

SL
M143 m 211, NE
m 57.4-11.1
785

RINTTECH

OFFICIAL JOURNAL OF THE INDIAN FEDERATION OF PRINTING TECHNOLOGISTS

Vol. IV

JUNE 1957

112 No. 11

for

PRINTING INKS
QUALITY PAPERS
GERMAN LITHO PLATES
GERMAN PROCESS ZINC SHEETS
"BUTTERFLY" GUMMED PAPER
"BUTTERFLY" GUMMED TAPE

Indenting Agents

PRINTING MACHINERY
PAPER
MATCH CHEMICALS
IRON & STEEL
AND
PRINTERS' SUNDRIES

*Individual Consideration
is always given to your own
Particular Requirements*

Contact

K. ORR & COMPANY
40, CHINNATHAMBI STREET, MADRAS-1

JL

re: 3519

Grams: PRESUNDRY

M143m21, N5384-

N57-4.11-12

178503

Cable: "BHUVANA"

Phone: 84469

SWADESI TYPE FOUNDRY

51, Guruvappa Chetty Street

CHINTADRI PET

MADRAS - 2

Producers of

TYPES IN FOURTEEN LANGUAGES
HALF-TONE & LINE BLOCK MANUFACTURERS

Manufacturers of:

Perforators, Lead Cutters, Mitreing Machines

Dealers in

ALL KINDS OF PRINTING MACHINERIES AND ACCESSORIES

Direct Importers of

Both New & Rebuilt Printing Machines from U. K. and U. S. A.

*Large stocks of all kinds of machines from Wharfedale to
platen and all varieties of printing materials including
roller composition are always available.*

ENQUIRIES SOLICITED

T. A. SUBRAMANIA MUDALIAR
Managing Partner

496
94

VOL IV JUNE 1957 No 11

PRINTECH

The Official Monthly of The Indian Federation of Printing Technologists Madras

President

R. SIDDIQUE, D.I.P. (LOND)
M.I. PTG. M. (LOND)

Hony. Secretary

S. SRINIVASA RAO, L.P.T.

Hony. Editor

V. R. SIVARAM, L.P.T.

Office

7, KONDI CHETTY STREET
MADRAS 1

Grams: "PRINTECH"

All correspondence regarding the Federation should be addressed to the Hony. Secretary.

Regarding matter for publication, subscription and advertisements should be addressed to the Hon. Editor.

All payments should be sent only by crossed postal order or cheque, made payable to the Indian Federation of Printing Technologists, Madras.

AVOID MONEY ORDERS

ANNUAL SUBSCRIPTION FOR PRINTECH Rs. 5

CONTENTS

- 3 RANGE OF LITHO PAPERS CONSIDERABLE
- 7 REDUCING INK MOTTLE FOR QUALITY
- 11 THE ORIGIN OF NEWSPAPERS
- 15 APPROPRIATE COLOUR COMBINATIONS
- 18 NEWS

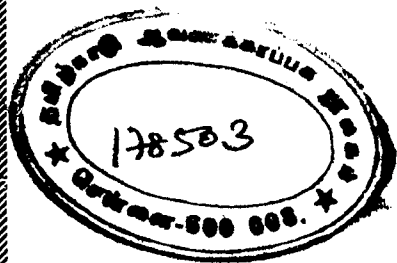
What the Indian Printer wants

is a **GOOD INK**
at a **REASONABLE PRICE**

That's why he buys

G A N G E S

PROVED AND ACCEPTED FOR 29 YEARS



FACTORIES AT

HOWRAH BOMBAY MADRAS

RANGE OF LITHO PAPERS IS CONSIDERABLE

A. M. B.

THE range of papers at present available for the lithographic process of printing is considerable. The evolution of these papers, like many others, is due to the gradually changing demands of the printing craft.

In the early days of the process, when all work was executed by direct litho, it was considered that the paper quality most suitable for the purpose was one that was only slightly sized, in order that there should be no rejection of the printing ink, and which possessed a fairly smooth rolled surface. Anything in the nature of a rough surfaced paper was judged totally unfit.

