

PRINTINDIA

V. 2

V. 3

No 4-6

No. 1-2

1954



JL
M14 m 2, NS4

NS4 2 & 3
123756



Printindia

A MONTHLY MAGAZINE DEVOTED TO PRINTING & ALLIED INDUSTRIES

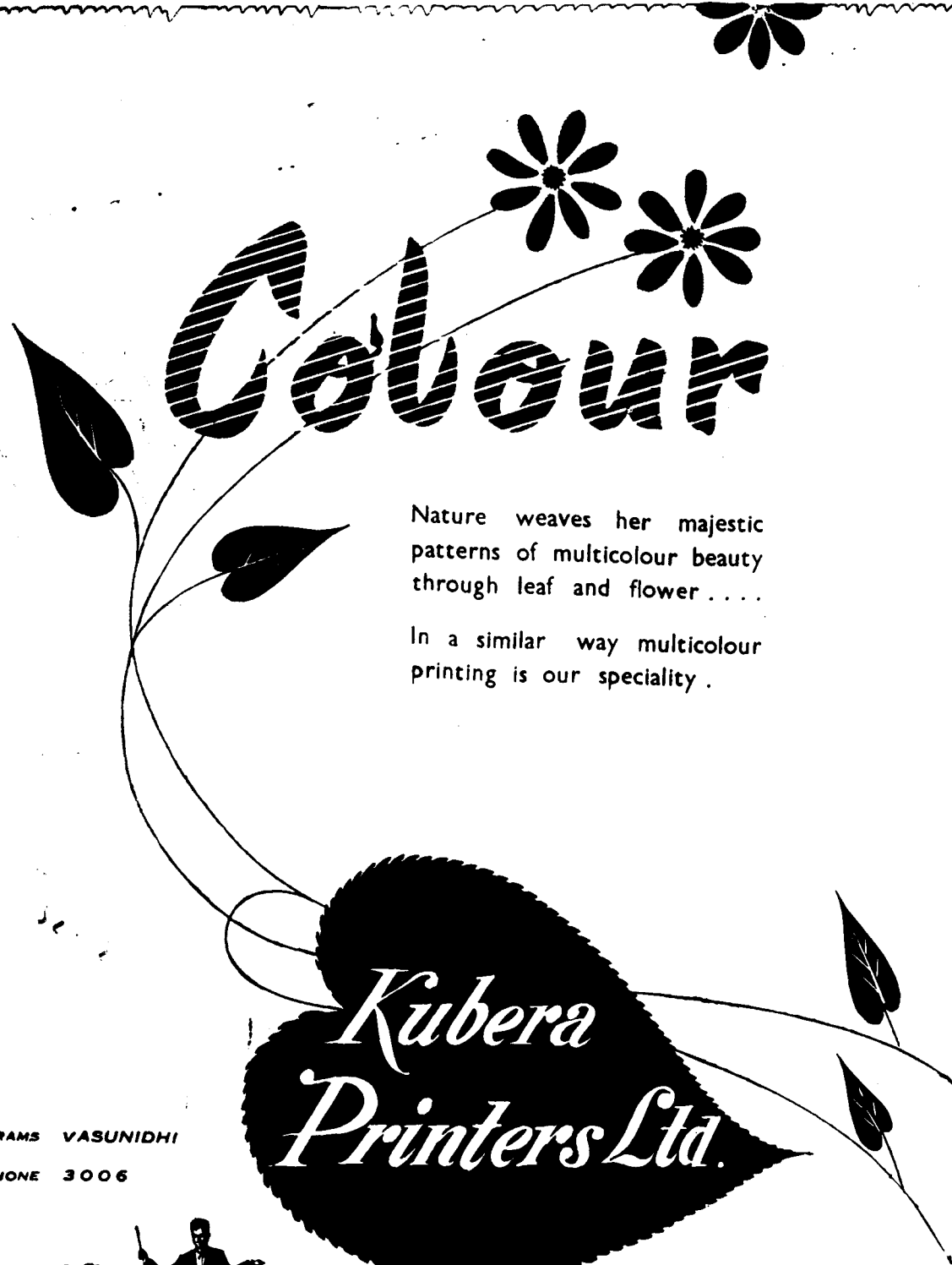


A *Kubera* PUBLICATION

UG. 1954.

PRICE. RE. 1-





Colour

Nature weaves her majestic patterns of multicolour beauty through leaf and flower

In a similar way multicolour printing is our speciality .

Kubera Printers Ltd.

GRAMS VASUNIDHI
PHONE 3006

The House of Master Printers

KUBERA BUILDINGS
21, SUNKURAMA CHETTY STREET, MADRAS-1.



PRINTINDIA

A Monthly Magazine Devoted to Printing & Allied Industries

Vol. 2]

AUGUST 1954

[No. 4

Managing Editor
TEMPORAU

Business Manager
V. S. N. Murthi

Circulation Manager
Miss. Lily Hughes

London Correspondent
F. & D. Brownlie

Roving Correspondent
G. V. G. Krishnan

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.

PRINTINDIA is Published in the 1st Week of every month.

ANNUAL SUBSCRIPTION RATES

INDIA	Rs. 10/-
U. K.	£ 1 Shs. 10
U. S. A.	\$ 5

Editorial & Publication Office :
PRINTINDIA

Proprietors
KUBERA ENTERPRISES Ltd.,
"KUBERA BUILDINGS"

21, Sunkuramachetty St., Madras-1
INDIA

Grams : VASUNIDHI

Phone : 3006

In this issue 18 AUG 1954

- Linofilm
- Small Printers—Are They Doomed?
- Better Design Sells More Printing
- Federation Costing in Indian Presses
- The Paper Guillotines
- Regular Features

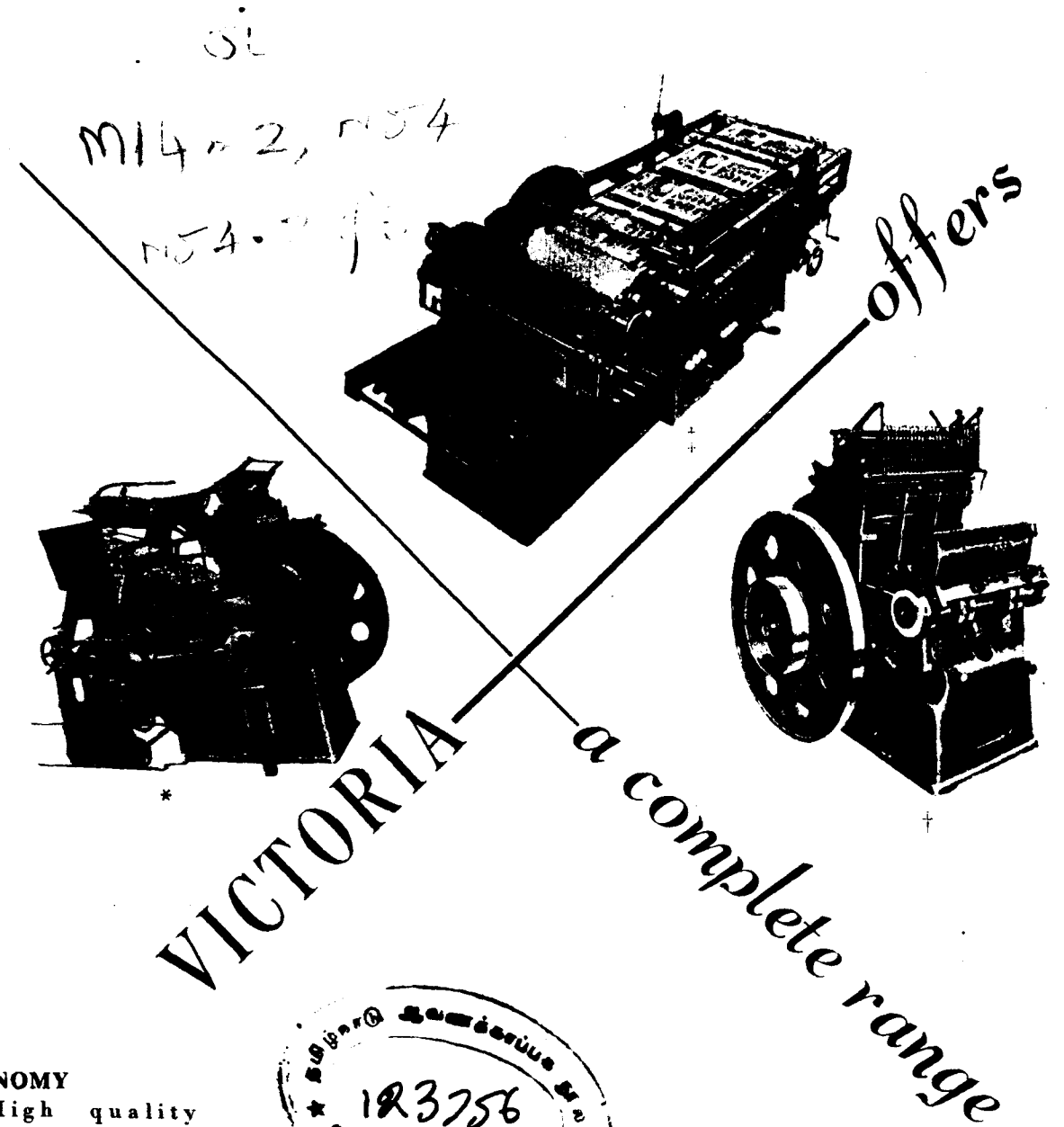
From Our London Correspondent
News & Views, Spotlight On
Persons & Firms, Modern Machinery & Equipment, Review Forum
etc. etc. etc.

THE BLOCKS FOR PRINTINDIA

ARE MADE BY

Messrs. NEWTON & CO.

THE LEADING BLOCKMAKERS OF MADRAS
80 WALLAJAH ROAD :: MADRAS 2
Phone : 86729



ECONOMY

High quality machines of modern design at low cost.

SPEED

Easy make-ready & excellent turnover.

QUALITY

Suitable for high-class work in single or multicolour.

EVERLASTING

Built to last and give decades of service.

APPLY FOR FULL DETAILS TO:

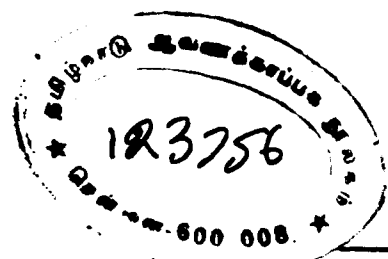
INDO-EUROPEAN MACHINERY CO. LTD.

Khaleeli Mansions
35/3 Mount Road
MADRAS - 2

Sambava Chambers
Sir P. M. Road
BOMBAY - 1

Post Box 1499
Chandni Chowk
DELHI - 6

9 Mangoe Lane
Off Bentick St.
CALCUTTA - 1



Model	Maximum sheet size	Speed up to
*A2' Handfed	13-3/8" x 18-1/2"	1,500
*A2' Automatic	13-3/8" x 18-1/2"	2,500
†C' Handfed	15-3/4" x 21-5/8"	1,300
†Front 'Gudrun' Automatic	22" x 31-1/2"	3,200
†Front 'Heidenau'	25-1/5" x 37-4/5"	3,500

LINOFILM

We reproduce below a statement issued by the Mergenthaler Company makers of the latest invention LINOFILM—briefly describing the various basic principles and approaches to photocomposing and advantages of the LINOFILM

Despite the use of many confusing terms, there are only a few basic approaches to phototypesetting devices producing justified lines. The fundamental engineering concepts being used by the people at work in this field of phototypesetting all fall within these general classifications:

1. The circulating matrix, or matrix handler, approach. (Linotype's 1950 machine, Fotosetter, Rotofoto, Monophoto, etc.)
2. The spinning disc, or spinning cylinder approach. (Peery, Keller-Fries, Photon, etc.)
3. The directed-mirror approach. (Klyce, Spievak, Huebner, etc.)
4. The video tube, or pure electronic, approach. (Linotype.)
5. The static character projection approach. (Linofilm.)

The circulating matrix, or matrix handler types of phototypesetting machine have been developed through the adaptation to photography of existing hot metal casting machines, retaining conventional matrix circulating or handling prin-

ciples and substituting photographic devices for the orthodox casting mechanisms. Linotype utilised this approach as a first step in its phototypesetting research programme. The research model of our machine of this type was exhibited at the National Graphic Arts Exposition held at Chicago in 1950. It differed from machines of a similar nature in that it photographed a whole line of assembled matrices at once rather than matrix by matrix. That machine was never offered to the trade.

It was our judgment that the use of a machine designed for other purposes to produce a photographic product did not meet the new requirements of phototypesetting and would result in the preservation of certain inherent limitations that should not be carried over into a new process. At the same time we rejected the spinning disc (or spinning cylinder) and the directed-mirror approaches because our research engineers saw certain fundamental performance limitations and disadvantages in those methods of phototypesetting.

We embarked upon a research programme designed to develop a simple, practical and efficient phototypesetting machine of original concept and without inherent performance limitations. The result of that project is the Linofilm, a completely new machine of original concept based upon a unique approach.

During the course of our research we conceived and patented another new concept which can be designat-

ed as the video tube, or pure electronic, approach to phototypesetting. However, the subsidiary electronic component developments in this field are not at the level of performance required for the construction of a practical machine. While this is an interesting approach we view its reduction to practice as something which is far in the future.

PRODUCES TAPE

Linofilm is a two-unit machine consisting of a keyboard unit and photographic unit. The keyboard unit produces, in one operation, regular typewritten copy and perforated tape. The tape is fed into the separate photographic unit which operates automatically to set type on film in response to control information on the tape.

The two-unit construction separates the basic keyboard and photographic functions and provides unit utilisation in accordance with the workload imposed on each and



Linofilm-Keyboard Unit



Linofilm-Photographic Unit

AUGUST 1954

with varying time schedules for the operation of individual units. The separate units may be grouped and placed anywhere within a printing or publishing plant as best suits that particular operation, and no air conditioning is required. Each unit uses electric power ordinarily available.

The Linofilm keyboard unit, occupying the space of a typing desk, consists of a standard typewriter, a small auxiliary panel for a few selector and control keys, a justifying unit and a perforator.

The keys of the typewriter itself are slightly re-arranged for ease of operation. The auxiliary selector and control panel has keys for hair spacing between characters in increments of twelfths of an em, fount selector keys, a quad left key, an end-of-line and justify key, and a line erase key. These are compactly arranged for operator convenience.

The justifying unit is a mechanical justification computer and indicator, and the perforator is an electromechanical punching unit which perforates the appropriate code on paper tape. Tape is the medium which permanently stores and carries all keyboard information to the photographic unit. The tape is easily handled and can be held for re-runs as needed.

Keyboard settings are made by the operator according to the type, size and length of line specified. In the pre-production model being exhibited line lengths upto 30 picas can be handled and the operator can letter-space and word-space. Justification of the line is computed mechanically and punched into the tape automatically.

The operator punches into the tape the specifications for capitals and lower-case of roman, italic and

bold face, as well as small capitals and pie characters. The operator also sets blank spaces and blank lines.

Use of a standard typewriter keyboard means that there is no keyboard limitation on operator speed and output. Output of the entire typing unit is limited only by the speed of the operator.

The photographic unit of the Linofilm contains a reader unit, an optical system and a film magazine. It occupies approximately the same floor space as the keyboard unit. All of the functions of the photographic unit specified by the tape are controlled electrically.

ELECTROMECHANICAL READER

The reader unit is an electromechanical reader for decoding the information punched on the tape by the keyboard unit. Its construction is simple.

A multi-projection optical system is used to project any single character from an array of characters to a common photographic point. The optical system is unique and consists of a light source, the character arrays mounted on a vertical turn-table and an optical turret assembly.

The film magazine is a holder containing the film and a mechanism for advancing it between lines. The film magazine is lightproof and removable in its entirety. In addition, through the use of a separable film cartridge exposed film may be removed from the main magazine at will.

The product of the pre-production model exhibited is a wrong-reading positive (black letters on a clear base), but production models will be able to produce either

wrong-or right-reading positives as desired.

The photographic unit of Linofilm contains a minimum of moving parts and mechanisms. In the pre-production model of the first of the Linofilm line it operates at approximately the speed of the Comet Linotype machine. However, because of its unique optical system, Linofilm's photographic unit has no inherent speed limitations. The speed of the photographic units in production models will be greater and will meet any requirements of the industry.

The heart of the Linofilm is the optical system contained in its photographic unit. The optical system consists of: (a) A light source illuminating the character array; (b) a vertical turn-table which carries a number of small glass plates on which type characters are arrayed in a grid formation, each glass plate containing what corresponds, to a front complement of type characters. The turn-table is controlled automatically from the tape and presents the desired fount to the optical system for photography. Individual founts, as well as whole turn-tables, are easily changeable, although enlargement by photographic methods makes available a wide range of type sizes from a single character array. The turn-table in the photographic unit of the pre-production model being exhibited now carries five glass-plate character grids, but the turn-table in the ultimate production model can be constructed to carry an additional number of such character grids; (c) a shutter system permitting selection of any single character from the array (fount) selected; (d) a multi-projection lens system which projects the selected character to the photographic point; (e) an optical turret assembly accomplishing

(Continued on page 14)

Small Printers—Are they Doomed?

By
SRI K. C. RAMAN

There are thousands of small printers in our country. Are they doomed? They are not, assures the author, provided they keep themselves abreast of the times

In the printing industry—as, indeed, in almost every industry the small printer of today feels very keenly the intrusion made upon his territory by the keen competition of big printing firms from large Cities.

Of course one finds here and there certain exceptions of local printers withstanding outsiders, but in the majority of cases one often hears the complaint that work is going out of the district on account of ruinous price cutting by outsiders and it is almost impossible for the local printer to hold his own. The price-cutting, though a serious factor is by no means the sole cause of work going astray.

Let us take for instance a small district situated near or amongst several large firms of one kind or the other. The orders from these firms alone should be sufficient to keep the local printers busy. The print buyer of large quantities feels that the small printer lacks smartness, finish and exactitude in the execution of orders entrusted to him. Again seldom is he properly conversant with the modern make-ready methods and innumerable upto date labour saving devices etc., which are obtaining such a strong footing amongst the larger printing firms. Unfortunately this is a hard thing to say of the small printers but in the main, it is only true.

SHORTCOMINGS

How often small print-shops turn out work in a manner which one of the same craft feels ashamed to own. Heavy impression, uneven

inking, a gross super-abundance of ornament and a total lack of symmetry in the selection of type faces are frequent. So also the colour work which shows lack of care in washing up both ink rollers and slab. These are some of the shortcomings of the small printers which buyers of intelligence and experience will not tolerate.

Hence it is that the salesman representing a large printing firm whose work is good, is given a "chance to quote." The price tendered is by no means always below that tendered by a local printer but the order is often obtained with the remarks from his new customers that they would much prefer not to send out of the district, but frequently were obliged to do so when wanting really good work.

THE WAY OUT

Now the small printer will ask what is the way out? Well, the remedy is to realise the shortcomings mentioned here and to start with employing properly trained technical personnel and gradually modernize the equipment and introduce labour saving devices. Many cases have come to the writer's knowledge where outside printers had the "run" of certain districts for years and have been allowed by the local printers almost without protest. If only local printers would shake off their lethargy, canvass the local districts systematically and unremittingly and show that they really want work which for such a long time has been going

to distant places and also convince that they could be done locally in a first class manner, their efforts will not go in vain.

Of course on some classes of work, e.g. multicolour printing—the prices of large outside firms which specialise in one direction are—and always will be—unapproachable by their smaller brethren; but with the majority of work local printers should be able to cope with at about the same prices or perhaps even lower. Further it is important to bear in mind that firms from a distance are handicapped by travelling expenses and carriage of goods.

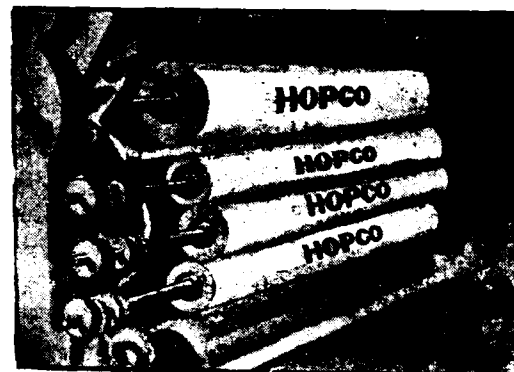
A FEW HINTS

The local printer more often than not is inclined to feel too sure of his clientele and does not go about with the same persistency as does the outsider. He imagines that because he is always on the spot, neighbouring firms will always send to him when in want. However, it is not so; it is the printer who with the utmost regularity calls on firms at periods varying from a week to a month according to their size, and who is therefore always expected at a certain date. Whether anything is actually wanted or not at the time of his calling does not really so much matter; the fact of his putting in an appearance shows that he is wishful for orders and he is not likely to be forgotten when such orders are about to be placed.

It would also be helpful if the local printers would advertise in the

(Continued on page 24)

Service to Printers **HOPCO**



RUBBER ROLLERS

Largely in use all over India

- ♦ Famous for attractive printing, long lasting and oil & heat resisting.
- ♦ Ready stocks available for all Chandler & Price machines.
- ♦ For all cylinder, Rotary, Litho-Offset & Varnishing machines also, supplies will be made to order.

FOR PARTICULARS WRITE TO:

HOLT PRELLER & Co.

Head Office:
P. O. B. 1014 :: BOMBAY-1
Grams: "HOPCO" Bombay

Branch Office:
10, THAMBU CHETTY STREET, MADRAS-1
Grams: "HOPCO" Madras

Got your copy of this pride publication?

".....PRINTINDIA does a good job by covering in details,—through reports, articles and pictures,—the second session of the All India Printers Conference and Exhibition recently held at Calcutta. We have nothing but high praise for this issue which contains stimulating articles by competent authorities, a nice account of the last Conference and many other provocative items. You will be glad to possess a copy of this Special Number" so says the well known Amrita Bazar Patrika daily from Calcutta.

Phone: 3006

KUBERA ENTERPRISES LIMITED
'KUBERA BUILDINGS' :: 21, SUNKURAMACHETTY STREET :: MADRAS-1

THE ALL INDIA PRINTERS CONFERENCE NUMBER

OF

PRINTINDIA

A Landmark in Graphic Arts Journalism

- ♦ EXQUISITELY PRINTED ON REAL ART PAPER
- ♦ LAVISHLY ILLUSTRATED WITH DOZENS OF PHOTOGRAPHS OF THE CONFERENCE TAKEN AT CALCUTTA
- ♦ THROWING HUMOROUS SILELIGHTS ON PERSONS AT THE CONFERENCE

AND

- ♦ PRESENTING AN AUTHENTIC AND CANDID SURVEY AND SUMMARY OF THE PROCEEDINGS OF THE CONFERENCE AND THE EXHIBITION

A publication no printer
can afford to miss!

Price including postage
by R. P. 1-10-0

PLEASE SEND YOUR REMITTANCE TO:

Grams: 'VASUNIDHI'

Better Design Sells More Printing

By

MR. WILL BURTIN

To look forward, to attempt to decipher the future, is an old human tradition. In past times the Delphic oracle or the astrologer were consulted, but with his increasing knowledge man now applies his experience and imagination to the task of planning, rather than guessing, his future.

This is one of the great things about man—he can look around, beyond himself, can question—he can review the past and estimate what the future may hold. The earnestness of this search determines largely his chance of success and, in our time, even survival.

It is safe to state that the progress of Western man is not an accident, not just the fruit of fortuitous circumstances, but the logical result of an attitude which never stops asking questions—and finding answers.

Leading contemporary scientists have stated that we are living in a relatively unexciting time—that all the great questions have been asked. These men have defined our time as the period in which we must find the answers, before new questions can be asked.

This sounds surprising and somewhat strange at first, yet it is literally true. We are living in the midst of the "answer" period, a period of hard work, which is testing our moral and intellectual standards as never before. Much that is unreal or useless about our way of doing things, and of thinking itself, is exposed to this process to a new light.

Progress is never easy. Progress is often obscured by the heat of argument, which stems from the courage of the great questioners and the opposition to change. Often it arrives unrecognized and often with the great roar of the atom bomb. But it is always the heartbeat of our lives and of the society we live in.

We are fortunate to work in a professional field that is closely linked with the progress of the last centuries. Ever since Gutenberg mechanized the process of organizing images on parchment and paper, the fields of design and printing have supported each other in developing better ways of expression and clearer understanding. The case of contemporary living itself would be impossible without the development of printing, first as an art, then as a craft, and now as an industry.

Whatever assurance this achievement may spell, it does not release us from the obligation to look forward. We must review our activities steadily, not only on the basis of what they accomplish, but also of what they could do—not only on how well things are done, but how much better they could be done.

MUST ASK TWO QUESTIONS

The time has come when we must ask ourselves—as designers and printers—whether we are doing well enough in design for communication, considering the amount and quality of knowledge available: and whether we are utilizing the

technical potential of printing to the fullest advantage.

In art and design, the 19th century was marked by great analytical endeavours which resulted in many art-isms. Probably as a result of specialization, from which neither artists nor any other profession could escape, the social purpose of art was increasingly obscured by introversion and preoccupation with esthetics as such. While these endeavours were progressive in character and were themselves (often unknown to the artist) part of the great scientific debate, they resulted in a certain remoteness from immediate reality. A cleavage developed, with science and technology on one side and art on the other.

Artists and designers associated their activity and its assumed finer meaning with the humanitarian and emotional side of things, while science was classified as impersonal and intellectual.

For some time this division seemed plausible. However, we can now estimate the extent of that error, and must reject the division as arbitrary and even dangerous. The thesis of art vs. science proves upon inspection of facts to be fiction.

I believe it was Darwin who stated that misinterpretation of facts is less dangerous to progress—because it can be corrected—than ideas unsupported by the proof of reality.

Wrong ideas can hang on beyond the generation which creates them, and they have a way of breeding

AUGUST 1954

Many outstanding performers in the fields of design are now just as precise in expressing their ideas as they are creative in their work. For example, Richard Neutra, the great American architect, writes in his recent book **SURVIVAL THROUGH DESIGN** about the problem of beauty. He observes that there is no sense of beauty as such in man. Instead, man values the harmony of integrated efforts, usefulness, and simplicity as qualities, because they do assist him in a better and deeper understanding of the living world.

The new sciences of psychiatry and psychology have brought more insight into the workings of man's mind. The ability to think abstractly has brought a tremendous growth in concepts of space, matter, time and energy. A re-evaluation of every aspect of living and consciousness has flowered into the great scientific revolution which is the characteristic of our time.

It is clear that art and design must meet many new requirements in this new age, which is only re-

In our estimate of that certain unknown reader, we must rely on a radically different type of knowledge about people, in which science is

(Continued on page 23)



8

By

Though Printing industry is the third largest industry in India, there is no standard costing system for Indian Printers. The All India Federation of Masterprinters have drawn up a costing system for introducing on an all India level and this system is briefly detailed hereunder for the benefit of our readers

chinemen, has to submit his estimate to his client—a competitive throat-cutting estimate, having had to face rates of small and still smaller houses with one platen possibly, husband and wife working on the machine and in the case-room at odd hours. The Printer's estimate is therefore based on allied anticipations, while all the time looking through the prism what the cost would be like—a rough calculation looking at the ceilings, with pencil between the lips.

Why make a pre-conception, that the Federation Costing System is an elaborate process, when the very subject is elastic in its import? Piece-meal application

Date.....

Pay Rs......

Name of Compositor
Distributor

No. Section

[illegible]

will ultimately lead to standardization and no result will be wasted. Left alone, in its unscientific works control, the industry is bound to recoil.

Let us now study, how much of the F.C.S. principles can be practically applied in Indian conditions. A Printing Establishment whether it be large, small or specialised, whether it is news, book or job printing house or even Box-making, Bag-making or Offset Printing house, must have in the Cost, three elements.

- (1) Wages (Productive Departments);
- (2) Materials (Directly chargeable to Jobs);
- (3) Other Expenses;

and all movements of whatever nature and all expenses must fall in one or other of the above. In the

Productive Departments, however, all wages and overtime paid, cannot, however be directly allocated to jobs, because there are odd indirect workings involved, besides idle timings. Wages of Productive Departments, even though these may be paid to Direct Labour, must have to be classified under (i) those directly attributable to job-heads (ii) indirect and as such, falling under chargeable expenses (iii) idle hours forming under on-cost expenses. The data for classification are obtainable straightaway from Daily Out-turn Sheets of productive hands, a specimen of which, is given in the previous page.

In addition to the above, there are certain categories of workers, unlike compositors in a Letterpress Establishment or artists in an Offset house who may be termed direct labour, like coolies, metal

melts, proof-pressmen and sundry, whose labour-hours cannot be directly allottable to jobs. These are to be charged as on-cost expense-heads on monthly allocation basis.

Finally, comes the Supervisory Staff, whose salaries along with other expenses form a surcharge on actual expenses on jobs.

As in the case of Labour, so in materials, there are issues, like paper and inks, which can be directly allocated to jobs. But what about machine oil and the like? These are indirect materials.

Once thus the segregation is made between direct and indirect expenses both in the case of labour and material, we have to consider other overhead items like electricity, gas, insurance, taxes, rent and so on.

(Continued on page 27)

The Paper Guillotines

By
SRI J. P. JAIN

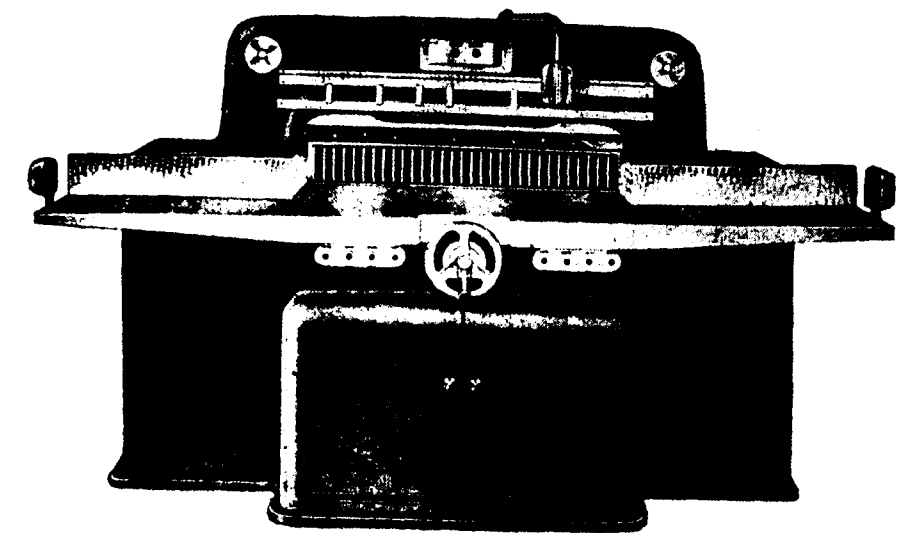
Binding is as important a process as the printing itself. The progress of printing is interconnected with the development and improvements which have taken place in the binding field. Efforts have been made all over for economy in running cost and time taken in the cutting operations. An output of 20,000 and above in a rotary could not be achieved except for the proper arrangement of folding and cutting in the rotary itself. Similarly the three-knife trimmers have gone a long way for improving the speed and uniform cutting of magazines and books.

The oldest form of cutting, cutting the papers by ordinary larger size pen knife, seems to have lost its entity among the multitypes of cutting machines and devices which have been developed today. The Guillotine can be classified among those hand-operated and hand-clamped, power-operated and hand-clamped, self-clamp and power-operated, three-knife trimmers and others.

The Hand lever cutting machine is the simplest form of cutters. The movement of the knife is regulated by a hand lever i.e. pressing the lever brings the knife down and after cutting lever automatically goes up by means of a spring. Some lever cutters are made without stand and some with stand. Clamping is done by hand. Bigger size machines are also fixed with back gauge for movement of paper. These type of cutters are still being made for small presses who cannot afford up to date machines.

The next improved model is the rotary hand cutter. The movement of knife is regulated by means of a rotary wheel. The rotary wheel means a regular movement of knife and thus a finer cut. Hand clamping and hand-operated back gauge are a common feature to lever cutting machine. The latest type of hand rotary machine are equipped with flywheel and claw coupling. The machine disengages automatically after each cut when the blade is in its extreme upper position. The blade cuts in a rocking motion and is adjusted in long holes. Adjusting levers are provided for fine adjustment. The manual clamping, a cumbersome process requiring a lot of strength, now can be done by minimum amount of power. To release the pressure, a short pull on the hand wheel is sufficient. The clamping beam, the guide of which is adjustable, can be used also for marking the cutting line by actuating the hand-

wheel. A covering plate is provided for delicate paper. The cutting board is tightly screwed to the machine. The side lays extend close upto the cutting line allowing even smallest piles to be fed. The back gauge feed is driven by means of a hand crank and steep-threaded spindle. A setting nut makes sure that the screw spindle works free from play. A clamp on the steep-threaded spindle secures the back gauge against displacement by shocks. The back gauge can be adjusted to all sides. Its guide in the table groove is readjustable. The reversible narrow cutter makes it possible to set the pile against the plain or prong side and to cut the pile down to a residual width of 1". The scaled tape indicates the exact distance between the pile gauge and the cutting line. A leans combined with a light allows of convenient reading of the back gauge adjustment in the scaled tape.



Maxima MHE Automatic Cutting Machine

SWADESI A Great Name in
FINE FINISHED TYPES

Manufacturers of
Types in Fourteen Languages
AND
Half-tone, Line, Electro Blocks

Suppliers of
Printers' Complete Requisites
MACHINERY & MATERIALS

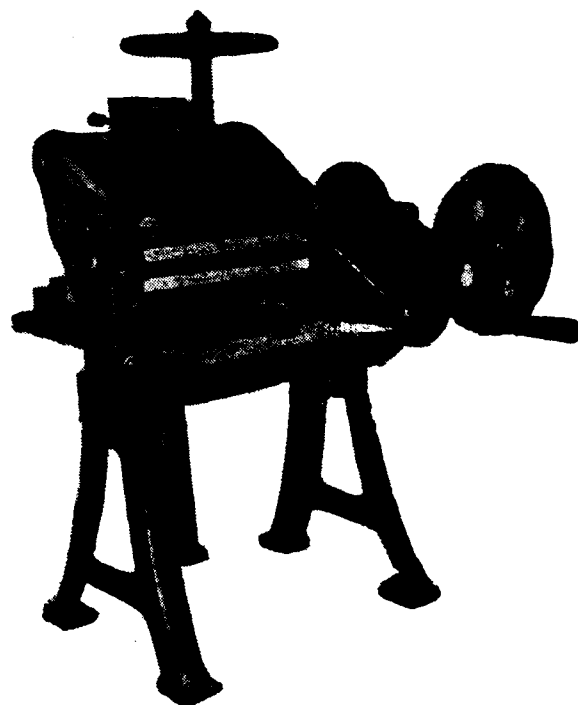
Cable: BHUVANA

Phone: 8291

SWADESI TYPE FOUNDRY
CHINTADRI PET :: :: MADRAS-2

The next step to the hand operated cutting machine is the power-operated one. The drive instead of hand is by means of electric motor. The spring ring coupling allows the machine to be thrown into and out of gear independent of the blade position. The machine disengages automatically after each cut when the blade is in its extreme upper position. Another feature generally now provided is a safety hand guard. Some of the Manufacturers equip their machines with cradle swinging cutting motion instead of a yoking motion. It is claimed that the former system decreases the strain of the whole mechanism, works with a minimum consumption of electric energy and saves the knife edge.

The necessity of quicker cutting had necessitated further improvements over the hand clamping system. It was replaced by self-clamping system. The pressing device is driven by its own gear. It operates shock-free and holds equally well the highest and the lowest pile of paper. The front leading



Hand lever and hand-Clamping Cutting Machine

edge is generally fitted with a hardened and grinded bar made of special steel, enabling the knife to pass the bar in hundredth millimeter distance. The foot indicator of the cut, used before the cutting, for determining the exact position of cut, requires only very slight pressing. The necessary pressure is provided by perfectly designed levers and high quality springs. These are arranged in such a manner that they automatically develop the require pressure according to the immediate demand. They apply high pressure when hard material is cut and in contrary, these prevent the pressure becoming too great for a soft material. A very important advancing of the system is that the tension is applied to the springs only for a short period during the actual cutting. No tension is applied when the machine is at rest which has a very favourable influence on the durability and continuous equal pressing.

Some of the self-clamping machines are provided with automatic advance of paper for continuous cuts at a determined length. Such a machine is known as Automatic Cutting Machine and the colloquial use of self-clamping machine as automatic cutting machine is incorrect. In this system, width of cut is set by the lever provided on the table in front of the operator. Fine setting is provided for eventual corrections during the cutting operation. The mechanism allows cutting of strips of uniform width in a continuous series down to last 1/4" or near about depending upon the various machines. Such type of arrangement is very convenient and economical

to those engaged in production of labels on mass scale. The automatic can be cut out, so that the machine can also be run as an ordinary high speed guillotine. For semi-automatic operation, the machine is set for automatic advance of a given width of strip and struck on by hand for each cut. Where width larger than 9 inches are required, the step advance is adjusted at half. After each cut, the back gauge advances automatically, by half the length without cutting then the pile will be advanced automatically another half by the action of a hand lever and then the cutting knife will come in action. The other improvement in the clamping system is by hydraulic pressure. Hydraulic clamping solves the problem of clamping with high efficient cutting machines. The clamping device works smoothly and without any shocks even at the highest speed. The clamping pressure may be adjusted within a wide range according to the materials being cut by means of an easily accessible hand wheel. The pressing under this system is perfect. If a wrong clamping pressure has been set or a slightly blunt knife used, the pressure automatically increases to ensure a smooth and perfect cut.

Recently some manufacturers have introduced a new type of safety guard which works through photo electric cell. The photo electric cell is so designed as to give a field of protection all along the width of the danger zone in front of the knife. If any one of the attending personnel or anybody else puts his hand into this zone, neither the clamping device nor the knife can be put into operation. If the danger zone has been tampered with while the knife has been already set in motion, both the clamping device and the knife return to their initial position. Some

(Continued on page 18)

From Our London Correspondent

F. & D. BROWNLEE

The Official Report of the Second International Conference of Printing Research Institutes on "Printability of Paper", held in Sweden in 1953, has now been published by the International Bureau of the Federations of Master Printers (69, New Oxford Street, London, W. C. 1).

The Report begins with an introduction to the problems of printability of paper and follows with a review of the methods used to measure the suitability of paper for printing.

An important contribution on the subject of the strength of paper was made by Professor B. Steenberg (Swedish Forest Products Research Laboratory), who showed how such problems as web breaks are affected by strength properties which are not easily ascertained by the usual methods of strength testing. The speaker suggested that a more realistic way of approaching the problem would be to consider shock waves and their interaction with weak spots. He also made reference to such matters as cockling and dusting.

Another paper "The Physical Relationship between Paper and Ink", by I. Olsson and L. Pihl (Graphic Arts Research Laboratory, Stockholm), described experiments that have been carried out on the subject of how printing pressure and ink viscosity affect the amount of ink transferred to paper under impression.

An important factor controlling print quality is the influence of the

porosity of the paper, and on this subject Dr. D. Tollenaar (Graphic Arts Research Institute, Amsterdam) discussed the theory of the movement of liquids in the pores of paper, followed by an experimental study of the penetration of ink into paper.

Many other interesting and informative papers were read, including such subjects as the dimensional stability of paper and its relation to variations in relative humidity, with particular reference to register problems; the influence of paper on ink drying; the measurement of the printing quality of news-print; and the ways in which paper-makers can improve the printability of paper.

The whole Report is interesting and valuable as giving an insight into the work being carried out in printing research institutes in all parts of the world on "Printability of Paper", which is one of the chief factors influencing the quality and production rate of print.

Goodhale Distributors Ltd., of London have introduced a new 26" self-clamp power paper cutter, which is stated to have a number of unusual features, and like the other models made by this firm, no flywheel, no clutch, and no belt are required.

The machine, of box-like construction, is 3ft. long by 1'6" in depth, and most of the operating parts, including motor and gears, are totally enclosed. The main structure consists of two massive aircraft alloy castings, but in spite of this

the machine weighs only about 10 cwts. The main frame also is in the form of a box-like casting, and the table rests on its base.

There is no clamping pressure on the main frame, the clamp being pulled from below by means of a reciprocating action, with a clamping pressure immediately variable from zero to 4,500 lbs. Another feature is pre-set clamping pressure irrespective of the height of the pile.

The clamp may be used as a cutting line indicator through movement of the foot pedal, and after cutting, the knife automatically returns to the top of the stroke, the actual cutting time being less than two seconds, with a cutting cycle of 3 1/2 seconds. Included also as standard equipment is an automatic hand-operated device for regular or irregular label cutting.

Drive is by means of a 1 1/2 H. P. motor, and incorporated in this is an electro-magnetic brake which is always in the "on" position except when the machine is actually operating. In the event of the electricity supply failing, or the motor itself breaking down, all the moving parts are locked, so that the machine cannot be operated. Included also is an eye-level rule graduated both in inches and metric, and no greasing of the bearings is necessary, the daily attention required being claimed to be only 20 seconds.

Investigations by Patra have shown that steel litho plate graining marbles can be more economical

(Continued on page 16)

Linofilm

(Continued from page 4)

optically the required point size changes by enlargement.

The optical system enables Linofilm to utilise a completely new character presentation method that places successive letters on stationary film from a static character array. Weightless beams of light replace costly, bulky and complicated devices requiring continuing maintenance and periodic replacement. From an operational view-point this also means that no time or energy is required to start and stop the parts replaced by inertialess beams of light. Because of its unique optical system Linofilm has no inherent

speed limitations and no variations in character placement or alignment.

There is no limiting factor in the Linofilm which will prevent the adaptation of any existing Linotype face or character to Linofilm use. Some modifications of Linotype faces will be necessary to convert to Linofilm's unit system, letter characters designed on random widths. In making those modifications full advantage will be taken of those benefits peculiar to a photographic system.

The basic family characteristics can and will be retained; so, while a Linotype and Linofilm face may not be identical letter by letter, the overall appearance of the two will

be the same. For the demonstration of the pre-production model of the Linofilm, an experimental roman, italic and bold face type was prepared. Work is proceeding on the conversion of Linotype faces for Linofilm use.

FACES AVAILABLE

A full library of Linotype faces will be available when the Linofilm is offered to the trade. For languages other than English, a standard assignment of position for each required accent will be adopted. Non-roman languages will be given individual consideration and treatment.

Spacing within the line on the Linofilm is keyboard controlled.

The necessary fixed spaces may be introduced between characters or words as required in a full and adequate range of sizes from hair space to full em.

Variable spacing for justification between words only. The minimum provided by the machine is small enough to allow fine, close spacing. Spacing between lines, or leading, is controlled in the photographic unit in increments of points or fractions of a point upto 24 points, but blank lines of the body size being set can be allowed.

Kerning, both to the right and to the left, is possible. Italic is full kerning. Any variety of pie characters is readily available. The

pre-production model being demonstrated quads left, but full quadding can be made available on the production model.

RANGE OF TYPE SIZES

The range of type sizes in the pre-production model of the Linofilm is from 6 to 16 point. As in Linotype practice, it is recognised that a single letter design will not suffice for a full range of sizes from 6 to 16 point. Consequently, two character grids are used in the Linofilm to cover the full-size range of this machine. The smaller is 6 point (prepared from 8 point designs), and by enlargement covers 8 and 9 point as well as 6 point. The larger is 10 point (prepared from 12

point designs), and by enlargement covers 12, 14 and 16 point, as well as 10 point. In the production model additional sizes can be made available.

There are no variations in character placement or alignment in the Linofilm. The clarity of the type-on-film product of the Linofilm is excellent, and far above the requirements of any known reproductive process. There is no distortion inherent in the Linofilm optical system and the original type design is reproduced on film with great sharpness and fidelity.

In its typesetting research and development Linotype has

(Continued on page 24)



(L to R) Sri K. V. Subba Rao, Managing Director of the Kubera group of concerns, Sri Jain, Sri Bhandari and Sri Temporau



Sri Bhandari in a Conference at the PRINTINDIA Office

From Our London Correspondent

(Continued from page 13)

than glass ones and that the final grain is of much better quality. Comparisons were made with the two types of marble to check the rate of wear during a test period of a few hundred running hours. It was found that in addition to improving the quality and consistency of the grain by using steel

marbles, the graining time was less and only 10 lbs. of steel marble replacements were required per week compared with 75 lbs. of glass marbles. Tests showed that replacement costs for steel marbles are approximately half those for glass.

The preliminary tests were concerned with examining the technique used by the grainer, and it was found that when the grainer was running the marbles were almost two layers deep, which led

to extra wear without a corresponding increase in graining of the metal. The resulting grain was "scratchy", and it was considered this was probably due to an excessive amount of water being used (due to the design of the bed of the grainer) and to the over-riding of the smallest marbles by the largest.

It was felt that although some improvements in quality could be achieved by suitable modifications to the technique, one of the most important causes of lack of consistency was the rapid rate of wear of the glass marbles. As steel marbles wear less rapidly than glass, and since they are smaller for a given weight, they allow a greater number of abrasion contacts with the plate for the same load. Thus a more consistent and a finer (yet deep) grain is likely to be produced.

The next step in the investigation was to use steel marbles and to compare results obtained with glass ones. Using the steel marbles, it was shown that the final grain was much finer than the one obtained with glass marbles, yet it was deep enough to carry the optimum amount of water on the printing.

"PATRA NEWS" also gives a useful practical hint for determining whether letterpress machine cylinders are firmly "down", on the bearers. It is recommended that the minder simply dabs out a patch of ink, preferably bright coloured, to a very thin film on each bearer in line with whatever part of the forme requires the heaviest pressure, and then takes one impression in the ordinary way at printing speed. An ink patch clearly defined in size and shape should be noticeable on each of the cylinder bearers. Should it fail to appear, serious trouble on the run, and possibly costly damage and loss of time would certainly result.

(Continued on page 22)

PRINTINDIA



SWADESHI TYPE FOUNDRY

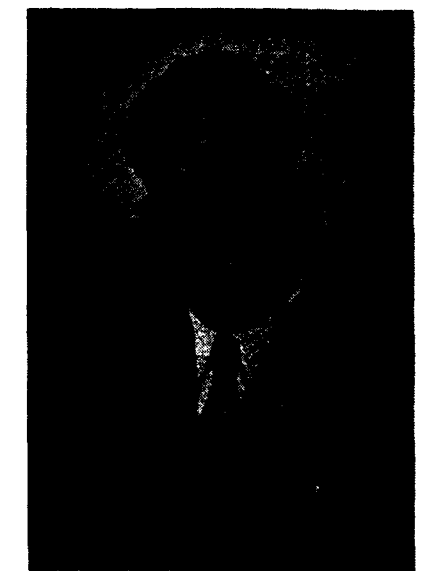
To most of the printers in this country, Swadeshi Type Foundry, Madras is quite a well known name. Started in the year 1906 by Sri T. Arumuga Madaliar, the Swadeshi Type Foundry has grown by now into a huge institution doing tremendous service to the printers in this country. Sri T. A. Subramania Mudaliar took charge of the Foundry in 1918 and during the period he was at the helm, the Foundry has developed in all directions. Now there are more than 125 persons working in the Type Foundry. Swadeshi Type Foundry has made



Sri T. A. Subramania Mudaliar

a great name for the types they provide in many Indian Languages which include Hindi, Marathi, Sanskrit, Devanagari, Tamil, Telugu, Malayalam, Canarese, Urdu, Oriya, Gujarati, Sinhalese and English, etc. In addition to the Casting of Types, they are also manufacturing "Leads" of various sizes in different points on standards of the west. Besides, they are also manufacturing Durable Brass rules at a very less cost. There are few Type Foundries in this country casting types in so many languages as the Swadeshi Type Foundry of Madras. In view of this, this Type Foundry has a rich flow of business from all parts of India from Kashmir to Cape Comorin.

It is very gratifying that Sri T. S. Shanmuga Sundaram B. Sc., one of the enterprising sons of Sri Subramania Mudaliar has taken over the management of this Type Foundry since March 1950. Sri Shanmuga Sundaram is a highly qualified man who has the charm of making friends with one and all and he has also widely travelled in this country. In January 1955 Sri Shanmuga Sundaram is leaving for England and Europe on a study tour of the Type Foundry Business. And intends to visit all the leading Type



Sri T. S. Shanmuga Sundaram B. Sc. Foundries in the Continent including the famous Monotype Corporation. This tour of his will equip him in a larger measure to serve the printers of this country far more through the Swadeshi Type Foundry which he is managing now.

PRINTINDIA

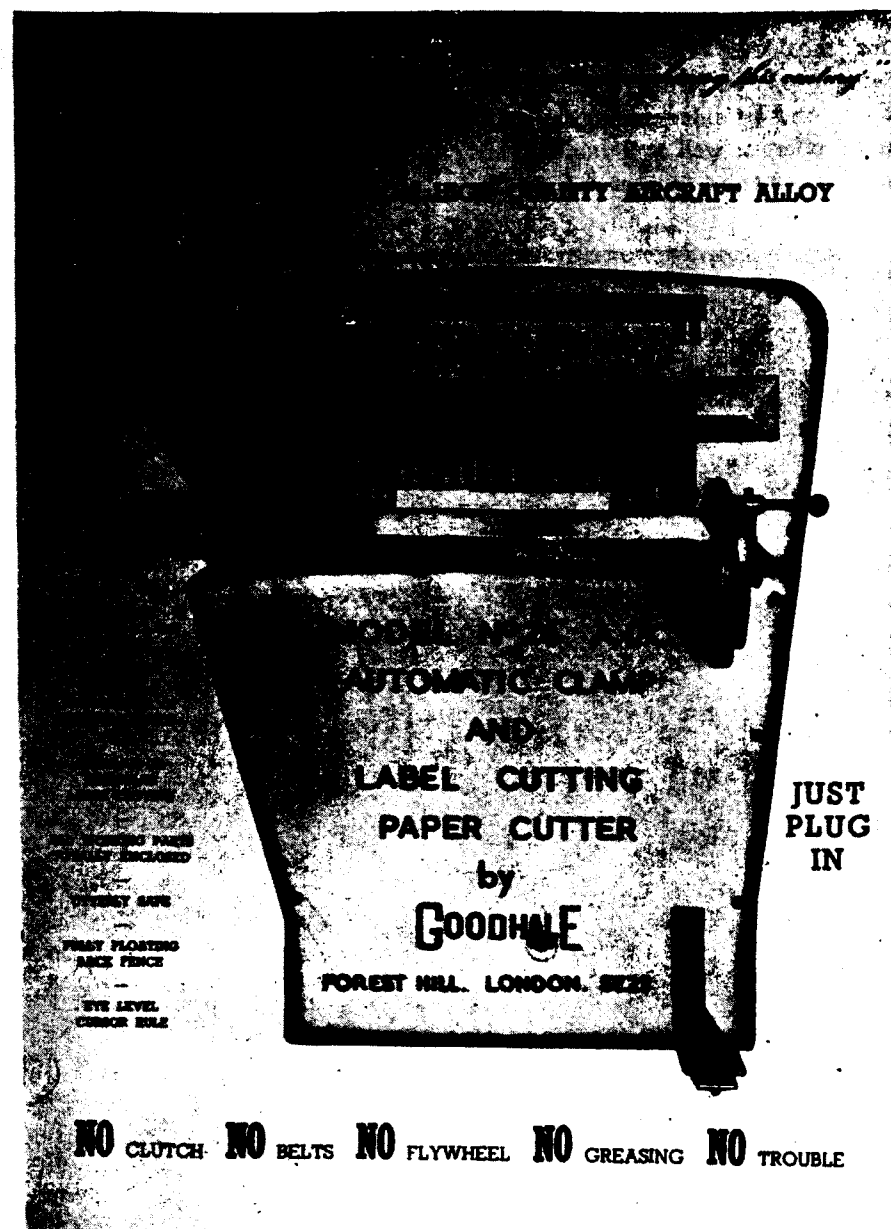
is Available at all

News Agents in India

and at

Higginbothams Railway Stalls

17



26" Self-clamp Power Paper Cutter

16

The Paper Guillotines

(Continued from page 12)

manufacturers provide a double push button safety guard, which works on the principle of employing both the hands of the operator when starting the cutting machine.

