Heavy upper lower and the address is in Gothic Caps.

As the saree is important, the face is left out, with the saree emphasized. Other ads in the series feature other poses of the female form minus the face with the usual oval Jaifabs. Walter Thompson, Bombay are the designers of this attention getter.

OM SHAKTI (15" x 2 cols.)

Tall, slim, outline of the fashionable female form is presented against four rectangular bands, with a different pattern in each.

Vigorous slanted script characterises the headline at the missing feet of the lady with the text in Times Roman following. Ultra Bodoni (l.c.) is chosen for the name "Shakti" with an over size "S" so as to allow

Announcing... the 3rd ANNIVERSARY NUMBER - - - -

Preliminary work has already begun on the 3rd anniversary number of the *Paper Marketing News* which is to be out in August 1957.

You are cordially invited to send us your contributions, articles etc. for publication... Amongst other things it will contain authoritative articles on Paper, Print, Packaging, and Stationery.

YOU ARE ALSO INVITED TO UTILISE OUR COLUMNS FOR PROPAGATING YOUR SALES MESSAGE - - - IT WILL REACH YOUR BUYER DIRECTLY

For Details Contact:—

PAPER MARKETING NEWS

81, MINT ROAD

FORT, BOMBAY - I

Phone: 26-3257

the words "A Podar product" in Gill italic caps. The varieties of cloth are in Gill medium caps.



Shakti
Slim shakti scores

Full of shakti, this advertisement is indeed nice. But none can blame us for failing to get the designers.

FINE WORK FOR MAFATLAL FINE (10" x 3 cols.)

The seated lady the small space with handlettered headline dominates this piece. Of course, the lettering is capable of improvement. A finer lettering would have improved the appearance of this advertisement. The name and address at the bottom would look better if type set in, say, Gill condensed caps and Gill medium caps, respectively. Gill bold caps is used for the five lines of text. The top line is in upper lower of the same family. The two squares of trade mark of Mafatlal group are at the bottom left, one in white and the other reversed. A little more care and this ad would have scored. But why is the hand of the lady on her cheek?

CLASSY CALICLOTH

For sheer daring and brilliance, the Calicloth ad is a good example with a difference. Striking illustrations, to begin with, the like of which we rarely come across. The lady of light and shade is sufficient. As if aid was needed, the word Organdie is featured in a unique staggering fashion. In a small italic line the ad adds the right bit of news in Bodoni, about organdie sarees in daring designs and exciting colours. These along with the name and address at right bottom in Bodoni Bold upper lower and Calicloth" in Gothic lower with the "C" in reverse to the left of the large lady's elbow complete another Shilpi success. To be sure, more such mighty pieces are needed in this field.

Of the remaining three, two use tints and black to good effect:

ARVIND MILLS ARE ALRIGHT (6" x 2 cols.)

With a cross tinted top, rectangular tapering to a point at the bottom, this ad is interspersed with vertical lines. In this portion we are confronted with two panels, one oblong for "sanforized" and one upright for the trademark. Our eyes follow the six dots which lead not only to the varieties available in Gothic condensed caps set left flush,



Light lines for Fine Fabrics

but also to the name "Arvind Mills Ltd." in Gill condensed caps, reversed with the address in Gill medium



Sanserifs, shirtings, panels and poplins

caps. We are apt to think what would have happened to the address lines in advts were there no Gill Sans to their rescue.

With tints, black and white, P. N. Joshi achieves a surprisingly sure effect for Arvind. But why so much space between dot and item?

MARK! METTUR MILLS (9 x 3 cols.)

In contrast to the foregoing, this has a square tinted background throughout the entire space. The trade marks, the letters O & W as well as the illustration of the mull piece, against a black rectangle, appear white against the tinted background. In other words the tint has been removed to form these.

The headline "Outstanding value in White" is handlettered in black with the exception of "O & W" which are in white. In Mettur Mills advertisements, this theme is consistently followed. Indeed these products of the mills have become household words in the south and the advertisement naturally reflects the brilliance of their products.

Sans serif letters dominate the design. These are used in large sizes

for lettering "Mettur" and "Mulls and Longcloths" in smaller size. Gill medium italic caps is used for "sold at fixed and economic prices." The Gill bold reverse in panel is used for "Mettur Industries Ltd." Gill series are used for "Managing agents." Efficient publicities have done this well.

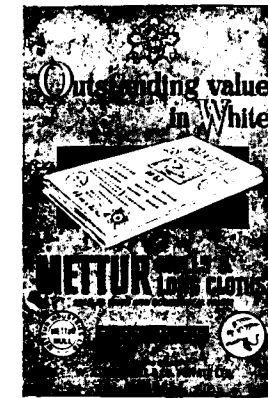
NATIONAL RAYON CORPN IS NICE (11" x 3 cols.)

Beauties were employed in the foregoing as attention getters. NRC think birds will compete well with the damsels, and they use them to good purpose. But, the beauty in the centre corner against black background is there all right.

Two advertisements entitled Nature's Weavers" have appeared. The yellow warbler with its nest beautifully done is the centre piece in scraperboard. Uneven italic Baskerville blurb at top talks about this bird. Then a lady, a cone of rayon yarn and the Baskerville text and then the address in Gill series and an uneven wavy boarder wafting in the wind which gets on well with the other elements in the ad, make a marvellous piece of publicity for the National Rayon Corporation. Everests have done it!



Birds' yarn well told



Initials, Tints and Mulls

IN PASSING

A short resume of advertisements of recent months which caught the eye is worth recapitulating:—

The new Tata's 501 Bar Soap ads 6" x 2 cols have headings "She's saving for her daughter's wedding", "She's saving for their own home," etc. followed by ".....and 501 Bar soaps help her!" are likely to catch many eyes. (JWT, Bombay)

The latest in the series "Good Advertising helps all of us" (8" x 3 cols) develops the idea "Advertising helps to create jobs" The type and format remain as usual (Shilpi, Bombay.)

Air India International had two, one with a black elephant (8x4 cols) with a tail knot to remind us that AII flies to London, Tokyo, Sydney, Nairobi; another of 10" x 3 cols. featured the usual dapper Maharajah with a valise marked Tokyo grinning his moustache off in a Japanese street. (JWT, Bombay)

West End Watch latest headed "Trains don't wait for the man who's late" keeps to the usual good standard (Everests). But our trains do not retain any standard of punctuality that it has become blasphemous to expect our trains to be on time!

Ilford X-ray films with x-ray illustrations of a snake's vertebrae told

a good story both graphically and textually.

Burmah-Shell's 9" x 8 cols. "Fill her up" showed a terrain with oil derrick in the middle most convincingly; and from that, via derricks exploration, refinery and additives, the story of the ad (set in Baskerville) comes down to Shell with ICA and thence to Burmah-Shell In India's life and part of it. (DJK, Bombay)

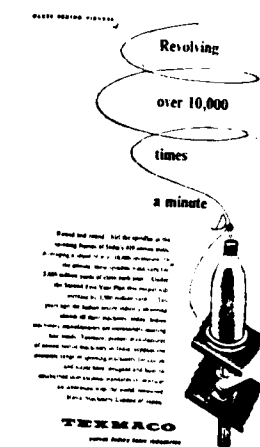
Gillette Blades had a good illustration with Times series for text for 8" x 2 cols. ad "For the man who won't accept second best."

Allwyn had a striking illustration with concise copy tucked in Gill medium for their "Homelier looks for modern homes" (9" x 3 cols.)

Easun Engg. featured a rather intriguing headline "A Godsend... this foreign exchange shortage of ours" (10" x 3 cols.) Taxes featured as dragons were not so intriguing (Grants, Madras.)

Remy beauty aids feature now striking pen and ink pictures in place of halftone beauties as formerly (Criterion, Madras)

Tata Iron & Steel came out with a huge handshake (10" x 5 cols.) against a background of steel plants, sending good wishes to Rourkela (Bembo Italic). From a neighbour (in Goudy Bold upper lower) with text in Times (JWT, Calcutta)



Eye catching idea! of the month

Testeels inaugurated their firm in a fitting manner with a big splash in 10" x 5 cols. effectively designed by P. N. Joshi, Bombay.

Geoffrey Manners have been introducing new products, again, in a big way: Minit Balm & Cough Syrup handled by LAS, Bombay and Gripe Mixture by Advtg & Sales Promotion, Bombay.

Codopyrin, Glaxo Labs' analgesic (10" x 2 cols.) ads with neat illustration and brief copy, continue well (LAS, Bombay.)

Tugon, a new Bayer insecticide, was introduced through 11" x 4 cols and 21" x 2 col. ads (Studio Ratan Batra)

Indian Plywood Mfg is another newcomer (Shilpi).

Goodlass Wall Nerolac had a good 10" x 3 cols. with a border and a brush at the end—a tidy ad (JWT.)

Palani Central Bank's ad 7" x 3 col. had a good headline: "The money that never did any work" (Money in a cupboard). Moral: Put money in a bank and let it earn for you. (JWT, Bombay)

Tata Mercedes Benz had a big ad with 3 models in 15" x 5 cols. First-class artwork, fine layout and not a too talkative copy (Everests)

Stanvac's Adipocere is still on the scene (10" x 3 cols.) (Press syndicate), Kaira Dist Co-op Milk Produce: The freshest butter available: Amul—a name to rely on: simple and effective (Press Syndicate, Bombay).

D & P Canneries' new 3 cols. ads about bottled delicacies is handled by Press Syndicate, Bombay. Nice work.

Texmaco's "Revolving over 100,000 times a minute" is brilliant. The 4 lines of heading in Times Bold upper lower left flush, the text in

Times Roman right flush, Texmaco in a Grotesque expanded, a Gothic condensed italic line and the address in Times Roman caps and small caps. All these are recapped by the picture of the speeding spindle and inter-connected with a 6 pt. rule at the bottom, part of the way.

The 6" x single column advertisement for Stylo has a good beginning with one line Ladies' watch and one halftone illustration of men's watch. All lines are handwritten. If these were type set they would have been far better, as a novice has done the lettering. Bad lettering tells—its own story. (the block appeared last month).

AIR INDIA INTERNATIONAL

"Who says cats can't fly" is good copy. The grinning happy cat formed the major part of the 12" x 2 column advertisement.

The ninth birthday ad with the Maharajah "dressed up to the nines, and why not?" was a good reminder of the age of AII.

"The Tea House of the December moon" of AII advt. was well done in Jap style.

ARCO AIRCONDITIONER

"The Weather God was bewildered" made us all bewildered really by too many elements crying hoarse for our attention and failing to make a homogeneous whole.



Arresting ad for alluring Organdie

BURMAH SHELL

"This is a road" with left flush Baskerville text in a 9" x 8 column advertisement with 3/4" dot stipple as border deserves special mention. For sometime past we thought that Shell advertisements although good in themselves lacked the spark which used to dominate the scene. Now recently, Shell ads are coming into their own.

CALTEX

LAS Bombay are conducting a good campaign with the slogan "Oil is the Lifestream of progress."

CAUVERY SPINNING & WEAVING MILLS

Handled by Efficient Publicities, Madras, has some crisp illustrations and good layout.

DUMEX

The famous Zodiac series continue, but in Indian language advertisements such as in Tamil, the translation is horrible. Even the slogan "Give then Dumex and see how they grow" is rendered in unintelligible hard Tamil. We would be pleased to assist in Tamil copy-writing, for which there is no dearth at present.

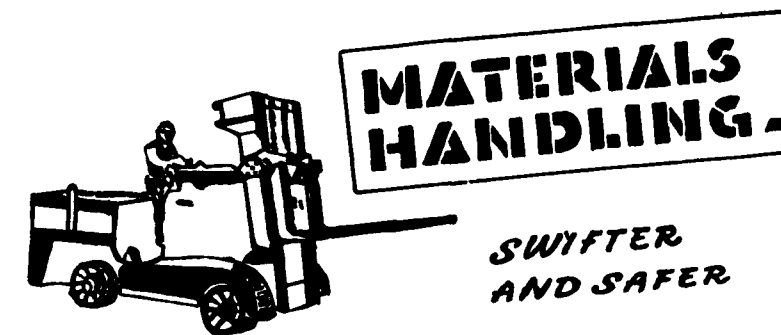
HANDLOOM HOUSE

Shilpi maintained the distinctiveness associated with this Institution in an advt headed "Shopping and sighing." The sigh was illustrated by a lady in reverse brush.

LIFE INSURANCE CORPORATION OF INDIA

The series "From an Insurance Agent's Diary" handled by Advertising and Sales Promotion, Bombay is an eloquent testimony as to what can be achieved by private enterprise joining hands with Govt. The Directorate of Advertising

(Continued on page 26)



By
SRI OM SARUP

Materials can be conveyed slowly or fastly, efficiently or inefficiently, safely or dangerously. Inside a press, in a day the same material is handled by a number of people at a number of points. How best to prevent unnecessary handling and how to mechanise the necessary handling is shown in this article.

MATERIALS HANDLING IN THE PRINTING INDUSTRY

In the economics of manufacturing, materials handling system plays an important part. It is a major factor in the printing process. After extensive studies, the cost of material handling has been shown to be very high. In certain cases, it forms as much as 25 per cent of the total cost of production.

ADVANTAGES

Materials handling system provides satisfactory movement of materials through the various processes and into storage at a low cost. It ensures reduction or elimination, wherever possible, of the use of manual labour. The greater portion of material movement is accomplished by mechanical means.

In a large press the materials which are usually handled again and again at various stages of production are: Matter in the galley: For taking proofs and returning to the rack; for correction and taking a revised proof; for author's correction and a revised proof; for making-up into pages and finally for imposing and locking-up. The locked-up forme

is handled many times; for taking a proof, for stone corrections, for a revised proof and re-correction, to the machine room for final printing, back to the composing room for storing or for clearing.

In the proof-reading department the manuscripts and the proofs travel a number of times between composing and proof-reading departments until finally passed for printing.

In the machine department, paper is handled many times before and after printing; from the store to the machine room, from the machine room to cutting, from cutting mach-



Lifting Formes is hard work

ine back to the machine room for printing, and again for backing, in case of colour work for three or four printings either on the same machine or on other machines, until the printed copies are finally passed to the binding department.

In binding, the printed sheets travel from counting to folding, folding to nipping, nipping to gathering, gathering to collating, collating to sewing, and on to gluing, rounding, backing, end-papering, trimming, casing and finishing, packing and despatching.

A proper arrangement of the departments within the press will reduce the length of travel and the number of re-handlings of material; also the amount of materials handled will be substantially reduced. The proper arrangement of the equipment in each department such as composing and make-up, imposing, lock-up, premakeready, machine and binding will help to reduce the number of times the materials are picked up and put down. Such arrangement will also facilitate handling by mechanical means.

There are many varieties of material handling equipment. Their selection depends upon their suitability to the products that must be moved and also to other facilities for such movement in the press. One way of reducing material handling is to provide for "in-process storage" or "moving storage". This means temporary storage of materials required for immediate use is avoided. Thus, it will provide a constant supply of materials for the successive processes.

VERTICAL AND HORIZONTAL

Materials can be moved vertically or horizontally. In a press where the composing room is in one floor and the machine room is in another, vertical as well as horizontal is called for. Formes can be moved by a forme trolley

with rubber tyres. Although this represents the simplest form of material handling equipment the benefits derived from its use are many. There is no strain in lifting eight or 16-page formes and the risk of breakage while being conveyed from one department to another is avoided. Further, two men are required to lift formes manually and carelessness on the part of even one results in serious accidents.

There is a school of thought which believes that formes get disturbed if handled vertically. The disturbance is marked in colour jobs. The moveable imposing surface is a solution to this problem. This table is provided with wheels and is of the same height as the bed of the machine. After the lock-up of the forme and thorough testing as regards height and lining-up, it is moved into the machine room and brought near the bed of the machine. On two-revolution machines the trolley is brought straight under the feed board and transferred to the bed. After printing, the same process is repeated for the forme to be returned to the composing room for clearing and distributing. Formes from one floor to another can be conveyed by means of a rope-conveyor or chain-conveyor. This is a simple lift with pulleys and a receptacle where the formes are stacked and conveyed up or down. Carrying formes manually up or down the staircase is difficult and risky.

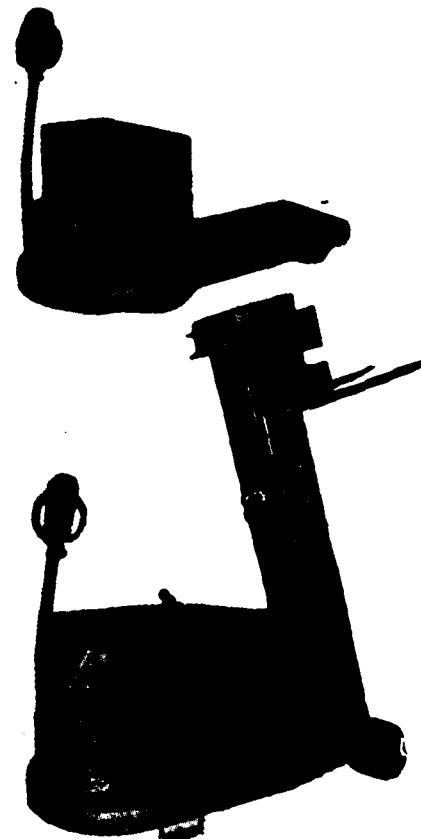
TROLLEYS

In the foundry, type metal is re-melted into ingots. For getting old metal from the respective departments, trolleys are sent round to collect metal. After casting, the ingots are sent into the Linotype, Monotype or Stereotype departments through trolleys. These trolleys are pushed by manual

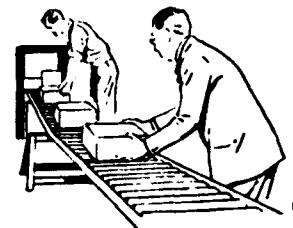
labour but they are more convenient than lifting manually.

Paper reams from the store to the machine department is also conveyed by trolleys. Trolleys without rubber tyres spoil the flooring, make great noise and disturb the department and also cause accidents. It is essential to provide them with rubber tyres, thus making it easier to pull or push.

In the paper store, cranes, hoists, and mono-rails can be employed to lift large packing cases containing paper or board and sort them in racks. Cranes may be overhead, bridge travelling, gantry or jib cranes. Hoists are also used for lifting. They may be with electric motor drive or with chain or pneumatic. Mono-rail carriers may be of the trolley or chain trolley type for horizontal transport. In warehousing operations, small, short-turning radius, lift truck is used



Two Modern Clark Lift Trucks



Roller Conveyor

with advantage for loading and unloading packages. A fork truck can lift a 2,000-lb. load to a height of 26 ft. for storing. Wheeled platforms, dollied and pallet lifts are also used in warehousing operations.

For conveying proofs and other light weight materials, miniature conveyors such as spiral chutes are used. Bundles, cartons, crates, boxes, etc. can be conveyed by spiral chutes. Roller spirals are also used to convey the above from one floor to another. These are arranged around a central shafting similar to a spiral staircase.

LIVE ROLLERS

Live rollers and belt conveyors are used for horizontal movement. These units can be arranged for handling materials along fixed lines of the travel between different sections of the plant. Simultaneous loading and unloading is possible in a double dock live roller installation. Gravity roller can be used in conjunction with rubber bolt conveyors. Material can be channelled into any one of the three or four outgoing conveyors. In the binding department, guided pallet conveyors can be successfully used. In the stores, wheel gravity conveyor with a portable powered belt can be used with advantage.

CHAIN CONVEYORS

By far the most popular and versatile are the chain conveyors. These can be used as final assembly lines in carton and case making. The chains are flexible and the movement need not be in straight

Printing & Polygraphic Equipment DEPENDABLE ★ STURDY ★ EFFICIENT

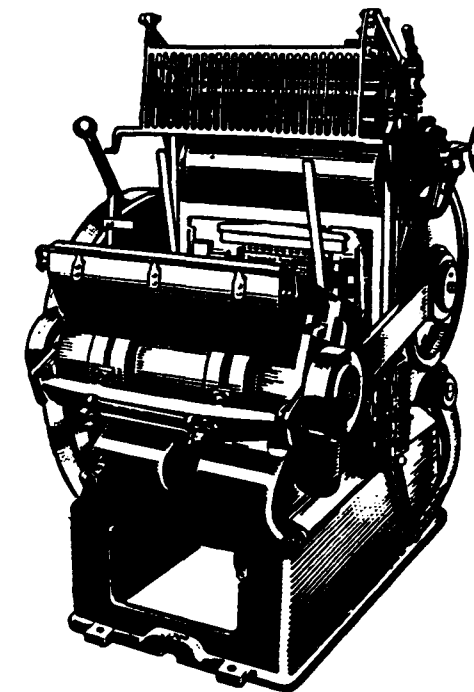
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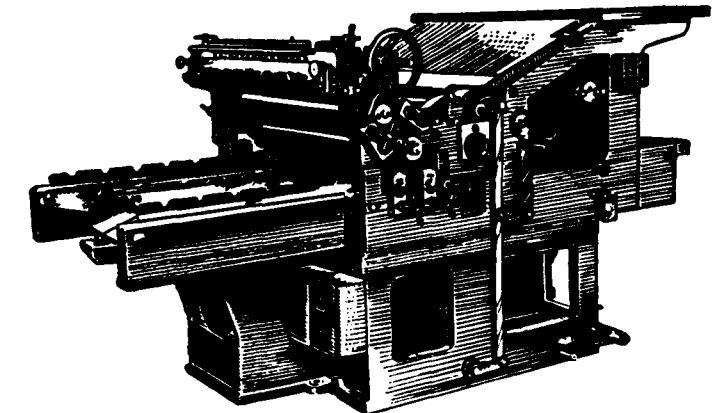
V/O Machinoexport

MOSCOW - U.S.S.R.

- Composing and slug casting machines
- Perforating typesetting machines
- Two revolution flat bed presses
- Rotary & Offset presses
- Photo offset equipment
- Paper cutting machines
- Book binding & stitching machines etc.



HEAVY DUTY PLATEN PRESS
TT-1:15" x 20"
4 Rollers (Ink), 1200 I.P.H.



CYLINDER FLAT BED PRESS - Model M.P.
20" x 26" Automatic Cylinder Lifting Device,
2500 I.P.H. Manual Feed.

Please write for further details
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16, Custom House Road, Bombay-1.

THE INRUPEXCO
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TRADE REPRESENTATION OF THE U.S.S.R. IN INDIA

NEW DELHI

House No. 21, Block 48, Panch Sheel Marg, Chanakyapuri
CALCUTTA (Branch) **BOMBAY** (Branch)
1, Bishop Lefroy Road. 46, Pedder Road.

NU - 56A

lines. Slides and chutes employ the force of gravity as the power source for moving materials. These may be applied to collect waste paper from guillotines, for metal from the Lino and Mono departments, etc. These slides and chutes may be applied to lower packages, loose materials, parts or products, from the top floor to the ground floor. They also can move parts from one machine or process to another over small horizontal distances. The chutes may be straight or spiral, depending upon the relative positions of the point of delivery. They are polished very much to reduce friction which will stop the materials on route.

PNEUMATIC TUBE

There are also pneumatic systems to handle bulk materials but it is not applicable to the printing industry. However, the cylindrical

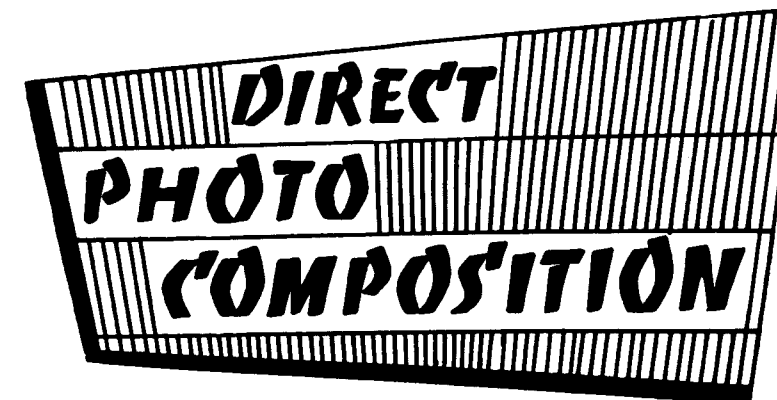
tube pneumatic system may be adapted for this industry. In this the carriers are moved by the force of a vacuum pump. Small parts, mail, blue prints, layouts, manuscripts, orders, samples, tools, books and registers, money, etc., can be conveyed by the pneumatic-conveyor. Some of the presses in the city which have tried mechanical conveyors are *The Hindu*, which had a system for conveying copy and proof from and to composing departments, and the Government Press, which has a rope lift for conveying type formes from composing to machine departments and vice versa. *The Hindustan Times*, Delhi, has pneumatic conveyors for conveying copy, proofs, etc.

Messrs. Soldans Ltd. London, have a complete range of most up to date materials handling equipment. These will handle any

type of materials through every stage of the job, to slash production costs and step up the press output. For instance they have a variety of conveyors: Hewer conveyors designed and specially built to suit any press requirement; with or without automatic off loading; gravity roller conveyors over a wide range to suit individual needs.

The firm of Soldans are also famous for their popular Auto lift, Atlas Pallet truck, Atlas Hand Truck, Stackers, movable imposing table, paper roll, dolly stillages and pallets, Hirst Fork Lift truck, Harbilt Low Leader Pedestrian controlled truck, etc.

The trucks and lifts are very useful for storing paper, boards, etc. on high racks without disturbing others and without the necessity for hard manual labour, as all these are power operated.



By

MR. C. L. BOILEAU
Sales Manager, Intertype Ltd.

The major need in printing is quality. The Intertype Fotosetter provides means of improving quality. The dream of the offset printer for an all-photographic product has been realized. Fotosetter not only produces a wide variety of printed products but its flexibility creates a market for new typographic products. In this article, the Intertype Expert of London traces the growth of Fotosetter in his own unique style

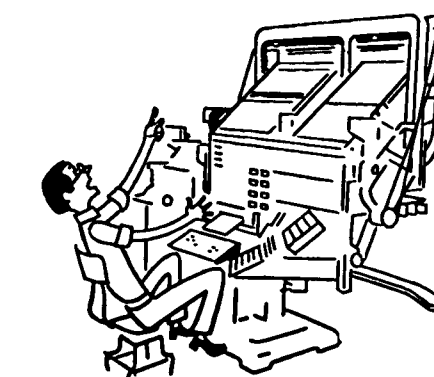
DEVELOPMENT

The history of photo-composition, like the overwhelming majority of successful technical achievements, is a complicated one. To prepare an exhaustive survey of this particular development would involve intensive research in many archives; the preparation of a comprehensive volume much greater than the few printed sheets of my article. Therefore I shall concentrate my remarks on a few significant aspects.

SIGNIFICANT ASPECTS

A reviewer of this new technique of type production has to discuss three particular facets of the subject: the avenues of the scientific technique; the practicability of the various proposals relating to the requirements of the Printing Industry; and the development of the machines and apparatus by the designers and their sponsors or supply houses.

For over fifty years innumerable patents have been taken out for photographic composing devices.



progression of the scientific technique. At the same time one can secure an appreciation of the complexity of the task, the extent of the creative imagination — and financial resources — necessary to obtain the desired result.

A study of the devices and machines proposed in the past discloses several distinct lines of approach. The processes of thought and research in each case have not ceased. Thus we have perfect examples of the continuity of scientific enquiry. The few modern photo-composing machines which are either nearing the solution by one method or another, or which are now accepted as providing means of film setting, have followed certain principal lines of research.

OFFICE MACHINES WITH LIMITED RANGE

1. *Typewriter Systems*, offering what has often been termed "leadless" composition: To-day justifying typewriters abound. Few people are unfamiliar with their operation. But these machines do not provide the film; that has still to be made by photographing the image — or typewriter original — which is far from satisfactory. Type faces are limited, and are not cut true to set-width because of the typewriter keybar system; the impression being made through a ribbon results in rough and patchy character reproduction. Moreover such machines have not the requisite accuracy in alignment and spacing, and of course, type size and character range are strictly limited. For some office work, records and so on, the typewriter undoubtedly has earned a place in the realms of modern print, but the printed result, in my opinion, really can be described only as "off — or far off-print"!

A notable contribution to the fund of experimental data in this

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

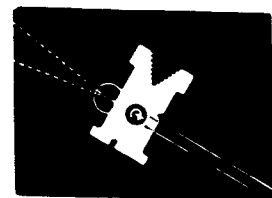
FACTORIES AT: HOWRAH BOMBAY MADRAS

sphere occurred during the prolonged strike of compositors in Chicago in 1947, when newspapers of a size to which America is accustomed were regularly produced by type-writer, with printed alphabets stuck on paper backing for the article headings; the pages were assembled, photographed and line blocks and stereotype made in the usual way.

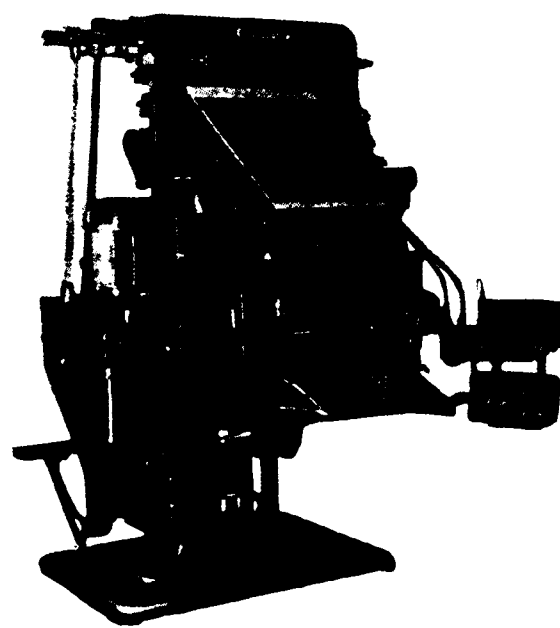
2. *The Illuminate! or Reflection System.* Numerous efforts to "face" type and then subject it to intense light illumination, and by reflection produce a film, were never successful. To-day we have in the "Hadege" a modern interpretation of this idea, using special plastic matrices.

3. *The Disc or plate Method.* Probably the most popular avenue of effort, not only is disc or plate form, but in segments, cylinders and other master alpha set carriers. The characters are invariably in negative form. A light source is brought to bear on the character and by different optical systems directly produce a film. Apart from one machine, the "Fotosetter", all other keyboard photo-composing machines being developed to-day operate on this principle, whether keyboard is a separate or integral part of the unit. They utilise either a stationary or revolving single or multiple negative character-carrying member.

4. *The Circulating Matrix System.* Several attempts were made to use the proved mechanical benefits and operational advantages of line-composing machines. A camera in place of the hot-metal or casting unit, however, is not enough.



Fotomat with negative character



Intertype Fotosetter

Reflected light on special matrices, glass inserts in regular matrices, and so on, all failed because of the lack of character definition in the finished film. Eventually one manufacturer solved the problem by introducing a negative character insert into the side of the matrix. This is the "Fotomat". It is used on the Intertype Fotosetter.

So much for the first section of my paper, the *development of the scientific techniques.*

Concerning the practicability of the various proposals and devices in relation to the requirements of the Printing Industry, I would refer to an article on this subject which many years ago appeared in the *British Printer*. This detailed clearly and succinctly what all that time ago were considered necessary requirements of a photo-composing machine if it was to satisfy the exacting day-to-day requirements of printers.

CORRECTION WITHOUT TEARS

In all type composition the need for corrections arises, either because an author changes his mind (or often cannot make it up!), or the compositor or composing machine is at

fault. A Photographic typesetting system is useless without simple, speedy and effective correction equipment. It was on this ground that so many valiant efforts failed: they had no practical film correction apparatus, or even a method! It was this aspect, perhaps as much as any other, which enabled Intertype Fotosetter to make such rapid headway.

In an article in *The Times Printing Supplement* of July 1955, Mr. H. M. Cartwright gave

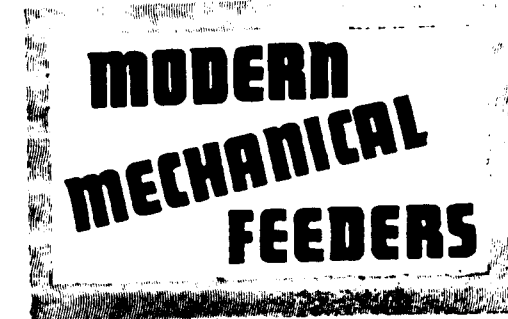
unqualified support to this statement, remarking that "it certainly looks as if it will be a long time before the Fotosetter supremacy is seriously challenged."

Fotosetter installations throughout the world have adequately proved that photo-composition is no longer a dream nor still in its experimental stage. It works to the requirements of the trade. In Scotland is lively evidence of that fact, for in 1956 the Glasgow Corporation installed the first Fotosetter in the United Kingdom. They are daily producing their deversified run-of-the-shop work with typical Scottish thoroughness.

Of course in discussing a new technique one cannot overlook the attitude of the trade unions. Their reaction to photo-composition has been commendable. In August of this year, after discussions with the British Federation of Master Printers, agreement was reached on the operation of the Intertype Fotosetter.

DIRECT PHOTO-COMP ARRIVES

Undoubtedly direct-keyboard photo-composition has arrived and
(Continued on page 28)



By
"DAWSON"

Are you still feeding by hand? Then you are hastening slowly! In the race for more production, better quality and increased economy, probably, you will be left behind. Possibly, you don't know anything or enough about printing executed untouched by hand. Here is something for you to modernize your machine department

In January 1957, "Printindia" published an article on automatic feeders, with the title "Are you still feeding by hand?" There an attempt was made to describe all types of mechanical feeders, the old and new, the popular and the not-so-popular. However, as a feeling of incompleteness was sensed, some of the latest feeders will be described here.

AGE OF AUTOMATICS

People prefer to call this age of ours by different names. Thus, we have the Age of Science and Technology, the Age of Democracy, the Age of Atom, the Nuclear Age, etc. This is only a manifestation of the freedom of speech, for, is this not an Age of Freedom too? For us printers, this is an Age of Automatics. This is an Age of Speed. This is an Age of Efficiency (but not of sufficiency). No second-rate men or machines are tolerated in this our age.

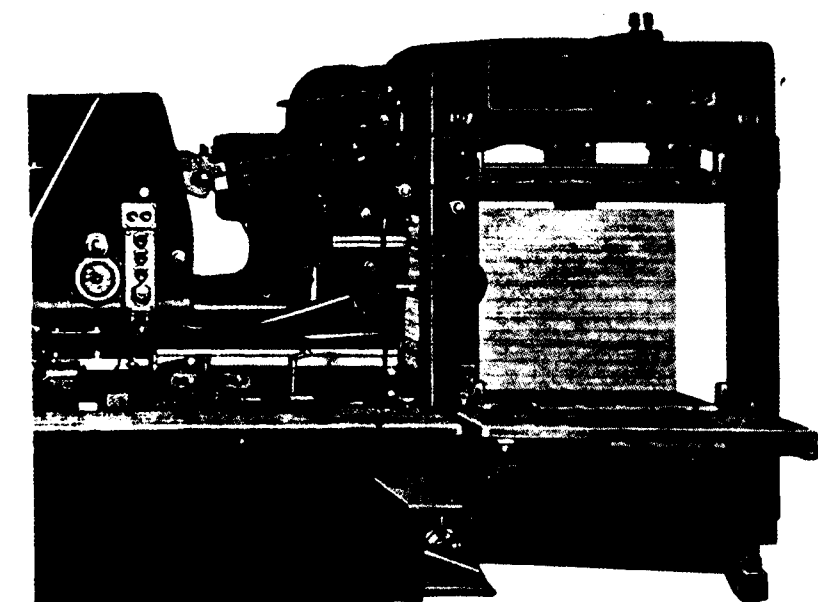
If it is true that this is an age of speed, why do we still see in India most of the operations still done by hand? Why do they still set type hand? Why is there still hand-feeding for printing, folding, ruling and other machines? The answer is the economy of the

But the fact remains that high speed presses are necessary to meet the increasing demand and necessity for lowering costs. It is also true that these high speed presses should be fully automatic, if they are to be true to their name. Then and then alone 100 per cent efficiency can be aimed at. Machines should be run without interruption for full production. Indeed, this continuous production is the secret of the popularity and speed of rotary presses for our newspapers and magazines.

Manufacturers of Printing machinery such as the Linotype Machinery have approached this problem of providing the industry with new feeders. The opinions of practical printers with considerable experience have been ascertained and with these as bases, they have avoided the faults of previous makes and constructed ideal mechanical feeders with improved features.

LOADING AND UNLOADING

The cause for frequent stoppage of automatic feeders and deliveries is for loading a fresh pile to the feeder and unloading a printed pile from the delivery. This stoppage causes ink distribution problems



L & M Roll back feeder at work on a high speed machine

and the evenness of ink is disturbed thereby especially in halftone and colour work requiring high standards of inking.

ACCESSIBILITY TO BED

Most of the automatic feeders of yesterday do not have free access to the bed for placing the forme and locking it, as well as for corrections. Of course this can be solved by extending the feedboard to a greater length. But this is not without its difficulties. In solving the problem of accessibility, problems of floor-space and sheet control are created. Thus getting a forme to the bed or making machine corrections on the forme are extremely difficult with certain types of mechanical feeders, although they are satisfactory in so far as feeding is concerned. Certain manufacturers have solved the problem of accessibility to the bed by means of swing devices. The feeder can be swung out of position, giving more access to bed. This

too is not cent per cent satisfactory. A swinging feedboard means additional space at the side or between two machines. Again we are confronted with the floor space problem. Further, swing feedboards are impracticable for large size machines such as Quad Royal (40" x 50")

Another unhappy feature of cumbersome auto-feeders is the absence of light on the forme. The darkest part is below the feedboard and alternative arrangement such as a lead lamp with its attendant dangers have to be made. Unwary workers may easily trip and cause accident.

The readers are aware that auto-feeders may belong either to the class known as sheet feeders or to stream feeders.

In a stream feeder, considerable time is wasted when a sheet is buckled on the feedboard, when a sheet reaches the front lays, the speedily revolving cylinder snatches the sheet. This snatching of the

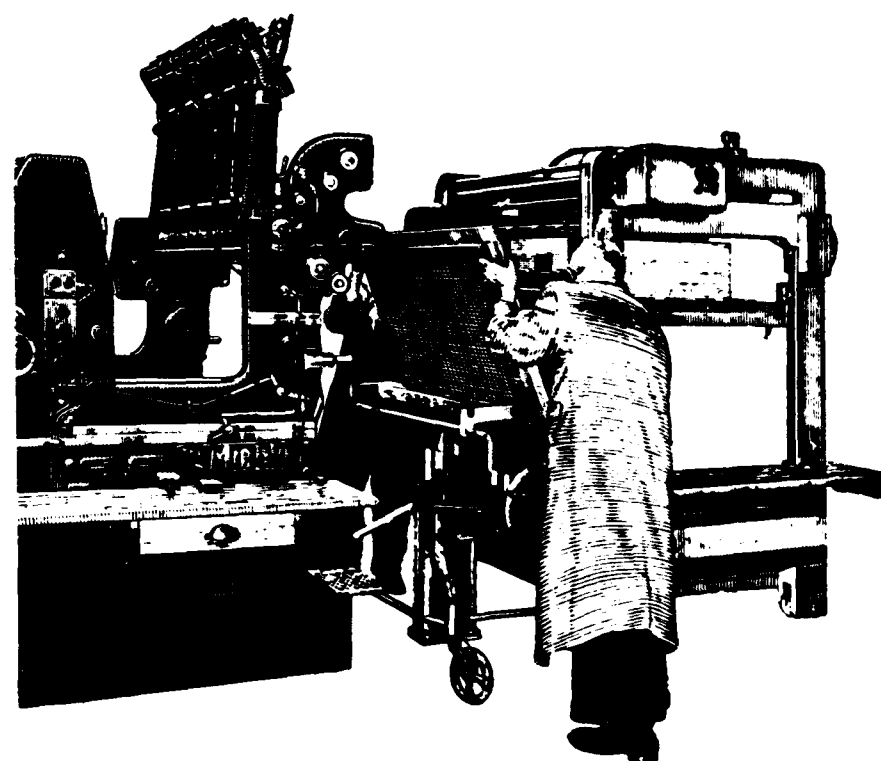
stationary sheet by the grippers tends to accelerate it with the result that the register is faulty. Whenever a pile feed is adopted for any press, it begins to pay only when you have a pile delivery also. Otherwise, the advantage gained by speedy feeding is negated by the slow delivery. This is patent in the case of heavy art board or the other extreme, thin tissue or bible paper or India paper. These cause difficulties in their transfer through the machine.