Later we witnessed the introduction of the offset lithographic process and with this it was discovered that the delicate tints associated with this process could be effected on the roughest kinds of paper. Consequently the frequently used earliest offset papers were in the nature of the roughened cartridge qualities. At that time, as today, this quality of paper was used for water colour and crayon drawing and it would seem that as there is an affinity between the soft delicate shades of offset litho and these forms of artistic work the choice was natural.

But as time progressed the printer began to realise that the use of these extremely roughened surfaced papers, which in effect are a series of hills and valleys, was detracting from the full value of the beauty of his colour work. This is understandable, for the offset process is actually the result of extreme pressure and it is naturally a handicap in this form of printing if it first has to overcome the paper surface before the ink is accepted.

Full Circle

Consequently he began to favour a paper slightly less rough, out of which demand came

the manufacture by the paper maker of the modern offset cartridge as distinct to the ordinary cartridge. So far has this demand progressed that we have now travelled almost full circle, having passed beyond the slightly roughened or egg-shell finish as it is termed, by producing offset papers nearly as smooth as the direct litho papers. At the same time the shade of these papers has moved away from the slightly creamy of the initial cartridge qualities to the modern high white. There is, of course, certain work executed on the plain and embossed cover and other roughened qualities but we are here considering more especially the ordinary white offset cartridge.

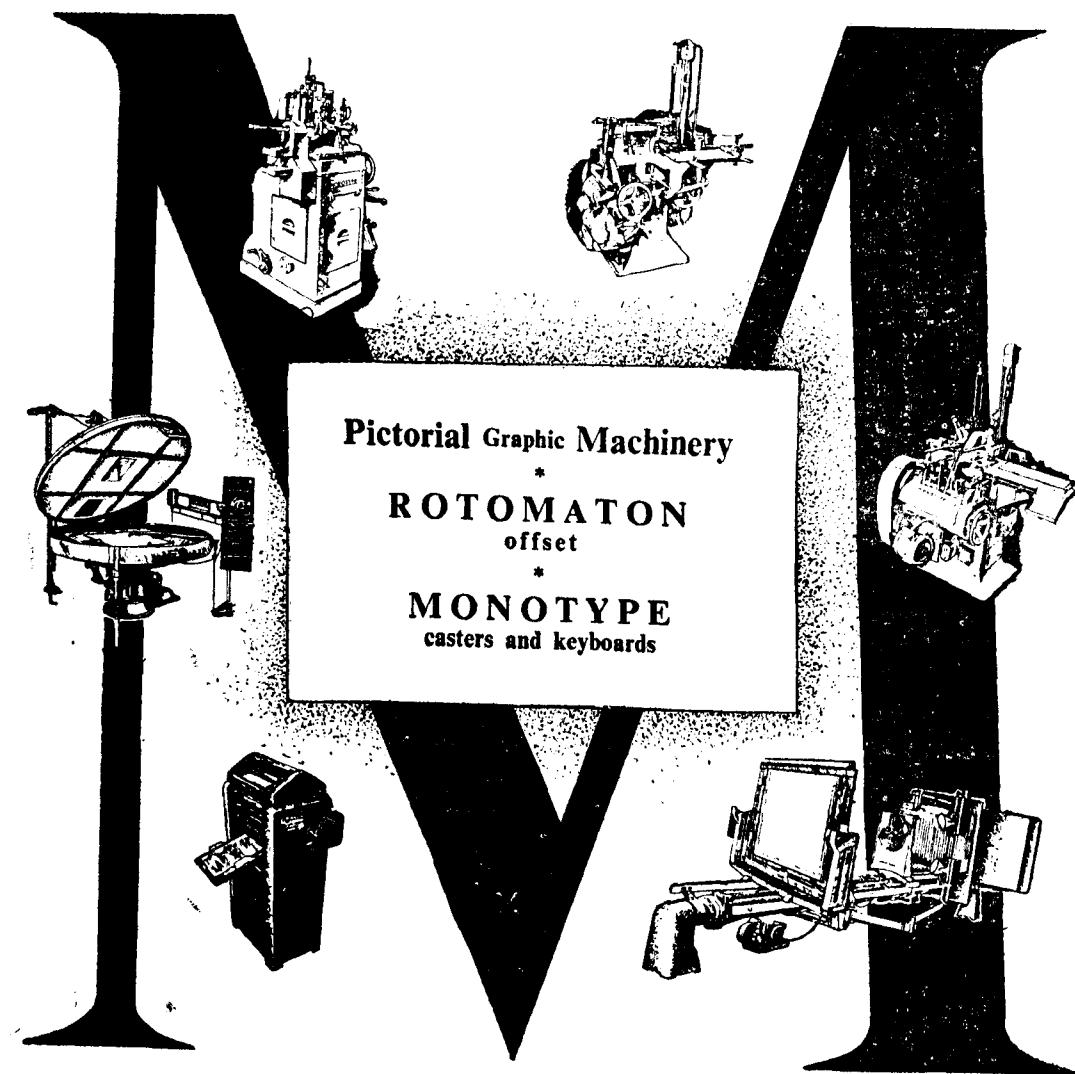
These papers are manufactured either from a fibre furnish of pure wood or a mixture of wood and esparto grass. The former, although the cheaper, nevertheless possess the necessary characteristics for the execution of high standard commercial work, including the essential features of strength, opacity, folding qualities and a pure white shade.