The cutting of books in the three sides involved a lot of problems. Not only the cutting was unduly delayed but also the various books cut were not uniform. To meet these difficulties, in the beginning plain single knife trimmers equipped with one knife and a turn-table. In

these machines, the pile is placed against the saddle of the turn-table, pressed by hand and cut on three sides, while the table is turned accordingly. As the technique made further advance, it was tried to increase the efficiency of this trimmer by arranging two piles opposite to each other on the turn-table and revolving the table automatically. Further the four sections were provided for and the machine was equipped with several knives. To avoid all these cumbersome process, the firm of M/s. August Fomm at Leipzig and at the same time the firm of Karl Krause found that successful solution whereby knives arranged crosswise work

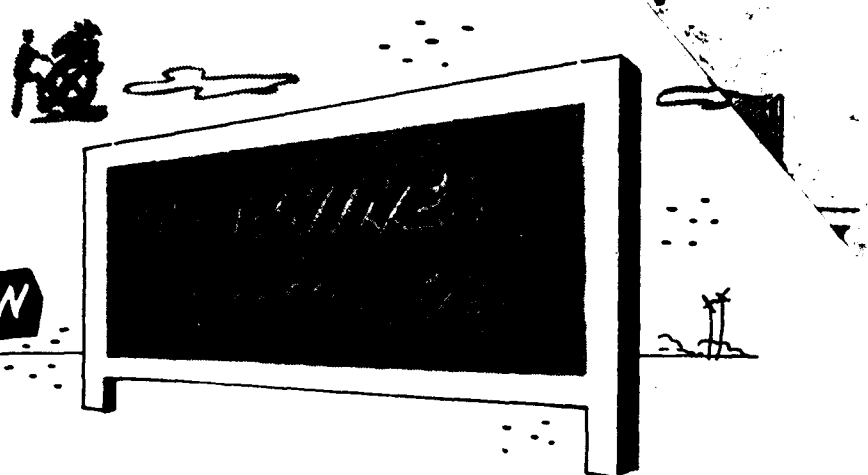
against only one firm cutting section. This was further improved from time to time to the present variety of Three-knife Trimmers for which the details have already appeared in the April and May 1954 issues of this valued Journal.

Other varieties of Cutting Machines are special Cutter for Cutting Sheets from reels or slitting the big reels into two or more and re-winding the same. These new types of machines have immensely helped the production with speed and efficiency. This is just a start of new varieties of Guillotines and equipment and the future has enough in store.



Photo taken at the time of erecting the first S. & S. Offset Proofing Press—DUFA VI at Hoe & Co., Madras. In the picture can be seen Sri S. Bhandari (Mg. Director, Indo-European Machinery Co. Ltd.) Mr. Fischvoight (German Engineer) Sri Francis (in charge of offset Dept., Hoe & Co.) Sri J. P. Jain (Madras Manager of Indo-European Machinery Co. Ltd.) and Sri V. S. N. Murthi (Business Manager, PRINTINDIA)

Graphic machinery manufacturers and dealers may utilize the columns of this monthly feature to broadcast brief descriptions of their latest machines to the printers in India and surrounding countries.



KLISCHOGRAPH

The Klischograph is an electronically controlled engraving equipment for the automatic production of blocks which are ready for immediate printing. The picture is scanned by a photo-electric system, the resulting current being amplified to operate an engraving needle. For the production of the screen a waveform of suitable frequency is superimposed, so that the needle cuts dot for dot a screened block, in which, as in a conventional block, the size of the dots corresponds to the picture brightness.

Whilst single colour blocks only can be cut with the type K 150, it is possible with the type K 160 to prepare the individual colour-blocks for three and four colour printing.

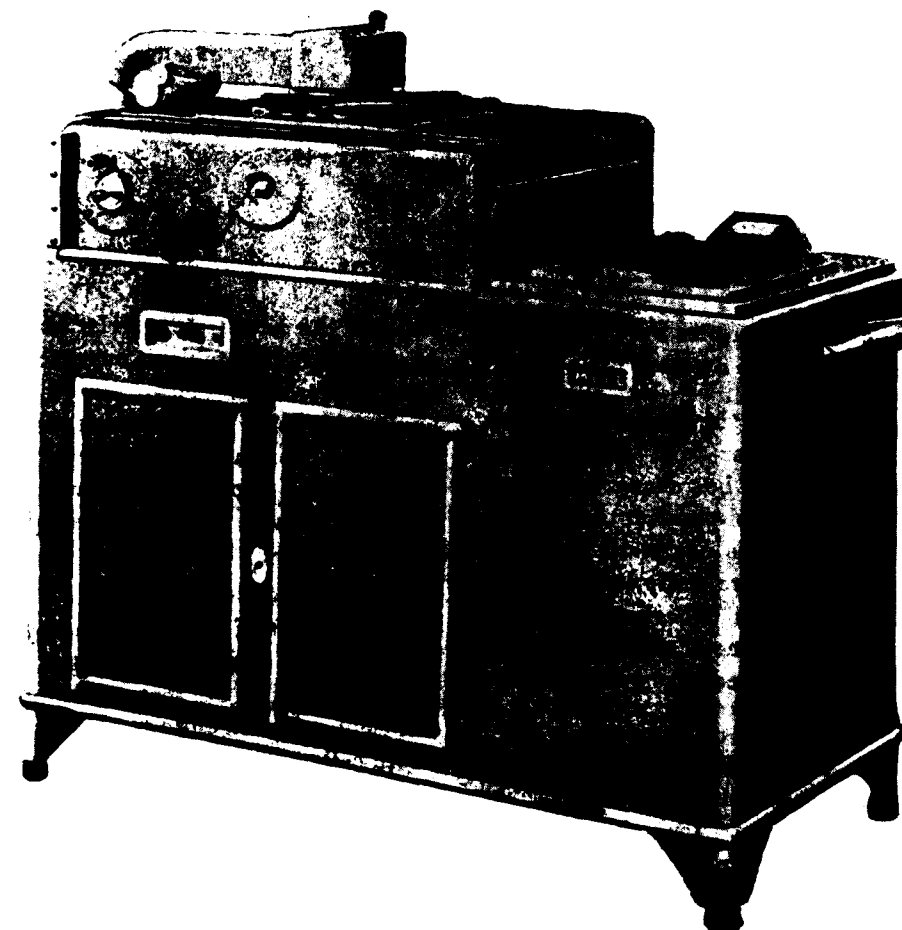
From a colour picture the Klischograph automatically prepares, within a short time, colour-corrected blocks for yellow, red and blue. For four colour printing a black block can be additionally prepared. The scanning of the picture and the engraving of the block is carried out in the same way as with the single colour machine. By means of colour filters the basic colours are separated; at the same time an automatic colour correction of the blocks is carried out rendering them ready for immediate printing. The four blocks are cut, one after the other, from the same picture and

incorporate the necessary change in screen orientation. The screen is 80 lines per inch and should therefore be specially suited for newspaper reproduction.

With a maximum picture size (6 x 8") one block is cut within

22 minutes, so that the complete set of four colour blocks can be completed in 1½ hours.

Nolar Foils are used as block material made of a special material which will give a long run with either moulding or direct printing.



The New Klischograph K-160



The Klischograph K-150

The flexible Nolar Foil can easily be attached to a rotary cylinder.

For each of the blocks the needle, which is similar to a gramophone needle, must be changed. Being absolutely fool-proof in action the few operations necessary in using the machine are easily learned. In this way the Klischograph saves time and money, and is specially suitable for colour work for the daily press.

In *design* the model K 160 is similar to the single colour Klischograph, except for the slightly increased size needed to accommodate the electronic apparatus. The colour picture is fixed in a frame and is scanned from underneath

while at the same time a Nolar Foil on the engraving table is engraved from above, both picture and foil having the same size. The scanning results from a back and forward motion of the engraving table which is motor driven *via* a controlled clutch.

A fine point of light produced by the *scanning system* illuminates a small element of the picture and is diffusely reflected on to two filtered photo-cells. The brightness of the scanned point is transformed by the photo-cells into a current which feeds two amplifier channels. The first amplifies the basic colour response, while at the same time the second automatically performs

the electrical operation necessary for complete colour correction. After the addition of the screen frequency this modified current operates the engraving needle.

An *electronic correction system* has an advantage over the orthodox method in that the resulting blocks are ready for use, so that no proofing, with subsequent colour retouching, is necessary.

The four blocks are cut one after the other in such a way that the scanning direction and hence the *screen direction* is turned in each case. This is brought about by a rotation of the picture frame on the engraving table and corresponds to the usual screen rotation.

The machine offers no difficulties *re setting-up and operating*. First the required colour is selected by a switch on the control panel and the corresponding colour filter inserted into the scanning head. Then the two amplifier channels are adjusted using the two control knobs, so that the pointer of the monitor instrument rests in turn at two set points. Subsequently the Nolar Foil is placed in position and the needle adjusted to a certain depth by means of a gauge, whose correct setting is indicated by the switching of a lamp. This completes the setting-up, after which engraving commences. At the conclusion of this operation the machine switches itself off.

* * *

In general *design* the Klischograph for line engraving is similar to the half-tone machine. The line drawing is fixed in a frame, and whilst it is being scanned from underneath the foil placed on the engraving table is cut from above. Both line-drawing and block are of the same size.

(Continued on page 22)

PRINTINDIA

REVIEW FORUM

MENTAL POWERS

Author : Sri A. S. Moorthy M.A., B.L.

Man always wants to know a little more than he is allowed to know. His inquisitiveness may sometimes land him into quite uncomfortable situations, but, all the same, he is eager to know more and more.

We have accepted for a long time that what we think with some earnestness has immense power to do good or sometimes evil, if misapplied. This idea is almost traditional in the East, while in the West, there is an increasing number of learned men and women who are convinced of the power of Thought. Sri A. S. Moorthy's book being a product of much study and patient compilation, correlates all that so far has been achieved in the sphere

of Man's fullest exercise of this unique faculty - to influence others, and himself too, by the power of his thought. It may be that not all of us may readily appreciate the value of this power but, all the same, it would certainly be worthwhile examining to what extent we have advanced in this highly absorbing investigation into the proper application of the mental faculties of the normal human being.

It has been a long journey from the time when great scientists like Sir Oliver Lodge and Sir William Crookes were considered rather strange people for their confirmed interest in aspects of our existence which cannot be readily perceived by the usual scientific means. We are now living in times when it is possible to demonstrate to million

of Television observers how the strong will exercise on the Patient by a Doctor can help him to perform a surgical operation without the use of any anaesthetic. It is common knowledge now that such things are possible. The appearance of Sri Moorthy's book is therefore very timely and one may commend it to the eager student of Psychology with the endorsement of a saying of Bacon quoted by the author himself :

" Read not to contradict and confute, not to believe and take for granted, but to weigh and consider ".

The price of the book is Rupees Nine only and the publishers are : Desa Seva Publications Limited, Madras-4.

— " DHANUS "



The Leading European Screen-Brands Haas & Koh-i-Noor Over 35000 Screens in use.

HALFTONE SCREENS FOR BLOCK AND OFFSET PRINTING
PHOTOGRAVURE ENGRAVED SCREENS FOR DIRECT COPY ON CARBON TISSUE
VIGNETTE-CONTACT-SCREENS IN ALL NORMAL RULINGS
SPECIAL-GRAVURE SCREENS FOR TEXTILE PRINTING
FILM SCREENS FOR SHADING AND OFFSET WORK BY COPYING PROCESS
SHADING SCREEN-DESIGNS ON CELLOPHANE WITH ADHESIVE MATERIAL

Catalogue free of charge

HERBST & JLLIG, FRANKFURT a/MAIN 13, GERMANY

AUGUST 1954

21

(Continued from page 16)

Turning to the lighter side of printing, "ACTIVITY", the Official Organ of the Home Counties Master Printers Alliance in Britain, in their June issue, gives the following little poem entitled "PRINTING," by E. W. H. :—

22

(Continued from page 20)

The engraving styli have a chisel shape, with a straight edge, and cut chips of constant width out of the foil. The width of the edge corresponds to the movement of the arm. Corresponding to the three different feeds styli of three different widths are used, which are changed like a gramophone needle.

and red-sensitive photocells, feeding amplifying channels which control the engraving needle. The red spot scans the drawing, the blue spot scans the area surrounding the red point on the drawing and determines whether this area is free of any black marking. In this case an *additional control of the depth* becomes operative which results in an total engraving depth of 0,6 mm when scanning large continuous white areas.

The automatic additional depth in the engraving of large white areas corresponds to the subsequent finish of a line engraving in the orthodox process method.

The maximum *picture size* is 10 × 10 ins. For the scanning of smaller pictures it is possible to fix several small foils into the adjustable picture frame. The foils are cut to the sizes required and the edges are chamfered with a small plane so that they can be gripped properly by the tension screws of the image frame.

The Klischograph is equipped with an automatic cut-out which switches off the motor when the block is finished.

FOR

**C & P RUBBER ROLLERS,
SPARE PARTS, BRASS RULES,
STITCHING, PERFORATING,
CUTTING MACHINES
TREADLES, ETC. AND
EVERYTHING IN THE
PRINTING LINE...**

Please contact

GUNVANTRAY & COMPANY
KHADIA CHAR RASTA
NAVA DARWAJA ROAD
AHMEDABAD-I

(Continued from page 8)

helpful. Our concern with the average man, the average reader, the average housewife, the average doctor, is a necessary step toward understanding larger groups of people as well as the non-average. We need this understanding so that we can organize images and use colors and type which inform a reader quickly and with precision, and stimulate him into motion or participation. This view of an artist's or designer's profession is very different from the Victorian ideal of the ivory-tower specialist, who was called on from time to time to perform some creative miracle.

The Bauhaus in Germany was the first institution which provided the needs of the new designer with organization. The slogan "FORM FOLLOWS FUNCTION" became overnight the rallying shout of

Many of the new ideas were amorphous or their significance may have been exaggerated. But a trend toward greater clarity—and, above all, toward harmony with the creative potential of our time—was established. These new ideas led into better understanding of processes, better utilization of technology, clearer concepts of the essentials in communication. They led into better design.

It is our task to move from the industrial concept of the Bauhaus into the scientific age in which we are living. It is here where the really new and exciting things happen, things which not only are not only changing the form but the content of design and printing.

The invasion of television into our homes, schools, factories and laboratories is cutting across the established uses of printing and design. Television is taking over where dynamic presentation of ideas in education and promotion is demanded. Television forces graphic designers and printers to think about our field in a new way.

The advantage of the printed world and image would seem to lie in the fact that these can be read and reread, can be referred to again whenever necessary. The effect which this will have on the styling of word and image will need close observation. Symbolically speaking, there may be less jazz and more Bach and Beethoven in printing and advertising design. Styling will concern itself more with precision and clarity, with better systems of influencing the reader's visual memory, while the more hectic sales approach will gravitate toward television.

This may bring a new appreciation of colour and texture in a printed product. We need a better appreciation of the new printing surfaces and materials such as cellophane, aluminum, and plastics; of fibers; and of new colours.

Having recognized the new limitations of printing, we will find in them new freedoms and styling

opportunities. For we can then be more certain that our readers will enjoy much more than before a good printing product which does not move (or flicker), which satisfies his sense of touch just as much as his yearning for a well-paced, legible, thoughtfully organized reading job. Our scientific brothers in chemistry will provide us with new colours of greater luminosity and velvety depth; new inks and type faces, with visual images of greater psychological depth, better adjusted to our visual perception than the relatively crude images of past centuries.

We should keep in mind that this new and enlarged function of design is not a revival of traditional forms. It is a challenge which our profession has yet to meet.

Earlier, I posed the question whether we are utilizing the technical potential of printing to full advantage.

Somewhere along the path of our recent development a belief has arisen that speed is the principal ingredient of efficiency, that large quantity is a measure of quality or of cultural progress itself. The five-colour wet-printing press has assumed the position of an achievement and monument in itself. Many of us still labour under the naive Victorian belief that the forward march of man culminates naturally in this zenith of technology.

Just as there was and still is and "art-for-art's-sake" approach there is also something like a "achine-fo-machine's-sake" form of religion. We must reject the latter just as completely as the former. We must remember that technology is

(Continued on page 28)

Linofilm

(Continued from page 15)

consistently recognised that one of the problems most likely to retard the use of phototypesetting even in applications otherwise economical, revolves around the difficulty presented by corrections and make-up. Much thought and work have been devoted to corrections and make-up concurrently with the development of the Linofilm itself. This has resulted in a multi-method approach to corrections and the development of a new concept for handling make-up activities.

The several methods for correction now evolved are these:

- (a) Typing errors detected at the keyboard can be corrected immediately through the use of the line-erase key on the auxiliary panel.
- (b) The typed copy made available with the tape can be edited and corrected, and the tape changed before photography.
- (c) The film itself may be corrected by a new automatic splicing device which we have tentatively named the Photocorrector, a product of Linotype research.
- (d) The film may be corrected piecemeal or in large segments by corrections in the perforated paper tape after photography, and the offending line, lines or full section re-run.

In actual practice these methods can be used singly or in combination. The availability of all of them at various stages in the phototypesetting process will materially reduce the difficulties and complexities of making corrections. This, in turn, will affect the econo-

mics of phototypesetting and the photocomposing process as a whole.

The line-erase key on the auxiliary control panel enables the keyboard operator, upon detecting a typing error, to punch into the tape a signal which will cause the incorrect line to be disregarded by the photographic unit. Correction of the tape itself is a simple scissors and mucilage operation.

The inch of blank space on the tape at the end of each line affords ample space for an easy lap-splice which the photographic unit will accept without difficulty.

NEW DEVICE

The new device developed by Linotype for correcting film is a single-unit fully automatic heat splicer. As a single unit operation, it successively cuts the film, removes the offending line, inserts the new line, butts the separate pieces of film and welds them together accurately. No overlay is required because butt welding is used. The resulting corrected film photographs perfectly. The total elapsed time for the full operation is measured in seconds, and the skill required is the simple one of feeding the offending film into the corrector and removing the corrected film.

An experimental model of the correction device is in practical operation in our research laboratories and a mock-up of it was shown to the trade at the exhibition of the Linofilm. Testing and product engineering are proceeding so that the correction device will be available with the Linofilm.

Linotype research has also developed a new concept for handling film for make-up purposes. Preliminary constructions indicate that this new approach will greatly facilitate film make-up. Research models of the devices are in prepa-

ration. They are surprisingly small and uncomplicated.

SECOND MACHINE

Linotype research is in the process of developing the second machine in the Linofilm line. It is being designed for display and related commercial applications. A pre-production model will be demonstrated to the trade in 1955. It is anticipated that with this second machine the Linofilm line will be complete except for certain special phototypesetting machines for highly unusual applications concerning which we have already been consulted.

The two-model approach to phototypesetting follows Linotype's conclusion that one model of a phototypesetting machine is not likely to meet the requirements of the trade either from an operating view-point or from an economic view-point. Offering to the trade a single machine with many performance specifications often not required by the work for which it is being acquired, does not seem to be a realistic approach.

Linotype are also making detailed studies of the economics of phototypesetting and the photocomposing process to assist the industry in its consideration of practical applications. Others are at work on collateral developments in platemaking.

Small Printers—Are they Doomed?

(Continued from page 5)

local leading dailies and also through cinema slides. Apart from this, well-designed blotters with calendar printed on them should be sent at regular intervals to all the big firms in the locality as a sort of reminder.

(Courtesy: Amrita Bazaar Patrika)

PRINTINDIA



We are extremely grieved to record the death of Sri Amritlal Seth, Founder-Editor of "JANMABHOOMI" and Managing Editor of the JANMABHOOMI Group of newspapers. He died on 30-7-54 at 8-15 a.m. at the age of 63. The late Sri Amritlal was for some time an High Court Advocate and afterwards served as a First Class Magistrate. In the year 1921 he joined the national movement and he was arrested in the year 1930 when he led the DHOLERA SATYAGRAHA. Ever since he was an active member of the Indian States People's Congress. Recently he founded the Indian Language Newspapers' Association with the objective of improving the conditions of the language papers in India. His sudden and sad demise is a great loss to our country and in particular to the Indian Printing Industry. PRINTINDIA offers its condolences to the bereaved family.

Berthold Type Foundry, Berlin, have started manufacturing poster types made of plastic material. These types are water-proof and can withstand temperatures upto 90°C. They are also not affected by the chemicals used in manufacturing printing inks and washing solutions and they have been designed to withstand heaviest printing pressure.

It has been reported that many industrial firms in Germany have now decided not to give any printing work to the local printers as they

had an opportunity of coming into contact with simpler and economical machines exhibited at Drupa.

These machines, they found, can be operated at a very low cost and thereby avoid a lot of expenditure by giving this printing work to the outside printers.

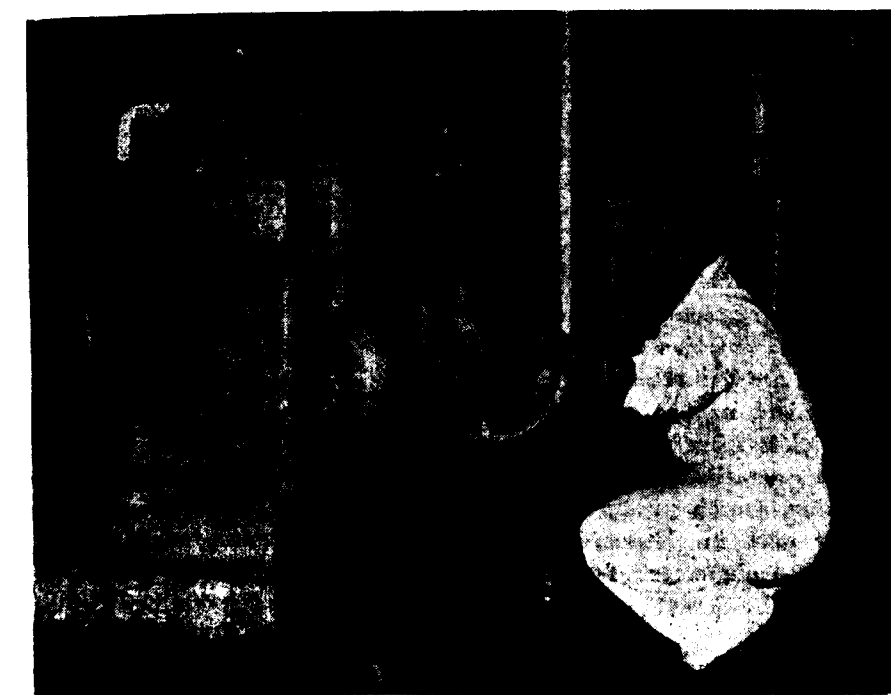
* * *

STARCH IN PAPER MAKING

The industrial uses of starch, already extremely numerous and continually increasing, include many applications in the paper-making and allied industries. As a matter of historical fact, the primary process that was, and still

is, the main foundation of the British maize-starch industry and all its offshoots was invented by John Polson and patented by him in 1854. The firm of Brown and Polson founded in 1840 to-day manufactures more than 400 different starch products, used by some eighty or so industries.

The development of starch is mainly due to the invention by John Polson of the wet milling process, which enabled the industrial process to be halted at any desired stage, thus making available an infinite number of graduated products. The function of the wet milling process is to "split" or



A view of the Centrifugals where the last process is conducted before the Starch is filtered and passed to Driers.

disintegrate the whole grain in a series of operations that culminates in the presentation of pure edible starch. Its by-products are all the other substances contained in the maize kernel, each in a convenient form for further processing.

The papermaking industry uses very large quantities of starch products, and uses them for various purposes at different stages of the manufacturing process. Up to a point, the application may be said to follow the same pattern as in textile applications—starch being used in both the initial and final operations. But although the “coating” of paper corresponds fairly closely with the “finishing” of cloth in the textile industries, the function of “beater size” is very different from that of “warp size.” In textile weaving the size forms a protective film round the yarn and is subsequently washed out. In papermaking the adhesive properties of starch are called into play. The size helps to bind together the disintegrated fibres of the raw material and is incorporated permanently into the finished product.

The formula for beater size had to be varied in accordance with the chemical and physical characteristics of the pulp and the varying conditions created by different manufacturing techniques. Length of fibre and duration of process, for example, are important considerations. And not only in beater sizing and coating but in the intermediate operations of calender and tub sizing, starch products play a decisive part in determining the quality and character of the final product.

The astonishing versatility of modern paper manufacture makes great demands on the chemistry of starch. Its products range from

almost microscopically thin tissue to sturdy building board, from coarse wrapping material to the fine art paper that alone responds to the latest printing techniques, from sheer transparency to scientific opacity, from the water-soluble to the water-proof. Many of these recent developments would not have taken place but for the close co-operation between paper manufacturers and the Brown and Polson laboratories, who are continually engaged in every branch of research connected with starch and its products.

Envelope gumming and manufacture, board laminating, paper tube winding, plaster board manufacture, and off-set printing are only a few of the numerous other applications that might be mentioned. Laminated fabrication, for example, which is used in many manufacturing industries, involves the joining of two or more thicknesses of material to give extra strength. In the case of paper and board the operation is usually carried out under pressure on very high-speed machines, and dextrine-based adhesives have proved extremely efficient for a wide range of materials. Easy to spread and quick to “tack,” they can be used in the fastest machines, operating at speeds up to 400 ft. of board per minute.

**PRINTING INKS
MANUFACTURE**

Mr. John D. Barton, Manager of the Hoogly Ink Co., Ltd., Madras, while speaking at a luncheon meeting of Madras Rotary Club about “The Printing Ink & Allied Trades” on 3rd August 1954, said that Printing was the foundation on which our modern civilisation was built. Printing was not invented first in the West but it has been

developed by a large measure to what it is today through untiring research and efforts by the West. Now, different varieties of printing inks are being manufactured to serve various types of printing in vogue.

FREE OFFER

With the objective of assisting the thousands of small printers in this country in framing up a costing system a reprint of an article dealing with the Federation Costing System is now made available freely by the publishers of “PRINTINDIA” to any printer that may desire to ask for it.

The leaflets can be had from :
**THE GENERAL SECRETARY,
All India Federation of
Master Printers,
32, Upper Circular Road, Calcutta-9**

Grams: “PUNANIRMAN”
Telephone: “3151”
**Premier Suppliers Ltd.,
105, N. S. C. Bose Road, MADRAS-1**

DISTRIBUTORS:
M/S. ORIENT PAPER MILLS LTD.
M/S. SIRPUR PAPER MILLS LTD.

Most Varieties of Paper
are available from stocks
ENQUIRIES SOLICITED
**Other Offices: CALCUTTA (Head Office)
BOMBAY
DELHI**

PRINTINDIA

**Federation Costing
in Indian Presses**

(Continued from page 10)

Having thus arrived at a precise point with regard to expenses in labour, material and overhead, we have to calculate the number of direct hours and an hourly cost rate sheet can be prepared as shown here:

Once the hourly rate is calculated, we can very easily calculate the costs of individual jobs.

The above is a most simple method of scientific costing, which can be introduced easily in any printing establishment. A few years of historical records of such job calculation will clearly give an idea



Late Sri P. Angappa Chettiar

We are much grieved to announce the sad demise of Sri P. Angappa Chettiar, Proprietor of Messrs. A. Sundaram & Co., Printers, Binders and Stationers, 158-B, Broadway, Madras-1, on 17-7-1954 at the age of 67. He leaves behind his two sons Sri A. Sundaram Chettiar L. P. T. and Sri A. Ramalingam Chettiar B.Sc., and a number of friends and relatives. His benevolent attitude to all without any classification won him a great number of friends. The Printing Industry of Madras has lost one of its noble sons and “PRINTINDIA” offers its heartfelt condolences to the bereaved family.

of precise estimation by comparative study and help to formulate

HOURLY COST RATE SHEET

.....-Cost Control Centre

	Rs.	As.	P.
1. Number of Direct Hours	...	...	...
2. Number of Men or Machines	...	...	...
3. Amount	...	...	...
4. Overtime	...	...	...
5. Provident Fund	...	...	...
6. Bonus	...	...	...
7. Stationery	...	...	...
8. Electricity	...	...	...
9. Gas	...	...	...
10. Insurance	...	...	...
11. Municipal Taxes	...	...	...
12. Repairs and Renewals	...	...	...
13. Depreciation	...	...	...
14. Rent	...	...	...
15. Chargeable Expense and Indirect Supply	...	...	...
16. Miscellaneous	...	...	...

SUB-TOTAL ...
FACTORY OVERHEAD ...

ADMINISTRATIVE AND SEL-
LING OVERHEAD ...

COST PER HOUR ...

budgetted costing side by side with financial reconciliation with general accounts and Profit & Loss. Ultimately it will help Production Control and eliminate acceptance of unprofitable jobs.

Please refer to
PRINTINDIA
While Writing to Advertisers

**PRINTING MACHINERY
For SALE**

Available for quick sale Two Linotype machines, American Model No. 8; 30 EMS with 2 magazines each; One Double Royal and One Double Demy-Elliott and Payne; One Chandler and Price Treadle—all in good running order.

Apply sharp :
**Indo Commercial Bank Ltd.,
P. B. No. 194,
MADRAS-1**

Better Design sells More Printing

(Continued from page 23)

only a by-product of scientific development, not an end itself.

Machines are tools which are constructed to meet specific requirements. The manager of a machine must be its brain and its heart, not its follower.

Considering the changing needs of communication, the printing manager must train himself to see the mechanics of reproduction and multiplication as a new problem.

Our reproduction methods are still very clumsy and imperfect. Our screens chew up images too much. Our inks are not adjusted well enough to accommodate the textured surfaces of paper or other materials we print on, or should be

printing on. The coated, glossy paper stock has become a cliché, far from satisfying the needs of vision and touch.

Perhaps we should print with coloured gases instead of inks, or utilize electronic to throw colour onto sensitized layers. The recognition of these needs is our opportunity to move ahead in new directions.

I am not ignorant of the other aspects which the management of printing includes. There are the factors of economy in the usage of equipment, coping with budgets, and many other necessities of business life. But let us not magnify them, because they are mechanics—mechanics that need constant review so they will not warp a healthy development, but rather facilitate it.

The essential reason why we succeed in business and in a larger

world is that we work with enthusiasm, maintain a positive approach, and are practical in going about our objective. With this viewpoint we cannot be beaten, we will go up steadily. We will all—printers and designers—rise to the challenge of living, not succumb to it.

Announcement

Telegram: 'MERRIMENT' Telephone: 55783

South India Paper Co.

19, BADRIAN STREET, MADRAS

are glad to announce

that they are appointed

DISTRIBUTORS for SOUTH INDIA

for

Sirpur Paper Mills Ltd.

All qualities of paper, such as Creamlaid, Ledger, Printing, Typewriting, Duplicating and all other varieties available at COMPETITIVE PRICES



HOE & CO

THE PREMIER PRINTERS and
PHOTO OFFSET LITHOGRAPHERS
OF SOUTH INDIA

Stringers St. P. B. No. 86 Madras 1

PRINTED AND PUBLISHED BY V. S. N. MURTHI FOR THE PROPRIETORS MESSRS. KUBERA ENTERPRISES LTD., AT KUBERA PRINTERS LTD., "KUBERA BUILDINGS", 21, SUNKURAMA CHETTY STREET, MADRAS-1
MANAGING EDITOR: TEMPORAU

Phone: 2722

Grams: NELSONCO

NELSON & Co.

(THE FINE-ART TYPE FOUNDRY)

Estd: 1916

PRINTERS' PROVIDERS

62, Swami Pillai Street, Choolai, Madras-7

Post Box No. 452

Manufacturers of printing types

in

ENGLISH, TAMIL, TELUGU, HINDI, KANNADA
and all other Vernacular Languages

Suppliers of

"Manickam" Paper Cutting Machines
Perforating, Ruling, Lead & Rule Cutting
Machines Etc. and all printing materials.

Factory at

AMINJIKARAI, MADRAS-10

PHONE: 86313



ASHALATA

Blocks Courtesy of GUNDOSE, Madras

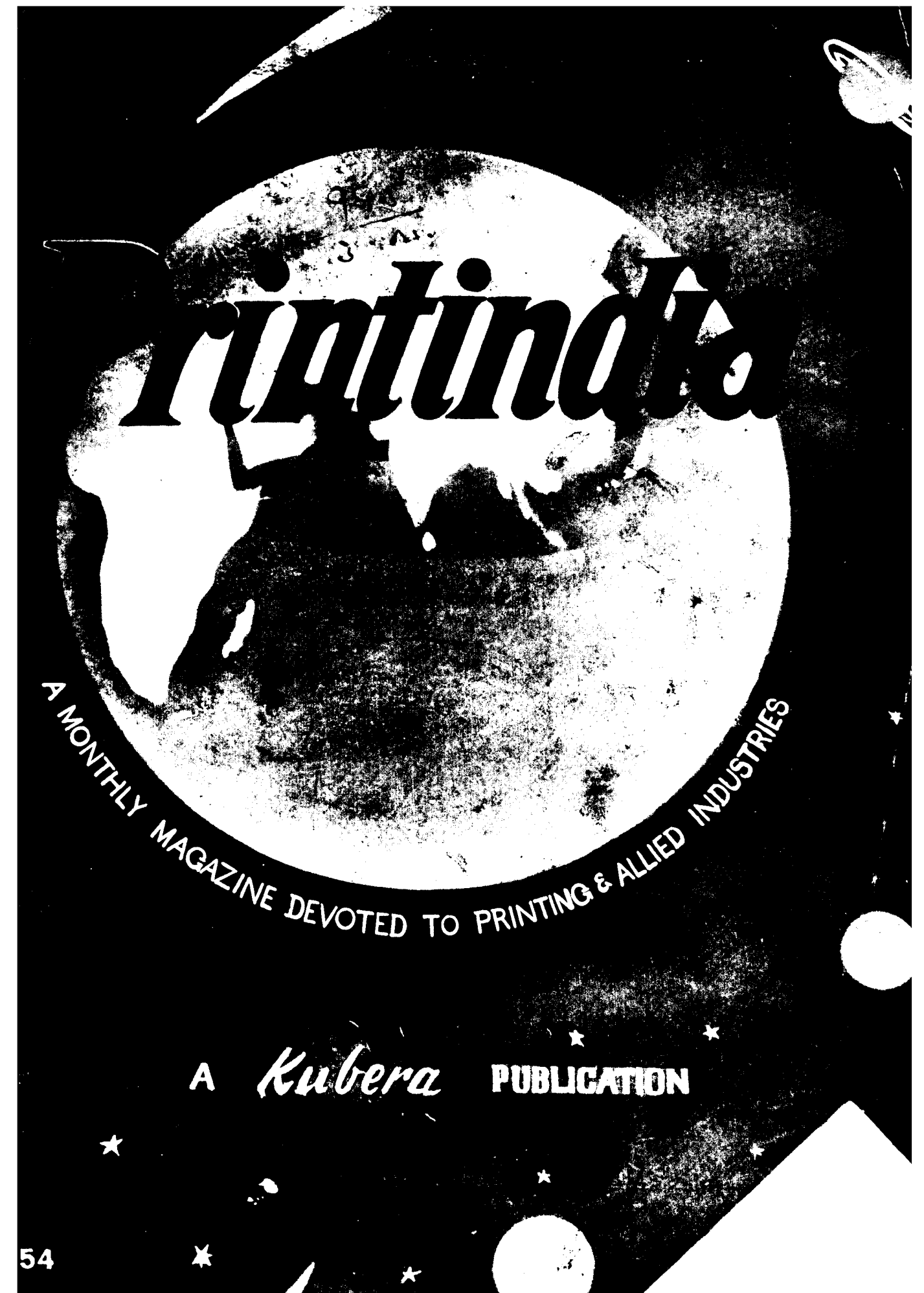
PRINTED WITH RAINBOW'S STANDARD TRI-COLOUR INKS

U.P. 76

U.P. 76

U.P. 76

Manufactured by
RAINBOW INK & VARNISH MFG. Co., Ltd.
BOMBAY - 7





Colour

Nature weaves her majestic patterns of multicolour beauty through leaf and flower

In a similar way multicolour printing is our speciality .

Kubera Printers Ltd.

GRAMS VASUNIDHI
PHONE 3006



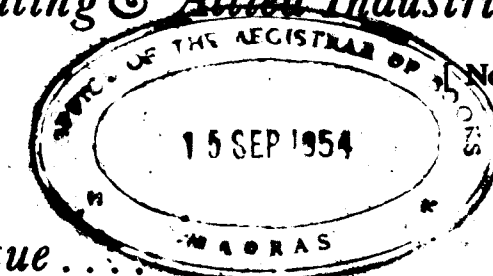
The House of Master Printers
"KUBERA BUILDINGS"
21, SUNKURAMA CHETTY STREET, MADRAS-1.

PRINTINDIA

A Monthly Magazine Devoted to Printing & Allied Industries

Vol. 2]

SEPTEMBER 1954



In this issue . . .

- Printing Ink and the Allied Trades
- First Anniversary Celebrations of the Indian Federation of Printing Technologists
- The Printing Exhibition
- The Printer's Devil
- Paper Industry in India Today
- Sri Suresh Chandra Mazumdar Passes Away
- High Quality Reproduction of Proofs
- Regular Features

From Our London Correspondent
Spotlight On Persons & Firms,
Modern Machinery & Equipment,
News & Views, Review Forum
etc. etc. etc.

Managing Editor
TEMPORAU

Business Manager
V. S. N. Murthi

Circulation Manager
Miss. Lily Hughes

London Correspondent
F. & D. Brownlie

Roving Correspondent
G. V. G. Krishnan

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.

PRINTINDIA is Published on the 10th of every month.

ANNUAL SUBSCRIPTION RATES	
INDIA	Rs. 10/-
U. K.	£ 1 Shs. 10
U. S. A.	\$ 5

Editorial & Publication Office :
PRINTINDIA

Proprietors
KUBERA ENTERPRISES Ltd.,
"KUBERA BUILDINGS"
21, Sunkuramachetty St., Madras-1
INDIA

Grams: VASUNIDHI Phone: 3006

THE BLOCKS FOR PRINTINDIA

ARE MADE BY

Messrs. NEWTON & CO.

THE LEADING BLOCKMAKERS OF MADRAS
80 WALLAJAH ROAD :: MADRAS 2
Phone: 86729

Ma

தமிழ்
தெலுగు
देवनागरी

ENGLISH

संस्कृत
हिन्दी
मराठी

acturers of

14 LANGUAGES IN PRINTING TYPES, HALFTONE, LINE & ELECTRO BLOCKS etc

சுருஷம்
மபலாஹம்
ಕನ್ನಡ
ಕುರಾತಿ
ಕಿವಲಿ

ENGLISH

SUPPLIERS OF PRINTING REQUISITES

TELEGRAMS: 'BHUVANA'

TELEPHONE: 8291

CHINTADRIPET, MADRAS-2

Printing Ink and the Allied Trades

By
MR. JOHN D. BARTON

Modern civilisation is largely poised on the mount of Printing and Printing-inks are inexorably vital for any type of Printing. The author, a veteran of Printing-inks manufacture, elaborately explains the umpteen developments fast sweeping the Printing industry.

Printing-ink may well be called the Fountain of Knowledge, and it is very satisfactory to think, that, but for the Printing-ink Makers, of which noble fraternity I am one, most of us would know precious little, and none of us anything like what we now know. For without the printed word, education and progress, as we know it today, would not have been possible, and without Printing-ink there would be no printed books. Thus Printing-ink must indeed be literally "The Fountain of Knowledge."

The importance of Printing is not always fully appreciated, but it can safely be said that Printing is not only the Foundation, but also the Framework on which our modern civilization is built. Take Printing away and the whole edifice will crumble.

You have only to consider for a moment the wide ramifications of Printing and you will have great difficulty in finding even one aspect of our modern daily existence which is not in some way influenced by the Industry.

Printing was not first invented in the West, which can only claim to have been instrumental in developing it to what it is today.

Printing, like many other worthwhile things, was originally developed in the Orient, China to be exact.

Some authorities maintain that Printing was carried on in China as far back as 200 B.C., but there is no

evidence to prove this; in fact, at the close of the 6th century, during the Sui Dynasty, when history shows Printing was developed, the Pekin Imperial Library contained no less than 37000 volumes which were, as far as it is known, all hand-written over many, many, many centuries.



Mr. John D. Barton

It is, therefore, significant that between 600 A. D. and 900 A. D. during the Tang Dynasty, no less than 16000 more volumes were added to this collection, a comparatively short period in the history of Chinese civilization, and is an indication of the impetus given to creative writing by the invention of Printing.

Even ancient China had its ink makers, and even Emperors are to be found among their ranks, and as a result of the increase in the con-

sumption of ink, due to the invention of Printing, its manufacture became an art of the highest order, and further, since the Chinese held in high esteem anything connected with writing or printing, the ink makers of those illustrious days were men of position and renown accorded always the highest honours and respect.

For us modern Ink Makers, it is a sad thing to contemplate, for today we work almost unknown and certainly unhallowed at our noble profession. In fact, judging by the reactions of most people to the announcement by an Ink Maker of his trade, it would almost seem we are considered quite unnecessary.

We find that even moveable type was invented in China way back before William the Conquerer set foot on English soil. A gentleman by the name of Pi Sheng produced a number of booklets and announcements by this method between 1040 and 1050 A.D., but moveable type did not find popularity in China by virtue of the vast number of characters necessary to produce even the simplest work, and the general method was to carve the work complete section by section in relief on suitable sized blocks of stone or wood and to take the impression from these.

Paper, too, was first made in China as far back as the 2nd century A.D., and so carefully did they guard the formulae and methods used, that it was a 1000

years before the secret finally percolated to the West, and it may be of interest to know that the methods used by the ancient Chinese are still the basis of the manufacture of hand-made paper today.

The introduction of paper into the Western world, no doubt, was responsible to a large extent for the later development of Printing.

And so we will follow the secret of paper westward and find that Book Printing was first introduced in the West in the early part of the 15th century, and although similar methods were used by the early Western craftsmen to those of the Chinese, it is strange to relate that there seems to be evidence to show that these men were even aware of the earlier oriental practices in the art.

Strange, too, it is, that for two hundred years wood cuts were used to print decorations on cloth before any one thought of applying the art to the Printing of books.

The early printers had no Printing Presses. They carved their copy page by page on a smooth block of wood, and by daubing the relief, thus obtained, with the ink, usually a mixture of size pigment and water made to the required consistency, took the impression by placing a damp piece of paper on this surface and rubbing it over on the back with the palm of the hand to obtain the transfer. By virtue of the method used, it was not possible to print both sides of the paper, as rubbing the already printed surface would naturally smudge the work. So two sided pages were obtained by pasting two printed sheets together back to back.

The invention of moveable type or the introduction perhaps would be a better way of putting it, in West followed close on the heels of the introduction of printing, and is

generally credited to *John Gutenberg*, although some authorities give the distinction to a Dutchman named Janzoon Coster, and, tradition has it, that the idea came to him while he was explaining the technicalities of Printing, as it then existed to his children. He had, it appears, carved a number of letters on small pieces of wood to demonstrate his theories, and these he stamped on paper in the form of short words for the children's better understanding. From this simple beginning, it is alleged the method of Printing by moveable type was developed. Be that as it may, whoever was responsible for the idea, the principle was adopted throughout the rapidly developing printing trade, and very soon the type was cast in metal alloys.

By the end of the 15th century, there was hardly a town of any size in Europe which did not have at least one printing press.

Thus the printing trade expanded and flourished into the 16th century, and with its expansion, became commercialized, and it is sad to tell that the desire for profit eclipsed the earlier printers' zealous regard for fine workmanship and the high standard of finish and quality of the earlier works to a large extent disappeared, as shoddy work and adulteration became the rule rather than the exception.

But I suppose this retrograde step was inevitable in order that the trade might develop to what it is today, for without the spur of commercialization and the resultant availability to the masses of printed literature at a moderate price, modern mass production methods could not have been developed, and I am glad to say that today the general trend is towards better and better class of Printing.

In this endeavour towards perfection, the Ink Makers, the Paper Makers and those who make all the complicated machines used in the trade, are using every means known to science to ensure that the printer gets the best tools to turn out ever better work.

Printing or Printing-ink, which came first? We are now back to the well known controversy, the chicken or the egg.

It is certain that without Printing there would be no Printing-ink likewise, of course; *vice versa*. So to avoid any argument, we will give the credit to ink "Writing-ink" as the earliest printing inks were merely a modification of same and made of basically the same materials adjusted to suit the purpose of the printer.

The earliest inks were made, as I already described, from a mixture of pigment, usually Lamp Black, size and water, and in view of the secrecy surrounding the manufacture of Printing-inks during the earlier days of the development of the trade, there is some doubt as to when Linseed Oil was first used in the manufacture of Printing-ink, but Linseed Oils suitably bodied would appear to have been used in the West soon after the art began to spread and develop during the 15th century.

Lithography was invented by Alois Senfelder in 1796, and Planographic Printing from specially prepared limestone was developed and perfected, about one hundred years later it was found possible to use zinc plates for the purpose, thus opening the way for the modern offset process developed during the first decade of this century.

The basic principle of these two processes is the same. The stone

(Continued on page 18)

PRINTINDIA

First Anniversary Celebrations of The Indian Federation of Printing Technologists

"A truly heavy responsibility is devolved on printers to educate the public to distinguish the really beautiful from the ugly, the decent from the vulgar and the right from the wrong.....", exhorts Sri Sri Prakasa, the Governor of Madras.

GOVERNOR'S ADDRESS

Governor Sri Sri Prakasa presiding over the first anniversary celebration of the Indian Federation of Printing Technologists at the White Memorial Hall on 14th August 1954 emphasised that a truly heavy responsibility devolved on printers to educate the public to distinguish the really beautiful from the ugly, the decent from the vulgar and the right from the wrong by the way they employed their highly powerful art because posterity would have just reason to blame them if they spoiled the taste of the present generation in the midst of whom they were functioning.

Sri Sri Prakasa in his address said that he was particularly happy to be on the same platform with Chief Minister Sri Kamaraj after a long time. As politicians they knew how much they owed to the printers during the freedom struggle and how they depended upon them to carry their message to the public, apart from what the newspapers did for them. Sometimes the newspapers might have been embarrassing to them and they might have been even obliged to deny what they had actually said after seeing the thing in print. But the fact remained that politics and politicians would have suffered from severe handicaps had there been no printers or newspapers. Having been a pressman himself once he knew all their difficulties. He had spent nights without number either in the composing room helping the workers to keep the types in order or correct-

ing proofs along with the editorial staff. So he had no hesitation in congratulating this Federation on the success they had achieved within a year of its inception.

It was a sad fact, observed the Governor, that while there was no dearth of talent yet they were inclined to be slipshod in their work by and large. That was why they had not made the progress which they ought to have done otherwise.

Talking of the importance of printing in relation to journalism he said that editors depended more upon printers for their work than the printers needed to depend upon others. Those who were in the

printing trade should therefore realise their importance in the scheme of things. But he was sorry to say that not all their printing was good and not all the press was neat and tidy. For instance in the choice of colours for posters they should have an eye to proportion just as they would not like a lot of chilly powder being mixed with some items of their food. Using another simile he would say there was a world of difference between a well-dressed woman and a over-dressed woman. In printing also they should see that the matter was well-dressed and not over-dressed. He said this because they saw some "loud colours" in the Cinema



Members of the Executive Committee with Sri Sri Prakasa, Governor of Madras and the Chief Minister Sri Kamaraj Nadar at the first Anniversary celebrations of the I. F. P. T.

SEPTEMBER 1954

5

posters. It was upto the printers to tell their customers what was beautiful and what was ugly.

Likewise Free India had a great claim on the press to expect that it put to proper use the great power it wielded. The newspaper unlike the teacher in the class room reached hundreds and thousands of readers and it was incumbent on it to mould public opinion in such a way that people always walked varily and on the right path. Any mistake on its part would be disastrous because even to-day people accepted as gospel truth what appeared in the newspaper and any subsequent contradiction only tended to worsen the position. One could therefore realise how difficult, delicate and risky was the work of a newspaper and in a similar sense that of the printers. He would suggest in the circumstances that printers must put their foot down whenever anything vulgar, indecent or palpably wrong was sought to be carried in print. If they discharged their



The Chief Guest at the poster section—His Excellency finding out why bright colours were used for posters.

duties conscientiously in this manner they would become the best possible vehicles of general education and the greatest teachers in democracy. In a sense they would be the real

builders of the soul of the nation. Whatever service they might do in this direction was bound to be reflected even in the homes of people and other departments of life. At the moment some people thought that tidiness, cleanliness and beautification were the obsessions of the rich to indulge and the poor need not bother about such things. The poorest of the poor could lead beautiful and tidy lives in their homes if only they took interest.

The Governor said that being in the midst of printers his memory went back to the many struggles he had to go through in a newspaper office to bring out the paper every day. Those who did not know this were inclined to be very angry when the delivery of a newspaper was delayed even by a few minutes.

"While we clamour for holidays for ourselves" he added "we do not want newspaper men to have

(Continued on page 24)

PRINTINDIA

The Printing Exhibition

(FROM OUR CORRESPONDENT)

The Printing Exhibition organised under the aegis of the Indian Federation of Printing Technologists at the White Memorial Hall, Egmore, Madras, from August 14 to 16 was an unqualified success. Sri Kamaraj, Chief Minister of Madras, who opened the exhibition, paid warm tributes to the Federation for the manner in which it had been got up, and Governor Sri Sri Prakasa described it as "interesting and instructive. About 6,000 persons visited the exhibition including a large number of women.

The exhibition was arranged in a neat and systematic manner and was divided into two main sections. The first being an educative and instructive nature showing how types are manufactured stage by stage, how composing is done and made up into pages and the matter was also proofed on a Vandercook Press. This was followed by a duplicating section showing the manufacture of stereotypes and electrotypes. In this section the curved stereotypes for modern rotaries were also displayed with a partly printed running web of a newspaper dropped from near the ceiling giving an idea to the visitors as to how a newspaper is produced. Next to this was the process engraving section showing very clearly how pictures are reproduced for printing purposes. Different kinds of blocks such as, line, half-tone, tricolor, etc., were completely shown stage by stage. There was also modern colour masking method on display. The next section was an eight colour label reproduced in stages by lithographic process. The last section consisted of various classes of book binding. In this, some old and

excellent book bindings with gold blocking and gilt-edged works was an attractive feature. This entire

group was explained by the Student Members of the Federation who were from the Central



A section of the Poster Panel at the Printing Exhibition held in the City.



The Chief Guest inspecting the special charts prepared by two of the members showing the evolution of the Printing Machines.

Polytechnic, Madras. There were also panels of printed specimens of the work turned out by the Students of the Printing Department of the Central Polytechnic, Madras, students work from V. J. T. I., Bombay, and also from a few of the schools in Britain.

The baby Offset Rotaprint machine was on demonstration throughout reproducing the pictures of Governor and Chief Minister.

The next group was consisted of about 20 panels on which fine printed specimens were grouped under different categories, such as, Calenders, broadsheets and type specimen sheets, mechanical composition, posters, book jackets, tricolour plates, lithographic repro-

ductions, paper specimens, silk screen printings and gravure printings, etc. The prominent newspapers of America, Britain and Indian newspapers were hung in rows forming a wall by itself in one part of the hall. The Magazines and some of the printing technical journals which normally a printer does not come across here were also on display. These magazines were arranged in an orderly manner in book racks. Some of the best specimens of bookwork of the local presses were displayed on composing frames thus enabling the visitors a grand view.