The answer to all these problems of floor space, accessibility to bed, lighting to work on the forme, etc. will be found on the latest L & M roll back feeder. Some of the features that commend these feeders to our printers are: Ample space for forme lock-up and correction, special strip lighting under the feedboard to help lock up and corrections on the machine, the continuous pile for non-stop feeding, the swinging grippers that are capable of adjustment while the machine is running and the fact that there is no necessity to lubricate these swinging grippers during their working life.

INACCESSIBILITY

Taking the first point of inaccessibility in auto-fed machines, this shortcoming alone is responsible for the greatest waste of time. Easy accessibility of the bed and adequate lighting for the same are necessary for any machine man. Because, he wants to get the forme on the machine with the least effort, within the quickest possible time. Easy access to bed is provided in L & M machines by means of the Feeder that rolls back. For this, the machine-man has to throw a lever and turn a handle. Now the feeder runs out on wheels. The back wheels are of rubber and run on the floor and the front wheels are of steel and run on tracks

(Continued on page 30)



Accessible roll back feeder

PLANNING— Key to Production

By

SRI J. M. HARI

What we want, how to produce it and where and in what way to produce is PLANNING. These are the days of planning. Even suicides are planned! For good things a plan is a must. A well-planned factory is like a well designed machine. It runs smoother, faster, safer and better. This article shows you how planning helps production in printing.

In our time we are seeing mass production of books by the million. This craze for speed is but a facet of the race for lesser cost of production. Planning is a type of control and in these days everything including birth is controlled! One often hears of planned parenthood. For planning in activity, the planner should be satisfied that the arrangement he has made out is the best under the existing circumstances to produce the given good. The planner studies the factors, the problems arising out of them, their relationship and the results good and bad flowing out of them. A good plan gives the pattern for the greatest good with the minimum cost and discomfort.

COST OF EQUIPMENT

The risk involved in the printing industry today is much greater than it was prior to World War II. The investment in machines, buildings and knowhow required to start a press is many times the amount necessary in the past. Planning the press helps us to crystallise our troubles, problems and difficulties. It then paves the way for solution. Before buying machinery, equipment, furniture, office appliances, the following things should be calculated: complete information

regarding its value, its utility to the business, its appeal to the public and the type of work the press is doing, the availability of funds, floor space, capable men to handle it, etc. Plan is evolved only after a deep study of all these and other relevant factors.

SCIENTIFIC PLANNING

Planning a Press is an exact science. By good planning unskilled labour may be utilised to do the routine tasks in the press, leaving the skilled with more time to do properly their work. Press is a place where the factors of production, land, labour, capital and enterprise are brought together to produce printed matter and thus render service to society. In planning a factory the buildings available, the machinery (to be) installed, land, tools, appliances and materials, the number of men employed, management personnel, etc. should be considered.

Factory is a single unit and all the above are parts of a unit. The planning is done as a whole for all. The functions of all should be so co-ordinated and helped by the plan for the smooth flow of productive work. Unity of purpose is the prime point. The first thing is what type of establishment are we

planning for: A job office, a book office, or a newspaper office. In short, what is the press going to manufacture in large quantities? Letterheads, visiting cards, labels, coupons, tickets, invitations and the general forms and stationery like invoices, receipts? Then it is a jobbing office. Similarly, if book work is to be produced it needs a different and more elaborate plan. The volume of work determines the amount of floor space required for the necessary equipment, labour and supervisory personnel. There should be provision for their welfare also.

CO-ORDINATED UNITS

Printing is not a continuous industry like sugar or paper mill, steel plants, oil refineries, food processing plants, etc. The latter cannot be interrupted without much loss in men, material and money. The printing industry is characterised by various units that should be co-ordinated to produce the full printed matter.

New plans are necessary when a press is buying new equipment, moving into a new building or building a new factory premises, expanding its activities, adopts new processes, takes new contracts for permanent publications, periodicals and the like. Even if a press is not doing any of the above, it is worth planning it for the sake of minimising waste, reducing cost and improving the profit margin and quality of work as well as rate of production.

RE-PLANNING

Periodic check of our factory plans pays us well. Big factories are continuously being planned. Only in India we have planning by accident. If a press looks well planned, consider it as a mere accident! It is true that new buildings be adapted to suit our needs, but in existing buildings planning is limited by its structure. 90 per cent

of our printers do not own their buildings. They have to pay heavy rentals for unsatisfactory premises which were built for domestic accommodation and not at all for housing a printing press. For planning a press the press is broken down into its departments :

COMPOSING - MACHINE - BINDING - MANAGEMENT

Each of these departments is broken down into the various processes: Thus in Composing: Distribution, Composing, Proof-pulling, Correction, Reading, Making-up, Imposing, Lockup and Lineup, Pre-make-ready. In Machine: Make-ready, Platens, Cylinders, Automatics, Various size machines, Drying room, etc.

In Binding: White Paper Warehouse, Printed Paper Warehouse, Counting, Cutting, Pressing, Folding, Gathering, Collating, Sewing, Glueing, Endpapering, Preparation of Boards, Attaching Boards, Case-making, Covering, Finishing, Perforating, Numbering, Gilding, Edge decorating, Ruling, Eyeletting, Envelope making etc.

In Management: Time-keeping, Accounting, Typing, Payment, Records, etc.

After break-up of the productive and service departments, we should find out the capacity of each department, i. e. how much work is expected to be turned out in the course of a week or month. This will reveal accommodation required for materials, their storing, labour force required and their needs, etc. The flow chart showing the sequence of operations that a printed work undergoes and the capacity diagram showing the output per week or month of the various operations will not only be helpful in planning the press but also for various other purposes in efficient production.

Having found the capacity of production of the press, it is now easy to collect the minimum number of men, machines and quantity of equipment needed for the same. The next step is to calculate the expenses for producing the planned number of copies or other types of printed matter. The annual cost of production in a press consists of:-

1. Recovery of Capital invested (Depreciation)
2. Interest on investment
3. Rent, rates, taxes, heat, light, etc.
4. Direct labour costs
5. Direct material costs.

With the above data, it is possible to estimate for the future requirements of the press.

In buying machinery, we should find out how long it takes to recover the cost of the machine. If it makes an unduly long time and you cannot afford to spend so much, better go in for another one; before buying equipment see whether it would suit your costumers' print requirements.

FACTORY LAYOUT

Each Department is made up of machines and men doing a particular kind of process or making a certain product. The product moves from one department to another according to the operations performed. In making the product that is being made pass from one department to another, *material handling*, an important subject of factory planning has to be considered. The aim should be to reduce unnecessary handling and travel of the product and to minimise its travel.

The flow pattern of planning consists in having rows of composing frames, rows of galley racks and making up frames, rows of imposing surfaces with the galley

press or the proofing press in a readily accessible place. The job cases are arranged in a convenient corner, as they are not needed often. The forme racks should be near the stone. The place where the furniture is kept should be near the stone and proof press. Spacing materials which are necessary for setting, correction, make-up imposing, for book as well as job, should be centrally placed. Lead racks, furniture racks, wood and patent metal quoins, locking up apparatus as keys of mechanical quoins, mallet, shooter, planner etc. should be readily available without making one walk a distance or wait for others to give them.

ORDER OR DISORDER

People think a straight line arrangement is the best arrangement. Straight rows of composing frames, composing machines, making up randoms, job cabinets, platen machine rows, cylinder machine rows of various sizes, etc. Actually, the straight line method wastes a considerable portion of the available space. The odd angle arrangement or asymmetry is the order of the day. Such arrangement economises the available floor space and bring the unit closer. Straight line arrangements call for greater walking by workers while in the asymmetrical arrangement the units are brought closer.

To plan a press properly, a blue print may help. A step ahead of blue print is the use of two dimensional templates of card or metal. But the modern way is to have miniature models of machinery and actually see how they all work out to be in factory made to scale.

In positioning machines, the workers' comfort while working, access to supply of materials, safety, light and air, supply and removal of materials will figure large. Talking of safety, guards should be

provided for gears, rollers, cutting machine blades, platens, belts, fans, pumps and other hazardous moving parts, switch boards, electric gear such as transformers, generators etc. should be encased in non-conducting material to prevent electrocution. Piling sheets to a great height will eventually fall on persons nearby.

It is frequently found that large presses, which may be well planned as regards production, are ill arranged as regards personnel facilities. Thus the canteen, the wash room, bath or the water closet will be a furlong away. Keeping them nearer is conducive to better production and causes less waste of time. The decentralization of latrines, urinals, stores, canteens and baths can be seriously considered by large presses. In some places the wash room is far away from the canteen or there are no washing facilities in the canteen. The workers are thus not encouraged to clean their hands before eating. This tells on their health and eventually on the production.

AISLES AND GANGWAYS

The pathways in each section should be broad enough to allow workers to move freely carrying a forme, a galley or a case without hitting the neighbouring compositor. But it should not be so broad so as to be a waste of space. In cities, floor space is costly and not available in plenty. Therefore, there is the necessity for economy consistent with requirements. The load and frequency of the traffic determine the width of the aisle. Too narrow aisles, do not allow free movement of men carrying forme trolleys, or paper trolleys, or metal trolleys for mechanical composition. It is better to introduce one-way traffic on busy aisles to avoid waste of time and to ensure smooth flow of traffic. The pathways

should not be zig-zag and narrow as this wastes time. Straight gangways are easier to travel. Too wide aisles tempt the imposer to stack some formes, or the paper trolley man to halt his trolley for a while. It is better to have straight and narrow ones than to have wide and zig-zag aisles.

IMPROVED PRODUCTION

To meet the challenge of rising costs, Management is constantly seeking to improve production efficiency with new technology, new manufacturing methods. But even where topnotch efficiency has been achieved in an existing printing establishment, there are often other ways to reduce operating costs. For example, the establishment of a new branch plant, in many cases, bring about not only worth-while savings in manufacturing costs, but also substantial reductions in operating costs, with the latter due entirely to a more strategic plant location.

In other cases, the modernization of existing plant facilities will often bring costs into line and place a business in a more advantageous, competitive position. In integrating such things as smooth-flowing layout or plan, improved material handling and where logical, even the selection of the proper location for the plant itself, printing presses should correlate good industrial engineering and good economics.

DELHI PRESSES

There is an illustrative case in New Delhi. The Delhi authorities all on a sudden decided that there is much congestion in the heart of the city. This is no wonder for every one of us is aware of the congestion. But what is wonder is that the authorities thought that the congestion will be eased if the printing presses were asked to

quit. These presses, in fairness to the local authorities, are indeed located in a very congested area. But in fairness to the presses themselves, these have been carrying on their normal business activities for a long time peacefully. To suddenly disturb them will be nothing short of a fatal blow to their business. Therefore, a solution was found. This is to shift all presses to a suburb and if possible construct a number of buildings for printing presses. The only hitch is that for building a small structure for a medium sized press it costs about Rs. 2 lakhs. Whether so huge an amount could be found by the proprietor or whether the Govt will come forward to help are things to be seen. For the purpose of this article I have mentioned this as an instance where, it is possible that selection of proper location, tactical planning and proper lay out will reduce printing production costs to a very large extent. Control of temperature, humidity, foundation for machines, supply of power and its transmission are all matters to be taken into consideration for overall planning. Glare-free lighting and noise prevention are also matters that should receive consideration in modern planning for industrial production.

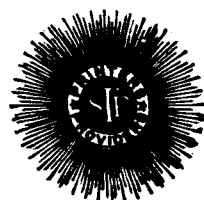
This article is written in order to create interest in planning in general for the printing industry and to show how planning plays a part in the economics of production. It can be safely said that all presses, big, small and medium, need sound planning. The need for expert planning is not called for only in the case of big concerns. It does not depend on the size of the press. Often a small printing plant will have more complex problems than the large one. Therefore, there is no need to be unnecessarily size conscious, but go ahead with planning.

50 YEARS IN THE SERVICE OF THE PRINTERS

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ESTD. 1906

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SWADESI TYPE FOUNDRY

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::

MADRAS-2



F. & D. BROWNLIE

CELLOPHANE PRINTING MACHINE

A 3-colour printing machine has been introduced by the Countersip Engineering Co. Ltd. of Bristol, for printing on paper, metal foil and the various plastic wrapping materials such as cellophane.

The printing units are of the letterpress type, printing from rubber plates, the machine being arranged for printing cylinders varying from 18-24" in circumference, in steps of approximately 1". Changing from one size to another is easily accomplished by winding back the inking mechanisms, each of which has four forme rollers, five reciprocating drums and five distributing rollers, and special attention has been given to allow for quick setting of the rollers.

The material is in reel form, and after passing through the guide rollers is fed around a single large diameter impression cylinder. The web of material is controlled by vacuum means, as nothing is allowed to touch the printed face. Colour register both sideways and lengthways is provided for on each printing unit and can be operated when the machine is running.

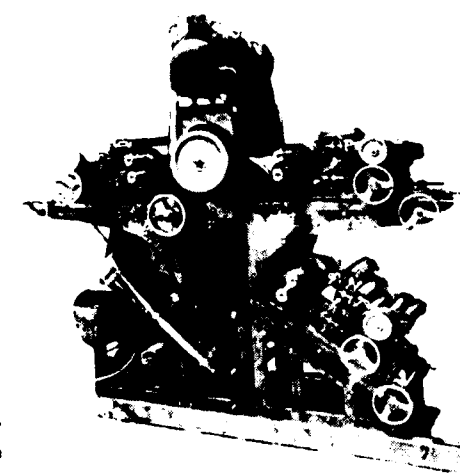
MAGNETIC BRAKE

The machine can be arranged for rewinding the printed web as well as various types of deliveries to suit the particular products, and special means are provided for

spraying the material after printing, to prevent set-off when using slow-drying inks. The rubber plates are fastened to the printing cylinders with the usual adhesive backing material and lines are engraved both around and across the printing cylinder bodies to facilitate setting the plates in the correct position. Drive is by a variable speed motor fitted with a magnetic brake and means are provided to stop the machine in case of web breakage. Speed of the web is variable from 100-300 ft. per minute.

ELECTRONIC ENGRAVING FOR COLOUR PRINTING BLOCKS

The Federation of Master Process Engravers recently arranged a demonstration of the new Finella Klischograph machine for producing



Three Colour Plastic Printing Machine

colour half-tone printing blocks, at the works of K. S. Paul of London, who are the British agents for Klischograph machines.

As well known, electronic engraving machines for producing black and white half-tone blocks have been in use for some time, with excellent results. The new machine, however, can engrave four colour sets of half-tone plates with a great saving in time. It scans by reflection from flat copy up to 8" x 6", and produces blocks the same size as the original in screens from 65 to 120. Plastic, anodized aluminium alloy, zinc, magnesium and copper plates may be engraved.

CONTROL OF CUTTING STYLUS

In addition, it is possible to use the machine as a colour densitometer, and from the original copy adjustments can be made to the electronic circuits, so that not only can the scan through each of the tri-colour filters be balanced but the second simultaneous scan to give the correcting or "masking" adjustment to the impulse controlling the cutting stylus in the engraving head can be accurately and selectively tuned.

QUICK WORK

The screen angle for each block of the colour set is obtained by rotating the engraving table to pre-determined positions, and for example a plate of the largest size, 8" x 6", can be engraved in just over half-an-hour for 120 screen. A 3-colour set would take less than 2 hours for setting and cutting on the machine. Examples shown at the demonstration included a 4-colour set, 8" x 6", in 120 screen, which by the ordinary half-tone process took 41 hours to make. From the same original, using the colour Klischograph, the total time was less than 15 hours, comprising four hours for engraving, five

AUGUST 1957

hours for proving, 4½ hours for fine etching.

COLLOBLOC DEVELOPMENTS

Arrangements have been made whereby Hawthorn Baker Limited are to have the sole agency for the Collobloc process in all countries of the world. Koch process Limited, who developed Collobloc, will retain their interest in the further development of the process, working in close collaboration with Hawthorn Baker.

FOIL PREPARATION

The special Collobloc foil, made from three layers of colloids, is available in rolls and is readily cut with scissors to the exact size required. The pieces of foil are sensitised in an ammonium bichromate bath, and after drying, can be used immediately or kept for a week in a refrigerator. Another preliminary operation is the preparation of the metal backing sheet of any thickness. These are coated with adhesive, and when dry, the prepared sheets can be stored indefinitely in a cold place.

SIMPLICITY

The method of making Collobloc half-tone blocks is extremely simple. The original picture is placed in a simple camera and photographed (up to 3 minutes' exposure) with super-ortho film through a special Collobloc vignette contact screen. This gives the screened negative, sized up or down, needed for making a Collobloc half-tone.

This screened negative, made to the exact dimensions required for the final half-tone, is placed with the sensitized Collobloc foil in an ordinary printing-down frame and exposed for 3-8 minutes. The light hardens the foil to varying depths as it passes through the screen negative and the top layers of the foil. The exposed foil is fixed to a rigid support such as offset zinc or aluminium, previously coated with adhesive, and a simple mangle and cold water ensure perfect adhesion. The Collobloc is then developed, merely by washing out in hot water for about 5 minutes. The paper backing of the foil peels off and the water dissolves away those parts

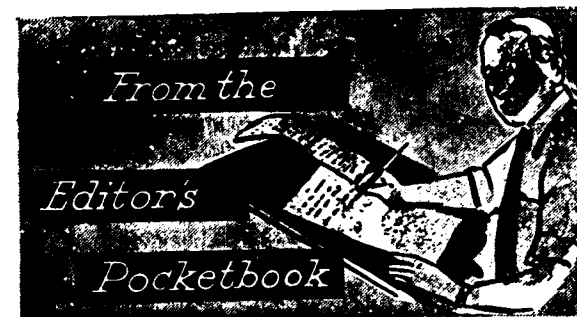
of the colloid which have not been hardened by the action of light during printing-down. After drying, the collobloc is ready for proofing on the press.

PAPER SEASONING

The seasoning of paper to machine-room atmosphere will eliminate many printing problems, and a machine for this purpose is manufactured by Hall & Kay Ltd. of Ashton-under-Lyne. This operates on the continuous principle, the paper being ready for immediate printing when removed from the machine, and various sizes are available to suit different requirements, with a capacity of 4,000 lbs. of paper if necessary.

The paper is suspended in batches from a conveyor by means of specially designed clips with a simple catch and release arrangement, which hold the paper firmly during its passage through the machine. The paper travels at a controlled speed through the machine at room temperature, and humidity is delivered evenly and at the correct velocity between the sheets from each side and also from underneath by a fan and ducting system. The distribution system extends the full length of the machine, and if desired, special humidifying units can be installed to operate under automatic control with the object of further increasing the moisture content of the paper, particularly in the case of offset printing.

A variable-speed motor drives the conveyor chain and supporting structure carrying the endless rows of clips, allowing the time for seasoning to be controlled according to the quality and the weight of the paper. It is stated that heavy-bodied papers, which normally take at least two days to season, require only about two hours to go through the machine.



PRESS FOR NEYVELI

Long before Neyveli lignite is mined for large-scale use as fuel, the corporation has become a by-word in the South. For on Neyveli, the hopes are pinned for the long-neglected industrialisation of the south. Whether Neyveli lignite is going to be economical and useful and if so, when and to what extent are points too early to answer. But they are going to start a printing press there, is certain.

The AIFMP *Bulletin* has rightly deplored the tendency of manufacturing units usurping the legitimate place of the printing industry and denying the printing business which is legitimately the private sector's. But, it doesn't look as though, the Corporation is going to abandon its plans for starting its own press, notwithstanding the *Bulletin's* front page editorial.

ERRATIC EXPERT AT WORK!

We are afraid that the above editorial has missed one important point. We are not going to miss it. In Madras we have such a person as "State Expert for Printing." Who is this expert and is he an expert in all branches of printing? Printing is not in its primitive hand-press form, when every adventurous man or woman can claim to experiment and to be called an "expert." A thousand new techniques, a hundred new processes, dozens of branches have grown and made printing a highly specialised industry. When such is the case, he will be a fool or a liar who calls himself the master of all. Granted, one can be and sometimes is a jack of all and master in none.

The ways of Govt. are inscrutable and hence they follow a routine pattern. They ask the State Expert(?) in printing the probable machinery and equipment needed to start the press at Neyveli. And what did they get! A few office duplicating machines and similar appliances plus other equipment. The list of the Expert(?) is famous more for its omissions than for its patronizing office machines. (It is a fact that due to such patronizing a very large scale order was placed for all sizes of office machines in the Madras

Govt. Press. Several lakhs of rupees of the Madras Tax Payer have been thrown into the drain to fulfil the whim of an official.)

So, this Expert (?) recommends not more than a mere 400 lb. of foundry types. He not so much as mentions any Linotype, Monotype or any other modern machinery. The list recommended by this wise guy has made him a laughing stock of the whole of the printing industry.

It is a matter for investigation as to whether this official of the Madras State Govt. dubbed as Expert in all branches of the printing process such as Offset, Block making, Lithographic Stone and platemaking Photogravure, Silk Screen printing, etc. is really competent and experienced and if so in which particular branch. It is also a matter for public enquiry as to how this official, who takes trips at private expense abroad quite too often for our slender foreign exchange resources to bear, has suddenly grown fond of small offset machines and as to how it came about that he was empowered to order a whole battery of them in the teeth of opposition of all his assistants.

Conclusion: Experts should be periodically screened if only to find out whether they are really experts. The present state expert in printing appears to be expert in recommending large scale purchase of small offsets fit for offices!

ADMISSIONS TO RSP, MADRAS

Last year, as we have pointed out before, the Part Time Printing Technology Diploma Course in Regional School of Printing, was left half vacant rather than admit applicants from Hyderabad and Kerala. No cruder exhibition of linguism and narrow provincialism can be found. That such unparalleled provincialism is enjoined by the existing rules for admission to Polytechnics is a thing to be ashamed of.

This year the story repeats itself. There are plenty of candidates from other states including one from Bihar, one from Bombay and scores of them from our neighbouring states of Mysore, Andhra and Kerala. All these applicants were not even called for interview as they belonged to other states. Yet at the end the story of last year may repeat itself and the seats may be kept vacant whereas these could be given to candidates from other states.

In Part Time Diploma courses many Master Printers' sons wish to join for the diploma. Many of the applicants are science graduates. Because of an absurd age restriction, they are denied seats. Such spurning of talent will soon lead to dearth of adequately trained technicians for our industry.

Anything in Blocks

TRI-COLOUR, HALF-TONE & LINE

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COLOUR BLOCKS

FROM

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Estd. 1890 Phone: 3202

M. C. APPASAWMY CHETTY & CO.

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Layouts and Lettering

(Continued from page 10)

and Visual Publicity representing the Public Sector of the Advertising Industry can, we are sure, certainly not come up to such standards in their designs. Our only regret is, why not they at least try?

MOTOR INSURANCE CO. LTD.

The motoring public are educated by the advertisements of this concern handled by Keymers, Madras. Abstract tints, geometrical and otherwise, talk about "Courtesy on the road pays—It saves you!"

LACTOGEN

Grants' striking babies, short terse copy are direct, forceful and striking.

PARKER 61

The introduction of this wonder pen is by means of publicity mate-

rial characterised by their neat layout and choice typography as well as good illustrations. LAS, Bombay, do the job well.

SARIDON

Sometimes when we see the hideous advertisements, we need some Saridon, sure! But Saridon advertisements are another matter. Are they not handled by J. Walter-Thompson! The "From pain to Relief" series is going well.

SCISSORS

Telling scraper board drawing or the arrestive background for the personality series, the artist-draughtsman, the station master (supt.) and the aircraft mechanic occupy 2/3 of the space. The hand lettered Scissors and Gill Bold Italic "His Cigarette is" are very effective indeed.

Shalimar Paints and Ovaltine continue their colour campaign.

STANVAC

Press Syndicate, Bombay, introduced "I am Adipocere" 10" x 3 col. series. Quite a new and interesting angle on oil and well exploited by the neat typography and design.

SURAJMALS

Grants, Madras, handle the publicity of this famous Madras Jewellers. Quite a good piece of publicity matter. But we often find too many harsh elements attracting us all over without the graded degree in emphasis.

Consequent on our proof-reader and many of our staff being down with Flu (real and imaginary) a few errors have crept into the June issue. The type face in the Horlicks advt was "Perpetua" and not "Gothic" as mentioned. Again in Shalimar review the slogan is "A ceiling to day could be a shower tomorrow" and not "A calling today."



WAGES OF PRESS EMPLOYEES

The Division Bench of the Circuit Court of the Bombay High Court at Nagpur on July 10 dismissed with costs a petition filed by some proprietors of printing presses for a writ of *mandamus* against a Government notification fixing minimum wages for employees in the printing industry.

The old Madhya Pradesh Government had appointed a Committee in June 1956 under the Minimum Wages Act to advise the authorities in the matter of fixation of minimum wages for certain class of employees engaged in the printing presses in the State.

The Committee headed by Mr. N. H. Mujumdar, Chairman of the State Industrial Court, included at the time of the appointment equal number of representatives of employers and employees.

The Government published the recommendations of the Committee as their own decisions and a notification to this effect dated October 29, 1956 was published in the Gazette Extraordinary bearing the date October 31, 1956.

The notification and the rates of wages fixed were to take effect from the date of the publication of the notification in the State Gazette.

The petitioner advocate, Mr. M. R. Bobde, had contended that the Gazette Extraordinary of the Madhya Pradesh Government bearing the date October 31, 1956, was actually printed and published on November 9, 1956, when the

old M. P. Government ceased to have jurisdiction over Vidarbha region owing to States' reorganisation.

He, therefore, prayed that the Gazette notification should be declared void. The petitioners had also filed three affidavits supporting this contention.

Their Lordships, Mr. Justice J.R. Mudholkar and Mr. Justice Y. S. Tambe, dismissing the petition, remarked that much of the material in the affidavits was based on hearsay and, therefore, was of no value.

Referring to Mr. Bobde's application to call for the record of the Government Printing Press which was now the property of Bombay Government, Their Lordships observed, "We think that for this purpose, a long and reliable enquiry was necessary and, therefore, we do not think proper to go into it at this stage."

Their Lordships observed that while constituting the Committee the Government had given equal representation to employers and employees. "Section 9 of the Minimum Wages Act, however, does not say that at every stage, the proportion between the employers and employees be the same."

Their Lordships, therefore, dismissed the petition with costs. The petitioners included printers of three language dailies of Nagpur. **INTERNATIONAL CONGRESS OF PRINTERS**

The Ninth International Congress of Master Printers was held in

Lausanne, Switzerland, during June 1957. 270 delegates from Britain attended besides a large number from other parts of the world. The chief of the British delegates were Mr. Ellis Thirkettle, Principal of London School of Printing, Charles Birchall former President of British Federation of Master Printers and H. W. Underhill of Messrs Eden Fisher Holdings Ltd.

GUILLOTINES FOR INDIA

India Stores Department, London, placed a contract for a number of cutting machines recently. The total order is worth about £ 9,500 (Rs. 1.27 lakhs) and the firm with which the order for these paper cutting machinery was placed is Messrs. Goebel GmbH., Darmstadt., West Germany.

NEW HOE ROTARY FOR SINGAPORE

A new Hoe-Crabtree newspaper rotary has been bought by the "Straits Times" Singapore's leading English daily. The daily has already many Hoe-Crabtree machinery and this latest one is capable of turning out 24 pages with colour.

SCAN-A-GRAVERS

It is estimated that there are more than 2,000 Fairchild Scan-a-gravers in the printing houses in various parts of the world. Most of these are with newspaper establishments, while a few are with trade houses and other printing presses. With the introduction of the Scan-a-sizer, the popularity of the electronic engraving machine has enormously increased. During the Graphic 57 exhibition Scan-A-Graver was attracting much attention.

NEW PAPER MILL IN ANDHRA

Andhra Pradesh already having the Andhra Paper Mills at Rajahmundry will have one more paper Mill at Shakarnagar, Nizamabad district. Situated near the Nizam Sugar Mills, it will utilise Bagasse

(Continued on page 31)



**WE HAVE NO
QUARREL
WITH THOSE WHO
SELL FOR LESS—
THEY KNOW WHAT THEIR
STUFF IS WORTH!**



RAINBOW INK & VARNISH MFG. CO. LTD.
MAKERS OF QUALITY PRINTING INK & VARNISHES
TARDEO, BOMBAY 7.

Direct Photo Composition (Continued from page 16)

as a practice is accepted. One cannot help but recall the words of Mr. Stanley Morrison on this subject in his lecture in 1937 to the British Academy on "The Art of Printing". He said it was "nevertheless possible that the next generation of printers will supply texts built-up from photographic negatives, keyboarded on a photographic text-composing machine... if photography will enable printing more eminently to fulfil this duty to society we must resist any temptation to regard it as essentially unworthy of consideration... we shall, therefore, be well advised to accept photography... even for the composition of books, if and when it is made available".

ECONOMIC ASPECTS

Before proceeding to the final aspect of this new technique, the development of the machine by the designers, a word or two about the economic implications of photo-composition should be considered.

The idea of reducing metal type in the composing room is by no means a new one. It is obviously inefficient to go through the cumbersome business of composing, making-up and proofing a forme of innumerable components, after all carefully locked-up with quoins in a steel chase, just to secure one perfect impression from which to make a film.

DIRECT FILM

Film directly produced will clearly eliminate the manipulation of many bits and pieces and supplies in the composing-room. Type metal—lead as we may call it—is a very real expense. Let me give you some figures. A few years ago an expert analysis was made of the lead in use in the Printing Industry of Great Britain. The staggering figure of £77,000,000 was computed, of which without question the major

portion represented lead that was idle, stored or locked-up and put away under that frightfully costly system of "standing formes". By calculation it was disclosed that for every compositor, printers have an average of nine tons of metal tied up in standing matter—at something like £170 a ton.

Quite apart from the incredible amount of money "tied up" (how perfect the description in this circumstance!) consider the labour that is required to handle the weight of metal; in breaking down and "dissing" the type formes; in remelting for further use. Nor should we overlook the building space in which to store the formes; racks, furniture and trolleys—all cost money.

By contrast, film is light in weight and bulk. A simple office filing cabinet, easily accessible and indexed, will hold "type" equivalent to many, many tons of metal. A typical example was a job composed in film on a Fotosetter in the U.S.A. in which the films were comfortably stored in a cabinet drawer 2 feet by 4 feet. Calculation showed that had the job been set in lead it would have weighed 8,000 lb.

And how much cleaner is the operation of a photo-composing machine, with no molten metal, no trimmings or swarf, and no space-bands to clean; nor time every morning to heat up the pot.

There is universal recognition that film setting provides absolute fidelity and sharpness of character definition. Because of this no artist's touching-up of the characters is required. This is a boon to photo-mechanical houses which for so long have had to endure the costs of nullifying the effects on reproduction proofs of ink squeeze, of imperfections in the face or outline of lead type, pitted letters and so on. Directly composed film provides flawless character definition of

a sharpness and density with which proofs or pulls from lead formes cannot compare.

FREE WHITE SPACES!

I have already touched on the ease of handling film in contrast to lead. The advantages and economies of film methods of composition are particularly noted at the stage of make-up of the forme. No saw-trimmer is required to cut blocks, furniture or slugs; no chases or quoins, or clumps and the other innumerable bits and pieces and devices that are wanted to fit together a type forme for the press. Film composition eliminates material normally used for white space. White space is really "free". The strips or sections of film are fingered and manipulated into place quickly, and with dexterity that considerably facilitates make-up. Odd shapes, angles, overlapped or panelled type, and out-of-the-ordinary intricate formations are as readily manipulated as a straight-forward job. One merely requires a pair of scissors, simple film guillotine or cutting fixture, and a planning table; add a roll of Scotch tape—or better still, the increasingly popular system of waxed "past-up"—and if you are going to produce business forms or rule forms, include a ruler and a bottle of Indian ink and a pen with a selection of nibs (for positive films), or a selection of scribes (for negative films)—and the outfit is complete! Remember that no brass rule has to be bought—one simply draws the column rules on the film.

EXTENSIVE RANGE

The great value of direct-key-board photo-composition has been thoroughly proved on over 200 Fotosetter machines which are working in numerous plants and producing an extensive range of work, including:

Books of all kinds, Magazines and periodicals, Brochures, leaflets and similar advertising material,

Business and rule-forms, labels, etc. Stationery, including letter-heads, greeting cards, etc. Newspapers, Maps, Cinema Slides and Posters.

It will be noted that the first item on my list is books. This is a natural and inevitable application. The first commercially produced hard-bound book ever to be entirely film-set was Cray's "Basic Micro-technique" in 1951. It was set in 11 pt. Garamond, 2 pt. leaded on an Intertype Fotosetter and printed from deep-etch offset plates for the Blakiston Company of Philadelphia. Probably no advance in the Graphic Arts had been awaited more eagerly, raised more hopes, caused more discussion than the coming of photographic technique in type composition. The promise of photo-composition had become a reality.

In a detailed report issued to commemorate this bit of history, certain facts were stated which are worthy of mention, endorsing as they do some of the points I have made:

- (a) The composition estimate was lower than other offers from regular type-setting (in lead) houses.

- (b) Correction costs compared favourably with similar work in lead composition, even though difficult technical material later included by the author, required much re-folioing.
- (c) All camera work was eliminated.
- (d) The quality of type (sharpness etc.) was perfect.

It is impossible now, and probably it will never be possible, to catalogue the numerous books which since 1951 have been produced by this system. Everyone who has used it had endorsed the faith of the designers. I feel it is not out of place for me to repeat the words of Mr. John Bogg, Director of Design and Production of the Oxford University Press, New York, who said: "I am enthusiastic about Fotosetter composition; it is the first new principle in typesetting since Gutenberg".

Another outstanding all-film production was "The Columbia Historical Portrait of New York", published by Doubleday & Co. This was the first book ever film set and gravure produced. A 544-page book, profusely illustrated, the

selected type was Times Roman. Mr. Douglas Black, President of Doubleday & Co., in reviewing the search for quality reproduction of type by gravure, commenting on the results, said: "We wanted to get the best quality of type possible and there is no doubt that Fotosetter composition gave it to us. We have achieved a much sharper, cleaner reproduction than we have been able to get from conventional type proofs".

I will conclude my remarks on the subject of book production by mentioning one other interesting event. Early this year the original films of a book which had been published in America were sent by parcel post to England. Lowe and Brydon, the printers, opened up the packet, re-assembled the films, and within 24 hours had processed the albumin plates and had run off the first sheets! Heinemann have published this 384-page book, which is called "Sunshine and Shadow", the life story of Mary Pickford, an interesting example of simple, speedy and economic international exchange, by means of film composition.

The letterpress section of the trade has not been left outside the orbit of film setting, for parallel with the development of this process has been the practical introduction of rapidly etched magnesium plates. So "leadless composition" has successfully invaded the sacred precincts of the letterpress printer.

The new horizon of photo-composition is indeed farflung. With the aid of a simple enlarger and other photographic apparatus, modern reproduction cameras, enterprising use of the artist's brush, and a positive approach to this new field of opportunity, the Printing Industry can indeed go forward with renewed vigour and profit in the new era of photo-composition.

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AUGUST 1957

Modern Mechanical Feeders (Continued from page 18)

provided for the purpose. When the feeder is in the fully out position, the tracks can be retracted. There is a special universal clutch to re-synchronize the drive, when the feeder is commissioned again. When the feeder is retracted, two strip lights fixed on the inside frames are automatically switched on. Thus the lighting problem is solved. No more long lead lights with their attendant risks. No more dark corners under the feed board.

When the feeder is wheeled away from the press and when someone is working on the machine, it is not possible to run the machine, although it can be inched for make-ready purposes. Thus here is one of the many safety devices provided on the L. & M. fast presses.

While the overall space requirements remain practically the same, ample space is provided for the machine-man and his helper to bring in the forme trolley and load the forme. About two feet of space is saved in the roll-back feeder when it is compared to conventional ones such as Model 2 feeder. But it is a fact that people still prefer for certain classes of machines Model 2 feeder.

CONTINUOUS LOADING

Stopping and starting retards output. So, the key to a non-stop run is continuous loading. In other words, you needn't stop the machine when one pile is exhausted and another has to be rolled in. Experts have found by experience that 15 per cent of running time is spent on re-loading the piles especially on heavy stock.

Continuous loading on latest L & M feeders are made possible by the following means: Before the pile is first loaded, steel laths are placed on the feedboard and the pile is placed on these laths. Upon

these laths the paper actually rests. The pile is then built up to its usual height, wound up in contact with combers and the run commenced. After some running, the pile is reduced to a convenient depth, a white light indicates that it can be removed from the back of the feeder. A second pile is loaded on a second board, with laths inserted as before. The pile remains resting on the laths. These laths are supported by lifter bars. This goes on rising until the depth of the pile is about one inch.

Now a red light warns the operator of a stationary pile. Only a short time is necessary to restore the height of the pile. During this time, the feeder mechanism is capable of adjusting itself to the differences in depth of pile.

The second pile is now wound up by hand. The top is in contact with the bottom of the laths holding the first pile. During the change-over some height of the pile is lost. The automatic feeder compensates for such loss in height. The laths under the top pile no longer rest on the lifter bars. These laths are removed individually by sliding out. Now the two piles become one. This is technically termed as "marrying" the two piles. When the lifter bars of the first pile are removed, the red light will go out and not until then. The four stages in the operation of continuous loading are:

1. Loading the second pile while the first is nearly exhausted
2. Withdrawing the stacker board from under the first pile
3. Second pile is wound up to contact laths now supporting first pile
4. Removing laths of first pile to combine first and second pile.

To do this there is no need for any assistance. There need be no hurry as the press is always running.

Thus this arrangement is easy, effective and efficient. There is another safety device to prevent overwinding of the pile. This special trip disconnects the drive when the pile is overwound mechanically. Although the drive is allowed to run freely, it does not continue to raise or lower the pile. This arrangement is for mechanical winding of pile. When it is manually wound more than what is required, the mechanism locks automatically preventing further operation.

BACK SEPARATION

For certain classes of machines we should still have front separation. In some of the latest letterpress machines we have for this reason front separation feeders. But, back separation allows stream feeding or continuous feeding. The system of combers and twin blowers are considered to be the best arrangement for the separation of the sheet. Therefore even in the latest models of feeders these two are left untouched. A redesigned roter, improved movement of the forwarding suckers are some of the good features of the latest L & M Feeders. In all automatic feeders running by suction, a considerable quantity of paper fluff gets lodged in the suckers and blowers and it is quite a problem to clean them. With the re-designed roter, in a matter of minutes it is possible to clean them. When feeding very thin stock such as tissue or bible paper, a forwarding vacuum roller can be utilized. It controls the sheet during its initial movement on to the feedboard tapes. This is another auxiliary device supplied when necessary along with the latest L & M High Speed machines equipped with auto feeders.

SINGLE SHEET OR STREAM?

This controversy of either the stream or single sheet being the better is finally buried by providing the dual feeding device.

This is an ingenious arrangement to alter the kind of feeding at will, either for stream or continuous feeding or sheet by sheet. It is now recognized by all leading authorities that both sheet feeding and stream feeding are necessary to suit certain circumstances during production. Therefore either can not be said to be the superior of the two.