The esparto qualities, however, are much in request for this class of printing and many of the modern esparto lithographic offsets are among the most agreeable and presentable papers produced. The selection of the esparto grades is not a haphazard choice as this particular fibre possesses certain attributes not generally or to such a marked degree obtainable with other fibres. Being fine and short they produce papers close and regular in appearance, and among their more practical advantages are greater bulk together with softness and the fact that they present a closely woven sheet.

Register Work

Perhaps the most important feature of an esparto quality is that it has a lesser tendency towards expansion than other qualities and is

A Strong Team



THE MONOTYPE CORPORATION LIMITED

8, MISSION ROW EXTENSION
CALCUTTA 1

* Registered Trade Mark

consequently particularly suitable for register work. Finally esparto papers are even surfaced and handle fairly firmly.

Apart from the general features mentioned above the production of a good lithographic paper probably calls for more exacting requirements than papers for any other class of printing. Perhaps the chief requisites are flexibility, ink receptivity and moisture content, and added to these are brightness of shade, a high degree of opacity, a fair degree of strength and resistance to any form of picking.

The very nature of the printing process demands that the paper is sufficiently pliable to be squeezed up against the blanket and that it should accept the ink immediately. Also as this is a planographic form of printing there is naturally a great amount of pull on the paper when the impression is being taken. Consequently this demands a surface where the fibres are well bonded together. If loose fibres or dust, resulting from guillotine trimming, are present then these fibres or dust will be pulled away from the surface and build up on the blanket and result not only in destroying the value of the printing but loss of time through having to stop to wash up.

Another important feature is the control of the moisture content of the paper to prevent waviness or curl which will only lead to creasing in the finished printing. As every offset printer knows, this is one of the most difficult problems both for him and the paper maker. While the paper may be in excellent condition when it leaves the paper mill it is liable to encounter many atmospheric changes before it reaches the machine. In order to avoid undue risk, it is usual, whenever possible to store the paper on skids or hang it for some time before use.

Apart from the ordinary mill finished printing papers and the specially produced offset qualities the virtue of the lithographic process is that it can provide excellent results on so many other classes of papers.

Among other popular grades are the M.G. posters which at one time was highly glazed quality but today this high glazing is not so

popular. With this quality the work is usually executed on the M.G. (mill glazed) side leaving the roughened under side for its express purpose of pasting. But occasionally where a more softened effect is desired the printing is produced on the roughened side.