The whole arrangement was neat and orderly and the organisers and the Federation deserves congratulations for putting up this show

which happens to be the first one of its kind in this premier city of the South.

In the service of the Printers for many years Now !

At the most competitive rates FOR

C & P RUBBER ROLLERS, SPARE PARTS, BRASS RULES, STITCHING, PERFORATING, CUTTING MACHINES TREADLES, ETC. AND EVERYTHING IN THE PRINTING LINE...

Please contact

GUNVANTRAY & COMPANY
KHADIA CHAR RASTA
NAVA DARWAJA ROAD
AHMEDABAD-I

THE PRINTER'S DEVIL

By

SRI K. G. KRISHNA RAO

The Printer's devil is a perennial thorn in the abdomen of the Printer. It calls for a great vigilance on the part of the Printer to drive off the devil. The author, in this article, makes an interesting research into the devil's havoc !

Devils are usually said to haunt such places as are not generally frequented by humans. But, the printer's devil is an exception. It seems to take a strange pleasure to haunt every printer, small or big. How stealthily it creeps in, in spite of the best vigilance to drive it out ! The greater the vigilance, the greater seems to be the joy for the devil to steal in unawares. Newspapers and journals are commonplace for the pranks of this devil. It is rare that we see print without some aspect or other of the devil in it.

Strange indeed are the ways of the devil, and stranger still the havoc wrought by them. Like any other devil, the printer's devil too manifests itself in a multiplicity of forms. It is a spelling mistake in a word, and a wrong font type in another. It is a letter added where not needed or it is an omission which often makes nonsense. Then we see the running of letters up and down at the end of lines. There is again the transposition of lines in the make-up of the page or column. It is hard to make a list of the activities of this devil, but every printer shudders at the thought of the devil in his print !

Just imagine the havoc these devils can cause. Measured in terms of rupees it should easily run into several million, unless the evil in the devil is nipped in the bud. Have we not heard of instances where Constitutions have been challenged, just because of a comma, inserted or omitted ? How often do we find

news in print that so-and-so is dead, while the gentleman concerned is in fact quite hale and healthy. Imagine the fate of students appearing for examinations, whose numbers are wrongly published in newspapers. Suicides have followed wrong figures

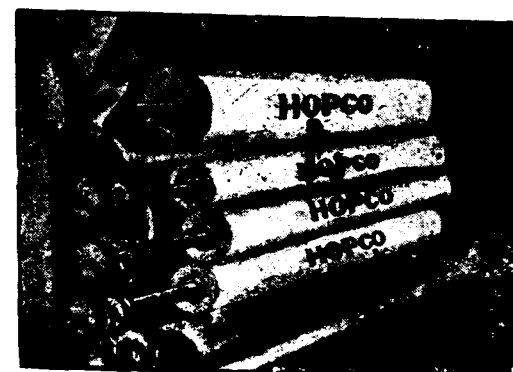
in print. Print done in haste is the easiest victim of the devil.

I remember, in my early days I got jobs, several running into thousands. This was when Poet Tagore visited Madras. It was a race



The Panel showing the specimens of work turned out by the Printing Students of the Central Polytechnic, Madras

Service to Printers HOPCO



RUBBER ROLLERS

Largely in use all over India

- Famous for attractive printing, long lasting and oil & heat resisting.
- Ready stocks available for all Chandler & Price machines.
- For all cylinder, Rotary, Litho-Offset & Varnishing machines also, supplies will be made to order.

FOR PARTICULARS WRITE TO:

HOLT PRELLER & Co.

Head Office:

P. O. B. 1014 :: BOMBAY-I
Grams: "HOPCO" Bombay

Branch Office:

10, THAMBU CHETTY STREET, MADRAS-I
Grams: "HOPCO" Madras

against time to deliver a leaflet for a performance, an invitation for a meeting or a welcome address. Often there was hardly any time to refer any doubts to the author. It was an invitation which I was printing. This stock was very high quality double large gilt-edge ivory cards. Two thousand copies had to be delivered in less than four hours. The author had prepared the matter, corrected the proof, and okayed it too for final striking. But hardly had he left the press, I noticed that the date and the day of the meeting

never agreed. I knew one of these was definitely wrong. How could I decide which was correct, the day or the date? I was in a fix. The doubt must be cleared. The author could not be located, as he was always on the move. Fortunately, the devil was noticed in time, and only about a hundred cards had come out in print. I had the machine stopped immediately and later got the correction made. The loss was about 2 hours to refer to the author, but this was negligible when compared to the 2000 cards

which would have been a heap of rubbish. In one instance, I had to bundle up over ten thousand leaflets of demy folio size printed on fine m. g. superfine calendered paper. The devil had worked its havoc quite unnoticed by any one. I know many printers like me have faced similar situations and borne the loss without a word.

The devil sometimes provides us with comic interludes too! You read of the ass stepping into the car instead of the lass, the devil having just pushed down the *l* to the line below. Don't you laugh too much when you see the man *dying* well, when actually he is *dyeing*. Beware, we may find ourselves changing sex! A Mrs. Chakravarthy might suddenly change to Mr. Chakravarthy, because the rollers had just pulled out the *s* due to faulty justification.

The causes for these disastrous activities of the devil are too numerous to list. The principal cause is negligence or "oversight" as we apologetically put it. There is only one way to curb such evil. And that is vigilance - vigilance at every step. The best place for the devil's workshop are the numerous small presses, where one person has to correct the proof, pass it and okay it for the final striking. The same eye that reads through the same print many times is not able to perceive the devil. In the bigger presses however, chances for devilry are comparatively less because of the array of proof-readers, supervisors, works managers, and lastly the "Chief" who gives the final O.K. The devil is sure to be caught by one or the other of these "sentries". I used to go through the print even while it was running on the machine. So, the devil could be caught from its hiding place before it could wreak its vengeance. Before you deliver the next print, BEWARE OF THE DEVIL.

Paper Industry in India Today

(FROM OUR CORRESPONDENT)

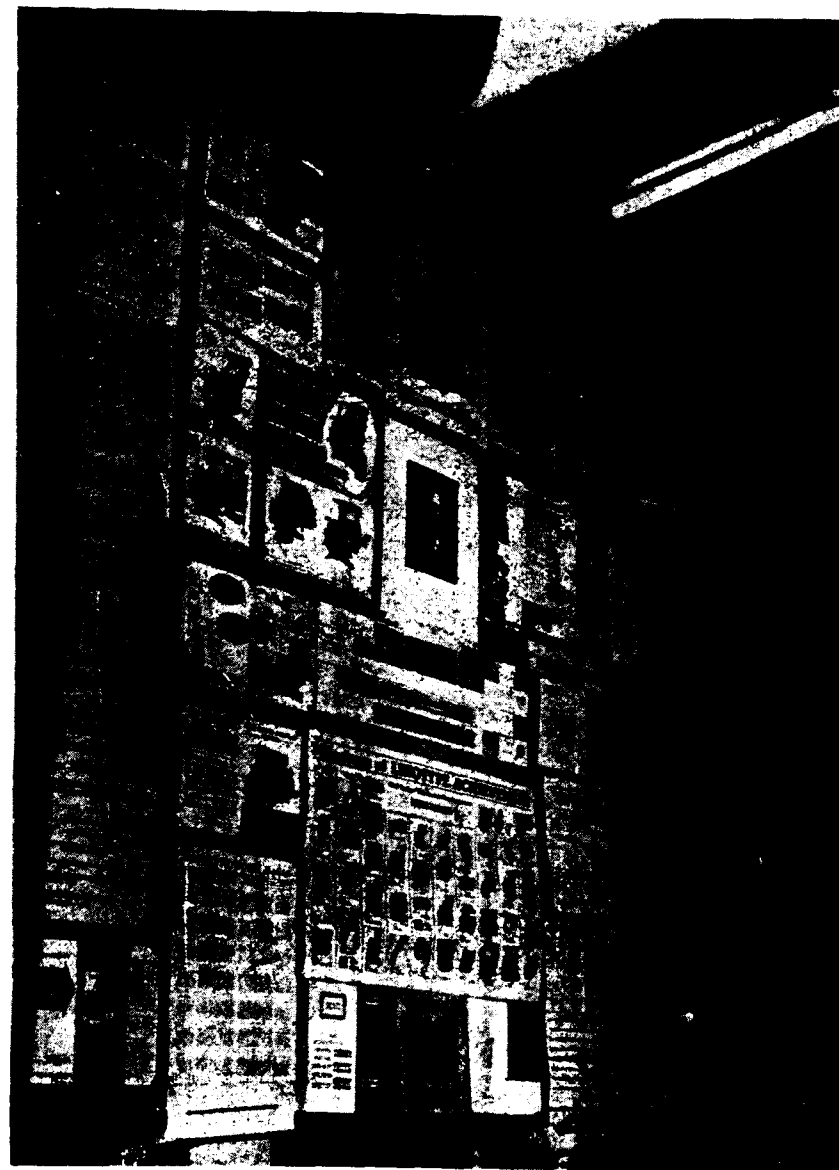
"The Paper Industry had maintained a steady progress during the last many years.... and it will not be long before India will be able to produce as many varieties of papers and boards as possible", said Sri Brijmohan Thapar in his presidential address at the 12th Annual General Meeting of the Indian Paper Mills Association at Calcutta on 31-8-1954.

The Presidential address delivered at the 12th Annual General Meeting of the Indian Paper Mills Association by Sri Brijmohan Thapar and read by Sri RamChengari in his absence to attend the meeting was a real insight into the conditions of the Paper Industry as they exist today in this country. Shri Thapar disclosed that the Paper Industry had maintained a steady progress during the last many years and the production figure of paper and boards during the year 1953 stood at the highest i. e. 1,39,704 tons as compared to 1,37,508 tons and 1,31,916 tons in the years 1952 and 1951 respectively. Production according to him, during the year 1953 would have been still more but for the somewhat unhappy labour conditions which existed in some factories. Mills are not only going ahead with the various expansion schemes but are making all possible efforts to produce as many varieties of papers and boards as possible. It will not be long before India will be able to produce almost all the varieties. The Paper Industry has actually suffered from various handicaps and they can be mainly classified as: the difficulties of obtaining raw materials; the transport bottleneck, and lastly the adverse import policy of the Government.

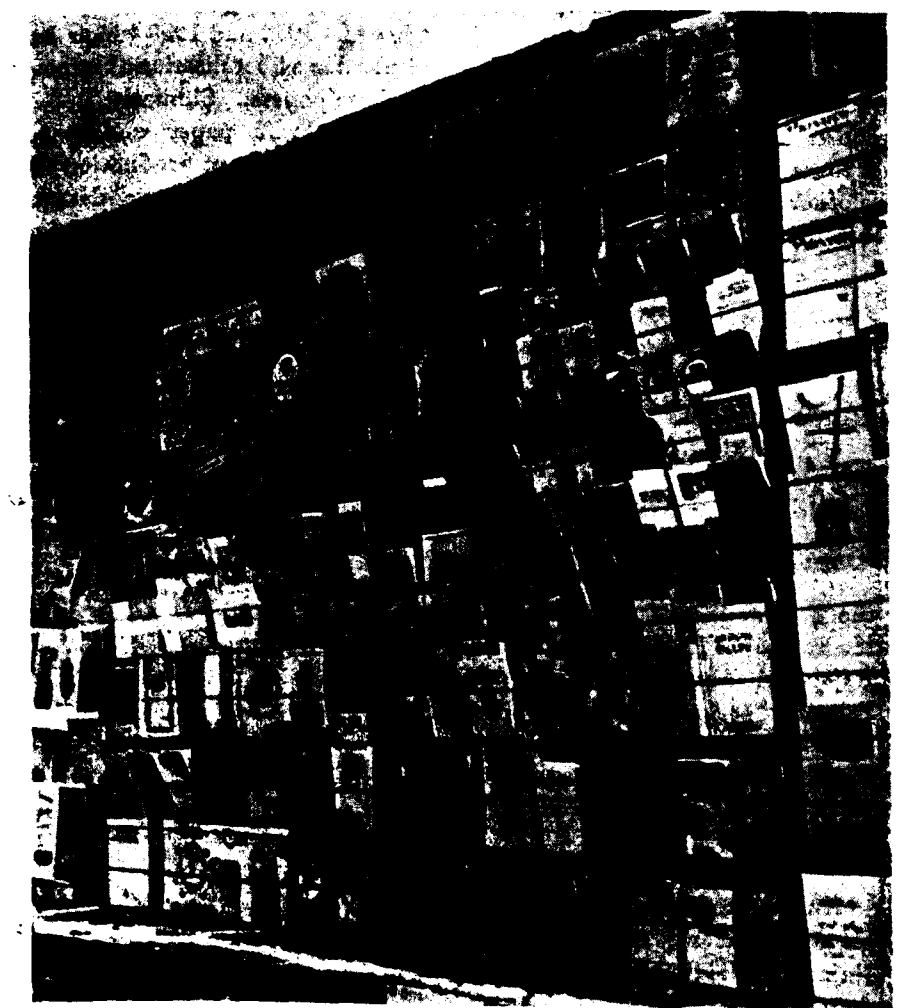
Today, the paper mills are not assured of adequate supplies of raw materials like bamboo, sabal grass, salt cake, hosiery cuttings, rags etc. and this condition prevails when

there is an abundance of these materials in our country. The main reason for this irregular supply is that the State Governments have not agreed to give long-term leases and the rates of royalty charged are excessive. Further there is a tendency in the state Governments to sell these raw materials through

middlemen by way of auction, which means a higher price to the Industry. Mr. Thapar appealed to the Government to see that as far as possible, the State Governments extend all possible facilities for direct lease to the Paper Industry and avoid the middlemen who usurp lot of money and thereby



The Special panel put up at the Printing Exhibition of I.F.P.T. to Commemorate the Centenary of the Inventor of Linotype, Mergenthaler whose picture can be seen in the centre.



Local Periodicals on display at the Printing Exhibition organised by the A. I. F. P. T., Madras.

increase the cost of the above products.

Restrictions on movement between stations on various Railways and non-availability of proper quantity of wagons in most of the cases means piling of stocks at most of the Mills. Under the system now in operation, raw materials for the paper industry and finished products come under the lower category of transport preference. He urged the Railways to upgrade the movement of raw materials for the Paper Industry and finished products, and allot wagons to each Mill for regular movement of the finished products.

The biggest handicap to the Paper Mills is the Import Policy of the Government of India. In spite of the increase in the quantity of Paper produced as pointed out above, the imports have not been curtailed to any appreciable extent. On the other hand, due to import trade control, the imports of paper and

boards in actual practice since July 1953 have been much larger than warranted by the normal requirements of the country. This has adversely affected the balance of supply and demand, putting our own industry into great disadvantage. Though the Government of India has reduced the quota fixed for Established Importers in respect of printing paper during the current licensing period from 50 to 40 per cent, it does not stand par with the increase in indigenous production. There was considerable scope for further reduction. During the current licensing period, the basic period for establishment of quotas in respect of writing papers, pads, envelopes, packing and wrapping paper had been extended to include the years 1952 and 1953 which had resulted in a liberalisation of imports of these papers. Similarly, in the case of kraft paper and paper boards, the present production was enough to meet the entire demand of the country, while in the case

of strawboards, the actual production was far short of the installed capacity. He, therefore, felt that any further import of strawboards, paper boards, kraft paper etc., was likely to affect indigenous production adversely.

Lastly, he referred to the proposal of the Government of India to raise the cess on paper and board to Re. 1/- and As. 8/- respectively, besides making it statutory. According to him, the industry was already contributing more than the value of the services it obtains from the Forest Research Institute and the research conducted by the Forest Research Institute had been purely academic and of little practical interest to the industry with the result that almost all the Mills have to maintain their own Research Laboratories which involve considerable expenses. As such, he suggested that the entire expenditure of the F. R. I. should be met by the Government.

Well-known Bangalore Printer Passed away

We are extremely sorry to record the sad and sudden demise of Sri M. Rajagopal Naidu, Proprietor of Rajagopal Photo Zinco & Power Printing Works, Bangalore City, on 2nd August 1954 at the sacred Haridwar in Ramakrishnashram, when he had been there on pilgrimage. He was 65.

Known highly for his deep religious sentiment, the late Sri M. Rajagopal Naidu was a former President of the Mysore Printers' Association, and the President of



Late Sri M. Rajagopal Naidu

the Mysore Printers Co-operative Society Ltd. For a very long time, he worked for the "Survey of India" department and in the year 1932, he left it and started his own concern "Rajagopal Photo Zinco & Power Printing Works" where he has conducted many experiments and has arrived at newer methods in litho printing. Sri Naidu was a well known social worker and a philanthropist in Bangalore. He left behind a galaxy of friends and relatives who bemoan his loss a great deal and "PRINTINDIA" offers to those left behind its heartfelt condolences.

From Our London Correspondent

F. & D. BROWNE

The Government Printing Office of America has recently published an important Report on a series of experiments carried out on the technique of type transparency proofing. This subject has received considerable attention in the printing industry during the last few years, but little technical information has hitherto been available on the subject. The experiments were carried out so that the final process could be better understood, but emphasis is placed on the need to follow the recommended procedure with care, since the process involves considerable deviation from standard practice.

Transparent proofs or transparencies are basically opaque prints from type or similar letterpress elements impressed upon a transparent plastic material and used primarily as positive prints in the production of deep-etch and reverse albumen offset plates. Though they may be used as reproduction proofs by placing a white sheet behind them on the camera copy board, they are normally intended for direct platemaking.

No camera work—developing, fixing or drying of negatives which delay the process in the operations between type and platemaking are required. The proofs may be handled and printed down on the grained offset plate immediately they have been pulled and no extra processing such as dusting and drying should be necessary, the proofs being used in the same way as with positives from camera negatives.

The technique for making transparencies is somewhat more intri-

cate than for reproduction proofs, especially as regards judging the opacity, and the process requires the same high standards in press, rollers, and type faces.

One problem has been getting the film of ink to adhere to the sheet in sufficient thickness to be opaque without spreading out and filling the type openings and distorting the letters. Transparent plastic sheet is smooth and non-absorbent, and the impression tends to squeeze the ink to the edges of the type face, leaving the centres of the letter strokes with no opacity. To overcome this, ink-makers generally concentrate the ink with pigment and adjust it to "take" on the smooth surface with minimum squeeze out, although the results have not always been reliable enough to meet the exacting standards of platemaking.

It has been the custom to run multiple impressions during which ink is applied to both the face and back of the sheet, requiring a proof press adapted to carry a special offset blanket in place of the usual tympan. Three impressions of ink are applied to the blanket, the transparent sheet set in the grippers and two ink impressions run on the face. In this way a coating of ink is built up on both the face and back of the transparent plastic sheet. Although the ink is kept "spare" the build-up gives an image of better fidelity and greater thickness and opacity than can be obtained by one impression with an equal amount of ink.

The impressions must be completely in register, and this is obtained

on a precision proof press with a gear on the impression cylinder running in a rack on the bed on which the type forme is securely locked. The transparent sheet must adhere to the blanket for the face impressions, and this is more important than in ordinary proofing because pulling the face impressions involves the forward movement of the cylinder on the return and again forward movement of the cylinder for the second impression. The sheet must adhere firmly to the blanket to avoid stripping it from the cylinder by the return movement and to prevent loss of register by slippage. To obtain a good adherence, a felt pad and steel roller are held manually against the sheet on the first pass into the press. This squeezes out most of the air between the sheet and blanket, and the latter has adhesive properties which are enhanced by the static applied by the felt and roller.

Dusting with lampblack gives the necessary opacity, and this combination of multiple impressions, face and back, and dusting, when properly carried out, produces good transparencies. The process developed by the U. S. Government Printing Department, however, differs essentially from the usual trade process in that the need for dusting is eliminated.

During the time a suitable ink was being sought, trials were carried out to find a transparent plastic sheeting having surface characteristics compatible with rapid ink drying. Eventually ethyl cellulose

(Continued on page 16)



Sri S. C. Mazumdar in Eternal Slumber

Journey's End. Heaps of floral wreaths placed on the body of Sri S. C. Mazumdar at different places during his last journey from his residence to Nimtolla Burning ghat on the banks of the holy Ganges.



SRI SURESH CHANDRA MAZUMDAR PASSES AWAY

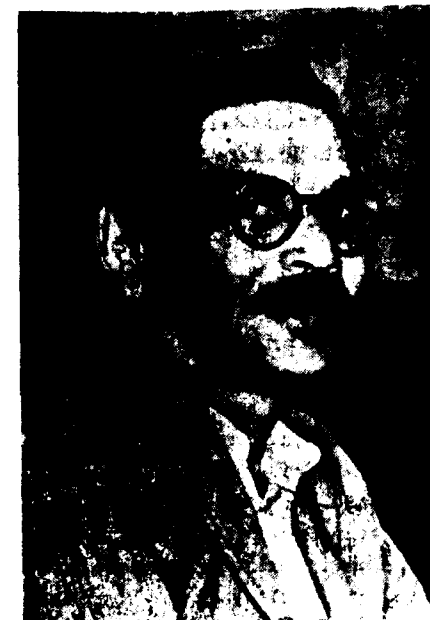
We are extremely grieved to record the premature demise of Sri Suresh Chandra Mazumdar, M. P., President of the All India Federation of Master Printers and Managing Director of the Ananda Bazaar Patrika group of Newspapers on 12-8-54 at his residence in Calcutta. Sri Mazumdar was almost in normal health since last six months though he had been suffering from high blood pressure previously. On 12th August he attended the office as usual and returned home in the afternoon complaining of chest pain and uneasiness. He was immediately attended by the doctors. At about 7-30 p.m. he became restless and complained of spasms in heart. Then oxygen was administered but his condition did not improve. After 10 p.m. he became alarmingly restless and was gasping for breath and ultimately at 11-15 p.m. he breathed his last.

MEMOIR

Born of a respectable middle class family in 1888 in Krishnagar which was once the cultural seat of

Bengal, Sri Suresh Chandra Mazumdar had his early education there. At that time Bengal was in the grip of a national resurgence and many a young man took pledge to liberate the motherland from the foreign yoke through armed rebellion. Sri Suresh Chandra Mazumdar overwhelmed by these revolutionary ideas landed in Calcutta and started working under the inspiring leadership of Sri Jatin Mukherjee under whom various groups of revolutionary workers in Bengal came to unite. Sri Mazumdar was arrested, released and rearrested and acquitted in murder and conspiracy cases connected with the national movement. Finally in 1912 he joined the Cambrian Press at Calcutta which gave him the fillip to develop his underlying instinctive love for the art of printing in a large measure. After serving two years he opened Sri Gouranga Press on a small scale which has become, by now, very famous. Later he conceived the idea of setting Bengali Script on Linotype keyboard and worked hard on this for

six years continuously and succeeded in the year 1936 in finally designing the Bengali Linotype keyboard by reducing the number of letters from 600 to 124. The



Sri S. C. Mazumdar

year 1937 has become a landmark in his career when the Ananda Bazaar Patrika started working with the first Bengali Linotype Machine which has been hailed as a revolutionary invention in the printing

industry. After inventing the Bengali Linotype keyboard he has designed the Bengali keyboard for the standard Remington Typewriter and the Government of West Bengal has accepted his system and the keyboard. In 1922 he has started the Ananda Bazar Patrika group of newspapers in collaboration with the late Sri P. K. Sarkar and the late Sri Mrinal Kanti Ghosh. In 1932 the increasing circulation of the Ananda Bazaar Patrika necessitated Sri Mazumdar to shift the press to a more spacious building which was found at 1 Burman Street from where this paper and its sister journals are being published now. In 1933 he has started the Bengali weekly "DESH" which is now one of the foremost popular weeklies in Bengal. In 1937 Sri Mazumdar has started the English daily "HINDUSTHAN STANDARD" and in 1951 Delhi edition of this paper has been started. In 1936 he joined hands with Sri S. N. Guha Ray of Sri Saraswati Press Limited and started the Calcutta Printing Press Owners Association. Sri Mazumdar was the President of

The Printing & Newspaper Industries of India lost one of its noblest sons...Thousands of men and women bemoan this irreparable loss.

this Association till 1952 and subsequently he resigned because of his indifferent health and his various political activities. Since the days of Non-cooperation Sri Mazumdar gradually worked his way into the Congress gathering strength from strength and by sheer dint of his personal association with it and the influence his journals exercised he became the pillar of the Congress in Bengal. After independence he was elected on the Congress ticket to the Constituent Assembly in 1947. Among his most notable contributions to our Indian Republic was what he did in getting "BANDE MATARAM" adopted as one of the National Anthems of India. In 1952 he was elected to the States Council of the Indian Parliament. Sri Mazumdar remained a bachelor till his very end and he was 66 at the time of his death.

Employees of Ananda Bazar Patrika group of Papers, paying their Homage to their Managing Director.



Congressman to the Last! North Calcutta Congress Committee honouring him with floral wreaths.



Deputy President of Rabindra Bharati placing a wreath on the bier Sri S. C. Mazumdar who was the Genl. Secretary of the Institution



From Our London Correspondent

(Continued from page 13)

sheeting in thickness of 0.001, 0.0015, 0.0025, 0.003 and 0.0035" were chosen, and it was finally decided that 0.003" thick sheets were the best proposition.

Full details of this research on sheet thickness and ink requirements are given in the Report, which lays stress on the following points:—Proper distribution of ink, absolute cleanliness of press rollers, type surface to be free of foreign substances, type formes to be clean before contact with rollers, blanket to be washed free of ink after each page change, bed and cylinder bearers to be washed clean every day, cleaning rags to be free of lint, and materials to be properly stored. Since the inks formulated for this process reproduce with a high fidelity it is doubly important that type faces should be perfect.

Specially designed for automatically gathering signatures and sheets in a consecutive manner for the production of reading books, magazines, and reports, preparatory to binding is the new Triumph full-automatic gathering machine Model NZ. This is built in units each comprising six boxes or stations, the maximum number of units being six, that is 30 individual stations, all of which are mounted side by side and are easy to view for supervision, adjustment or reloading. Loading and replenishing is accomplished whilst the machine is in operation. Signatures or sheets are extracted and controlled by gripper prongs and placed on an endless conveyor which delivers completed books to the stacker delivery.

Suction nozzles bend downwards the lowermost signature or sheet

which is then taken by the gripper prongs, extracted and then drawn downwards and on to the conveyor. This operation takes place simultaneously at all stations and is repeated on each reciprocating stroke of the grippers and whilst the conveyor moves forward to the next station. Sheets or signatures are thus piled consecutively until the book arrives complete at the stacker delivery, which packs the books in orderly fashion. All gripper and extraction mechanisms are controlled by electrically-operated throw-off devices, any one of which will stop the machine if replenishment of any particular station box has been overlooked, if damaged sheets have been loaded or if separation of heavily printed sheets should result in two or more being taken by the gripper. Start and stop is operable at each station.

Generally twenty-four stations suffice to cover standard book production, but the number of stations required is naturally governed by the greatest number of signatures which are to be gathered as one book in a single operation. Very thick books comprised of more signatures than available stations can, of course, be gathered in two operations. The usual speed is 50 signatures or sheets per minute, and the average production approximately 2200 books per hour.

The equipment includes single or double high-speed pump of 1028-1270 c. ft. suction capacity per hour; control devices at each station for automatic throw-off; additional detector device for stopping the machine if by paper faults two or more signatures or sheets are gripped; and complete fittings for the electrical control devices within the machine.

The size of sheet that can be dealt with varies, according to the

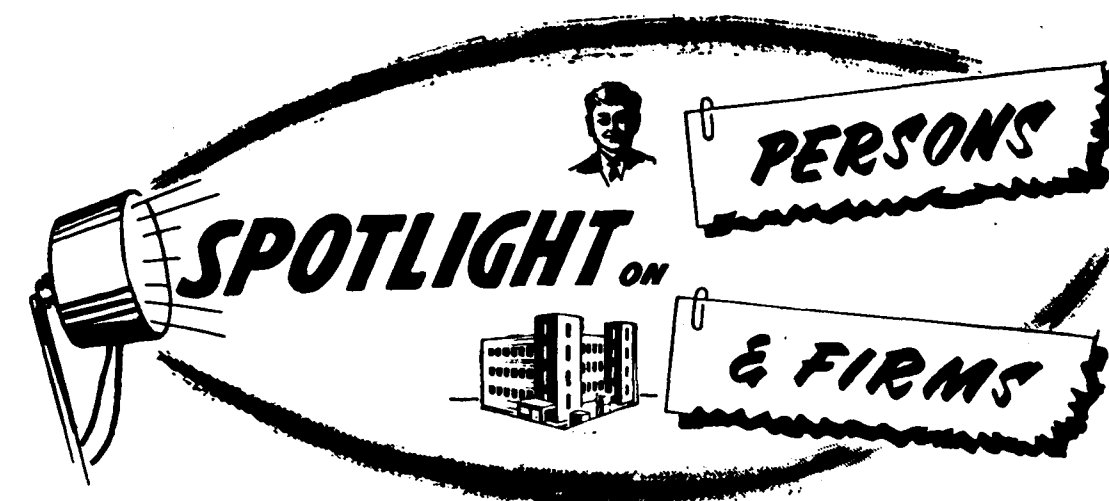
particular model, from 4" x 6" to 11" x 15½", and the floor space occupied by a typical 18-station machine, for example, is 32'0" long by 5'9" wide.

Another new development in printing equipment is a double-sided pasting machine, which pastes both sides of the book, and also the back if required, in one operation. Up to 15" in length can be accommodated without adjustment, with a minimum thickness of ½" and a maximum thickness of 4". It is stated by the makers that an output of between 3,000 and 4,000 per hour is possible.

A Lancashire firm have recently brought out an improved aniline printed for printing transparent cellulose film and similar materials. Printing on both sides of the film is achieved by making all the colour units easily reversible so that any colour can be used to print the inside or outside of the film. The inking and printing rollers are readily accessible from one position, and when using pigmented inks a slow-running motor is fitted, so that when the printing machine is stopped the rollers can be slowly revolved to eliminate drying of the ink on them. Hot air jets are used to increase the rate of drying, but before the film leaves the printer a final drying is done by a heated roller, while the film finally passes over a cold water roller for cooling down before being subjected to the next process.

FOR SALE
Heidelberg-Automatic
F. FOLIO SIZE (REBUILT)
Ready for inspection
Contact:
Arumugam Type Foundry
SUPPLIERS OF ALL VARIETIES OF TYPES
43 BROADWAY - MADRAS

PRINTINDIA



There are certain types of individuals, agile, efficient and soft tempered who make people with whom they come into contact, carry pleasant memories of their association with them. Sri G. A. Phadke, the Managing Director of that popular firm The Typewriter and Office Appliances (India) Co. Ltd., is undoubtedly one amongst them. Sri Phadke born in a respectable Maharashtra Brahmin family in 1902 has had a very interesting and distinguished career. He had his education at Poona. From his early days Sri Phadke had an instinctive love for business.

On 1st January 1947 he came to Madras as the Branch Manager of the Oliver Typewriter Company and served in that capacity for two years but was obliged to start his own concern The Typewriter and Office Appliances (India) Co., at Madras in the year 1929 since the closure of the Oliver Factory in U. S. A., and took distribution of the Smith Corona typewriters. In 1933 he converted this business of his own into a private limited company taking in the late Dr. M. Subramania Iyer and Sri K. Narasimha Iyengar, advocate, Kumbakonam as associate directors.

In 1936 Sri Phadke visited Japan to study business conditions in that

country. Later he visited U. K. and other European Countries in 1949 and made arrangements for the distribution of Rotaprint Offset printing machines. He again visited London in 1951 to study thoroughly the working of the Rotaprint machines and the processing work. He is now specialising in Office Offset Printing machines and has got trained two young men in the Factory with a view to give after Sales Service to the Rotaprint users.

His son Sri R. G. Phadke B.Sc. of the Madras University is now undergoing training at the Rotaprint Factory after passing his course at the London School of



Sri G. A. Phadke

Printing in first class, with his main subject as Offset Photo and Lithography. He also passed Offset Lithography Examination conducted by the City and Guild, London, in the first class and it is hoped that he may prove to be of great assistance to his father's Company.

Dignified in gait, and refined in speech Sri Phadke is also a member of the Institute of General Managers, London. He is a keen rotarian and Director of the Madras Rotary Club. Besides his business activities he takes interest in social activities. He had rendered yeoman service to the volunteers engaged in the struggle for freedom and it was how he came into personal contact with late Rao Bahadur Dr. M. Subramania Iyer and K. Narasimha Iyengar who still continues to be the Chairman of his Company.

The Typewriter and Office Appliances (India) Co., Ltd. have made a number of satisfactory installations of Rotaprint machines in Government Offices and large commercial Houses. Sri Phadke has introduced a scheme to train a few youngsters as operators for the Rotaprint machines every year so that their services may be utilised by the Rotaprint users to their best advantage.

(Continued on page 18)

Printing Ink and the Allied Trades

(Continued from page 4)

or plate is prepared in such a way as to expose a surface absorbant to water. Then the theory of oil and water not mixing is brought into practical effect. The image required to be transferred to paper is fixed to the stone or plate by hand or by photographic means. The image areas attract the greasy ink and the non-image areas which are damp repel it thus by mechanically and alternatively damping and inking the stone or plate, a clean image is maintained for the final print to paper.

1840 seems to be the date when photography was first applied to printing when a gentleman named Mungo Ponto discovered that exposure to light converted a mixture of Albumen and Potassium Bichromate from a soluble to an insoluble form. Thus a metal plate sensitized with a coating of this mixture could be exposed under a negative. The dark areas that would normally appear on a photographic print became hard, and the remaining areas remained soluble and could be washed off, leaving an unprotected area of metal, easy prey to an acid etch, while the areas protected by the solution remained intact.

This discovery, of course, led to photo-engraving as we know it today, and without which our newspapers and periodicals could not reproduce the photographic like pictures of current events that they do.

William Perkin in 1856 added his mite to the general progress of the trade by discovering ways of extracting pigmented colours from coal. This discovery has led to the

development of a vast range of pigments and shades. Some idea of the range of these shades may be gained by the fact that in 1937 an International Colour Code was adopted which comprised 720 distinct shades, any of which can be broken down still further.

But Printing does not end with Typography and Lithography. We have too, the Intaglio form of Printing, whereas typography is printing from a raised surface and lithography printing from a plain surface. Intaglio printing is done from an engraved surface, and the print is obtained from the recessed engraving. In this form of printing the ink is applied to the whole of the surface it is then removed by diverse means from all but the engraved portions, and the paper to be printed is pressed into the recessed engraving, thus becoming imprinted with the ink lying therein.

The main processes of Intaglio Printing are copperplate from which high class visiting cards and invitations are printed. Die Stamping from steel dies which are used for printing letterheads and the like, and a process known as Rota Gravure which process is used for printing a Number of Illustrated Magazines and other publications.

To go into details of various printing processes would each involve an address of somewhat longer duration than I am allowed for this whole talk, suffice it to say that the ink manufacturer has to produce printing-inks to suit the needs of the methods of printing mentioned besides one or two others, and even subtle sub-division of those, besides catering for numerous types of paper and, of course, the multitudinous problems of getting the ink to dry under all conditions and despite all obstacles.

The foregoing gives some idea of how printing came into being. It also gives an idea of the vastness and complicity of the industry which people tend to take very much for granted. Be assured though that the last thing to disappear if civilization is ever lost to the world will be the Printing Press.

And it is here that I would like to make an appeal to you. Be kind to your printer; by that I mean don't always take price as the ruling factor when ordering your printed matter; demand quality and expect to pay for it.

Remember when ordering your print that first, quality printing is a good advertisement to you or your company, whether it be letterheads, pamphlets or merely internal office stationery, and secondly, the printer has to cover the cost of paper and ink, his wages bill, depreciation so that he can replace his machinery and equipment, his overheads and he has to live and expects to make some profit out of his endeavours.

Spotlight on Persons & Firms

(Continued from page 17)

In conclusion we may say for certain that he is a shrewd businessman sparing no pains for the upkeep of the growing Institution of the Typewriter and Office Appliances (India) Co., Ltd. and we wish him every success in his future career.

PRINTINDIA

is available at all

News Agents in India

and at

Higginbothams Railway Stalls

PRINTINDIA

Graphic machinery manufacturers and dealers may utilize the columns of this monthly feature to broadcast brief descriptions of their latest machines to the printers in India and surrounding countries.

MODERN

The Times of India's New Rotogravure Press

Progressive increase in circulation, a popular demand for a wider variety of publications coupled with plans for overall expansion of printing facilities and in particular extension of the photogravure press which is already the largest in the East, initiated M/s. Bennett Coleman & Co. Ltd., the Proprietors of The Times of India and associated publications invited tenders from British, Continental and American manufacturers for a Rotogravure Press.

The specification had of necessity to be exacting for though it was intended initially for the production of the Company's three pictorial papers — THE ILLUSTRATED WEEKLY OF INDIA, DHARMAYUG and FILMFARE, to speed output and improve quality, it needed to be sufficiently flexible in certain essentials as to page size, colour combination and format to cater for new and additional publications in the future.

The extent and manner in which these essentials have been met will be seen from the brief references to the data given below as incorporated in the accepted tender submitted by Messrs. M. A. N. (der Maschinenfabrik Augsburg—Nurnberg A. G.), Augsburg, a firm

who enjoy a very high reputation as designers and manufacturers of printing machinery.

The estimated cost of this press installed is £ 130,000 and it is of particular interest that the order, which was placed on the 15th October, 1952, was completed from drawing board to satisfactory trial test at the Makers Works on the 5th October 1953.

This machine is now in production satisfactorily notwithstanding certain local structural difficulties and not the least that of placing the press, which is 82'0" long X 8'0" wide, in the existing building so as to avoid fouling ceilings and supporting columns to ensure that the movement of cylinders and paper reels in and out of the press are not impeded.

The increased capacity of the M. A. N. Press by reason of its rapid output will demand a higher production in the quantum of cylinders added to which is the cylinder production for the battery of Palatia automatic sheet-fed machines, which by reason of the quality of their production have already attracted much favourable attention and enabled the Company to enter the commercial gravure printing field.

The machine consists of nine printing units, three reel stands, one fixed size folder and one variable size folder with provision for a third fold.

Each unit is reversible and totally enclosed; an improved doctor blade motion ensures smooth oscillation and a clean wipe and provision has been made to enable the machine minder to regulate both the pressure and the angle of the doctor blade.

The inking device for each unit is operated on the dry sump principle, ink containers are situated outside the press, from these the ink is brought to the printing cylinder by means of a small electric pump, the surplus ink wiped off by the doctor blade is returned through filters to the ink container and recirculated. This system ensures a constant supply of grit and dust free ink to the cylinder and at the same time prevents deposition of the ink. Colour register is maintained by a push button control station on each folder where the machine minder by selecting the appropriate button can advance or retard circumferentially any particular cylinder; lateral register is controlled by a hand wheel.

Printing impression pressures of the rubber impression rollers can be

pre-set either manually or electrically to a fixed scale and pointer reading, thereafter the impression rollers can be raised or lowered either individually or collectively by push button control.

As paper tension control is a vital part of maintaining colour register at high speeds, particular attention has been paid to this problem. Each reel stand is provided with a special tension control. This is achieved by driving the reels by means of a "triangular pendulum." This is automatically controlled by P. I. V. gear which in turn is controlled by a dancer roller combined with a mercury tilting switch.

Additional control of the paper web tension is maintained by fitting a slip clutch on each drying drum drive; and by increasing or decreasing pressure on the clutch any

desired web tension may be set and kept constant independent of speed variations while running the press.

To condition the paper web before each first impression three sets of four steam drums are provided. These serve the dual purpose of driving off excess moisture in the paper and smoothing the web; thereafter the drying of the web between each impression is effected by electrically heated drums and a continuous blast of pre-heated air. The circulation of the hot air is controlled so that part of the air is carried back to the fan, mixed with fresh air and re-circulated and part already enriched with the vapourised solvents is led off to a solvent recovery plant.

The products of the press by reason of its flexibility can be of a

far wider variety than is usually found in machines designed for magazine printing; page size can range from 14½" by 11" to 7½" by 19½" and colour combinations can be varied to an astonishing degree.

Using the full press a publication of 96 pages carrying 16 pages in four colour can be produced and delivered stitched and folded. For publications of a lesser number of pages upto 32 pages of three colour can be run and by varying the paper leads combinations of two, three and four colour can be produced at speeds of upto 15,000 copies an hour.

Moreover by restricting the number of pages and colour pages it is possible to produce two publications simultaneously, both folders being in operation.

News and Views

A development to assist in the feeding of the many granular materials used in the paper trade is the 'RT' feeder, the only moving part of which is the revolving feed table, rotated at constant slow speed below the stationary feed hopper.

This rotation is effected by an electric motor, Pelton wheel or convenient belt drive, with the necessary speed reducing gear.

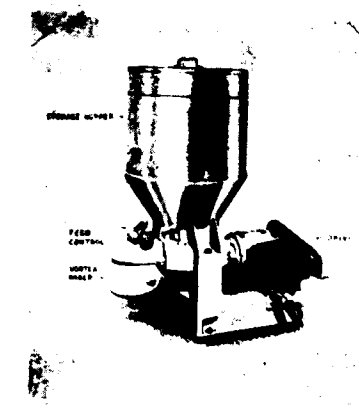
A sectional feed knife extends into the chemical or other product within the base of the hopper, deflecting a certain constant volume of materials from the table into a vortex mixer alongside, the quantity deflected being determined by the position of the feed knife and the number of sections of the knife which are in the operative position. The effective thickness of the knife is predetermined according to the required range of feed capacity, the range being very wide, while the position of the knife is instantaneously adjustable by a positive external control while the machine is running.

When used for reagents having a tendency to arch or pack moving agitators are provided within the feed hopper, keeping the mass of chemical in motion, and ensuring uniform gravitational descent to the feed table. The measured stream of chemical is discharged through an opening into the vortex mixer adjoining where it is intimately

mixed with water and discharged to the point of application.

The rate of feed is externally controlled by the rotation of a small friction hand-wheel mounted above the vortex mixer, which moves the feed knife further into and out of engagement, the position of the knife and consequently the rate of feed, being shown by a pointer on a divided scale. The worm drive of the knife and pointer ensures positive fixed adjustment without the necessity for a locking device or the setting of fixing means such as locknuts or set screws, and there is also included a device for adjusting and locking the knife thickness. Also by modification of the speed reduction gear any required delivery can be secured from a few ounces to several cwt. per hour.

The feeder is practically dust tight in operation, the feed hopper being fitted with a dust proof cover to prevent light materials being air-



The new Dry Chemical Feeder

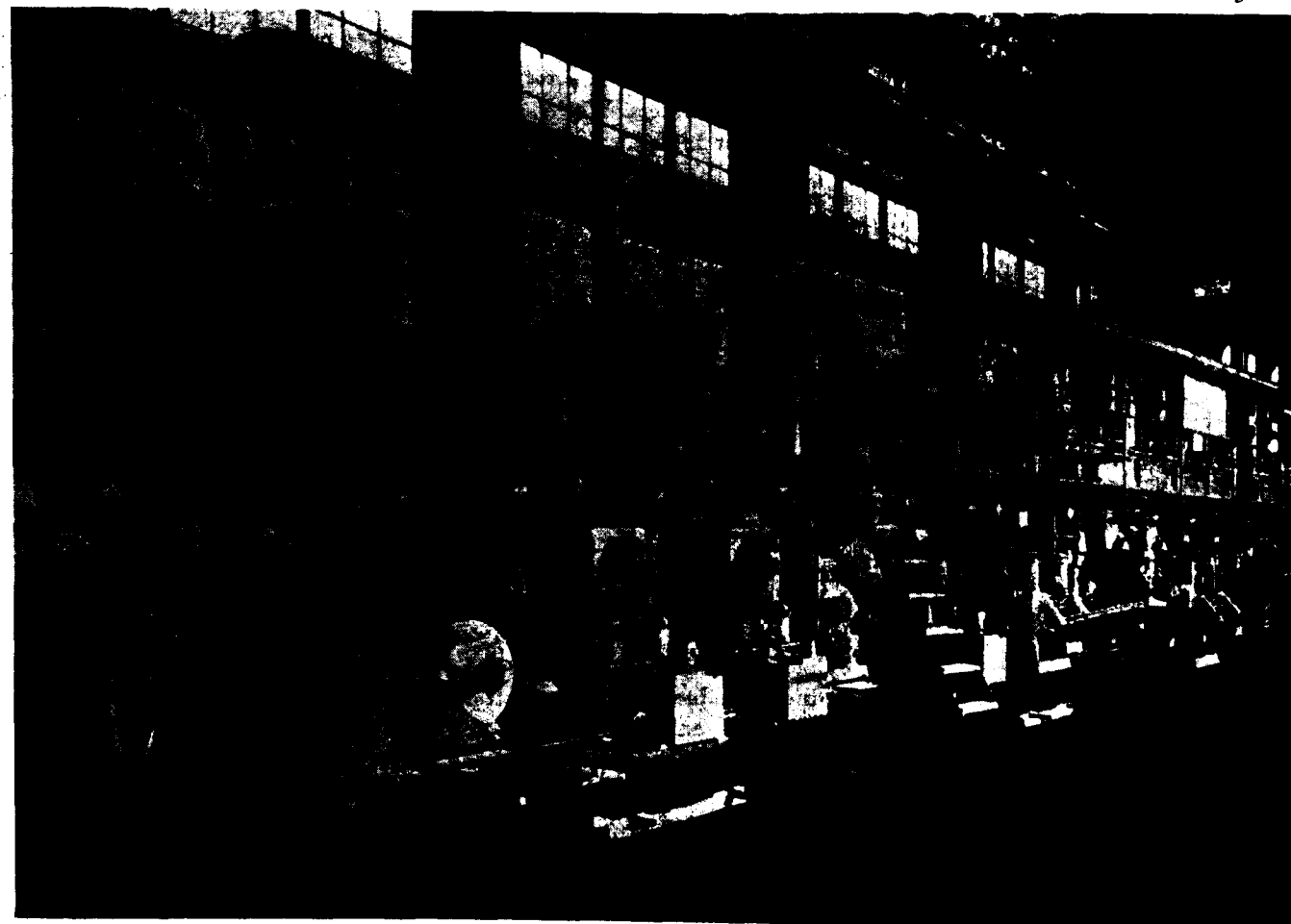
borne by stray air currents and becoming deposited in the bearings of motors and other machinery.

The Paterson Engineering Co. (India) Ltd. of London and 21 Theatre Road, Calcutta who produce the machine claim that any type of powdered or granulated substance be handled.

* * *

The Hony. General Secretary, All India Federation of Master Printers, 32, Upper Circular Road, Calcutta-9, in his circular No. FD-14/54 dated 1-9-54 informs us that the proposal made by the federation urging the Government "to abolish the present procedure requiring applicants for Import Licence under Actual Users head to annex a certificate from the State Director of Industries to their applications" has been adequately covered under provisions of para 37 of Section I of the current Red Book, by the Chief Controller of Imports and Exports, Government of India, New Delhi, in their communication No. 37 Pol. IV (13) 54 2006 dated 30-8-54 as follows:—

"With reference to your letter No. FD-170/54 dated the 21st June '54 on the above subject, I write to inform you that it has not been possible to exempt Actual Users from the production of consumption certificates issued by the State Director of Industries along with their applications for import



M. A. N's New Rotogravure Press installed recently at The Times of India Press, Bombay

licences. Your proposal has, however, been adequately covered under the provisions of para 37 of Section I of the current Red Book, according to which such of the applicants who have been obtaining regularly Actual Users' Licences during the last three preceding periods need not obtain fresh consumption certificate from the Director of Industries in the current licensing period. In such cases it would be enough if the Actual User applicant furnished certified copies of licences received by him in the three preceding periods and a certified copy of the Director of Industries Certificate issued to him in the preceding period.

In other cases the applicants have to produce consumption certificates issued by the State Director of Industries along with their applications."

* * *

SIMPLIFIED OFFSET COLOR PLATES

Microtronics Corp. has named a new color separation projector for use with a simplified process of the three-color offset litho printing developed by Eastman Kodak Co. The process was designed for fast, moderate-cost lithography that eliminates the black plate. It does not require exact matching of original colors, but it is said to assure highly pleasing color effects and appreciable savings.

Incorporated in the projector is the new Kodak gray contact screen for direct screening of halftone color separation negatives. Copy is a color transparency. The projector, largely automatic, masks the transparency to correct for contrast and color balance. Direct-screened halftone separation negatives are made by exposure on Kodalith pan film, and the image is transferred to the litho plate

from the negative in a vacuum frame. It is said that these steps, requiring no later color correction, are carried out by precision register pins and a specially modified Kodak matrix film punch that maintain exact mechanical register of color transparency, mask, separation negatives and printing plates.

HEAVY-DUTY HYDRAULIC SHAVER

A heavy-duty, hydraulic drive-shaver for stereotypes, electros, metal base, plastic, and wood has been introduced by the Monomelt Co., 1611 N. E. Polk, Minneapolis 13, Minn. In addition to its hydraulic drive, the new shaver features a non-clogging cutter head; a flexible, 17-finger front hold-down; and a table capacity of 17½ x 22½ inches. An automatic tripping device prevents over-depth cuts and assures clearance of plates during the fast return cycle.

Got your copy of this pride publication?

".....PRINTINDIA does a good job by covering in details,—through reports, articles and pictures,—the second session of the All India Printers Conference and Exhibition recently held at Calcutta. We have nothing but high praise for this issue which contains stimulating articles by competent authorities, a nice account of the last Conference and many other provoking items. You will be glad to possess a copy of this Special Number" so says the well known Amrita Bazar Patrika daily from Calcutta.

Phone: 3006

KUBERA ENTERPRISES LIMITED

"KUBERA BUILDINGS"

21 SUNKURAMA CHETTY STREET

Post Box No. 1519

MADRAS 1

THE ALL INDIA PRINTERS CONFERENCE NUMBER

OF

PRINTINDIA

A Landmark in Graphic Arts Journalism

- ❖ EXQUISITELY PRINTED ON REAL ART PAPER - - -
- ❖ LAVISHLY ILLUSTRATED WITH DOZENS OF PHOTOGRAPHS OF THE CONFERENCE TAKEN AT CALCUTTA - - -
- ❖ THROWING HUMOROUS SILELIGHTS ON PERSONS AT THE CONFERENCE - - -

AND

- ❖ PRESENTING AN AUTHENTIC AND CANDID SURVEY AND SUMMARY OF THE PROCEEDINGS OF THE CONFERENCE AND THE EXHIBITION - - -

A publication no printer can afford to miss!

Price including postage by R. P. 1-10-0

PLEASE SEND YOUR REMITTANCE TO:

Grams: 'VASUNIDHI'

REVIEW FORUM

GERMAN EXPORT TRIBUNE 54—Published by Export-Verlag Ehle-Hogrebe, Wuppertal-Barmen, Winklerstrasse, Western Germany.

GERMAN EXPORT TRIBUNE also titled as EXPORT YEAR BOOK of the Paper and Printing Machine Industry of Western Germany, is hardly a Tribune, nor can it be called a Year Book as most people understand it, since it does not contain any of the data, information or interesting articles usually associated with such publications. A most suitable title for this dreary succession of advertisements would be "catalogue". However despite its misleading title it is no doubt a useful reference book for those wanting to know who manufactures what for the printing trade in Western Germany. The publishers are to be congratulated for compiling such an excellent set of cross indices by which one can trace out very quickly the manufacturer of any particular item that may be required. Strangely enough the indices seem to tell one more than the advertisements themselves. The printers of this volume deserve high praise. To those academically interested in good printing, as such, it is a pleasure to run through: the paper is good as is the binding, the black is black and strangely enough bone dry, the solids whether black or colour, are except for only

a very few, evenly printed, flat and unmottled which is a feat in itself. Set off is conspicuous only by its absence and over impression is almost non-existent. As a piece of printing, the workmanship is a lesson to young and old, student and journeyman.