This is accomplished by a lever which can be turned either to sheet feeding or stream feeding. By this simple device the speed of the feedboard tapes is altered. This operating lever has another advantage in the case of obstruction and delay due to crumpled sheets. In such cases, no time need be wasted to clear the stream feeder. The lever is reset to reverse, the handle is wound. This brings the sheet on the tape back to the pile. This arrangement obviates pile-up on the feedboard and waste of paper as well as delay.

The gearbox on the tape drive contains necessary mechanism for slowing down for sheet feeding or quickening for stream feeding. Thus in a matter of seconds, by simply operating the easily accessible handle, feed can be changed as desired.

SWINGING GRIPPERS

For positive control of the sheet during printing and for perfect registration, swinging grippers have been devised. These can be swung clear while packing the cylinder for full accessibility to the machine-man. The swinging grippers are fitted with micro screws, capable of adjustment while the machine is running. They move the sheet back by 1/16 inch to compensate for any possible rebound from the front lays. The grippers close when the sheet is stationary and perfectly at rest. After taking hold of the

stationary sheet, they begin to swing forward at an increasing speed. When it is moving at the same peripheral speed as the impression cylinder, the sheet is accepted by the cylinder grippers. Thus the swinging grippers are in the same position as front lays. What are called front lays are mere pre-register steps. The front lays are situated under the feedboard apron. This is adjustable to compensate for thickness of stock. The front lays come up to receive the sheet and remain up during side registration. Then the swinging grippers suspended from a pivotal bar move back to contact the gripperedge of the sheet. Now the front lays drop beneath the apron.

The position of the side lay is in constant relation to the front edge of the sheet and may be adjusted horizontally.

When no sheet is fed, the no-sheet trip incorporated in the front lay mechanism come into operation to stop printing. When a double sheet is fed, the two-sheet trip fitted to the feedboard comes into operation to stop the impression.

With the pile feeder and pile delivery, continuous production speeds and standards of quality are maintained on L & M High Speed machines. The High Speed Miehle is equipped with both up to date feeder and delivery. The High Speed Two-Colour machine is equipped with Model 2 Automatic Feeder and Extended Pile Delivery. The Letterpress Perfector is also likewise equipped. The High Speed Centurion is equipped with the Roll Back B U S Feeder and Extended Pile Delivery. The High Speed Centurette is likewise equipped, while the L & M High Speed Cutter & Creaser is equipped with Roll Back Feed and Chain Delivery.

News and Views (Continued from page 27)

(Sugarcane waste) from the sugar mills. After considerable experiments in the west as well as here, this new raw material is found to be suitable to manufacture certain kinds of papers.

The Union Minister for Heavy Industries, Sri Manubhai Shah is already busy selecting sites for the new mill. The estimated cost of the mill will be around 5 crores of rupees and the mill is expected to produce 30,000 tons of newsprint per year. This added with that of NEPA Mills will bring India's effort towards self-sufficiency in newsprint to 60,000 tons per annum. The estimated annual requirement of newsprint in India, according to the authors of the Second Five Year Plan will be somewhere near 1,20,000 tons. Another 2½ crores of rupees of foreign exchange will be saved when the second mill goes into production.

85,000 tons of waste sugarcane stalk will be made available as raw material for paper making, from the Nizam Sugar Factory, perhaps the biggest sugar factory in Asia. A team of experts from Germany visited the sugar factory recently and recommended a new process for the manufacture of paper from Bagasse.

In spite of the difficult foreign exchange position, the present quantity of import of newsprint will be maintained and there is no question of reducing or increasing the same.

The Government of India have permitted printers and publishers of newspapers and periodicals to sell 5 per cent of the damaged or end reel clippings of rotary web reels to printers and publishers of religious books, Indian Almanacs and other cheap and useful publications subject to the approval of such sales by licensing authorities.

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

175. Q. I want to impart high gloss for a magazine wrapper. Kindly post me with details of the ways to achieve this economically and brilliantly. The magazine has a run of 50,000 copies per month with art cover printed letterpress.

A. There are three ways to achieve this, the simplest one is to use "Higloss inks" which are available with all reputable ink manufacturers. I should recommend this for long runs as it is more economical than the others which I shall presently mention. In case you consider the gloss imparted by these inks is not up to the mark, the next choice is to varnish the wrapper. This can be done either on an ordinary letterpress with flat tint blocks using overprint varnish obtainable from your ink maker or varnishing may be accomplished on a special varnishing machine using spirit (volatile) varnish. The third choice is to laminate the wrapper on a special laminating machine. This process uses acetate or other transparent plastic substance to adhere to the printed cover and gives a protective and decorative coating. The last-mentioned is the costliest and the first-mentioned the most economical. But cost is commensurate with the results achieved. I leave you to judge which is the best, depending on the peculiar conditions of production of your magazine. Most of our Indian magazines have glossy printed tri-colours, but there are others with varnished wrappers. Rarely, if ever, we see nicely laminated covers in this country. But, given time, lamination will come and stay.

176. Q. We have received an order for printing colour re-productions for a surgical publication. The drawings are full of detail and a high fidelity of reproduction is called for. Under the circumstances, would you advise printing these coloured photographs by letterpress or will it be better by offset?

A. From your question I have to infer that your establishment has the choice to adopt either offset or letterpress. For smoothness of reproduction from coloured transparencies and exactness of detail, I would rather prefer offset deep etch than letterpress, although a superfine screen (over 200 lines to the inch) manufactured by a reputable blockmaker and printed under ideal conditions of production would go very near the effect achieved by offset. From my experience in the United Kingdom, famous publishers of surgical books have always preferred offset for similar picture reproductions.

177. Q. An order for 2,000 copies was placed with our firm, but due to spoilage we gave 1,950 copies but charged the same contract rate. The customer disagrees and threatens to go to Court. Where are we according to printers' Standing Conditions?

A. It is generally accepted that an order may be delivered 5% either side of the amount ordered. However if more are delivered it is expected that the customer will pay at the quoted rate for extras and I find that the printer must deduct in like measure for shortages. A customer can insist on the exact amount being delivered when placing his order or asking for a quotation in which case the printer, in his wisdom, must make due allowance in such a case.

178. Q. A catalogue in four languages is to be reprinted. As we do not have types of these languages, can we do it by photo-engraving? Is offset cheaper than making blocks for a moderate run of a few thousands?

A. Providing the original prints are good I see no reason why you should not be able to reproduce the job by photography. Presumably you have offset machines and the necessary process equipment in which case I would recommend offset.

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

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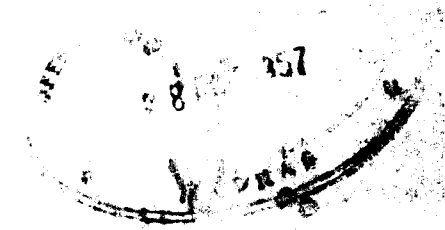
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ANNUAL SUBSCRIPTION RATES	
INDIA	Rs. 10/-
PAKISTAN	Rs. 10/-
Ceylon	Rs. 10/-
BURMA	Rs. 12/-
U. K.	\$ 1
U. S. A.	\$ 2

Editorial & Publication Office:
PRINTINDIA

Proprietors
KUBERA ENTERPRISES (Private) Ltd.,
"KUBERA BUILDINGS"
21, Sunkurama Chetty St., Madras-1
INDIA
Grams: VASUNDHI Phone: 3006

PRINTINDIA is Published
on the 10th of every month

Estd. 1953

Printindia

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

VOL. 8]

OCTOBER 1957

[No. 6

In this issue....

- ★ On the Road to Ruin
- ★ Layouts and Lettering
- ★ Ejection Difficulties on The Linotype
- ★ Man vs. Machine
- ★ Writing Through Print
- ★ Strike Through
- ★ Advertising Week
- ★ Picture of a Pioneer
- ★ Regional Printing Associations
- ★ From the Editor's Pocketbook
- ★ Regular Features

From Our London Correspondent
Pressroom Problems Solved
News & Views etc. etc. etc.

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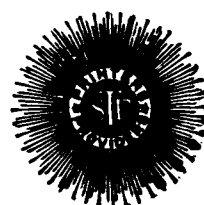
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EDITORIAL

ON THE ROAD TO RUIN

The Education Ministers of all the states met recently at Delhi. Besides rubber stamping certain recommendations of the Educational Panel of the Planning Commission, they made some weighty decisions. The All India Council for Technical Education had proposed the introduction of 100 senior and 200 junior scholarships of the value of Rs. 250 to 400 p. m. for training of technical teachers. The Education Ministers Conference has accepted this proposal.

Whenever the Govt. formulate any scheme for the promotion of Industry, the printing industry is always left out. Whether this is the result of ignorance or deliberate neglect is not important. As an example we can take the case of State-Aid to industries. For a long time "printing" was not considered as an "industry," and state-aid was denied to it. Thanks to the efforts of AIFMP, the Govt. have thought fit to open their eyes and accepted printing as an industry for the purposes of granting aid. This however doesn't mean that thousands of our printers have benefited to any extent from such state-aid. We can't even say that any sizeable number of applications from printers for state-aid has been entertained, much less considered. In a democracy like India, there is many a slip between policy and execution, application and grant.

Another example where printing has received short shrift is in the matter of stipend for printing students, while undergoing training on completion of studies in Printing Schools. Apprenticeship scholarships to electrical, mechanical and civil engineering students are available but glaringly enough, printing technology students are denied such encouragement. Such invidious distinction between one trade and another, to the detriment of printing industry should cease. *The Govt. of India should forthwith declare that paid apprenticeship training scheme is applicable to printing students also.*

Now comes the scholarship for technical teachers in technical institutions. We wouldn't be surprised if the Govt. come forth with a statement that Printing is not a technique and printing schools are not technical institutions. And hence such scholarships are not applicable to printing teachers! This is a matter in which the Technical

Educational Adviser of the region appointed by Govt. of India, should take initiative and do justice to this industry.

Another important decision is about production of school text books. It is proposed to nationalise text book production. The reason is stated to be *providing cheap and good books* for our children. From what we know of other nationalised industries none will delude himself that good and cheap books can be had from the public sector—the numb limb of our economic body.

Time and again we have pointed out in these columns the crass inefficiency of giant Govt. printing undertakings. The spending spree for producing shoddy work in these Govt. messes miscalled presses is too well known for us to reiterate. We have seen the callous indifference of the authorities at the time, labour and money spent to produce low quality stuff.

A concrete example will be illuminating. The Govt. of Madras print at their Govt. Press a quarterly magazine for the Dept. of Industries. To start with, this magazine of about 120 pages takes more than 3 months to produce. As for the cost, we understand that as much as 100 per cent is charged as overhead. The result is, the quarterly generally comes once in six months, badly printed at prohibitive cost. *Any private printer will gladly print this magazine at half the present cost in quarter the time with cent per cent quality.*

Dozens of similar cases can be quoted which will conclusively prove that Govt. printing undertakings are bulwarks of inefficiency. As these cannot be mended, they should be ended. *At least they need not be extended or expanded.*

We can readily imagine what will happen if the text book industry is nationalised overnight. Instead of costing less, books will cost more. The quality of printing will certainly not be better than our money order blanks, driving licenses, S.S.L.C. books and other Govt. monstrosities. God only should save our children from reading Government produced anaemic text-books looking like telegraph forms, for which we will be asked to pay through our nose.

We wish to digress a little to prove that nationalisation benefits none. (We leave out the

shirkers, the blacksheep, the anti-social elements and other malcontents who thrive well under nationalisation.)

Our work-a-day life provides ample testimony of the total failure of nationalised industries and undertakings. Whenever power fails at the crucial moment, never forget that the Govt.-run Electrical undertaking shudders at nationalization! The M.E.S. not even issues correct bills to its constituents. The telephones become sick very often. We are familiar with many intruders who cut into our line while transacting urgent business through telephone.

A young applicant arrived late for his interview. The recruiting board politely asked the reason for his unpunctuality. The impulsive late-comer answered truthfully enough "Ask your Govt. Transport." The board promptly disqualified him for the post. This was not because of his late-coming, but for his casting aspersions on a nationalized concern!

A news item recently told that the Grand Trunk Express once in several months arrived on time. (We wish to add, that on verification, it was found to be the previous day's Express!) For such unpunctuality we have now been asked to pay more as railway fares. Accidents have become so numerous that we would like to request the planning commission to fix targets for the plan period! At least 300 accidents a year should be provided for in our plan!

Our nationalized airways more often than not suffer from chronic engine trouble or arrive late due to operational reasons!

The recently published report of the nationalised Life Insurance Corp'n. has highlighted the naked truth that several crores of new business was lost (due to nationalization). When a policyholder dies, the Insurance Co. pays him. But when the Insurance Corp'n. itself is extinct of life, none will pay a Naya Paisa for it! Well we can sing with the bard, "Oh Inefficiency! Thy name is Nationalization!"

The Indian Finance Minister is reported to have assured American Capitalists that further nationalization will be halted. At the same time, in India, the Education Ministers' Conference has voted for nationalization of text-book production. Further, Sri N. V. Gadgil has hinted that Sugar and Textiles, if nationalised, will yield sufficient income in this emergency.

The Tax Payer who pays for all nationalized inefficiency, accidents, lost time and labour, wasted material and what-not in all nationalized undertakings sheds blood and not merely tears. Printers of Bharat should resist with all their might this inroad into their legitimate sphere. They should send a delegation to the concerned Ministry at Central and State levels to point out the vagaries of Govt. policy. If it is only good and cheap books they want, the private printers can certainly give them. But, the Govt. Presses cannot and will not give either cheap books or well printed books. Before expanding Govt. Presses, the Govt. should appoint an impartial committee to go into all the facets of working of the Govt. presses, both state and Govt. of India.

At any rate, there is no case for nationalization of books at this juncture when we are suffering for want of foreign exchange. Indeed, this state of affairs has been brought about only by hastily nationalizing every good industry and drying up even these sources of revenue. Left in private hands with due controls and checks, text-book production will progress as other private industries have progressed. If handed over to the public sector, lethargy and gloom, chaos and confusion, high cost and low quality will envelope this industry too, as they have enveloped every nationalised industry.

There are many ways of bursting our economy. But an Englishman said that "Nationalising and Burst"-ing is the best!

WHY IMPORT TYPE?

A communication from Bombay Printers' Association states that a large quantity of Indian language types is to be imported from USSR by the Govt. of India. If this is true, it is very unfortunate for the Indian Type Foundries which have made a mark for the supply of excellent types in all languages made of good quality metal. Swadesi Type Foundry in the South, Gujarati Type Foundry in the North, Sri Type Foundry in the East are synonymous with good types. Every Printer in Bharat should resist with all his might this unjust import of Bengali types from a foreign country when our type foundries are capable of and have been delivering the same to our satisfaction.

Layouts Lettering

By

SRI RAMAKRISHNA NARAYANAN

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

STATE AWARDS FOR FINE PRINTING

This year too, the annual competition for state awards for excellence in designing and printing will be conducted in Delhi during November. But, why in Delhi, is anybody's guess.

This year press advertisement layouts will also receive a prize. This latest addition will be keenly watched for the outcome in the competition.

The wage board affair still hangs on. Everyday, more newspapers go to court questioning the validity of the wage board decisions. At Madras, a conference between Labour Minister and newspaper managements has not been fruitful. The decision of the Supreme Court is earnestly awaited—and not only by the journalists.

The Madras Advertising Club celebrated the Advertising Week and the deliberations of the meetings and exhibition organized by the club

are found elsewhere in this issue. These celebrations have focused attention of the public on the role of advertising in India, notwithstanding the pessimism displayed by the Madras Minister for Education, according to whom, advertisements served no "social purpose."

HAIR HEALTH

The myth that beauty shines unadorned is broken. Instead, it has been proved that beauty aids really help to highlight one's strong points and keep the weak ones under cover. Good clothes and garments may be added to beauty aids, although they don't come under the list proper. We have



The girl, the groom and the tonic

already reviewed Textile ads. For a change, we delve into the realm of hair oils, shampoos, snows, and other smartphernalia. Some of the indigenous hair oils, etc. are quite good and their ads are also good.

A couple of foreign brands, a fine foreign shampoo and three Indian makes have been taken for review this month.

Vaseline Hairtonic (5" x 4 cols.) "Two heads are better than one when they use Vaseline Hairtonic" is quite a good theme that has been running for some time now. The same headline and matter is continued throughout the series with a different illustration for each number. A young man and a small girl are shown in one and the other has two heads of young girls. In all illustrations, the figures are done with dry brush with tint. Gothic Bold Expanded is used for the headline and Bodoni Condensed for "Vaseline Hair Tonic". In the bottle of the product these words are in Bodoni. The usual uneven left flush indentation is used for the text and the typeface is Bookman. Look at the two lines obviously set later in Metro Black and thin. JWT is responsible for this good series of advertisements, which smell the smartness of a Vaseline-groomed person.

Colgate Hairtonic (4" x 2 cols.) Here again the two heads (perhaps the same head) one rendered in beautiful scraperboard and the other in plain line—these set the pace for the closely written headline in Sans lettering. With the exception of the mention of Lanolin, the matter is the same as that of the previous ad., but set in Baskerville. A bottle of Colgate Hair Tonic adorns the bottom of the ad. The name of the product hand-lettered neatly in four lines balances well with the top. There is a line below on top of the rule. "Ideal for

children's hair and all members of the family" which in effect means good for all. This neat package



Garamond, Gill and Bocil Girl

ad achieves in the small space something effective. But, aren't the top four lines a bit crowded? It looks that they could do with a little more breathing space! Grants have done this.

Lustre Creme (3" x 2 cols.) A tinted oval, stars in outline, three lines of lettering and an illustration at left occupy the entire space of the ad. Five uneven lines in Times Roman form the text. The main message "Now available in India" with *Now* underscored is hand lettered. In a small panel to the left of the jar illustration are the words "contains Lanolin." To the right of it at the bottom is found "The favourite shampoo of 4 out of 5 top Hollywood stars." Persuasive, probably; effective certainly. Grants are responsible for this effective charm.

Bocil (4" x 2 cols.), *Castorol* (5" x 2 cols), *Cantharidine* (6" single)—The first is a recently introduced product and the last two are old favourites. The main figure in each is that of a lady, the medium in

Bocil is scraperboard and line in the others. In *Bocil* a thick curved line provides a link besides serving as a frame. In this is accommodated the illustration and the Garamond left flush headlines. Gill Medium is used for text. It takes the eye to the token at the left corner and the accompanying blurb in Gill Medium as well as the name of the product rendered in the usual style.

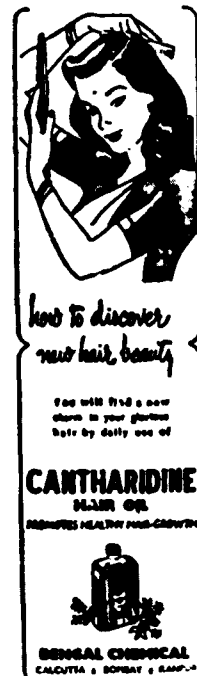
Calchemico's Castorol is dominated by the reverse oval containing the product name and the figure of the lady (head only). In uneven script is found the headline "For lovely tresses." Gill Sans is used for the sizes, firm and address and inside the panel an offer of free illustrated folder of hair-styles.

Cantharidine has as its catchword "promotes healthy hair growth" in Gill Italic, while the headline in uneven brush tells "how to discover new hair beauty." The lady with the mirror and the comb, the headline, text, spacing, bottom illustration and address, aided by the side border lines add up to a wholesome advt. *Bocil* is business-like with its free sample, pilfer-proof, easy to grip bottle, etc.



Here's Cream of Hollywood

Castorol is boldly effective and *Cantharidine* is charming. These are three different ways of telling the



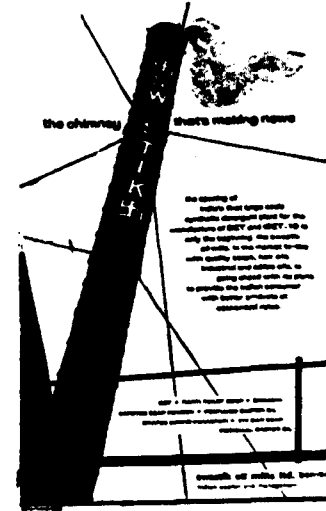
Beautiful Ad of Beauty Aid

hairoil story without hastily spilling it.

Burmah-shell series always pulls you in a big way and in the array of many good pieces it is rather difficult to pick and choose, as one is as good as another. At the outset, one would conclude that there is absolutely no chance for *Burmah-Shell* to have anything to do with "Jute which protects the goods which India delivers." But when you go through the text, you would realise the part of *Shell* in it. To begin with, there is a fine rule border, too fine for a newspaper ad. The crayon illustration graphically depicting the part of Jute, amply white spaced *Baskerville* lines—all go to make an advertisement which is in a class by itself. D.J. Keymer did it.

Swastik chimney ad could not have been missed by any. The size (9" x 3 col.) is one thing that many could not miss. For another, the chimney itself symbolising the

activity that goes on beneath it, is an unusual piece to be employed for publicity purposes. The inclined



Swastik's Sky-scraping Chimney

chimney, the cables, the heading and address in Gothic series, most of it in lower case form excellent elements that go to make a superb ad for *Swastik Oil Mills*, by *Shilpi*.

Pan American's striking scraperboard work of the terra firma, plus the headline "Helping to bring men of goodwill in 80 countries and lands closer together" in Erbar reversed; the two Futura lines at the bottom "PAA offers the only Round the World Service" and "World's Most Experienced Air-line" all these make a remarkable piece of advertisement. J. Walter Thompson designed this.

And now to *Britannia Eng. Co. Ltd.* This one (8" x 2 col.) featuring a girder with the insignia, name and address on one (left) side, the text in uneven Gill Medium lines set left flush on the right, with an outline of steelwork at the bottom is another that stands out

of the ads. A good idea executed better by *Clarion*.

IN PASSING

Ashok Leyland continue to catch the public eye with the well designed ads of buses and trucks.

JWT

Assam Oil has started a new series, bye line, *The Story of Oil*: 1: illustrated with mountain range and head lined in Gill Heavy with "As old as time." Two cols of of Times text, "Assam Oil" in Weiss Roman. This is worth watching. Keymer

Binny's Silks ad features a big 6" x 3 col photo of film star *Suryakumari*, headed "Reminiscences of a well dressed lady. This evidently start a new series.

JWT

Brooke Bond's second (of a series of 8) features the *Bhai Sahib* in half-tone at left watching a tea garden in line, headed "it all starts here bhai sahib..." The story of tea is in the middle plus some facts and a few figures at right in a panel.

JWT

DET headed "Does Det really wash anything?—The 4" x 4 col. ad answers "DET washes everything." *Shilpi*

D & P Products (6" x 3 col.) introduces bottled mangoes "for the first time anywhere." Usual first



Britannia's big structure

class art work, brief copy.

Press Syn.

Glaxo's baby has the parents saying "He's the best baby ever." Granny, Ma & Pa are the people gazing rapturously at a chair. Usual copy etc.

LAS, Bombay

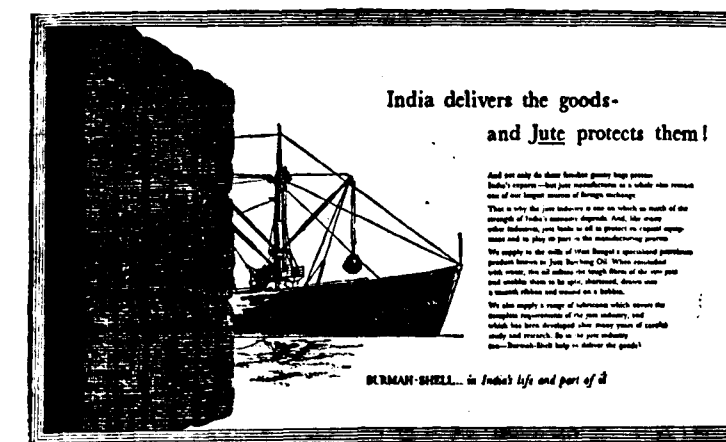
Godrej feature their 10" x 3 col. and 6" x 2 cols ads, and underneath add their series of slogans sent by competitors for *Swadeshi Soap Industry*.

East. Psychograph and Everest.

Henley's has a good 6" x 2 col. ad headed "Modern India specifies" Good illustration and good copy in Gill series. *Clarion*

Lux Toilet Soap 10" x 4 col. with the illustration of star *Padmini* plus a dancing motif in the background maintains the usual standard of *Lintas*.

(Continued on page 16)



Burmah-Shell's part of our lives

Ejection Difficulties on The Linotype

Many of the difficulties experienced due to faulty ejection of slug on the Linotype are due to ignorance of the working parts. In this article some of these and their solutions are discussed by the eminent American author.

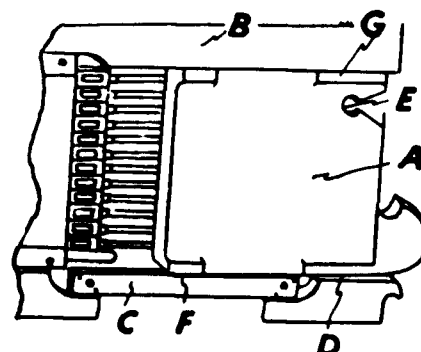
Sometimes when ejecting display slugs on a linotype, a loud noise is heard and the slug must be removed from the mold by loosening the mold cap. Ejection difficulties are generally caused by a slight tipping of the slug as it breaks away from the mold surfaces as ejection is begun; it will then lock against the ribs in the mould.

This tipping can be caused by many things; most common is an out-of-square condition of ejector blades. If one or two blades project beyond the others, look for bent, broken, or extremely worn blades or links. Then secure a parallel block (an old vise jaw will do) and lightly coat the surface with red lead or Prussian blue. Hold this surface against the face of the mold and push the ejector-blades forward against the block. An impression will show high blades.

If only upper blades pick up an impression, the cause may be excessive play of the ejector slide (A in the drawing) between the mold slide (B) and the ejector slide keeper (C), redoweling it in the

opposite corners. The ejector slide keeper should be set for just enough clearance of the ejector slide to permit free action.

After re-setting the ejector slide keeper, a clearance may exist at (D). This is permissible, however, since the direction of the force transmitted through the ejector link at (E) acts in a forward and upward direction, causing the ejector slide to bear against the keeper at (F) and the mould slide at (G). Thus the clearance at (D) is not critical and the proper setting of the keeper will insure the correct movement of the ejector slide. Take another impression and carefully file the ends of high



Linotype Ejector Blade

blades until an impression is secured on all 30 ems of blade.

After squaring ejector blades in this manner, if ejection difficulty continues, the next step is to check the mold banking in ejection position. When the mold slide comes forward to ejection position, the mold should bank evenly on both banking blocks, located above and below the trimming knives. Here again an impression can be made by coating both banking blocks, and bringing the mold forward. An even impression should be obtained on both ends of the mold. If this shows the mold is not banking on both blocks, the low one can be shimmed until it does. After shimming, however, it is extremely important that a check be made to be sure banking blocks are not holding the mold away from solid contact with vise jaws and matrices during casting. This can be done by wiping off the molds and again coating both banking blocks. With the plunger pin removed, allow the machine to revolve through the casting cycle and stop it just as the first elevator starts to leave the vice cap. Open the vice and examine the mold adjacent to the banking blocks. No impression should have transferred. If an impression can be seen on the face of the mold, the banking blocks will have to be reduced in height until they clear at casting position.

After checking all this, it is safe to assume ejection mechanism is in proper working order. If difficulty continues, examine metal temperatures, condition of molds and liners, and maintenance.

Cold metal of mouthpiece can be a contributing factor to ejection difficulty. The pot temperature should not be lower than 536 degrees (510 degrees if equipped

(Continued on page 21)

Man vs. Machine

By
SRI S. GIRI

Man is the most complicated machine. If he is neglected the whole industry will come to a standstill. Caring for him will yield good dividends in the shape of better production. Man is not a mere a factor of production. He is the beginning and end of production.

Call by whatever name your press. A press is only known by the employees it keeps. If anyone asks me what is a press? I will not hesitate to reply: It is a unit of workers. I would rather not say that it is a grouping of automatic machines or that it is the property of Sri ABCD! This truth that a press is known by its workers is not mere indulgence in half-truths or homilies, clichés or catch-words. It is only the emphasis of the secret of all business and industrial organizations including printing presses.

The printing process and the printing industry have grown today into a highly complex and competitive enterprise. It hasn't the slightest chance of survival much less success, unless it decides forthwith to draw upon a wide variety of skills from its technicians. If this is true of all industries it is all the more true of the Graphic Arts and Allied Industries, where yesterday's blockmaking is made obsolete by today's electronic engraving and today's composing machines rendered obsolete by tomorrow's Photo-composing machines. Where rubber stereotypes try to eclipse their lead counterparts and conventional printing machines will soon be relegated to, as mere museum pieces.

How exacting the modern printing business is, will be well understood by a survey carried out in the western countries. According to our survey, there are more than 20,000 printing presses in India employing over 2 lakhs of technicians. The jobs held by these two lakhs of workers represent one or the other of 200 different categories of occupations in Printing and Publishing Industry. When I say this, I don't mean that every press should have necessarily 200 different categories of personnel to run its business efficiently, but only to make the reader realise that a large printing establishment should embody on its staff a wide variety of skills, trades, professions. It should be obvious by now that this calls for highly trained, experienced and contented staff.

Staff of such magnitude and with such commendable sterling qualities do not develop by chance. In fact they will never develop in the present day conditions of our presses. Indeed the purpose of this article is to focus the attention of press-owners on this important matter of human relations. Many press-owners have paid high price for failing to realise the importance of human relations. But there are progressive printing concerns who are alive to their responsibilities and aware of

this human angle to our industry. Every press should have a personnel policy. It should minimise staff turnover and maximise their skills. It should inculcate into them a sense of belonging and accomplishment. Happily, the Govt. have included in the experiment of labour participation, the printing industry too.

Any employee relations policy of a press should make provision for the following broad principles:—

First and foremost, the worker wishes to be treated as a MAN, nothing less. Therefore the management should recognize the dignity of the individual. A press worker, however small his position may be, deserves the respect due to him as a citizen of free India, free to think as he likes. The prosperity of the press depends upon the willing and active co-operation of all employees working as a team. Some employees create disunity among workers, inducing to form rival workers' unions. This will ruin production inside the workers. The customer can be satisfied only with a quality product, economically produced within the minimum time with the minimum of materials and maximum of skill and ingenuity. Only presses which work as above can stand competition.

BETTER UNDERSTANDING

Without communication there can be no understanding between employer and employee. There should be proper channels of communication. Ideas and information as far as possible, of common interests should be shared through effective channels of communication. Only then, will employee understanding improve. Morale will be good, productivity high. Hush-hush policy will lead to mutual distrusts, fear, suspicion, recrimination, jealousy and enmity.

LABOUR PARTICIPATION

Increased responsibility should be allocated to labour in management. The development of employees to fill positions of trust and responsibility should be the aim of all press-owners. Feudal, hereditary communal, linguistic motives are unworthy and undesirable in the present free Indian climate. Of course, fair wages, never less than the prevailing ones, consistent with the work turned out as well as the necessity of the worker to fulfil his responsibilities to his family, should be paid. While greed and pampering should be curbed, legitimate wage scales are the absolute sine qua non for contentment of the staff.

Good working conditions, which are safe, healthy and which will promote the well being of the workers are necessary. Good production never comes out of dark dingy cellars miscalled printing rooms. Even animals and plants require natural light and air. Man will never brook sub-human conditions in which he is forced to work due to his poverty. Management should understand this basic fact of human nature.

Leave with pay has become the law in all civilized countries and advanced industries. In presses, a minimum number of days of leave with pay are enjoined by our Factory Act

Preventive health measures and Employee Health Insurance are there only to promote better production and better understanding. No management or worker should resent this. In fact every worker should insure his life. The firm can provide insurance benefits, pension benefits, provident funds etc. if it can afford the same.

PLEASE SUGGEST SOMETHING

To encourage constructive thinking for mutual prosperity of employer and employee, a suggestion plan calling for suggestion of improved ways, techniques, processes, equipment etc. should be introduced for the employees. Incentives in money or otherwise should be provided for good practical suggestions. Then there will be a sense of personal achievement for the worker who has been thus rewarded for his suggestion and there will be more suggestions for the ultimate benefit

of all-employer, employee and the customer.

A proper recruiting, training and employment programme should be put through. The determining factor in appointment and promotion should be merit and not community, caste, religion, language, nativity or kinship with the management. Motive for transfer should only be administrative and productive convenience and not vindictiveness. Nothing ruins production as revenge and counter-revenge, which mentality perpetuates a vicious circle. Press workers should be helped in getting training in Regional Schools of Printing. This training will help them to better their prospects paving way for their personal advancement in the printing industry. Incidentally the printing establishment is benefited by a cleaner atmosphere, lesser waste, less number of accidents and new techniques, lesser breakages etc.

Apprentices should be encouraged to learn the craft unhampered. Then only there will be a stand-by of technically trained personnel to replace retired workers. If the industry is not to be caught unaware by the dearth of trained personnel, it should forthwith launch a programme of taking a limited number of apprentices for each section.

Every worker is first a citizen and then only a printer. This enjoins on him to know the rights of his citizenship and also his duties. The management should help him in understanding his rights and responsibilities. It should allow him freedom to exercise his rights.

Every press worker should have the right to discuss with management his individual problems at any reasonable time either in person or his accredited representative. He should be free to review his performance periodically with his

(Continued on page 18)



By
SRI B. VENUGOPAL

Printing has pervaded every branch of knowledge. The supremacy of printing has almost extinguished handwriting. Script type saves the situation by bringing to our mind sweet reminiscences of the era of calligraphy. Script type is the beauty without the labour of handwriting

CALLIGRAPHY

The art of writing or hand writing as an art is Calligraphy. Prior to the advent and advancement of printing as we know it today, calligraphy developed in all climes. There were many stages and many styles through which calligraphy has passed. Now it almost seems to have passed away into extinction.

It is interesting to record that at one time in the second century the well-formed classic Roman capitals then known as majuscules were in vogue. By evolution came the less finished rustic and uncial forms of writing. The rounded Carolingian minuscules flourished under the famous Charlemagne. These again soon transformed themselves into Old English, German, Black or Text. It was only in the humanistic hands of the 16th century Italian artists that calligraphy again flourished. Calligraphy can be said to have reached its apex in the manuals of Ludovico degli Arrighi (we have a type face after Arrighi).

ENTER THE PRESS EXIT CALLIGRAPHY

With the entry of the printing press for conveying thought and

ceremonial scrolls, academic diplomas, awards and certificates. In sales promotion field, increasing uses are made of calligraphy in the modern day.

One may ask, what is there in handwriting (or calligraphy) to call for this abiding interest. The answer is its deeper and richer meaning as a thing of beauty. The world is not willing to let this beauty die. Calligraphy imparts to the book or page a warmth, an atmosphere, a character, an individualism and beauty. These are unmatched and unattainable by the cold mechanism of the printing process. Calligraphic designs are executed with masterly skill, consummate patience and give the work an added measure of quality and distinction. The calligraphed page is transformed into a more artistic and more personalized interpreter of the thought expressed.

A LUDLOW SCRIPT

The Ludlow Typograph Co., famous for the introduction of popular display faces, has come out with a novel script called "Admiral Script." In this broad pen script with free flowing design, the face has been planned to combine with Bodoni and other faces. Admiral Script has been designed by R. Hunter Middleton, Director of Type Face Design, Ludlow.

AMSTERDAM SCRIPTS

Continental Scripts are famous. Among them stand out scripts by

Ludlow Admiral Script
Two weights are now available:
Murray Hill Bold and Mur

Anything in Blocks

TRI-COLOUR, HALF-TONE & LINE

ALSO
COLOUR BLOCKS
FROM
COLOUR TRANSPARENCY

..... WRITE OR PHONE
Estd. 1890 Phone: 3202

M. C. APPASAWMY CHETTY & CO.
14, JONES STREET :: MADRAS-1

Amsterdam Typefoundry. This typefoundry has introduced a unique script called "Mistral." This important new series is of interest to Printers and advertisers. Mistral was designed (or written,

Agrette

Ariston

Boulevard

Excelsior

Caprice

Gracia

Rondo

Derby

Reiner Black

Signal

Palette

Dynamic

Mistral

Reiner Script

if you like) by the French Artist Roger Exceffon. Mistral means the "wind." The designer evidently reminiscing the cool air from Alps over the French country named it "Mistral." The freshness and rapidity of the face come up to the expectation.

Mistral typifies the handwriting of an intelligent, quick-thinking, fast-acting, nimble-witted, business-like personality. Such is the personality, every advertiser would like to employ for introducing his products. The purity and truthfulness of this typeface have been appreciated by Graphologists. For, is not a natural script retaining all the characteristics of handwriting? The designer has managed to combine this naturalness with good connections between letters without any necessity of kerns or overhanging parts. Indeed this is a masterpiece of typographic technique.

Variants of many characters are supplied with each fount to maintain the spontaneity and flow of the script face. Thus we have one kind of "S" to be used initially as in "stage", another to be used finally as in "mills", a third to be used in between letters as in "question."

Generally, script types cannot be used entirely in block capitals. But Mistral caps can be used independently also, without the slightest abnormality in appearance. This fact doubles the utility of the face.

Script types are difficult to decipher in metal and more often mistakes occur due to one letter being

taken for another. To avoid errors, Mistral types have the corresponding plain letters cast on the shoulder for ready reference or verification in case of doubt. Accurate composition and equally accurate distribution are thus ensured due to this. Mistral is available from 12 to 72 point.

Palette from Berthold Ariston

BERTHOLD'S PALETTE

Martin Wilke of Berthold Type Foundry has designed a script called "Palette." This face is well known for its unconventionality (or informality) and its extreme legibility which is a rare thing to be found in such novel script forms. Palette is a brush script bubbling with vitality devoid of any freakishness. Add to this its demi-bold weight. Palette is an ideal face. It is available from 12 to 72 point.

Berthold Foundry's Caprice is another unusual script with delicacy and charm. Its pleasing grace will not fail to impress the reader. Berthold has also the Ariston, an old time popular script.

(Continued on page 14)

Thompson Quillscript Salto from Klingspor



By
SRI M. GUPTA, B.Sc. (Hons),
Bengal Chemicals, Calcutta

Printer faces many technical problems. Most of these stem from unsuitable materials. Ink troubles are common enough in this country. Such troubles are partly due to tropical conditions of weather and partly due to improper paper-ink matching. In this brief article, the expert of Printing Ink Division of Bengal Chemicals deals with a particular problem called "Strike Through." When you spread your newspaper in the morning, you more often than not see shadows appearing around the printed matter. The fact is that there has been strike through. Although our newspapers, are by and large, well printed, there is scope for further improvement in the quality of their production. Sharp, crisp, bright printing lends itself to easy reading. Smudgy print is repulsive. Much of the smudginess in print is caused by cheap inks, unsuitable paper. Bengal Chemicals is one of the leading firms dealing with printing inks and their expert who is writing this short article has abundant knowledge in the present subject. Indeed, he knows what he is talking about

This is a phenomenon experienced in printing by some and is disliked by all. A "strike through" means the showing up of colour on the other side of the printed sheet so that when the reverse side is printed, the whole paper looks dirty. The discerning printer abhors this and would do everything to avoid such a result.

Printers in India are using Newsprints of various grades, different weights, less and more calendered substance made from different raw materials and treated with different chemicals. The result, however, varies slightly according to the above factors, and in rare cases stocks of newsprint might be widely different. These comparatively cheap grades of paper, as a rule, are printed with comparatively cheaper inks having bodies of mineral oil. For drying of the ink, therefore, absorption into the stock is envisaged. Consequently, it is

necessary that precaution should be taken so that the ink or its constituents do not penetrate too much into the stock.

It has been observed by actual experiments in our Ink Research

Laboratory that the colour of oil used, consistency of ink, size, quantity and dispersion of pigment, character of paper, temperature of ink and paper at impression, contact time during impression or degree of impression and the toner in the particular strength used are the factors which decide whether there would be strike through.