Another quality in frequent demand is the super-calendered printing, usually a wood free quality, and hard sized, used for multi-coloured label work, frequently subjected to after treatment by varnishing and often, like the M. G. poster, left with the underside slightly roughened. Sometimes a coated art or chromo is selected for this printing process. In this case it is essential that the coating is of such a nature that it will stand up to the pull of the process and no signs of picking or plucking should operate. Perhaps one of the chief virtues of the coated quality is its ready absorbency of the printing ink.

Finally the grain direction of the sheet has an important bearing on the efficiency of the lithographic paper.

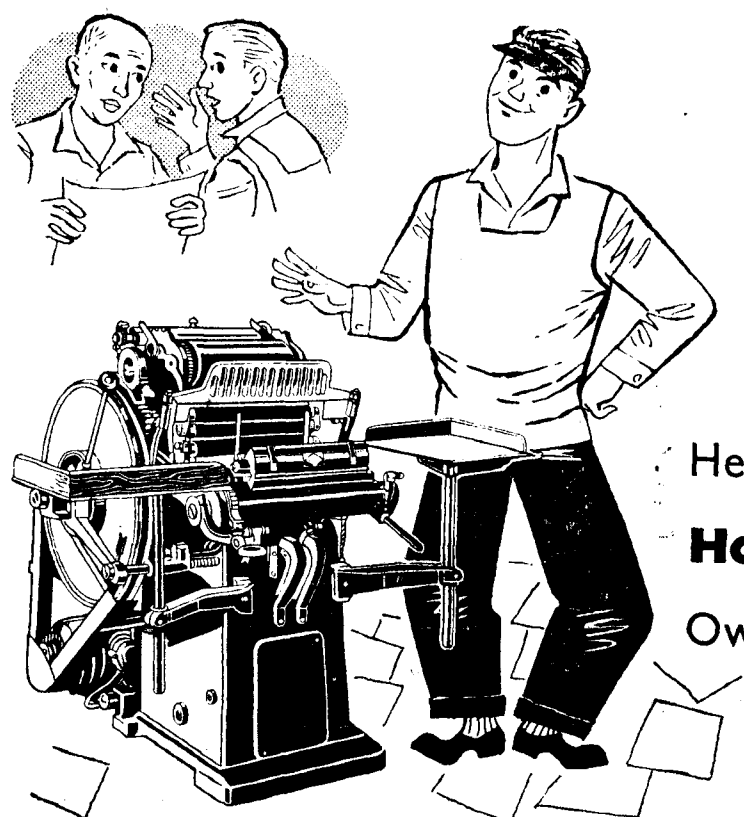
"Cut Long Grain"

To lessen the propensity of these papers to the fault of stretching, or more correctly expanding, they are cut from the web of paper the narrow way across the machine or as it termed "cut long grain." For the benefit of the uninitiated a brief explanation of the terms may be of service. It will be readily appreciated that the process of papermaking the selected vegetable materials to individual fibres into a flat continuous sheet. In the process the materials are cleaned and bleached receiving an addition of sizing and loading the appropriate juncture until the paper maker has a mixture of prepared pulp and water the ratio of approximately one per cent pulp and the balance water. This mixture is poured at a controlled rate, on to a finely meshed continuous wire and it is on this wire that the sheet is formed.

As the mixture travels along the wire a proportion of the water falls through the wire leaving the fibres on top and the gradually coalesce until they form the sheet. Each fibre

JUNE 1957

PRINTED



He's a
Hohner
Owner...

No wonder then he's pleased... for he has *no* printing problems whatsoever. The versatile HOHNER Platen Press is ideal for small print jobs—producing quality printing without rival—except from *another* HOHNER of course!

Special Features: ★ Cylindrical Inking ★ Excellent Rolling Power
 ★ Sturdy Impression ★ Long Life

For further details please consult:

THE EAST ASIATIC COMPANY (INDIA) PRIVATE LIMITED
Printing Machinery Section

Bombay - Madras - Delhi - Calcutta - Bangalore - Secunderabad

is in effect a tiny tube and as these fibres flow along the wire they naturally have a tendency to move forward head foremost. The initial section of the wire is subjected to a constant joggling motion which tends to cause the fibres to fall across one another and thereby give strength to the sheet. If all the fibres laid in the length direction there would be no strength across the sheet.