Graphicus

* * *

PRINTECH—July 1954 Annual Number—Published by The Indian Federation of Printing Technologists at 26 Broadway Madras-1.

Printing, both as an art and as science, is progressing fast and in order to keep pace with the progress, our Printers need complete knowledge of the developments that are taking place abroad in the improvements of modern technique, machineries accessories etc. This Magazine serves well in this regard and also provides an incentive to our Printers for making improvements in the light of circumstances prevailing in this country.

The Printing is neat and clean and everyone connected with the Printing Industry will be naturally interested in possessing a copy of this.

The various articles published in this issue can be classified under

two categories, those dealing with subjects of day-to-day interest for printers and others dealing with the improvements which have taken place in the field of Graphic Arts. Besides the above, it contains the annual report of the Indian Federation of printing technologists and a welcome address by the President at the first anniversary celebrations.

Articles on Spacing, Paper and Humidity Control, Numbering Machines, Varnishing by Letter Press will be found of immense help to printers in their routine work. For instance, the article on numbering machines gives an interesting account of all types of numbering machines whether hand, typehigh, paging or other special varieties. It is something surprising, though a fact, when it is said that there are as many as nine varieties of numbering machines under Bindery.

Articles on Linofilm and New Composing Machines deal with the progress and improvements taken place so far in the field of composing and block making. Another important interesting machine which can be very profitable utilised without any delay in our country by the big newspapers is the Scan-A-Graver or Clichograph.

J. P. J.

SEPTEMBER 1954

23

First Anniversary Celebrations of The Indian Federation of Printing Technologists

(Continued from page 6)

any holidays. In fact on Sundays when we rest we want our newspapers to be double the normal size. In Madras Newspapers have become morning dailies, which means all night work for those engaged in their production. All this ought to be known to the outside world so that their sympathy may be attracted and they may know the difficulty in producing a newspaper while it is easy to toss an anna or two in exchange for it. It will be good for all concerned if there is a better communion between the public and those in charge of producing the newspapers."

The conflicting role of women as competitors and counsellors, paradoxical as it may seem, was commented upon by Governor Sri SriPrakasa when he congratulated the printers at a meeting last evening



The panel showing the entries for the Monogram Competition conducted by the Federation in March 1954

on the score that their business was monopolized by men unlike in other profession which women had

invaded but he hastened to caution them that they would still have much to learn from the women and would be profited by it if only they took their counsel in toning up the aesthetic side of their art.

"I congratulate you on the fact" said the Governor "that the printing work is entirely monopolized by men, because the competition of women in every other department of life is so great that we are just being elbowed out. I have been in the midst of many other gatherings and there were always more women present than men. But I do not know how long it will last. The pressure of our womenfolk is getting greater and greater and by the many insidious ways which only women know they may enter your trade also as they have done elsewhere. Anyway the consolation is at the moment your trade is free from this incursion. The only way in which you can keep them out is



The band of enthusiastic members who worked hard to put up the Exhibition, with the President and Hony. Exhibition Organiser (seated 3rd and 4th from left)

to see that you, treated your own womenfolk at home properly so that they may use their influence with their sisters and keep them in check. Besides so far as art and beauty are concerned the woman's eye is more sure than that of the man. So the Federation of Printing Technologists may from time to time consult women with the result they may teach you the correct methods of printing. If you do so they would tell you that you should not print the pictures of their sisters (cinema stars) in lurid colours in those posters in the Exhibition."

The Indian Federation of Printing Technologists is doing very useful work, and there is no call to be disheartened by initial difficulties or inadequacy of resources.



Chief Minister Sri Kamaraj Nadar declaring the Exhibition open.

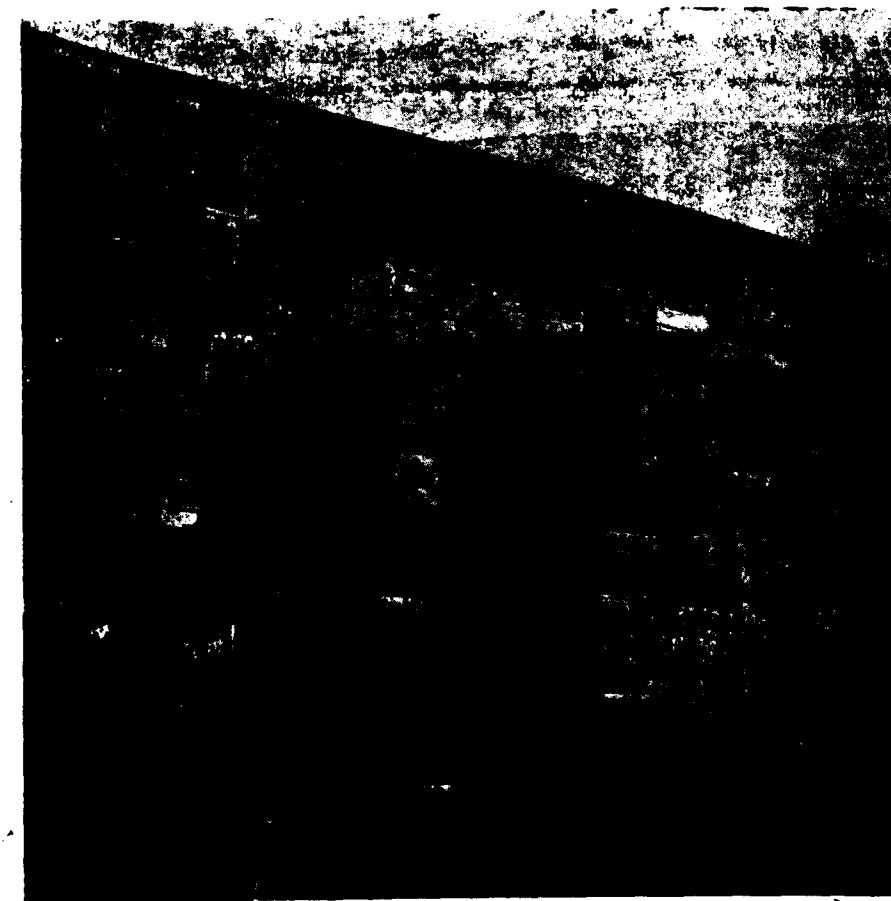
CHIEF MINISTER'S SPEECH

The following is the substance of Madras Chief Minister Sri Kamaraj Nadar's brief speech opening the Printing Exhibition at the White Memorial Hall, Egmore, Madras, on August 14, 1954.

Sri Kamaraj said in his Tamil speech :—

"I am very happy at this opportunity of meeting printing technologists. I have just now been through the wonderful exhibition organized by you. I was very much impressed. Your Secretary said in his report that time was short and it could not therefore be made comprehensive. If within this short space of time and with your limited resources you can organize such a fine exhibition, what can you not do, given time and resources?

"The exhibition reflects the scientific progress made in the printing industry. While giving us an idea of the progress made in



Panel showing some magazines, type specimen books and Printing Technical Journals.

country, it shows us also how much more we in this country have to learn. We have highly talented men here who are trying to master this great art, and I wish them all success.

Printing played a very important role in our freedom struggle. In free India it has a much more important part to play. I am sure the art is safe in the hands of the younger generation.

All great endeavours meet with obstacles in the beginning. You will encounter many kinds of difficulties, but you must not be discouraged. It is your duty to go forward unperturbed. I have no doubt success will ultimately crown your efforts."

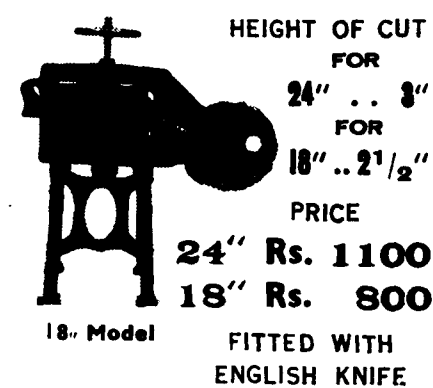
S. K. Thamba proposed a vote of thanks.

CORRECTION

We hereby request the readers of PRINTINDIA to note that the article entitled 'FEDERATION COSTING IN INDIAN PRESSES' by Sri K. K. Ghosh published in the August issue of the magazine, has nothing to do with the Costing system to be formulated by the Sub-committee appointed by the All India Federation of Master-printers. We are very sorry that we mistook the article as relating to the costing system pertaining to the Federation and we are grateful to Sri S. N. Guha Ray for pointing out that the Federation has not yet formulated any such Costing System at the moment. In view of this, we have stopped the reprints of the aforesaid article for free distribution as announced by us in an advertisement on Page 26 of the August issue of PRINTINDIA. We are very sorry for the incon-

venience we might have caused to the readers but we assume the article by itself is worthy of study as an individual suggestion emanating from an experienced printing technician like Sri K. K. Ghosh.

—Editor "PRINTINDIA"



NORTON & CO.
CHOLAI - - MADRAS 7

High Quality Reproduction of Proofs

By

MR. ALEXANDER LAWSON

The advent of the reproduction proof press has brought about a minor revolution in the composing rooms of many printers, particularly those specialising in setting composition for the trade and the plants which have added lithographic equipment to augment a purely letterpress operation. The day is long past when a satisfactory proof could be made on a standard proof press by using a sheet of coated stock held to the cylinder by a piece of string secured with a paper clip or a rubber band.

Successful printers to whom the reproduction proof is the "product" they offer to customers have now set up proofing departments directed by skilled personnel who supervise the mixing of special formula ink, the selection of paper stock, the packing of the cylinder of the press, and of course the careful production of the proof.

The press itself has become a highly engineered machine, in reality almost a full-grown cylinder press, but with the motive power still consisting of the strong arm of the operator.

With so much composition being set for jobs produced by lithography and gravure, the proofs must be of high quality—crisp and clean—if they are to be caught by the camera and transferred to the plate. While it may be true, as the writer has heard in discussions relating to reproduction proofing, that there are more *prima donnas* behind cameras than on the operating stage, nevertheless, should the proof be less than desirable, the printing

plate can never overcome that initial disadvantage.

NEW METHODS INCREASE PRODUCTION

Printers who operate this equipment are ever on the lookout for new techniques to increase production. To this end, they spend hours trying to find ways of by-passing some of the special headaches in the operation.

These problems involve the packing of the press, the proof paper, the ink, and drying methods to mention the most important items upon which opinions differ.

Selection of paper stock seems to be the most controversial subject of all. Indeed, it is surprising that so few paper manufacturers have given attention to producing a sheet for this specific purpose. Perhaps one reason is the fact that printers themselves can't agree on its requirements. Probably a majority would concede that the sheet should first of all be level.

Next, it should allow relatively fast drying, since proofs often go to the customer with strict time requirements. The paper should be non-curling, and it need be coated on one side only.

Several glossy-coated printing papers now manufactured for general printing have proved dependable. Since dull-coated sheets also appear to be reliable, the users have divided into two main groups: the adherents of the glossy-coated stocks and those having faith in dull-coated paper. It is generally agreed that

white is the best colour, but even here the arguments persist, with light shades of blue dominating the anti-white viewpoint. Preferences indicate a weight range of 60 to 90 pounds.

MUST FORMULATE PROPER INKS

The second major field of experiment in reproduction proofing is concerned with ink. Again, everyone has his favourite kind, but at the same time keeps an eye out for something more effective, often trying a score before he finds a mixture that answers his requirements. Several manufacturers have developed and now market inks especially for reproduction proofing because standard job inks are usually not adequate. For that reason the printer would be well advised to seek out his ink supplier and give him the information needed to formulate the proper ink. Basic

Grams: "PUNANIRMAN"
Telephone: "3151"

Premier Suppliers Ltd.,
105, N. S. C. Bose Road, MADRAS-1

DISTRIBUTORS:

M/S. ORIENT PAPER MILLS LTD.
M/S. SIRPUR PAPER MILLS LTD.

Most Varieties of Paper
are available from stocks

ENQUIRIES SOLICITED

Other Offices: CALCUTTA (Head Office)
BOMBAY
DELHI

BENHUR
REGD
Paper Products

Marriage Invitation Cards	Printing & Binding	Letter Pads	Exercise Note Books
Festive Greeting Cards	Boxes & Cartons	Office Files	Tag Labels
Loose Leaf Ledger Sheets	Account Books	Envelopes	etc., etc.

DAMODHAR ENVELOPE FACTORY
PIONEER ENVELOPE MAKERS

26 Thambu Chetty Street
P. B. 5008 - MADRAS-1
Office Phone: 3403

Trade Mark
"BENHUR"

Damodhar House - 51 Main Road
Royapuram - MADRAS-13
Factory Phone: 4469

PRINTINDIA

SEPTEMBER 1954

27

requisites of most reproduction proof inks are stiffness of body and strength of colour.

While paper and ink arouse most of the controversy in discussions of proofing, myraid other details affecting the quality of the product must also receive consideration. Standard proof presses can perform with reasonable efficiency, particularly if handled by skilled personnel, but a shop requiring full-time press operation will lose an appreciable amount of production time. The type of press which has a bed cut to .918-inch is the most desirable because it eliminates the need for a galley or a bed-plate, both of which can materially impair the precision principle followed in production of the finest proofs.

The press itself must be kept free of dirt and grease, particularly on the cylinder bearers as the impression can easily be made uneven. The packing should be hard, and while the regular oiled

tympan is satisfactory, many printers prefer the beaded-glass type of packing. Rubber rollers, since they are less affected by temperature conditions, are considered superior to composition rollers.

The prevalence of dust, not usually considered in proofing operations, is a real concern in a precision set-up. Even ink coverage can be adversely affected, and in some instances fine-line type can be damaged by this agent. Controlled ventilation is probably the only positive method of overcoming this problem and that of humidity as well.

DRYERS INSURE QUICK DELIVERY.

Several available models of drying apparatus insure quick delivery of the proof without smudging. The simplest of these, which can be constructed in the shop, consists of a box containing wire shelves and a standard electric heater with a small fan to circulate the heat. It must be used carefully

to prevent overheating and damage to the proofs. With or without heating devices, it is good practice to slip-sheet the proofs with absorbent tissue.

Normally, a careful printer is concerned about his type metal. He is constantly aware of the casting difficulties which occur when the metal becomes contaminated. In reproduction proofing, where sharpness of image is imperative, he must be doubly cautious. Beyond that, he must insure that his matrices are in excellent condition and that casting temperatures are as exact as the metal formula.

In all, a good reproduction proof from every impression is not accidental. It must be part of a quality operation in every aspect of production, both in state of equipment and in application of human effort.

Certainly the product must represent the printer's best effort if it is to be adequate for the many operations to follow.

(Courtesy: The Inland Printer.)

SOLVE YOUR PROBLEMS

We have great pleasure to inform the printers of this country that any problems confronting them in their day-to-day activities pertaining to the graphic arts industries can now be satisfactorily solved by sending them to the "PRINTINDIA" magazine in the shape of questions giving details of the troubles. They will be carefully analysed by an expert and will be replied to month by month in the columns of this magazine. This feature will be introduced from the October issue and all questions may be sent addressed as follows:—

GRAPHICUS,
c/o "PRINTINDIA"

'KUBERA BUILDINGS' :: 21, SUNKURAMACHETTY STREET :: MADRAS-1

PRINTED AND PUBLISHED BY V. S. N. MURTHI FOR THE PROPRIETORS MESSRS. KUBERA ENTERPRISES LTD., AT KUBERA PRINTERS LTD., "KUBERA BUILDINGS" 21, SUNKURAMACHETTY STREET, MADRAS-1
MANAGING EDITOR: TEMPORAU

PRINTING TYPES IN

MANICKAM PAPER CUTTING

PERFORATING

RULING

LEAD & RULE CUTTING

HINDI & MALAYALAM

TELUGU, KANADA

ENGLISH, TAMIL

ESTD: 1916.

Printers' Providers & Engineers

CATALOGUE ON REQUEST

NELSON & CO.

(THE FINE-ART TYPE FOUNDRY)

62, SWAMI PILLAI STREET, CHOLAI, MADRAS-7

Post Box No 452 Grams: NELSONCO

AMINJIKARAI MADRAS-10 PHONE: 86313.

62, SWAMI PILLAI ST, CHOLAI, MADRAS-7 PHONE: 2722.

★
PRINTED
WITH
RAINBOW'S
STANDARD
TRI-COLOUR
INKS



CHITRA KUMAR (LAKSHMI)

CHITRA KUMAR (LAKSHMI)

1. P. 70



1. P. 71

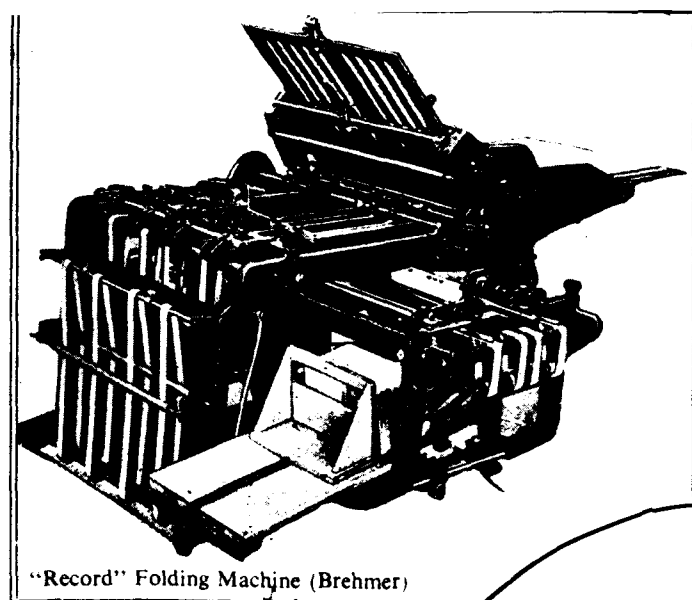


1. P. 72

THE RAINBOW

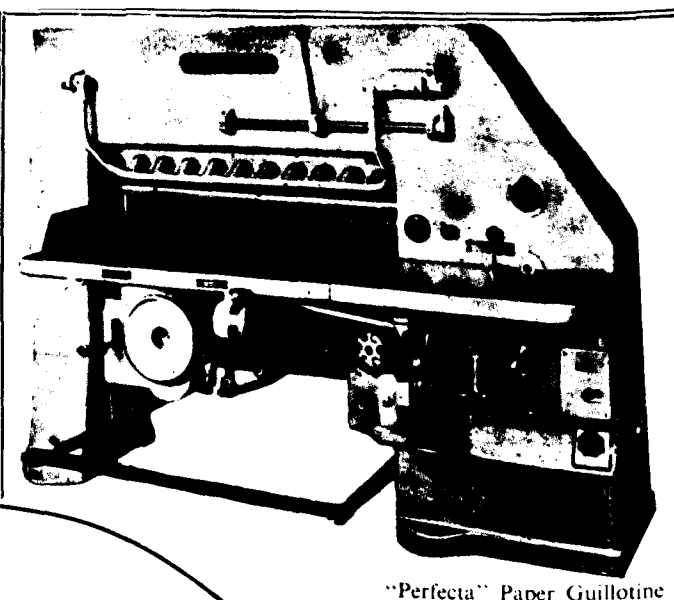
RAINBOW INK & VARNISH MFG. Co., Ltd
BOMBAY - 7

Printindia
A MONTHLY MAGAZINE DEVOTED TO PRINTING & ALLIED ARTS
A Kubera PUBLICATION
PRICE . Re. 1.
954



"Record" Folding Machine (Brehmer)

P
O
L
Y
G
R
A
P
H

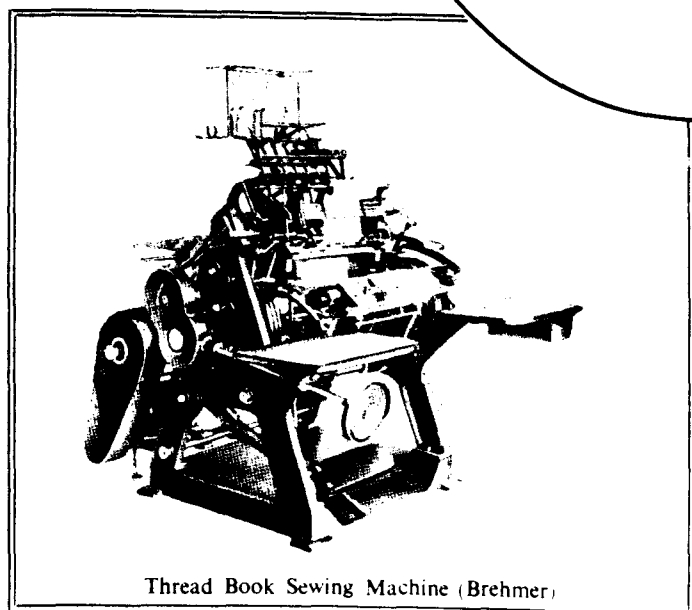


"Perfecta" Paper Guillotine

THE BEST CHOICE
OF
MACHINES

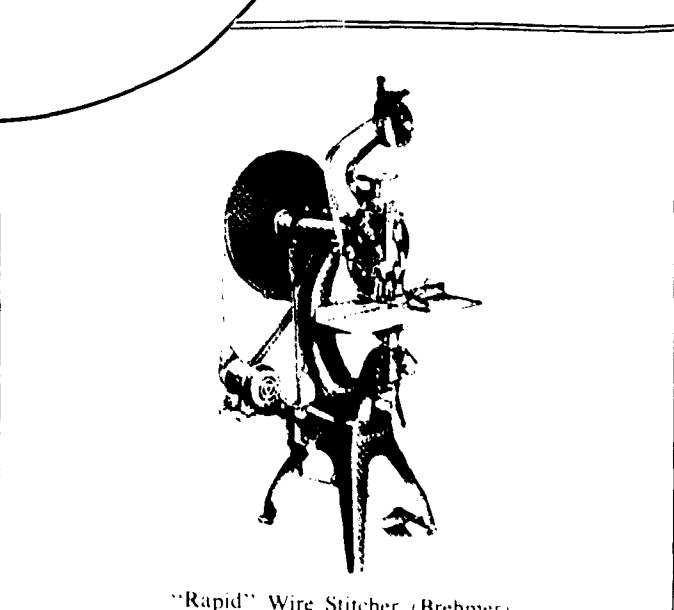
For Your Binding Department

FROM A RANGE OF
world-famous manufacturers



Thread Book Sewing Machine (Brehmer)

F
A
M
I
L
Y



"Rapid" Wire Stitcher (Brehmer)

WRITE TO-DAY TO
INDO-EUROPEAN MACHINERY CO. LTD.

Khaleeli Mansions
35/3 Mount Road
MADRAS - 2

Sambava Chambers
Sir P. M. Road
BOMBAY - 1

Post Box 1499
Chandni Chowk
DELHI - 6

9 Mangoe Lane
Off Bentick St.
CALCUTTA - 1

PRINTINDIA

A Monthly Magazine Devoted to Printing & Allied Industries

Vol. 2]

OCTOBER 1954

[No. 6

Managing Editor
TEMPORAU

Business Manager
V. S. N. Murthi

Circulation Manager
Miss Lily Hughes

London Correspondent
F. & D. Brownlie

Roving Correspondent
G. V. G. Krishnan

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.

PRINTINDIA is Published
on the 10th of every month.

ANNUAL SUBSCRIPTION RATES
INDIA Rs. 10/-
U. K. £ 1 Shs. 10
U. S. A. \$ 5

Editorial & Publication Office :
PRINTINDIA

Proprietors
KUBERA ENTERPRISES Ltd.,
"KUBERA BUILDINGS"
21, Sunkuramachetty St., Madras-1
INDIA
Grams : VASUNIDHI Phone : 3006

In this issue....

- Why a Printing School?
- Brief History of Book Binding
- The Printer and Society
- All India Printers' Conference & Exhibition — Third Session, Madras
- The Hooghly Ink Co. Ltd.
- Hooghly Ink Factory Inauguration at New Premises—Gala Reception & Dinner at Hotel Oceanic
- Regular Features

From Our London Correspondent
Spotlight On Persons & Firms,
Modern Machinery & Equipment,
News & Views, Review Forum
etc etc etc.

THE BLOCKS FOR PRINTINDIA

ARE MADE BY

Messrs. NEWTON & CO.

THE LEADING BLOCKMAKERS OF MADRAS
80 WALLAJAH ROAD :: MADRAS 2
Phone : 86729

Ma **acturers** of **14** **LANGUAGES** **of** **IN PRINTING TYPES,** **HALFTONE, LINE** **& ELECTRO BLOCKS etc.**

SUPPLIERS OF PRINTING REQUISITES

தமிழ் தேவநாகரி
செலு
சங்கு
हिन्दी
मराठी
ഗ്രന്ഥം മലയാളം
ಕನ್ನಡ
English
English
English

TELEGRAMS: 'BHUVANA'

TELEPHONE: 8291

CHINTADRIPET, MADRAS-2

WHY A PRINTING SCHOOL

By

SRI S. N. GUHA RAY

The Printing Industry in our country has developed to a crucial stage when it cannot run profitably without the services of technicians and craftsmen. But technicians and craftsmen are not born in a day. They have to be trained. For this purpose schools are necessary where training can be given. In this article, Sri Guha Ray, the learned author deals at length with the problems relating to the training of our young men. As it will not be possible for all to go to foreign countries for training he recognizes the necessity of setting up Regional Schools of Printing in the key cities of India for giving comprehensive training, which proposal has already been accepted by the Government. He exhorts the printers to co-operate with the Government in establishing and running the printing schools which will pave the way for the dawn of a new era for the printing industry in India.

The time has already come in the Printing Industry in our country where it cannot run profitably without the services of scientifically trained executives and craftsmen. Of all the nascent industries, probably ours is the only one which still depends mostly on craftsmen, who have very little scientific training and who learnt their trade by the hard way. The time has come when the industry has to discard the old way of things, when it has to run its business in the modern and scientific way. If it wants to survive in these days of competition, it has to modernise not only its machines but also its personnel. During my last European tour, I made a special study of the points which to me were responsible for the higher quality of production of European printing. The European printers use almost the same machines and equipments as we do. Our better type of printers were using till recently (before the Import restrictions came), the same make of printing inks: the same quality of Art Paper and boards are being used by both the European printers and their Indian compatriots. Still the production differs quite appreciably in quality. Of course, no one knows better than myself that both in Letterpress and Photo and Chromo-offset, the best of our printers can and do produce things which compare favourably

with the best printers of Europe. This is not my own idea, I have heard it from some of the British, Swedish and German Printers who had the opportunity to compare our products with their own. Even very recently, a masterprinter from Sweden, who was touring throughout India and Pakistan with a view to re-organise the Free Trade Union Movement (which has its headquarters in Brussels) admired the quality of Indian Printing and took some specimens for presentation to the Printing School of Stockholm.

But just as a swallow does not make a summer so a few up-to-date printing presses do not mean that our quality of production is on the whole satisfactory.

One of the principal factors responsible for the development of all the industries of Europe is the technical qualification of the administrative personnel as also of the craftsmen employed in them. It is unthinkable in Europe to run a business or industry where the personnel have not received or are not receiving a training from an industrial school. Besides the State and Municipality sponsored Technical Schools, the bigger factories have their own Schools where both the junior executives and the junior journeymen get their theoretical training. This is not true of the Printing Industry alone but also of

all the industries. The theoretical training of the workers is supplemented by the practical training in the factory where they are employed. Every employer knows the value of a person who is theoretically trained and that is why a trainee is gladly allowed payment by his employer for the days he attends school to get his theoretical training. The law in most European countries also makes it a compulsory obligation for every employer to send his apprentices to a school and pay for the days they attend their classes. The State or City Corporation also pays a heavy portion of the cost of running the Industrial Schools.

The quality of production can never be standardised unless the executives and the craftsmen are conversant with the theoretical know-how of things they handle. We in this country, both the Executive and the craftsmen, suffer from this lack of knowledge of things and because of this, we can almost never standardise our products. It will not be very far from truth if I say that even using the same paper, ink and machine and in same atmospheric conditions most of us are unable to repeat the standard of our own previous production. This is because neither our executive nor our craftsmen have got any scientific training.

OCTOBER 1954

Now that the Central Government in its Education Ministry has decided to start several regional printing schools with the co-operation of the State Governments and local printing industry, I think that the latter should take a long view of things and do everything in their power to get the Schools started in their respective regions.

I have been questioned by brother-printers to explain why the young printers who have returned with diplomas in printing from the famous British Schools of Printing have not as a rule proved successful. The answer is simple. These schools are primarily meant for training the sons of masterprinters and secondly to train their apprentices and junior craftsmen already engaged in the Printing Industry. With a theoretical and scientific background behind them these youngmen can naturally supplement their work in the Printing Press where they are already engaged. But in the case of boys we send from India, most of them are absolutely innocent about printing. They are sent by their guardians, most of whom are equally innocent of any knowledge of the printing industry, just to get a diploma, the underlying idea being that this Diploma will help their wards to get a job in some Government or semi-Government printing establishment. They seldom take care to enquire about the minimum requirements for such a job, which almost invariably is 5 years' practical training in a Printing Press. Most of these boys do not acquire any such experience before they leave for foreign training and when they return with the Diploma, they find themselves helpless. As I have stated above, the training at the School is a supplement to the training that the boys are actually receiving as junior executives or junior craftsmen in a

printing establishment. Our boys do not have this advantage. So mere receiving training in the school can never help the boy to be a full-fledged printer. His academical training in a Print Shop. In Great Britain it is almost impossible for an Indian to get practical training in a Printing Press. Under an agreement with the Printing and Kindred Trades Federation, which is the Federation of Trade Unions of Printing Press employees of Great Britain, the Printing Press owners of Great Britain, cannot employ even an apprentice not to speak of craftsman in their presses, if the latter is not a member of the Trade Union of the area. And the British workers especially those in the Printing line are very particular about enrolling anyone in their Union, who is not a British National. During my last sojourn in England I tried my utmost to remove this obstacle and though I was assured by the Printing & Kindred Trades Federation that it would advise its member unions to consider favourably the cases of Indian Students of Printing who would apply to be the members of their respective trade unions, I learn that this has borne no practical result due to the non-co-operative attitude of both the British Master Printer and his worker.

In West Germany, due to lack of skilled worker and various other reasons, Indian students of printing may sometimes get a change of practical training. In my negotiations with the Central organisation of Master Printers of West Germany in Bielefeld, I was assured that the Indian Students will be, however possible, given the practical training which will qualify them as Masterprinters. The Director of the Munich School of Printing also assured me that in cases where an Indian Student of Printing can prove that he has completed one year's practical

training in a printing press recognised by the All Indian Federation of Master Printers, he could get one year's remission from the usual four years' course of the School. The Indian Printing Industry should remain grateful to Dr. Franz Thierfelder and Mrs. Eva Rederer, Director and Secretary respectively of the Indischer Ausschuss (India Institute) of Munich for their sincere efforts to help the Indian Students in getting them admitted to the various German Printing Presses.

Our problem now is to how best we can train our executive and craftsmen here in our own country. It is not possible to send each and everyone of them to a foreign country to get the requisite scientific training. Even if we can send them they are not expected to derive much benefit in proportion to the cost involved. We have to start our training centres here in different regions of India if we really want to make reasonable profit from our business. It is a happy sign of the day that the Central Ministry of Labour has started several vocational Schools to give a preliminary training in Printing Craft. But in most cases the equipment is rather negligible and the training rendered cannot make the trainee really acceptable to the Masters as qualified craftsmen.

The Master Printers, if they really want to survive in the struggle for existence, must themselves arrange for technical training of the craftsmen and executives. The only way out is to co-operate with the Government in starting regional printing schools and when the Schools are started to send their apprentices, craftsmen and junior executives to the schools to get theoretical training. It augurs well that our Government have appreciated and admitted the paramount needs for

(Continued on page 20)

PRINTINDIA

Brief History of Book Binding

By
SRI H. APPAJAIAH

In most of the Indian Presses bookbinding is treated as of little consequence. But from times unknown it has progressed a great deal and if the printing industry accords to bookbinding its due importance there will be an all round improvement. The author in this article gives some interesting flashes about the growth of the bookbinding art.

INTRODUCTION

Bookbinding is very often referred to as a neglected branch of the printing Industry. This art is much older than printing. Its nature is such that it calls for a high degree of practical training and an aesthetic sense. It can be studied with advantage in schools. It can be made a remunerative side occupation in a country like ours, where the main means of living is agriculture. Agriculture is known to keep its practitioners idle for over half the year. Bookbinding can provide a major supplement to the budget of an average Indian family. Besides the various operations in bookbinding suit the nature and temperament of women. Hence its pursuit confers great advantages on us. Bookbinding has a long history. It originated when the art of writing on pliable material came into use. A notable feature of the craft is that it has grown in volume with the passage of time. But principles of the art continue to be the same as they were when bookbinding was invented. The development effected in this craft during centuries is only the mechanisation of the various operations which were originally done by hand. The principles remain the same.

In the early days several materials were used for writing upon: soft clay, tablets of slate, lead, wood, etc., were used. The very nature of these materials precluded their conversion into books, nor was it necessary. The earliest known pliable

writing material was the palm leaf, which was hunched in a corner and threaded. That was in much use and demand in the early days of civilisation. These are the earliest forms of books.

Book is a word derived from the word "Beech" a tree whose bark was once used for writing upon. It is the same as the Anglo-Saxon word "Boc," the German word "Buch", and the Dutch word "Beuke", all of which mean the same as the English word "Beech."

Many printers know something about the invention of movable types, the development of the printing press and the evolution of printing technique. Unfortunately much is not known nor written

about the growth of bookbinding an older art.

The book in the form of a vellum or parchment roll came to be displaced by the more convenient "Codex" (i. e. folded leaves) about the 4th century A. D. With such bookbinding originated.

DEVELOPMENTS

Monks were the earliest binders. Several folded vellum leaves were inserted one within the other to form books. For sewing purposes they were taken section by section on to a frame and sewn together. The same method is the best for all high-class work. Most books in those days were heavy folios. Strong wooden boards were used as covers. After cutting them to the



A photo taken of the reception given recently at Bangalore on the eve of the Sales Conference of Monotype Corporation Ltd.

size of the leaves intended to be covered, the ends of the sewing threads were laced into these boards. An iron ring was fitted to the lower cover, and the book was tied with a chain to the reading desk. Even today the "Hereford" library at Oxford preserve some of the volumes. However this style of binding was soon found to be unsatisfactory. After some use the back became concave. This again throw much strain on the sewing. The thread snapped, and the leaves bulged out in a ugly way at the foredge. A method had to be devised to overcome these drawbacks. The first thing they did was to apply glue to the backs of such books. The next improvement was to hummer the glue back to a convex shape. These operations, namely glueing and rounding, survive even today.

It was later discovered that if the cover projects beyond the leave at the three edges, better protection is

given to the leaves. It was this change that gave rise to the "squares" of boards in bound books.

Still later it was found that a little trimming of the three outside edges of the leaves gave a better appearance to the volume. This in turn gave way to the invention of the Guillotine. This meant that the sewing thread used at the back from head to tail for fear of cutting these threads while trimming the edges. A method had to be found by which the sewing thread at the back stopped short of the two edges. Some devise by which these threads could be secured a little distance away from the head and tail had to be found. This is the origin of what is today known as the "cattle stitch."

In the use, the boards invariably moved backwards, and thus tore off the cover. To avoid this, the rounded book was lowered into the press, back uppermost. The back

was hammered to give a "groove" on each side. This is the operation known today as "backing." The back was covered with leather to protect the sections. Later the cords with which the boards were laced were exposed to give protection to them. The covering at the back was extended on either side so as to cover up these threads. Thus came into being "quarter binding."

Basically these processes evolved by the early binders have continued upto date. The improvements that have been effected in the course of the last two or three centuries have only added to the speed of production. These have not been material alterations in the processes themselves. Of course these improvements have cheapend books. Some of the old bindings preserved in museums, speak volumes for the strength and durability of the work of the old binders.

THE PRINTER AND SOCIETY

By

SRI K. G. KRISHNA RAO

Every family has its own doctor, tailor, barber etc. It is not uncommon for a family to have also its chosen printer. The word 'Family' in this context may be stretched far enough to include even commercial institutions. The author intelligently analyses the importance of the printer to the family whose works he executes, and asserts the bonds of kinship may ultimately be conducive to the progress of the printing industry.

Like every other "family" man the printer too enjoys a privileged position in the ranks of our social structure. We talk of our family doctor, the family tailor, the family barber, the family dhoby and so on. The printer also is a "family" man in the same sense. He has his own importance to a family.

I still remember those early years of mine as a printer. I printed at least half a dozen invitations for a family—for the weddings and upanayanams of the sons and daughters, one after another, in the order of their priority. The common man looks upon the printer as his friend, philosopher and guide in this highly skilled craft. He seeks the printer's advice on all matters concerning print. It may be a small visiting card or a large size account book. All the same, it is the printer who has to give the scheme and shape to the work. He has to offer his "technical" advice on the size, the types and the ink to be used, and last but not the least, the "special" concession as the family printer. The "special" rate often is a little more than the market or the competitive rate. Yet, it is accepted as a special favour for the family printer.

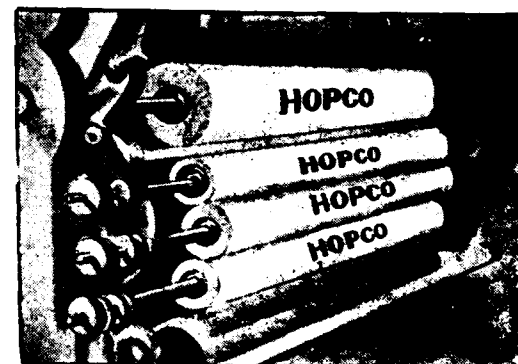
Twenty years back when I had just begun my life as a printer, I took up the printing of a journal. The customer was a government official, who had taken up the reins of his trade union. To him the journal was a labour of love. To me it was a privileged duty, apart from

a standing business proposition. The press was not very well equipped. All that I could command was only a small treadle and a few hundred pounds of type. I had to rise equal to the task. The journal had to be printed on time. Very often, I had to carry the proofs in the late hours of the night to his home some miles away. That was the most convenient time for him to go through the proofs. Once, I had to give him the slip. The proofs were delayed, and when I presented myself before him with the proofs, he flew into a rage. He tore the sheets and threw them at me. I knew for certain that he was not right in his outburst. But, I could not afford to lose my temper. I would run the risk of losing a valua-

ble customer. I swallowed the insult. I knew he would as quickly cool down as he had lost his temper. He did cool down. I had but a passive smile on my lips. Perhaps, this had disarmed him. I handed out the copy of the proofs which I had taken with me as a stand by for the emergency. The proofs were corrected and passed finally. It was near midnight when we parted. He patted me on my back and said "You are our family printer." The fond words still echo deep in my mind. Although over 15 years have rolled by since and he has retired, I have a strange pleasure in being called his "printer." To his friends, family and even strangers, I am introduced as his printer.

(Continued on page 24)

Service to Printers HOPCO



RUBBER ROLLERS

Largely in use all over India

- ◆ Famous for attractive printing, long lasting and oil & heat resisting.
- ◆ Ready stocks available for all Chandler & Price machines.
- ◆ For all cylinder, Rotary, Litho-Offset & Varnishing machines also, supplies will be made to order.

FOR PARTICULARS WRITE TO:

HOLT PRELLER & Co.

Head Office:
P. O. B. 1014 :: BOMBAY-1
Grams: "HOPCO" Bombay

Branch Office:
10, THAMBU CHETTY STREET, MADRAS-1
Grams: "HOPCO" Madras



Another photograph of the visitors at the reception after the Sales Conference

MONOTYPE

REGISTERED TRADE MARK

Composing and Casting Machines

can provide all the solid setting, display type and spacing material, etc., that your composing room needs—and at minimum cost*

A 'MONOTYPE' KEYBOARD

requires only a simple and rapid change of equipment for an operator to compose text matter in any European language—or any of the Indian languages listed at left below.

A 'MONOTYPE' COMPOSITION CASTER will automatically cast and deliver perfectly-spaced lines of new, solid single type to measures as wide as 60 ems pica. It can be fitted, if required, with attachments for casting Display to 36 pt.; also leads and rules to 12 pt.

Hindi, Marathi, Kashmiri, Sanskrit [also Nepalese], Bengali and Assamese, Gujarathi, Urdu, Tamil and Telugu [also Burmese] can all be set with ease and at speed on 'Monotype' machines.

A 'MONOTYPE' SUPER CASTER

will provide type up to 72 pt.; leads and rules from 1 to 18 pt.; single-unit and strip borders; dashes; quotations (*wooden-cored if required*) and block-mounting material; two-piece, type-high foundry furniture in continuous or in fixed lengths, etc., etc.

A 'MONOTYPE' THOMPSON TYPECASTER

will cast type from 6 to 18pt. from 'Monotype' matrices: a wide range of famous type faces, including eastern scripts, is available. Types produced from these matrices require no further operations on them as they are cast to a standard height.

*Roman Type Faces are available on 'Monotype' machines in an unrivalled range of matchless designs.

Display matrices of many of them may be hired.

SEE OUR STALL AT THE ENSUING ALL-INDIA PRINTERS' FEDERATION EXHIBITION TO BE HELD AT MADRAS

Enquiries can be made to

The Monotype Corporation Limited, 8 Mission Row Extension, Calcutta 1, India

THE MONOTYPE CORPORATION LIMITED
SALFORDS, REDHILL, SURREY

Regd. Office: 55-56 Lincoln's Inn Fields, London, W.C.2, England

From Our London Correspondent

F. & D. BROWNLEE

It is well known that acidity in papers or boards, atmospheric conditions, and the amount of driers used are three of the factors controlling ink drying.

For a number of years past the Printing, Packaging and Allied Trades Association have been carrying out experiments to ascertain the causes of slow ink drying, and an Interim Report recently published gives some interesting information on the results so far obtained.

The experiments were made on two sets of uncoated laboratory-made papers, one prepared from 75% bleached esparto and 25% bleached sulphite, and the other from a bleached sulphite pulp. A number of sheets of each kind were treated to give varying pH values within the range of 4.4 (strongly acid) to 7.1 (neutral).

As regards the effect of acidity of papers, it is stated that the change in drying time is progressive with increasing acidity, and that inks dry much slower with the more acid papers with pH values below 5.0. This increase in drying time, however, depends upon the relative humidity of the atmosphere. On increasing the relative humidity from 65% to 75%, prints on near neutral papers may have their drying time increased by 2.3 times, but the times for prints on acid paper may be increased 10 times. The relative humidity of press rooms will, on occasions, reach 75% and over, and this is when serious trouble will arise.

If, therefore, the relative humidity can be kept to 65% or under

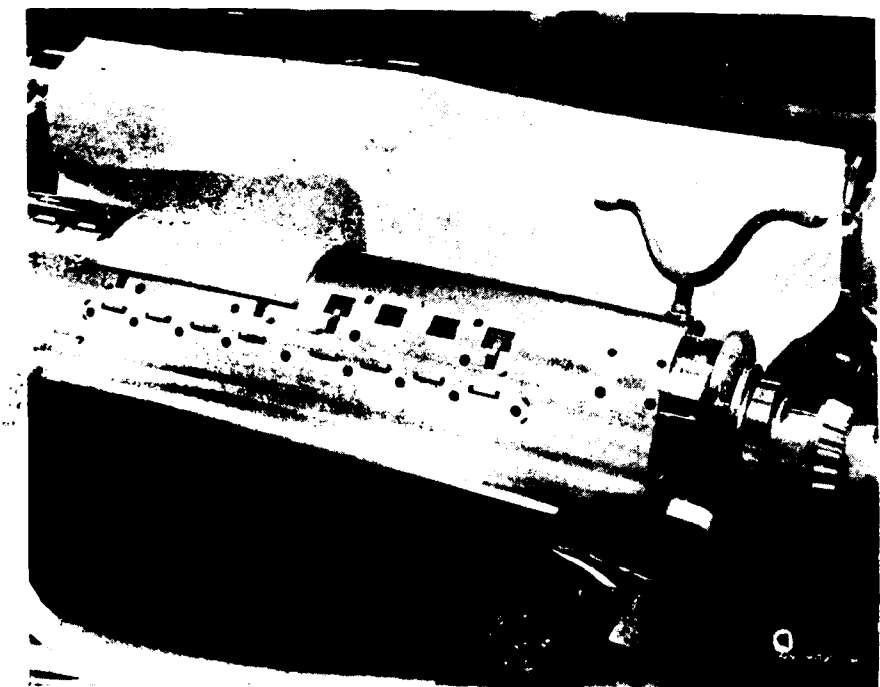
(a normal range) drying troubles due to "acid" papers are much reduced. The influence of relative humidity probably explains why ink drying problems are more apparent in lithography than in letterpress. In lithography a little moisture is picked up by the paper in passing through the press and when the sheets are stacked on the delivery table, the moisture conditions inside the stack simulating those of a print kept in an atmosphere of higher humidity.

Printers, however, would generally find it impracticable always to work at relative humidities of 65% or below, since most works are not air conditioned, and in litho shops the problem will still arise even if the room is air conditioned. The main answer to the problem, in

view of the fact that the majority of works do not have controlled conditions of temperature and humidity must be in producing papers which are not markedly acid.

Experiments on the effects of ink driers on drying time showed that highly acid papers absorb cobalt to a greater degree than neutral papers, thus slowing up drying. Further, the investigation showed that an increased drier concentration in the ink would offset the effect of acid papers. It is suggested that the ideal pH value should be about 4.8 or 5.0, and values above this range should be satisfactory under all normal conditions.

It was found that the addition of sodium aluminate to the pulp had little effect on the pH of the paper



Tension lockup press cylinder with plate in unlocked position.

OCTOBER 1954

9

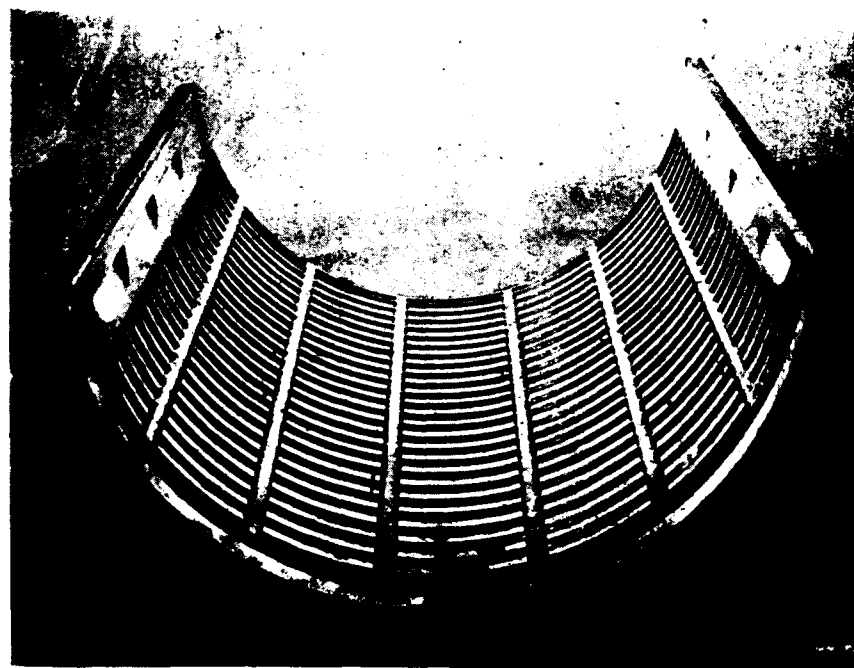
or on the drying time. The use of sodium in the sizing process should have no adverse effect on ink drying. This work was aided by co-operation from the British Paper and Board Industry Research Association and the Norwegian Pulp and Paper Research Institute, which provided the experimental papers used in the investigation.

Specially designed for the jobbing printer, who is often hampered by lack of adequate space as compared with large printing works, is the new Harrold guillotine, which particular attention has been paid to the question of strength with economy in space. Two sizes of this machine are available, that is to cut 26" (measuring 3'10" wide by 5'1" back to front) and to cut 33" (measuring 4'4" wide by 5'9" back to front).

The small space occupied is due partly to the generally enclosed design of the machine, and partly to the ingenious way in which the clutch and other mechanisms are brought inside the frame. These

include a powerful worm-drive with a big rotating worm and a correspondingly heavy worm-wheel with large machine-cut teeth. The worm wheel connects by levers with a dependable knife carriage, and when the latter is in the extreme "up" position it is slightly canted, while at the completion of the cutting stroke it is parallel with the machine table. The effect is that the cutting blade enters the pile of work at an angle, shearing into a corner with the minimum of power expenditure and the minimum of strain on the working parts.

Clamping pressure on the guillotine is exerted by direct screw movement, so that there should be no question of the work being disturbed or "drawn" while cutting is taking place. Above the big square-thread clamp screw is a heavy hand-wheel which the operator can swing freely. The back-gauge of the guillotine is of the interlocking type for cutting narrow strips, and the movement of the back-gauge is imparted by a hand-wheel.



Tension Plate Lockup

The efficient operation of rotary newspaper printing presses depends to a considerable extent on satisfactory methods of plate lock-up. The more conventional methods of holding the plates on to the press cylinders frequently result in web breaks, plate breakage, and frequent replacement of blankets, all of which means reduced efficiency and increased operating costs. Still another fault of the usual method of lock-up is that it does not provide for counteracting the action between the plate and impression cylinder, tending to flatten the plate. Proof of such tendency lies in the well-known fact that plates which fit snugly when originally locked on to the cylinders are often found to be quite loose when unlocked at the end of the run.

The Goss tension plate lock-up has been designed to overcome these troubles. The plates are held in steady tension around the cylinder by a locking device which engages the underside of the plates. As a result, the plates and cylinders become, in effect, a single element providing a constantly accurate printing periphery. The use of tension in this way eliminates the problem of plates buckling across the cylinder; overcomes the tendency of centrifugal force to throw the plate off the cylinder; stops plates lifting on either side of the impression contact line, and prevents ends shifting on the cylinder.

A new colour testing instrument has been evolved for the purpose of discriminating between fine shades of colour imperceptible to the average human eye. This consists of a box-type galvanometer and test head. Operation is carried out by placing the coloured material to be checked flatly under the test head, which functions by means of

(Continued on page 20)

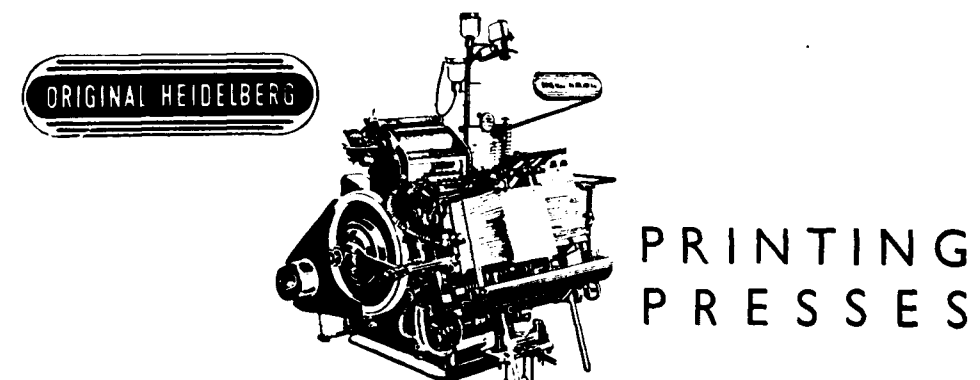
PRINTINDIA

All India Printers' Conference & Exhibition Third Session Madras

The printers of South India, I am sure, would be happy that the Third Session of the All India Printers Conference and Exhibition is to be held in Madras in February 1955. This would give them an opportunity of meeting their brother-printers from all over the country, and exchange views with them which would enable them to solve their own problems. More than all, this would be an opportunity for them to learn what is happening in other parts of the country so far as printing trade is concerned.