A thin oil in the ink will penetrate easily and if the oil be coloured the other side will look more dirty. An ink pigmented more than the optimum may bring trouble. Generation of unusual heat during printing might thin down a defectively formulated ink, thus helping quick penetration and strike through. If the time of contact during impression be more than what it should be according to the speed corresponding to which the ink has been made, more ink would be fed into the paper—resulting in strike through. Toners, which are in most cases oil soluble dyes, should be most carefully used in Newsprint Inks. For, unlike other pigments of printing inks, it dyes the paper and does not act as surface coating agent.

Gold Medals

Awarded by German State

Over 50 years world's leading
Screen Brands **HAAS & KOHINOOR**

Engraved Halftone-Screens

Engraved Rotogravure-Screens
for Paper, Textile, Plastic material

UNIVERSAL-Contact-Screens
interchangeably used for both
Offset and Letterpress procedures

Film Screens, 50 Designs
and Cellophane-Screens for Shadings

Film Screens with dots
in different tones for Letterpress or Offset

HERBST & JLLIG
FRANKFURT A. M. 13, Germany

ATF'S THOMPSON
QUILLSCRIPT

Tommy Thompson of American Type Founders Inc. has designed the Quillscrip. The designer is a renowned exponent of this art. Incidentally he is the author of the Studio Publications' "The Script Letter". For some years now the chancery style of script has begun to dominate publicity material. This Quillscrip is an authentic typeface of the Chancery style. Further it has also the novelty for which our Publicity

Caprice — a new Balthold type face available from stock London

Caprice is an unusual script, a most attractive creation because of its natural beauty and pleasing grace.

Ashley Script: 14, 18, 24 & 36

The Monotype Corporation Limited

Agencies are always on the look out. The designer has produced in this face something that rings true as type with its well-knit form and at the same time without losing the calligraphic touch. Quillscrip combines well with traditional display faces due to its moderate weight and colour. Its well protected stroke terminals make it a versatile face suitable for reproduction equally well on newsprint and coated stock. Quillscrip has a few alternative sorts too and is available from 14 pt. to 48 pt.

KLINGSPOR'S "SALTO"

The Klingspor Foundry of Germany has produced the script known as "Salto." Inspired from Teutonic characters, this new type

face has vigour, balanced weight, and miniature lower case letters. The difference in face height (or x-height) between Salto Capitals and its lower case is rather noticeable. But the designer has contrived to position the respective characters in such a remarkable way that the average reader will have no qualms about reading outsize caps with miniature lower case. This adjustment of relationship is indeed something unique in type designing. Thus the inevitable optical confusion which would have resulted from difference in spatial depth has been scrupulously and cleverly avoided. One of the classic tricks of typographic designers has been high contrast between capital and lower case letters.

When a printer buys GANGES INKS

HE CAN BE SURE THE QUALITY IS THE BEST BECAUSE:

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

THE BEST MACHINERY IS USED

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

THIS IS GANGES' GUARANTEE TO THE PRINTER

ADVERTISING WEEK

The last week of last month was celebrated as the Advertising week. The Madras Advertisers' Club organized these celebrations on completion of the first year of their club. Eminent publicists and industrialists, advertisers, printers and others directly or indirectly benefited by Advertising thronged to the Indian Chamber Buildings to attend the lectures, to view the exhibition and take part in the deliberations. Sri R. K. Swami of JWT, Sri Venkatachari of Easterns, Sri Varadan and others took active part. Sri S. Parthasarathi, President of the Madras Advertisers' Club, made his own singular contribution to the proceedings. Mr. Diggins, PRO, USIS, narrated the beginnings of Advertising in USA in a notable speech, during the week. Sri C. R. Srinivasan, Sri Somayajulu, Sri Chidambaram Chettiar, Sri Murugappa Chettiar and others delivered interesting talks on the service of Advertising in the progress of our nation. The only discordant note was that of Sri Subramaniam, Madras Minister for Education. He made no secret of the fact that he never believed in Advertising. We wonder whether advertising believes in him!

VALUE OF ADVERTISING

The vital role of advertising in an expanding economy was stressed by Dr. A. Lakshmanaswami Mudaliar, Vice-Chancellor of the Madras University, inaugurating on 23rd September the "Advertising Week" organised by the Advertising Club, Madras, in connection with its first anniversary celebration.

Dr. Mudaliar, who also declared open on the occasion an exhibition of commercial art organised by the Club, emphasised the growing need for pushing up the advertisement for Indian goods in foreign countries and to promote research on the methods of advertising.

The function was held in the premises of the Southern India Chamber of Commerce, Esplanade, and was attended by a large gathering of advertisers and businessmen in the City.

Welcoming Dr. Mudaliar and the gathering, Mr. S. Parthasarathi, President of the Club, said that the art of advertising, had developed into a specialised branch of business in the West and its role in the production and distribution of goods had been fully realised and appreciated in the U.K. and U.S.A. India had done well during the past two or three decades, but had still

to work up a long way before it could reach the standards established elsewhere. But when once the value of this tool of industry was realised by top men in business and Government circles, its growth was bound to be rapid, he said. Advertising, like the atom, was a force that could be used for good or evil. If only the good aspects were correctly understood and practised, advertising as a profession would undoubtedly rise in stature.

In the 18th and 19th centuries, economists were more concerned with the factors that governed production. They took it for granted that consumption would follow. It was only now that the concept of marketing research and the study of people's needs and desires as the basis for development and promotion, came to be accepted as a business policy. America had now gone a long way in the application of these new concepts to business planning and promotion. This was reflected in all their advertising and public relations activity. The process now was not to sell what they make, but to make what the people want, and to publicise this want on a large scale to make increasing numbers of people want what they manufac-

ture. In effect, advertising and sales promotion had come to be regarded there as a social weapon that enlarged the economy as a whole and helped to stabilise it at a higher and higher level. He explained that there would no doubt be a certain time-lag before these ideas were accepted and assimilated here in India, but evidence in other fields showed that progress was assured.

AN ART AND A SCIENCE

Advertising was at once an art and a science, and an advertising man had to equip himself in more fields than one. As in the case of journalism, only a part of it might be learnt by a course of study, but the rest had to be learnt by hard practical experience. Stating that he was told that the Bombay University proposed instituting a course in advertising, Mr. Parthasarathi suggested that the Madras University, being one of the oldest and most progressive in India, which had already offered a course in journalism and which had just decided to open a course in architecture, could institute a course in advertising as well.

Referring to the exhibition, he said that in addition to specimens of commercial art received from the Commercial Arts Guild, Bombay, it included a representative selection of work done in Madras. The role of advertising in a growing economy was also graphically represented in a special series of colour charts.

Dr. Lakshmanaswami Mudaliar, at the outset, congratulated them on forming themselves into a Club, which, he said, would bring together and promote better understanding among the advertisers. He agreed that advertising was an art as well as a science and remarked that unfortunately many people in this country had not understood its value. As one

who had some experience in several countries both in the Eastern and Western hemispheres, he could say that advertising played an important part in the life of a nation. In fact, there was nothing that could be sold or that would fetch a market unless it was well advertised. If to-day trade had been captured by America, it was largely due to their power of advertising.

Explaining how when he was in his teens, he was much attracted by a small advertisement on one of the walls in George Town, Dr. Mudaliar said that an advertisement need not necessarily be very costly, but the manner in which letters were printed might itself create an impression in the minds of the people. There were many methods of advertising. People seemed to think that advertisement consisted of merely putting up posters on street walls and publishing full page advertisements in newspapers. There were certain others, who felt that advertisement consisted of depicting huge portraits of personalities in front of picture houses to attract the attention of the people. Stating that this sort of advertising he had never seen before picture houses in big cities of the West, Dr. Mudaliar said what was really needed was something to incite the curiosity of the consumer. He added that it was not merely by explaining all the virtues of his goods that one could get the consumer to purchase it.

Dr. Lakshmanaswami Mudaliar said advertising was not something different from salesmanship and pointed out that the latter was essentially a profession in which advertising techniques had to be adopted. No one could be a good salesman, who had not grasped the first principles of advertising, he said and added that in that respect our salesmanship in this country

was rather wanting. This was one of the things that the Advertising Club should impress on salesmen in this country. Dr. Mudaliar also emphasised that even in advertising it was necessary that some standards were kept up and remarked that an advertisement, which did not keep up to ethical standards, was not a true advertisement.

Proceeding he said that he had never seen much of an advertisement of Indian goods anywhere else. In many parts of Europe it was unknown. But, on the other hand, many of the productions of the Western countries were being sold in the Asiatic markets largely because of advertisements. He did not see why our industrialists, if they were anxious to sell their goods, should not advertise them in other parts of the world. One of the great mistakes committed at one time in the past was that for the sake of internal needs, goods that were being sent to outside markets in Mombasa, Malaya and other places, were restricted by Government with the result that other important countries captured those markets. That was why their handicrafts were now very little known in those countries. Therefore, advertisement of our products should be pushed on in other countries.

Dr. Mudaliar also stressed the need for research in advertising and pointed out, in this connection, how some of the big companies in other countries had a research section, which was constantly examining the value of their advertisements.

In conclusion, the Vice-Chancellor referred to the suggestion of the President of the Club to start a course in Advertising in the University and pointed out that at present advertising and salesmanship were very essential parts, in two of their courses, namely Journalism and Business Management. They had invited persons in various

walks of Business to come and enlighten the students on these methods. He was sure that, as these progressed more, the University would consider advancing further the teaching on advertising.

Layouts and Lettering

(Continued from page 7)

Mafatlal Fine Mills 10" x 3 cols. features a design of a pet with a plant and flower (representing various shades), a novel piece indeed with good lettering

Nettlefolds continue their 8" x 2 col. series headed "Points to look for" Two big screws crossing each other, with text in Times.

Everest



Paa's project for goodwill

Players' Please has a 8" x 2 col. ad to commemorate India's victory in World Polo Tournament on Aug. 25, 1957 at Deauville, France.

Grants

Vanaspathi Assn's ad this month headed "Off on a journey of 25,000 miles" has an illustration of a boy with his school knapsack (or satchel) in line, with the text in Goudy and Bookman series.

JWT

Zenith blades has a feature with the "Z" made into a hollow headed "Spend an Anna, save a fortune." Care to try?

Everest

PICTURE OF A PIONEER

By
SRI P. PETER

India needs all-round development of her industries. Some areas have developed at the expense of others. In Independent India, it is but natural that all regions should receive consideration. There is no dearth of talent in the south and this cannot be shown as an excuse for its neglect in the development of industries. Sri M. Rathnam is one of the many southern pioneers, who ventured ahead in the realm of industry. He had interest in his work, hope in the outcome and faith in his capabilities. No doubt, his efforts have been crowned with success. India needs more of such pioneers. Here is a short pen sketch of the illustrious Rathnam who continues to extend the frontiers of knowledge.

India has produced many noted thinkers, industrialists and politicians. Her quota of inventors may not be spectacular but it cannot be disputed that our country has contributed to the growth of knowledge, science, industry and well being of the world in general.

The South has also its industrialists, inventors and important men of science. Sir M. Viswesvarayya, Sir C. V. Raman, Sri S. Radhakrishnan are living examples. We are pleased to introduce below a pioneering industrialist of Madras, who is doing notable work in the field of industry and manufacturing original products.

Sri M. Rathnam was not born with a silver spoon in his mouth but of poor parentage and had to struggle through his early days which were spent in a smithy shop. But, he always loved to do every job that he undertook to perfection and until then he was not satisfied. In later days this urge towards perfection brought forth success in his industrial ventures.

In his 24th year he started his own jewellery shop with a loan got from another dealer. Soon, enamel jewellery was introduced and Sri M. Rathnam's shop was the only one manufacturing enamelled jewellery. He not only became successful in this line but also taught to hundreds of persons to take up this line.

etching on glass, enamel badges etc. The factory is equipped with up to date machines such as electric furnace for melting enamel jewels and tempering steel articles.

Sri M. Rathnam, Proprietor of Rathnam Industrial Works, has developed many new techniques in this branch of industry and is a genius in rigging up original mechanical gadgets, many of which are being successfully used by him. Many in and around Madras take their problems to him for solving with the help of his vast experience.

Young men of south should emulate the noble example of this pioneer who has earned a name for himself by his singleminded devotion to his craft and by selfless toil which always yield rich dividends. India is really proud of people like Sri M Rathnam.



Man vs. Machine (Continued from page 10)

employer. All press transactions with employees should conform to high moral standards, if the management wants to retain its respect. Such performance reviews with supervisors will eventually increase production in the press and ability in the individual worker.

The essence of management lies in human relations. The press which has a happy human relationship always pays rich dividends to all concerned. In marked contrast where there is strife and disunity resulting from bad understanding, there is no chance of normal production, let alone high production.

The science of management is young. Only in the United States it has developed new concepts and techniques. Successful application of Management Science will provide the key for all problems facing the printing industry in India. The prosperity of American and English

Presses and the high standard of living that could be afforded by press workers in those countries are the direct outcome of employing scientific management principles.

In achieving material satisfaction in the shape of high wages and good profit as well as spiritual satisfaction, labour should become a willing and accepted partner.

Democratic methods of management believe not so much in centralising responsibility with the top men or supervisors, but with the gradual delegation of powers lower down. This gives freedom to try and do a better job by the workers.

In view of the paucity of the necessary capital, our presses lavish in labour and is very frugal in capital. In other words, there are more workers and there is less pay. Management methods, experts aver, can improve production in printing presses. In the Govt. Presses, managerial problems are more complex and more difficult to solve than in private presses. If

only for this reason, the state should abandon the unholy thought of expanding the already bellicose Govt. Presses.

When all things are considered, press owners should abandon the obsolete idea that workers belong to a lesser strategy in opposite camp. Workers in their turn should stop despising and envying the owners. Both should realise the need for the other and work as partners in a common pursuit.

Frequent labour troubles are experienced in certain parts of our country in the printing industry. The results of strikes and lockouts have always been the same: every where ruin. Ruining of the business, ruining of the workers' living. This sad prospect should always be kept before every worker who wishes to go on strike on every small pretext and before employer who wishes to resort to lockout for any trivial reason. After all, workers and owners are but the two limbs of our industry.



F. & D. BROWNLIE

SHEET VIEWING TABLE

The difficulties of checking the quality of print under different degrees of illumination are familiar to most printers, and the practice is growing of installing booths or rooms for this purpose, fitted with standard lighting and colour-matching lamps.

A sheet viewing table with colour neutralizing light control has been introduced by Sydney R. Littlejohn & Co. Ltd. of London. This unit, which is provided with curtains to shut out extraneous light, is specially designed for press rooms, and provides a constant colour-matched light source, for checking and passing sheets irrespective of natural light variations, on day and night shift operation. The table is fitted with separate light source of blue, green and red portions of the spectrum, thus converting yellows, reds and blues to black for easy checking of print quality and ink distribution.

The construction is of pressed steel and wood, complete with four-sided lined curtains; filtered and colour matched light sources of fluorescent type, with instant start control gear, and six station switch panel. The overall size of the complete unit is 67" x 55" x 83" high, taking a maximum sheet size of 60" x 48".

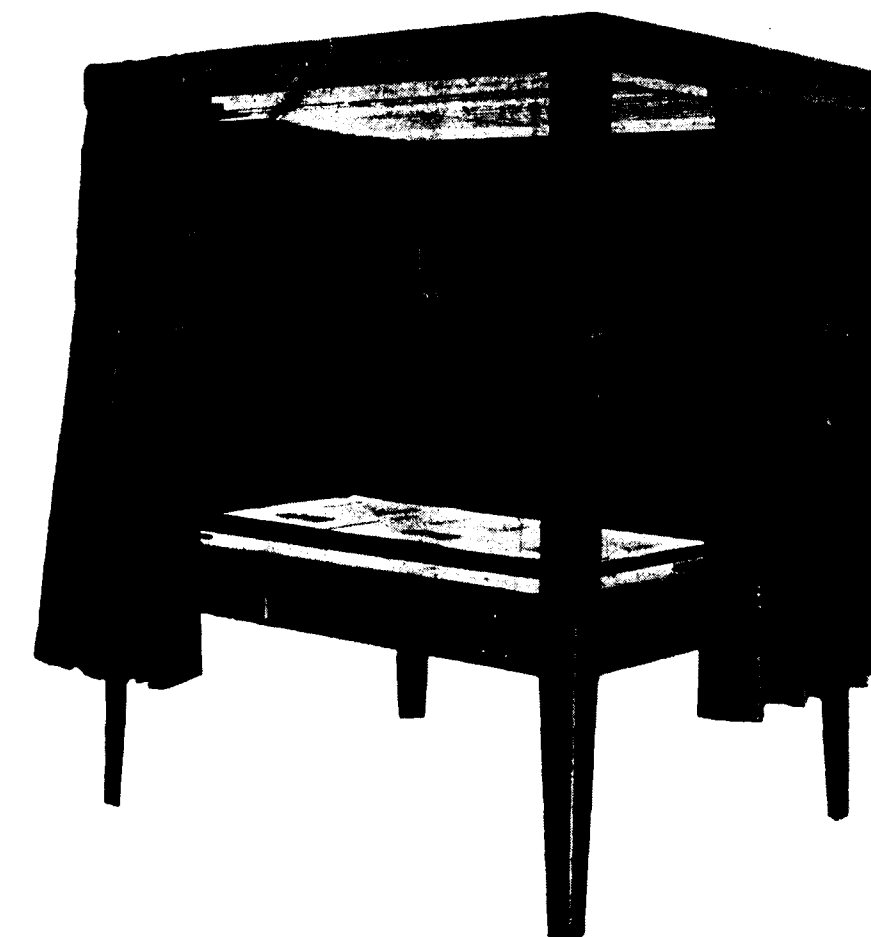
NEW POWDERLESS ETCHER

An important development in the photo-engraving and printing

industries is represented by the Lithotex-Dirats powderless etcher, which was shown for the first time at the recent Graphic 57 exhibition at Lausanne. This is to be manufactured in Britain by Pictorial Machinery Limited for distribution by British, European and overseas branches and agencies.

The machine, designed for the rapid, powderless etching of fast etching, photo-engraving zinc, for half-tone, line and combination work, consists of a tank containing the etching fluid and a series of paddles which throw the liquid in a vertical splash action. One of the major features of the process is that the same etching liquid is used for all three types of plate, and they can be etched in one operation without stopping the machine or changing the constituents of the bath.

It is stated that under normal working conditions the bath remains stable for 24 hours, and 8-12 plates, up to a maximum area of 24" x 24", can be etched in succession with the same solution,



Littlejohn's Sheet Viewing Table

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PAPER, BOARDS, STATIONERY
AND
THE GRAPHIC ARTS INDUSTRY

thus ensuring a consistent quality of plate production.

It only requires 10 minutes to etch a zinc line or combination plate to a depth of 0.020", and from 2 to 3 minutes to etch a halftone to a depth of 0.0025—0.006", according to the fineness or coarseness of the screen used. The machine can also be used for etching magnesium plates, and it takes five minutes to etch dry-offset plates or rotary letterpress plates to a depth of 0.010".

A series of coils of tubing in the tank provides a cooling system which is fed from the normal water supply, controlled by an electrically-operated valve in conjunction with temperature control equipment. Heating is by means of a 4 kw. heater unit fitted to the underside of the tank, which is also governed by the temperature control equipment.

A timing system is included to control the etching cycle, and the paddle speed can be adjusted by the variable speed motor unit which forms part of the machine. Excess fumes are removed from the tank by a vent fan and ducting system.

Soag Machinery Co. of London have recently added to their wide range of book binding machines the latest design of the Swedish Nidor blocking press. This has many new features and is designed to simplify hand blocking on the spines of book cases in all types of binding. The book cases are centred on the machine automatically, so that even with continuous variation in case sizes it can be quickly set up by the use of a self-centring device on the sliding table.

Hand-gilding type, set in a chase is used, and during composing the chase is held in a special holder, while register of the blocking or stamping on the spines is pre-determined by means of adjustable gauges and stops.

The set-up time is stated to be only 2 to 3 minutes per chase, and up to 150 book cases of various sizes and of different titles can be worked in eight hours. Exchange of chases in the press takes only a few seconds and owing to the narrow head, as a rule it is not necessary to pull out the sliding table for feeding.

The use of rolled gold and foils makes pre-treatment unnecessary, and it is claimed that operation of the machine can be learnt in a few hours. The impression is made with little effort by means of short easy hand lever motion, while the lever return is automatic and pneumatically damped. The press table can be adjusted vertically to suit varying heights of type and different thicknesses of material.

Small panels on the side of the case can be blocked in a separate operation, and for this and other specialised work two auxiliary gauges are included. A special insert platen with handle is provided, which allows the use of the lower press gilding type and stamps affixed by adhesive. Chases for titles either across or along the spine are included in the equipment. The machine is specially intended for binderies working on short runs, and particularly for library re-bind work.

A new type of drying box is a noteworthy feature of the Flexographic web-fed rotary presses manufactured by James Halley & Sons Ltd., West Bromwich. Specially designed for use on this type of press, the dryer operates on the heat-exchange principle, and is stated to be a great advance over the conventional arrangement of drying hood.

The Befanco dryer is electrically operated, and although the loading is only 1 kw. per 4" of web width, heat-losses have been reduced to such an extent that

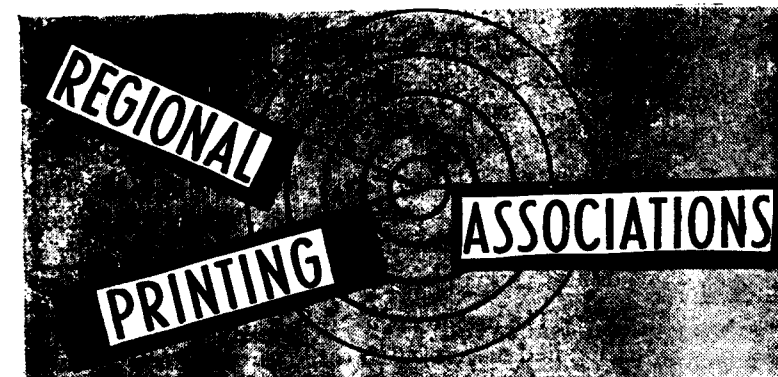
drying is effected within 8" of web travel. Further, the heat is so closely controlled that wax laminants can be passed under the dryer without de-lamination. It is available in 24", 30", 36" web widths.

Typical of the Halley range of web-fed rotaries is the 4-unit machine, which is a general purpose press suitable for all types of paper and board, film or laminants, including metallic foil, and can be used for 4-colour work or as two 2-colour units, each with its own web feed and sheet or rewind delivery.

The impression can be adjusted independently on each printing unit and will remain constant under pneumatic control throughout the run. Tripping of the stereo cylinders is a simple operation with the pneumatically operated toggles, and quick change-over of cylinders is possible, due to the accessibility provided by the "in-line" arrangement of the units.

The circumferential printing range is 12" to 32" in 1" steps, and the constant web tension included not only ensures hairline register but also eliminates all stresses and strains from bad reels being communicated to the printing units.

The printing units themselves are equipped with grained forme rollers with a special doctor blade assembly to provide accurate control of the flow of ink. In addition, ink is supplied to the grained forme roller by a rubber-covered duct roller, thus giving both or either blade or roller doctoring. The drive of each duct is operated by electrical equipment independent of the impression cylinders, so that even when the press is stopped the ducts and forme rollers continue to run, preventing the formation of skin surface or coagulation of the ink.



At the Annual General Meeting of the Calcutta Printing Press-owners Association, held on Saturday the 10th August 1957 at the Registered Office of the Association at 32 Upper Circular Road, Calcutta with Shri D. N. Dhar in the chair, the following office-bearers and members of the Executive Committee were elected unanimously:—

President: Shri D. N. Dhar (Imperial Art Cottage); *Vice-Presidents*: Shris S. N. Guha Ray (Sree Saraswaty Press Ltd.), A. K. Sengupta (Bengal Autotype Co.), K. D. Munshi (Pooran Press) and N. B. Dutt (M/s. N. B. Dutt & Co.); *Honorary Secretary*: Shri K. C. Pal (Nabajiban Press); *Assistant Secretaries*: P. K. Mukherji (S. Antool & Co. Pvt. Ltd.), Chittosh Ray (Nahakumar Press); *Honorary Treasurer*: Shri M. L. Dutta (Raghunath Printing Works); *Members of the Executive Committee*: Shris Khirode Dev (M/s. A. T. Dev Private Ltd.), B. D. Sen (Nabmudran Private Ltd.), P. L. Dey (Kidderpore Press), A. K. Dhole (Kanai Press), S. B. Mallick (Bani Press), N. Lahiry (Loyal Art Press Pvt. Ltd.), S. N. Nukherji (Clive Press), I. B. Lahiry (Homin Art Press), Heramba Baisya (Style-O-Print), S. C. Mitra (Bengal Card-board Industries & Printers Pvt. Ltd.), M. Chakrabarty (Kalika Type Foundry Pvt. Ltd.), P. C. Mitra (Venus Printing Works), J. N. Dey

(Express Printers Pvt. Ltd.), N. K. Nag (Tower Halftone Co.), and K. L. Verma (Sri Chitragupta Press).

Auditors: Messrs. P. K. Ghosh & Co., Chartered Accountants.

A great tribute was paid by the members to the retiring Secretary Shri S. N. Guha Ray and the following resolution was passed unanimously:

"RESOLVED that this Annual General Meeting of the Calcutta Printing Press-owners Association places on record its grateful appreciation of the sincere and selfless services rendered to the cause of the printing industry and to this Association by Shri S. N. Guha Ray as the Honorary Secretary for the last twenty-one years. It is mainly due to his yeoman service that the printing industry of the country and of this State in particular owes its present status, dignity and importance."

Ejection Difficulties on the Linotype

(Continued from page 8)

with Monomelt, made by Mergenthaler Linotype Company, Brooklyn, New York) and the corner of a 6-point slug should start to melt after being rubbed slowly across the mouthpiece six or seven times.

If the back of the slug goes hollow after a few slugs are cast, lowering the mouthpiece temperature is not always the solution. When casting larger slugs at a relatively fast rate of speed, a mould cooler is almost a necessity. Air cooling is the most efficient and practical; however, it must be a volume of air rather than a compression of it. Compression of air causes condensation which will quickly rust moulds, liners and discs.

The Linotype Thermo Blo Mold Cooler (Mergenthaler Linotype Company) delivers the maximum volume of air directly where it is needed. It is easily adjustable to suit any condition, and the two-piece sliding nozzle permits pulling out the mould disc without the necessity of disconnecting hoses.

Moulds should be periodically removed from the disc, disassembled, cleaned and polished (using a good grade mold polish on a reglet) but making sure that the reglet is held square with the polished surface at all times. All polish should be removed before replacing the mold. To remove any polish in the ribs, cast several blank slugs before using matrices.

("Care of the Linotype." by William J. Mulroy, Linotype News, Spring 1957, p. 12. Reprinted with permission from U. S. T C M.)

MESSAGE TO INDIA(N) GOVT PRESSES

"I urge the Printing Industry to indulge in more prestige publicity to bring home to the public the essential part played by Printing in the life of the community."

—Sir John Simpson
Controller of HMSO, England.

PRESSROOM PROBLEMS SOLVED

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

184. Q. Here is a novel order for printing two colours from the same block. One is to be in a light colour and the other a strong one. We have tried tints and shades, but the results are poor. Can you suggest two coloured inks that are suitable for such jobs?

A. From your question it would appear that you require to print a block which is a combination Line and Halftone with an ink that will give one colour effect on the Halftone and another on the Line solid. Blue Green or Violet Black give the maximum contrast between Tone and Solid. Any one of these inks may suit your purpose.

185. Q. We want to stock varnishes for the machine room to be used as a modifying agent for inks that give trouble to suit varying qualities of paper. Please let us know three or four kinds of varnish that are essential for this purpose.

A. The following can be useful:—

- (1) A good high grade Petroleum Jelly or vaseline may be added in small quantities to reduce tack when printing on soft paper.
- (2) A good quality Letterpress or Litho Varnish to reduce the body of inks that are too stiff or lengthen inks that are too short.
- (3) Transparent tinting medium to reduce colour strength if an ink is found to be too highly concentrated.
- (4) A first grade liquid or paste drier to reduce drying time when printing on hard surfaced paper.

Any additions to printing inks should be made with great care and only the minimum amount of addition to obtain the required results should be made.

186. Q. While working on plates, we used to place a piece of card to bring up the type matter. This is much resented by an

educated young man newly appointed as machine supervisor. His theory is that only blocks should be underlaid and type formes never. What is the way out?

A. When it is found that any type in a forme is very low or worn in comparison to the rest, change the particular type, do not underlay. Type formes should only be made reaching on the overlay.

187. Q. Can you suggest a way to emboss at the same time to print the low-lying portions. The block is booklet cover with a reverse block. It can be printed on a platen or cylinder. We want raised printing in white and ordinary printing flat at one impression. Kindly help us with solution of this problem.

A. The die used will have to be brought to type height and then providing the surface design on same is suitable. This may be inked by the Machine Rollers in the usual way to print. The portion of the die for embossing purposes may be built up on the platen face with tissue and paste on platen faced with tissue. A heavy Platen machine is most suitable for this kind of work.

188. Q. In my machine room I have allotted one man per automatic machine and two per hand-fed machine. But the machine-men are discontented and say that automatic machines require more men than hand-fed machines. What is your idea? Books say that small automatics need half a man, i.e. two could be looked after by one attendant.

A. This is a labour question its solution depending on many factors. While you are quite correct in your point that small automatics need only one per two or even three machines, a lot depends on the type of work being done. In India, it would be better, I feel to have one man per machine with a helper detailed to every two or three installed.



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A RUBBER

R.N. MENON

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"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
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ANNUAL SUBSCRIPTION RATES

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



Editorial & Publication Office:
PRINTINDIA

Proprietors
KUBERA ENTERPRISES (Private) Ltd.,
"KUBERA BUILDINGS"
21, Sunkurama Chetty St., Madras-1
INDIA
Grams: VASUNDHRI Phone: 3006

**PRINTINDIA is Published
on the 10th of every month**

Estd. 1953

Printindia

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

VOL. 9]

NOVEMBER 1957

[No. 1

In this issue....

- ★ The 4th Milestone
- ★ Greetings and Good Wishes
- ★ Layouts and Lettering
- ★ Presenting the Process Camera
- ★ Lithography for the Layman
- ★ Mintite Rollers
- ★ Regional Printing Associations
- ★ From the Editor's Pocket-book
- ★ Regular Features

From Our London Correspondent
Modern Machinery and Equipment
Pressroom Problems Solved
News & Views etc. etc. etc.

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EDITORIAL



We are not living in a peaceful world. This is a world at peace. The present is uncertain, the future alarming. Why did these things happen? And how can things be remedied?

The well-being of the people does not depend upon politicians alone. It depends more upon the industrial and business community. In Free India, today, thanks to the short-sighted policies of our Govt., an ever increasing burden is shouldered by the industry. Taxation on the one hand and labour legislation on the other have practically dried up all sources of capital. Add to this, the menace of nationalization, India is certainly not a safe country for foreign investment. If this process of pampering the labour and playing down the employer continues, soon we will be left even without the political freedom we now enjoy. For, is not economic freedom the bedrock of political freedom!

Four years is not a long period in the life of a magazine. But it is not the length that counts, but the content of this period. These have been four momentous years for the Graphic Arts Industry. For the first time in Bharat, Printers began to feel proud of their craft, if not of their craftsmanship. They realised the advantages of organizational representation. They associated themselves and federated into an All India Body. We have said that this body is far from an ideal one. But for a beginning, it has done very well indeed.

Another hopeful feature of Indian printers is the modernizing of plant. Although, our presses do not have any proper purchase programme, even the smallest press aspires to own an Original Heidelberg Automatic! What is more, many have succeeded in having it. New machines, precision instruments, modern techniques—all these have boosted Indian Printing. Today we are glad that a considerable quantity of printed material is exported to the neighbouring countries. The quality is comparable to that obtaining elsewhere. Everything seemed to be going fine. Then came the bolt from the blue: restrictions on import of

newsprint, restrictions on import of machinery, total ban for six months (or even more) of import of machinery.

As we have pointed out before, printing machinery import forms but less than half a per cent of the total imports running to over 1000 crores per annum. As printing is vital to the material, moral and spiritual needs of a growing democracy, printing machinery can very well be exempted from the import ban. This, we are sure, will not upset the foreign exchange position. For our export drive, considerable quantity of attractively printed mailing pieces, catalogues, brochures, posters and the like are needed. A slovenly-printed catalogue will not reflect the quality of the goods to be exported. After all, our printed advertising literature is the only salesman for our goods abroad. It cannot be over-emphasized that this salesman should be well-groomed and nicely presented. Otherwise our export drive will end the way of "Grow more food campaign." Again, take the encouragement of tourism. This is an excellent foreign exchange earner. Here too, printing plays a prominent role. For all these and others, our printers need up to date machinery and equipment. Foolish banning of imports of such vital machinery will wreck all our plans including the Five Year Plans.

We are entering the fifth year today. We are proud to be in the fraternity of printers. We have received many messages and good wishes on this our 5th Birthday from printers all over the globe.

The role of *Printindia* has been unique. It has linked North with the South and the East with the West. Printers have been brought nearer print-buyers. The small printer has shed his complex and is growing fine. The articles which appear in our columns have evoked approbations from leading authorities from all over the five continents. Leading organizations of the world, such as PATRA, refer to our articles in their abstracts. This is no mean achievement for a five-year babe.

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These are essential to co-ordinate well the various modern equipment into a profitable production operation. Through agreements with outstanding experts in various branches of Graphic Arts we serve India's Printing Industry to reach greater triumphs in quality and speed of production.

Thanks to modern means of fast communication, latest information could be broadcast to all the world in a matter of moments. No press, however small, no printer however insignificant, no town however tiny, can afford to be isolated, from the dynamic developments. To be out of touch is to be out of existence. A technical magazine is perhaps the best link with the latest strides made elsewhere.

India cannot lag behind others in Graphic Arts development. Our presses should be among the better-equipped. Our printers should be among the well-informed. Our workers should be among the well-paid. Our printing should be among the well-produced. Users all over the world will soon voice their satisfaction of Indian Printing. That day is not far off.

Our subscribers are as far flung as in Malaya, Burma, Ceylon and Singapore. Our advertisers, we are happy to mention, are not restricted to the Indian sub-continent. The list includes leading manufacturers of Europe, UK and USA.

All these but point to one thing. *Printindia* is not hitched to any Federation, real or phoney. It is not the organ of any merchandising firm or manufactory. Its worth lies in its freedom. Free from the above shackles which corrupt thinking, *Printindia* marches forward. Its fearlessness and balance in criticism which is always constructive, its service in the cause of the low and down-trodden, its fight for the truth, have won laurels in these four short years.

Success comes with effort. Effort should be in the right direction. The means should be good. The goal should be noble. *Printindia* might not have achieved much. But it has rendered a notable service. *Printindia* has awakened the rank and file in the printing industry. If anything, it has made the printer to bestir himself, to get up, to girdle his loins and march on with the rest of the world.

On this happy fourth anniversary, we assure the thousands of readers scattered all over the globe of continued service. Service has been our slogan, and so it shall remain!

GREETINGS & GOOD WISHES



Printing Industry in India is valiantly struggling against heavy odds in the shape of lack of up-to-date machinery and technical 'know how'. Journals like *Printindia* have a definite contribution to make in this uphill task that the printers are faced with. Your articles written by various experts on different aspects of printing can and so supply a long felt need. The advertisements that you carry in your pages are also very helpful for printers all over the country.

I take this opportunity to send my very best wishes and greetings on the 5th BIRTHDAY of your esteemed journal.

GOWARDHAN KAPUR
President,

All India Federation of Master Printers

I am happy to learn that *Printindia* is entering the 5th year of its publication. With the rapid industrialisation of the country, the printing industry is sure to assume a much greater importance in the years to come. The function of journals like *Printindia* in promoting the interest of the industry is a unique one and I have great pleasure in associating myself in wishing it all prosperity in future.

J. C. JAIN
General Manager,
"The Times of India", Bombay.

Printindia is offering a very useful purpose and I wish it "many

happy returns" on this, its fifth Birthday hoping it will keep up the good work in these "licence-restricting" times.

T. I. ARCHER
Offset & Process Superintendent
"The Hindu"

It gives me great pleasure to greet *Printindia* again and to wish it many continued years of vigorous life. The magazine continues to keep up the standard of its contents. *Printindia* is a necessity not only as a technical journal but also for publicising the many political factors encroaching on the trade and training.

T. S. DANDAPANY B. A., B. L.
Press Supdt., The Hindu (Retd.)

Printindia has been doing signal service to the printing & graphic arts industry dealing with not only their day to day problems but also the latest improvements made in Printing Technology in various overseas countries. May it continue to prosper and carry on its fruitful work in this field!

H. K. DASS
The Eagle Lithographic Co. Private Ltd.
Calcutta

On this auspicious occasion of the 5th birthday of *Printindia* I send my good wishes and wish continued success.

S. BHANDARI
Indo-European Machinery Co., Bombay

On your completion of 4 years' service to the Graphic Arts industry, I wish to congratulate you on the excellent work you have done during this period.

Printindia has always been a bright publication, and the printing industry should be proud of a journal of its type.

As you enter on the 5th year of your life, I wish you many more happy returns and a very bright and prosperous future.

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

On the occasion of the Fifth Birthday of *Printindia*, I send my heartiest congratulations for its success in the service of Graphic Art Industries in our country. Good Luck.

P. N. SEAL
K. N. Seal & Company, Calcutta

My best wishes to *Printindia* on its Fifth Birthday. I wish many a happy return of this day.

For the last four years it has rendered yeoman service to the graphic arts industry in India. It has brought the latest information about the technique of printing and allied industries to Indian printers. I pray that *Printindia* will continue its noble career to the benefit of all concerned.

S. N. GUHA RAY
Director-in-Charge
Sree Saraswati Press Ltd., Calcutta

Best wishes for your continued success.

J. D. BARTON
Hooghly Ink Co. Ltd.

We are extremely glad to note that your magazine is progressing well and we wish you all success and prosperity for the future also.

A. SIVARAM
Branch Manager
Agfa India Private Ltd.

(Continued on page 22)

50 YEARS IN THE SERVICE OF THE PRINTERS

A GREAT NAME IN
FINE FINISHED TYPES

Manufacturers of
PRINTING TYPES IN 14 LANGUAGES
TAMIL, TELUGU, ENGLISH, GRANTHAM, MALAYALAM, CANA-
RESE, HINDI, SANSKRIT, MARATHI, DEVANAGARI, GUJARATHI,
URUDU, ORIYA & SINHALESE

AND
**HALF-TONE, LINE &
ELECTRO BLOCKS**

SUPPLIERS OF PRINTERS' REQUISITES



ESTD. 1906

Grams: BHUVANA

Phone: 84469

SWADESI TYPE FOUNDRY
CHINTADRI PET :: MADRAS-2



By

SRI RAMAKRISHNA NARAYANAN

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

THE MONTH

Yet another Diwali has passed. The Press of India as usual had plenty of "Diwali Greetings" for their pages. But inside there has been little of the feelings of goodwill, co-operation, give-and-take, and all other good things those greetings implied. Instead, there were many demands, appeals to tribunals, writs in courts, and other signs of mutual recriminations.

The wage board decision is not yet in and the price-page schedule is said to be imminent. One of these days, they will be here and leave many of us high and dry.

In printing industry, all of us need wisdom to face all our problems boldly, solve them courageously and suffer those that cannot be solved patiently. If we are to fight for any of our rights, let us remember in this hour our duties too.

There have been supplements since we reviewed the states re-organization supplements. The

Japan supplement brought out by *The Hindu* recently was interesting with the coloured cover page illustrated appropriately for the occasion: the Fuji, Cherry Blossom and the Kubuki Dancer. A notable feature was that most of the advertisers from Japan had some blocks to tell their story. These vigorous ads used mostly the Sanserif type faces Metro & Futura. Among the Indian ads mention may be made of Texmaco, about Indo Jap co-operation, with two gear wheels having India and Japan, in mesh (Clarion).