The First Conference was held in Bombay in 1953 and was attended by a number of delegates. The Second Conference held in Calcutta was more representative as by then, printers had realised the importance of an All India organization. Judging from the past, one could expect that the Third Conference to be held in Madras would be a success from all points of view. Every major city in Bharat is expected to send its representative and problems faced by the trade would be discussed and steps taken to get redress.

More than all, printers of South India should be happy in that, for the first time in South India they would have an opportunity of seeing the latest machines displayed in the Exhibition. The Exhibition which is to be held in the Y.M.C.A. grounds, Royapettah, Madras, is attracting the attention of printing machine manufacturers. Though plans have been drawn up only for thirty two stalls, more than half the number have been booked already. It is feared that this number would not be sufficient and arrangements would have to be



SCHNELLPRESSENFABRIK AG HEIDELBERG

Manufacturers of the famous West German Printing Presses

Announce the Appointment of
THE EAST ASIATIC CO. (INDIA) LTD.
as Sole Agents for

BOMBAY:	P. O. Box No. 639, Shrinivas House, 27-A, Waudby Road,
MADRAS:	P. O. Box No. 146, Bharat Building, Mount Road,
NEW DELHI:	P. O. Box No. 656, Delite Cinema Building,
BANGALORE CITY:	Suryodaya Building, T. 37/38, Silver Jubilee Park Road,
SECUNDERABAD:	Jeera Corner, Rashtrapathi Road,
	and adjacent territories.

OCTOBER 1954

11

made for more stalls. Persons interested in exhibiting machines or such other articles as would interest the printing trade would do well to contact the Secretary, Madras Printers' & Lithographers' Association, 11 McNichol Road, Chetput, Madras, at an early date and have their stalls booked.

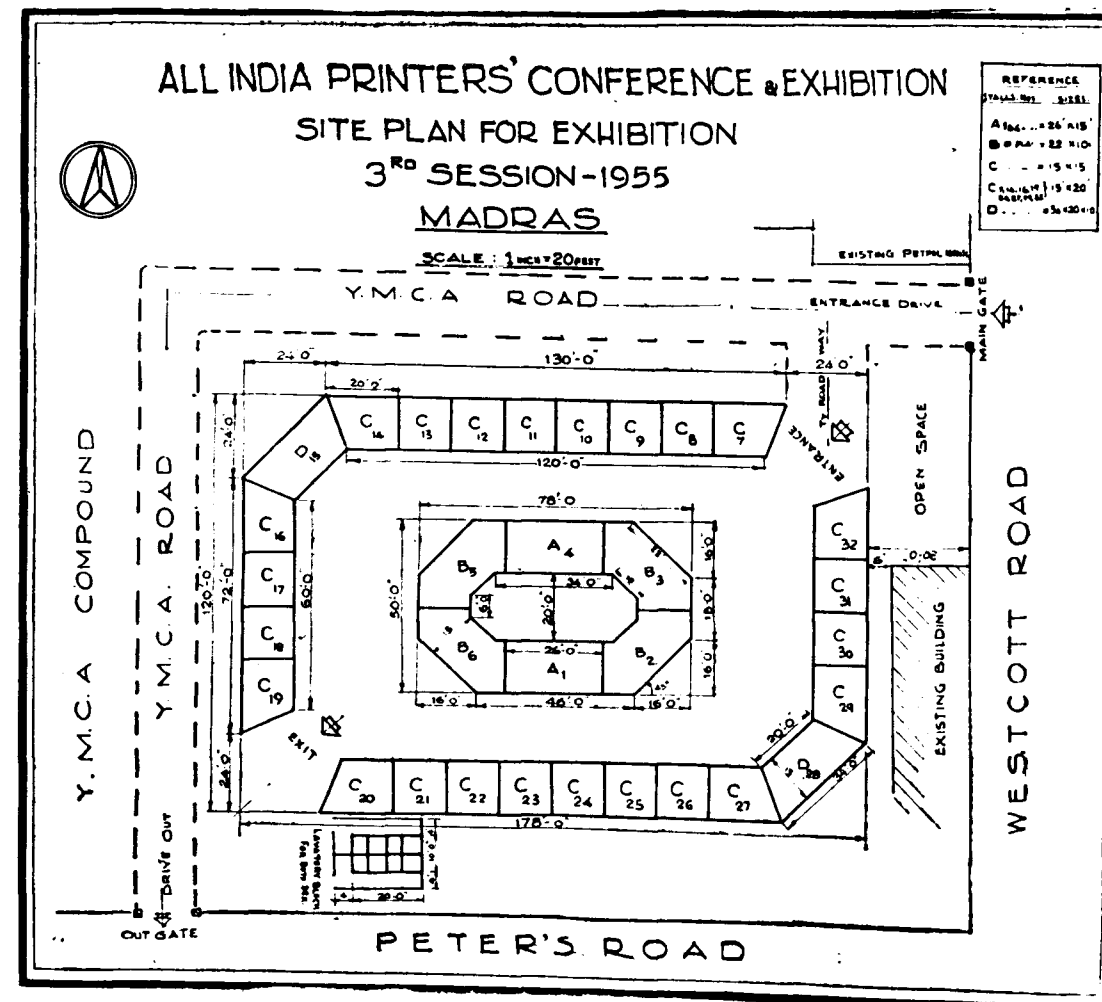
In addition to holding the Conference and Exhibition, a Souvenir would be published containing articles by leading and competent men covering all aspects of the trade. This would be a very good

medium of advertisement for allied traders viz., paper merchants, type-foundries, etc. Circulars regarding the Souvenir as well as the exhibition can be had of the Secretary on application.

While this is an opportunity to learn more about the trade, the responsibility of running the Conference and Exhibition and publishing the Souvenir has now devolved on the printers of South India. South India had stood up on all occasions and acquitted themselves creditably in such matters. It is felt

that every printer would give his full hearted co-operation in making this function a success. Nothing would be possible without adequate finance. The Secretary and the various Committees appointed for this function request every printer especially in the City to donate liberally so that they could manage this function respectably. The name of all the printers is associated with this Conference. Every South Indian printer is the host. I would therefore request you to play his part creditably and make the Conference success.

(Sd.) S. VISWANATHAN,
Honorary Secretary, The Madras Printers' & Lithographers' Association, Madras-10



HOOGHLY INK CO., LTD.

The shifting of the Madras Factory of the Hooghly Ink Co., Ltd., to more spacious premises in Rundalls Road, marks a new milestone in the growth and development of this Company. On the eve of the inauguration of the factory at the new premises, it is natural that one should look back into the colourful and chequered history of this concern which is today recognised as one of the top-notch printing ink manufacturers of this country.

In October 1913, Mr. Edward Richardson a highly resourceful but unassuming Englishman started in Calcutta, a branch of the Richardson Printing Ink Co., Ltd., thus pioneering the manufacture of printing inks in India. By April 1914 this Calcutta branch started the manufacture of printing inks in India in a small scale at 433, Grand Trunk Road, Howrah, with which address many printers of Calcutta are sentimentally attached. Till 1920 the Calcutta branch of the Richardson Printing Ink Co., Ltd., continued to trade and the business was slowly developing when it was found necessary that a new company should be floated to take up the assets of the branch and carry on the manufacture of inks on a large scale. As a result of this, the Hooghly Ink Co., Ltd., came into existence in 1920, incorporated in England. As the years rolled by the business of the company grew by leaps and bounds. In 1928 a very vital change of ample significance was affected when the assets and business of this concern are taken up by the Hooghly Ink Co., Ltd., now registering the firm in India. In addition to registering the firm in India, this company has received Indian capital and has also taken Indians amongst the directors. The late Sri Raghunath Dutt the well-

known paper merchant of Calcutta was one of the first Indian Directors when the firm was registered in 1928. By this move of Indianisation of the company the directors of the old Hooghly Ink Co., Ltd., of England showed that they were very farsighted, as it naturally helped the company a great deal in acquiring the affection and support of the Indians at large. With these changes affected, the company has grown to its present heights and today it can be said with due modesty that there are hardly any printers in India who are not familiar with the Hooghly Inks.

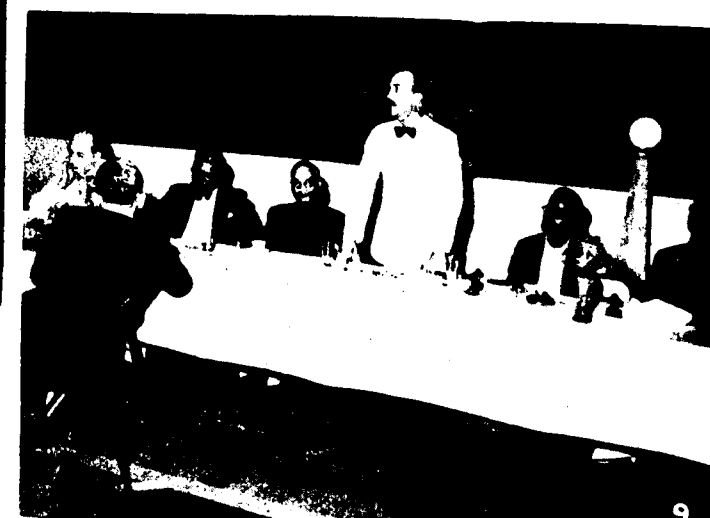
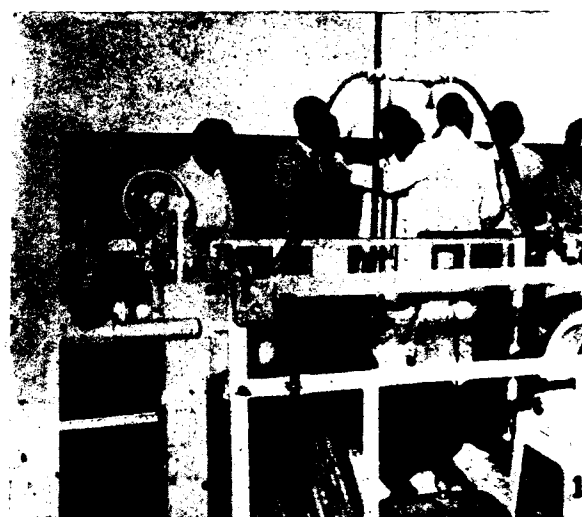
In 1938 a branch factory was opened at Bombay by Mr. R. I. Birkett who is now the Managing Director of the parent concern. In 1949 the Bombay branch factory has been constituted into a separate entity operating within the framework of the parent body at Calcutta as the Hooghly Ink Co., (Bombay) Ltd., to facilitate administration affairs. In the meantime the business of the Calcutta factory developed to such an extent that it had to be shifted from the old Grand Trunk Road premises to its present location.

In 1950, the Madras factory has been started by Mr. H. Rudkin, one of the senior executives of the Company, at No. 2, Rundalls Road. This branch factory was taken over by Mr. John D. Barton towards the end of 1952 and since then the factory has developed on a wide scale under his direct supervision. On the 1st October 1954 the Madras factory is inaugurated at its new premises at 28, Rundalls Road and with this factory the Hooghly Ink Co., Ltd., can cater effectively to the multifarious needs of their thousands of customers all over South India. The present premises is not only spacious but quite im-

sing in appearance. There is ample floor space for erecting a larger number of modern machines and it also provides sufficient accommodation for keeping large stocks of manufactured inks ready to meet any contingency.

In 1953 a depot of the Hooghly Ink Co., Ltd., was opened at Delhi by Mr. J. Bentz one of the technical executives of the company. Having recorded the phenomenal growth of the Hooghly Ink Co., Ltd., with its network of factories and depots in the important key-cities of India, it should be said with due respect that this company has grown on the shoulders of one individual whose personal magnetism, technical knowledge and untiring energy enriched it in so vast a measure that is not easily possible to express in words. This individual is none other than the illustrious Mr. R. I. Birkett, the present Managing Director of the company. His vision, foresight, genius and his expert management have culminated in creating a splendid organisation all over India with inestimable business contacts. Mr. Birkett though appears a trifle reserved, is at heart friendly and benevolent. His sympathy to workers and staff is almost proverbial, equally conspicuous is his stern attitude demanding efficiency and loyalty from the workers. Under the managing directorship of Mr. R. I. Birkett, the Hooghly Ink Co., Ltd., not only caters to the growing needs of the Indian printing industry but also presents excellent opportunities for talented Indians to rise to the highest ranks from its staff. In this connection it is worthwhile to record here the name of Sri K. B. Bose who started working for the company in 1913 as a clerk and in course of the passing years he

(Continued on page 20)



INAUGURATION OF HOOGHLY INK FACTORY AT NEW PREMISES

- (1) The Madras Manager, Mr. Barton showing the machines to the Mayor of Madras.
- (2) Mr. Barton shaking hands with the Mayor.
- (3) Mr Barton taking the Mayor and other guests round the factory.
- (4) Sri Khasa Subba Rau of SWATANTRA, Temporau of PRINTINDIA in a tete-a-tete on Oceanic's Roof-garden.

- (5) Sri K. V Subba Rao, Head of the Mechelec and Kubera group, addressing the gathering
- (6) A section of the guests enjoying the dinner.
- (7) Dr U. Krishna Rao, ex-minister of Madras, Mr Stooks, Controller of Stationery & Printing, Madras & Sri V. S. N. Murthi, Business Manager of Printindia at the Dinner.
- (8) Mr. Barton, welcoming Sri Sambhu Prasad of Andhra Patrika while Editor of Swatantra looks on.

- (9) Mr. John D. Barton addressing the guests after dinner.
- (10) Mr. Barton, Sri Temporau and Sri Sri Ramulu, Head of the Printing Dept. of Polytechnic at the dinner.
- (11) The Mayor of Madras being garlanded at the Factory on alighting from his car.
- (12) Dr. U. Krishna Rao addressing the audience.



GRAND DINNER

AT HOTEL OCEANIC

Hooghly Ink Factory Inauguration at New Premises Gala Reception & Dinner at Hotel Oceanic

(FROM OUR CORRESPONDENT)

—Madras, 1st October.

The Madras Factory of the Hooghly Ink Company Ltd., moved into its spacious premises on the Rundalls Road last week and the housewarming ceremony held by the Manager, Mr. John D. Barton, began with a simple, yet impressive "switch on" function by the Mayor, Sri R. Munisami Pillai, and ended with a largely attended Dinner Party at the Hotel Oceanic Roof Garden.

The event, as Mr. Barton told the distinguished diners signified the beginning of yet another interesting chapter in the colourful and chequered history of this 40-year-old pioneer firm in the printing inks manufacturing industry.

Founded in Calcutta just a year before World War I by a resourceful, nevertheless unassuming Englishman, Mr. Edward Richardson, The Hooghly Ink Company Ltd., soon asserted itself as a producer of quality printing inks. As the business of the company increased by leaps and bounds, the promoters introduced a significant and far-sighted change in the firm's structure in 1928, when it was registered in India with Indians being appointed on the directorial board as more Indian capital flowed into the expanding concern. A decade later, Hooghly Inks invaded the Bombay Market where a factory was erected and a similar establishment in Madras followed three years after independence. These factories and a number of depots located in leading Indian towns, complete the network of Hooghly Inks Ltd., which today produces nearly thirty per

cent. of the quantity consumed in India.

Thanks to the foresight and genius of the India Manager, R. I. Birkett, whose technical knowledge and unflinching zeal was mainly responsible for moulding the firm into a splendid organisation with inestimable contacts. Mr. Barton, the Madras Manager, has utilized his own knowledge in both printing and ink trade to full advantage in satisfying hundreds of fastidious printers all over South India.

Throughout the day on October 1, when Hooghly Ink Company Ltd., celebrated "Grihapravesam," a stream of visitors, mostly printers and other members of the trade, visited the new building and moved around the premises inspecting the ink manufacturing plants and acquainting themselves with statistical information furnished in the numerous charts and graphs displayed there. The factory produced last year 50,000 lbs. of Ink and this year production average will work out to 75,000 lbs. Mr. Barton told newsmen that the Hooghly ink was equivalent to that of any ink imported from anywhere abroad and, as an illustration, pointed to the use by the Nasik Security Press of Hooghly Ink as proof of the high quality of his company's "ware."

The rapid strides made by Hooghly Ink Company were highly commended later in the evening in the post-parandal speeches by an array of speakers who wished the firm increasing prosperity. Welcoming more than 100 guests who attended the dinner party, Mr. Barton

briefly traced the history of his company's development and paid an eloquent tribute to his chief Mr. R. I. Birkett to whom the firm owed its present enviable position in the industry.

Leading the host of speakers was the Mayor, Sri Pillai, who said that the Madras Corporation, although directly not connected with the printing inks industry, was deeply interested in its development, for this industry played a vital role in civilised society. And, he added, there was nothing like private enterprise to achieve and maintain a high standard in the quantity purveyed.

Dr. U. Krishna Rao, former Industries Minister of Madras State, attributed the attractive and spotless get up of a medical journal he edited to the best and most suited type of ink provided by Mr. Barton. He emphasised the need for close

(Continued on page 28)

**In the service of the
Printers for many years Now !**

At the most competitive rates
FOR

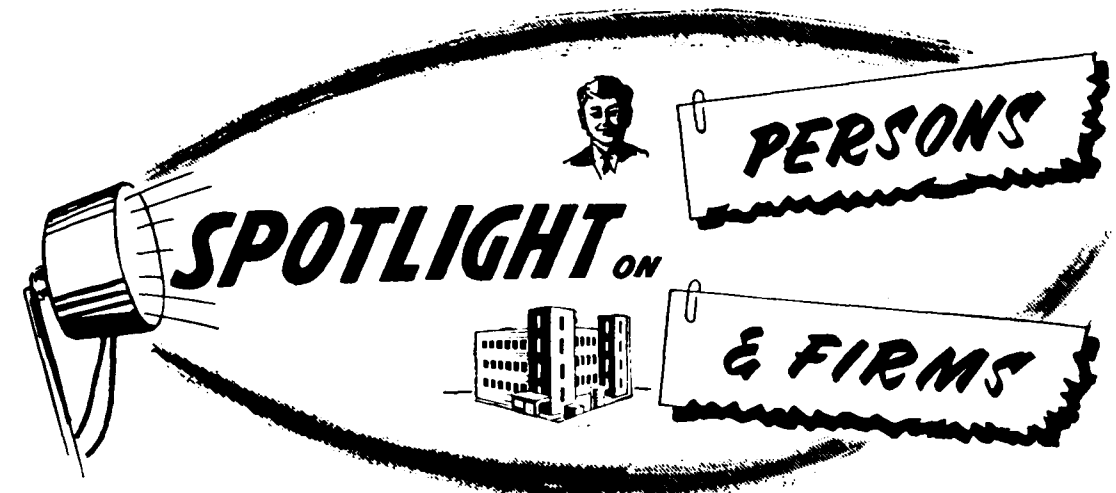
C & P RUBBER ROLLERS,
SPARE PARTS, BRASS RULES,
STITCHING, PERFORATING,
CUTTING MACHINES
TREADLES, ETC. AND
EVERYTHING IN THE
PRINTING LINE...

Please contact

GUNVANTRAY & COMPANY

KHADIA CHAR RASTA
NAYA DARWAJA ROAD
AHMEDABAD-1

PRINTINDIA



FRITZ FISCHVOIGT

To many printers in this country, Fritz Fischvoigt is quite a familiar name. Since his arrival in India in 1951 he has made a good number of friends in this country. India has been having good business relations with Germany in respect of printing machinery and therefore it is not surprising that German Technicians should be coming to this country for erecting the machines supplied by them and also to train up the Indian workers to operate the machines. Mr. Fischvoigt is responsible for training many workers in the key cities of India and most of the workers look upto him with a good deal of affection.

Born in November 1912 at Hanover, Germany, Mr. Fischvoigt took an exhaustive course in engineering and has chosen the printing machi-

nery line. For over a long time he was looking after the repairing of printing machines and the erection of machines in Hanover. Having gathered a considerable experience Mr. Fischvoigt was a freelancer for many years, working for M. A. N., Albert Frankenthal, Heidleberg, etc., whose machines he was erecting in Germany. In the wake of the last war Mr. Fischvoigt started his own business at Hanover during which period he successfully erected many machines at Hanover. At this time M/s. M. A. N. was sponsoring a scheme for training individuals to look after their two revolution presses. Mr. Fischvoigt took advantage of the training offered and later on was sent to India to work on the staff of Parsons & Whittemore (Madras) Ltd., who are the sole agents in India for M. A. N's machines. Mr. Fischvoigt worked

for over 2½ years with Parsons & Whittemore for whom he erected various machines at many presses in India.

Not much of a conversationalist, Mr. Fischvoigt is a delight to watch as he works on the printing machines. An expert technician Mr. Fischvoigt figuratively looks like a magician in the press room. He takes inordinate pains to coach the Indian workers and usually he is considered as a very hard task master. Mr. Fischvoigt has again become a freelancer in this country and he is now taking various assignments from other printing machinery firms. His presence in India is highly useful to the printing trade and we hope the printers in this country will take full advantage of his technical knowledge while he is yet in this country.



**The Leading European Screen-Brands Haas & Koh-i-Noor
Over 35000 Screens in use.**

HALFTONE SCREENS FOR BLOCK AND OFFSET PRINTING
PHOTOGRAVURE ENGRAVED SCREENS FOR DIRECT COPY ON CARBON TISSUE
VIGNETTE-CONTACT-SCREENS IN ALL NORMAL RULINGS
SPECIAL-GRAVURE SCREENS FOR TEXTILE PRINTING
FILM SCREENS FOR SHADING AND OFFSET WORK BY COPYING PROCESS
SHADING SCREEN-DESIGNS ON CELLOPHANE WITH ADHESIVE MATERIAL

Catalogue free of charge

**HERBST & JLLIG, FRANKFURT a/MAIN 13,
GERMANY**

RAINBOW INK & VARNISH MANUFACTURING CO. LTD.

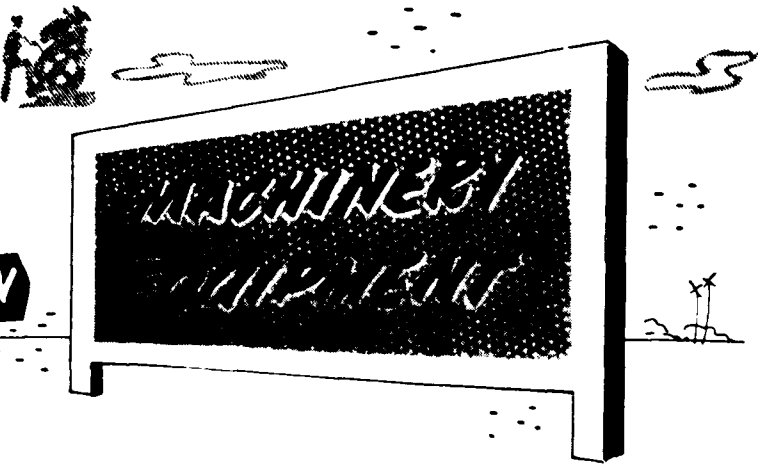
BOMBAY 7.

INK & PAPER RELATIONSHIP CHART.

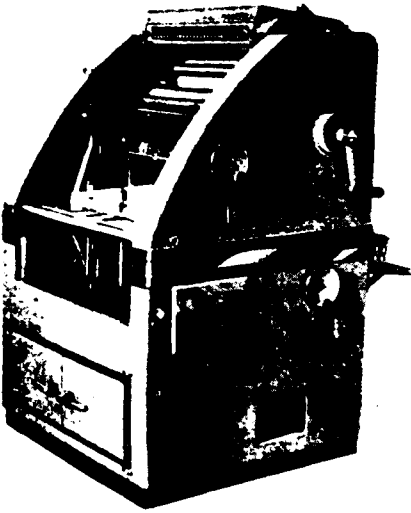
INK.	Stock																				
		Rough News	Glazed News	Printing Paper	S. C. Printing	M. G. Poster	Kraft Paper	Art Paper	Coated Paper	Chromo Paper	Chromo Board	Box Board	Post Card	Bond Paper	Bank Post	Parchment	Glassine	Cellophane	Metalfoil	Plastics	Tin Sheet
Standard Black		E	E	E	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Superior News Black		E	E	E	G	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Popular Job		E	E	E	G	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Job Black I		E	E	E	G	x	G	x	x	x	x	G	x	x	x	x	x	x	x	x	x
Job Black II		E	E	E	x	x	G	x	x	x	x	G	x	x	x	x	x	x	x	x	x
Alpha Black I		E	E	E	E	G	G	G	G	G	G	G	x	x	x	x	x	x	x	x	x
Alpha Black II		E	E	E	E	G	G	E	G	G	G	E	x	x	x	x	x	x	x	x	x
Illustration Black		x	x	x	x	E	x	E	E	E	E	G	G	G	x	x	x	x	x	x	E
Ultrasat Black		x	x	x	x	x	x	E	E	E	E	x	x	x	x	x	x	x	x	x	G
Suprasat Black		x	x	x	x	x	x	E	E	E	E	x	x	x	x	x	x	x	x	x	G
Process Black		x	x	x	x	G	x	E	E	E	E	x	G	G	G	x	x	x	x	x	E
Royal Black		x	x	x	x	E	x	E	E	E	E	E	G	G	x	x	x	x	x	x	E
Bond Black		x	x	x	x	E	G	G	x	x	x	G	E	E	E	E	x	x	x	x	E
N. Litho Black		E	E	E	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
N. Offset Black		E	G	E	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Label Black Litho		x	x	x	G	E	G	G	G	G	G	G	x	x	x	x	x	x	x	x	G
Tropical Inks		E	E	E	E	E	E	G	x	x	G	E	x	x	G	x	x	x	x	x	G
N. Series Inks		E	E	E	E	E	E	G	x	x	G	E	x	x	G	x	x	x	x	x	G
S. Series Inks		x	x	x	x	x	x	E	E	E	E	x	x	x	x	x	x	x	x	x	G
Label Inks		G	G	G	G	E	G	E	E	E	E	E	G	G	G	x	x	x	x	x	E
Concentra Inks		G	G	G	G	E	G	E	E	E	E	E	E	E	E	x	x	x	x	x	E
High Gloss Inks		x	x	x	x	x	x	E	E	E	E	x	x	x	x	x	x	x	x	x	G
Butter Paper Inks		x	x	x	x	x	x	x	x	x	x	x	G	G	G	E	E	x	G	x	E
Cello Inks		x	x	x	x	x	x	x	x	x	x	x	G	G	G	E	E	E	G	x	E
Plasto Inks		x	x	x	x	x	x	x	x	x	x	x	x	x	x	E	E	E	E	x	E
T. P. Inks		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	E
Meta-Foil Inks		x	x	x	x	x	x	x	x	x	x	x	x	x	G	G	G	E	x	x	E
Gold Ink		x	x	x	x	x	x	E	E	E	E	x	x	x	x	x	x	x	x	x	E
Silver Ink		x	x	x	x	G	C	E	E	E	E	x	G	G	x	G	G	G	G	x	E

The above chart published by the Rainbow Ink & Varnish Mfg. Co. Ltd. Bombay is reproduced by us for the benefit of printers in India and surrounding countries. This chart may be pasted to a board and hung in the pressroom which will facilitate easy reference.

Graphic machinery manufacturers and dealers may utilize the columns of this monthly eature to broadcast brief descriptions of their latest machines to the printers in India and surrounding countries.



Messrs. Kovo Ltd., of Czechoslovakia have introduced in the market a new model of the famous ZETAPRINTON Offset Machines. Styled as Model 30, this machine is capable of taking a paper upto size 14" x 20". Fully automatic, provided with suction feeding and so designed as to render possible uninterrupted paper feeding, this Model is streamlined in construction and capable of speed and quality output. There is a cut-out device which provides for automatic stopping of the machine if paper feeding is in any way interrupted. The Inking and Damping Units are also automatic and ensure perfect supply of Ink and water.



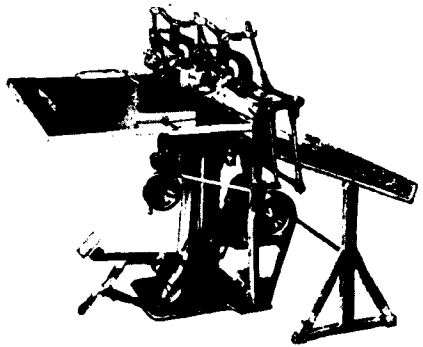
Zetaprinton - Model 30

The Factory has taken into consideration, while designing this machine, difficulties usually encountered in Offset Machines of this size and kind and have obviated any possible defect in the maintenance or control.

This Machine can be conveniently utilized for printing of leaflets, circulars, technical drawings, instruction sheets, catalogues etc. The image in the metal sheet used for printing can be made either with a special drawing pencil or a special ink or with a rubber stamp or in a typewriter with a special autograph ribbon by directly transposing composed type on the plate in a printing press and lastly by a photo mechanical transfer.

Messrs. F. H. Zimmermann, Berlin have recently come out with a WINDSPIEL-POLYP Special Numbering Machine provided with a semi-automatic sheet delivery. The prismatically planed machine-bow has a width to allow sheets of 105 cm. to pass and upto 6 printing heads can be mounted on this prismatically planed bow. The printing table is particularly large to permit sheets having a size of 60" 100 cm. to be pushed through the machine-bow after the number-

ing operation. The sheets numbered pass over flat rails and automatically fall into the rear delivery-box.



Windspiel-polyp Special Numbering Machine

As the machine front table, upon which the sheets to be numbered are placed, automatically lifts after each printing process with the rear delivery-box remaining in the same unchanged position, the sheets numbered fall down neatly placed one above another. Thus, the machine can be used to number sheets having sizes from a minimum 10 x 20 cm. to a maximum 60 x 100 cm. The power required is 0.25 H.P. Such a machine will be found very useful where numbering is to be done on large sheets and also when the sheets to be numbered run to several thousands.

Hooghly Ink Co. Ltd.

(Continued from page 13)

became the Secretary of the company. Today Sri K. B. Bose is one of the esteemed directors of the company. Opportunities like this are always open to the talented and enterprising Indian youth.

Among the important personnel of the Hooghly Ink Co., Ltd., the following names may be mentioned:—

R. I. Birkett Esq.,
Managing Director.
J. Hewitt Esq.,
Deputy Managing Director.
Mr. K. B. Bose.,
Secretary and Director.
H. Rudkin, Esq.,
Calcutta.
Mr. A. Davies.,
Bombay Manager.
Mr. J. D. Barton.,
Madras Manager.
Mr. J. Bentz.
Delhi Manager.
Mr. T. Braham.
Deputy Manager, Calcutta
Factory.

From Our London Correspondent

(Continued from page 10)

a photocell and light source fed through interchangeable narrow band colour filters. The resulting reflections are passed to the galvanometer reading panel, the machine being intended mainly for testing material against a standard.

Another application of electronics to printing is a device for the automatic monitoring and control of faults in register on printing and packaging machines. This consists of two units, a detector head which can be mounted on the printing or packaging machine, and an amplifying unit which can be mounted either on the wall or incorporated in the machine. The detector head consists of a photo-electric cell, a miniature head amplifier, and

Why a Printing School

(Continued from page 4)

Schools of Printing in India, the Government have been sponsoring four Regional Schools of Printing to start with, in Bombay, Madras, North India and West Bengal. More may be established in future—near and distant. In the meanwhile it is our interest—nay our duty to the Industry—to see that the opportunities are not wasted even a bit. The spell of ignorance can't be allowed to continue long and we must see that everyone of our executives and working personnel gets proper scientific training. Whole-hearted co-operation with the Government will help us immensely in the matter of establishing and running Printing schools. Now that the schools are being started let us hope that the fog will lift soon heralding the dawn of a new era in the Printing Industry of India.

For Safe' durable
packing & binding,
in INDIA and in
FOREIGN countries,
Discriminative con-
sumers prefer only

BHOPAL STRAW BOARDS

as by its use the cutter's
knife remains unharmed
and goods reach the
destination Safe.

For your requirements ENQUIRE:

M/s. Parsram Jethanand & Co.,
3, Thambu Chetty Street, Madras-1

DISTRIBUTORS FOR ANDHRA,
TRAVANCORE-COCHIN, MYSORE
AND MADRAS STATES.

List of the wholesale Stockists and Distributors:

Messrs

Dangety Narayanaswamy, Rajahmundry
Shree Vishnu & Co., Bezwada
Trade Service Ltd., Salem
J. B. Advani & Co., Ltd., Cochin
C. V. Ramakrishna Iyer & Sons, Calicut
Ramalinga Iyer, Ernakulam
Paper Mart, Trichur

MADRAS DISTRIBUTORS:

Messrs

V. Perumall Chetty & Sons
Palaniappa & Co.,
T. Chelvarangam Mudaliar & Sons
Ram Paper Co.,
Zia-Ullah & Sons
Meenakshi Paper Co.,
Copparam Natesa Chetty
M. Hussanali & Sons
S. Ranganatham
P. S. Nanjappa Chetty & Sons
Voora Adishesu Chetty
Jeyam & Co.,

BANGALORE BRANCH:

HARIBHAGAVAN DAS
PARASRAM & CO.,
17 Mamulpet Bangalore City



The research which was initiated during the second World War into the development of faster and more efficient methods of sieving materials for the manufacture of explosives has been continued in subsequent years for the benefit of industry in general. The application of the principle of gyratory vibration to sieving processes solved the problem of preventing the repeated mutual impact of the particles being sieved, and led to the production of sieving and straining machinery of greatly increased efficiency, capable of throughputs previously unobtainable even with units using high pressure feed and vacuum take-off.

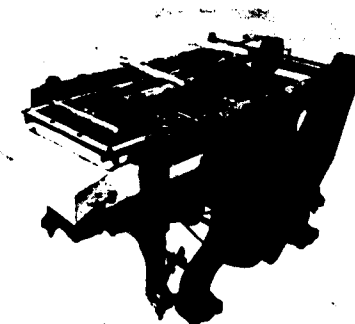
Russell Constructions Ltd., of Russell House, Adam Street, London, W. C. 2, who originally applied this principle to sieving and straining machines are now marketing a variety of equipment, the most interesting to the paper industry being the Russell Separator, a straining unit of compact design which is capable of straining out solids suspended in a liquid or viscous medium at extremely high rates of throughput, in some cases amounting to 12,000 gallons per hour through a 120 mesh.

This is effected by passing the material through a screen to which a gyratory motion is imparted in such a manner that while the screen itself is not rotating, each point upon its surface is describing a circle of small diameter in a

horizontal plane at about 1,500 gyrations per minute.

A specially designed nozzle imparts a form of turbulence to the flow of the material and upon coming in contact with the gyrating mesh, the solid matter is held in suspension, thus preventing any clogging or blinding of the mesh while the liquid is being rapidly forced through. The dewatered solids are impelled with a rolling motion over the dry part of the mesh towards the outlet and are at the same time freed from any excess liquid which they may still be holding. This solid matter is then delivered at the opposite end to the liquid outlet with all but the surface moisture removed.

A ½ h.p. electric motor drives the mechanism which generates the gyratory motion at the straining frame. This is a stainless steel assembly to which is fitted the straining element (mesh surface 4'7½" x 1'6½"). Stainless steel or Monel metal mesh is usually fitted and mesh sizes of upto 200 per



Russell Separator

linear inch can be used. Quick withdrawal of the straining assembly for mesh changes can be effected by merely releasing four bolts. The overall dimensions of the machine are—length 5'7", width 2'11", height 3'2". The complete unit weighs 10½ cwt.

The Russell Separator has been put to many uses in paper manufacturing industry such as the straining of china clay and coating mixture in which a throughput of 12,000 gallons per hour through a 120 mesh has been obtained. A rate of 6,000 gallons per hour through the same mesh is achieved when straining out black liquor for the extraction of sand and fibre.

Esparto grass half stuff can be passed through a slotted plate in lieu of the wire mesh for the extraction of roots. The same method is used for the separation of string and unground fibre from waste paper pulp at the rate of 8 cwt. dry fibre weight per hour.

The Separator can also be used for straining the back (white) water from the paper making machine for the extraction of the fibre, thus saving a quantity of valuable material for reprocessing and mitigating river pollution.

The use of chlorinated rubber paints for the protection of plant and equipment against corrosion is finding increasing application in industry in general. These paints

dry by evaporation and not by oxidisation so that drying is more rapid than that of oil or synthetic paints and produces the attractive appearance of a lacquer. They are unaffected by temperature changes and are available in all standard shades.

Detel products Ltd., of Victoria Park Estate, South Ruislip, Middlesex; who pioneered the manufacture of chlorinated rubber coatings, supply a range of such paints to afford protection under almost any working conditions that may be encountered. The chief uses of Detel paints in paper mills are in the area of the wet end of the machines and on roofing structures which suffer from considerable condensation.

The manufacturers recommend an application of 'D.M.U.' (Detel Metal Undercoat) and two coats of

Detel 'A' grade for complete protection in these instances. The former is a metallic zinc-laden primer which builds up during its life, becoming harder, more adherent and impermeable. It contains a very high proportion (over 96%) of finely divided zinc and its protective action resembles that of galvanisation.

Detel 'A' grade provides a very flexible coating which follows the expansion and contraction of the surface to which it is applied. It is acid and alkali resisting and is an excellent electrical insulator, even after prolonged immersion in water and is therefore very useful for preventing electrolysis, one of the factors promoting metallic corrosion.

The high resistance of Detel to water, chemicals and other corrosive agents makes it ideal for the protection of hot and cold water

tanks and pipes, generating station equipment, fans and ducting. A special grade known as Detel 'A' (flooring) grade can be used for coating concrete floors and is particularly useful in switch rooms and store rooms as it can be washed, scrubbed or polished and thus prevents contamination or shorting by the dust usually produced on such floors.

No skilled labour is required for the application which is best done with a brush. It can also if necessary be sprayed on. Any breaks in the surface can easily be patched after the removal of the loose material and the new patches are rapidly integrated with the original coating.

Detel paints are in general quick drying, and various grades can be supplied in a range of attractive colours.

SPECIAL DRUPA ISSUE

"*Printindia*, a monthly magazine devoted to the printing and allied industries in India, has published a special DRUPA number. This issue, dated July, carries a very effective cover in gold, red and black, which has been varnished. The DRUPA arch is illustrated on the cover. Sri S. Bhandari, managing director, Indo-European Machinery Co. Ltd, gives his impressions of the DRUPA Fair at Dusseldorf; there are brief details on all the exhibitors, well illustrated; a correspondent contributes 'Highlights of DRUPA'; there are articles by German contributors and a special section of 'DRUPA in Pictures.' This shows graphically the spectacular nature of the Fair. Well printed in several colours, *Printindia* is a tribute to India's growing printing industry."

— "PRINTING WORLD WEEKLY", LONDON.

The review reproduced above appeared in *Printing World* which Magazine was part of a batch of technical literature recently received from abroad, and while its complimentary nature must be a source of great satisfaction to the editor of *Printindia* it also gives cause for reflection on the main features of this publication of *Printindia* covering DRUPA.

Drupa was undoubtedly a very great success, and deservedly so, it was a fine Exhibition and International Conference of the Printing and Allied Trades. It is quite obvious that great foresight and plenty of time was given to its conception and much publicity to its realization.

The *Drupa* Number of *Printindia* reminds us that in March this year the editor produced a similar edition covering the 'Second Session of the All India Master Printers' Conference' held in Calcutta this year.

A very apt remark in the editorial pages of this particular number accounts for the absolute lack of comparison between the very fine show at Dusseldorf and the Calcutta Conference, quote "Thousands of Printers were actually unaware of this conference," and it might also be said that apart from the lack of publicity, it also suffered from lack

of sufficient planning and foresight.

The Dusseldorf Fair, like most other trade fairs abroad, took many months, even years of careful Planning, and was obviously designed to suit the needs of the exhibitors. It is most probable that organisers were already considering the technicalities and making necessary contacts for 1954 even before the First Fair in 1951 was concluded.

It is hoped that sufficient publicity has been given to this year's conference to ensure that the efforts of the organisers will be suitably rewarded.

If a Conference is to be supported by a Trade Exhibition, the organisers must care for the requirements of the manufacturers they expect to cooperate. The exhibition should be designed to meet the requirements of the exhibitors, the exhibitors should not be expected to adjust themselves to fit into an already preconceived layout and plan.

To start with such practice makes the whole thing a gamble as to whether sufficient trade interest can be aroused to take up the available space or it may be found that insufficient space and facilities are available to accommodate all those wishing to participate.

For such an Exhibition it's first necessary to interest all prospective

buyers in the proposed scheme, get an idea of the support likely to be given by that section of the trade, and then circulate all manufacturers at home and abroad to find out what support they will give, what they are prepared to do, and what space and facilities they will require to achieve their purposes.

Then, and only then, can a really fine exhibition be planned. True it will require much space and finance and quite a lot of facilities from official sections, such as electricity for power and lighting and special import arrangements. It will also require a lot of covered space, but for the latter, there is no doubt plenty of large portable buildings available which could be hired and erected on a suitable site.

And in all these matters, it is more than probable that the Central and State Governments would be only too willing to assist in every way possible, if good planning and wide trade support guaranteed its success.

Such an exhibition, however, would take much time to plan and achieve so why not plan the 1957, or even 1958 Conference, which would be the 5th, from now. Make it big and worthwhile and show the *Printing World* what India can do.

Graphicus

SOLVE YOUR PROBLEMS

We have great pleasure to inform the printers of this country that any problems confronting them in their day-to-day activities pertaining to the graphic arts industries can now be satisfactorily solved by sending them to the "PRINTINDIA" magazine in the shape of questions giving details of the troubles. They will be carefully analysed by an expert and will be replied to month by month in the columns of this magazine. This feature will be introduced from the November issue and all questions may be sent addressed as follows :-

GRAPHICUS,
c/o "PRINTINDIA"

KUBERA BUILDINGS. :: 21, SUNKURAMACHETTY STREET :: MADRAS-1

The Printer and Society

(Continued from page 7)

Even in the higher circles of society, we find a continuance of this tradition. We hear of printers "by appointment to" His Majesty the King, His Excellency the President, His Excellency the Governor, His Highness the Maharaja and so on. The warrant of appointment confess upon the printer an unique sense of prestige. He feels elated at the distinction showered upon him by the highest authority of his place.

The printer in a town has his own pride of place in his surroundings. He is a centre of attraction to the village folk around, who have to go to him for a casual invitation for a wedding or the like. The printer will have to play the host to these visitors. He must be a veritable book of reference, with the latest

calendar (panchangam), he must know the Rahu Kalam and the Yama Gandam, the auspicious Muhurthas etc. He must draft the invitation from details furnished. He must take care of Rahu Kalam before he begins to write the draft. He must remember Yama Gandam before he starts the final print. Even the proofs must not be corrected during the inauspicious period! And when everything is finally printed and ready, he must deliver the copies in the most orthodox fashion with a smear of haldi-kunkum at the corners. The customer is thoroughly pleased with the service, and so the family printer of Sri Murugesan becomes the family printer of Murugesan's friend Manikkam, and Manikkam's friend Ratnam, and so on, resulting ultimately in a privileged position for the printer.

The printer in large cities, however, has a different form of family ties. He is a member of the Rotary

Club, a Sports Association, a Commercial Chamber or a Gana Sabha. Wherever he is, he is looked upon as an authority on the intricacies of the craft. It is his voice that will ultimately decide the form of print. Large firms still have what they call "our" printer.

The importance of the printer for the well-being of society can never be minimised. In fact, he is an integral part of society, of whatever type it might be. It is the printed word that makes or mars society. Though unnoticed and insignificantly at times, the printer does contribute his share to the preservation of society. Unfortunately, in the ills of the present-day world, his voice seems to be a cry in the wilderness. But, the day is not far off when the printer will be able to attain that height of glory in society that is his legitimate due. Let us hope and pray that this will come much sooner than we expect.

Phone: 2916

Grams: EMGISHA

M. G. Shahani & Co. (Bom) Ltd.

289 CHINA BAZAAR ROAD :: :: MADRAS 1

SOLE AGENTS FOR

TAMPAX, GOYA Perfumes, MITCHAM'S
Lavenders and Talcum, INECTO Hair Dye,
KOKO Hair Tonic

MANUFACTURERS

of
SKYLITE Envelopes, Gum,
Files and other Stationeries

- STOCKISTS OF HIGHCLASS STATIONERY
- WE STOCK AND MAKE VARIETIES OF ENVELOPES SUCH AS MANILLA, KRAFT, CLOTH LINED, WINDOW IN COMMERCIAL AND OFFICIAL SIZES
- GREETING AND INVITATION CARDS OF VARIOUS QUALITIES AVAILABLE
- FILES & ENVELOPES MADE TO YOUR SIZE & REQUIREMENTS

Please send your trade enquiries to the above address

C. P. G. NAIR
MANAGER



"THE MANUFACTURER'S GUIDE TO PACKING AND PACKAGING"

Most of us who have occasion to receive Christmas presents rarely stop to think what great care must have been taken in packing the parcel or packet delivered to us. As a matter of fact, packing is a great art and whether the gift is, small or big, costly or not so costly, proper packing and the material used for packing make all the difference in giving a presentable appearance to the gift sent.

Packing and packaging have been developed to a great measure in the West. One cannot but recall here the slogan adopted by a well known toothpaste manufacturer: "We could not improve the toothpaste so we have improved the tube!" and indeed, it was so. The modified form of the tube was certainly more convenient for the users of the toothpaste and it looked ever so more tidy. This is only a small example to show that manufacturers in the West spare no pains in making their products more and more attractive in appearance. There are several firms whose only function is to supply first rate material for packing and packaging. Prominent among these are M/s. Samuel Jones & Co., Ltd., who have built up a really efficient organisation for the manufacture of packing machinery and material.

They have recently issued a very handy and beautifully printed booklet giving details of what is most modern in the art of packing and packaging. This booklet gives interesting details of such important subjects in the art of packing and packaging as labelling, gumming the paper for labels, sealing tape, inner parcel sealing, post parcel sealing and container sealing. There is a special section on bill sealing also. Waterproof papers and fancy papers are dealt with in detail and one is left with envy at the wonderful range of packing and packaging material available in the West. The sections on fancy papers, self-adhesive dispensers are indeed very instructive.

As one peruses the booklet with interest, one becomes familiar with the excellence of the material used in modern packing and the wide range of machinery used. M/s. Samuel Jones & Co., Ltd., appear to have perfected the process of preparing non-curling gummed papers which do not curl or block under normal storage conditions. These can be regularly printed by Offset Litho Presses at the amazing speed of 2,000 sheets per hour, the size of each sheet being 30 x 40.

The design and typography of this booklet is highly commendable. Gothic face has been used throughout for reading matter and the headings and picture captions are

set in Bodini Ultra Bold Roman. The publishers of this booklet M/s. Samuel Jones & Co., Ltd., deserves every praise for giving very useful information about the art of packing and packaging.

MODERN LABELLING

Here is something which ought to interest every home, office and factory. A 28 page book, an outstanding example of Samuel Jones & Company prestige publication. This fully illustrated book is divided into two parts. Part one contains a description of the ingredients and properties of paper and of adhesives. Part two is devoted to the four methods of applying an adhesive label.

The book is of crown quarto size centre stitched. The general review, reports of technical developments and new products extend the appeal of the publication to all interested in labelling. The text matter is set in Monotype Perpetual Roman and Italic.

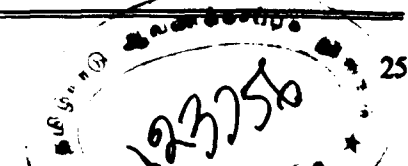
PRINTINDIA

is available at all

News Agents in India

and at

Higginbothams Railway Stalls



The year's most sensational novel!

Goodbye to Sorrows and Tears

By
TEMPORAU

"This interesting novel tells the story of Subha.....The author does not moralize about anything and is able to make a dispassionate appraisal of life's problems, indicating what one's attitude should be."

—THE SUNDAY STANDARD

"Here is a chunk of real life portrayed with sympathy and understanding.....The story moves with ease and offers pleasant reading.....Is nicely printed and get up in attractive style."

—INDIAN REVIEW

Price Rs. 3/-

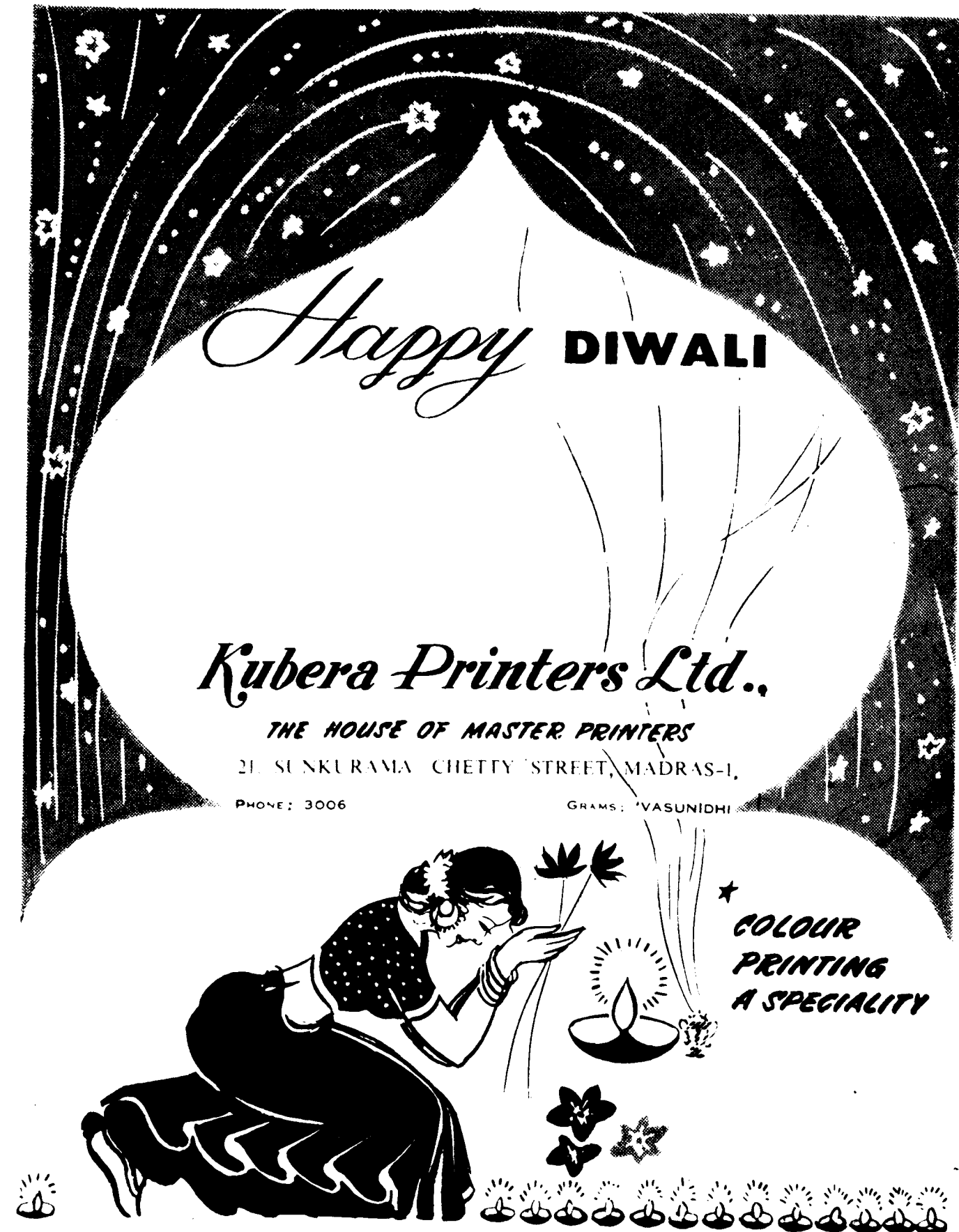
Postage free

FOR COPIES PLEASE WRITE TO:

KUBERA ENTERPRISES LIMITED

"KUBERA BUILDINGS"

21 SUNKURAMA CHETTY STREET :: :: MADRAS-1



Hooghly Ink Factory Inauguration at New Premises

(Continued from page 16)

co-operation between the paper and ink manufacturing industries for more often than not the printer of a bad product found himself in a dilemma, the paper manufacturer telling him that the ink was bad and the ink producer maintaining that the paper was rotten. In this aspect, he appreciated the efforts of the Hooghly Ink Company in having any eye on the quality of paper while producing ink. Dr. Rao, who was also the Labour Minister in the previous cabinet, said amidst laughter that the Hooghly Ink Company was one of the very few factories which had little labour trouble.

Sri Khasa Subba Rau, Editor of *Swatantra*, described Hooghly Ink Company as "an ideal example of Indo-British Cooperation" and wel-

comed "more and more Bartons and more and more industries like this to produce things we want in this country at reasonably cheap rates." Stating that "my dislike for the British has completely vanished when they ceased their hold over us and established a more lasting empire over our hearts." Sri Subba Rau was certain that British concerns, which were today larger in number in India than even during pre-independence days, would always ensure the interests of India and Indians who, after all, were bound to contribute to a large extent to the progress of the companies themselves. The extraordinary facilities provided for the Indian staff by the Hooghly Ink Company should serve as a model worthy of emulation by other similar firms.

Sri K. V. Subba Rao of Mechelec and Kubera group of concerns, pointed out that printing emanating from the highly creative graphic

arts industries should not be standardised. Stating that a "healthy growth is mutual", he said it was a question of demand and supply. As the demand for the right quality grew, the standard of the material supplied would also be bettered correspondingly with necessary research work.

Sri S. Viswanathan, Secretary of the Madras Printers and Lithographers Association paid an eloquent tribute to the quality of the Hooghly Inks and said that as one engaged in the printing trade, he found nothing wanting in the products of the firm.

Rotarian Vice-President Dr. E. Somasekhar thanked Mr. Barton for the excellent dinner on behalf of those "unconnected with either printing or Ink Industry" while Mr. Barton himself proposed a vote of thanks to all those present and particularly to the speakers for the kind references they had made to the Hooghly Ink Company.

ADVERTISEMENT TARIFF

	CASUAL	CONTRACT*
	Rs.	Rs.
FRONT COVER	300	200
BACK COVER	200	150
2nd & 3rd COVERS	150	120
1st INSIDE PAGE	120	100
INSIDE FULL PAGE	100	80
HALF PAGE	50	40
QUARTER PAGE	25	20
COLUMN INCH RATE	(per col. inch) 3/8	3

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

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

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

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

PRINTING TYPES IN

MANICKAM PAPER CUTTING

PERFORATING

RULING

LEAD & RULE CUTTING

HINDI & MALAYALAM

TELUGU, KANADA

ENGLISH, TAMIL

ESTD. 1916

Printers' Providers & Engineers

CATALOGUE ON REQUEST

NELSON & CO.

(THE FINE-ART TYPE FOUNDRY)

62, SWAMI PILLAI STREET, CHOLAI, MADRAS 7

Post Box No 452 Grams: NELSONCO



PRINTED

WITH

RAINBOW'S

STANDARD

TRI-COLOUR

INKS



RAINBOW INK & VARNISH MFG. Co., Ltd.
BOMBAY.



Manufacturers of

Suppliers of

PRINTING TYPES IN

"MANICKAM" PAPER CUTTING

ENGLISH, TAMIL

PERFORATING

TELUGU, KANADA

RULING

LEAD & RULE CUTTING

HINDI & MALAYALAM

Languages...

*Machines...
Treadles...*

ALUM
100

CATALOGUE ON REQUEST



(THE FINE-ART TYPE FOUNDRY)

Post Box No 452

Grams : NELSONCO

*To the Graphic Arts Industry,
Be true to your ideal, and
you are sure to rise still
higher in your achievement.
With my blessings*

November 1924

Message from
THE MOTHER
Sri Aurobindo Ashram
PONDICHERRY

PRINTINDIA

A MONTHLY SURVEY OF THE GRAPHIC ARTS INDUSTRIES

Vol. 3]

NOVEMBER 1954

[No. 1

Managing Editor
TEMPORAU

Business Manager
V. S. N. Murthi

Circulation Manager
V. S. Bashyam

London Correspondent
F. & D. Brownlie

Roving Correspondent
G. V. G. Krishnan

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.

PRINTINDIA is Published
on the 10th of every month.

ANNUAL SUBSCRIPTION RATES
INDIA Rs. 10/-
U. K. £ 1 Shs. 10
U. S. A. \$ 5

Editorial & Publication Office :

PRINTINDIA

Proprietors

KUBERA ENTERPRISES Ltd.,

"KUBERA BUILDINGS"

21, Sunkurama Chetty St., Madras-1
INDIA

Grams : VASUNIDRI

Phone : 3006

In this issue

- Editorial : Printindia Marches On !
- Colour and Colour Printing
- Printing and Profit—Quality and Quantity
- Imposition in Letterpress Printing
- The Problems of Letterspacing
- Greetings to Printindia from Home & Abroad
- Regular Features

Pressroom Problems Solved
From Our London Correspondent
Spotlight On Persons & Firms
News & Views
etc. etc. etc.

THE BLOCKS FOR PRINTINDIA

ARE MADE BY

Messrs. NEWTON & CO.

THE LEADING BLOCKMAKERS OF MADRAS

80 WALLAJAH ROAD :: MADRAS 2

Phone : 86729

EDITORIAL

539
4.24

Printindia Marches On!

As we glance at the many messages sent to us for the Birthday Special Number from the topnotch men of the printing and allied industries, we are naturally awakened to a knowledge of the heavy responsibility that rests on the shoulders of this magazine. Within the short span of twelve months "PRINTINDIA" has acquired a tremendous popularity and subscribers have mounted up in leaps and bounds, thereby proving the stark necessity of a printing trade magazine in this country. Today "PRINTINDIA" has thousands of readers in all corners of India and we are greatly pleased that many foreigners have developed an interest in this magazine from far-flung countries of the globe. The growth of this magazine, in a way, is symbolic of the growing Indian printing industry which is fast shaking off its old smudgy tentacles and is beating up into newer horizons of creative printing. In the last few years the Indian printing industry has gone through epochal changes which resulted in the emergence of some topnotch printers whose quality of work is on a par with that obtained in foreign countries. Through the All India Federation of Master Printers, gigantic efforts are being made to remedy the lower standards of printing and introduce a quality-consciousness on a mass scale. So at this juncture we are aware of the grave responsibility of this magazine which has taken up the job of spreading the necessary knowledge required by the printers to achieve higher levels of quality production.

During the year that passed by "PRINTINDIA" brought out two special numbers, one devoted to the All India Printers' Conference at Calcutta and the second one surveying the DRUPA Fair Exhibition held at Dusseldorf. The latter special number naturally cost the publishers a large amount of money as it was found necessary to depute a Special Correspondent to visit Dusseldorf, Germany and collect the relevant information regarding DRUPA for the benefit of the Indian printers. But the publishers have put aside all considerations of profit and have concentrated on the primary objective of offering through the magazine the material that is required by the Indian Printers with the firm belief that an interchange of ideas on an international level will help the Indian industry to progress and prosper.

On the eve of this birthday we once again affirm our ambitious objective of serving the Indian printing and allied industries to the utmost we can and in this venture we look to those thousands of comrades in the industry who have already stood by us and who, we are certain, will stand by us as the months roll by.

—TEMPORAU

Colour and Colour Printing

By
'S'

Colour is indispensable for reproducing the rhythm of life. "Colour is important in our lives because it affects the gamut of human sensations and emotions." Here is a brilliant article which aims in introducing a discriminative sense of colour amongst the printers

In the extraordinary choice of colour to-day we have a new dimension for design, a new means for creating the rhythm of modern life—and we need this new means, all of it, in the competitive world. Colour is important in our lives because it affects the entire gamut of human sensations and emotions. We all possess intuitive discrimination in matters pertaining to colour. The colours to which we react consistently and favourably are exemplified by the colours with which we habitually surround ourselves. Sex, age, occupation, locality, particular occasion, character and mood are all disclosed by the colour selected. Colour is a physiological sensation, the appreciation of which may vary considerably from one individual to another and for the same individual according to circumstances. Colour when thoughtfully handled is aesthetically satisfying and moving independent of its subject matter. Colour may lend its emotional quality to the atmosphere of the printed matter; lively high-keyed colours for animation; full-toned low-keyed colours for richness and dignity; cool blues and violets for tranquillity and mysticism. The use of complementary colours as a means of heightening the apparent intensities of each is frequent in graphic art. Juxtaposition of different intensities or hues plays an important part in colour effects and should be thoroughly understood by the artist and the printer so that he may

adapt it to his needs. As a rule neutralized colours are often used in the larger areas, with the most intense colours reserved for smaller spots. Above all the designer must plan his choice of colour as well as its allocation in the layout, with the keenest intention of which he is capable. Generally speaking the best practice is to concentrate the colour rather than scatter or spread it. The clearest illustration of colour use is to be found in a combination of three fundamentally contrasting elements of layout: display heading, photography and art work. These three elements are, in themselves, contrasting in nature and their essential differences are given heightened emphasis by the skilful use of Colour.

The darkest shade is generally the last colour printed, this has the purpose of avoiding smearing. For instance in the case of orange and blue-black (an effective two colour combination) orange is the first colour and the darker blue-black the second. The red, yellow and blue are the primary inks which when properly combined, produce all the colours of the spectrum. Black is used to deepen tones, sharpen outlines and add values unobtainable with the other three colours. In general the most popular use of a colour with black is to effect contrast and this is achieved by the choice of a bright, clear, high-key colour, such as emerald green, turquoise, cerulean blue, orange or tan. Vermillion is

the contrasting colour most frequently used with black and it is invariably effective, in spite of the fact that we see it so often. It is always safe to play with gray-greens, gray browns, rose and old blue. If stronger colours are needed, as they are often are, care must be taken to be sure that they do not become loud and compelling. We should always remember that contrast is more visual than emotional. Obviously, well-adapted, well-balanced colours can prove to be a powerful sales help. They command attention, convince, promote prestige, add interest, speak a universal language and direct appeal or emotions and when properly applied and displayed they sell plenty of merchandise. Colour and design tend to sway the customer to immediate purchase. Control of the colours of the inks used in three and four colour printing is essential. In packaging industry variations in the colours of inks used to print designs on boxed or wrapped merchandise have led to customers refusing to buy them, in the belief that their 'off colour' appearance has been caused by overlong storage. By means of Spectrophotometer the colour of any material can be precisely recorded and the same colours reproduced exactly without further reference to the original material itself. For testing colour durability Sheen Colourimeters or Ecl Reflectance Spectrophotometers are used to measure the extent to which the material has faded.



Party of Indian printers inspecting Polygraph step and repeat machine at the Paris Graphic Arts Fair

The colour of all printed surfaces is made up of two components, body colour and gloss. A third component, bronze, also is a factor in many cases. For example black aniline colours always show bronze effect which cannot be avoided entirely, owing to the fact that these blacks are mixtures of colours such as red, blue and yellow. The dispersing power of different transparent shades causes the bronze effect. Body colour the principal component, is seen nearly independently of the other two, when the surface is viewed at right angles under diffuse illumination. Gloss is best recognized by viewing the surface with directional illumination so as to image the source in the eye. Bronze is seen by viewing the surface at an angle in a similar way except with a moderately diffuse source. Thus the colour of a printed area is a function of viewing angle and light source and it is dependent on the relative proportions of the three components: body colour, gloss and bronze. An order for ink specifies the colour desired in terms of original art, or the ink company's colour sample book, by colour matches or notations or

some material unrelated to ink, such as cloth or food. Developing the initial colour match in ink is a complex procedure requiring experienced colour matchers. It involves both colour matching and proper physical properties, such as tack viscosity etc. When mixing the inks for a match colour the resulting colour depends in principal part on two factors: colour of ink and thickness of the film. Care must be taken to ensure that the film of ink that is rolled on the paper is not heavier than is normally run when actually printing. When mixing the inks for a match colour it is advisable to use inks from only one source. Mixing different brands increases the possibility of the match colour being affected by chemical reaction. It is also advisable not to mix the quick-setting inks containing synthetic resins with inks containing linseed oil. This may cause picking problems on coated papers, while adding quick-setting ink to the linseed oil ink may cause problems when used on uncoated papers. For the quick-setting inks are intended for coated papers while linseed oil inks are usually intended for use on

a wider range of papers, including uncoated papers. In colour mixing the best method is to mix transparent colours with transparent colours only and the opaque colours with opaque colours if possible. Let us now examine as to why not mix opaque and transparent colours together? There are two good reasons for not doing this. One is you may get a lot of mottling with these mixtures and the other is the colour will not stay or be the same or anywhere near the colour when wet after it dries out. This is because both types of inks are made to fulfil certain conditions and mixing the two types together may make the resulting mixture unsuitable for either of the intended purposes. The colour of the wet ink film can never correspond with the dry film, for the reflectance on a wet ink film are usually lower than the corresponding dry film. The great majority of raw materials (pigments and vehicles) used in formulating inks have indexes of refraction and produce semi-transparent films. Increased opacity is imparted through the addition of high index white pigments such as zinc oxide and titanium dioxide, but complete opacity is never obtained. Therefore ink films vary in colour with their thickness.

The pigment primary colours used by the printers are, yellow, red and blue. Mixing the three pigment primary colours together in certain quantities will produce a kind of black. Keeping this fact in mind, it can readily be appreciated that a colour can be darkened by adding a portion of its complementary colour. This method of darkening a colour is better than the commonly practised method of adding black. The addition of black to a mixture kills its brightness and tends to degrade the colour. By mixing yellow and red, we know,

(Continued on page 21)

Printing and Profit—Quality and Quantity

By

MR. JOHN D. BARTON

Mr. Barton gives valuable suggestions which will go a long way in aiding the printers to execute their jobs with a good margin of profits. The author emphasises the importance of quality which is so often sacrificed to achieve quantity

While it must be admitted that printing is an art it must also be acknowledged that it is an industry and a very important one; it is therefore to the national good and the public interest that printing should flourish and prosper.

In doing so however those engaged in this noble profession must not lose sight of the first role of printing mentioned and quality of finish should be a printer's first aim.

There is, no doubt, a lot of vicious competition throughout the trade; rate cutting, at times, can only be described as foolhardy, especially when a printer quotes so low a price that he can hardly cover the cost of the raw materials he uses. This all too common idea that the job must be obtained at any cost must be generally overcome if the printing trade in India is to progress, the practice of quoting for work on the basis of someone else's price, whether factual or fictitious, usually the latter, must also be dropped. Too many printers are prepared to offer a lower rate than that intimated to them by the prospective customer as having been quoted by some other printer.

However, all this does not mean that the printer must necessarily charge high or even exorbitant rates. There are more ways of reducing the price of the product than merely knocking a few annas of the quoted figure.

There are numerous printers in India quoting competitive rates and still making very handsome profits, they achieve this happy state of affairs by using their equipment and facilities to the fullest advantage thus obtaining the highest possible output and reducing the on-costs of their finished work.

Much money can be saved in cost of production by analysing one's business, first cut down on waste of the raw materials, see that your paper is properly stored and handled. Firms in the big cities where printing-ink is manufactured, have little need to carry big stocks of same and risk deterioration, buy it as you require it, but keep about 2 weeks stock of the inks regularly on hand.

For those in the districts where the source of supply is far away, almost any colour required for normal Jobbing Work can be mixed in your own press by keeping a small comprehensive stock of the popular colours. Black, red, yellow, and blue plus some white and tinting medium.

Plan the printing programme so that it is not found when the machine is made ready that there is no ink of the shade required to run the job. If the ink for a particular job is not in stock no doubt there is another order which can run on until the necessary ink is obtained. Machinery and manpower should be used to the fullest

extent and non-productive work must be done in the quickest and most efficient manner so that more work that is earning money can be done during the time the Press owner is paying for.

A wise printer always tries to have a buffer order on hand, there are numerous types of work ideally suitable for this; marble and fancy paper printing, for a ledger book-binding etc., exercise-book covers, even tricolour mythological pictures, labels such as are regularly pasted or nailed on to goods sent by rail, sea or air, GLASS, WITH CARE, THIS SIDE UP, and a host of others. An energetic stationer could no doubt handle the selling of such items easily and profitably and much of it can be done on odd sheets on off cuts which would otherwise be wasted.

Going back to ink don't try to preserve for posterity those odd ounces of ink left over from some particular job. It takes up valuable space and will be good for nothing in time, mix it at once in a cheap black and get rid of it when printing some cheap throw away leaflet.

As far as machines are concerned try to have the next job nearly to put on before finishing the one that is running, if possible choose a job that is printed in the same colour, or at least a similar one.

When there are a number of same orders to be printed, start the day, with a job printed with the cleanest, lightest ink and

progress gradually shade by shade to the darkest and densest. This saves much washing up time and may even save spoiling a job by the rollers sweating out a previous dark colour into a subsequent pastel ink.

At night before closing down, the machines should be thoroughly cleaned even to the extent of running up some white after washing and washing up again. It is a good policy to wash off again in the morning if you are running with a pastel or light clear colour.

Proofing a job is another money saver. Run a few sheets before printing with unfamiliar paper or

ink and ascertain from this if the ink is the correct shade, if it will dry on the paper and not least important if it is suitable for the paper.

Another tip is don't always take the ink-makers specimen book print as being the shade you will get, the ultimate shade obtained depends on the paper you use, the machine setting and even the type of machine, specimen books are only a guide.

An interesting experience that can easily be carried out in this respect is to run a dozen sheets of different papers through the same machine with the same ink one

after the other. It is amazing the vast variations you will obtain even on paper of equal thickness.

If in doubt on any point regarding the suitabilities of your ink either in respect of the paper you use or the machine you are running, always consult your friendly ink-maker who will be only too happy to advise you.

Please don't blame the ink if the job does not turn out properly. Usually it is not the fault of the ink any more than it could be said that a screw driver was no good because it was not possible to undo a nut with it. You should always use a spanner and a spanner of the correct size.



The Mammoth Polygraph Stall at the Paris Graphic Arts Fair

John Dickinson & Co., Ltd.

(INCORPORATED IN ENGLAND)

PAPER MAKERS & MANUFACTURING STATIONERS
SUPPLIERS OF COMPLETE RANGES OF MACHINERY
FOR THE
GRAPHIC ARTS & ALLIED INDUSTRIES

MADRAS BRANCH

Hakim Mansions, Loane Square, George Town

MADRAS - I

(P. O. Box 77)

BOMBAY

(P. O. Box 58)

CALCUTTA

(P. O. Box 45)