Two ads of Hitachi neatly done for William Jacks by DJ Keymer.. All's Maharajah turning a sales-

OXFORD PUBLISHING
1478-1957
THE OXFORD UNIVERSITY PRESS is a Department of the University of Oxford. It therefore has no shareholders and subserves no private interest. Its function is the output of scholarly and educational works, many of which are in their nature unremunerative.
FOUR AND A HALF DECADES AGO the Oxford University Press came to India since when the growth of the INDIAN BRANCH has been steady. There can hardly be any subject or language to which, through its many notable Indian authors, the INDIAN BRANCH has not made some contribution of worth.
OXFORD UNIVERSITY PRESS
POST BOX 340, MOUNT ROAD, MADRAS 2

Caslon combines with century

man, jibba khadi cap and all, with a valise named "Tokyo" (JWT).

State Trading Corp's "STC Trades with the world" with a silhouette of ships as border by Clarion.

Now that almost all our dailies have brought out supplements for Japan and our Prime Minister has also visited the country, it is hoped that our industrialists and businessmen will leave no stone unturned for the further growth of commerce between the two countries.

ANNIVERSARIES

On this happy occasion of the fourth anniversary of *Printindia*, we are glad to review five anniversary ads. Here they are in the order of their age:—

OXFORD PUBLISHING 1478-1957 (2x2 cols.)

This ad appeared in the University Centenary supplement of *The Hindu*. Note the heavy copy and the fact that it is a type-set advt. In spite of this, how does it manage to put on a spick and span look? The answer is simple: Choice selection of type faces and type sizes with ample space. Caslon No. 3 is used for *Oxford Publishing*, the years in bold and the name in italic are in Century series; the text and address are in Times Roman. The waved rule covers the whole piece and is very suitable indeed.

HINDUSTAN LEVER 15x5 cols.

Sailing and steamships are illustrated in line and the headline is arresting in handlettered uneven roman. The two-column text is in Times Roman, interspersed with small line illustrations. The text sets out the story of Lever Bros., HVM, United Traders and so on to the present Hindustan Lever. At the bottom is the line "Hindustan Lever serve the home" in Times bold with the emblem in the middle. This story by Lintas is

quite good in the telling, both in the matter and in the manner.



This story begins in 1888...

The story of the Tata Iron and Steel Company is a story of the growth of a great firm. It is a story of the pioneer who brought about this silent revolution in steel industry by bringing into existence this firm. Entitled "A great Indian" in 30 pt Bembo italic, the ad features a statue of the late Sri J. N. Tata, done excellently on scraperboard medium, left, below the headline. The text is in left flush in Times Roman, being a tribute to Tata as it appeared in *Times of India* of 20th May 1904, a day after he passed away.

HINDUSTAN LEVER SERVES THE HOME

Lovely Life of Lever Bros.

TATA IRON AND STEEL CO.
12×4 cols.

Recently the advt of this firm entitle "50 years ago" appeared in the press. The piece under review is about the pioneer that brought about this silent revolution in steel industry by bringing into existence this firm. Entitled "A great Indian" in 30 pt Bembo italic, the ad features a statue of the late Sri J. N. Tata, done excellently on scraperboard medium, left, below the headline. The text is in left flush in Times Roman, being a tribute to Tata as it appeared in *Times of India* of 20th May 1904, a day after he passed away.

At the bottom, besides the name and dates of Tata, the commemoration line, there is the address in Gothic expanded caps. The whole thing is a great advt for a great firm about a great Indian. The Job was of course done by the Great JWT.

AIR INDIA INTERNATIONAL

The Maharajah is certainly growing up, and he is becoming conscious

of it too! Look at him looking at the mirror. The moustache printing at you seems to be growing too.

The copy is a lesson on brevity (Parties who send carloads of copy for a single column solitary inch, please note). Three lines of Cartoon type; Dressed up to the nines—and why not, he's nine years old today! Immediately below in their usual style is Air India International. This is a very appropriate and expressive advt by JWT.

LIFE INSURANCE CORPORATION OF INDIA

One thing (perhaps the only thing) we like about the LIC is its advts. Out of the many things we like about their advertisements, their emblem is the most liked.

Look at the huge milestone with one protective hands in it. Does not it dominate the whole ad! The chalk rendering gives the right touch for the texture of the stone. The half line tint connects the stone and the emblem on the left, in a black rectangle. Gothic expanded is used for the words "First Milestone". The text is in Times Roman in right flush indentation. The usual black lettering is used for Life Insurance Corporation of India. Quite an impressive ad by ASP.

DIWALI ADS

The best way of celebrating Diwali is to get a nice advertisement published in the local daily or weekly. Among these, JWT's greetings with two lines of Goudy caps, five lamps and a doll for Tata was good.

Mettur Industries by Efficient had a bouquet of flowers, three lines of handwritten script enclosed by elongated circular tint. Gill series were used for the name of products and firm name.

Plato pens with plantain leaves illustration and a single lamp, both in chalk had five lines of Cartoon type as copy, Plato in Bodoni bold

and an illustration of the pen at right in line and shade.

IN PASSING

AMUL BUTTER: "People who want freshness insist on Amul-Butter" is the heading of the 20" single column ad. This is a sure eye-catcher what with comic illustrations and Futura headlines.

P. Syn.

BLACKWOOD HODGE feature their "Stop ahead" ad 10×3 cols. by Grants.

CAWNPORE WOOLLEN MILLS: Bold outline figures characterise this 7×3 cols.

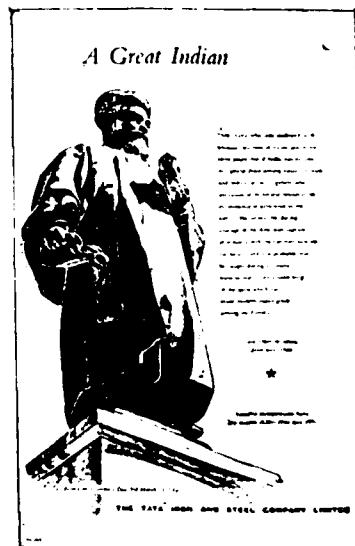
Two men with the patterns of Lalimli Woollen goods incorporated Bodoni italic for headlines, Times Roman for text, Gill and Futura for address.

FINLAY MILLS: A striking silhouette of scissors with shading for clothing and the word "cut" above the silhouette form the ad. This poplin ad is quite good as it goes, but why not crisper types?

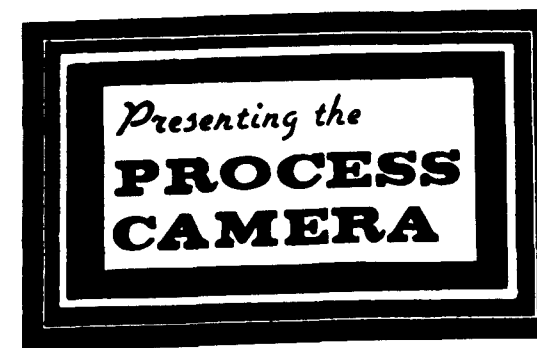
ASP

GLAXO BABY has Granny, Ma and Friends exclaiming "what a picture he is!"

LAS



HANDLOOM HOUSE: The 9×2 col ad of a tinted buridans (placed vertically) with two hands (Continued on page 27)



By

SRI S. NARASIMHAN

The invention of photography has revolutionised modern art. The process camera used for making negatives for block-making is a very useful piece of equipment in any modern printery. Everyone concerned with this branch of Graphic Arts should have a thorough knowledge of the construction and working of this photo-mechanical device.

Engraving by hand is now relegated to the status of a hobby. Photo-engraving has taken its place. The subject, though complicated, is absorbing for those who are interested. A knowledge of photo-engraving should have a liberal background of chemistry, an artistic perception, a sense of appreciation, an aesthetic taste, and above all, a sound judgment with an alert mind. Those who cannot think precisely and whose thoughts are always vague can consider themselves unfit for this branch of printing.

The photographic studio of a process-engraver is divided into three sections: 1. The Camera Section, 2. The Dark Room or Developing Chamber, and 3. The Etching and finishing department. The Dark Room is sub-divided into Wet Plate and Dry Plate Sections. Light-sensitive plates may either be manufactured readily by machines and sold in packets or can be processed in the Dark Room itself, with stock chemicals and solutions. The latter is called Wet Plate.

Photo-engraving methods can be broadly classified into two: 1. Line

negatives. The processed negative is printed down on sensitised metal plates or in other words, exposed under the negative to strong natural or artificial actinic light. This produces an acid resist on exposed parts, generally fish glue or albumen being used for the purpose. The metal is etched in acid, leaving the image in relief in the protected portions. The etched metal is routed, sized and bevelled; then it is mounted type-high on metal or wooden mount. Now it is ready for printing process.

THE CAMERA

The Process Camera has few common parts with the photographer's camera. It consists of a frame work on which are mounted the copy board, the main camera including the lens, prism, focussing bellows or camera extension, screen-holder, film or plate holder, dark slide etc. The frames and bellows are moveable with the help of runners, for the purpose of focussing. The complete camera has a carriage with a turntable, free for turning the lens either at right angles or parallel with the copy-



Close-up of a copy-board

board. There are cameras made of wood as well as of metal.

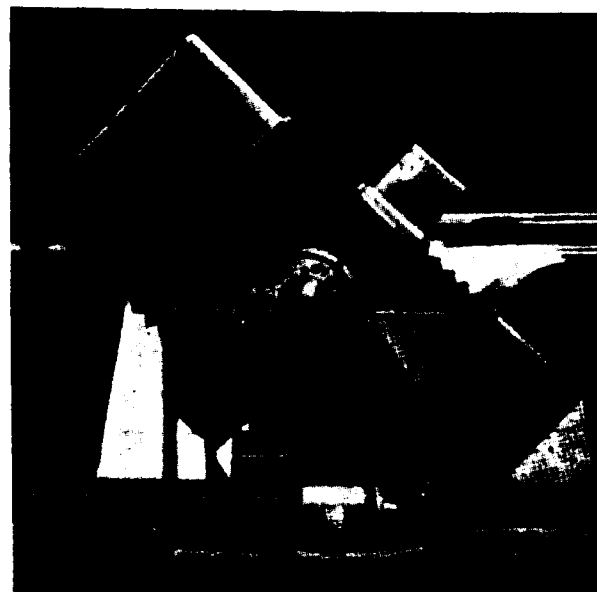
Focussing is done by either moving farther away or nearer to the copyboard. The farther we move the greater will be the reduction, and the nearer we move the camera, the greater will be the enlargement.

Process cameras are mainly intended for reduction to ensure a sharp image. About 1/5th reduction is possible on process cameras.

There are devices to fix the carriage at the focussed point undisturbed for tri-colour and four-colour work. There are springs supporting the camera to prevent vibration.

ILLUMINATION

Illumination may be by enclosed or open arc lamps. These emit a large percentage of ultra-violet and blue rays. The film or plate is sensitive to these rays. In the arc lamp two pieces of carbon of specified circumference are used inside a reflector. Nowadays, electric repro-lamps are used instead of arc lamps. These have been found very satisfactory for



Close view of Rotadon Process Camera

exposing mono-chrome as well as multi-colour originals. Gas-filled lamps are rich in red and green rays and are admirable for colour negative making. When such lamps are used, orthochromatic and panchromatic plates may be used with advantage.

BEHAVIOUR OF LIGHT

To understand the photo-mechanical process, some knowledge about light and its behaviour when passed through a lens is necessary. As a form of radiant energy, light gives the ether a wave motion. These waves travel in straight lines at a terrific speed about 186,000 miles per second. What we call sight is but the impact on our optic nerves of these waves. Sources of light like the sun or electric light make non-luminous bodies visible when illuminated. If a surface is polished, it reflects all the light but a rough surface scatters the light. Light becomes diffused when passing through a translucent object, and it is absorbed by opaque objects. The speed of light changes when passing through a transparent medium and hence it bends or refracts. The shape and density of the objects decides the extent of refraction. The ratio of the speed of light in air compared with its speed in the transparent medium is called refractive index. The refractive index decides the degree of bending. Lens-makers have applied the principle of refraction and manufacture lenses according to refractive indices.

A photographic lens collects the reflected light from the original

and directs it to a plane. The light passing through the axis of a lens is not refracted. The density of the glass and the shape of the lens decides the extent of refraction. Various forms of photographic lenses are: single achromatic, rapid rectilinear, aplanets, anastigmatic and apochromats. Anastigmatics and apochromats are very expensive as all defects have been removed in them.

Chromatic aberration is caused in the single achromatic lens. This is a very old and simple form of photographic lens. As the visual focus, should coincide with the actinic focus, a lens should be corrected for chromatic aberration. When transmitted rays passing through the margins of the lens fail to be focussed in the same plane, the defect known as spherical aberration results. By using a small stop, this defect is rectified to a certain extent. Another form of spherical aberration is that of oblique rays. This is called coma or zonal aberration. This results from unequal magnifications of the various zones of the lens. Coma is prevented by using a small stop and varying the form of the lens. Cheap lenses produce radial astigmatism, otherwise known as stigmatic aberration. This is the effect of the lens getting oblique light rays into two focal lines. The result is a double-focal point instead of a single focal one. Radial astigmatism makes the lens useless for photo-mechanical process. Another kind of aberration called curvilinear distortion, causes marginal rays apparently curved. This is peculiar to single lenses. Other defects in lenses are: flare spot, optical flare or ghost image, etc. For high class colour reproduction, apochromat lens is used. There are special brand names for the various classes of lenses described above.

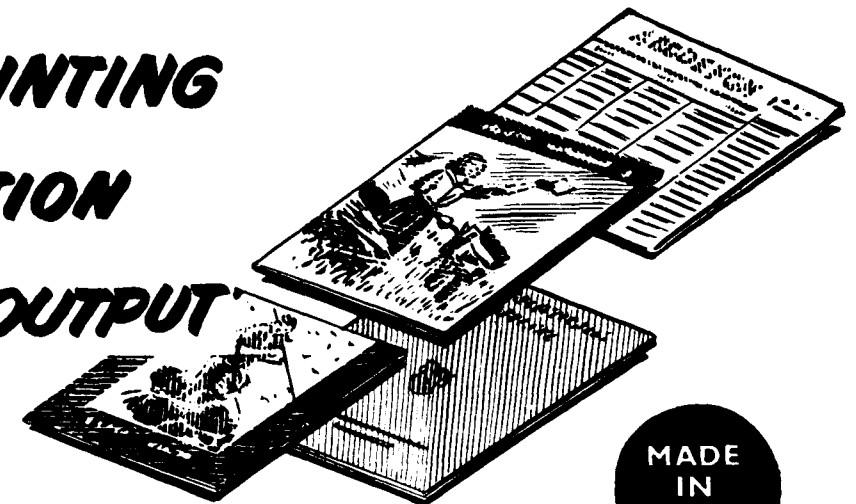
FOR NEAT PRINTING

EASY OPERATION

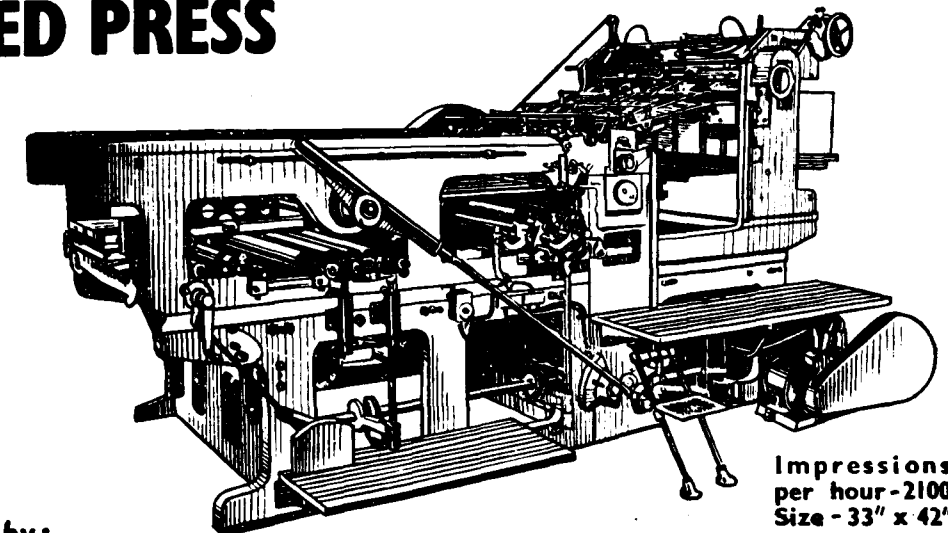
INCREASED OUTPUT

DEPEND ON...

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FLAT BED PRESS**



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IN
U.S.S.R.



Impressions
per hour - 2100
Size - 33" x 42"

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Please write for further details to our Agents:

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16, Custom House Road, Bombay.

THE INRUPEXCO
16, Bentinck Street, Calcutta.

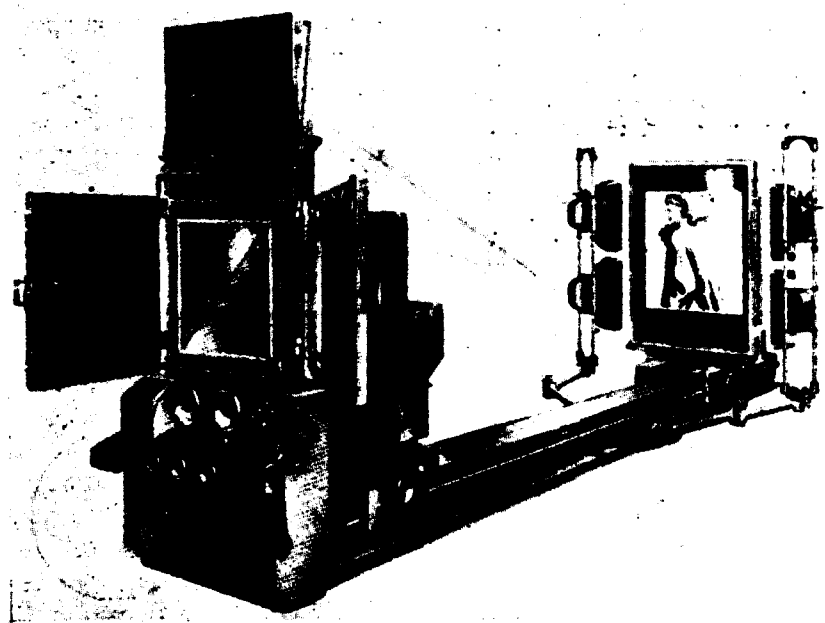
TRADE REPRESENTATION OF THE U.S.S.R. IN INDIA

BOMBAY (Branch)

NEW DELHI

CALCUTTA (Branch)

NU - 57A



Modern Klimsch Camera

A metal tube in front of the camera carries the lenses. Between these is the diaphragm. It has an adjustable opening with a circular frame containing a series of metal leaves. When these are rotated by a lever or ring found outside the metal tube, adjustments to apertures can be made. An adjustable diaphragm is called iris diaphragm because of its likeness to the opening of the human eyes. The focal length of the lens and the diameter of the aperture are inter-dependent. There are various methods to express the size of the stop. Usually it is the ratio of the focal length to a given number. A lens producing a cone of light with a steepness of one in eight is given the focal number of $f/8$. The intensity of the illumination of the image is always proportional to the square of f ratio.

Testing a lens: Process lens should be free from defects and corrected in positions beyond its principal focus to render it useful for copying, reducing and enlarging. The glass used for the lens construction should be transparent beyond the violet region as quick

exposures are necessary. A long focus about 18" being the average is necessary. Otherwise the oblique rays will spoil the dot formation. The process lens should be capable of giving critical definition at full aperture for full plate. There should be no serious aberration in the centre as well as the edges. This should be free from distortion by reproducing straight lines on the edges perfectly straight.



Speaker has a close look at Heidelberg at R S P Madras

Colour images obtained from the lens should be of proper definition and same size. The foci of the three primaries should coincide exactly. Otherwise the colour reproduction will not register.

To test a lens for its suitability for colour negatives, we may proceed as follows. Take a transparency holder and arrange the three colour filters in it. Stretch a very fine wire behind it. Illuminate this object by light from behind. Take a photograph with a panchromatic plate. The wire should be recorded in the negative as a sharp clear straightline. A blurred, displaced or out-of-focus line shows unsuitability of the lens. But, it may be suitable for single colour reproduction. Another test to find defective lenses is as follows: On a white card make squares, straight lines and circles. Pin the card flatly on the camera copy-board. Focus it to varying sizes. Observe the image on the focussing ground glass. There should be no change in the image for different size stops and there should be no distortion on the object. Get a few negatives made and see whether the image recorded is sharp.

(To be Continued)

LITHOGRAPHY for the LAYMAN

By

SRI T. KRISHNA

Of the three main methods of Printing, Letterpress, Lithography and Gravure, the second is the favourite of millions. Letterpress still remains the bread-and-butter process. Gravure is but a luxury for India and a closed book for many Indian technicians. In this brief article, the experienced author outlines the cardinal principles and technique of the Lithographic process.

THE BIRTH

A stone in Solenhofen, Bavaria (Germany), a man in Munich and a laundry list brought about the birth of one of the most popular printing processes par excellence.

Born in Prague and migrating to Munich, Aloys Senefelder, cut for an actor, ended up as the discoverer or inventor of lithography. His mother's chance direction to note the laundry list led to the discovery of the property of the stone and its immense possibilities are printing history. Senefelder died in 1834, but his invention still throbs at every lithographer's shop.

STONE

Kelheim is (or was) a small town near Munich and Senefelder's stone was called Kelheim stone. These stones are still shipped from that locality to all centres of the world. Chemically the stone contains about 97 per cent of carbonate of chalk. Very fine in texture, it has admirable reproductive properties. About three to four inches thick stones are needed for printing. Thinner layers are also cemented into one by a special cement. The latter stand pressure than solid monoliths, as the cemented plates reinforce or strengthen one another.

Stones of two varieties are available for the lithographer: one with a coarse texture and yellow tinge; the other with blue-grey colour, very hard and fine. Some of the best reproductions are from the hard blue-stone. Apart from the above general classification, no two stones are alike, due to geological formation. The task of the lithographer is to select a variety suitable to the particular class of work he is going to reproduce. Thus the dissimilarity is also an advantage as it affords the printer an endless choice.

The stones are ground and polished, a grained surface being imparted to it. Used stones are also ground for removing the old work to be used for fresh job. The following tools and materials are essential in the stone grinding department of a lithographic printing plant:—

Some kind of flint as graining quartz, ground flint, rock quartz or other similar substance is used for grinding stones. Old work can be obliterated with Hoosier stones or rubbing stones. These are naturally occurring abrasives. Steel grinding discs are employed for rubbing out old work on stone grinding machines. For polishing stones, a natural

abrasive made from volcanic lava, called lump pumice is used. From lump pumice, pumice powder is made and is used for polishing lithographic stones. Some of the artificial abrasives used for removing old work are Schumacher bricks, triumph polishing bricks, etc. For polishing stones Water of Ayre stone or Scotch stone is also used. Sea sand sifted by brass wire netting can also be used for graining stones. The polished stone is washed and cleaned with a sponge. Sponges may be natural, found in the sea or artificial, i. e., manufactured. The first has quality and the second durability. The edges of stones are filed down, the backs of worn down stones are backed with slate slabs and the levelness is tested with straight edges and other precision instruments.

PLATES

The inherent difficulties in getting suitable stones, in transporting these heavy slabs over long distances, storing difficulties etc., paved the way for finding a lighter substitute. The choice fell on metals. Few realize that aluminium was the first metal to be used successfully as a substitute for lithographic stone. Zinc came later but is more readily procurable, cheaper, and satisfies certain special requirements of the lithographic printers.

Aluminium is easier to roll and work, is softer when rolled and also whiter. But it is easily damaged when scratched lightly even by materials softer than itself. When exposed to air, it oxidizes quickly, developing an insoluble oxide. Nitric acid has no perceptible effect on aluminium, but some of the other acids in dilute form will act on it. Dilute sulphuric acid has a very slow action on aluminium. Carbonates and sulphates oxidize aluminium quickly and this quality lends itself to lithographic process. Aluminium plates used for lithogra-

phy contain small amounts of other metals to make it durable.

Inks with high alkaline content such as the lakes, magnesium whites etc., should not be used on aluminium plates, as caustic solutions attack aluminium vigorously than acids. For the same reason dilute alkali solution is employed to remove old work from aluminium plates. Regrained plates should be tested carefully for trace of caustic soda which is injurious to the work on plates. The following is a simple means of testing the presence of caustic:—

Pour a few drops of liquefied phenol, otherwise called carbolic acid, at a corner of the aluminium wet plate. If a pinkish colour is seen at the spot, then there is some caustic or other alkali present in the plate. In such cases of presence of alkali which turns the plate brittle, a counter etch should be used.

ZINC IS HERE TO STAY

Ninety-nine per cent of Indian lithographers use zinc. Indeed, experts aver that zinc is the best available metal for lithographic reproduction. When rolling zinc into plates, a film or scale is formed

on the surface which should be removed from the top by graining. Ignoring the scale will weaken the grain structure. Before any work is put on the plate, this film or scale should be completely removed. Scumming and toning will result from this scale. Zinc has better folding strength than aluminium. The peculiar property of zinc is to form a coating when in contact with solutions of alum in muriatic acid. This coating is very stable and cannot be dissolved even by acid action.

When alum and hydrochloric acid (muriatic acid) acts on zinc, the oxidation produced is different from auto-oxidation. When etched with strong acids, even auto-oxidation will not take place, e.g., strong muriatic acid makes zinc water-repellant, as though it has been coated with grease.

Printing from zinc or aluminium is in principle similar to printing from stone. Almost the same chemicals can be used for metals as for stones.

TRANSFER

After preparation of the surface of the plate or stone, transfer takes place. For this, transfer papers

are employed. The design is transferred from the original to the stone or plate. This may be carried out on stone in a Broadway or Longway press and on plates by photographic means, on a vacuum printing down frame, with arc lamps. Plates have to be grained on a graining machine with sand or other abrasives and marbles. After graining, plates are sensitized with egg albumen (fresh or powder) and bichromate on a whirler.

Weak transfers give poor impressions, whatever the condition of the originals may be. Good transfer paper is essential to get good printing and it is foolish economy to go in for cheap transfer papers.

In label and similar work, transferring is very important. The artist draws the original on a small stone (or plate). From this a number of pulls are taken on a transfer press. These proofs are sized and lined up on a large plate. From this an impression of the entire group is made on a printing plate. Good quality transfer paper will retain the fine details of the original and the resulting print will be faithful to the original. The back of the paper is moistened and washed off the plate. Transfer paper has the same coating which comes off as in the case of decalcomania (transfer picture paper). In some places like Sivakasi, the printer prepares his own transfer paper with starch. This may be economical for long runs and large establishments. But today, manufactured transfer papers to suit various kinds of work are readily available at cheap rates. These are of standardized quality and will not alter due to atmospheric changes. Such stability is necessary for close register work and multi-colour work.

Three broad classes of transfer papers are in use. For colour work

(Continued on page 29)



By

MR. MINTON

Good milk should be drunk in a good vessel. Good ink does not mean fine printing unless quality rollers are used. Printers of today are passing on from composition rollers to rubber rollers. This is not going from bad to worse. But certainly it is not from good to better. The inherent disadvantages of composition rollers necessitated a substitute. Rubber rollers have their own headaches. In this article Mintite rollers are discussed at great length by the manufacturers. They are not new, but they are near-perfection in rollers. When rollers last longer than the machine, they are sure to be perfect rollers

The inception and development of Mintite roller coverings was begun over sixty years ago by Mr. Louis Minton.

In those days roller coverings in use throughout the printing industry were extremely crude and Mintons introduced for the first time, the principle of permanently anchoring the flexible covering material to the metal stock, so that it could be removed only by the use of hammer and chisel.

The first application of this principle was made in the production of lithographic rollers to replace the leather skin nap coverings then in use. Mr. H. Birdsall, a director of Norbury Natzio, Manchester, outlined to Mr. Louis Minton the problems they, as practical lithographers, were faced with when using skin rollers which not only moved along the stock, but required glazing, constant scraping to renew the nap and necessitated the utilisation of a separate set of rollers for each colour.

The Mintite lithographic inking grade produced as a result, provided a resilient covering permanently secured to the stock throughout its entire length, and gave lithographers a covering

which had a fine matt velvet-textured surface which was readily cleaned, and the 'nap' of which was indefinitely renewed without scraping.

As a result of the success of the Mintite lithographic grade roller coverings, achieved from some thirty years' experience of their use and in their production, the late Mr. W. H. Locke, then managing director of Linotype & Machinery Ltd., furnished Mr. Louis Minton with a very comprehensive catalogue of the various problems and inconveniences caused to letterpress printers by the cast composition (glue-glycerine-gelatine) roller coverings then in general use.

The experience and knowledge acquired in the production of the lithographic grade enabled the Mintite letterpress grade roller covering to be evolved, and provided the answer to many of the most irksome of the difficulties which were preventing printers reaping the full benefits from the important advances that were then taking place in the design and speed of letterpress printing machines.

Since those early days, nearly half a century ago, the manufacturers have had the benefit of the

opinion and advice respecting their practical requirements from many hundreds of the world's leading printing establishments, and they never cease to regard themselves as "Students" because not only have modern advances in design and technique necessitated a resilient approach to roller problems, but the improvisations occasioned by shortages of the conventional materials and methods occasioned by the war of 1939 have been an added important factor that has had to be taken into account.

So much for a brief history of the inception of the Mintite roller covering. Now, for letterpress printers, we may examine the problems outlined so many years ago by Mr. Locke, and the solutions which resulted after nearly half a century's endeavours in the present-day production of the Mintite letterpress grade roller covering which, whilst having a similar resiliency to the composition roller, is quite permanent and without "compo's" main disadvantages.

ATMOSPHERIC CONDITIONS

The compo-glue-glycerine-gelatine type of roller covering is affected by atmospheric conditions and, in particular, by changes in temperature and humidity. Owing to the hygroscopic properties of some of the constituent substances of the actual composition, the rollers take up moisture from the atmosphere and swell under conditions of high humidity, and contrarily give up moisture and shrink under dry hot conditions.

Accordingly cast "compo" rollers are made from several different kinds of composition in an endeavour to cater for the vagaries of the climate, but whilst in some countries abroad, climatic conditions are stable for several months at a stretch, in the United Kingdom, as you know, we can have the temperature up to the



Sri C. S. M. Babu, Lecturer, explains Process Engraving to the Speaker

70's and down to the 35's with snow and night frost all in the same week.

This problem of varying dimension tolerance due to changes in climatic conditions has been overcome in the Mintite covering, which is a "dry" covering having a permanent inaugural self-developing "tack" and free from glycerine, water or any volatile matter. It is quite unaffected by any climatic conditions throughout the world—the same coverings are in use here as in every country, including Iceland, Scandinavia, Malaya, South America, South Africa, Egypt, Australia, and the United States of America, and by ships at sea. Mintite is, of course, quite unmeltable even at the highest speeds of the most modern presses, and they cannot burst, crack, break-up, or leave the stocks.

HAND-MADE THROUGHOUT

Mintite coverings are not moulded or cast but are hand-made throughout and individually finished enabling their final dimension tolerance to be completed within one thousandth part of an inch. Not only is the covering "dry" but it is extremely tough and rollers covered in it are still giving satisfactory service after having been in constant use for nearly 40 years.

DAMAGE

The first contingency which threatens rollers is rule-cuts. This is far less likely to occur with the Mintite because its resistance to damage is very much greater than "compo". If, however, in course of time this damage does occur, it can be removed from the covering by buffing—grinding off the damaged surface. Provision has been made for a slight uniform expansion in diameter to take place (approximately 1/16" in twelve months on a 3" diameter roller,

when further increase stops) but which permits of damages to be removed and the covering thereby restored to its original diameter and condition. As Mintite coverings are the same from their surfaces to their anchorage to the metal stock and are not in separate layers of different materials, the new surface has all the properties of the original one.

The roller adjustment on all machines is sufficient to allow for the uniform increase in diameter should there not be any occasion for buffing; in practice it is surprising how few rollers have to be returned to us for this attention.

A Heidelberg machine roller (one of a set of four) illustrates points. It was covered in 1931 to a diameter of 2". Five years later it was returned full of rule-cuts and impressions, after it had done thousands of runs with perforating brass as well as all classes of commercial work. As in five years of use the diameter of the roller had increased from 2" to 2-1/16" it was only necessary to remove the damaged surface by buffing and the roller was returned to the client in its original diameter and condition without re-covering. In 1949 Minton's were told they were still in work and had been in constant use ever since they were rebuffed in 1936.

The rollers were again returned, and on this occasion we kept one. It was seen that the same thing has happened to this roller as before—the increase in diameter permits the removal of damages and restoration to the original diameter and condition without re-covering, so that after 18 years continuous commercial work, including thousands of runs with perforating brass rules, the covering has been restored to its original diameter and condition. The three rollers returned to

the client are still in work, which makes their life so far 26 years "not out".

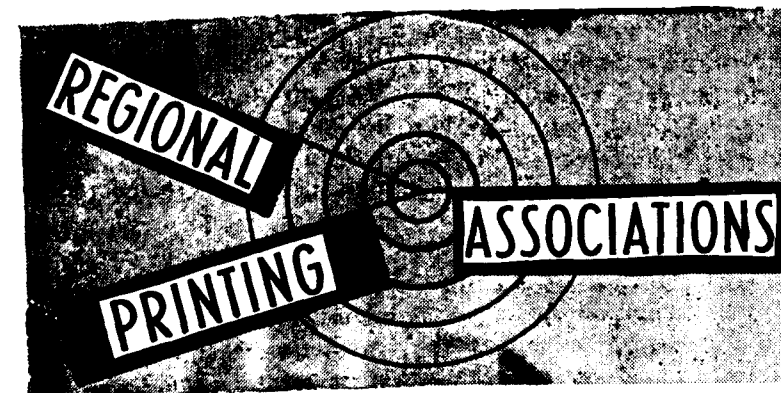
CLEANING

The next contingency that had to be provided for is the removal of dried-on ink from the surface of the coverings, which brings me to their cleaning. Mintite letterpress coverings are readily cleaned with paraffin and the lithographic grade with equal parts of paraffin and petrol or petrol alone. These fluids are once again easily obtainable and we strongly recommend printers to use them only, in preference to the various proprietary roller washes on the market, the ingredients of which are necessarily dependent upon cost and what is available, and some of which could have a harmful effect upon the Mintite coverings.

As has already been explained Mintite is a dry covering with a self-developing tack and therefore the technique of washing is itself different from that used for moist "compo" coverings—the cleaning rags must be soaking dripping wet with paraffin so that the ink is actually sluiced and dissolved away. When all the ink has been removed the coverings should be gone over with a clean rag moist with clean paraffin and allowed to finally dry by evaporation, thereby obtaining the fine-matt dull velvety characteristic Mintite surface. By adopting this procedure it is practical to print a yellow tint immediately after having used black inks without any difficulty.

Due to the fact that letterpress inks in general use have been designed for printing with "moist-compo" rollers, and also owing to the synthetic varnishes and mediums used in certain inks nowadays, it is necessary, very often, to adjust them for use with Mintite

(Continued on page 31)



DELHI PRINTERS' ASSOCIATION

The Annual General Meeting of the Delhi Printers' Association was held on the 24th September 1957 in the new premises of the Delhi Press. Shri B. L. Baluja presided.

The condolence resolutions were passed at the sad demise of Lala Amar Nath of Delhi Press and Shri Badrinath Seth of Navin Press.

Presenting his report, the Hon. General Secretary Shri Vedavrata described in brief, attempts made during the last two years to improve the lot of Printers of Delhi.

Touching the labour problem in Delhi presses, Shri Vedavrata opined that no doubt, to some extent it is a universal problem these days and no sphere of employment, whether Government or private, can avoid its repercussions, yet its bad effects have been aggravated by the sweeping and indiscriminate and doctrinaire policies and whims of persons at the helm of affairs. Labour and social laws are enacted keeping in view problems created by big industries and establishments. But these are applied to small and medium industries also simply because they fall under the guillotine of the Factory Act. He gave the instance of the Industrial Disputes Act which has unnecessarily caused strained relations between employers and employees in small industries like printing presses without

dardise terms of price in their presses and should try to win the co-operation of their employees.

He disclosed that the Government and the Small Scale Industries Institute have already started scrutinising laws adversely affecting the Small Industries and hoped some good may come out of this move.

Listing some difficulties and problems facing the Delhi Printers and steps taken by the Association to alleviate or remove these, Shri Vedavrata mentioned the staggering of electric supply under which presses in Delhi have to observe their weekly holiday on Tuesday instead of Sunday which means a great hardship and handicap to presses. This matter has been taken up with the Chief Commissioner, Power Control Board and the State Electricity Board and there is some hope of getting the needful done.

DELHI MASTER PRINTERS



Sitting (from L. to R.): Prof. Vedavrata, Shri Jugal Kishore, Shri L. Brijlal Baluja, Shri Vishvanath, Pt. Lakshmi Narain.

Standing (from L. to R.): Shri S. Jugander Singh, Shri R. S. Virley, Shri Gopi Nath Seth, Shri Amar Nath, Shri D. P. Sinha, Shri Rishi Rande, Shri Ashwini Kumar.

Last Row: Shri Richpal Singh.

Similarly, a great problem will be created if the Government permits its plan of removing presses from residential and commercial localities. It is a serious matter and the Association has taken it up with the State Industrial Advisory Board, Delhi Improvement Trust, Land and Development office and other offices concerned. The General Secretary acknowledged with thanks the support from the office of the All India Federation of Master Printers in this respect.

Shri Vedavrata reported that the Delhi Administration have included the printing industry also in their scheme of cheap credit to small industries. He said that the State Bank of India and the Small Scale Industries Corporation yet require to be tackled to include presses in their schemes of credit and hire-purchase facilities.

Shri Vedavrata disclosed that the Central Government has decided to start a School of Printing Technology in Delhi under the Delhi Polytechnic. Moreover, Government has a plan of a Central School of Printing Technology for which a committee has been formed to recommend among other things the place of its location.

The Vice-President Dr. Radhakrishnan and many Ministers of

Central and states and Governors and representatives of printing trade in other countries sent messages of goodwill. Among those who paid personal visit to the exhibition were Shri K. C. Reddy, Dr. Panjab Rao Deshmukh, Shri Kamaraja Nadar, Shri Bakshi Gulam Mohammed. Everybody who visited the Exhibition spoke very high of the enterprise and paid compliment to its organizers. Stalls were tastefully decorated. East Asiatic Company and Polygraph Export of East Germany won first and second prizes respectively for two best maintained stalls.

Shri Vedavrata said in his report that this Exhibition has certainly raised the status of printers and their organisations in the estimate of Government and other circles and have modernised the outlook of printers who cared to visit it.

Shri Vedavrata disclosed how in one respect the visit of the Prime Minister solved a great problem before organizers and participant exhibitors. After imposition of the import restrictions of printing machinery, the machinery for this Exhibition, was allowed to be imported on special licences under which it was to be sent back to the country of origin within six months after the Exhibition. It was really

a hardship for the importers who had spent a lot for exhibition of these machines. When the Prime Minister visited the Exhibition the Organizers brought this genuine difficulty to his kind notice. Very soon organizers were informed by the office of the Chief Controller of Imports that on our representation to the Prime Minister the restriction has been waived and after meeting the requirements of Government, the Exhibition machines can be sold to private presses. Shri Vedavrata thanked the Prime Minister and the Government of India for this favour.

Shri Vedavrata mentioned names of distinguished guests of the Association during the period under review and functions organized in their honour and said that these help in widening our contacts and horizon.

In the end Shri Vedavrata said that our trade is in need of healthy conventions and a code of ethics and a move in these directions should be made by the association. He thanked his colleagues for fine co-operation and team spirit and expressed hope that their successors who would succeed to a better organiser and better placed association, would receive even more co-operation from all printers of Delhi.

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HUMIDITY CONTROL FOR THE SMALLER PRINTER

For many years printers have recognised the problems created by fluctuating humidity in machine rooms and stores, affecting both ink and paper. The larger houses have overcome the difficulties by installing built-in de-humidifying equipment, but the cost involved is often beyond the reach of the small or medium sized firm.

Recently Westool Limited of St. Helen's, Auckland Co., Durham, have produced an interesting piece of equipment which it is hoped may prove the solution to many of the smaller man's problems. This is a de-humidifying unit which stands on the floor and is about the size of a small bedside table. It is mounted on castors for easy movement and is operated from the normal electricity supply.

Room air is drawn into the unit by means of a fan, and passed over refrigerated coils to condense the moisture. This runs down into a container while the air is blown back into the room. The unit itself is designed to operate in rooms of up to 1,600 c. ft. capacity, and for larger rooms a number of units can be linked together. Also they can be adapted for automatic control and it is possible for a number of units in a large room to be regulated by a humidistat. It is

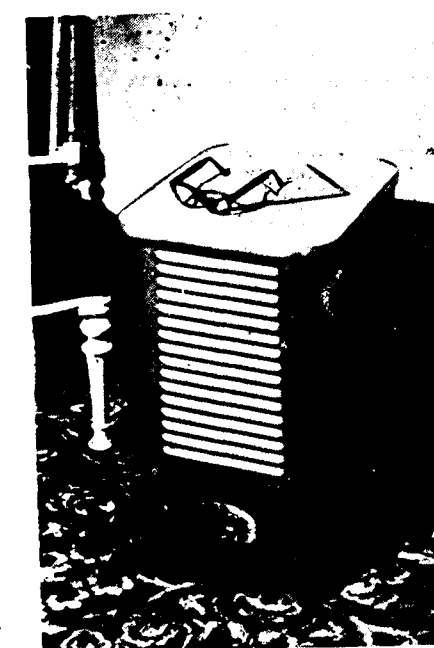
NOVEMBER 1957

stated that running costs are low, and that virtually no maintenance is required.

HIGH SPEED FEEDER FOR SHEET-FED ROTARIES

A new feeder put on the market by Autofeeds London Ltd., is designed for speeds of over 10,000 sheets per hour, and is stated to be capable of attaining up to nearly 15,000 per hour if necessary. In addition to letterpress printing, it is stated to be suitable for all sheet-fed rotary machines.

This latest machine, Model R, has been developed from the firm's original Model D., the new model



Westool De-humidifier

being very similar to the latter in outward appearance although being capable of twice the speed.

The chief features or modifications include a smoothing-out in the action of the cams; re-positioning of the lifting and forwarding suckers; and the introduction of two separate blasts. The first one is the ordinary blow-down as the lifting suckers pick up the sheet. The remaining pile is held down, and the second blast comes into action under the sheet to lift it and carry it forward as the forwarding suckers transfer it to the feedboard. It is stated that only very slight adjustment is necessary to change from one weight of paper to another, or to compensate for changes in textures. Other improvements include automatic stoppage of the hoist control at the correct feeding height; a built-in knock-off device to guard against bad loading, and a trip mechanism for mis-feeding.

This new model is to be made in sizes from demy to quad crown, to sheet or stream-feed stock ranging from light bank to 3-sheet card, and for changing sizes, all that is necessary is to move the bridge carrying the suckers.

JET AIR DRIERS

The jet air driers manufactured by Screen Process Supplies Ltd. of London utilise the most modern, scientific drying principles. Wet prints are laid on one end of the conveyor and are carried through a drying tunnel where hundreds of small air jets rapidly remove the solvents. The prints emerge completely dry and drop off into a stack ready for the next printing.

This type of air dryer is extremely economical in use, since the electricity consumption is small, and racking-deracking labour can be used for more productive work. Also saving

19

in floor space is considerable and if necessary, the output of two or more printing tables can be dried simultaneously. The speed of processing enables a high output to be maintained even under adverse weather conditions; tighter delivery schedules can be planned, rush jobs can be got out in a hurry and when necessary, shift work can be undertaken without the problem of additional drying space arising.

A wide variety of stock can be handled, including paper, card, metal, glass and plastics, and most types of colour can be dried without difficulty.

PLASTIC SHEETING FOR MAKE-READY

It has been discovered by a British firm of printers, Joseph Jones Ltd., of West Bromwich, that paper-backed plastic sheeting, although not manufactured specially for use in printing, has the

correct amount of resiliency and toughness to be ideal for make-ready. In this connection they have been experimenting with Stixon S. P. Q., a product of Stixon Plastics Ltd. of London, and in make-ready, the plastic sheeting is usually used underneath the top layer after a certain amount of make-ready has been done. The use of Stixon does not do away with the necessity for make-ready altogether, but it does result in a substantial reduction, while it can be used four or five times. It is stated that the finished job shows no impression whatever, and Jones have tested it on a 270,000 run without signs of collapsing. The method is likely to be of special interest to printers who have a large amount of recurring work, and both old and new type, and old and new blocks can be combined, giving highly successful production results.

NOTES ON TYPOGRAPHY

The fifth sheet in the series "Notes on Typography" written and designed by Geoffrey Dowding and published by Wace & Co. Ltd., gives some interesting hints on Punctuation, which the author describes as an art nearly always left to the printer, authors being almost without exception either too busy or too careless to regard it. Very briefly, the practice of excessive amounts of white space after full points in text setting of all kinds is regarded as unsatisfactory. Thus the stop, followed by the initial capital of the new sentence, is an adequate sign that one sentence has come to an end and that a new one is beginning. The same applies to colons and semi-colons, which in ephemeral printing are often set with an excessive amount of white space

(Continued on page 28)

Search for quality ...you'll find GEVAERT

A quality job requires film or plate that's quality all the way—Gevaert film or plate, in other words. Dependable... uniform... with wide exposure and developing latitude... low halation, low fog in forcing. Gevaert film produces dense, hard dots... is tough and abrasion resistant. For quality every time—reach for Gevaert.

LITHOLINE 0 82p FILM
maximum contrast, highest sensitivity, latitude and resolving power. Polystyrene base for utmost stability.

0 81 LITHOLINE ORTHO
0.003" thick, thin base for line or screen positives, or negatives.

0 82
in regular base, same emulsion —0.006" thick.

CORRECTONE FILM
a special film, intended mainly for continuous-tone negatives in photogravure and photolithography. It preserves the sparkling highlights, will block out backgrounds in wash drawings, pencil sketches and similar originals.

P 23 FILM
a fast panchromatic emulsion. Long gradation, wide latitude in exposure and development. Ideal in continuous-tone colour separation work and masking process.

GRAPHIC P 2 PLATE
for making continuous-tone separation negatives from colour transparencies or copy. Same photographic characteristics as P 23 film. Ideal for masking process.

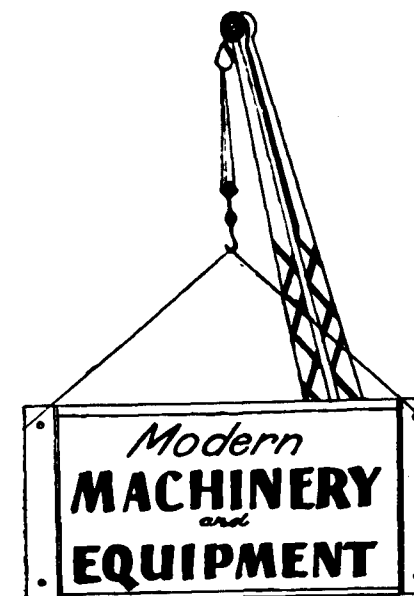
RP 5 PLATES
has a very vigorous gradation and high speed. Intended for colour separation negatives in photogravure, photolithography and process engraving.



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

THE RUSSEL STRAINER

The problem of wastage of colour inks left unused on gravure machines has always been difficult. If recovery is attempted the frequent washing of the piping and filtering medium used in order to separate any foreign matter which may have accumulated in the inks is a laborious process and in many works the coloured inks are allowed to mix to form a grey which can be used as a diluent for black.

NEW WAY OF RECOVERY

A new method of recovering and reconditioning such inks has now been devised with the use of a straining machine which employs the principle of gyratory vibration. This machine, the Russel Strainer, has a great number of applications in industry for both sieving and straining and achieves a throughput of 400 lbs. of black ink in twelve minutes and a slightly lower figure for coloured inks. Its mesh, which

has a total screening area of only 2½ square feet does not rotate about its own centre, but every point upon its surface describes a circle of small diameter in a horizontal plane. This motion, when sieving, eliminates the tendency to blinding and clogging of the mesh, as there is none of the bouncing action which is typical of other types of screening machinery and when straining gives an exceptionally fast throughput.

The gyratory motion is generated by an out-of-balance flywheel enclosed in a cast iron housing and operated by a ½ h.p. electric motor, which for the purposes of printing ink recovery is flame-proofed to Buxton Certificate standards. Several other precautions are taken to ensure safety in operation.

SAFETY

The vibrating part of the unit is suspended in the static frame by three rods and consists of the flywheel and the straining assembly which is a watertight unit made of stainless steel. The drive from the motor is transmitted by flexible rubber coupling designed to break if for any reason an excessive load is applied. The straining element

is held in a circular frame by three toggle clips. This arrangement facilitates rapid removal for cleaning purposes. An inverted conical lid prevents splashing when the ink is poured on to the screen.

A 200 phosphor bronze wire mesh is used, the minute apertures of which impede the passage of any solid matter. This collects on the mesh without hindering the flow of the liquid and can be removed with a scraper if necessary.

The machine is compact, being approximately two feet in diameter and is mounted on rubber-shod trolley wheels for easy movement.

Full details may be obtained from the manufacturers, Russell Constructions Ltd., Russell House, Adam Street, London, W. C. 2.

BANCROFT FOLDING MACHINE

Bancroft Folding Machines Ltd., Kinghamway, Reginald St., Luton, England, have manufactured the Bancroft Folding Machine in two sizes Double Crown and Demy. The sole agents are C W Sanford Ltd., 8 Salisbury Court, Fleet St., London E C 4 represented in India by Messrs East Asiatic Co., Ltd., Madras.



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Film Screens with dots
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FRANKFURT A. M. 13, Germany

The notable features of this Folding machine are:—

It is a knife folder capable of making angular or cross folds for bookwork formes, as well as parallel or fan folds for mailing pieces, advertisement and publicity literature etc. Creasing, slitting and perforating attachments can be provided, if so desired. The Bancroft is compact, occupying very little floor space and is capable of giving in the neighbourhood of 7000 parallel folds or 4000 cross and parallel folds per hour. Operated by a fractional motor of 1/3 horse power this consumes negligible power and saves enormous time and manual labour. Binding departments and printed paper warehouses need not present the

appearance of mountains of stacked paper waiting for their turn of slow folding by hand employing an army of folders, with all the attendant troubles of labour.

Accurate folds are ensured by the unique automatic registration device. This straightens the sheet just before folding. There are special self-lubricating bearings which save time of lubrication. No sheet is allowed to come in contact with oil and thus increase waste. A non-slipping 7-belt drive is another feature.

The Bancroft employs deflectors for the first and second folds which are parallel and knife fold- ing for the third and fourth folds.

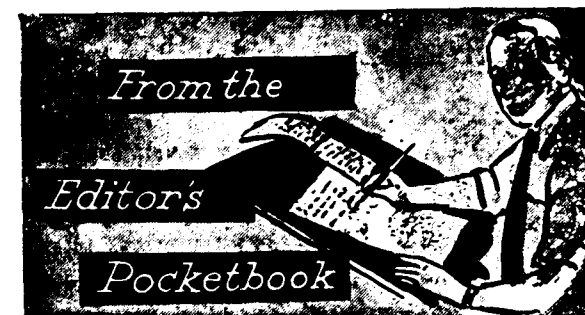
Greetings & Good Wishes
(Continued from page 5)

We are glad that you are entering the 5th year having completed successfully four years and to commemorate the occasion a special issue of *Printindia* is being compiled. On this auspicious occasion we wish you a happy success and best wishes. We are well aware that your magazine is very useful to several industries like Graphic Arts, Papers, etc. etc. in our country. Hope, you will continue extending valued services in the fifth year.

BHARAT VARNISH CO.

Congratulations on another Birthday.

GRAPHICUS



THE KHADI CURTAIN

All of us have heard of the Iron Curtain. The Communists say this is a figment of the imagination of Capitalists. We know of the Bamboo Curtain from the Americans when they refuse to see the large mainland of China administered efficiently by a Communist Govt. Some even talk of the Dollar Curtain or the Sterling Curtain when referring to the USA and UK. But now we are pleased to announce the "Khadi Curtain." This, the latest in the series of curtains in the Satellite Era, doesn't allow the outsider to see the facts of India. What is more, it stops goods from entering India, due to a suicidal import policy: by stopping even newsprint, it cuts the number of pages a newspaper can bring out, thus rationing news, so to say. It doesn't allow even medicines to be imported. Surely, even Gandhiji who opposed all things foreign, would not have allowed things to go on like this, inside the Khadi Curtain.

YEN CREDIT AND RUPEE ACCOUNT

Many foreign countries have come to the aid of India in getting her out of the shortage of foreign currency. Some leading firms have offered deferred payments for machinery purchased now. Others have opened rupee accounts which means we can pay in Indian currency for the machinery purchased from that firm. As a result of the visit of Prime Minister Nehru to Japan, it has been announced that a considerable amount of Textile machinery is to be given to India. What we printers fail to understand is, why textile machinery alone? Is it because we have been overproducing textiles even during the First Plan period? Perhaps it is because, we are exporting textiles to certain countries and stepping up our production of textiles may help our foreign exchange position. But, printing machinery also could well be included in the list of items to be given by Japan under the new agreement. Yen credit also is to be given to India. In this also, printing machinery should figure. We are sure that the authorities arranging credits, deferred payments and other ameliorative measures during the import ban period,

will pay attention to the needs of the printing industry and come out with offers of supplying the much-needed machinery, equipment, accessories, spare parts and the like.

SIVAKASI IN TROUBLE

A shadow has fallen on prosperous printers of Sivakasi. Hailed as the "Printers' City", Sivakasi has more than hundred offset printing establishments, from one-man shops to 500-hand undertakings. Pioneering with everything in litho and offset printing, process-engraving, it has even a couple of printers making their own inks. The wonder is that they are making their inks economically and efficiently with local talent, without outside technical help, barring books of course. The Printers' Federation at Sivakasi is very active. It has an imposing building and a good library. The Graphic Arts Society, Sivakasi, meets often and discusses technical problems, finds solutions. This doesn't mean that the old "trade secrets" days are over, but they are waning. In the litho and offset field, especially in the platemaking field, some sort of secrecy is found essential for business reasons.

Everything was going on well and all the workers are well paid and the printing firms get good profits, pay heavy taxes, the latest machines and equipment and train their own local people. A couple of months back, a waggon-load of crackers booked from Sivakasi exploded at Katpadi. The Govt immediately banned booking crackers by rail. As the printers depend upon the cracker business for their printing orders, now this ban of booking crackers is beginning to affect the printers. No doubt they have the match business to give them work and also the calendars for seasonal work. But the fact remains that a large slice of work of the litho printers has been taken away at the time of Deepawali.

Representations have been made and relaxations are being announced. We hope that Sivakasi Printers will recoup the momentary loss in the volume of their business and come into their own ere long.

There was a time when some new Madras firms under-quoted them and took off quite a number of orders which had been going to Sivakasi for a number of years. But soon, the orders were restored to Sivakasi printers. This only proves that they know how to beat others in their own game!

Printing machine manufacturers have always been looking upon Sivakasi as a big market for their wares. The interdependent character of Printing—Matches-Cracker industries makes the vagaries of fortune to be

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"HINTS FOR THE PRESSMAN"
can help you!

When manufacturers first thought of publishing this 88-page book containing 120 illustrations, they had only ORIGINAL HEIDELBERG users in mind. But the news of their venture spread so fast that numerous requests were received for the book from pressmen in printing establishments where Heidelbergers are not yet in operation.

So whether you're an old HEIDELBERG-user or not, reserve your copy of "HINTS FOR THE PRESSMAN" by writing to us. There is a nominal charge for each copy. But please hurry and register your name, as the number of copies is limited.

MAKE PRINTING PAY THE 'HEIDELBERG' WAY

THE EAST ASIATIC CO. (INDIA) PRIVATE LIMITED

Printing Machinery Section

Bombay - Delhi - Madras - Bangalore - Secunderabad

shared by all the three industries. The Govt. should see that such industries are not hit hard by a voidable restrictions.

GOOD PAPER AND BAD PACKING

Import restrictions mean an entirely different thing to indigenous paper manufacturers, although they too depend upon foreign firms for the supply of a variety of raw materials, finishing materials and spare parts and accessories for their plant. They can make hay while the import ban lasts. It is a fact that good quality art, good kraft, fine writing and drawing paper, superfine offset cartridge, speciality papers and various other items of stationery including good bonds are for the most part imported.

Apart from the fact that paper produced by some indigenous mills are neither of good quality nor of uniform substance, the quantity produced falls far short of our requirements. Nepa mills on which many laid high scores suddenly developed power trouble and is practically idle, barring a few token tons of production. Our planners cannot be congratulated for the overlooking of such contingencies while estimating for equipment.

But there is another important angle which needs the undivided attention of all paper manufacturers and dealers. We mean the packing of paper in reams or half reams. The paper used for such packing and the way it is secured are very bad, to say the least. For one thing the contents can never reach in tact and for another, more often than not the paper is received in the printing establishment unfit for printing, due to folds, creases, damaged edges and what not.

We happened to see a ream of American Paper. How carefully and sturdily, and how attractively packed are these? We request our paper makers and paper dealers to invest a few thousand rupees and get special sample reams of American Papers, at least to study the manner in which they are packed and also the material used for such packing. It is shameful for us to see reams of paper arriving at the press looking as if they are going to be re-pulped into paste boards. The packing of Indian paper is vital and it is a matter on which more attention and more care are to be immediately bestowed.



NEW CONTROLLER OF PRINTING

Some three years back, the post of Controller of Printing, Madras was created by the Govt. of Madras. This step was taken due to the necessity felt in official quarters for a Class I Administrative Officer to man the 2,000 strong Madras Govt Press. None expected this post to be given to a technically qualified hand. In this, the Govt of Madras did not disappoint anybody. Their choice fell on Mr. H J Stooks, a senior administrative officer.

Now that Mr. H. J. Stooks has retired, Sri S. Krishnaswami IAS has been appointed. On the 19th of October 1957, the new controller took full charge of his post.

CORONATION PRESS, SIVAKASI

The Coronation Litho works, Sivakasi gets its name from its birth in 1936 the Coronation Year of King George VI. Sri Gnanagiri Nadar and Chidambara Nadar, the energetic brothers who are the proprietors of the press are well known for their broad vision and far-sightedness. Both their sons are qualified printing technicians. Sri D. G. Dharmar, LPT is a Licentiate in Printing Technology of the Regional School of Printing, Madras. He has to his credit three years training at the well equipped, ably staffed premier printing institution of the East. Sri Bhaskar has graduated from the London School of Printing after taking the Diploma in Printing, specialising

in Process Engraving and Offset Printing. The wise parents and the sons' young minds, with a loyal band of workers are carrying on very well.

The up to date equipment of the Coronation Litho works include the following, among others:—

A battery of single colour and Double Colour British Crabtree Offset Machines.

Roland Offset Machine

ATF Chief Offset Machine

More than seven Flatbed Lithographic Machines.

Quad Crown Plate Graining machine.

Edmund Bush Varnishing machine 40"

Five Transfer Presses power operated.



First Anniversary of the Advertising Club, Madras was inaugurated on 23-9-57 with the opening of an Exhibition of Commercial Art by Dr. A. L. Mudaliar at the Southern India Chamber of Commerce Hall, Madras.

A battery of cutting machines including 42" Polygraph Perfecta Automatic.

32" Harrild Cutting Machine.

30" & 24" Japanese cutting machines.

Pictorial Machinery Camera and complete Photo Offset Plate-making equipment such as whirler, graining machine, printing down frame, etc.

No wonder with this ever-growing up to date equipment and technically qualified managers and intelligent proprietors, the popularity of Coronation is growing.

ALL PURPOSE PAPER

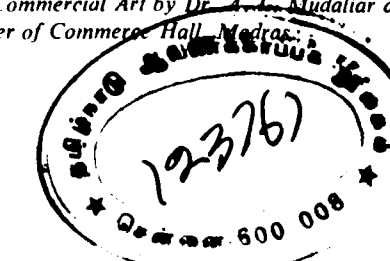
William Nash Ltd., St Pauls Cray Kent, England, have brought out a new All Purpose Paper. As its name implies, this quality of paper is so manufactured and finished to make it suitable for the following uses:—

Printing by Letterpress, Printing by Lithography including Photo Offset, Printing by Die-Stamping and Copper Plate, for Typewriting, for Writing, etc.

This W N Note Paper, naturally, represents one of the outstanding advancements in recent years in

NOVEMBER 1957

M14 m 2, N54
N52.847



25



Group photo taken on the occasion of Sri M. Ananthasayanam Iyengar Speaker of the Lok Sabha's visit to 30-year old Regional School of Printing. Mr. Iyengar with Principal, staff and students.

specialty paper-making. Made from especially selected raw materials, this has all the improvements of modern technique embodied in it. Its purity and natural colour, strength and durability, evenness, and stability of surface, crispness handle and character, all make the product of the Cray Valley Paper Mills an achievement in modern paper making. W N Note All Purpose Paper is available in Large Post, Double Large Post, Medium, Double Medium and Double Foolscap sizes.

FIRST 'MONOTYPE' MACHINES IN ETHIOPIA

Another new overseas market, which has recently been opened up by The Monotype Corporation, is that of the expanding country of Ethiopia. The first 'Monotype' machines, two Keyboards and a Composition Caster, were installed in Addis Ababa in June at the press of B.I. Surmeyan.

During the past two months a number of important persons have visited the firm for practical demonstrations, including the

Ethiopian Prime Minister (H. E. Bitwod Makonnen Ind Alkatchew), the Vice-Minister of Press and Information, the O.C. Imperial Body Guard and the Commissioner of Police. A visit is also expected shortly from the Emperor, H. I. M. Haile Selassie.

A great deal of interest has been aroused by this first 'Mono-

type' installation, and as a result of this, the Corporation has already received further orders from the Berhanena Printing Press (the Government Press) and the Artistic Printing Press. One of the chief reasons for this immediate success has been the enthusiastic approval shown for the new Monotype face (Series 599) which has been specially designed for Amharic, the principal Ethiopian language.

Photographs of the Prime Minister's visit are available on request to the Publicity Department.

AUGUST MEETING

Early in August, Representatives of the All India Federation of Master Printers, viz., Sri Gowardhan Kapur, President, Sri S. Ramu, Sri S. N. Guha Ray, Vice Presidents and Sri R. Venkateswaran, Hony. Jt. Secy. met the Govt. of India, Ministry of Commerce and Industry. On the Govt side there were: Sri K. B. Rao, Chief Controller of Printing, Sri L. R. Nair, Director of Advertising and Visual Publicity, Sri S. C. Nandy, Dev. Offr., Heavy

(Continued on page 30)



Speaker at the Binding Section.

Layouts and Lettering

(Continued from page 8)

(also tinted, but differently) on either side with text inside the



Dressed up to the nines

—and why not
he's nine years old today!

AIR-INDIA

The Nine-Year Look

meridans and to the left bottom of it, proved certainly an out of the usual, different, ad. Shilpi

JEEP: Having built a dam, fought the floods, the latest in the series is headed "Blast the rock" and the part Jeep plays in it. The usual standard is maintained.

P. Syn

KLM: The 8x3 col ad has a quaint illustration of a bearded air-traveller listening (with evident pleasure) to a (KLM) hostess. Gill Bold is used for the substance of the ad., i. e., KLM offers special off season fares etc...The fares in Times Roman and Bold, text and address in Gill, with an upright handwritten line "Yes, Fly KLM and save money" adding to the ad value. Grants

LIFEBUOY: 6x4 col ad appears at the bottom with a red extra colour. Lintas

MOBILGAS has a new series 10x4 col. beginning "why did..." "who put...and such queries..." This has minimum copy in Futura left flush, jolly illustrations in line, neat handlettering and Gothic. Expanded for "Mobilgas and Stanvac" JWT

NAVAJIVAN MILLS: 8x2 col of voiles headed "You are breathtaking when you're dressed in Nava-Jivan voiles" features the seemingly careless but finely drawn figure of a lady in brush. Usual type, layout etc. The ad nearly lives up to its headline. Everest

PALUDRINE: ICI's ads are generally of a high standard. This one saying "Draw the circle of safely around you" features a circle formed by tablets (of Paludrine), line illustrations of mosquitoes helping the readers to remember that the tablets keep them at bay.

PHILIPS Argenta lamps: 8x2 cols boldly emphasizing "Ah! Argenta glare-free light!"

Neat illustrations, Times series for text plus address in Gill. JWT

ROLEX: The 12x4 col. ad was about one Columbus and millions of us benefitting from his discovery. Just so, are one Wilderf, the founder of Rolex Watch Co. and the thousands of Rolex watches the world over. Perpetua for headline, Bookman for text, with a fine charcoal wash drawing of Columbus thrown in for good measure. JWT

STEELAGE PRODUCTS. A 4 col. ad about the firms' products with announcement of M/S Spencers, as distributors has main headline in Goudy Bold italic, text in Times Roman, heads in Gothic

Bold. This ad stands out due to its neat halftone and fine layout.

Everest

TRAYONS: 8x3 cols. had a fine black and white illustration of a peacock, feathers spread out, introducing the new spun-dyed yarn. Times series is used for the matter in the cut-out. JWT

TEA BOARD: Instructive series on how to make good tea is going strong. Another number of the campaign gives us the rare information that "over 104, 600 million cups of Indian Tea were drunk in the world in 1956". This quantity is based on experts and evidently doesn't include the amount of tea consumed within our frontiers, which will make the figure all the more staggering indeed. A globe in heavy uneven outline, Ultra Bodoni headline, Gills Sans text, the Tea Board monogram at the bottom, the symbol of friendliness, Mr Tea—all go to make the subject of Tea very interesting through an equally interesting ad. P. Syn.

WILLS' NAVYCUT: The credit of converting a topical event into an advertising point goes to Grants. The ad captioned "Destination-Moon" features an imaginative scraperboard drawing at the top with text in Times, a packet of Wills at right bottom and two lines of hand lettering at left bottom.



Protective hands predict progress

NOVEMBER 1957

From our
London Correspondent
(Continued from page 20)

before them, whereas only a hair-space should be inserted before them, that is between them and the words they follow, and this can be omitted if the letter preceding the colon or semi-colon happens to be f, k, r, t, v, w, x, y or z. No more than the normal text spacing should be inserted after these two marks of punctuation.

Mr. Dowding goes on to say that quotation marks never improve text setting, and should be omitted when the meaning is clear without them. But if omission is likely to cause the slightest confusion, then single quotes should be used, never double ones, except when a quotation appears within a quotation, then commence with single and open and close the second quotation with double

quotes. If there is a third quotation within the second, then it should be enclosed in single quotes. Double quotation marks introduce an excessive, line breaking amount of white into lines however carefully they are set, destroying the even colour and therefore unity of the particular lines. If many appear on a page they create an untidy and often ugly effect.

Hyphens are normally designed to centre on the x-height of the founts they are supplied with, that is, on the centre of the face of the small (or short) lower-case letters like a, c, e and x. When they are used with the capitals of the fount they appear to be dropping, attempting to find a resting place on the 'line'.

Dashes, like hyphens, have been designed to centre on the face of the small or lower-case letters only. When they are set with the capitals of the fount, they must be raised to centre on the depth of

the face of the capitals in the same way as for hyphens. When dashes fall at the ends of lines they look much better on the right rather than at the beginning of the line. Only in ephemeral printing, where the setting may be designed with a ragged left-hand edge and a squared right-hand edge should dashes be allowed to fail at the beginnings of the lines. Both dashes and hyphens can, of course, be set outside the text measure, that is, overhanging on the right of the text.

Dashes must always be of sufficient length: the em dash is to be preferred to the en dash, because very short dashes tend to look like misplaced hyphens, or like minus signs. They should be separated from the word or words they relate to by a hair-space only. Finally, it is as unnecessary as it is ugly to use the dash preceded by a colon, as :—Use either one or other mark of punctuation, but do not use them together.

When a printer buys **GANGES INKS**

HE CAN BE SURE THE QUALITY IS THE BEST BECAUSE :

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

THE BEST MACHINERY IS USED

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

THIS IS GANGES'
GUARANTEE TO THE PRINTER

Lithography for the Layman (Continued from page 14)

transfers, an ever-damp or moist transfer paper is used. This is also called Excelsior paper. For type transfers and making original designs, Berlin transfer paper and crayon transfer paper are necessary. The third class of transfer papers are transparent or semi-transparent. They are French Chrome Transfer paper and Moist Transparent Transfer paper.

PRESSES AND MACHINES

The inventor built his own Lithographic press himself in 1798. Today's transfer press is a faithful model of it. (Ratcliffe Press is a typical example.) Fiedrich Koenig invented the flatbed press in 1810. Great fillip was given to lithography by this invention. At the turn of the 19th century, the offset rotary lithographic machine came into use. This increased the speed and domain of this process and is responsible for the present day popularity enjoyed by this branch of the Graphic Art.

After Koenig gave the flatbed press, it took exactly a century to get the photo composing machine (1910). Thus the Offset process is a challenging rival of letterpress today. Popular makes of American machines are ATF Chief, Colour-metal, Harris, Miehle Offset, etc. English machines are: Crabtree, George Mann, etc. Continental machines include M. A. N., Roland (the Rolls Royce of Offset machines), Polygraph, Parisolith, Planeta etc. Chinese and Japanese machines like the Komari are also widely used in this country. There are single colour, two colour, three colour machines and hand-fed and automatically fed machines. Recently in Madras, The Express Newspapers have installed a Web-fed Rotary Offset Press. This is an



Lecturer Datchanamurthy demonstrates platemaking to Speaker

American machine (of the Webendorfer type).

There are many materials used in the process of lithography. The following are the main ones:—

In the Lithographic Art Department, original designs are made in any suitable media. Bristol board may be used to water colour it. Crayon Transfer paper may be used for crayon work or tusche to be later transferred on to a stone or plate. Red Sable hair and Camel hair brushes are used by the litho artist for making designs in water colour or with oil colours on Bristol boards. Bristol board is a smooth art board used for art work. On autographic transfer paper, special autographic transfer ink is used. This paper has a special transfer coating. Small sticks of crayons made of a greasy substance are used for making designs on stone or plate. Wooden or metal handled crayon holders can be used. For pulling impressions of crayon drawings, special lithographic ink called crayon ink is used. Crayon transfer paper is a special paper with a special coating for use in transferring crayon, tusche stick or

with Ind an ink, brush and liquid tusche.

Tusche is a greasy substance in liquid or stick form used for making designs on litho stones, plates and on Crayon Transfer paper. Litho pens are also used for making designs on stones and plates with liquid Tusche. Finely ground pigment called tracing blue is also used for tracing outlines of designs on stone or plate. Litho artists' ink is made with special dry powdery pigment with a stiff varnish. It is used for pulling proofs from drawing made with crayon or tusche.

For inking-in the printing image on the stone, nap roller with a rough or smooth surface leather is used. For preparing the printing image on stone or plate, red chalk powder called offset powder is employed.

Various kinds of dusting powders are used while preparing the printing image on stone or plate:—

Asphaltum powder or bitumen (synthetic and mineral), Colophony or Rosin powder (a vegetable substance made from the residue of turpentine), etc.

(To be continued)

News and Views
(Continued from page 26)

Indl. Machinery Directorate, Sri A. C. Sen, Controller of Printing, Sri S. R. Sethi, Dy. Controller, Sri Bhawani Shanker, Sri N. Viswanathan, D. P. Puri, Asst. Controllers, U. K. Mallaya, Manager, Publications Divn., Melaram, Dy. Controller of Imports, N. K. S. Aiyengar, Dy. Development Officer (Paper).

During the discussions which centred round the remarks made by Sri Gowardhan Kapur in his Presidential Address during the April conference, Sri Melaram assured that large scale applications for import of spare parts are sanctioned on an ad hoc basis to actual users, in addition to licence holders. Spare parts to the tune of Rs. 2 lakhs may be allowed. Govt. have not so far granted any licence for

import of machinery to start new presses by big business undertakings. Certain special machinery displayed during the Delhi Printing Exhibition have been offered for sale to the private sector. If not utilised by private printers these will be re-allotted to Govt. Presses.

High level negotiations are going on in respect of manufacture of certain items of printing machinery in India, with technical collaboration of reputable foreign firms.

A list of papers and boards not manufactured in India is to be drawn to facilitate permitting imports of such items only. Only speciality printing inks are to be imported, as ordinary inks are manufactured in sufficient quantities in India.

Sri Gowardhan Kapur appealed to the Govt. on many important points and the Govt. promised consideration and co-operation in solving all their problems.

TECHNICAL ASSISTANCE

Messrs. Indo European Machinery Co. Private Ltd., Sambava Chambers, Sir P. M. Road, Fort, Bombay 1, in collaboration with their Principals Messrs. Roland Offsetmaschinen fabrik, Faber & Schleicher AG, Offenbach Am Main and Messrs. Hoh and Hahne Hohlux GmbH, Offenbach Main, Germany, have arranged to engage an experienced photo litho technician in order to give assistance and training to their various customers throughout India. The technician has already arrived and will be assigned with different customers from time to time. It is also proposed to set up their reproduction centre in Bombay at a later date as soon as the equipments required for the purpose could be imported. This centre in addition to providing first class production jobs, will be used for training of Indian technicians. Further information can be had from Indo European Machinery Co. Private Ltd., on request.

Mintite Rollers

(Continued from page 16)

rollers by the addition of one of the Mintite ink adjusters, the function of which is to retard the drying time of the inks upon the coverings without interfering with the drying time or printed results upon the paper.

NEVER LET ROLLERS RUN DRY

I would here add a word of warning about the damage that can be caused to rollers by running them "dry" in the machine. If, during makeready, when carrying out adjustments to the machine or for other reasons, rollers are allowed to function in the machines without some lubricant in the form of wet ink or Mintite ink adjuster on their surfaces, there is bound to be frictional wear and abrasion—this, needless damage is so easily avoidable that we endeavour to impress upon machine minders the very simple method of overcoming it—never let the rollers run dry.

There are occasions in printing too when this damage can occur, when, for example, a double-demy machine is printing only a demy sheet the ends of the rollers may get dry and frictional abrasion takes place unless the ends are kept moist with Mintite Ink adjuster or some other lubricant.

REPAIR WITHOUT RE-COVERING

The third and final major contingency is the replacement or repair of damaged or worn-out bearing ends which we can undertake without having to re-cover the rollers. The most remarkable example of what can be done to make serviceable a Mintite covered roller which has been severely damaged occurred in India during the war

years. Due to a serious machine accident a quad-crown Mintite roller was bent from the centre into approximately a banana shape and the users not unnaturally concluded it had no further use. The L & M organisation in Calcutta have many years experience of Mintite, however, and as at that time replacement from the United Kingdom was extremely difficult, they decided that nothing could be lost by attempting even a crude method of rectification.

Accordingly they shaped a thick piece of timber to roughly conform with the roller and fitted this on to the roller. By striking the wood with a sledge hammer they straightened the roller sufficiently to enable it to work in the machine and the Mintite covering did not leave the metal stock.

PRINTING QUALITY

What is of even greater importance than longevity in a roller covering is the quality of the printed result. All are well aware of the vital part the rollers in a press play in the final production upon paper, and they can and do make or mar the printer's entire endeavours. The difference between the clarity, sharpness and liveliness of printing produced with Mintite coverings, as compared with "compo" is quite remarkable. This clearer and sharper printing that can be obtained with Mintite is chiefly accounted for by the fact that the covering, being quite "dry" with a self-developing tack, readily deposits the ink on the forme at only a kiss-contact pressure-setting, whereas a very much heavier setting is required to induce the moist-surfaced "compo" roller to part with its ink, which it does by a form of suction.

CAPITAL EQUIPMENT

Another factor that plays an important part in this clarity of printing is the fact that the Mintite covering is uniform in diameter throughout its entire length and therefore it can be set with real accuracy.

The fine matt velvet-textured surface of the Mintite covering remills the ink whilst actually printing so that when it eventually reaches the forme it is in its most closely associated condition.

Mintite roller coverings are not "expendable" requiring renewal at frequent intervals—but are to be considered as "capital equipment" in the same way as printing presses. Provided reasonable care is exercised, their first cost is the last for roller coverings on each press equipped with them and their life will be as long as those presses.

GRADES FOR MANY PURPOSES

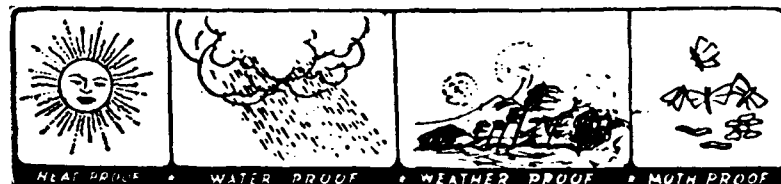
These remarks principally relate to the letterpress grade roller, but it will be interesting to know that there are grades of coverings which have been approved for every description of printing and varnishing on paper, cardboard, tin, metal foil, cellophane, linoleum, and other mediums. Some of the purposes for which coverings are required are very exacting and it will give you some idea of what the coverings have to withstand when certain hot fluids, waxes and varnishes they are required to convey, have temperatures as hot as boiling water. For other purposes they are required to apply pressure—come into contact with—heated surfaces of even higher temperatures. They specialise in roller coverings and our experience is at the disposal of all who have problems and difficulties with resilient coverings for all and every purpose.

GLASS - O - LAC

Non-yellowing Varnish for

PLAYING CARDS

Ideal for Black Centre Art Cards



Also Picture Varnishes

Litho Varnishes, Offset Varnishes

and Printing Inks



Free technical service



Manufactured By

Bharat Varnish Mfg. Co.

Agra Road, Ghatkopar, BOMBAY 39

Grams: BHARAT (Ghatkopar)

::

Phone: 67272

PRESSROOM PROBLEMS SOLVED *Graphicus*

189. Q. Where can we get special mould-made paper to print certificates? It is said that no one manufactures it in India. Any help from you will be highly appreciated.

A. Approach the local Cottage Industries Board. It is quite probable that hand made paper is made at the "Cottage Level."

190. Q. We have set a job in four different ways for the approval of the customer. Are we to change for all the four settings? If not, how are we to recover the expenses of setting? If we charge on him for all are we not charging him for a thing he has not used? I shall be thankful for your kind reply through *Printindia*.

A. If the resetting was the fault of the Customer or if the four designs were set to facilitate his choice or at his request, the Customer is liable and the cost can be put on to the job. If, however, a mistake in your Press was the cause, then it would not be fair to charge the Customer.

191. Q. Do you think it will be profitable for a large offset printer to manufacture his own inks? The annual consumption of various grades of inks is in the order of several tons.

A. To manufacture Printing Inks on any scale the outlay in equipment and raw material stocks is very heavy. The on costs involved in manufacturing the comparatively small quantity of ink required by even the biggest Press would be extremely high. If a printer has the cash to spare to purchase the necessary equipment for manufacturing Printing Inks I would strongly recommend him to utilise that money for improving his Press and Printing equipment.

192. Q. Why Pre-makeready system has not been adopted to any appreciable extent in

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

India? Is it because of inherent shortcomings in the system? Or is it due to the fact that without pre-makeready our printers are able to achieve perfect results.