and

~~~~~ SOLE AGENTS FOR ~~~~~

## HOOGHLY INK CO., LTD.

CALCUTTA BOMBAY MADRAS DELHI

India's Leading and Pioneer Printing Ink Makers

Manufacturers of  
HIGH GRADE PRINTING INKS  
MADE IN THE EAST FOR THE EAST

*Service*

*Economy*

*Quality*



Top: Sri N. L. Contractor (extreme right) Mg. Director of Rainbow Ink & Varnish Mfg. Co., Ltd.  
with President Rajendra Prasad

Bottom: Mr. Stephen Spender, world famous English poet was given a dinner at Hotel Oceanic by  
the leading poets and writers of Madras in October



# Imposition in Letterpress Printing

By  
SRI A. K. GUHA

"Imposition is one of the important techniques in Letterpress printing," says the learned author in this article which throws much light on the problems of imposition

Imposition is one of the important techniques in Letterpress printing. Unless pages are correctly and properly imposed and locked up in the chase, a machineman has to experience serious difficulties in the adjustment of pages or margins or blanks, as the case may be. This feature is no doubt a common problem which a Press has to encounter. Many a job put on the machine-bed has to be lifted or returned to the composing section for re-adjustment due to incorrect imposition. Printing Machines, being the main corner-stone of production, should not be unnecessarily detained or fed with formes of defective imposition, incorrect justification, etc.

## THE TECHNIQUE

By the operation of imposing in Printing is meant the arrangement of pages of type-set matter in such a manner that they appear in serial order when printed and folded after printing. These pages of type-set matter are locked in a frame of steel or cast iron in the operation of imposition. It is essential for craftsmen engaged in imposing work to understand imposition as well as the technique of folding the full sheet to the subdivisions required.

In regard to this, expert advice of the binding department should be obtained in advance whenever called for. Folios, Quartos, Octavos, Sixteens, Thirty-twos, sixty-fours are known as regular sizes because they double their numbers in each fold, but twelves, eighteens, twenty-

fours, thirty-sixes and similar subdivisions are irregular sizes.

## TERMINOLOGY

Formes may be imposed either as sheet or half-sheet work. The term 'sheet work' indicates that the pages in a section are imposed in two separate formes known as 'inner' and 'outer' formes.

One side of the paper is first printed from one forme and the reverse is printed from the second forme, so that with the printing of both sides a complete copy of the Section may be obtained. The outer forme always contains the first and last pages of a sheet or section, while the inner forme consists of the second and inside pages of a folded sheet.

In Half-Sheet work one side of the paper is printed from a forme. When the run is complete, the printed sheets are turned and the white side is again printed from the same forme. After printing, the printed sheets are cut in halves and two copies of the same section are obtained.

A quarto size in a sheet work will contain eight pages in a sheet in a manner so as to appear four pages in the outer forme and four pages in the inner forme. Similarly an octavo work will contain sixteen pages in a sheet, eight pages in each outer and inner forme. If pages are correctly imposed, each pair of folios added together ordinarily totals one more than the number of pages in the forme.

In imposing a forme, pages appearing in a section are arranged on the imposing stones so that they may appear in numerical order. After the chase has been placed over the 'matter' in correct position, furniture, foot sticks and side-sticks of the required sizes and specifications are inserted. Page cords are removed and the pages are closed up against the furniture.

The allocation of spacing materials is determined by accurate measurement through a sheet folded to the size of the job. If metal furniture is used, the measurement can be ascertained by calculating the spaces allowed for back, head, tail and fore-edge in terms of 'ems' and 'points'.

## TECHNICAL VOCABULARY

An impositor or Storeman should be fully acquainted with the terms

(Continued on page 18)

Grams: "PUNANIRMAN"  
Telephone: "3151"

**Premier Suppliers Ltd.,**  
105, N. S. C. Bose Road, MADRAS-1

### DISTRIBUTORS:

M/S. ORIENT PAPER MILLS LTD.  
M/S. SIRPUR PAPER MILLS LTD.

Most Varieties of Paper  
are available from stocks

ENQUIRIES SOLICITED

Other Offices: CALCUTTA (Head Office)  
BOMBAY  
DELHI

PRINTINDIA

# The Problems of Letterspacing

By  
MR. ALEXANDER LAWSON

The problems of introducing spaces between letters, either lower case or capitals are discussed in this article for the benefit of the Indian Printers

Although it is not difficult to explain some of the standard procedures of letterspacing, when we try to outline the reasons for introducing spaces between letters—either lower case or capitals—it is difficult to make a statement that will not be challenged by typographers.

In the matter of lower case composition, letterspacing is a doubtful procedure unless the job is being set under duress, and by that I mean, under conditions which make standard word-spacing difficult. These conditions could be listed as the setting of extremely narrow measures necessitated by run-arounds, trick composition, high speed operation on low-cost work, or simply an unusual run of bad luck on line-end breaks in jobs requiring strict adherence to copy.

At the upper end of the scale, where the typographer is graced with ample time, a generous budget, and perhaps some control of copy, it might be appropriate to recite the dogma, "No letterspacing of lower case!". Most typographers, however, find that in practical operations they must strike a happy medium between the excesses of the newspaper column and the requirements of the fine book.

Exponents of the "don't do it" school cite typographers efforts over some five centuries to fit the miniscule letter snugly alongside its partners in countless combinations. They decry the production man's

disregard of aesthetics in his attempt to standardize procedures and thereby keep down costs. There is room for both viewpoints in this diversified industry, the typographer being required only to exercise sound judgment in deciding when and where to depart from acceptable standards of composition.

## RULE FOR LETTERSPACING

To provide specific information to the apprentice, a rule might be formulated that letterspacing is employed when it is necessary to word-space more than an en quad in order to justify a line. In keyboarding, the operator must judge what constitutes that particular space. Generally, in type sizes upto 14 point, it is unnecessary to space lower-case optically. Instead, we simply resort to placing spaces between all of the letters of enough words to justify the line. Care must be exercised to see that a word is not partially spaced. The actual spaces used will vary with the line, but a copper or half-point card should be sufficient. The most objectionable practice consists of using a spaceband on a slug-casting machine, allowing the wedge to do the work.

Adding space between letters proportionately reduces, to the reader's eye, the word-spacing in the line. Should this space be of standard thickness (equivalent to a three em space) or even less, the words have a tendency to run together, becoming unintelligible to the

reader. Variations are introduced by using condensed type in which an en quad would be too wide for a word-space, and in extended or bold face, allowing a normal wider space upto two-thirds of the em.

## NO SCIENTIFIC FORMULA

The necessity to letterspace is reduced as the measure widens. With 10—to 12—point type sizes, the ratio of letterspaced lines declines sharply at a line length of approximately 20 picas. A table could probably be constructed to indicate, percentagewise, the number of letterspaced lines occurring at various pica measures, but the findings would be of little practical value because copy can vary from job to job. Good spacing is controlled by the frequency of word breaks occurring in ordinary composition. No scientific formula can be applied with any degree of success. The operator must use his own judgment.

Very few of the principles which apply to letterspacing of lower case can be carried over to the spacing of caps. Here, the typographer's only problem is to make the line of capitals appear optically correct to the reader. No one argues with the importance of this arrangement, particularly in display composition.

Because of our reading habits, caps are always difficult to read. In addition, we have the problem of placing in juxtaposition a number of unrelated shapes in such a manner that they will be smoothly

interpreted in their entirety. Otherwise, they will seem to break into little groups and will slow down reading speed. Although our modern capital alphabet has remained relatively unchanged for some 2,000 years, we have become so familiar with the lower case form that reading of caps in anything but "short takes" is now a laborious procedure for us.

#### ALL CAPS DIFFICULT TO READ

Despite the fact that capital letters have a beauty far surpassing that of the lower case letters, we are unable to assimilate them in the mass.

In letterspacing of lower case, the compositor is concerned primarily with justification, while in handling caps the problem is one of optics. The individuality of the various capital letters interferes with their blending into a readable group. Few words set in caps do not require some optical correction.

In recognizing this fact, most printers make some attempt to letterspace caps for reasons other than merely stretching a display line, but the careful printer applies this consideration to nearly all composition in capitals, with the possible exception of text matter. Without any optical correction, a word in caps will tend to divide itself into little groups separated by spaces of varying widths, thus slowing down the reader's recognition of the word. This factor should be a key to determining how much space must be added or taken out. No definite rules can be followed. The compositor must be responsible for adjusting bad gaps of space.

However, the typesetter does have at his command several techniques for producing the desired result, depending upon the requirements of

the job. If there are no bad combinations of characters, such as AV or TA, space might only be increased between "tight" combinations to compose a satisfactory word or line quickly. If there is a poor arrangement of letters, any corrective procedure must be governed by whether or not the measure will allow fairly wide spacing, and by the kind of type used.

In most instances, notching of letters must be used to achieve a closer fit. Notching can be done on a circular saw without much chance of damaging the letters. The plant equipped with a type-mortising machine can perform this operation with ease. A minor disadvantage to notching may be that an individual character cannot be used again in a different combination of letters.

#### MUST BE SHAVED AT ANGLE

Because small sizes of type do not lend themselves to notching, they must be shaved at an angle in a hand mitring machine. This practice is difficult to handle in the line. Spacing out small sizes is easier because the optical fitting can be more readily accomplished with copper or brass spaces. With display types that are used frequently, it might save time and energy to select several of each of the characters—A, T, V, W, Y, and possibly F, L, and R—and undercut them on the saw for use only when needed. These letters can be stored in a separate compartment in the case. However, this practice is feasible only when a specific job calls for the use of a handset type in quantity, as in the imprinting of certificates or diplomas.

With this method a single undercut letter can be utilized in a triple combination, such as AWA or ATA where the only sawed letter is the one in the centre. Undercutting

the tail of the R allows tighter fitting of such combinations as RO and RU.

An ever-present danger in notching or undercutting type is overcorrecting the fitting, creating a combination that is as bad as the original. This mistake can be observed frequently in cap composition, even when the rest of the line has been carefully fitted. The final decision lies with the typographer, who must constantly refine his sense of proportion.

Through the years, many treatises have been written on this subject, both for and by artists and printers alike, some of them practical and informative, others introducing theories of proportion and the application of mathematics. The apprentice who wishes to acquire the knack of proper spacing of capitals must read everything written on the matter, but most important of all he must examine the work produced by real craftsmen so that he can develop mature judgment and understanding.

(Courtesy: The Inland Printer)

Telegram : JAIPKPSO Telephone : 233K

**JAI DAYAL KAPUR**  
PAPER MERCHANTS

DISTRIBUTORS FOR SOUTH INDIA :

**BALLARPUR**  
**PAPER & STRAW BOARD MILLS LTD.**  
No. 2 Anderson St., G. T. Madras

HEAD OFFICE : BOMBAY BRANCHES : DELHI, LUCKNOW & MADRAS

DISTRIBUTORS :  
**SHREE GOPAL PAPER MILLS**  
at Bombay, Delhi and Lucknow

PRINTINDIA

## From Our London Correspondent

F. & D. BROWNLEE

The majority of printers to-day realise the advantages to be obtained by using mechanical quoins in place of the old wooden quoins and sidesticks. Mechanical quoins, however, as with most other things, have their disadvantages, including the possibility of a serious distorting effect on steel bars and chases.

The house magazine of Hawthorn & Baker Ltd., "The Cornerstone", gives some good advice on the correct usage of mechanical quoins. This says that providing suitable spacing material is used, and other elements are accurate, a forme can be relied upon to lift with surprisingly light quoin pressure, but the chase must be adequate to resist even this pressure. Almost every forme will have a degree of bow, but excessive bow can be avoided and for precision work it is most important that it should be, to allow correct adjustment of the forme before it is sent to press and avoid time-wasting readjustment on the press.

Because a chase is made of steel this does not mean that chase deflection can be avoided, but it can be lessened. The article states that while the resistance to bending varies proportionately according to the height, it varies as the cube in relation to its width. A considerable loss in strength is caused by only a small reduction in width, and for this reason chase width should not be sacrificed to allow increased printing area. Nobody really knows the precise pressure required in a forme of mixed elements to ensure that it will "lift" as it varies from forme to forme with different components, but practical experiments on a forme of uniform

elements revealed that 30 lbs. per inch distributed uniformly along the length of the chase bars was sufficient. Spacing material which varies in width from one part to another means that undue pressure has to be applied to secure a lock-up which will allow the forme to be lifted. The pressure has to accommodate the narrower dimensions, meaning excess pressure on the wider dimensions, so that inaccurate spacing material should be avoided.

In the field of colour printing interest attaches to the range of web fed machines constructed by Chambon Ltd., of London for multi-colour printing and waxing of wrappers and similar products.

The machine illustrated is equipped for printing in four colours, that is two dry off-set and two letterpress, together with a double faced waxing appliance. After printing, the web travels through the latter, being totally immersed in the wax. The amount of wax deposited is adjustable and the glazing is effected by two chromium-plated water-cooled cylinders. Following the waxing, the web is accurately slit to width and rewound into firm reels on a special rewin-

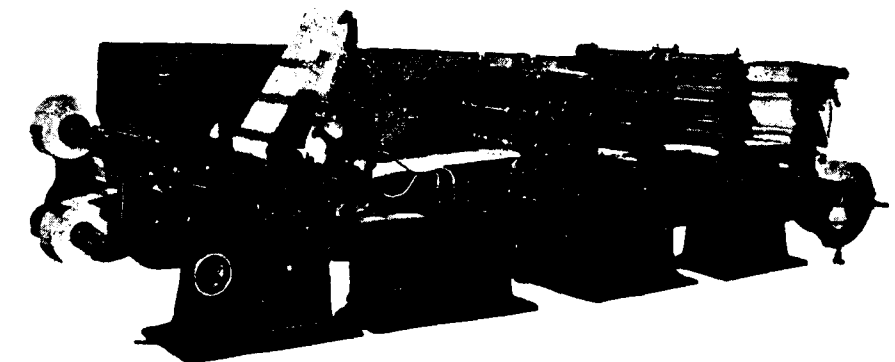
ding appliance. All the various processes are carried out in one operation from the reel, so that the machine occupies very little space and consumes a minimum of power; there is also available an interchangeable sheeting appliance.

Normally the machines print from chromium-faced steel or phosphor bronze engravings, with the great advantage that the life of these is prodigious, although they can also print from rubber stereotypes. Machines of this type are of course principally intended for large-scale production, and are not suitable for jobbing work.

A recent development by a Bristol firm is a rotary perfecting press and folder, intended mainly for the economical production of paper-covered books, leaflets, catalogues, and publicity material of various kinds.

The presses and folders can be supplied for producing either fixed size or variable-size books, and the multi-size folder is so arranged that both open and closed head sections can be produced. It is stated also that the variable-size folder can be

(Continued on page 16)



Web fed machine for printing in four colours, two dry offset and two letterpress

# GREETINGS TO PRINTINDIA FROM HOME & ABROAD

".....well printed in several colours, "PRINTINDIA" is a tribute to India's Growing Printing Industry."

— *Printing World, London.*

\* \* \*

Best wishes from far away please. Long may the magazine prosper. Will be seeing you soon.

GRAPHICUS

\* \* \*

The starting of "PRINTINDIA" about an year ago was a landmark in the history of the printing industry of this country. I clearly remember the day when your learned editor Mr. Temporau discussed with me about launching a monthly magazine for printers. Mr. Rau had great enthusiasm about its utility and its existence for a year has proved this beyond doubt.

I am sure that the "PRINTINDIA" in due course of time will rank among the few magazines connected with trade in this country and abroad.



SRI J. P. JAIN,  
Madras.

It gives me great pleasure to wish "PRINTINDIA" a better and brighter future on its first anniversary. I believe this Magazine has rendered its service to the printing trade in all its aspects and will continue in doing so to further the interests of Printing Trade in this country.

I take this opportunity to thank its sponsors in introducing this valuable and informative organ which has indeed done a lot of good to the printing industry.

N. K. GOSSAIN.  
*Gossain & Co., Calcutta.*

\* \* \*

On the eve of the first birthday of your magazine "PRINTINDIA" I would like to wish you and your Publication ever growing success for the future.



JOHN D. BARTON.

All my good wishes to the "PRINTINDIA" on its First Anniversary. May it live a long, healthy and prosperous life and serve nobly the Art Preservative of All Arts.

S. N. GUHA RAY,  
*Hony. General Secretary,*  
All India Federation of Master Printers.

I am glad to learn that "PRINTINDIA" has completed the first year of its existence and that you propose to bring out a special birthday number. I offer you felicitations and best wishes for the future.



K. SRINIVASAN,  
*Managing Editor, The Hindu.*

\* \* \*

On the occasion of your first Anniversary, I send you greetings and good wishes for a brighter future. Surmounting all the obstacles and hurdles that lie in the path of any new venture, "PRINTINDIA" has in this short span of time taken vast strides. It can now justly claim to be one of the leading periodicals serving the printing industry in India.

The success of it can be measured by its growing popularity among the printers not only for its informative but for its technical as well as educative values. The success of this paper is to great extent due to the untiring efforts of its Managing

Editor, Mr. Temporau and we hope he will continue to serve the printers through this paper in years to follow, for the betterment and advancement of printing in India.

I wish all the best and good luck to "PRINTINDIA."



S. BHANDARI,  
*Managing Director.*

Indo-European Machinery Co., Ltd.  
DELHI-BOMBAY-CALCUTTA-MADRAS

\* \* \*

I am very glad to learn that you will be celebrating your birthday in the coming month.

Concerted effort is needed from all sides to put the printing industry on a modern and sound level in India comparable in all respects to the achievements of the Western Countries. It is therefore a great satisfaction that you, as a champion of this great cause, are completing a year's march. May He guide you in the task lying ahead also so that

you may carry on with the work with the same zeal and enthusiasm.

S. S. RAMAMURTHY,  
Printing Machinery Section,  
East Asiatic Co. Ltd. Madras.

\* \* \*

I am very glad to know that you are bringing out a special birthday number in November. You have completed one year of very useful existence and the progress during your first year of publication is really praiseworthy. I am sure if such progress is maintained, "PRINTINDIA" will become a household name with everyone connected with the Printing Industry in India. I wish you all success.



N. L. CONTRACTOR,  
*Managing Director.*

Rainbow Ink & Varnish Mfg., Co. Ltd.,  
BOMBAY.

We are grateful to all our patrons, well-wishers and readers who sent us inspiring messages on this birthday occasion.

—Publishers.

Printers rely very largely on technical journals for information on the latest developments and improvements in the trade, and I would like to congratulate "PRINTINDIA" on the very useful work it is doing in this direction. The first year of publication has, I believe, been a most successful one, and I would like to wish "PRINTINDIA" every good fortune in the future, no matter in what field of the craft it may venture.

DR. G. L. RIDDELL, F. R. I. C.  
*Director of Research,*

The Printing, Packaging and Allied Trades  
Research Association.

\* \* \*

Trade Magazines are few in India though the need for them is more than at any time ever before. I am glad that "PRINTINDIA" has completed one year of publication. I wish it all success.



J. C. JAIN,  
*General Manager.*

The Times of India & Allied Publications.

(Further messages  
on page 24)

## PRINTINDIA COMPLETES ONE YEAR OF SERVICE TO PRINTING & ALLIED INDUSTRIES

## From Our London Correspondent

(Continued from page 13)

attached to existing photogravure or rubber-plate presses.

Rubber or other flexible printing plates are used on the press, and a special feature of the design is that the change-over from one set of printing plates to another can be accomplished in the minimum time. As a semi-heat-set ink is employed, which does not dry on the printing plates, the wash-up time is also reduced considerably, so that it is possible to operate the machine for the maximum period without stopping.

The inking arrangements are such that the ink-rolls are completely refreshed at each revolution, the pressure between the ink-rolls being positively controlled and dial gauges provided which enable the operator to reset to a pre-determined position after stopping the press at the end of a run.

Interesting information on paper surfaces is given in a recent issue of "Paper Making and Paper Selling". The degree of surface of a paper has been defined as the amount of gloss present, though the surface of antique papers may actually be rough. The first step towards a smooth surface is the satin-finished antique, which is actually a feather-weight paper lightly rolled, or calendered. A slightly smoother surface is given to the mill-finished printing, which possesses a low smooth finish. These three papers are particularly suitable for all letterpress printing, the satin antique being occasionally used for illustration work.

A mill-finished printing sometimes receives an extra rolling or "high mill finish", a surface that is hardly distinguishable from the

genuine super-calendered finish. Next is the actual super-calendered printing paper where a fairly high degree of surface is obtained by the calender rolls. Finally there is imitation art paper, which is slightly damped, or water finished, before being calendered, this type of surface being adequate for ordinary illustration work.

Next comes the coated art paper and the addition of the coating should obliterate the wire and felt marks of the papermaking machine, often noticeable on the underside of other printing papers. Art papers have either a matt finish (moderately rough surface) or a highly glazed finish, the latter being particularly suitable for all work which has to be executed in several colours and where it is desired that every detail of the illustration should be clearly defined.

In addition to these surfaces, there are the friction glazed finish and the plate glazed finish, processes by which a high finished surface is obtained through pressure between zinc plates.

Writing papers are given various surfaces, from parchment (so called), which inclines towards roughness, to the vellum, which is particularly smooth. Drawing paper finishes divide into four kinds, double rough, rough, unglazed, and hot pressed (glazed by pressure between plates).

Even with ordinary letterpress printings the quality of the paper surface plays an important part. A very thin printing will naturally need to have its two surfaces practically identical, or one side will require a heavier impression than the other if alternate black and grey results are to be avoided. Highly glazed papers have a tendency to resist the prin-

ting; also, when printing, the ink is pushed towards the edge of the type and a thinning of the ink in the broad lines of the type operates.

Esparto papers, generally speaking, have much to commend them as regards surface. Invariably these are even and "kindly" and have a tendency to be non-resisting to the printing process, so that there is less wear and tear to the blocks and plates used.

Developments in paper folding machines include a miniature desktop machine capable of giving up to twelve folds. Three models are available, two of which are hand-operated and take sheets up to foolscap and 13½" wide, and an electrically driven machine taking sheets up to foolscap size and up to three sheets stapled together.

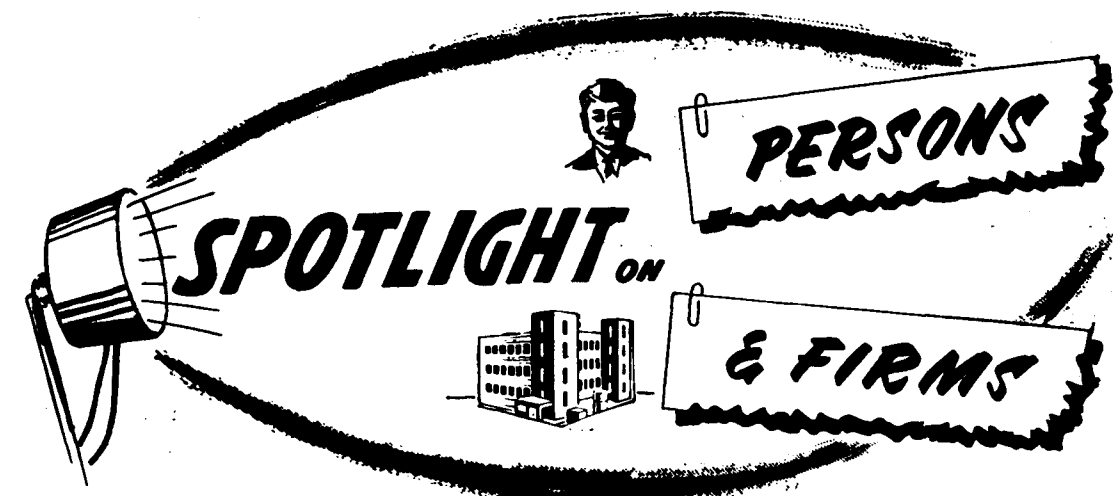
Another invention relates to arrangements in which a partially folded paper sheet is slit during its progression through a folder so as to form two or more separate sections which are subsequently to constitute separate signatures. A paper sheet which has been initially folded and subsequently cut into two or more separate sections by slitting along a line or lines at right angles to the last folded edges is folded by turning each of the separated sheet sections through 90° and then subjecting each of them to a further folding operation to produce a fold parallel to the cut edge formed at the previous slitting operation, so that each of the sections is given a bolt-ended formation.

Please refer to

**PRINTINDIA**

While Writing to Advertisers

PRINTINDIA



One of the distinguished printing technicians that recently visited Madras in the month of October is Mr W. G. Dixon, Technical Representative of M. S. R. W. Crabtree & Sons Ltd., Leeds and London. It is unfortunate that his visit to the city was not publicised enough to enable the Offset printers of the locality to contact him and take advantage of his guidance. During the course of the year many eminent people from the Graphic Arts Industries will be landing in India visiting the key cities and the Indian printing industry should always take advantage of such visits to enhance its knowledge in the field of printing.

Our Staff Correspondent was fortunate to have an interview with Mr. Dixon at Connemara Hotel and they discussed the printing industry in this country for over some hours. Born and educated in London, Mr. Dixon underwent training for over 7 years in the Lithographic Department of M. S. Eyre & Spottiswoode Ltd., London. After the training he started working for George Mann Ltd., when he came to India in 1928 for erecting and demonstrating Offset machines. He erected some offsets at M. S. Calcutta Fine Art Cottage, now known all over the country as the Eagle

Lithographing Co., Ltd. In course of time, Mr. Dixon toured South America for over 4 years during which period he erected one eight colour reeled Offset Press at M. S. Guillerno Kraft Ltd., at Buenosaires for specially printing the Spanish version of the well-known world monthly magazine "THE READERS DIGEST." Later on, he joined the British Ministry and Information Department as Production Manager and while in

this Office he travelled a great deal through China and the Far Eastern countries erecting Offset machines.

Mr. Dixon is a very well-informed technician in the printing industry. He is well versed in almost all branches of the Graphic arts industries. He has a great interest in the growth of the Indian printing industry and he is ever ready to solve the problems that may be sent to him by the Indian Printers with sympathy and understanding.



Mr. Dixon feels that there is a great future for the PRINTINDIA Magazine, a copy of which he is holding in his hand. Our Business Manager Mr. Murthy is seen on the right

## Imposition in Letterpress Printing

(Continued from page 10)

'work and turn', 'Tumbler forme', 'work and twist', 'portrait', 'Landscape', 'signature' and 'collating marks' as summarised below:—

'WORK AND TURN' is the method of printing a forme which has been imposed for half sheet work. After printing the first side, the second long side of the paper is fed to the gripper for the second impression. The paper is turned but the same long edge is fed twice.

IN 'TUMBLER FORME', after one side has been printed, the printed sheets are turned in a manner so that the opposite long edge is fed to the machine grippers. This method of presenting both long

edges of paper to the gripper is also known as 'WORK AND TUMBLE'.

'WORK AND TWIST' method is adopted when a forme is dressed up with both vertical and horizontal rules. In this case, jobs are composed in two sections—one with horizontal rules and the other with down rules and locked up in one chase in a manner that the head of one is away from the other. After the first working in the machine, the printed sheet is only turned round so as to present the opposite edges to the gripper. The horizontal rule section is overprinted by the down rules and two finished copies are obtained from each sheet after cutting.

The ordinary upright pages are termed 'PORTRAIT' where the width is less than the depth of the page. A broad or oblong page is also technically termed as 'LANDSCAPE'.

'SIGNATURES' are placed at the gripper edge and to help the binders in gathering and collating the sections. Letters in small capital or foot of each section to enable the machine-minders to determine any other letters are placed according to the 'STYLE OF THE HOUSE'. The letters J. V. and W are not usually used in signature. Sizes of type used for signature should usually be one or two sizes smaller than that of the text matter. Signatures are generally placed at the foot of first page of each section—two ems below the last line of the Page.

'COLLATING MARKS' are inserted on the spine. One em or two ems rule appear at regular intervals in relation to the signatures. This procedure enables a binder to detect omission of any section, if any, after gathering.

(Courtesy: Amrita Bazaar Patrika)



## POLYGRAPH NEWS

It is announced by Messrs Indo-European Machinery Co., Ltd., Madras that their Principals: Messrs. Deutsche Waren Vertriebsgesellschaft mb H., Polygraph-Export, Berlin would participate in the forthcoming Printers Exhibition in Madras opening on 6th February, 1955. POLYGRAPH is the world's largest single unit for manufacture of Graphic Machinery. The exhibits would include Two-revolution and Stop Cylinder Presses, Automatic Cylinder Presses "MERCEDES" in various sizes, Automatic Platen Press, Book and Pamphlet Stitchers, Paper Cutters, Paper Folding Machines, Book Sewing Machines and various other interesting items to the Graphic Trade. This would be the largest single show of Graphic Machinery by single organisation ever held in this country. A 12-men delegation would arrive in India well in advance of the fair, which would include technical and commercial experts. The POLYGRAPH also participated in the last Paris Graphic Fair and some of the interesting photographs including a general view of the hall are published separately.

## NEW PAPER MILLS IN U.S.A.

The Bowaters Southern Paper Corporation at Calhoun in Tennessee, is one of the biggest newsprint factories recently started in America. This project in the United

States of America has a large investment of British Capital. The mills were installed at a total cost of sixty million dollars and are operated by Bowaters Southern Paper Corporation, a wholly owned subsidiary of the Bowater Paper Corporation, Ltd., of London. The parent Corporation in London subscribed 25% of the cost. The mills have an initial capacity of 130,000 tons of newsprint and 55,000 tons of kraft pulp annually making them the largest of the three newsprint mills in the southern United States.

## NEW PLASTIC FILM FOR LAMINATION

May & Baker Ltd., of Dagenham, Essex, announce the introduction of a new transparent acetate film for lamination to paper, paperboard, wood and metal. Known as "Acelon" L-10 A. C., it has a heat-sealing adhesive coating on one side. The base film before coating is normally 2/1000 in. 3/1000 in. or 5/1000 in. thick and the adhesive coating is approximately 0.5/1000 in. thick.

"Acelon" L-10 A. C., is supplied in sheets measuring 20 x 36 ins. interleaved with waxed paper, or to order in rolls 36 ins. wide, by M. & B. Plastics Ltd., 45-47, Wigmore Street, London, W.1.

It is said that at temperatures of 100 to 125 C. (212 to 257 F.) and

pressures of 5 lb. to 100 lb. per square inch, the film will adhere strongly to wood, aluminium, paperboard, paper and printed matter including heavily inked litho work.

The surface which it is desired to cover with "Acelon" L-10 A. C., should be clean and dry. To prevent the "curling" of thin board or unsupported paper, both sides should be covered with "Acelon."

Blocking presses are very suitable but any general purpose hydraulic or toggle press with heated platens may be used. When covering rigid or thin materials "cushioning" should be provided to ensure a uniform distribution of pressure over the work. Suitable cushioning materials are Printer's Blanket, rubber insertion or several thicknesses of blotting paper.

## WEDDING AT TIRUPATI

Sri N. Narayan Rao, Senior Assistant Director, Government Printing, Hyderabad Deccan is married on 13th October 1954 at Tirupati to Srimathi Sreekumari, daughter of Sri C. Anna Rao, Executive Officer, Tirupati Devasathanam. Many distinguished persons from the printing and allied industries attended the marriage function at Tirupati. On 17th October a special "at home" was given at Nizam Club, Hyderabad.

# Service to Printers HOPCO



## RUBBER ROLLERS

Largely in use all over India

- ◆ Famous for attractive printing, long lasting and oil & heat resisting.
- ◆ Ready stocks available for all Chandler & Price machines.
- ◆ For all Cylinder, Rotary, Litho-Offset & Varnishing machines also, supplies will be made to order.

FOR PARTICULARS WRITE TO:

**HOLT PRELLER & Co.**  
P. O. B. 1014 : : BOMBAY-1

Grams: "HOPCO" Bombay-1

# HOTEL OCEANIC

SANTHOME :: MADRAS - 28

- The newest, most up-to-date Hotel
- Every Room overlooking the Ocean
- Air-conditioning, Frigidaires, Radios and Telephones
- Large Airy Public Rooms & Roof Garden
- Excellent Cuisine, Service and cleanliness
- Catering for large parties undertaken
- Under European Management

Grams :  
"APPICHI"



Phone :  
85791

## Machinery for Printers and Binders

- ◆ TREADLE PERFORATORS
- ◆ PAPER CUTTING MACHINES
- ◆ MITREING MACHINES
- ◆ LEAD AND RULE CUTTERS

Large Number of Machines in daily use all over  
INDIA, BURMA & CEYLON Etc.



Grams : PRINTYPE

Manufactured by :

Phone : 3849

**THE MADRAS TYPE FOUNDRY**

(PRINTERS' PROVIDERS)

38, JONES STREET

::

MADRAS-1

## Colour & Colour Printing

(Continued from page 5)

make orange. But we would not use a bluish red and greenish yellow to produce orange colour. The best would be a light red and lemon yellow or you may have to match a Persian yellow to make orange. To obtain a tint a transparent medium is mixed with the basic colour. When mixing tints, white is sometimes used instead of the transparent medium. Its use, however may cause machining problems when printing on coated papers. To avoid these, transparent medium should be used whenever practicable. The tint should be mixed so that it appears a little darker than the actual copy. This will enable a light film of ink to be run and lessen the possibility of mottle, set-off and sticking.

The warmth of a colour is decided by the amount of red it contains. The greater the proportion of red the warmer the colour. The coldness of colour is usually decided by the amount of blue it contains. All basic colours tend to be either warm or cold. A yellow for example may have a reddish or perhaps a greenish tendency, such as is possessed by the process yellow. A blue may be warm leaning towards a violet or cold with a tendency towards green as is evident in process blue. The red may be similar to a process red which has a leaning towards the violet or a warm red towards orange. The warm colours—red, orange and yellow—appear to advance toward the eye, while the cool colours—green, blue and violet—seem to recede. To-day we are still prone to rely on our individual judgment when determining colour relationships although introduction in recent years of colour charts and

the various ways in which they present colours and colour combinations, is cultivating a more widespread appreciation of the possibilities of studying colour in a scientific manner. To study and apply colour scientifically does not mean that 'colour sense' now becomes an absolute human attribute. Science takes the place of guesswork, but no amount of it can ever become a creative force. Its role is that of providing accurate data for use as a basis to start from and as a check, not only of the final scheme, but of each stage in its evolution. No one colour on its own can have any relative value. A favourite colour must necessarily imply enjoyment of it in relation to some other colour or colours. It is in determining colour combinations, therefore that scientific principles begin to apply and it is at this point that an understanding of what is meant by complementary colours becomes essential. The most commonly known colour wheels and circles comprise a chosen number of colours arranged in a spectral order around the perimeter. The simplest of these wheels

consists of six colours ; the three reflecting primaries, red, yellow and blue and between each pair and compounded from them, the appropriate secondaries, orange, green and purple. From this and the more complex arrangements, which merely provide a greater variety of hues, the diagrammatically opposed colours are presumed to be complementary to each other. We thus have red appearing as the complementary to green, yellow to purple and blue to orange. A complementary colour, if it is to fulfil its name, should be that colour which provides the most optically pleasing foil to its partner. If anything like such a definition is to be accepted then red and green, each of the brilliant intensity revealed by the wheel, can obviously not be considered as complementary to each other. Yellow and purple, on the other hand, do make a satisfactory visual partnership. If by this token, one is left to pick and choose which are and which are not satisfactory combinations, the colour circle as we know it is of little practical value.

The practical system does not accept the spectral circle as a basis for determining colour complement-

**In the service of the  
Printers for many years Now !**

**At the most competitive rates**

FOR

C & P RUBBER ROLLERS,  
SPARE PARTS, BRASS RULES,  
STITCHING, PERFORATING,  
CUTTING MACHINES  
TREADLES, ETC. AND  
EVERYTHING IN THE  
PRINTING LINE...

Please contact

**GUNVANTRAY & COMPANY**

KHADIA CHAR RASTA  
NAVA DARWAJA ROAD  
AHMEDABAD-1



Mr. Nevbert Managing Director  
of DWV Polygraph Export unit  
with Sri S. Bhandari

taries but makes use of the 'after image' retained by the eye when retina has been saturated. The principle is made clear by two or three selected patches of colour, well separated from each other against a pale neutral ground. By staring for ten seconds or so at any one of these colours and then switching the gaze to a part of the neutral ground, the 'after image' reveals itself. A second patch of colour, which matches the 'after image' in hue and tone is placed near by and completely absorbs the 'after image' when the eye is brought to rest upon it. It will be noticed that complementaries derived precisely in this way from the unconscious reaction of a colour saturated retina, do not depart largely in hue from the complementaries obtained diagrammatically by the wheel system. They do however, exhibit a difference in tone whose exact determination is so much more readily accomplished by nature's own instrument the eye, than by any other means, since it calls for no conscious action on the part of the brain. This provides a scientific basis for practical application and as the dictionary definition says 'supplies a deficiency.'

Visibility is often a vital point in printing, particularly where publicity and advertising are concerned, for on it the success—or otherwise—of the printed matter often depends. Juxtaposition is one of the most important aspects to consider in connection with colour visibility, for everyone is aware of one certain law—that any colour looks lighter on a dark ground, and darker on a light back ground. A bright red, orange, or magenta, on a grey or black back-ground offers a high degree of visibility. Black on white does not represent the highest visibility in the colour world for strangely enough, there are five colour combinations of higher visibility than this. The highest

visibility of colour combinations in order are: (1) black on yellow (2) green on white (3) red on white (4) blue on white (5) white on blue (6) black on white (7) yellow on black (8) white on red (9) white on green (10) white on black (11) red on yellow (12) red on green. By experimentation we will find that colour visibility changes according to the colour of paper or ground on which it is placed or printed. If you take a definite bluish-green you will find that on a blue surround it looks for greener than it does on a green ground. With the latter it has a decidedly blue appearance. Thus, the colour of a paper or printed ground can appear to change the colour of goods or materials. This factor is one of great importance to printers. This phenomenon, which we know as 'simultaneous contrast', can upset our colour visibility, for, by it, a small white patch on a colour ground appears to have a colour

complementary to that ground. For example, a small patch of white on a blue ground will appear somewhat pink. A very similar effect is seen when two complementary colours are placed close together, and here we get apparent heightened intensity. A close relation of simultaneous contrast is successive contrast. We experience this if we look at one bright colour for a considerable time until the eye is fatigued and then transfer our gaze to white paper. For example, the paper will appear strong peacock blue in colour if the first colour gazed at was bright red. Red is possibly the best colour for this experiment, for the nerve endings of the eye become more quickly fatigued when staring at red, since it agitates them far quicker than any other colour. Little use appears to have been made of this successive contrast and colour visibility changing, it is well worth investigating by progressive printers.

## Problems Solved

### PRINTERS!

For your requirements of rubber belting, rubber hoses, ball bearings and roller bearings for all types of Printing Machinery

Phone :  
8 413 7

### MOTORISTS!

For all quality spares for Morris, Hindustan, Wolseley, Standard Vanguard, Hillman Minx & Humber Cars and also for Morris Commercial, Dodge, Commer & International Diesel & Petrol Trucks

### CONTACT

## RELIANCE TRADING COMPANY

(RELIABLE HOUSE FOR SPARES & ACCESSORIES AUTOMOBILES & HARDWARES)

3 GENERAL PATTERS ROAD :: :: MADRAS - 2

PRINTINDIA



Q. 1. We print labels very nicely but the customer complains they smudge when he puts them on his tin. When we send them they are quite dry. What should we do?

A. Since you have not sent me a specimen print it is difficult to give a correct answer to you in these columns. It would seem that the labellers your customer employs do not keep the gum they use off their fingers and probably they are smudging the work with gummy fingers which will pick up the colour and smudge it over the label. If this is not so I suggest you to consult your ink maker as the ink you use may not be entirely suitable.

Q. 2. My tricolour work is sometimes not good although I used the best ink and paper always. The one enclosed herewith I do not find up to the mark, can you tell me why?

A. Your trouble seems to be a case of Registration being out. Tricolour blocks must be in perfect register or the whole colour effect is changed. Your bed plate is out of register slightly to the left of the sheet. This has caused mal-alignment of the tones and spoiled the colour effect you required. A note on the print states that you required a gold effect in the picture which you were unable to obtain. In this regard you should have mixed a deeper shade of yellow in the original tricolour yellow, a very small amount of a lemon or Mid-Chrome would have solved this problem.

Q. 3. I have printed my order on Bond Paper with ordinary ink purchased from a dealer in the market but cannot get good results. I am sending you a print. Can you advise me in this?

A. From the specimen you have sent to me it would appear that you have used the wrong type of ink for the paper. The ink appears to be a cheap grade or else mineral oil has

been mixed in it, since it is not drying properly. When printing on hard papers of which Bond Paper is one you must use a good quality letter press ink and if necessary add a drying compound. Also in order to get the depth of shade required you have tended to run too much ink with the result the work is smudging. In this respect a good quality concentrated ink would have made it possible to reduce the amount of ink run and thus obtain a better job all round.

Q. 4. The line blocks used are all new and the proofs are good but the results on the machine are poor, the print being streaked. (Part of a letter received the rest will be answered by post.)

A. From what you say and the selection of prints you have sent, it is evident that your form rollers have been cut, probably by brass rules used in previous jobs, and these will have to be recast. Also from the skid marks on the trailing edge of the blocks your cylinder appears to be over packed and the impression reduced on the impression cylinder itself. By over packing the cylinder and reducing the pressure on it to overcome the bump as the cylinder rides on to the form you have altered the speed ratio of the face of the cylinder with that of the bed, in other words you have increased the periphery of the cylinder over that set by the maker. Should this not be so I advise calling in a good machinery mechanic to examine your machine and adjust it properly.

Q. 5. The black ink is flying out off the machine in clouds of particles and making everything black. We are unable to stop this and we crave your advice. The machine is a flat bed at 3000 per hour.

A. Your problem seems to be Static Electricity. If you have your machine earthed I think the trouble will stop.

## Greetings to Printindia from Home & Abroad

(Continued from page 15)

Madras, as one of the leading centres of printing in India, took an enlightening step forward a year ago when "PRINTINDIA" was born, and the centre henceforward had a journal of its own devoted to print, one of its most important local industries.

In this far-flung country it is desirable that printing journals with a national outlook should, however, be produced in each major centre of the industry. This should lend to a spirit of emulation and so ensure that our trade literature will go on improving its standard. There can be no doubt that the trade can afford to maintain a fair number of journals, and it will do so if the standard of such journals is progressive.

Kubera are to be congratulated that within a year of limited issues it has already brought "PRINTINDIA" upto a standard that enables it to be classified among the printing journals of the world. That it has some way to go yet to equal the very high standard set by the best of these publications is realised but this does not seem beyond, eventually, the capabilities already observable in "PRINTINDIA."

H. STANHOPE,  
Manager, Eastern Area,  
The Monotype Corporation Ltd.



Mr. Nevbert talking to Indian Printers at Paris Graphic Arts Fair

My warmest greetings to "PRINTINDIA" on the occasion of the first birthday number and to Sri Temporau, the Managing Editor, my sincerest good wishes. I have no doubt that this technical magazine will go on from strength to strength in its usefulness and in its hold on the affections of all connected in Graphic Arts.

Those who are able to appreciate the care and skill requisite to render in the masterly decoration of the cover page of "PRINTINDIA" beautiful and accurate will readily admit that they are executed in a manner worthy of the high reputation of the Kubera Publications. Each number has a different design

and colouring and contains articles of general and specialized interests to buyers and users of printing. To carry out such an ideal requires determination and courage as well as taste and ingenuity.

I welcome the opportunity of associating myself with this first birthday number of the "PRINTINDIA" a monthly Magazine devoted to printing and allied industries and of expressing my sense of appreciation of the valuable service rendered in the cause of printing and allied trades.

V. K. SRIRAMULU,  
B.A., L.P.T., F.T.C. (Lond.)  
Head of Printing Department,  
Central Polytechnic, Madras.

## Announcement

For the convenience of Printers and other customers we have opened a show room on the ground floor of our building facing Stringer Street. We Stock good quality of Stationery like Envelopes, Files, Gum, Paste, Greeting cards, Visiting cards, Drawing instruments etc. We also stock Rainbow Printing Ink. Envelopes and Files manufactured to your requirements in any size and also Clothlined covers always available.

**M. G. SHAHANI & CO. (BOM) LTD.**

MANUFACTURERS OF SKYLITE ENVELOPES AND STATIONERIES

289, CHINA BAZAAR ROAD :: MADRAS-1 Phone : 2916

C. P. G. NAIR, Manager.

*The year's most sensational novel!*

# Goodbye to Sorrows and Tears

By  
TEMPORAU

"This interesting novel tells the story of Subha.....The author does not moralize about anything and is able to make a dispassionate appraisal of life's problems, indicating what one's attitude should be."

—THE SUNDAY STANDARD

"Here is a chunk of real life portrayed with sympathy and understanding.....The story moves with ease and offers pleasant reading.....Is nicely printed and got up in attractive style."

—INDIAN REVIEW

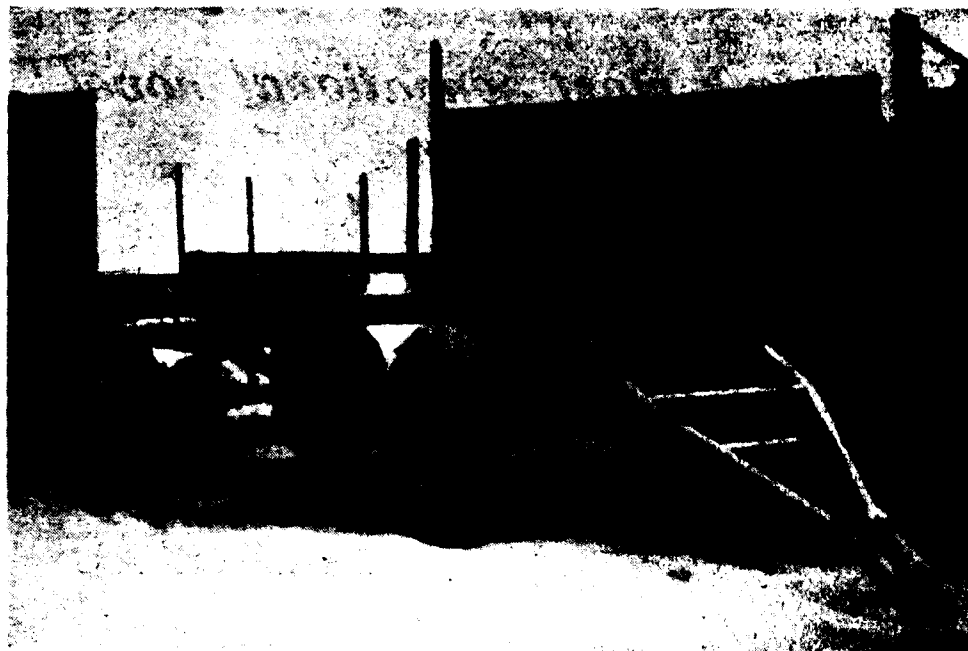
Price Rs. 3/-

Postage free

FOR COPIES PLEASE WRITE TO:

**KUBERA ENTERPRISES LIMITED**  
"KUBERA BUILDINGS"

21 SUNKURAMA CHETTY STREET :: :: MADRAS-1



ADJUSTABLE POLE-CARRIER MADE BY US FOR MECHELEC ENGINEERING CO., LTD.

*Builders of*  
**TRAILERS  
 PUSHCARTS  
 TROLLEYS ETC.**



**SARASWATHY TRAILERS COMPANY**

8, LORD GOVINDOSS NAGAR ROAD

MOUNT ROAD

::

MADRAS-2

**New Arrival in the Rotaprint Family!**

**Printers' Model**

***Rotaprint***

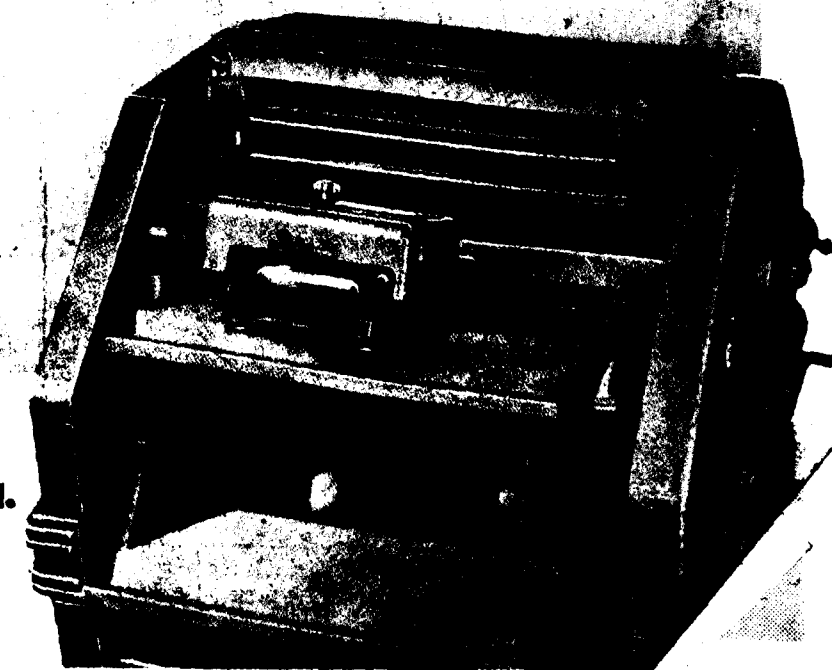
**R 20**

**SPECIFICATION**

**Net Weight:** Approximately 1,300 lb.  
**Floor Space:** 5' 1" x 3' 11" (Height 4' 5")  
**Paper Size:** Minimum 8 1/2" x 11 1/2"  
 Maximum 17 1/2" x 25 1/2"  
**Printing Area:** Maximum image size 17" x 23 1/2"  
 Plate 18 1/2" x 24"  
**Speed:** Up to a maximum of 4,500  
 impressions per hour.  
**Motor:** 1 h.p.

If desired for additional ink coverage, Rider  
 Roller attachment, including metal oscillator,  
 can be supplied.

**AN** Offset-litho printing machine of exception-  
 ally sturdy construction. The R.20 embodies all  
 the latest technical improvements to be found in  
 this type of machine, including fully automatic  
 suction stream feed from built-in feeder; fully auto-  
 matic inking and the patented "ROTAFOUNT"  
 damping—exclusive to Rotaprint machines. A  
 feature of this model is the plate adjustment  
 mechanism and pull side-lays. Other features  
 are micrometer pressure adjusters, chain delivery,  
 simplified handle operation, and the use of two  
 paper feed trays, enabling reloading of stack  
 whilst the machine is in operation. The capa-  
 bilities of this unit permit it to meet, in every  
 respect, the requirements of even the largest  
 concerns.



**SOLE AGENTS:**

Central, Western & Southern India:

**The Typewriter &  
 Office Appliances**

(INDIA) CO. LTD.

P. B. NO. 277

17, ARMENIAN STREET  
 MADRAS-1 (INDIA)

Northern & Eastern India:

**M/s. Adrema Ltd.**

P. B. NO. 2086

CALCUTTA-1

(INDIA)



NOVEMBER 1954



PRINTED  
WITH  
RAINBOW'S  
STANDARD  
TRI-COLOUR  
INKS

RAINBOW'S STANDARD TRI-COLOUR INKS BY KENNETH MFG. Co., Ltd

# Printindia

A MONTHLY SURVEY OF THE GRAPHIC ARTS INDUSTRIES

86



A *Kubera* PUBLICATION

1954

PRICE

9 Mangoe Lane  
Off Bentick St.  
CALCUTTA - 1

EDITORIAL

INDIAN PAPER MILLS

The All India Printers Conference at its 2nd session held in Calcutta passed a resolution as follows: "That the Conference draws the attention of the Government of India to the poor quality of the production of the various Papers and Board Mills in India in spite of the fact that the Industry has received and is receiving abundant Government and public patronage. This Conference requests the Government to set up an Expert Committee to review the entire production policy of the Mills and to devise ways and means for improving the quality of their products." Pursuant to this resolution, the Hony. General Secretary of the All India Federation of Master Printers wrote to the Under Secretary, Ministry of Commerce and Industry, Government of India, calling his attention to the above resolution and requesting him to set up an Expert Committee to enquire into the production policy of the Indian Paper Mills. But the result of all his correspondence with the Under Secretary to the Government of India, Ministry of Commerce and Industry, seems to have been utter frustration.

It is very well known that the Government of India and the State Governments are extending ample patronage to the Paper Mills in this country and yet it is unfortunate that the indigenous Paper Mills have not taken the necessary steps required to produce paper and boards of a high quality. The quality of printing is determined to a large extent by the quality of paper and boards utilised by the printer. Thousands of printers in this country are naturally interested in using the paper produced in India, but they find it impossible to harness the Indian paper because of the low quality and the irregularities in weight. As a result the Indian printers going in for quality work are forced to turn to foreign paper and boards. But importing foreign paper and boards is rather irksome and costly because of the high import tariff duties imposed by the Government of India on certain qualities of boards and further the import is rather limited. In the light of these considerations it is the bounden duty of the Government of India to investigate seriously into the paper mills industry and create measures conducive to producing better paper than what is turned out now by Indian Mills.

Sri S. N. Guha Ray says rightly in his letter to the Under Secretary to the Government of India, Sri V. C. Vijayaraghavan: "In the Board line the totally produced Box Board cannot be fed in an automatic printing machine. Our Bombay Association had on a previous occasion demonstrated to the Director of Industries, Bombay, the truth of this by taking him to a Bombay printshop. The Box Boards of Rohtas Industries Ltd., were given a trial in an original Heidelberg cylinder machine. The automatic feeder was simply unable to feed the Dalmia board into the machine for printing. This was mainly because of the uneven surface of the board. The Art Boards produced by this company are unsuitable for printing fine screen halftone blocks. We have occasionally seen specimens of fairly tolerable qualities of Box Boards and Art boards produced by this factory but they are available only as specimen sheets. They are never supplied in quantity or in reasonable time. We have never been able to explain why the mills cannot maintain this standard of sheets when supplied in bulk." We may also point out here that at a recent dinner held at Hotel Oceanic in honour of the printers of the city, a prominent printer of Madras spoke at great length condemning the quality of the paper produced in this country. He strongly complained that the paper produced in India is irregular in weight and

sheets taken from any packed ream vary in thickness and also in colour. It is not therefore surprising that the Calcutta Paper Traders Association and the Bombay Paper Traders Association should decry in one voice the various papers and boards manufactured by the Indian Paper Mills.

The printing industry constitutes one of the third largest industries in this country and it is the cardinal duty of the Indian Government to assist the growth of this major industry. But the printing industry cannot grow unless the paper industry is equally reorganised. In this context a revision of the policy of the Paper Mills is of paramount importance and it is upto the Government to take the necessary steps in this direction. It can be said with certainty that our present Indian Paper Mills can positively produce and offer to the country better paper and boards provided the Government renounces its apathetic attitude and tackle these problems at the appropriate Governmental level.

—TEMPORAU

PRINTINDIA

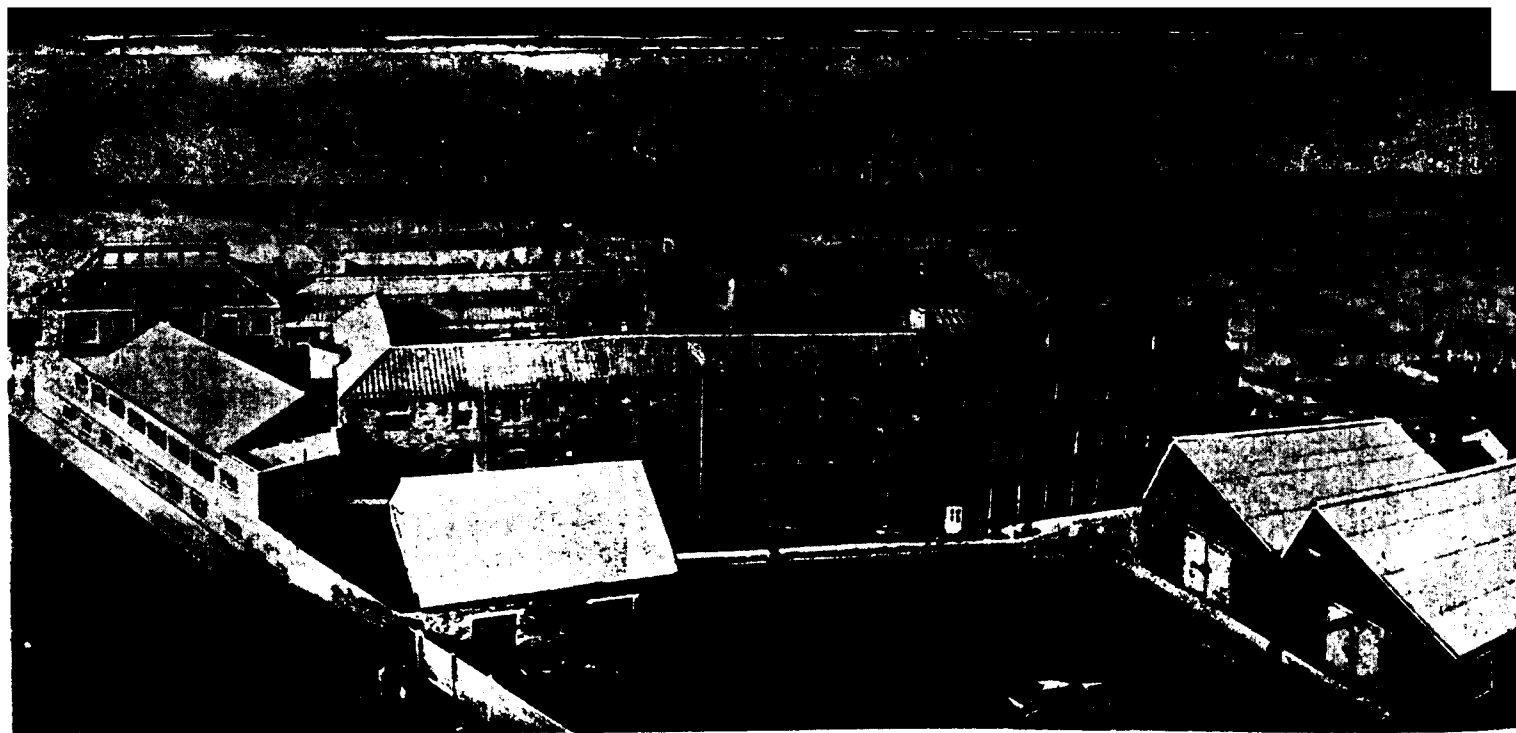
ADVERTISEMENT TARIFF

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

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

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

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



A view of the Foundry still on the same site in 1954

## THE RISE OF Stephenson, Blake & Co. Ltd.

### A Chapter in the Story of British Typefounding

The three young men who came together in Sheffield in July 1818 to form a typefounding partnership must have appeared rash to many of their friends. William Garnett, a silversmith and a clever mechanic, who had been assisting for some time in the shop of Bacon & Bower, a local firm of typefounders, was the only one who could claim some knowledge of the trade. John Stephenson had been brought up as a toolmaker for the fender trade, but was known as the "best filer in Sheffield." Together they had persuaded James Blake, an enterprising and respected file manufacturer, to support their venture with his capital.

Progress was slow at first, and prospects must have appeared dim. Tools and equipment had to be made laboriously by the two craftsmen, working in Garnett's workshop in Bridgehouses, and it might have taken years before a stock of

punches and matrices had been built up and a market found for the type, for Sheffield itself had its old established firm of typefounders, closely linked to the main publishers in the town, and other publishing centres were far away and not easily accessible.

This was the position in November 1818, when news came that William Caslon IV, bearer of one of the most honoured names in the trade, intended to sell his London type foundry. A fateful decision had to be made by James Blake. In order to buy a first class foundry like Caslon's he would have to sacrifice his interests in the established file trade, in which he and his family had prospered, for a trade of which little was known in Sheffield. He hastened to London, accompanied by Garnett. Together they took careful stock of the plant and its contents, and after some weeks of anxious calculation they

bought the whole for £2,100 and ordered its removal to Sheffield.

It was this purchase which set Blake, Garnett & Co., as the partnership was styled in its early years, on its feet. With it they acquired a series of successful founts, a number of skilled craftsmen and agencies in London and Dublin. The business was ready to supply a national market from the start.

In February 1819 casting began in Sheffield, and in April the first specimen book was issued—as yet largely a replica of Caslon's. By the end of 1820, 34,500 lbs of type had been sold. Although James Blake soon found that the sum realised from his file business was insufficient and had to mortgage his patrimony to obtain capital to grant the six months credit to customers then required in the trade, he had no occasion to regret his decision. The old customers remained; and with

the growing literacy of the new middle classes, the new tastes for novels, ladies' journals and newspapers, and the change from the more delicate founts of the 18th century to the ornate styles of the 19th, such as fat face Roman and Egyptian letters, there was a growing market in which the Sheffield skill of mixing metals and the craftsmanship implied in accurate finish could well hold its own. John Stephenson was a worthy representative of that Sheffield tradition, and in his own careful way, behind closed doors, he filed at his punches and devised delicate lathes and instruments of incredible accuracy to measure thicknesses and angles which compare well with the similar, though much more publicised, inventions of Maudslay and Bramah, evolved at much the same time. In the hardness of its metal, the Principal could declare in 1871, the firm had nothing to fear from any competitor. The excellence of its products was suitably rewarded with a gold medal at the Great Exhibition of 1851.

In addition to its reputation for accurate and careful finish, the firm soon acquired a name for the

enterprise with which it adopted continental "novelties" and "fancy types"—indeed, "jobbing" types remained its speciality throughout the nineteenth century. In the first eleven years of the partnership, however, comparatively little was added to the stock of founts, apart from renewals of Caslon's series. By the 1st January, 1827, £1,090 worth of punches and matrices has been added to the Caslon purchase, computed at £1,976.

The premises of the firm in those early years consisted of the original file shop and furnace of James Blake, situated at the back of a yard, and of a dwelling house and outbuildings in front, facing a lane which later became Upper Allen Street. From the house, an undisturbed view over fields and orchards was broken only here and there by isolated residences standing in large gardens; behind, the sloping ground was open or derelict until the town-side of Edward Street was reached. The shop stood on the very outskirts of built-up Sheffield, and it was only in the decade 1829-1838 that the area in the immediate vicinity filled up with shops and dwelling

houses, hugging the narrow lanes which ran up the hill. The dwelling house, which was suitably screened from the works by a wall, was occupied by John Stephenson, as the working partner, and it was there that Henry (later Sir Henry) Stephenson first saw the light of day in 1826.

Some improvements to the premises were made in 1822-3, when £20 was spent on building a new wall and £121. 9. 6 on other adaptations, while an adjacent piece of land was leased at an annual rent of £2. 15. 0. The equipment was still of a rudimentary nature, however; on 1st January, 1827 it was valued at £122 only, including the office furniture. "The primitive method of making types", as Sir H. K. Stephenson wrote, "though with many technical improvements, survived till the introduction of typesetting machines about 1853".

The early success of the business is shown by the nominal rate of profits which averaged 18½% between 1820 and 1827, but much of it was automatically reinvested. Garnett and Stephenson drew little beyond their salary

The brass rule manufacturing department at the Caslon Letter Foundry





Examining finished type

of £100 and ploughed back over four-fifths and six-sevenths of their profits respectively. James Blake, though drawing out much larger sums, also put back well over half in the form of capital and loans to the partnership. By these means, and by prudent management, the capital of the firm had risen to £11,000 by 1829.

When the original partnership agreement, which had been concluded for eleven years, came to an end on 1st July 1829, William Garnett took the opportunity of withdrawing from the business and set up as a farmer in Norton, a Derbyshire village not far from Sheffield. He appears to have returned to Sheffield in later years as a stereo-type founder, but had no further connection with the firm. The remaining two partners drew up another agreement, dated 25th September 1830, to run until the end of 1840. John Stephenson, still essentially a working partner, had by now increased his holdings to a sizable sum which was brought up to one third of the total capital

by a loan from James Blake, who held the other two thirds.

This partnership was destined to be short lived. James Blake died suddenly less than a year after the conclusion of the agreement, and John Stephenson found himself in effective control of a property only to a small extent his own; a clause in the contract had provided that in the event of the death of one partner, his executors should enjoy all the interests and benefits, but have no rights of management. In the next ten years John Stephenson had an opportunity of proving that his abilities were fully equal to his new task: "to his energy, artistic taste and practical skill the reputation of the house, especially for fancy types, is to be attributed—it being his practice, to finish, with his own hand, all the punches that were produced." (Bigmore and Wyman).

At the end of 1840 the partnership was re-formed, including now John Stephenson as the managing partner. H. B. Smith, the London

representative, and two of the nephews of James Blake, his brother Thomas and his brother-in-law, William Thompson. By 1845 they had paid off all the other heirs of James Blake and the freehold in Upper Allen Street had been bought by the firm. The premises consisted at the time of:

"House and Shrubbery, Gross Estimated Rental £16. 0. 0.

Shops and Appurtenances, Gross Estimated Rental £41. 6. 8.

Warehouse, Gross Estimated Rental £13. 6. 8."

By 1849, when Henry Stephenson was taken into partnership at a salary of £150 and with £1000 of stock transferred from his father the capital had risen to over £23,000.

The following decade saw a major revolution in the technique of type founding, and Stephenson, Blake & Co., as the firm was called after 1841, installed a large number of machines in that period which entirely transformed the character of the enterprise, and turned it from a workshop into something akin to a modern factory. In 1846 a justifying machine had been bought from the London maker, C. D. May: between 1852 and 1857 there followed typesetting machines, kerning, planing, brass rule, blowing machines; machinery and moulds for casting French furniture were acquired in 1854, a turning lathe in 1855, and in that year a steam engine was erected in a new building on an adjacent plot of land. In 1860 an American casting machine was also bought, at the cost of \$325.

Although some free-lance punch cutters remained after that date to execute special or temporary orders, the necessary capitalisation had reduced the number of typefounders

to five for the whole country. Despite much keen competition, relations were friendly between the "Big Five", and they co-operated in assessing current standards of wages and prices, promoting improvements and fighting the electro-typers, spurious firms who used the new process to copy unscrupulously the successful founts which the older Houses had painfully evolved and established.

Henry Stephenson had taken over effective management in 1850, and in 1863 John Stephenson withdrew from the firm. He died in the following year. The share of Thomas Blake, who died in 1868, was transferred to his son William Greaves Blake, who remained, like his father, a sleeping partner. William Thompson died in 1878, and his executors were paid off in cash. From 1879-87 the partnership consisted of Henry Stephenson and W. G. Blake and at the end of the latter year H. K. Stephenson was taken into the firm. Sir Henry Stephenson and Major W. G. Blake both died in 1904, and their respective sons, Sir H. K. Stephenson and Mr. Robert Greaves Blake, took control. In 1914 Stephenson, Blake & Co., became a limited company, but remained a family firm, and members of the two families are still found on the Board, every one a practical typefounder, to carry on the firm's tradition.

The capital of the firm had grown from £23,000 in 1849 to £31,000 in 1868 and to £58,000 in 1887. Its prosperity, though fluctuating with trade in the country as a whole, is attested by an average profit rate of 12% in 1840-9, 13% in 1850-68, and 28% in 1879-87 (including partners' salaries). Expansion was particularly rapid in times of boom. In June 1865 the firm's first London warehouse was opened in leasehold premises at No. 90 Newgate Street.

with Mr. T. W. Smith, later head of H. W. Caslon & Co., in control, in order to supply the customers of the Metropolis with the least delay. The depot was moved to its permanent freehold site at 33, Aldersgate Street, in 1871. During the great Mid-Victorian boom in 1873-4 alone, the firm's productive capacity expanded by 50%, yet there were fears, for some time, that orders could not be fulfilled. The following slump soon restored the balance, however.

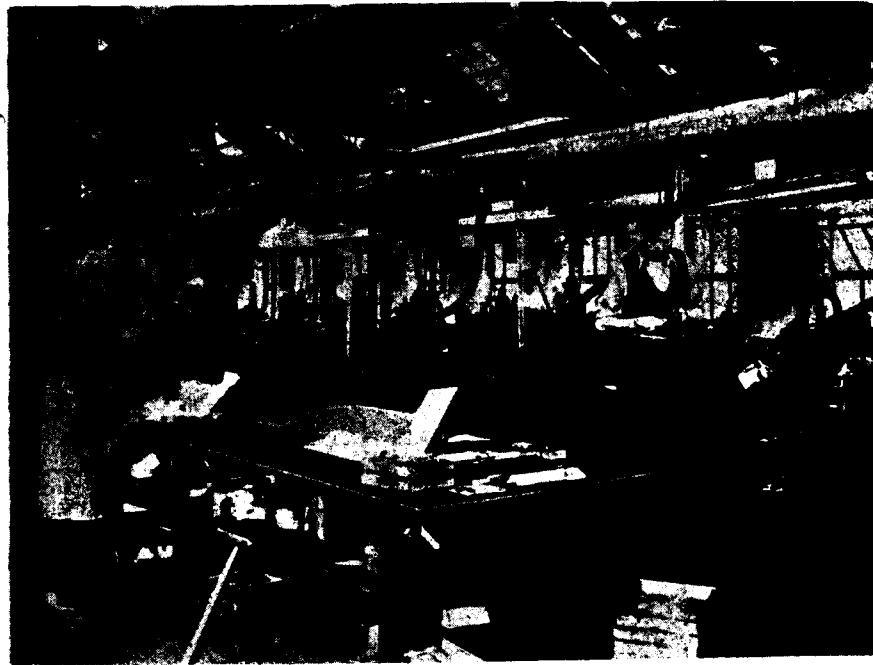
At that time the firm employed about 35 casting machines, which were on the point of changing over to steam; its travellers ranged over the whole of the country; one covered Lancashire, Western England and Wales, another Yorkshire and Northern England and the third London and Scotland; there was the London depot, and there were three agencies in the Colonies (Dominions), besides active and particularly successful attempts to invade the Spanish, Italian and American markets. John Stephenson, as he surveyed the extent of

the firm at the end of his active life, must have felt proud at the great changes that he had seen in his life time.

There is no doubt that much of the continued success of the firm was due to its skilled workmen. Relations with the staff were good, for both principal and men were content to be ruled by the rates paid by the London houses. Unskilled wages were lower in Sheffield, but against this the Sheffield firm insisted on employing its men steadily and for life, to the extent even of delaying the introduction of steam casting machinery in order not to turn the hand casters into the street. Henry Stephenson was aghast at hearing that in London even junior clerks were employed without guarantee of a fixed position: "in Sheffield...no Boy except some young Arab who was ready to earn a meal in whatever way he could, would go to an office with the chance of being turned adrift before he had learnt his business," he wrote in 1871. Apprentices started at a nominal salary which



Building new typesetting machines



One of the main Typecasting Shops

might rise to £20 by the time they were 20. Skilled caster's piece wages were around 30-33s. per week, a good average for a man in steady employment. It was common for men to work all their lives for the firm, and see their sons and perhaps grandsons enter its services, though formal bindings and indentures had fallen into disuse. Not all the men were Sheffield-born; some came from Scotland, where they had served in Miller & Richard's foundry, and others came from the London houses, H. W. Caslon & Co., and Reed & Fox. The firm at that time found regular work for two punch cutters, at piece rates which allowed them to earn the fabulous annual wage of £220. A French cutter was persuaded to settle in Sheffield for some time, but he was not a success and had to be sent back. There were also occasional contracts for outside cutters, and many borders, ornaments and other materials were bought abroad. Mr. E. Pechey, the chief clerk, who became head of the London warehouse when T. W. Smith left the services of the firm in 1873, also

designed many new type faces during the period of his office both in Sheffield and London.