A. Unfortunately in India it is the exception rather than the rule to 'makeready' at all; this is one of the reasons why 'pre-makeready' has not been widely adopted for where there is no 'made ready' on the machine 'pre-makeready' will not be found. 'Pre-makeready' is essentially an economy process and since labour and machine costs in India have not yet reached the high level they have in America and the West there is no great incentive to Press owners to adopt the system. The only advantage of 'pre-makeready' is saving machine time. Both methods are equally efficient in terms of results.

193. Q. Are short inks and long inks the same as stiff inks and buttery inks? What sort of ink do you advise for (1) heavy platen, fast cylinders, fine halftones, solid tints, transparent tri-colour?

A. Short inks are those which do not string out when lifted by a pallet knife and may also be described as buttery. A short ink can also be stiff. A long ink is one which is tacky or tends to be so and if lifted by a pallet knife draws out the ink on the knife tending to remain connected to the bulk of the ink by a string of ink. The longer this string becomes before breaking off the longer the ink is said to be. The terms are by no means technical and fall into the category of recognised trade slang; their interpretation is therefore rather wide. It is not possible to advise inks for use on specific machines since the paper used has more bearing on this matter than the machine.

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

Kubera Printers (Private) Ltd.,
THE HOUSE OF MASTER PRINTERS
21, SUNKURAMA CHETTY STREET, MADRAS-1.
PHONE: 3006 GRAMS: VASUNIDHI

★ **COLOUR
PRINTING
A SPECIALITY**

PRINT INDIA

NOVEMBER

Get your Blocks done
the NEWTON way

TRI-COLOUR
LINE &
HALF-TONE

*blocks are engraved and
delivered by us with
guaranteed precision
and at the right hour*

CONTACT:

PHONE 86729

NEWTON & CO.

THE LEADING BLOCKMAKERS OF MADRAS
80, WALLAJAH ROAD, MADRAS-2



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*



**RAINBOW INK & VARNISH
MFG. CO. (Private) LTD.,
BOMBAY - 7**

TELEPHONE:
Office: 42471
Factory: 88101

TELEGRAMS:
RAINBOWINK
BOMBAY

MAKERS OF QUALITY PRINTING INKS

1226/4-5

Estd. 1953

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



A Monthly Survey of the Graphic Arts Industries in India

Managing Editor
TEMPORAU

VOL. 9]

DECEMBER 1957

[No. 2

Business Manager

V. S. N. Murthi

London Correspondent

F. & D. Brownlie

ANNUAL SUBSCRIPTION RATES	
INDIA	Rs. 10/-
PAKISTAN	Rs. 10/-
CEYLON	Rs. 10/-
BURMA	Rs. 12/-
U. K.	£ 1
U. S. A.	\$ 3

Editorial & Publication Office:
PRINTINDIA

Proprietors
KUBERA ENTERPRISES (Private) Ltd.,
"KUBERA BUILDINGS"
21, Sunkurama Chetty St., Madras-1
INDIA
Grams: VASUNIDHI Phone: 3006

**PRINTINDIA is Published
on the 10th of every month**

In this issue . . .

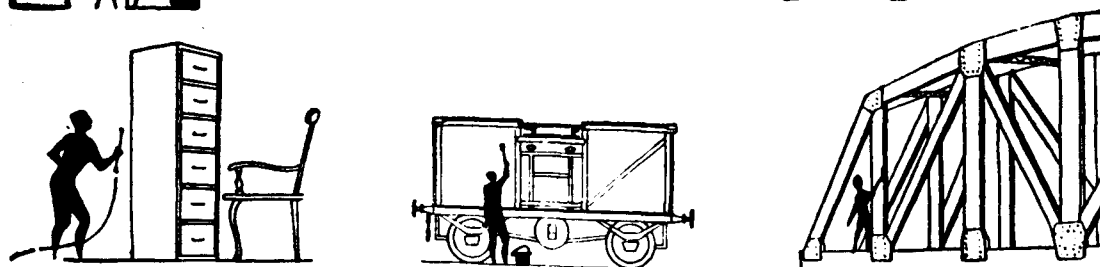
- ★ Know-How & Know-Why
- ★ Layouts and Lettering
- ★ Better Press Management
- ★ Lithography for the Layman
- ★ Presenting the Process Camera
- ★ From the Editor's Pocket-book
- ★ Regular Features

From Our London Correspondent
Modern Machinery and Equipment
Pressroom Problems Solved
News & Views etc. etc. etc.

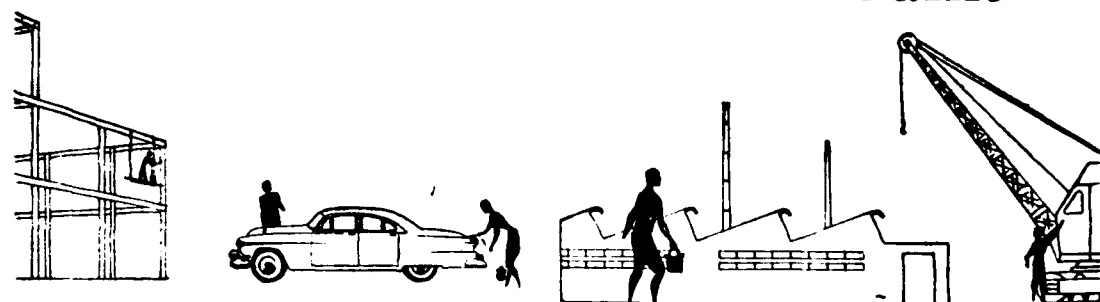
Printindia magazine sells throughout India and in many foreign countries. As a medium of publicity, its pull in the printing, publishing and allied trades is enormous. World famous manufacturers and advertising agencies have already been utilizing this magazine for high-potential trade publicity campaigns



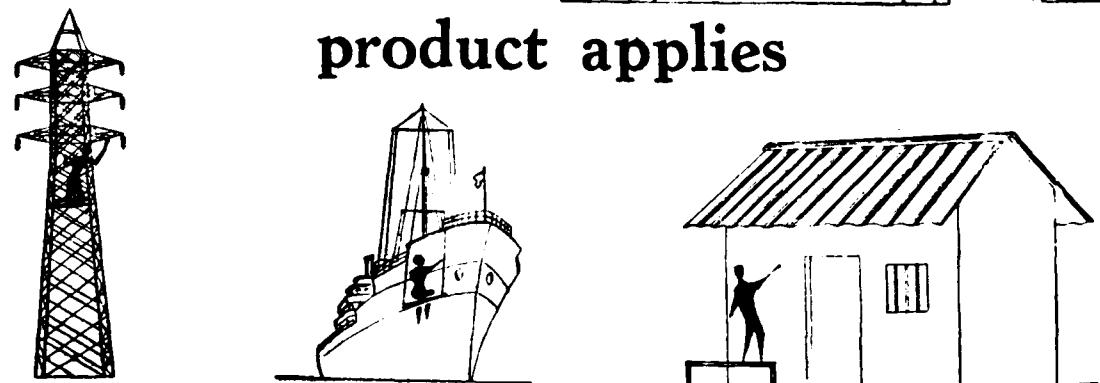
Whatever the purpose



a SPECIFIC Shalimar Paint



product applies



be BRIGHT - specify

SHALIMAR PAINT PRODUCTS

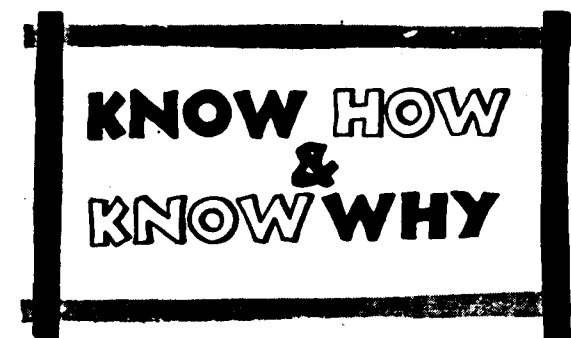


Write to P.B. 68, Calcutta-1, for the Shalimar Ready Reference leaflet which will introduce you to the complete range of our products.

SHALIMAR PAINT, COLOUR & VARNISH CO. PRIVATE LTD.

SPW 390

EDITORIAL



The Sputnik went up. The whole world sat up. Scientists everywhere listened: Bleep, Bleep, Bleep! Symbol of the successful satellite was at hand. Proof of progress of man conquering space was here at last! Sputnik II was in the outer space. More heart throbs, more suspense. Dog Laika was there! People everywhere declared in one voice: Russia has the lead in science! But, why?

Why did Russia conquer space sooner than America? American scientists had no compunction in admitting. USA is miles behind in pure research. May be, she is far ahead in applied science. Again, there are more scientists and research workers in USSR than in USA.

In plain words, applied science and pure science are called know-how and know-why. Advanced nations talk about their deficiencies. Backward nations cannot do better than listen and redouble their efforts. Although we hear now and then about our achievements in atomic science, nothing much concrete has been done in India.

Our backwardness in Industrialisation is a result of our backwardness in science. Our research workers, whose number can be counted on our fingers, are paid a pittance. There is no encouragement for them. Incentive is lacking from the industrialists too. State research organisations, wherever they exist, suffer from the morass of rules and regulations. They are entangled in red tape.

In the Graphic Arts industry, there is a great need for scientists. Research is necessary on printing materials. Paper, ink, metals, varnishes, glue, adhesives and a host of other materials wait for their turn to be tested in our laboratories. Their usefulness, their suitability and adaptability are to be assessed. Their physical characteristics are to be made known. Their chemical properties are not the least important. Their behaviour under certain conditions during the printing process would mean much to the printer if known. The reaction of paper and ink in daylight, atmospheric conditions, moisture, to acids, to alkalies, to sea

air, etc., is worth finding out for proper choice of printing, writing and wrapping.

All this is "Know-why." A compositor is asked not to use wooden furniture alone in a forme. He uses a wise combination of wood and metal. He hardly knows why? The machine minder prefers metal mount to wooden ones for blocks. He knows the former gives good results. It is not for him to question why, but to do and die! Again, a solid tint when it begins to pick, stops picking, if a pinch of grease, vaseline or other easer is added to the ink. Many do not know why. A halftone prints well on coated stock and fills in on antique. God knows why! When rules are imposed in one direction, there are creases, but when the direction is across, creases disappear. Does anybody know why that slur disappeared when the dressing was renewed? How can a rubber sheet under the packing give perfect results in a matter of a few minutes? We can go on cataloguing such "know-not-whys" *ad infinitum*. It is not going to improve matters in our presses.

The philosopher starts with one word: Why? He ends up by understanding most of the things he would have liked to understand. The scientist too has to do with two words only: Why and How? When the printer is at sea about the way of doing a thing properly, the technologist comes to his aid. He has the "know-how" up his sleeve. We shouldn't stop with that. We should never be satisfied with knowing how. Know-why is also important. In fact it is more important than know-how.

India does not lack in know-how. Recently we have started the various Regional Schools of Printing. We have our stock of foreign experts, engineers, mechanics, etc. There may not be a systematic training of craftsmen for the Graphic Arts, of foremen, supervisors, master printers and the like. The pattern of supplying the needs in man-power for the printing industry is still

confused. But at least there is some pattern for providing the trained workers needed by the 20,000 presses in India. Not that everything in this line is ideal. There is scope for considerable improvement in harmonizing the various sporadic activities towards training into one homogeneous whole. The various printing schools revel in their diversity. They appear to have no common ground except perhaps that all of them are supposed to teach the vague subject printing. Each appears to move in a direction different from the other. Trying to move in all directions at one time is moving nowhere. There should be a concerted approach on a common syllabus with a common goal. This goal is improving the standard of workers in our industry. This will pave the way towards better printing, cheaper printing, quicker printing and increased printing. We hope that the Union Ministry of Education, the All India Council of Technical Education and other bodies will take up the issue of examining the working of the Regional schools of printing in the land with a view to find out ways and means of improving the standard of coaching imparted at these institutions. Attempts should also be made to find out one more thing. This is how to co-ordinate the output of these printing schools with the openings for employment in the industry. The number of unemployed printing diploma holders is a danger signal. The frustrated do not hesitate to hate their *alma mater*. They little realise that the institution's primary duty is to give the best in training. They cannot expect the schools to function as employment exchanges. We are aware how our employment exchanges function!

As regards know-why, we have to start from scratch. Hurdles have to be crossed. Finance is to be found. Valiant band of workers, imbibed with the thirst for knowledge and research should come forth. The state should not be niggardly about providing ample facilities for research. Laboratories should be built and equipped. The industry can set apart a portion of their earnings for research. This is being done in USA and UK. A Central Graphic Arts Research Bureau should function for the benefit of all. Unless this starts functioning soon, many problems will remain unsolved. Plenty of printing materials will continue to be wasted. For, these problems will recur daily.

The progress of industry is measured by its success in grappling its problems. The solutions

afford the yardstick for gauging the advance registered by printers. When some problems are solved, others come to the surface. This goes on for ever. Scientists take pleasure in facing problems. Technologists take pride in finding solutions for them. Printers feel happy in the successful application of those solutions.

When shall that day dawn? Are research laboratories for printing industry included in the Second Five Year Plan? How many of our printers can afford research laboratories? How many will contribute to the common laboratory? Are our Government ready for such a programme? Will they encourage our research workers and scientists? These and other similar questions arise.

We feel that there is provision for printing laboratories in the plan. These might not have been named as "Printers' laboratories" or "Printing research." This is too much to ask of our planners. We are sure that there is ample provision in the plan for setting up laboratories for our industry. If proper approach is made *now* to the Ministry of Scientific Research, we are bound to succeed. There is no dearth of scientists in our country. Their knowledge should be harnessed for the good of the Graphic Arts Industry. There are many large printing houses, especially newspaper printing presses, offset printing establishments, and other large units which are bound to gain much by the research project. They can also afford to contribute towards the cost of the laboratories.

The laboratory and workshop work side by side. The scientist and the printer work shoulder to shoulder. Quality and speed advance hand in hand. The new era will be around the corner. Darkness will be dispelled. Light will be shed on subjects obscure till yesterday. Lustre will be found on every printed material. No more closed books. No more hush-hush and trade secrets. No more duplication of things known to one, unknown to many.

Only a psychological revolution will turn the hearts of our Govt. Precision-mindedness should be cultivated. Scientific attitude should be adopted.

We began this editorial with the Russian Sputnik. We may well end with a Chinese saying.

Knowing *what* to do is wisdom.

Knowing *how* to do it is skill.

Doing it well is virtue.



By

SRI RAMAKRISHNA NARAYANAN

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

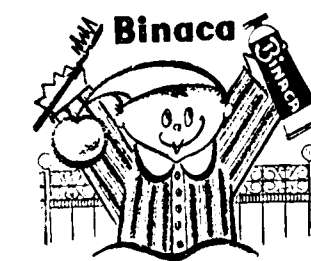
Premier Nehru was good enough to address the 13th Annual session of the All India Newspaper Editors' Conference. In his address, he paid a tribute to the Indian Fourth Estate, dealt with the various aspects of the newspaper industry, including the tensions which required the co-operative effort of everyone in the industry. He hoped that in the interests of the industry, the conflicts of the present would soon be resolved by free and frank discussion among concerned parties.

The President of the year Sri J. Natarajan of *Tribune* Ambala, dealt with the Wage Board decisions, the Press Council and a Code of Ethics for the Press, to be evolved.

One of the resolutions passed by the AINEC was the appointment of a commission by Govt., composed of a Judge of High Court and Chartered Accountant, to enquire into the financial effects of the Wage Board decisions on small

and medium-sized newspapers. The report should be submitted within three months. There was also a plea that this should not be taken as a measure to delay the imple-

a
good
day
starts
and
ends
with



toothpaste of exclusive quality
by CIBA

Binaca's Brilliant Piece

mentation of the wage board decisions.

The Supreme Court hearing of the Appeal on Wage Board is being heard this month.

President Rajendra Prasad has spoken very highly of this our "Art Preservative of Arts" when he presented the awards of the Govt of India to the winners of the Annual Fine Printing and Designing competition, of which about 7,000 entries as against 5,000 of last year were exhibited this year.

The largest number of awards has gone to the oldest newspaper of India, the *Bombay Times of India* Press. The first prize for an English daily goes again to the *Statesman*, Calcutta, but equal honours have gone to *Tribune*, Ambala. The *Hindustan Times* of Delhi has bagged the first prize for language newspaper and *Prajavani* of Bangalore, next.

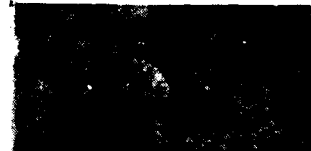
After the anniversary ads of last month, this month we go back again to our usual review, product by product. This month we take up early morning aids (or late night ones) i.e., tooth pastes and tooth brushes.

BINACA: The smiling night-capped youngster, tooth brush in one hand and a tube of Binaca in the other, done in dry brush and line is the piece de resistance here. "A good day starts and ends with Binaca" is the slogan, in thick Sanserif type in eight centred lines. "Tooth paste of exclusive quality by CIBA" in two smaller size lines of the same series are below the illustration. This simple, matter of fact ad doesn't appear to need anything more and is complete in itself. How we wish that such brevity and forthrightness are copied by other advertisers!

"COLGATE Chlorophyll promotes strong gum tissues" in

COLGATE CHLOROPHYLL PROMOTES STRONG GUM TISSUES

Clinical Tests Prove It!



Promotes Strong Gum Tissues!
Destructive Bad Breath More Effectively!
Rids Mouth of Decay Bacteria!



Colgate's crowded copy

Sanserif Condensed lettering and type is the headline of the second. In uneven brush italic follow "Clinical tests prove it" and a photograph of a dentist with a lady. Below these, at the left, above three rules, slightly diagonally, in uneven brush italics, appear three qualities of the paste with corresponding descriptions at the right in Times Roman. Three more things are noted: 1. No other toothpaste has active chlorophyll 2. Now available in Big Economy Size and 3. Children love its delightful minty taste. These are at the bottom along with an illustration of Colgate outfit. The keynotes of the ad are a scientific or clinical approach and the maximum copy. Grants.



The Direct Hit

KOLYNOS: The claim of this is it sets up a barrier against decay. The two lines immediately above the main headline in Gothic bold condensed "Brush decay out of your tooth—brush health into them" in Gill Medium condensed help to emphasize the claim. The Times Roman text with the beginning in Gill Bold sets out these and other qualities. Below in a box is the test described. This box is broken by a tube and carton at the left. Address and four lines complete another ad with scientific approach, but with less copy and more white space. (Remember teeth are white!)

NEEM: A broken oval half tint outline, a tint and line figure of the tube and a reverse oblong of the name of the product are the main features of this ad. Of course there is the address line at the

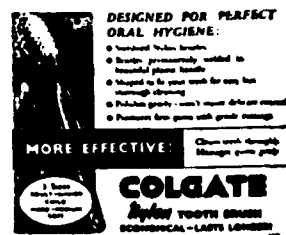


Neat Package Ad.

bottom. There is a direct approach which is familiar to readers in this sub-continent: the brush italic line says "Use daily Neem Tooth Paste" in Gill heavy caps "and ensure sound teeth and healthy gums throughout life" in Gill condensed. This is a business like and compact ad. Perhaps one is justified in thinking that it is too business-like and that business can be like something different also. Why not adopt a slightly indirect line?

KOPRAN: This is headed "The best of both" in Gill condensed. The design in the main consists of the illustration of a carton with the toothpaste tube, aslant. This illustration fits in the gap provided

by the half tint border enclosing the entire matter except the slogan-



Colgate's Colourful Piece

at the top and the distributor at the bottom. The copy in Plantin appears to suffer from a grammatical error i. e., A new formulae. The name and address are in Gill. This is a good compact advertisement of toothpaste. One however feels, far too much stress is laid on new management. Better to boost Babool, an oriental specific for all dental troubles.

ARYAN: A square half line tint outline in which the brush is placed diagonally to the left.

COLGATE: A vertical rectangle of half line crossed just below the centre, by a horizontal rectangle of black and white.

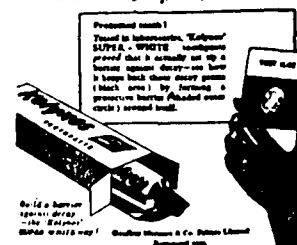
Dr WEST'S: A tinted arrow with three brushes in various angles and another blacker tint oval covering

Brush decay out of your teeth
—brush health into them!

'KOLYNOS' Super-White toothpaste

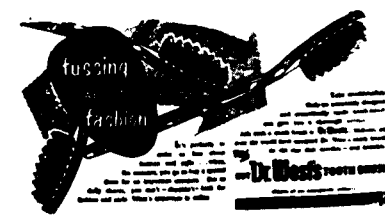
sets up a barrier against decay!

Double protection — a daily brushing with 'Kolynos' SUPER-WHITE toothpaste keeps your teeth clean and white, sets up a barrier against decay-causing bacteria.
One brushing with 'Kolynos' SUPER-WHITE removes the maximum amount of color-causing decay-causing bacteria, keeps your teeth and mouth clean and healthy, removes your breath.
Economical — half as much of 'Kolynos' SUPER-WHITE toothpaste is enough to set up this protective barrier — meaning cheap, healthy teeth!



The Clinical Approach

the three brushes accommodating the headline.



Three Brushes and an arrow

ARYAN uses Gill series throughout with two lines of thick uneven brush lettering and two lines of thin brush lettering. The Aryan trade mark is in reverse and the message relates to the correct shape for cleaning far better and lasting far longer.

COLGATE uses Garamond bold italic for headline, Baskerville for text and Gill for the rest. In bold vigorous brush stroke is found the word "nylon" qualifying tooth brush.

DR WEST'S uses Times Roman in two columns of stepped up diagonal indentation at left, right flush lines. There is a horizontal reverse "Also available Dr West's Children's size brushes" neatly balancing the top. LAS, Bombay

IN PASSING

ACC The second in the series of ads "ACC honours the code" is in 10x3 cols. Plain and wavy rule border, wide margins, Gill and Goudy series make a good ad.

SISTAS

BOEING are introducing a series of 10x3 cols about their 707 planes giving over 600 miles an hour. Halftone illustrations. Readers will recall that Air India International have ordered for three Boeing 707 planes.

BOAC: In Linotype No. 1 series, a 10x3 col. ad proclaims boldly "4 times a week to London by BOAC Britannia or Quantas super G Constellation". DJK

BANGALORE WOOLEN MILLS: A striking copper-red and

black ad of the figure of an ermine. Copy brings an analogy for warm clothing for winter by Binny's wollens. JWT

BURMAH SHELL concentrate on their Industrial Lubricant in a new series of 3 cols. Two sayings are compared. There are good black and white illustrations to match the typography. A typical sayings is "In France they say" and "In Industry they say." Subsequent numbers in this series have the first saying changed with the other remaining constant. DJK

EXIDE: "Sputnik loses its Bleep" in Gill heavy caps followed by "Obviously not fitted with (in Gill italics) "Silver" in tinted script and "Exide" in usual lettering, and..... still keeps going when the rest have stopped. The effect of this excellent ad has been greatly enhanced by the illustration of Mr. Workman peering anxiously at Sputnik and the outer space. Clarion

FINLAY: Feels well, falls well, looks well, begins the ad. This sarees ad has three ladies drawn to a fine point. Another says "Demand follows quality" neatly illustrated dealing with Finlay goods. The type used is crisp. ASP

GLAXO: "Pa, Ma and Grandma continue to adore the Glaxo baby."



The Shape's the thing

GKW continue their striking ad of their screws, coterpins etc.

Everest

IISCO's "Narrowing the gap" features a big black caliper and text in Times series. "Use steel only when you must today, there will be more to-morrow" is kept up.

Clarion

JAIFABS: Instead of ladies' designs and patterns of sarees, cholis and skirts are illustrated in the new 8x2 col ad of this firm. Gothic expanded for headline Bookman for text.

JEEP's "Plan that town" illustrates two engineers in a Jeep

(Continued on page 18)

Gold Medals

Awarded by German State

Over 50 years world's leading
Screen Brands **HAAS & KOHINOOR**

Engraved Halftone-Screens

Engraved Rotogravure-Screens
for Paper, Textile, Plastic material

UNIVERSAL-Contact-Screens
interchangeably used for both
Offset and Letterpress procedures

**Film Screens, 50 Designs
and Cellophane-Screens** for Shadings

Film Screens with dots
in different tones for Letterpress or Offset

HERBST & JLLIG
FRANKFURT A. M. 13, Germany

Engraved Halftone-Screens

Engraved Rotogravure-Screens

UNIVERSAL-Contact-Screens

Film Screens, 50 Designs

Film Screens with dots

50 YEARS IN THE SERVICE OF THE PRINTERS

A GREAT NAME IN
FINE FINISHED TYPES

Manufacturers of

PRINTING TYPES IN 14 LANGUAGES

TAMIL, TELUGU, ENGLISH, GRANTHAM, MALAYALAM, CANA-
RESE, HINDI, SANSKRIT, MARATHI, DEVANAGARI, GUJARATHI,
URUDU, ORIYA & SINHALESE

AND

HALF-TONE, LINE &
ELECTRO BLOCKS

SUPPLIERS OF PRINTERS' REQUISITES



ESTD. 1906

Grams: BHUVANA

Phone: 84469

SWADESI TYPE FOUNDRY

CHINTADRI PET

::

MADRAS-2



By

SRI R. VISWANATH

Better equipment plus better staff is not always equal to better profits or best quality of production. The reason is there is a third factor of production, i. e., Management. A well-organized, well-managed press runs long and runs well. Even modest machinery and mediocre staff may be made to produce perfect work under better management. It may be true that a people get the Government they deserve. But, a management gets the workmen it deserves.

How many presses pass out of existence due to bad management? How many presses survive crisis after crisis in spite of old machinery manned by average technicians? The answer is good management is essential, not only for its own sake but for also the sake of its personnel, for the sake of the industry and the country at large. Unfortunately scientific management for printers has not received the attention it deserves. There is many a square peg in the round hole of printing management, with the result both the peg and the whole as well as the wall are ruined!

The first thing that a press manager should know is that Printing is an art. Printing cannot be produced with a potential market in view. There is no question of anticipating demand to any great extent. Without knowing the requirements of the particular customer, no poster, no catalogue, no book, no printed matter could be produced. The printer takes his customer in shaping the execution

of the orders. Although one has to agree that the customer is always right, no customer is fully informed of the flexibilities and rigidities of the printing process as such. I feel that efforts in educating the customer about the intricacies or even the possibilities of the graphic arts has not been crowned with success. More often the printer has to guide the customer all along the line to produce a result the customer has in mind. The printer is all the time fighting the customer's influence which is not always beneficial in executing the job.

All matters that affect output should be the concern of the management. The days are gone when the management rested content with extracting work and paid a pittance as wages. Management, welfare of workers and analogous subjects loom large in today's management. These have a bearing on the cost of production although it may seem incredible. Human relationship is a factor that dare not be neglected. It has control over the mechanical efficiency of the press.

DESIGN

How many managers have devoted any attention to design of print and its planned production? Design comes first and its influence extends beyond the delivery of the finished product. Design has its impact on future production, progress of the press etc. No amount of attention, no degree of interest will be too much on design, as it affects the whole process. Management should realise that design and management are inter-related subjects. The smooth running of a press will be engendered when certain cardinal principles of organization are ignored. When the matter of design is overlooked or indifferently handled, no administrative miracle will transform the poor product into a good one.

Of course, it is not the duty of management to design and produce, rather it is to co-ordinate design and production. He employs experts to decide what is needed and why it is wanted: drawing, photography, engraving, paper, ink, process, etc. are handled by expert craftsmen. The activities of the various departments are harmonised by the management. How many managers realise that specialisation has come to stay in the graphic arts? How many have seen the effect of such specialisation on production? Why are our managers looking for a boy who can set, proof-read, galley-correct, make-up, impose, lock-up, print and deliver it? Such boys are non-existent. To search for them or to try and train such 19th century wonders is futile.

LITHO ARTIST

Many managers mistake a litho artist for an original artist. The latter produces originals like oil paints, crayon drawings, chalk work, pencil sketches and the like. The lithographic artist is mainly engaged, and rightly so, with the

reproduction of the media above mentioned. He knows how to draw printing plates in monochrome. These when printed in several colours will produce an effect close to the original. This artist's task is to interpret the original in terms of his process and processing machinery at his disposal. It is said that it takes about ten years to master the plate-making art for litho artwork. Again all artists can not be versatile in all types of artwork. One may specialise in human figures, others in abstract subjects or landscapes, one in small lettering, another in poster lettering, one in scraperboard work and so on.

The duties that fall to the lot of management may be summarised into: Organization, Production and Distribution. It also includes Development or planning for progress and plenty. Management falls distinctly into three categories:

The technical management of the factory. This is works management and calls for intimate knowledge of the plant, process and personnel. The second is secretarial or office management, which is paper work, managing of typists, maintaining records and so forth. The third is not less important, i. e., the financial management. This calls for proper budgeting, proper spending, harnessing of financial resources, maintenance of proper accounts, auditing, etc. A fourth kind of management is inevitable which is a mixture of all, called rightly, miscellaneous or General Management.

Purchasing of stores, equipment and accessories, spares, etc. planning the job and its execution and maintenance of the factory, clean, fit for work and fit for workers, according to Factory Act fall under Works Management. The works manager concerns mainly with

production. Under him work the departmental foremen, supervisors, charge-hands. They are more technical than the works manager. They tackle problems arising on the spot with individual jobs or processes. Only general problems common to the whole factory are brought to the notice of the works manager. Even then, these are dealt with by engineers if the problem is mechanical or electrical, if materials by chemists and if organizational by the General Manager.

The technical aspects of management relate to research, scientific, chemical or industrial subjects. They are dealt with by specialists in the line. A laboratory is essential for every large printing unit and it is increasingly realised that research and science have a greater role to play in the graphic arts industry. Investigating the usefulness of new

(Continued on page 22)

LITHOGRAPHY for the LAYMAN

By
SRI T. KRISHNA

Look at the lovely posters. They are printed by lithographic process. This branch of graphic arts is gradually gaining ground over other sister processes. Naturally every one should know all about it. The technique and possibilities of this process are given here in this second article

Lithography from stone, by zinc or aluminium plates or from paper plates for small offset machines do not differ in fundamentals. The transfer method is still much used (in Sivakasi for instance) in preference to photographic transfers. The latter calls for the installation of costly cameras and printing down frames, etc. In the transfer method, much care and experience are necessary to avoid distortion. It is therefore sometimes preferable where facilities exist to print the design directly upon the plate. The finely grained and sensitized plate is exposed under a reversed negative. A reversed image is thus got on the plate. This, when printed on to paper, will appear in correct position. Special etching solutions are available from the makers of the plate adapted to the particular requirements of the plate they manufacture.

OFFSET

This is an adaptation of the main process of lithography. It gets its name from the fact that the printing on paper is not obtained directly from the plate but from a blanket cylinder covered with special rubber. As the impression is offset from rubber blanket on to paper, it is called offset.

The offset printing press consists principally of three cylinders of equal circumference: the plate cylinder in which the prepared plate is mounted and screwed in position, the blanket cylinder on which is stretched taut a special rubber blanket with a smooth surface and the impression cylinder with grippers to which the paper is fed. The rubber blanket is about an eighth of an inch thick and first contacts the plate cylinder, gets the impression and then the impression cylinder on which the paper is stretched. Two sets of rollers are provided. One is covered with rubber to carry the ink for the printing portions of the plate. The other class of rollers is covered with flannel, moleskin or molleton for distributing water to the non-printing areas of the plate.

The rubber blanket is used because of its resiliency, which quality helps to obtain fine illustrations (halftones) on rough surfaced paper. The rubber adjusts itself to the inequalities of paper surface. Such results would be impossible by the direct litho-process in which printing is obtained directly from plates on to paper.

The surface of the zinc or aluminium plate, when grained,

retains moisture a sufficient length of time to print as in stone lithography. Zinc is mostly used because of its cheapness. But some lithographers prefer aluminium for its special qualities for colour work and for its ease in transferring. The thickness of plates used vary in gauge from 4 to 12 gauge.

GRAINING

A finely grained structure is necessary for printing from the plate. The plate is placed in a shallow tray of a graining machine. Glass or wooden marbles are used, the diameter of the marbles varying from half inch to three inches. Some sand and water is sprinkled and the machine is set in motion. The marbles and sand roll over the plate and produce the required grain. From 45 to sixty minutes are taken for graining a plate, depending upon the size of the plate and the capacity of the machine. Light graining machines take a longer time and heavy duty machines accomplish this task quicker.

When the plate is grained to the required depth, it is taken out of the graining machine, thoroughly washed and given a bath with the following:—A weak solution of alum, nitric acid and water. This washing will affinitise and prepare it to receive greasy ink. Now the offset plate is ready for transfer.

Offset printing can be done from transfers of the following:—Line engravings on stone, drawing on metal plates with pen, brush and liquid ink or with crayon, etc. Fine pen line work cannot directly be done on zinc. Wash drawings, line drawings, photographs, retouched photographs, etc. are reproduced on the metal by photo lithography. The image is transferred by photomechanical means.

For multi-colour reproduction by offset, colour separation

(Continued on page 14)

Quality in PRINTING INKS

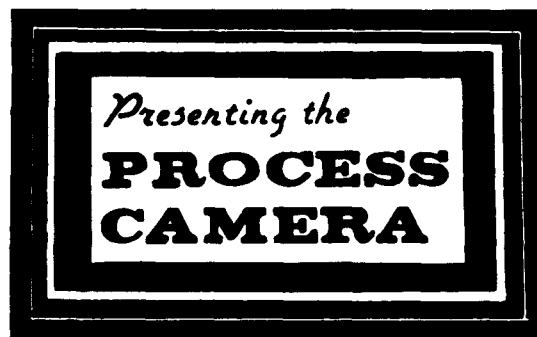
means many things

- BRILLIANCE
- DEPTH OF COLOUR
- COVERING POWER
- DRYING CAPACITY
- WORKABILITY
- FASTNESS TO LIGHT ETC

IN GANGES INKS THE EMPHASIS IS ON QUALITY

USED AND PROVED FOR 29 YEARS

FACTORIES AT: HOWRAH • BOMBAY • MADRAS



By
SRI S. NARASIMHAN

In this, the second of the series on Process Camera, the experienced author tells all about exposures, stops, and the principles involved in the same. Standardisation of stops, exposure timings, illumination, etc. are stressed here. The vagaries of human behaviour should not interrupt the quality of negatives produced on the camera. Camera is a precision instrument and should be handled as such

Understanding of optical laws are necessary for a good exposure. Good Illumination is the basis of a perfect exposure. The process-cameraman is concerned with two laws. Both relate to the behaviour of light or the intensity of illumination. The first law states that *the intensity of light varies inversely as the square of the distance from the source of the light*. The Second states that *the intensity of illumination varies directly as the cosine of the angle of incidence at the light surface being illuminated*.

A simple experiment will illustrate the first law:—

Materials required:—A piece of stiff paper about 4 inches square, another piece of paper and a small source of light. Take the first piece of paper and fold it into four to form a square of 2 inches side. In the second piece of paper cut a hole of 2 inches square. The folded piece should fill the aperture correctly. Now, place the second paper with the hole vertically. Place the illumination source at a distance of one foot. You will see that the pyramid of light has spread out. At a distance of 2 ft., the paper

when unfolded receives the whole light that passes through the hole or aperture. At one foot the light is spread over an area of 4 sq in. The same amount of light at 2 feet distance will be spread over an area of 16 square inches. But its intensity is one quarter of what it was at 1 foot from the light source. The intensity is thus lessened for greater distances from the light sources. In other words it will be proved that the intensity is inversely proportional to the square of the distance from light source.

Let us see how this optical law affects camera illumination and exposure. If a certain amount of exposure is found necessary at a distance of 6 inches from the light source to the copy, four times this exposure will be called for when the distance of lamps to the copy is increased to 12 inches. This is because the light has to travel double the distance.

The second law is not so easy to understand. This law is to be understood due to the fact the process engraver uses more than one lamp to illuminate his copy-board. These lights fall on the plane copy at an angle. The intensity of such

light falling at an angle at a plane surface is proportional to the angle of incidence.

Sine is a straight line drawn from one extremity of an arc perpendicular to the diameter that passes through the other extremity. Cosine is the sign of the complement of a given angle whose cosine it is.

To illustrate the second law, we shall consider a beam of light *ab* proceeding from a light source *I*. The angle at which this light falls on the original is *i*. The amount of light of beam *ab* is spread over the whole area of *ac*. In other words, the intensity will be equal to *ab* by *ac*. In a right-angled triangle the ratio of the base to the hypotenuse is the cosine of the angle. In this triangle, the base is the cross section of the beam of light and the hypotenuse is the area over which the light is spread. The base divided by the hypotenuse is the intensity of light. That is to say, the intensity of light is proportional to the cosine of the angle of incidence.

In illuminating the copy, the process camera-man takes into account the inverse square law also. Therefore when a lamp is moved away from or nearer to the copy board, these two factors are combined to determine the exposure under the new conditions. It is not possible to work out in such detail every time the lamp is moved. Therefore a table is constructed which will show clearly the exposure under altered conditions. A simple apparatus like an L graduated in inches with the degree of angle marked under them can be constructed to serve as a guide in determining distance and angle of light source.

Having four lamps is recommended for this reason. Four-lamp illumination will be over a large area and at the same time intense

too. Movements of lamps may be called for only in exceptional cases.

It is necessary to revert back to the properties of lenses for a while. If the lens is thin, it is easy to arrive at the focal length of the lens which is the distance from the lens to the principal focus. Principal focus is the position of the image of a distant object. But modern process camera lenses are compound lenses. It is thus impossible to measure from the lens face. Some point on the axis is taken, where if a thin lens is placed, it will give images of same size and position. This point on axis is called equivalent point. The distance from this point to the principal focus is measured. This is the focal length.

In ordinary photography, the object may be at a considerable distance, say five to six feet or even more. But in process camera work, the object is placed only a few inches from the lens. For every position of the object, there is a corresponding position of the image. These pairs of positions are called conjugate foci. The distance from the lens to the photographic plate is always greater than *f* in process camera work. In process work it is usual to reduce rather than enlarge and hence the magnification value will always be fractional.

The amount of light passing through the lens is restricted by a diaphragm. This diaphragm or stop is between the lens components. The stop is of vital importance in halftone work. It determines the character of dots.