Towards the end of the 19th century new methods of type-setting and printing, notably for the newspaper press, threatened the basis of the typefounding industry, while electrotyping "pirates" again undermined the narrowing market for novel or distinctive type faces. Stephenson, Blake & Co. could afford to forego the market for second-hand and ordinary type, and retained their hold over the supply of new and "fancy" type, where they were always one step ahead of imitators, where taste and design counted, and where the technical superiority of matrices struck from genuine punches over those formed by electroplating from other type was noted.

Other old-established houses found it increasingly difficult to carry on, and some were absorbed by the vigorous Sheffield firm. Sir Charles Reed & Sons, Ltd., heirs to many of the most famous

old English letter foundries, were bought up in 1905, and H. W. Caslon & Co. Ltd. in 1937. Certain faces of the other two great houses, Figgins and Miller & Richard were also acquired, and Stephenson, Blake & Co. Ltd., now almost the only typefounding firm in the country, have become the possessors of a remarkable collection of historical founts: in their vaults are stored "Caslon Old Face," cut about 1730, Grover's "Union Pearl," cut in the 17th century, Thorowgood Italic, Fry's Sans Serif Shaded, and many others, carefully indexed and preserved to form the solid proof of the achievements of an old and honoured craft.

The vicissitudes of the 20th century have left their mark on the Sheffield firm also. In 1907, a Wood Material Department for the production of wood letter and composing room furniture was opened on an adjacent plot of land, and the works itself has grown in every direction, taking in adjoining buildings and courts, but hideous gaps in their surroundings are silent witnesses of the sufferings of Sheffield in the last war.

During the first World War, half the staff, including Sir H. K. Stephenson himself, left for the armed forces, and a large part of the remainder was engaged in the production of gauges, ammunition boxes and other war materials, but the return of peace brought a rapid revival of sales, including large orders for the Peace Conference in Paris. In the second World War, all the present members of the Board joined up, and with them 75% of the personnel went to the War or into War Production.

Return to normalcy was less easy after 1945. In common with other industries the firm has expended much effort to increase its sales

(Continued on page 18)

# Lithographic Printing in America

We have great pleasure to offer to the readers hereunder The British Productivity Team's general survey of the Lithographic Printing Industry in America. This, we hope, will be of great interest to those interested in offset

## GENERAL IMPRESSIONS

1. The Team was greatly impressed by the tremendous enthusiasm generally displayed by American business men and industrialists in their determination to make their efforts a success; these men never appear to be discouraged by any problem however insurmountable it may seem to be in the first instance. This may well arise from the pioneering spirit which is still evident amongst the American people who, in the not distant past, faced up to trials and difficulties which would have daunted all but the stout-hearted. An attitude of continuous endeavour was apparent in all American manufacturers. They are constantly striving to progress and are always on the alert to adopt, adapt and improve any idea which they think will further their plans to increase productivity and so to reduce manufacturing costs.

2. There seems to be no limit to the imagination and ingenuity which is brought into play by American manufacturers to assure their survival and to achieve their ambitions. They fully realise that it is essential to market their goods or services at a lower price than the other man without sacrificing the quality demanded by the consumer and to do this they constantly devise ways of increasing the efficiency of their plants.

3. In many respects this attitude contrasts sharply with a state of mind not uncommon at the present time in Britain where circumstances beyond the control of industry tend to discourage some managements

from adopting a progressive outlook. The demoralising effects of complacency may not be apparent because of the absence of competition and the continued existence of a seller's market in many fields. Unless any tendencies towards complacency are arrested before they become wide-spread the ultimate result may be calamitous. The increasing burden of taxation on companies and on individuals naturally penalises a progressive attitude; it deters enthusiasm and engenders that feeling of frustration which, of recent years, has insidiously crept into British business.

4. In the American lithographic industry maximum production is the target throughout all levels from president to pressman and nothing is allowed to stand in the way of maintaining and increasing output. This is accomplished by the full utilisation of all machinery at its optimum speed and efficiency. Americans seem to delight in watching a machine operate at its full rated capacity both in size and speed; machinery is driven hard by the American operative whose physical effort seems to be no greater than that of his British counterpart, but nevertheless is much more effective.

5. Several of the firms visited were "young" by British standards; one of the most advanced technically is only 30 years old, yet it had recently moved into a new factory costing 3,000,000 dollars and its plant included no fewer than seven four-colour offset presses, i.e., more than in the whole of the U.K. Another only 13 years old had built

a new suburban factory, installed two web-fed offset presses in addition to other machines, induced its principal customer to remove his office from New York 200 miles away into the new building and persuaded the U.S. Mail Department to build a post office across the street to handle the greatly increased volume of traffic.

## GROWTH OF LITHOGRAPHY

6. While the annual turnover of the whole of the American printing industry is increasing, that of the offset side is doing so more rapidly than that of the other processes. There is a growing trend towards offset for several applications such as books—including novels, textbooks, children's books, etc.—display advertising posters, greeting cards, cinema publicity, transfers, give-away maps and general commercial printing. As an indication of the growth of offset printing, statistics are available which show that for 1938 the volume was about 150,000,000 dollars produced in about 1,750 factories whilst at the end of 1950 the volume had increased to 500,000,000 dollars and the number of firms to about 3,500.

7. Americans are more susceptible to the effect of advertising than are the British. Elaborate nation-wide campaigns, involving vast orders for printed matter of various kinds, are constantly being launched by the promoters of new products, who calculate that they must reap the greatest volume of sales in the initial selling period before their ideas can be copied by others. It is therefore vital to



Messrs R. Narayan, R. Subramanyam and V. Padmanabhan who came out successful in the Full Technological Examination conducted by City & Guilds, London

them that the public should be thoroughly acquainted with a new product as soon as it is placed on the market.

8. These campaigns use every possible medium and the lithographic process is recognised as being eminently suited to meet the major requirements of advertisers. There can be no doubt that this enormous demand for printed matter will continue to sustain the growth of the American lithographic industry.

#### ATTITUDE OF MANAGEMENT

9. The American lithographer is prepared to spend money in investigating every new invention or method and carefully examines each succeeding development to see if it can be practically and profitably introduced into his business.

10. In several factories visited it was learned that many of the top executives had risen from the workshop floor of the same firm and the wide knowledge gained by these men in the course of their promotion is largely responsible for cultivating

the attitude of mind essential for high productivity.

11. Managements in all firms pay great attention to costing and appreciate the importance of an efficient costing system in conditions of keen competition. Budgetary control is also in use in many firms; production records and statistics are carefully kept and any deviations from expected performance are the subject of inquiry, notwithstanding that the standards set are high. Cost-consciousness is not confined to top management, for all grades to departmental overseer level are kept informed regarding costs. Overseers are expected to use the information provided as a means of effective control and they acknowledge that intelligent supervision is the key to productive efficiency.

#### MANAGEMENT—EMPLOYEE RELATIONSHIPS

12. In several large lithographic firms consultation between management and workers effectively promotes greater productivity;

operatives are encouraged to make known their own ideas for increased efficiency and boxes are provided to receive suggestions which, if adopted, result in substantial cash rewards. There is little tendency for these boxes to be used for the submission of pointless complaints and it was generally reported that constructive suggestions for increasing productivity greatly exceeded any ideas for improved welfare measures or better working conditions.

#### COMPETITION

13. A seller's market no longer operates in the American lithographic industry; the initiative has passed to the buyer. Competition is keen and highly-gearred sales organisations are required in practically every firm. Orders are placed on a price basis, estimates being requested from at least six printers. In one instance no fewer than 20 bids were received by the buyer for a large calendar order. In another case a printer declared that one of his competitors would be prepared to tender for work at labour plus materials cost alone rather than risk a possibility of having to lay off labour in a period of temporary slackness.

#### QUALITY CONTROL

14. The importance of controlling the quality of the finished product and the condition of the raw materials is always stressed. Use is made of scientific aids to make certain that all the raw materials are up to the required standards, and a qualified chemist is often employed on the works staff to assist in these control measures. Temperature and humidity control are generally accepted as essential to high speed and high quality of reproduction.

#### BUILDINGS

15. As in the U. K. the trend in America is undoubtedly towards

single-storey factories where production flow can be facilitated and departments more conveniently arranged to avoid multiple handling of materials. Separate entrances and exits are provided for the intake of raw materials and for the despatch of finished goods. In congested city areas there are, by force of circumstance, many multi-storey factories both old and new; in one factory a four-colour press weighing about 30 tons was running at 5,000 impressions per hour on the fourth floor.

16. Some of the newer factories are virtually windowless, both lighting and ventilation being artificial and controlled. This exclusion of natural daylight and fresh air is required to maintain the best printing conditions throughout the twenty-four hours of any day of the year but to those unaccustomed to such conditions it tends to create claustrophobia in both works and offices.

17. In most American factories visited, particularly those built since World War II, the provision of ample working space for the efficient operation of machines and for the flow of work has been given high priority. In one large factory it was noticed that alongside a 50 in. by 72 in. four-colour press there was sufficient space to stack approximately 250,000 sheets representing work in progress. Americans appreciate that the provision of adequate working space increases the productivity of the worker; it is recognised that an operative cannot work efficiently whilst he is cramped for space or awkwardly situated.

#### EDUCATION AND TRAINING

18. In the U.S. technical education for the printing industry is a development of the last 60 years. Previously there was neither an

apprenticeship system nor any method of training personnel for the industry and the best skilled labour was obtained from overseas. Today there exist admirable facilities for technical training and these are particularly suited to the prevailing conditions. There are indications that the standard of education is higher than the standard of craftsmanship because general education continues at high school up to the age of 18 whilst apprenticeship may be delayed until an individual is over 30 years of age.

19. The Lithographic Technical Foundation greatly assists the industry by providing scientifically sound craft information, in publishing a wide range of technical literature in a form suitable for the operative and in providing instructional material and advice for use in the technical schools. Some of the larger lithographic plants have organised and equipped their own training schools which in many cases offer courses of instruction equal to that provided by outside training establishments. Several union branches also maintain their own training schools.

20. Individuals training for managerial positions are given a thorough course of practical instruction in the workshops and they also attend technical training establishments. Great importance is attached to adequate and specialised training for their ultimate duties as executives and in this respect excellent courses are available at various colleges such as the Harvard Business School. The Carnegie Institute of Technology at Pittsburgh provides a four-year degree course in printing management and this embraces both technical and management training. There is no equivalent in the U.S. of the Young Master Printers movement in Britain.

#### SHIFT-WORKING

21. In the U. S. a vast quantity of the industrial output is achieved by two-shift working and many of the national habits are adjusted accordingly. Shops, cinemas and restaurants are open longer, public transport operates later and many workers use their own cars to travel to their places of employment.

#### RECOGNITION OF EFFORT WAGES

22. According to the Bureau of Labour Statistics of the U. S. Department of Labor the average hourly earnings of production workers and non-supervisory employees in the lithographic industry in June 1950 were 1.831 dollars. This figure represents an increase of 99.9 per cent. over the comparative earnings of June 1942 and the industry is now third on the national list manufacturing industries. This list does not include mining, construction, transportation, wholesale and retail trades.

23. There is no national scale of wages, and agreements vary throughout the U. S. according to the negotiating strength of the local union branch. New York is the highest paid area and in that city the following are the agreed basic weekly rates of pay in dollars:

|                                   |        |
|-----------------------------------|--------|
| Retoucher                         | 110.53 |
| Camera operator                   | 119.95 |
| Photo operator                    | 99.76  |
| Plate-grainer                     | 77.85  |
| Machine minders:                  |        |
| Single-colour offset—72 in.       | 107.46 |
| Two-colour offset—72 in.          | 123.60 |
| Four-colour offset (first minder) | 122.64 |
| Flat-bed minder                   | 86.31  |
| Direct rotary (up to 64 in.)      | 93.04  |

These rates are for a 36½-hour five-day working week and 10 dollars extra is paid for the second shift.

After one-year's service a man is entitled to three weeks' vacation plus ten statutory holidays per annum.

#### MACHINERY AND EQUIPMENT

24. In America the Team saw offset presses 30 years old still running at the speed specified by the makers for that particular press when new. Old machines cannot be expected to function satisfactorily at high speeds unless they have been properly maintained and this appears to be the general practice in the U.S., where maintenance of the plant in a high state of efficiency is seldom neglected. No operative can be expected to get high productivity from a machine that is in a bad state of repair.

#### FOUR-COLOUR PRESSES

25. It is perfectly clear that the trend in the U.S. is continually towards even larger and faster offset presses; the unit principle is universally adopted for multi-colour printing and the Team saw four-colour offset machines printing sheets size 52 in. by 76 in. at 5,000 impressions per hour. It would be foolish to state that the limits either for size or for speed have yet been reached. At present the limiting factor is the time necessary for positioning the sheet to the lays.

#### WEB-FED PRESSES

26. From sheet feeding the next advance is naturally towards web-fed presses, many more of which have been introduced since World War II into American offset houses. Web-fed offset is claimed to be the most economical of the three main printing processes for long runs up to 250,000 copies. Machines of this type print as many as four colours on each side of the web and deliver the product (folded and cut) at speeds up to 14,000 cylinder revolutions per hour.

#### RAW MATERIALS PAPER AND BOARD

27. Production depends essentially upon supplies of materials being available at the right time, in the proper place and in a suitable condition; all of these factors are given great attention. It is difficult to plan for extra production or to become productivity-conscious when materials are notably scarce. The paper supply position in Britain is so serious that there is danger of sections of the industry being brought to a standstill.

28. Judged by present British standards the quality of American paper is excellent and this naturally has a bearing upon productivity; feeder troubles caused by poor stock are practically non-existent in America whereas in Britain today poor stock is frequently a cause of poor output. Static electricity, however, causes trouble in America to an extent unknown in the U. K.

#### INK

29. Printers in the U.S. are ceaselessly endeavouring to improve their knowledge of ink and its effective use on all types of material. The utmost co-operation is received from the ink manufacturers and much benefit is obtained from extensive research laboratories maintained by some of the ink firms.

30. Competition amongst the various ink firms is exceptionally keen and this results in a highly efficient service to the customer. When confronted with ink troubles American printers do not hesitate to call in a representative of the ink manufacturers or to return to them any batch of ink which is deemed faulty.

#### LITHOGRAPHIC ART

31. High productivity is being obtained in the retouching departments and this is attributed to

various factors. Provided a pleasing result is obtained, absolute fidelity of reproduction is not considered to be essential and is often knowingly sacrificed in order to ensure speed of production and to reduce costs. The aim is to secure only that degree of fidelity which the nature of any particular job may warrant.

32. Reproduction in four colours of general commercial work is now firmly established. Masking methods of colour correction are widely used to preserve photographic quality and to reduce retouching time. This enables more work to be done by the retoucher without greater effort. In addition, the retoucher is frequently relieved of such work as preparation of copy for the camera, opaquing and the assembly of negatives or positives for plate-making.

33. Film is used to a far greater extent than in Britain and adequate equipment of special design is utilised to facilitate its handling. Its use has the added advantage of simplifying storage and filing.

#### PLATE DEPARTMENT

34. Plate-making and plate-graining techniques now generally employed in America show no fundamental differences from those in use in the U. K. Work in the plate department however is greatly facilitated and simplified by the organisation of the preceding departments which send forward negatives and positives ready to expose with indicated register marks and masking lines.

35. Multiple hand repeat work in the vacuum frame is considered to be outmoded and all work of this nature is now done on step-and-repeat machines, mostly of vertical design and having a large transparency holder sufficient for 30 in.

(Continued on page 27)

## From Our London Correspondent

F. & D. BROWNLEE

There are many manufacturing and finishing processes for which, although low unit cost is still important, the primary consideration is absolutely accurate repetition, in perfect register, at the highest possible speed, for very long runs or even continuous production. To meet this need a new automatic "Marathon" unit has been evolved by Markmaster Ltd. of London, the original Markmaster having been designed to accomplish the medium-to-short "run", or even to create the individual item, speedily, at comparatively little cost.

The new "Marathon" unit is on the same general lines, both machines being intended for dry-foil printing at speed, in several colours concurrently, with minimum setting time, no "make-ready", exact register and instantaneous finish. Both will operate on the widest range of materials, from metal to muslin, from paper to plastics, wood, leather and cellophane.

The standard Markmaster is limited to manual operation, whereas the Marathon control is automatic by compressed air, a hand lever being provided only for proofing. A number of simple controls govern separately the speed of operation, pressure required, and length of dwell, enabling an output upto 2,000 per hour with single setting (proportionately increased with multiple setting) to be achieved, in several colours simultaneously.

Compressed air has been chosen because no form of motorised or

mechanical circuit can provide the flexibility essential if the fine quality of reproduction normally obtainable only by highly skilled hand operation is to be secured and maintained under automatic control. A small motor, however, raises and lowers the head of the machine, the Marathon being adjustable to take articles upto 12" high. Manual operations, once the job has been set up, are limited to feeding in the pieces to be impressed, and withdrawing them as completed. For many types of repetitive work even this can be still further limited by using a mechanical feed-in with automatic ejection.

The "Marathon" has both sliding and rotating tables, each fully automatic, and interchangeable according to requirements. These cater for work at speed on almost every known material and of all shapes. The compressed air may be operated either by foot pedal or continuously, and complete safety for the operator is ensured by all work being handled well outside the pressure area.

A contribution in "Print" gives some valuable hints on dealing with inking troubles, particularly mottle or repeats. Briefly, this says that printing ink should be smoothly ground and intense in colour, and working with a good quality ink not only precludes the occurrence of many troubles but gives a safer margin to avoid certain tendencies.

Repeats can be caused by the forme requiring more ink than the rollers can carry. This is not

necessarily a rolling fault, but one which can be overcome by suitable ink, as a thinner film of colour can be placed on the paper to obtain good results. Whenever possible, a transparent white should not be used with a coloured ink, and a short ink, namely one that cannot be drawn out between the fingers, should be aimed at. Reducing oils and liquid dryers should be avoided, and pastes for both purposes are recommended. In short, everything should be done to maintain the strength and covering power of the ink. When printing solids, the mixing of a powdered material, such as magnesia, will help the ink to lie more smoothly without mottle, and it is better to start with a darker colour than required and lighten it with an opaque white or a light colour which has strength. One advantage of this is that the covering power is unimpaired, and more ink can be run until the desired depth of colour is reached.

Certain types of slur are due to the ink being too thin, and this can be detected by the filling up of the type face and spaces between the screen dots in a half-tone. It is more readily detected in a half-tone as the spaces between the dots are comparatively small and fill up more readily. With a thin-bodied ink, or insufficient impression, the operator is apt to use too much ink in an endeavour to obtain the desired depth of tone. The slur is not so prominent on a deepetched half-tone as the dots are more pointed compared with those of a block not so deeply etched.

(Continued on page 16)

# Letterpress Printing in America

The British Productivity Team presents here a general survey of the Letterpress Printing in America. These extracts will be of great interest to Indian Printers

1. In this section of the Report we have set out briefly some of the things we found in the U.S. which are of general interest.

2. It should be stated at once that we found productivity in the printing industry higher in the U.S. than in Britain. The factors largely responsible for the high output in America are referred to in the following paragraphs.

3. We had ample confirmation of the truth of the often repeated statement that productivity is an attitude of mind. In America at all levels we found a more widespread appreciation than in Britain of the advantages of high productivity. The American knows that without high output his high standard of living cannot be maintained.

4. This productivity-mindedness shows itself in a number of ways. Management is continually

searching for ways of getting more and more production and reducing costs. There is a feeling that to stand still is to stagnate and also a constant readiness to try out new ideas and methods.

5. Among employees we found a strong belief that their own prosperity is linked with that of the business employing them and that it is up to them, as the men on the job, to find ways of saving time and material and improving methods. Suggestion boxes are in existence in a number of plants we visited, but even in firms where no suggestion box scheme is in operation new ideas come from the workers.

6. The attitude of the trade unions also is to encourage improvements and changes in technique leading to increased output and greater efficiency, and at the same time to see that their members share in the benefits gained from such im-

provements. This positive approach by the trade unions to the question of increasing output, together with the comparative lack of restrictive practices, is an important factor in America's high productivity.

7. We tried to discover the influences that had led to this high degree of productivity-mindedness, but found it difficult to produce any really convincing answers. We got the impression, however, that one factor is the quicker tempo of life in the U. S. combined with the spirit of competition which is found in all spheres of activity, including the home as well as the factory. There seems to be a strong force driving families to keep up with their neighbours in having the latest luxuries, such as television sets and motor cars.

8. There is a greater sense of insecurity in the U.S. than in Britain and no doubt this plays a part in keeping everyone on his toes.

9. The comparatively free intake of labour into the American printing industry in recent years has enabled the economic laws of supply and demand to operate to the benefit of the industry's efficiency. The shortage of labour, which is proving such a handicap to the development of the industry in Britain, does not exist in the U.S.

10. Despite the keen competition, we found everywhere a readiness to share knowledge with others—not only with visitors from overseas, but also with possible rivals in the same city. There is no question that this attitude has made an appreciable difference to the general

level of productivity in the printing industry. It is remarkable, however, that there is no research organisation catering for the American printing industry as a whole on the lines of Britain's Printing, Packaging and Allied Trades Research Association. Research in the U.S. is left to individual firms to initiate.

11. An important human relationship which interested us throughout our stay in America was that existing between employers and workers. It was a difficult matter to assess but, so far as we were able to judge, employer-employee relationships in the printing industry of America are good. Certainly it appeared very easy for the worker there to approach his boss; indeed, one often addressed the other by his Christian name. It was noticeable how strongly the personality of the man at the top was impressed on the whole character and atmosphere of many of the firms we visited.

12. The high degree of specialisation is a major factor in the high output of many of the firms visited. In a service industry such as printing, specialisation has to start at the selling end of the business and we saw several instances where the sales policy is to refuse all orders not exactly suited to the plant. Specialisation of product has led to

specialisation of plant. Some firms consist almost entirely of a machine room and they arrange for all other operations, such as designing, type-setting, plate-making, cutting and folding, to be done by trade houses. Specialisation is also found among the individual workers to a far greater extent than in Britain.

13. Another important factor contributing to high output (and also to low costs) in the U. S. is the maximum utilisation of machinery, equipment and buildings. It is the rule rather than the exception for more than one shift a day to be worked; wherever possible, machines are kept running almost continuously. The working of shifts also means that, for the same capital outlay, more equipment is available per worker at any one time than in a plant working a single shift.

14. Another step the Americans take, in order to make the utmost use of skill, is the employment of unskilled workers to serve the skilled operatives and to enable them to keep constantly at their tasks.

15. Quite apart from the greater amount of shift work in the U. S. we found that the proportion of each shift during which machines were idle was less than in Britain. Time-keeping is good and machines are started promptly and not stopping until the stopping signal is

given. There is no temptation to the operative to leave his machine in order to have a smoke as in almost all American plants visited smoking is permitted. Slot machines containing refreshments are to be found in most printing factories.

16. This continuous use of machinery means that less time is available for cleaning it and, generally speaking, we found the standard of cleanliness of machines to be lower in America than in Britain. The attitude towards machinery cleaning in America seemed to be that it is largely unproductive. There was certainly no evidence that the dirtier machines were working any less efficiently and we felt that we in Britain will have to realise that the primary purpose of a machine is to produce. The standard of maintenance (as distinct from cleaning) of American machines is high, and many old machines are still producing work at high speeds, three shifts a day. The running speeds of machines generally are higher than in this country.

17. Though the standard of the guarding of machinery is lower in America than in Britain, American printers have developed a greater safety-consciousness among their operatives than is found here.

(Continued on page 27)



The Indian Printers at the Roland Factory in Germany

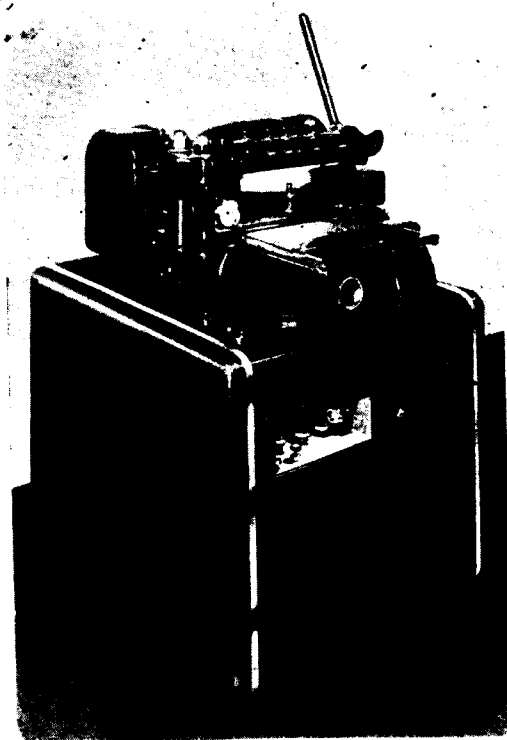


## The Leading European Screen-Brands Haas & Koh-i-Noor Over 35000 Screens in use.

HALFTONE SCREENS FOR BLOCK AND OFFSET PRINTING . . . . .  
PHOTOGRAVURE ENGRAVED SCREENS FOR DIRECT COPY ON CARBON TISSUE  
VIGNETTE-CONTACT-SCREENS IN ALL NORMAL RULINGS . . . . .  
SPECIAL-GRAVURE SCREENS FOR TEXTILE PRINTING . . . . .  
FILM SCREENS FOR SHADING AND OFFSET WORK BY COPYING PROCESS  
SHADING SCREEN-DESIGNS ON CELLOPHANE WITH ADHESIVE MATERIAL

Catalogue free of charge

HERBST & JLLIG, FRANKFURT a/MAIN 13,  
GERMANY



The Marathon Markmaster

## From Our London Correspondent

(Continued from page 13)

In colour work a slur caused by thin-bodied ink can make the spaces between the dots darker in tone than the dots themselves. When this slur first appears, it can be detected by small hair-lines in the spaces of the screen. Another type of slur in the printing of a solid is caused by the ink being too tacky. It usually produces an uneven strip of colour which runs in a curve from the leaving edge and may be half-an-inch to one-and-a-half inches wide. The edges of the slur are blurred. The cause, as mentioned above, is that the ink is too long and must be shortened. By "long" is meant that the ink can be drawn out between the fingers without breaking, and "short" when it breaks easily under the same test. At the same time, the ink should not be tacky or "plucking" will ensue.

Incidentally, to continue on the subject of ink, "Patra News" gives details of a simple device for keeping ink flowing, useful for letterpress and litho machine minders who experience trouble with inks that will not "feed" properly. It consists of a strip of rigid plastic or metal with a weight behind it which, when placed in the duct, acts as a "pusher" for pressing the ink against the duct roller. It is stated that this device will keep the ink flowing without any attention being required.

The same publication also gives information on preventing insect damage to books, which can be considerable, especially when the books are sent overseas. The story is told of a member who wrote asking whether there was an insecticide which would not only protect a bookcloth against insects, but have no adverse effect on the cloth itself. Patra told the member that the addition of insecticides is not a particularly satisfactory means of protection, as some damage is done before the insect dies. No repellents have yet been found suitable.

The most common form of damage is that caused by cockroaches and silverfish which chew the surface of the bookcloth to remove the starch filling from the cloth. This can be prevented by using a cloth containing no starch, such as leathercloth or vinyl impregnated cloth. If starch-filled cloth must be used, it can be protected by varnishing. Another way of making a book less liable to insect attack is to use synthetic adhesives instead of starch paste and animal glue.

An extremely interesting paper on "Filmsetting" was read by George Westover (B.Sc., Eng.) before the 1954 meeting of the British Association. The speaker dealt with the matter more from the

engineering point of view, but gave a brief historical resume of both typesetting and filmsetting machines. He reminded his audience that typesetting machines have been in operation for about 70 years, the most familiar makes being the Linotype, Monotype, Intertype and Typograph. These four are the sole survivors of many more makes but it is generally recognised that between them they possess ample facilities with which to meet the world demand for type-setting machines.

Filmsetting, as an invention, started at the end of the Nineteenth Century, the first patent on record having been granted in the United States. In 1895 the first British patent was granted to Friese-Greene of cinematograph fame, and from then onwards patents have been issued in several countries, so that there now exists quite a collection of them, although extremely few ideas have been translated into metal. It was not until 40 years or so after the first patent was granted, that a practical working model was produced, the Uhertype, invented by an Hungarian and developed in Germany, and the first automatic filmsetting at a printers shop was only installed less than ten years ago.

At the present time not more than four makes of automatic filmsetting machine are even claimed by their sponsors to be developed upto the stage of commercial operation. Included in the four is the American Fotosetter, of which

Please refer to

### PRINTINDIA

while writing to advertisers

PRINTINDIA

more than 100 machines are said to be installed in America. The other makes are the Monophoto and the Rotofoto, both British, and the Photon, which is an American exploitation of an invention by two Frenchmen, and is based, not on any known typesetting practice, but on entirely original lines. The Photon, which embodies electronics and memory units, is much more modern than any of the others mentioned, but it has yet to be proved how it will behave when installed and in operation in a printing works. There are other designs, both on the drawing board and in varying stages of development, of which that of the Mergenthaler Linotype Co. of New York is believed to be the most advanced.

The speaker described the difficulties and problems encountered in developing these various machines, particularly justification,

achieved by adding equal amounts of spacing material to the spaces tentatively set between the words in the line, until the last character of the last word reached right up the end-piece, and so filled the composing stick. This process is called "justifying" and lines so treated are known as "justified lines." Practically all reading matter in print is justified and practically all type-written reading matter is unjustified. Print need not of course be justified, but it is still necessary to fill out all lines to the same length, by adding spaces after last word, instead of spaces between words; otherwise it would be impossible to lock-up the type for printing. Practically all poetry in print is unjustified, but the type lines are filled out with spaces after the last words, to make them all equal for the purpose of locking up. In filmsetting as a process, justification is an entirely redundant

operation, because there is no question of locking up, and in fact no lock-up is possible.

There followed a detailed description of the four machines mentioned, the system of master negatives employed, correction systems, optical systems, speeds, and other relevant details. The speaker concluded by saying it is significant that the three leading makers of typesetting machines are now turning their attention to filmsetters, not with any intention of superseding their existing products, but for the convenience of the ever-increasing number of printers who operate printing processes dependent on the provision of transparencies for their functioning. Unfortunately no comparative data of operational costs of the two setting processes are yet available, but users in America will soon be in a position to furnish such figures, based on their own experience.

## Service to Printers HOPCO



### RUBBER ROLLERS

Largely in use all over India

- ◆ Famous for attractive printing, long lasting and oil & heat resisting.
- ◆ Ready stocks available for all Chandler & Price machines.
- ◆ For all Cylinder, Rotary, Litho-Offset & Varnishing machines also, supplies will be made to order.

FOR PARTICULARS WRITE TO:

**HOLT PRELLER & Co.**

P. O. B. 1014

::

**BOMBAY-1**

Grams: "HOPCO" Bombay-1

DECEMBER 1954

17

## The Rise of Stephenson, Blake & Co. Ltd.

(Continued from page 8)

abroad, and it has overcome many old difficulties, such as the costly addition of accents to foreign alphabets, in order to capture new export markets in the face of strong foreign competition. In 1951, 40% of the total output went abroad.

In its present form, the firm of Stephenson, Blake & Co. Ltd. represents a rare combination of painstaking and artistic craftsmanship and up-to-date mechanical productive methods. Type faces

are still designed by craftsmen-artists, and though they are transferred to the matrices by mechanical means, justifying and finishing still require a trained eye and a steady hand. With all mass production methods in the casting room, the firm has retained much of its paternal tradition. The principals are still able to call all their 350 employees by their names. The employment of three generations of one family is by no means rare. At the present time there are no less than five men on the Company's pay roll who have been with the firm for over fifty years, and there

are 15 others on pension, each with a record of over half a century's service.

It is gratifying to reflect that in an era of increasing mechanisation, there is still room for the successful application of human ingenuity and skill. At the head of the long line of machines which now supply our daily wants, there must still be man breathing life and design into the automaton. With no loss of efficiency, there is to-day, as there was in the day of the founders, room for the expression of human talent and inventiveness at the firm of Stephenson, Blake & Co. Ltd.



Engraving a Matrice



Sri N. Narayan Rao, Senior Assistant Director of the Government Press, Hyderabad, is a very highly qualified technician with years of experience behind him acquired in various countries of Europe.

A student of the Benaras and Osmania Universities, Sri Narayan Rao left for United Kingdom in 1947 and joined the Leeds College of Technology for a two years course in printing and he obtained the diploma in Letter-press printing and allied subjects. For this diploma he submitted a thesis entitled "PRINTING INKS, THEIR CHEMISTRY AND TECHNOLOGY". During this time he had good opportunities to study in detail the organisation and management of printing presses and he could also master problems of estimating and costing in the light of the system followed by the British Federation of Master Printers. While he was in England he visited the leading Offset Presses and process engraving establishments. Further he went round many printing machinery manufacturing plants of the United Kingdom. He made a special study of the latest methods of "PRE-MAKE READY" in England and of F.A.G. pre-make ready system in Switzerland. He further fully acquainted himself with the multi-

chrome camera of Adprint Ltd., the photo-mechanical method of retouching and other masking methods like Kodak's Magenta screen masking etc., Thus for over two years his sojourn in England was very fruitful.

In the year 1949 Sri Narayan Rao went to Switzerland and joined the well known firm of Photogravure Printers, Conzett & Huber, Zurich, and worked in all departments of the plant from photography to the ma-

chine room for one full year. In this country he had ample opportunities to master the technicalities and their secrets of the Photogravure process printing in umpteen colours. Very soon he was elected to the associateship of the Royal Photographic Society, London in colour photography and thus obtained A.R.P.S. London. Later on he was elected to F.R.P.S. and incidentally he is the first in India to have these qualifications for colour photography.



Sri N. Narayan Rao with his bride Srimati Sree Kumari. They are recently married at Tirupati

In 1950 Sri Narayan Rao went to Germany where he underwent practical training in offset printing, photo-mechanical process of retouching, process engraving and photo-gravure. He also worked in the factories of six of the biggest printers of Germany and acquired a good knowledge of the technical details and working methods of block-making, making plates for offset, photo-mechanical process of reproduction, photo-mechanical retouching. During this period he devoted three months in studying the latest developments in the leading printing manufacturers of Western Germany and got familiar with the erection, dismantling and operational instructions of their machines including flatbed and rotary type. He was awarded a diploma by the international photocopier exhibition, Cologne, in 1947 for his work in reproduction of colour photography. For about one year he stayed in Germany and he had wide practical training in currency, bank note printing and all kinds of security printing including postal stamps, revenue stamps and cheque books.

Sri Narayan Rao took active part in the discussions and proceedings of the 6th International Master printers Conference held at Stockholm in 1949 and the 7th International Master Printers Conference held in London in 1951. In short he visited the leading printing establishments and process engravers in England, France, Italy, Holland, Denmark, Norway, Sweden Finland Czechoslovakia, Austria, Ireland and Belgium, before his return to India in April 1952.

Sri Narayan Rao is one of the greatest assets of the printing and allied industries in this country and we hope he will utilise his knowledge for the development of the graphic arts industries in India.



Late Sri S. Doraiswamy Mudaliar

#### A PIONEER IN SOUTH INDIAN PRINTING INDUSTRY

The Art of Colour Printing has no doubt made considerable strides in South India, but many may not be aware that it was first introduced in these parts of our country by late Sri S. Doraiswamy Mudaliar.

Born in the year 1885 and starting his career in early teens as an ordinary compositor in S. P. C. K. Press he soon worked his way up to become very soon the Foreman of VIVEKANANDA PRESS. His mind always bent on learning, which providence denied him in childhood, he was ever after exploring pastures anew. While continuing as a Foreman in VIVEKANANDA PRESS, he brought forth BHARATHI PANCHANGAM in Tamil, printed in beautiful colours as an independent enterprise of his under the name and style of Messrs Vinayagam & Co., and it speaks volumes of his foresightedness when we find that this PANCHANGAM is widely popular even today.

Encouraged by the success of his maiden attempt coupled with the success of several other books and publications he brought about, he

purchased a running concern by name SRI BHARATHI PRESS in 1914 and introduced for the first time TRI-COLOUR PRINTING in South India. On the 14th of December 1944, when he breathed his last leaving behind him his two sons D. Rathnavelu and D. Sambandam, all the local newspapers acknowledged his services paying tributes to his pioneering zeal.

There was nothing in Printing industry that late Sri Mudaliar had not mastered right up from composing, treadling, binding to actual printing. Besides, he was also a salesman of no ordinary calibre as it was through him that several printing equipment dealers of the day, chiefly Europeans, were able to convince press owners to go in for fresh equipments. Not content with these, he brought about Commercial Calendars for the first time, with beautiful tri-colour pictures, which are the craze of manufacturers even to this day.

And the worthy successors Messrs Rathnavelu and Sambandam have added of late another feather to the grand old VINAYAGAM CAP by starting the manufacture of Calendars by photo offset in addition to the regular varieties.

#### WANTED

PROCESS CAMERA:  
24" X 24" or 12" X 15"

WITH ARC LAMPS, SCREENS,  
ETC. REPLY WITH LOWEST  
PRICE AND PARTICULARS OF  
MANUFACTURE

Box. No. 15

c/o PRINTINDIA  
"KUBERA BUILDINGS"  
MADRAS - 1

PRINTINDIA

## News and Views

#### ADVICE TO GOVT. PRESS WORKERS

Mr. K. Kamaraj Nadar, Chief Minister, advised the workers of the Madras Government Press to try their best to live within their means and avoid borrowing from outside their co-operative agency, speaking on 19th November at the Silver Jubilee celebration of the Government Press Employees' Co-operative Society at Mint Buildings.

Mr. R. Siddique, Superintendent of the Government Press and President of the Society, said that the Society was started in April 1923 (the Jubilee had to be put off for financial reasons from 1948) and was at present helping a large number of the employees of the Government Press.

Mr. C. M. Venugopal, Vice-President, presented a report on the progress made by the Society. Its membership, he said, had increased from 259 in the first year to 1,350 at present. Apart from advancing money to the members in need, the Society instituted recurring deposit system since the beginning and thrift deposit system since 1939-40 with a view to inculcating the habit of thrift among the employees.

Mr. Kamaraj Nadar complimented the employees of the Government Press on the right lines in which they ran the Society and suggested to them to open a provision store also, so that they might get their requirements at reasonable prices. He was aware that most of them

would find that the loan amounts they received from the Society would not be adequate. However, they should endeavour to be frugal and live more economically and at any rate to restrict their borrowing to the Society.

The Chief Minister said he knew the difficulties of the workers. It was but natural that in any establishment where there were a large number of workers, occasions might arise for misunderstanding or conflict. They should try to adjust themselves by understanding the viewpoints of others, instead of precipitating action on filmy grounds. He was pleased to learn that they were all under one union. He hoped that the benefits they received from the Society would further expand.

Mr. H. J. Stooks, Controller of Stationery and Printing, unveiled a portrait of Mr. Siddique on the occasion.

The Chief Minister distributed prizes to winners in the fancy-dress competition conducted during the function.

Earlier, Mr. Kamaraj Nadar and Mr. A. B. Shetty, Minister in charge of Co-operation, inspected the Government Press.

"THE TIMES" AND  
"DAILY WORKER"

The Communist "Daily Worker" and "The Times" share top honours as the best designed newspapers in

the country. Bronze plaques were awarded to the two at a ceremony in London's plush Savoy Hotel on November 19.

The Judges—a typographical scholar, a Printer to the University of Cambridge and a member of the Royal Fine Arts Commission—said in their report, "In class I, two newspapers stood out as by far the most distinguished and thoughtfully designed—"The Times" and the "Daily Worker," and as it was impossible to make a direct comparison between two papers of such different styles, the judges, decided to give the class to these two jointly."

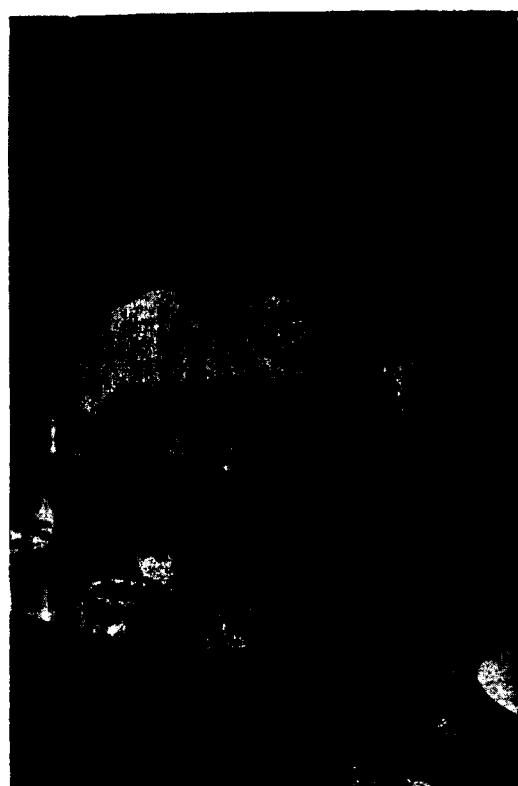
In making the presentation, one of the judges, Mr. Brooke Crutchley, Printer to the University of Cambridge, said the judging committee had no political differences. Their motto had been "Give it to the most beautiful."

This was the first year of the competition, sponsored by a Lynotype Company.

#### MADRAS GOVERNMENT PRESS

Matters relating to the completion of the division of machinery of the undivided Madras Government Press between the States of Andhra and Madras were considered at a conference of officials of the two States, held at the Madras Secretariat.

The Conference was attended by Mr. T.M.S. Mani, Secretary, Public Works Department, Madras,



Mr. F. R. Fischvoigt with Mr. Fred Wichmann of Roland Factory

Mr. H. G. Stookes, Controller of Stationery and Printing, Mr. A. R. Siddique, Superintendent, Madras Government Press and Mr. Natesa Mudaliar, Deputy Secretary to the Madras Government, Public Works Department, on the one side and Mr. S. R. Kaiwar, Secretary to the Andhra Government, Health Education and Local Administration, Mr. P. P. I. Vaidyanathan, Director of Industries and Commerce, and Mr. Amalanathan, Superintendent, Government Press, Andhra State.

It is understood that the conclusions reached at the conference would be finalised shortly.

\* \* \*

ROLAND NEWS.

Messrs Faber & Schleicher A.G., Offenbach, am, Main, manufacturers of Roland Offset Machines announce the appointment of Mr. F. R. Fischvoigt as their Resident Engineer in India. Mr. F. R. Fischvoigt has already joined the Technical Staff of their agents Messrs Indo-European Machinery

Co., Ltd., Bombay, Delhi, Calcutta and Madras and would always be available for the service of Roland users. It is also announced by the factory that their Foreign Sales Organiser Mr. Fred Wichmann will be visiting India next month in order to discuss problems with Printers on spot and to give advice regarding technical and commercial matters.

\* \* \*

#### MANUFACTURE OF NEWSPRINT U. S. EXPERTS ARRIVE

Three American specialists in Newsprint production have arrived in New Delhi on their way to Madhya Pradesh to advise on initial plant operations of the National Newsprint and Paper Mills, Ltd., the first Newsprint factory to be established in India.

Their services are provided under a special industrial technical assistance project of the Indo-American Technical Co-operation Programme.

The specialists are Messrs Charles S. Toliver, paper machine foreman, William Mallory, paper machine backtender and John B. Shuler, paper winding supervisor.

Two additional technicians will arrive later.

\* \* \*

#### 'ONE MAN' NEWSPAPER OWNER DIES AT 80.

Albert Richard Holcombe, who was printer and proprietor of the SOUTH DEVON EXPRESS, said to be the only 'one-man' weekly newspaper selling at a ½d in the world, died on October 24. He had celebrated his eighty-third birthday a few days before his death.

Mr. Holcombe, who was also editor, reporter, advertisement manager, compositor and circulation manager of the EXPRESS, joined the newspaper when he was 12 as an

apprentice compositor. Later he moved to London to become a compositor in Fleet Street, and after a time learned that the Express was for sale. He returned home in 1907, bought the paper and had been responsible for its printing ever since.

\* \* \*

#### NEW-TYPE SCREEN PRINTING MACHINES: SEMI-AUTOMATIC OR FULL OPERATION CLAIM

Two newly-designed screen process printing machines are now in the course of production by a well-known American company.

The firm—the Standard Process Printing Equipment Company of Philadelphia—has recently moved to larger premises where extensive manufacturing equipment is available. Because of this it is concentrating on the production of two machines in 32" x 46" and 44" x 64" printing sizes. The firm is also in production on wicket-type air-drying conveyers in stock sizes in special sizes to requirements.

\* \* \*

#### EAST ASIATIC Co., (INDIA) Ltd.

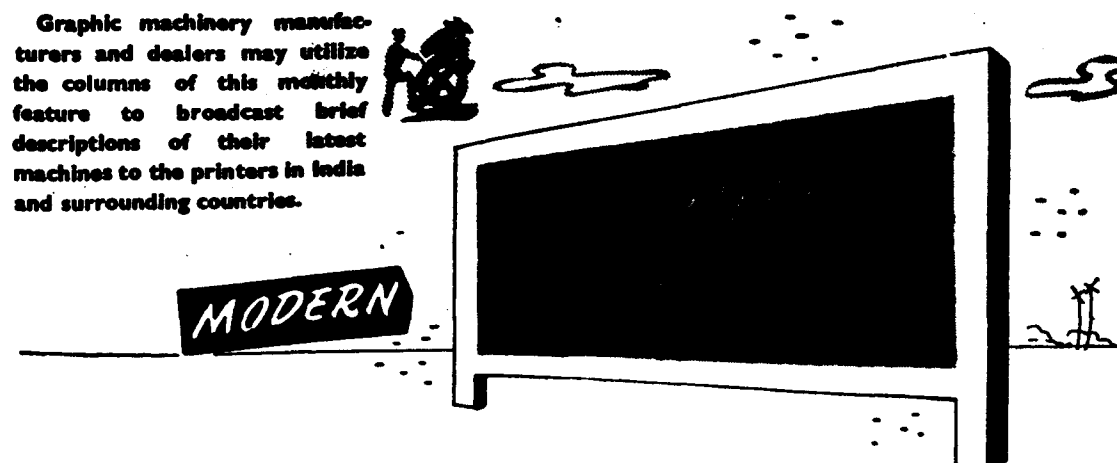
Messrs East Asiatic Co., (India) Ltd., who are dealing in Printing Machinery for several years now, have recently concluded Agency Agreement with Messrs Schnellpressenfabrik AG Heidelberg and Messrs Maschinenfabrik Adolf Mohr, Manufacturers of 'Heidelberg' Automatic Printing Machinery and 'Polar' power-operated Paper Cutting Machines respectively. It is interesting to learn that variety of these machines will be on display in the forthcoming All India Printers' Exhibition.

Also the Printing Expert of the Heidelberg Factory, Mr. Beckenbach is coming over to India to participate in the Exhibition and also visit several of Heidelberg's customers throughout India and Ceylon.

(Continued on page 24)

PRINTINDIA

Graphic machinery manufacturers and dealers may utilize the columns of this monthly feature to broadcast brief descriptions of their latest machines to the printers in India and surrounding countries.



#### POLYGRAPH M-O (ORIGINAL MERCEDES) AUTOMATIC CYLINDER PRINTING PRESS.

The new POLYGRAPH M-O (Original Mercedes) is a Demy Folio size automatic Cylinder Printing Machine based on Swing Cylinder System, as compared to M-I and M-II which are Stop-cylinder Presses.

Its special characteristics are: heavy construction, strongly ribbed carriage track, proper counterweight of the lever drive for absolutely smooth and vibrationless running at the highest speed; the conveyance of the sheet without tapes ensuring thereby absolutely non-slurring delivery; good accessibility to the printing cylinder; laterally swivelling high pile delivery attachment; and cylindrical inking unit with interchangeable inking rollers, lateral distribution.

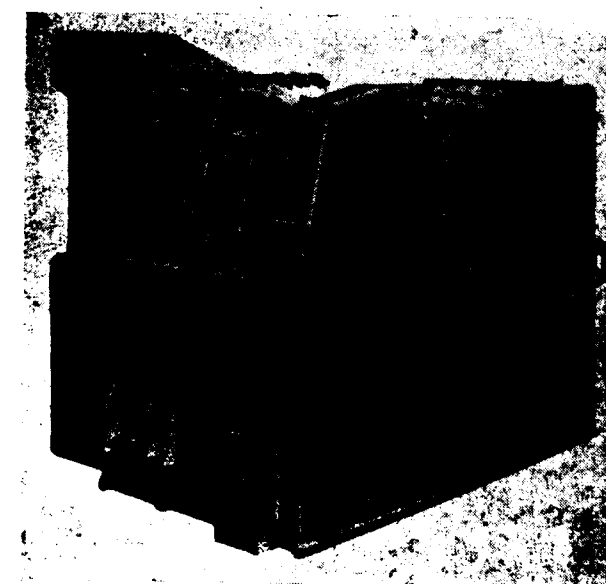
The M-O Press is the most economical small automatic Printing Cylinder Press which can be used conveniently and economically by all types of printing establishments. Apart from all the improvements, it has all the advantages of Model M-I and M-II which already have earned a name in the field of printing. All the moving parts are provided with safety guards, the sheets are fed from the upper side of the cylinder and no adjustments are necessary

for change of the sizes. It has a strong impression cylinder with individually sprung grippers and the grippers close only when the sheet is accurately fed and is completely stationary.

Maximum sheet size: 340x450 mm. (13 1/2" x 18")  
Minimum sheet size: 105x145 mm. (4 1/4" x 5 3/4")  
Size of matter: 315 x 430 mm. (12 1/4" x 17 1/5")  
Width inside chase: 350 x 490 mm. (14" x 19 1/4")  
Power required: 3 H.P.  
Nett weight: 3,960 lbs.  
Speed: 5000

#### GRIMM DAMPING ROLLER CLEANING MACHINE

During last Drupa, the firm of Erwin Grimm, Mainflingen A. M. demonstrated a latest Damping Roller Cleaning Machine with a squeezing device to squeeze out water from the damping rollers after they have been cleaned and washed in the machine. This was definitely a further improvement on all existing machines for cleaning damping rollers as up to now the squeezing of water had to be done by hand. The machine is electrically operated and a water spray apparatus is fitted to the machine so that the operator has

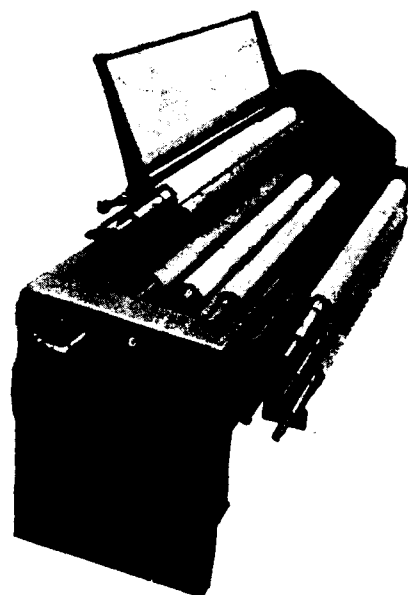


Polygraph M-O

DECEMBER 1954

23

22



Grimm Damping Roller Cleaning Machine

not to move for obtaining supplies of water. Six models are available providing for rollers of maximum length ranging from 31½" to 95" and the machine for longer rollers could

be made to order. The makers claim that the useful life and sound condition of the Damping Rollers is greatly improved by the use of this machine in comparison with hand scrapping system. The other obvious advantages are speed and economy in comparison with the hand methods. It shall be found extremely useful by all the printers particularly those who have a number of machines.

## News and Views

(Continued from page 22)

### SQUEEGEE PRESSURE

Referring to the new printing machines, the Company says that they are adapted to full or semi-automatic operation; unskilled labour may be utilised; there are no chains, gears or gadgets to wear out; squeegee pressure is adjustable; utilises regular screen process frames and prints on material from

thin acetate to ¾" thick wood at rates of up to 700 impressions per hour.

### INDO-EUROPEAN MACHINERY CO. LTD.

M/s. Indo-European Machinery Co. Ltd., have been given the exclusive selling rights of Fairchild Camera and instrument Corporation, New York. Their Scan-a-graver and Scan-a-sizer are already well known to printers.

### CRESCENT AGENCIES LTD.

M/s. Crescent Agencies Ltd., of Bombay have been appointed as Sole Export Agents for the well known Popular playing cards manufactured by Messrs Popular Fine Art Litho Works, Tardeo, Bombay. They are also appointed as the Sole Export Agents for the inks manufactured by Messrs Rainbow Ink & Varnish Manufacturing Co., Ltd., Bombay.

# HOTEL OCEANIC

SANTHOME :: MADRAS-28

- The newest, most up-to-date Hotel
- Every Room overlooking the Ocean
- Air-conditioning, Frigidaires, Radios and Telephones
- Large Airy Public Rooms & Roof Garden
- Excellent Cuisine, Service and cleanliness
- Catering for large parties undertaken
- Under European Management

Delegates to the 3rd session of The All India Printers Conference at Madras are WELCOME to our hotel.

Grams:  
"APPICHI"



Phone :  
85791

## PRESSROOM PROBLEMS SOLVED

By *Graphics*

In these pages "GRAPHICS" are expert on the printing and allied industries. Month by month the Pressroom problems of the printer. All questions should be addressed to "GRAPHICS" c/o PRINTINDIA

6. Q. All the machines we are having in our Press are taking too much time for make ready. I will be very thankful to you if you kindly suggest to me a system by which the make ready time can be reduced for (a) Type matter formes (b) type matter with halftone blocks formes (c) formes with full size blocks.

A. (a) The most satisfactory method of reducing make ready time for type formes is to use brand new type for setting the matter. Where worn type has to be set, ensure all the letters are of an even height as much possible. After setting take a proof. Remove and replace the types that appear to be low. In the case of type and line blocks a thin rubber blanket under the top impression sheet may be used on the machine, but this is not recommended for really light class work or formes containing halftones.

(b) The above of course applies to the type matter. The halftone blocks however should undergo 'Pre-make Ready'. Each block should first be examined to ensure it is properly mounted on a good even mount and tested with a type high guage. A lot of time on the make ready of the formes can be saved by interlaying the blocks before imposing them in the forme. There are also various mechanical overlays which save a lot of make ready time when using halftone blocks and details of these can no doubt be got from a good machinery and printers sundries agent.

(c) In the case of line blocks much of the foregoing applies. Ensure the blocks are even and well mounted and that as much make ready as possible is done by interlaying and underlaying before imposing. In all cases it is essential to see that the packing on the impression cylinder or tympan is even before commencing make ready, that all old make ready is removed. Renew the packing if badly worn especially the top sheet, and in the

case of halftone blocks be very particular in this respect.

7. Q. I have been reading a great deal of late regarding silk screen printing. I am unable to know how this is actually done. Will you kindly explain the silk screen process of printing and also inform me how it can be utilised by an average printer in this country?

A. To explain silk screen printing in detail will require an article of some considerable length. I will at some time write such an article for those interested. Meanwhile I suggest that you approach a good firm of Publishers and obtain a text book on the subject. There are many good publications giving all details and information.

8. Q. I am very much impressed with the questions and answers published in the last issue of "PRINTINDIA" conducted by you. I am running quite a large press. We are having a very good turnover but I find that the margin of profit is very small. The reason for this seems to be the high cost involved in producing the large turnover. Will you kindly suggest to me some methods by which the costs can be cut down and production enhanced?

A. The question of high turnover and low profit can usually be traced to costing. I suggest you acquaint yourself with the latest methods of costing and estimating. The British Federation of Master Printers have produced excellent books on this subject and no doubt your local Master Printers Association or a good publishing house could obtain these for you. As in the previous case, costing is too vast a subject to deal with in detail here. "PRINTINDIA" published a short discourse on the matter in the August 1954 issue which

**Opening Very Shortly!**

PHONE: 4998

# HOTEL DASAPRAKASH

CENTRALLY SITUATED VEGETARIAN RESIDENTIAL HOTEL

54, POONAMALLEE HIGH ROAD :: MADRAS - 8

## OUR OTHER BRANCHES:

THE MODERN CAFE, DASAPRAKASH  
Mysore

MODERN HINDU HOTEL  
Mysore

MODERN HINDU HOTEL, DASAPRAKASH  
Ooty

MODERN CAFE  
Esplanade, Madras

- ★ TELEPHONES & CALL BELLS IN ALL ROOMS
- ★ AIR-CONDITIONED HALLS & ROOMS
- ★ UP-TO-DATE FURNISHINGS
- ★ THEATRE & AUDITORIUM
- ★ ROOF GARDENS
- ★ ELECTRIC LIFT

**K. Seetharama Rao, Proprietor**

Show cases in the main lounge are offered for publicity purposes.  
Enquiries invited for taking up space facing main road for Shops, Saloons, etc

may be of some guidance to you. You are, no doubt, costing your work on a cost plus basis, in which case the price you quote for jobs in which the raw material element is highest will be too high, and the profit made on jobs where the labour and machine costs are highest may in some cases show an actual loss.

9. Q. We notice bad registration across the cylinder on our Miehle machine. We believe this is due to wear of the cylinder journals. Please let us know how this can be remedied?

A. This appears to be a case of worn machinery. If the cylinder journals are slack no doubt other components need attention or replacement. I advise calling in a good printing machine Engineer to examine the machine in question.

10. Q. What is meant by static electricity? How does it affect the work in the machine department?

A. Static Electricity can most simply be described as a form of magnetism which can affect paper or machines. In the case of machines it often

causes the ink to fly off the rollers in a fire spring (see question 5 in November issue). Where paper is affected it can cause sheets to stick together when feeding and also aggravates set off. The only cure is to earth the machine and in the case of paper to run the static, to earth by inserting a flat strip of metal, attached to an earth by means of a flexible lead, into the pile of paper at various levels to disperse the static.

11. Q. Make Ready: For halftone blocks rubber sheets are used for the beds. For better results what should be done?

A. Rubber sheets are not to be recommended in the printing of halftone blocks (see question 6 in this issue). There is no alternative for good efficient recognised make ready.

12. Q. Overprinting i.e., Varnishing on printed copies with the help of L. P. Treadles, is it possible, how?

A. Gloss overprint varnish may be applied by means of letterpress platen machines by using a flat tint block and overprinting the work solid with a good class Overprinting varnish. This is done in the same way as you would print an ordinary 'Flat Tint'.

## Lithographic Printing in America

(Continued from page 12)

by 40 in. negatives and positives. The blue line key is used to a great extent and serves as a patching guide and a check on film size; it is quite usual to see a 40 in. by 60 in. glass sheet with, say, 36 greeting cards cut and patched into position. The film used is not dimensionally stable but identical treatment for all colours throughout all the preceding stages, together with relative humidity control, usually minimises any difficulties of fit.

36. Horizontal type whirlers being in favour are used to a greater degree than the vertical type. Bi-metal and tri-metal plates are in limited use for production purposes with varying degrees of success; in most factories their use is still experimental. New types of paper, plastic and cellulose-acetate plates are being developed in the laboratories, though in two instances these had reached the workshop proving stage.

37. Hand transferring was conspicuous by its absence, except in one firm which specialises in printing posters; in the large modern factories hand transferring is regarded as obsolete and out-of-date. Some 300 transferrers deprived of employment in that section were said to have been trained in other branches by the A.L.A. and had continued to work in the industry.

(Reproduced from the book "LITHOGRAPHIC PRINTING" published by Anglo-American Council on Productivity, 21 TOTHILL STREET, LONDON, S. W. 1.)

Price 5 Shillings.

## Letterpress Printing in America

(Continued from page 15)

18. We were impressed by the thorough way in which work is planned in the U.S. Management is on its toes and tackles jobs more from the angle of the production engineer than from that of the craftsman. Pains are taken to ensure a smooth flow of work and the minimum waste of time, effort and material.

19. We tried to find an answer to the question whether the average worker in the printing industry in the U.S. works any harder than his British counter-part. He certainly works much more effectively and produces far more, thanks to specialisation, planning and the other matters dealt with in this Report, but our view is that his expenditure of physical effort is not proportionately greater than that of the average British printer.

20. Another cause of high output is the American's answer to the question "How much quality can we afford?" Printing of the very highest quality often requires much more time than printing which is not quite so good. In America, though we saw some printing of the highest standard, we also saw many cases where quality was varied according to the purpose which the piece of printed matter had to serve. In other words, time was not wasted in bringing to perfection jobs that did not need to be perfect.

21. Slight imperfections in the quality of printed matter can often be completely masked from the layman by the quality of design, and much of the print we saw in America was, we considered, better in its design than its British counterpart.

22. Largely because of trade union opposition, very few American printing firms have incentive schemes, that is to say, schemes of bonus payment based on work measurement. One of the firms we visited, however, did have such a scheme, and some aspects of it will be of interest to British firms. Although Americans achieve high output without the incentive of payment by results, it does not follow that such schemes will serve no purpose in Britain. Here full employment is the policy, but in American industry generally many are out of work. The Team feels that incentive schemes may be a useful substitute for what is provided in America by the fear of unemployment. Other incentives, however, exist throughout America in the form of abundant goods in the shops. Americans realise that the higher their output the greater their share of these goods will be and the lower will be their cost. The Team is satisfied that an increase in productivity in British industry will produce similar incentives in this country.

(Reproduced from "Letterpress Printing" published by Anglo-American Council on Productivity).

Price two shillings and six pence.

## In the Service of the Printers for many years Now!

- C & P RUBBER ROLLERS
- BREMER STITCHING
- C & P TREADLE SPARE PARTS
- CUTTING MACHINE KNIVES
- CHASES & MOULDS
- HELROD MACHINE LEADS
- GAUGE PINS GERMAN
- SCABRA STAPLE MACHINES & STAPLES 2, 2 1/2, 2 3/4, 1 1/2, 1 3/4 AND EVERYTHING IN PRINTING MACHINES AND MATERIALS ETC.

PLEASE CONTACT

**Gunvantray & Company**  
KADIA CHAR RASTA - NAVA DARVAJA ROAD  
AHMEDABAD - 1

**Manufacturers of** 14 **LANGUAGES of** IN PRINTING TYPES, HALFTONE, LINE & ELECTRO BLOCKS etc.

**SUPPLIERS OF PRINTING REQUISITES**

**CHINTADRI PET, MADRAS-2**

TELEPHONE: 8291

TELEGRAMS: 'BHUVANA'

தமிழ் தேவநாகரி ENGLISH

சங்குத் ஹிந்தி மராठी

ഗ്രന്ഥം മലയാളം

ಕನ್ನಡ ಭಾಷೆ ENGLISH

గుర్రానీ తెలుగు

ENGLISH

**Introducing ADOLIN**  
THE IDEAL INK CONDITIONER

FOR

Fine reproduction use ADOLIN in ALL your inks. Scientifically engineered to overcome many causes of poor printing. ADOLIN also eliminates the need of varnish thinners, modifiers and compounds. It is an invaluable time saver! It is economical! It is guaranteed!

A combination of natural and synthetic chemicals—ADOLIN is designed to accomplish various specific purposes. Read below the many distinctive advantages offered only in ADOLIN.

|                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADOLIN is unexcelled for gloss inks and overprint varnishes, prevents too rapid drying on the press, without affecting gloss, also does not retard drying but keeps ink open on the press.         | ADOLIN increases ink by its own additional bulk and weight assures a saving of 15% to 30% through greater coverage without reducing colour strength of the inks, producing smooth, uniform and sharp impressions.                                                                                            |
| ADOLIN prevents crystallisation and is unequalled for trapping of process and label inks in multi-colour printing. When added to each colour, perfectly laid colours are assured without crawling. | ADOLIN prevents ink waste caused by skinning and gelation. Pour or spray over ink in fountain and ink containers to form coating. When ready simply mix into the ink.                                                                                                                                        |
| ADOLIN does not affect tints or light pastels, shades, also prevents picking and reduces too much tackiness in the ink.                                                                            | ADOLIN prolongs Roller Life. Repels moisture and stickiness...prevents surface glaze and crystallisation of ink ingredients in pores of roller. Reduces wash-ups when sprayed on rollers during idle time...protects roller ends against destructive friction...keeps rollers in condition during long runs. |

ADOLIN is synthetic.....non-inflammable and non-toxic

**DIRECTIONS TO USE**

Add one-half to two ounces per pound of ink, depending on the consistency of the ink, and speed of the machine, more may be added if desired but not more than 3 ozs. per lb. of ink.

**OUR TECHNICAL DEPARTMENT AT YOUR SERVICE**

**RAINBOW INK & VARNISH MFG. CO. LTD.**



RAINBOW INK & VARNISH MFG. Co. Ltd., BOMBAY