EFFECTIVE APERTURE

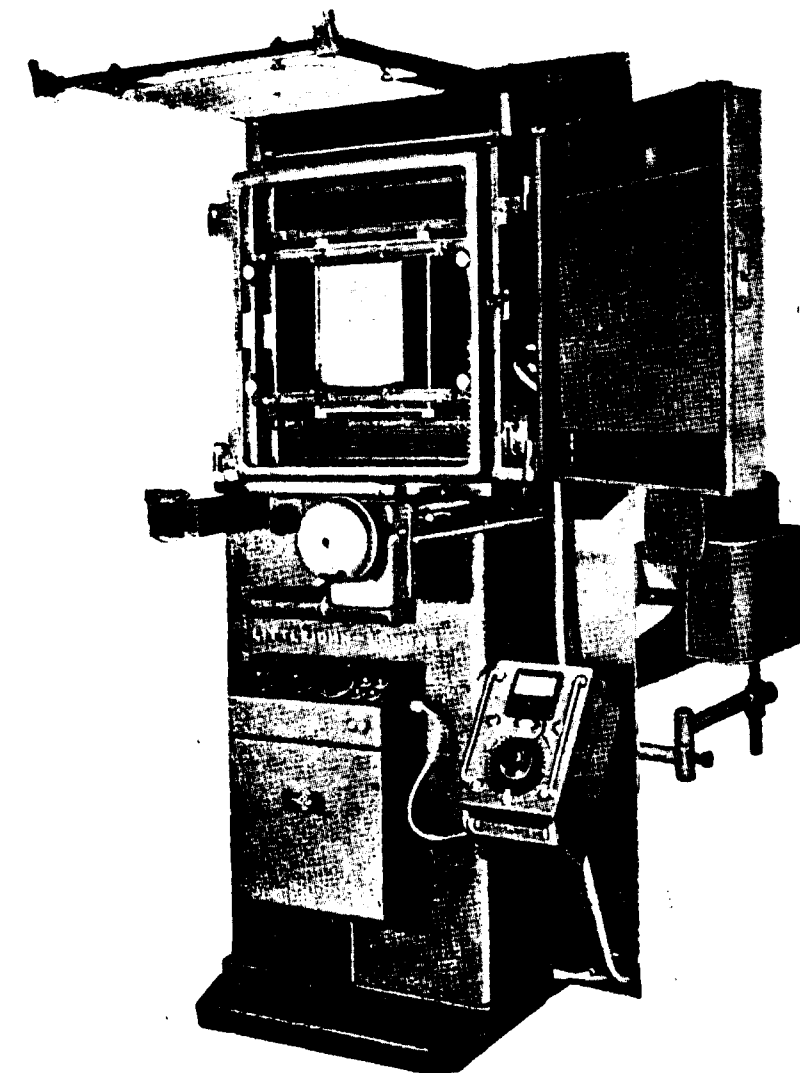
The actual size of the opening or aperture is always smaller than the effective aperture. This size is one of a virtual image formed of the stop by the front components of the lens. Only the effective relative aperture is useful for all practical

purposes and not the actual opening which is smaller. In front of the stop there are components of the lens which converge the light. The resulting beam of cylindrical light is greater than the actual lens opening or aperture.

The relative aperture may be obtained by another method. For this method the focal length is not necessary. Take a small source and by focusing on it, measure the position of the back of the camera, with respect to some fixed portion of the camera. By this measurement, the displacement of the focusing screen with respect to the lens can be obtained. Note the

position of the ground glass, rack it so as to bring it as near to the lens as is found convenient. Measure the fresh position of the focusing screen. Now the small image of the light would have spread out to a disc. Measure the diameter of the image. Find the ratio between the diameter of the disc and the displacement of the disc and the displacement of the focusing screen. This number is the designating number of the particular stop.

A definite relation exists between the following:— 1. the camera extension, 2. the position of the lens with regard to the object.



Latest Littlejohn Camera

Lithography for the Layman

(Continued from page 11)

negatives are made by using colour filters on the camera. A plate is made for each colour printing.

TRANSFERS

There are many methods of transferring depending on the nature of the original. An image from stone may be transferred on to plate by using a transfer paper. The extra transfer is necessary in the case of offset because offset plates should not be reverse but read straight. Then only the design will be reversed on the rubber blanket and printed straight on paper. Combination transfers from type matter, various designs on stones, plates, etc. may be obtained by means of special transfer papers.

Let us take an example. A halftone block of a building, a trade mark design from copper plate or steel die, a letter head of the firm are all to be worked together on a single plate in proper positions. There are four sources from which the copy for the offset plate is to be prepared. Transfers are taken separately from halftone, steel die, type, etc. and the proofs are positioned on a layout sheet and pasted. For printing a full sheet at each impression several proofs may be taken, technically called "ups." In order to get best results for transfer from halftone plates and type, an impression is pulled on good paper with transfer ink on dry transfer paper. This impression is placed face down on a sheet of damp transfer paper. The two sheets are run through the transfer press. Now the print on dry transfer paper is transferred on to damp transfer paper.

Negatives, line and halftone can directly be printed down on zinc plates to avoid transfers. Small

zinc plates can be used for such transfers, instead of stones. Modern step and repeat machines and multiple photo transferring machines do quickly the laborious process of transferring label and similar work to register.

ETCHING AND GUMMING

After the design has been transferred to the surface of the zinc plate, it is prepared for the press. The etching and gumming solution consists of Gum Arabic dissolved in water and a slight proportion of chromic or phosphoric acid. The plate is treated with solution.

ADVANTAGES OF PLATE OVER STONE

Stationery, advertising matter, labels, greeting cards, art subjects in colours of long runs, illustrated booklets, catalogues, folders, magazine covers etc. are profitably reproduced by offset. Lower priced stock can be used for printing by offset and a saving in paper costs can be effected. Light Weight stock can be used. Thin flexible plates can be fitted to the surface of the plate cylinder of the rotary press. This paves the way for greater production than on a flat bed stone or plate press. On flat bed machines fifty per cent of the motion is wasted for the reversal of the bed. In the rotary it is continuous motion. Vibration and lost motion in the reversal of the bed are absent in the offset rotary. Thinnest papers, embossed paper, kraft or ribbed paper, grained paper, rough paper and all qualities of paper can be used for printing fine halftones on the offset press. There is no indentation on the paper, during the process of printing as is the case with letterpress.

Zinc plates cost less than stone, take less space, are easier to handle, to transport, to store, thus effecting savings in cost of production. Less

makeready is required for offset printing. Offset gives softer and more natural effects for illustrations.

STEP AND REPEAT MACHINES

For printing multiple transfers on plate, the machine is used although the initial costs are high. The negative is made on glass or film of the drawing, photograph or other copy to be reproduced. The negatives are made as for photo-engraving, i.e., line negatives from line copy, screen negatives from photographs, wash drawings and other continuous tone copy and colour separation negatives are not to be stripped as straight reading plates are required for offset. A layout sheet, same size as the final printing paper, is taken and the correct position of each label is pre-determined. The negatives are placed one at a time and with the help of a transparent registering device are placed and locked in position. They remain stationary in this position while printing down is carried out. The plate is a little larger than the paper to be printed. It is sensitized on a whirler and held in position. The sensitized plate is moved so that only that part of the plate that is to receive the print is exposed, as predetermined on the layout sheet. The plate is brought in firm contact with the negative film side. There is a thick rubber blanket to help this contact. The arc lamps are switched on. As only the part of the metal plate under transparent units of the negative has been exposed, the remainder of the plate is protected from the light. Then the plate is moved to the next position and the process is repeated and so on until the whole plate is covered with prints in their required position as per layout guide sheet.

(To be continued)



F. & D. BROWNLIE

EXPERIMENTAL FLUFF TESTER

An experimental fluff tester which is capable of giving a good indication of a paper's fluffing characteristics has been developed by the Printing, Packaging and Allied Trades Research Association.

Earlier experiments on fluffing showed that by far the greatest quantity of fluff is removed from the paper by passing it through the printing machine in contact with a dry blanket without either ink or water, and this is the principle on which the tester works. The instrument comprises two metal cylinders, one covered with a rubber blanket. The metal cylinder is mounted in a frame above the blanket cylinder and pivoted about a fulcrum so that pressure is applied by the weight of the cylinder and the frame. Moveable counter-balances attached to the frame enable the pressure to be varied.

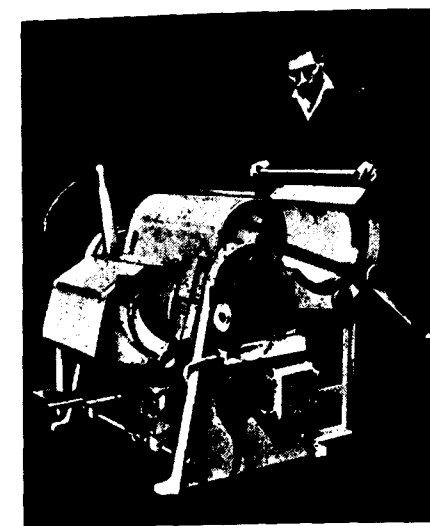
The blanket cylinder is driven either by hand or electric motor, and the sheets of paper under test are fed between rotating cylinders. By means of a pocket magnifier and side lighting, the number of fibres per sq. in. deposited on the blanket can be counted; ten counts down the middle of the blanket are considered to be sufficient.

Several types of paper have been investigated, ranging from featherweight to bond, and three types of

blanket material - natural rubber, commercial and synthetic, and in addition, the speed, pressure and relative humidity were also studied. Tests on the various papers showed that the instrument is capable of giving repeatable results and that fluff build-up proceeds at a steady rate with the number of sheets fed.

VARIETY OF PAPERS

Fourteen different papers were examined, the tester indicating differences in accordance with those expected in practice. In order of quantity of fluff removal, a ledger paper that gave trouble on disc ruling came immediately after a featherweight, followed by an M.F., that fluffed badly on type matter. Below these were the wire side of the M.F., a thick cartridge giving



New Semi-Automatic Caster

trouble in 4-colour work, and a range of offset cartridges which were troublesome on Patra's earlier printing trials. The lowest of all were the surface-sized cartridges and bond papers that were found to be trouble-free.

BASIC PROPERTY

In most cases, successive passes of the same sheet through the machine gave progressively less deposit, and after three passes, the deposit was negligible, except in the case of papers of low general strength, when the deposit remained unaltered. This is stated to be an important result, in line with the behaviour in printing, and for a given paper, the total quantity of fluff removed on successive passes until stability is reached is constant. This may well be a measure of a basic property of the paper which is un-influenced by the machine conditions of the test.

ONLY PRELIMINARY TESTS

It is emphasised that the report on the tests is a preliminary account only, and that further work must be done before definite attention will be paid to checking the stability of the blanket over a period of time and after considerable use, and to the method of counting. Counting is by personal assessment and may give rise to differences in results between various operators. The report concludes that this method of fluff testing has the advantage that the material leaving the paper is uncontaminated and can be readily examined. This should prove of value to papermakers when investigating the causes of fluffing, enabling cutter dust to be distinguished from surface defects, and an analysis of the fibres to be made.

NEW SEMI-AUTOMATIC CASTER

The production of first-class curved stereos for rotary presses

is probably more troublesome than any of the many complex and varied processes used in the printing industry. The chief reasons for weakness in curved plates are (1) 'Sinks' due to too rapid a chilling of the surface of the type metal, so forming a skin, the molten metal behind this skin cooling and contracting, forming a hollow or sunken surface, (2) 'Cokey face' due to the metal being too hot and scorching the face of the flong, producing minute gas bubbles which collect on the face of the plate, and (3) Porous plates which are due to air bubbles being trapped in the mould when the metal is poured in.

The remedy for 'sinks' is to raise the temperature of the metal and to see that the mould is not too cold, while reduction of the temperature of the metal is the cure for 'cokey face'.

THERMOSTAT

Timsons of Kettering and London, while not denying the need for a skilled operator, claim that their new semi-automatic casting box goes a long way towards curing the first two problems, and this is done by a generous arrangement of thermostatically controlled heaters throughout the machine.

GRADUAL CHILLING

There are two electric heaters in the crucible itself which enable a full pot of some 3½ cwt. of metal to reach the working temperature in the quickest possible time. In the valve which the molten metal passes through to reach the mould, there are additional heaters, while yet another heater at the farther end of the casting box itself ensures that the chilling is not too rapid.

METAL PUMPED FROM BOTTOM

The third and most troublesome factor, porosity due to trapped air

bubbles has been solved by the simple but novel expedient of pouring the metal from the bottom upwards into the mould. The incoming metal drives the air before it, up and out through the small vents at the top of the box.

Direct connection of the casting box with the crucible through the heated valve prevents any loss of temperature and eliminates exposure to atmospheric conditions. The ribbed-back plate is cast without a tail which, apart from conserving metal, saves a further trimming operation.

SIMPLICITY

Mat loading is simple, the tail fitting into a slot and clamps at the side are quickly brought into position. An additional guarantee of complete rigidity is the suction created by a pump drawing air out of the perforated bed-plate of the box. Minimum heat loss and maximum fuel saving is assured by the complete fibre glass insulation even down to the lid of the melting-pot.

SPEED

The makers state that this machine is not designed for the large-scale production of stereotypes, but is intended for the fairly fast handling of high-quality plates at speeds of 6 to 8 every thirty minutes. A floor space of 7' 0" by 7' 0" gives ample room for the machine and the operator.

DRYING UNIT TO PREVENT SET-OFF

A neat and compact drying unit for printers is made by the British Distributing Co. of London, operating on the principle of heat rays which dry the work as it goes through the machine. These heat rays commence to dry each newly printed sheet as it is being delivered, and due to their deeply penetrating

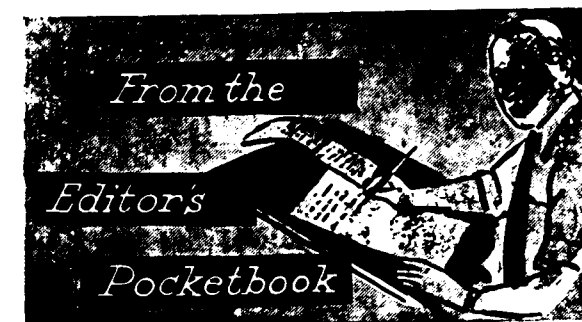
properties, the drying process continues in the pile.

The principle is quite different from that of using spraying fluids or powders, as the drying procedure allows work to be handled almost immediately by other departments, or even packed and despatched almost without any waiting period. It is stated that very heavily printed work and glossy papers respond somewhat more slowly, but even in these cases the waiting time is reduced to about half-an-hour. Further, it is claimed that the work produced is very much cleaner, and is remarkably free from "Set-off", and a strong light is produced by the units, thus enabling the work to be watched in an easy manner.

NEW ASTRAFOIL PROCESS

The makers of Astrafoil have introduced another new development, shown for the first time at this year's Graphic 57 Exhibition at Lausanne. This is known as the Diapos process, and is stated to provide a valuable time-saver by offering printers, platemakers and cartographers lengths of Astrafoil sheeting pre-sensitised.

A whirler is not necessary and prints can be made directly on to the Astrofoil in a simple printing-down frame. A further economy is effected in the subsequent dry development, and exposure to ammonia fumes brings up the image quickly (positive from positive, negative from negative), so that the complete process from exposure to the final print only takes about three minutes, no chemicals other than the ammonia being needed for processing and development. It is claimed that the process enables contact prints and multi-positives to be made quickly using conventional equipment.



TOP PRESS OFFICIALS TOPPLE DOWN

It began in Assam some years ago. A top Govt Press officer was placed under suspension and later removed from service. From that time this removal of officers in Govt Presses is continuing, spreading itself from state to state. The Central Govt Presses have also fallen a prey to this process of removal of top press officials. Practically every state from Nagpore, Andhra, Travancore-Cochin (or Kerala) is affected by some suspension, compulsory retirement or similar way of disposing undesirable officers of Government Presses. What we wonder is, why nothing comes in the papers about these disappearance of top press officials. Perhaps as an exception, a small *Madras Mail* announcement told about the suspension of a Superintendent of a neighbouring State Govt Press. Many have missed this news item. But none can afford to miss the writing on the wall.

There is something radically wrong about the nationalized printing undertakings. Otherwise there is no reason why compulsory retirements should be ordered for scores of press superintendents, managers and the like. There is no reason why there should be so many suspensions of Class I officers of Govt. Press. This toppling down of press Superintendents has a lesson for all Superintendents, past, present and future, of all state Govt Presses. They should be a little more wary in their dealings. They should not buy machinery, equipment or materials without calling for tenders and such tenders should be opened in public. In other words, there should be no dealing which has the appearance of shadiness. Everything should be like an open book, beyond reproach, above board. The superintendents should be a little more careful in selection of subordinates, in condemning others, in patronizing particular makes of machinery. They should take into confidence the private press owners, understand their difficulties and should not accept work that will affect the private sector. They should point out to Govt the impracticability of printing everything in the Govt Presses. They must maintain the Govt.

Press as a model printing undertaking, a shining example for the private presses to follow. The top press officials should realize that in a free India there are no masters in the Government. They should remember that they are only the servants of the people in the true sense of the word. Unless they realize this basic approach to all their activities, sooner or later, the fate of other press officials will overtake them also. We wish that all concerned will take the cue and maintain their integrity for which once we were famous.

WHAT PRICE NATIONALIZATION?

A price is to be paid for everything. (In present-day India, even honesty has its price!) Doctrinaire socialists ask us to pay the price for their foolish policy of nationalization. Have we not enough proofs that too heavy a toll is being paid for nationalized undertakings? Now the Government, as a further step in their gradual nationalization of essential industries, have decided to nationalize text-book production. What this means to the trade, has been happily worded and forcefully presented in a Memorandum of the Publishers Association of the South. Not that the Govt are going to reverse their policy. Of all the vices the present Govt is suffering from, false prestige is not the least. It is worth reiterating the fallacy of this false move.

The reason for this move is said to be the presence of confusion in selection of text-books for the various classes. We can tell here and now, that by Govt taking over, the confusion will only increase. Another reason is said to be the uniformly poor standard of our text-books. If anything is to be improved, none will recommend giving it over to Govt. Thirdly, we are told that the cost of production is not going to be less. We are amazed as to why this thing is nationalized, as no case is made out for the same. When Govt are confronted with more urgent problems such as the scarcity of food, unemployment, second plan resources, foreign exchange crisis, etc., they need not add to their responsibility another headache. Govt have not satisfied the people in any of the undertakings they have nationalized. While the bitterness of these unsuccessful public undertakings are still in our mouth, we are asked to swallow another bitter pill. Enough for us to say that this nationalization of text-book production is misconceived, uncalled for, unjust and impracticable. This should be added to the long list of our Govt's failings. No parent will consider his child lucky to start life with a Govt text-book. A more lifeless thing cannot be imagined!

Layouts and Lettering

(Continued from page 7)

against a background of buildings being constructed, studying plans.

P. Syn.

LEYLAND: 12x4 col ad is headed "Wherever there is heavy work to be done" with good illustrations in brush. The text helps to focus on the fact "the only 7½ ton pay load chassis made in India"

JWT

LEVER BROS: Toy train of junior in scraperboard is featured with headline in Ultra Bodoni (or Falstaff) "It's 1000 miles across the room" emphasizes the importance of Jr to the distance and quick movement of his toy train. Similarly Hindusthan Lever attach importance to moving the goods across the country. It concludes with the line "Hindusthan Lever serve the home" (in Ultra Bodoni).

LINTAS

MOBIL GAS continue their "Why did", "Who put" query series in 10x4 columns.

JWT

METTUR CHEMICALS: A striking ad of Cauvery brand of

chemicals features a half line tint background with chemicals in black circles, reverse lettering. Address in a larger circle white. Times Roman and Gill series. Criterion

PAL: A good black and white illustration of Fargo Diesel Bus and lorry with text in Gill series.

Sistas

TEXMACO's "Facts behind figures" series has an illustration of a dam. 171 million acre feet of water for power and plenty is the headline in Times Bold. The main text is in Times Roman and tells about Texmaco's association with the projects of India. It ends "Texmaco serves India's basic Industries".

Clarion

TATA STEEL's "For the Common Good" features children as drawn by children themselves. An extract from Nehru's letter to his daughter 30 years ago about working for the common good being the greatest thing we can do. At the bottom appears "Greeting to the children of India" (from Tata Steel.) This ad appropriately came out on Nehru's Birthday

which is celebrated as children's day.

JWT

TVS Southern Roadways. The new campaign features prams in one and cradles in another to help emphasize "we look after your parcels as if it were a baby" in Gill Heavy. The text in Baskerville is arranged in two columns. It begins "Any old lorry can carry your parcels, but TVS carry them safely and on time."

JWT

TEA BOARD: Thick outline figure of a monk with two leaves and a bud in his hands inside the outline. "Centuries ago an Indian Monk discovered the goodness of Tea" in Ultra Bodoni Italic and the text in Gill Sans, ends with "I am Tea."

P Syn.

TATA MERCEDES BENZ: Another 12x5 cols ad striking chalk illustration headed "at the Projects" in Gill Bold Caps with text in Times Roman describes Mercedes Benz at the various projects in the country. Everest VENESTA's Almunium foil 4x4 cols. ad has decoration plus protection as the theme with a neat illustration of a lady. Text in Bodoni and Gill series.

Clarion

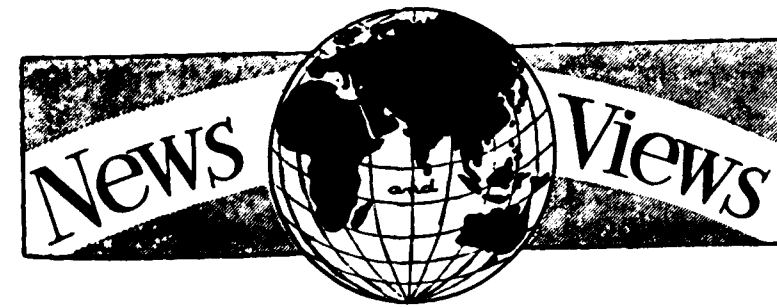
VOLTAS Milestones of Mechanised farming, No. 2 in the series, deals with the first tractor to be assembled in India. Format etc. same as previous ad of 6x5 col.

Everest

VANASPATI ASSN's 5x5 cols ad is headed "He's got to put an 112 lb in the next 12 years." Neat illustration as usual. Goudy headline and name and Bookman for text.

JWT

ZENITH uses a row of blades in the ads, sometimes formed into an Z, at other times, just as a curve. PANAMA has introduced an extra colour into its ads recently although they too use a row of blades as illustration.



PRESIDENT PRESENTS PRINTING PRIZES

In the course of an impressive function, President of the Indian Union, Babu Rajendra Prasad, presented trophies for winners in the contest for fine printing, at Delhi on November 21, 1957. The Government of India holds an annual contest for the award of prizes for fine printing and binding. This year, the exhibition containing over 6,000 entries was opened by the President. In his address to printers, the President said:

As a rising nation, we are firmly resolved to eradicate ignorance and illiteracy from India. That is a stupendous task which we cannot hope to achieve without the printer's co-operation. Today as I see the great strides we have made in this country in the art of presenting the printed word, I am perforce reminded of those days when in the late twenties I was in some way connected with two journals in Patna. Those were the days of hand-setting. Then legibility was the sole criterion of excellence in a newspaper or periodical. Newspaper readers were not so many in those days and the number of dailies, weeklies, and other periodicals was still less. As in other spheres of activity, great progress has been made in recent years in printing craft also. Not only has the number of journals gone up, but the art of display and presentation has also made much headway.

With the invention of newer and better machinery, the technique of

printing may be said to have undergone a metamorphosis. In India we have beautifully illustrated journals with wide circulation, journals representing all interests and all walks of life, from political parties to vegetable growers' co-operatives.

The institution of awards for fine printing is a constructive step towards raising the standard of printing. Though compared to standards obtaining in western countries like the United Kingdom and USA and also in some eastern countries like Japan, we are lagging behind, your determination to go ahead, I am sure, is a sign that sooner or later we shall catch up with those countries."

Dr. Kesar, Union Minister for Information and Broadcasting said: "One of the major reasons for modern progress is not only the invention of the printing machine, but also the perfection of this machine. Progress in printing is synonymous with progress in other directions. If India wants to develop in other fields, it will have to see that more perfection in printing and allied arts is achieved simultaneously. The Government's recognition of the art of printing and designing by the institution of the awards has been widely welcomed by printers, advertisers and advertising agencies. In spite of the fact that the competition is limited to the production undertaken during the preceding twelve months, the number of entries has been rapidly increasing. As comp-

ared to 5,000 entries last year, the number increased this year to about 7,000 varying from a small label to a big size poster."

The competition for excellence in printing and designing and the exhibition were organized by the Union Ministry of Information and Broadcasting. The presentation of awards took place in the buildings of the Indian and Eastern Newspaper Society, where the exhibition was also held. This is the third year of State awards for excellence in printing and designing.

JOHN D BARTON INSTALLS ROUND TABLE

John D. Barton of Messrs Hooghly Ink Co., Madras, installed a Round Table in his residence. A pleasant function was got up in this connection, when Sri U. Krishna Rao, Speaker, Madras Legislative Assembly inaugurated the Round Table. This is the First Round Table International in India and its Headquarters is in London. This world-wide organization has no fewer than 800 tables in over twenty different countries. Sri Gopala Rao, President of Rotary Club associated himself with the inauguration of the Round Table International.

TEXT-BOOK NATIONALISATION

The Publishers' Association of South India has appealed to the Government of Madras to reconsider their decision to take over publication of text-books and drop the proposal.

In a memorandum submitted to the Chief Minister and the Education Minister, the Association said the future of nearly 500 publishers, an equal number of printers, about 1,500 authors numerous block-makers, artists and proof-readers, besides thousands of employees would be affected, if the Government implemented their decision.

Anything in Blocks

TRI-COLOUR, HALF-TONE & LINE

ALSO

COLOUR BLOCKS

FROM

COLOUR TRANSPARENCY

..... WRITE OR PHONE

Estd. 1890

Phone: 3202

M. C. APPASAWMY CHETTY & CO.

14, JONES STREET

::

MADRAS-1

It contended that from the figures so far gathered, more than Rs. 15 lakh worth of books for the primary classes 1 to 3 will have to be jettisoned forthwith.

The Association wants categorical answers from the Government for questions as to whether the Government proposed to exercise absolute monopoly in the production, publication and sale of text-books, whether schools under private management would be given the freedom to choose their own text-books, whether the Government would consider giving notice of five years to all Registered Publishers to clear their stocks.

Stating that enforced uniformity in text-books would stifle all initiative and originality in teaching methods and reduce instruction to a dead level of insipid mediocrity, the Association fears that the State production of text-books would lead to discontinuance of publication of general books of cultural value, advanced works, dictionaries and reference books. The publishers are now able to bring out such expensive works, though they could not be sold within a short time, because of the steady income they derive by the publication of text-books. Under the State management, only a few authors can be employed, whereas now literally hundreds of authors are writing a variety of text-books. This field of talents would soon become barren with results which could not be looked upon with equanimity in any progressive state.

The Association points out that publishers whose mainstay is the production of text-books for primary classes will go out of business as soon as Government implemented their decision, while the others covering a wider range of books, would carry on precariously till the Government's programme is completed. Instead of the

Government taking over the publication of text-books on grounds of alleged corruption and malpractices in certain quarters, they could enforce more rigidly the rules relating to approval, prescription and adoption of the books. They could also improve the quality of the text-books by formulating suitable and reasonable criteria and by strictly enforcing them. It was strange that the Government which had itself categorised publishing as a small-scale industry had now set out to strangle the greater part of this industry and with it several allied trades, instead of encouraging it.

The registered publishers of the Madras Text-Book Committee are informed that the Government of Madras have decided to publish language text-books for standards I to III of Elementary Schools and classes I to III of Secondary Schools for use in the schools from the year 1958-59 onwards (says a communication issued by the Office of the Commissioner for Government Examinations, Madras). Therefore, the books submitted by the registered publishers for the above standards and classes will not be considered by the Text-Book Committee at its meeting to be held in 1958. The fees remitted by them for scrutiny of these books will be adjusted towards future submission of books by them.

NEWSPAPERS IN RUSSIA

Seven thousand five hundred and forty newspapers are now being issued in the Soviet Union with an aggregate circulation of close to 54 million copies, *Tass* reported.

The aggregate circulation of the 650 journals exceeded 30 million copies.

In 1957 as many as 1,920,000 people had subscribed to industrial and technical journals and 2,736,000 to agricultural journals.

HARISH C. JAIN SUCCEEDS JAGAN NATH JAINI AS MANAGING DIRECTOR OF 'NATIONAL'

At a 'Get-together' of the management and the staff of the National Advertising Service Private Ltd., recently at the Cricket Club of India, changes at the top management were announced by its Secretary Mr. Kailash C. Jain.

Mr. Jagan Nath Jaini, Managing Director, will guide the executives in his role as the Chairman of the Board of Directors.

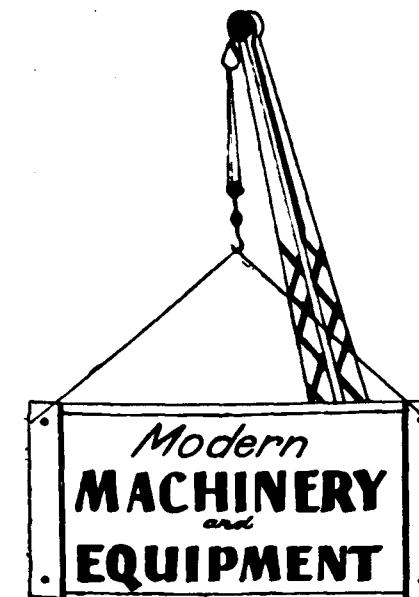
Mr. Harish C. Jain, B.A., M.S.M.A. (Lond.) who has been with the Company for the last 20 years, takes charge as its Managing Director.

Mr. Harish C. Jain picked up the rudiments of the trade in the Times of India. This is where he gathered valuable first-hand knowledge of the organisation and working of media. He was the Founder President of the Upcountry Newspaper Representatives Association.

In 1952 Mr. Jain was elected as a Member of the Incorporated Sales Managers' Associations London - a coveted honour in the field of selling, publicity and advertising.

In the year 1955, Mr. Jain served on the First Panel, "Building World Relations Between Agencies and Advertisers" at the International Advertising Conference held at Zurich, Switzerland.

Mr. Jain served on the Publicity & Propaganda Committee of the Bombay Pradesh Congress Committee during the recent general elections. He is also on the Executive Committee of the Advertising Agencies Association of India, member of the Bombay Management Association and the Indian Manufacturers' Association.



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

FULLY AUTOMATIC SHEET COLLECTING MACHINE NZ

For large edition of books, periodicals, magazines, time tables, calendars, catalogues etc. One of the main components of an automatic production line.

The collecting machines operate generally with 50 to 55 working-facts per minute, unless lower or higher speeds are indicated by economic considerations. When working with normal speed, the average output will be about 2200 to 2500 books per hour. If the number of stations is sufficient for the placing of two book blocks, one behind the other, this output will be doubled.

The sheet collecting machine consists of receiving stations, arranged beside each other and driven in groups of 6 each. This means that there are models with 12, 18, 24 or 30 stations. Each station

disposes of a pile container which can be refilled during the operation by collected printed sheets. After being drawn off the pile, the sheets are transported by a steel band, which runs in a groove. The grab gear of the stations, the steel transport-belt and the book block advancing device are controlled electronically. At the end of the band the books are piled behind each other. The adjustment of the lateral guiding to the different book sizes is done centrally. The machines are built for the usual book sizes as model NZ II, while model NZ IV, somewhat larger, is for periodicals, magazines etc.

As special execution, the collecting machines NZ can be supplied with one or two wire stapling stations, each containing a double-head wire stapling device. Carrying together and lateral stapling of the books are thus united into one economical operation. Another combination possibility is that with a pasting-binding automaton.

The sheet collecting machines NZ are driven by a double wedge belt. The power requirement is small when compared to the size of the machines. A 3 HP (2.2 KW) motor will be sufficient for the usual models. Models with wire staplers require 4-5 HP (3-3½ kW). A second motor of 3 HP (2.2 kW) is needed for the air suction pump. At 18 or more stations machines, the suction capacity of the pump should be 22 to 33.5 cub. feet per hour.

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NEW VANDERCOOK PRESS

The new features of the latest Vandercook Model 15-21 Test Press includes an adjustable bed, automatic inking from a standard ink

tin, automatic anti-set-off sheet spraying, plastic covered inker, short cylinder travel etc. Vendercook & Sons, Chicago are the makers.

GRAVURE CONVERTER PRESS

Champlain Co., Inc., Bloomfield, New Jersey, have announced the heavy duty Gravure Converter Press 44" to 54", cylinder size from 20" to 40" circumference. This machine will produce quality hair-line register jobs such as printing on cellophane, paperbacked foil, gift wraps, bottle labels, bread wrappers, paperboard etc.

A special feature of this new Gravure converter press is the complete walk-in accessibility between colour units.

This facilitates operational adjustments and job change-over.

NEW 3M MAKEREADY MATERIAL

Minnesota Mining and manufacturing Co., USA, announces the 3M makeready material for cutting costs of makeready. This material when printed on the press and processed on the special exposure unit, rises as much as .004 inch in the areas requiring the most printing pressure.

ROBERTSON CAMERA

The Robertson 31" Tricolour Overhead Camera, known as Series III is announced by Robertson Photo-mechanix, inc., Chicago. The optical centre of this newest version is 46". The operating and vernier mechanism is 68" from the floor. Even operators of short stature can use this overhead camera. Screen elimination is on the side. This permits housing two screens in the dust-free compartments of the camera. Maximum screen capacity is 32" circular and 24" x 32" rectangular. Screen elimination may be effected without affecting separation setting.

Better Press Management

(Continued from page 10)

products, processes or finding new uses for existing products belong to this branch. Control of the quality of product being produced, standardising procedures or processes, envisaging results that will flow out of the present to the future are also done here.

Distribution relates to the despatch of printed material. Production departments should stick to delivery timings so that there will be smooth flow of distribution. There will be less complaint from customers. Salesmen, representatives, travellers, etc., belong to this branch.

THREE C'S

Co-ordination, command and control are the three C's essential for management. Lack of co-ordination can be compensated by abundance of leadership. Drive is a quality for better management. But the present-day workers refuse to be *driven*. They are no longer dumb driven cattle who obey and do the allotted task. They want a leader whom they can follow for mutual benefit. Hence the quality of leadership is an essential element in management. But leadership is by no means a substitute for efficiency. Some presses work because of hero-worship of their leader. But when that leader is no longer there, efficiency is gone. The matter with efficiency is another. Efficiently organised factories run, whether the leader is there or not. The subordinates should be clear about their duties so that they may go about them even when their foremen are absent. They should not expect help every hour from their foremen. There should be team work within the department and co-ordination between departments.

The best leader does not order other people, without doing any work himself. He works with them. He asks the men to serve the common end, betterment of the organization. The expert should not content himself by merely advising the workers, but do something himself. Only then subordinates will respond adequately to leadership. The aim should be to get co-operation and not mere obedience.

JUDGMENT

Proper judgment is one of the qualities necessary for managers. They have to judge the quality of materials, the suitability of machines, the ability of workers to do a particular job, the time sufficient for turning out a certain volume of work etc. Sometimes the managers delegate powers to their subordinates or deputies. But when anything goes wrong the chief should not blame the deputy but take it upon himself.

Training, selection and recruiting, promotion etc., are other functions of management. There are in many of our presses men who have talents in other branches, fields of production or processes. The manager should utilise such untapped talent as it is likely to go to waste. In emergencies, such knowledge comes in handy.

The administrator is not one who commands from above to be obeyed from below. He integrates, co-ordinates and co-operates with all. He releases energy and works for better quality all the time. A scientific and analytical mind is an asset to management. By his example and persistence, the manager imbues and instils confidence into his subordinates. An administrator should have about 15 per cent of technical knowledge, 25 per cent organisational experience and 60 per cent personal qualities of leadership.

In the present day India, few can afford the experience or thrill of planning an ideal factory, building for one, buying all the new equipment they want or even employing the right type of men. The managers' work is hedged in within import bans, lack of building materials, dearth of trained technicians, high cost of materials, non-co-operation of the Government of the day, suicidal competition from the trade, lack of incentives for the private sector, etc. But there is something in aiming at an ideal, even as a distant project for the future. In any consideration for better management, the point that guides will be whether a particular move will yield profit or not. Any change for the better that produces profits is an improvement.

Cheap land, low rentals, proximity with the customers, material dealers, workmen, etc., are factors to be considered when choosing premises for a press. The present-day trend is towards horizontal expansion rather than vertical. The latter brings with it the problems of materials handling, lifting, etc. After selection of building, the selection of plant to do the work and the personnel who can do the work are to be made. Heating, lighting, ventilation, etc. come in while planning each department of the press. The existing arrangement of many of our presses can be altered without much expense to yield better returns, to render them more safe, to save more labour, time and material. Still, many will not agree to such a re-arrangement.

Power means today only electricity. Gone are the days when power meant air, water, steam, oil or even gas. Electricity is the best motive power. It is cheap, clean, can be had where we want it, can be started instantaneously and cu-

off when no longer required. Individual drives are preferred to old-fashioned and cumbersome shafting, which means that the whole machine-room will be full of belts and cross-belts, disfiguring and clouding the view of supervisors. There is flexibility of performance, freedom in locating the particular machine where we want it, economy in power etc., in individual drive. Only the initial cost is a discouragement. This too is being lowered, thanks to the manufacture motors in India.

Starting presses is easy. To keep them running is difficult. To continue running at profit is the most difficult of all. For this entails eternal vigilance at all levels. There may be many leaks in production. Wastage may be in the form of lazy employees, surplus staff, unwanted materials, unused machines, crowded departments side by side with vacant places, improper supervi-

sion, wrong judgement etc. All these are avoided by laying down a policy, planning the production, assigning the tasks of each and inspecting whether every thing is going according to schedule or plan. Charts, Boards, Card Index systems and others aid proper flow of production. They show the work loads in various departments and locate the weak spot in the set-up.

Rarely, if ever, presses prosper by luck or accident. Even then they don't remain a boom for long. It is the efficiency of management that counts over everything else. A wise and experienced manager realises that there are problems in production. He understands these problems. He employs proper personnel to solve them. He selects, trains and maintains proper staff. He pays them adequately but never pampers them by too much encouragement. He is strict towards

them but understands their difficulties. He makes the workers understand that better production means better pay for them, and good name for all. He recognises that labour and management are the two limbs of industry. One never goes any far without the other. They are never arrayed one against the other or to work against its interests.

The management is the brain and the labour is the brawn in the body of production. Although all ills cannot be laid at the door of the brain, most of them stem from the bad state of affairs at the top. It is true that a sound mind and a healthy body paves the way for progress. This is proved in the industrial field as in the realm of physiology. While there is a remedy for every bodily ailment, there are very little effective cures for the malady of the mind, i.e., the management.

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PRESSROOM PROBLEMS SOLVED *by Graphicus*

194. Q. What are the merits of deep-etch offset plates as opposed to albumin plates? Are there insurmountable difficulties in the production of deep-etch plates? We have been printing label work by deep-etch, but we have now switched on to albumin due to obvious difficulties.

A. Deep Etch plates need great skill in their preparation and first class training is necessary to achieve results. A properly prepared Deep Etch plate will outlive an albumin plate by as much as 20 times the number of impressions and if properly set and cared for, even more. From my knowledge of conditions in India I would say that the length of run on label work does not generally warrant Deep Etch and one Albumin plate will last for the run and a new plate can be made for the next order.

195. Q. How long do you think it will take for India to manufacture her own printing machines? Assuming the present import ban continues unlimitedly, what will be the fate of our presses having superannuated machines?

A. The successful manufacture of any machine or consumer goods depends largely on the potential market. Personally I do not feel there is any cause for despondency; the manufacture of printing machines in India will develop with the growth of the Printing Industry and I am sure that the present ban on imports is only a temporary measure to tide over India's immediate financial difficulty.

196. Q. We open a five pound ink can. We find that we require only a small quantity from it. Our machineman has a way of storing the balance. He pours some water in the tin and closes the can. In this way, he says, we can preserve the ink from decomposition. I would like

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

your frank opinion of the soundness of this method of ink preservation in partially used cans.

A. Pouring water on partially used tins of ink prevents skinning; when using this method of preservation, be sure all the water is poured off the ink before using again. The best method of obtaining the same result, however, is to smooth the surface of the ink and replace a disc of butter paper over it in the same manner as received from the manufacturer.

197. Q. When we want a good blue, our machine-man always asks for the blue from our offset section. If perchance it is not readily available there and a letterpress blue is used, he blames this ink for all the ills and ill-effects in the results. How far is the machine minder right in his weakness for litho inks? I am sure as an expert, you would be able to focus our attention on the virtues of offset inks and the vices of their letterpress counterpart.

A. The main virtues Offset inks have over letterpress inks is that they are usually of a more concentrated nature. It may also be that your machine-man prefers a stiffer ink than letterpress.

198. Q. Do you think there are any advantages in the grammes-per-meter method of designating paper over the usual weight per ream method?

A. This depends on how you have been trained to deal with paper. It is just as simple, perhaps simpler to deal in grammes-per-meter as with pounds per ream. However it so happens that most Indian Printers have used the latter method for many years and it has become second nature to do so.

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

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