Direction of Flow

Although the shake imparted to the wire, affects the fibres by causing them to fall across one another and felt together it is never so great as to overcome their tendency to flow head foremost and parallel and it is obvious that the direction of the flow will always be the strongest way of the sheet in machine made papers.

Papers for lithographic purposes are invariably cut with the narrow way of the sheet across the machine direction, consequently they have the greater number of fibres running parallel to the length of the sheet. Any change caused by the paper absorbing moisture from the atmosphere is represented by the fibres expanding across the sheet as their natural tendency, being tubes, is to expand in width. Therefore, the expansion in lithographic papers, it will be observed, occurs where it is least prejudicial.

Arrow Mark

It is the custom now to mark the ream wrappers of these papers with an arrow which indicates the "grain" or fibre direction but if the ream is not so marked and there is doubt as to the direction of the grain there are several simple tests which will indicate this machine direction.

On looking through the sheet the diamond shape marks of the papermaking machine wire may be visible in some papers and the acute angles of these diamonds point in the direction of the machine flow. With some papers it is difficult to observe these diamonds and another test may be tried. From the paper two equal strips are cut, one along and one across the

sheet, and when these are held up side by side one strip will tend to droop more than the other. The stiffer sheet will signify the machine direction.

Reducing INK MOTTLE for Quality

THE prevalence of printing ink mottle can often be the difference between a beautifully printed job and a mediocre one. On practically every printing job, it is desirable to have a smooth, nonmottled print. Here are several ways to obtain a smooth ink lay.

There are many factors that influence mottle but perhaps the three most important are press pressure, paper, and printing ink.

One way of reducing mottle, and the most convenient method available to a pressman, is to use minimum printing pressure. In many cases, this requires a better makeready than is usually used. The addition of another folio to the entire form to bring up one low spot can cause mottle. It is surprising how much impression can be reduced if the pressman is willing to do a little more spotting up than usual.

Paper can cause mottle if the right printing ink is not used. The printer will select a particular sheet for the end use of the job to be printed. For instance, a sheet that will have a high gloss when spirit or press varnished requires a non-absorbent paper coating. This type paper is not conducive to smooth, non-mottled print but through proper ink formulations, a smooth lay will result. Generally speaking, a relatively non-absorbent paper surface requires a greater amount of ink than a smooth absorbent sheet, particularly if the paper surface is slightly rough. An ink to print on this type of paper must have a good

TRADE **LINOTYPE** MARK

WHERE THERE IS PROGRESS

Among the most powerful influences in India today are newspapers, technical journals and school books. But they must be good, plentiful and cheap. They can be!

The LINOTYPE composing machine is the World's most economical and efficient tool for setting printed matter. With equal ease it can set Roman, Hindi, Marathi, Bengali, Assamese, Tamil, Burmese, Sinhalese or Urdu—in fact, over 850 languages and dialects.

WHERE THERE IS PROGRESS THERE IS A LINOTYPE

LINOTYPE AND MACHINERY LTD.

14 MADAN STREET, CALCUTTA 13

10/29 MOUNT ROAD
MADRAS-2

11/13 HORNIMAN CIRCLE
BOMBAY-1

body but the tack must not be higher than normal. This will enable the pressman to carry a little additional ink without mottle.

On a smooth absorbent coated sheet, a frequent cause of mottle is too much ink. If the pressman is forced to carry an excessive amount of ink to get the proper colour, the only solution is to have the ink-maker strengthen the colour of the ink, so a minimum amount of ink can be run. Transparent inks will mottle much more than semi-opaque or opaque inks, so when possible it is best to use the latter two types.

It might be well to mention something that

causes ink-makers quite a bit of trouble. It is not unusual for a printer to send a colour-copy with a bad mottle to his ink-maker with the notation "match exact without mottle." It is impossible to match *exactly* a mottled colour without duplicating the mottle. A smooth laying colour will always appear more dense than a mottled print. A close match can be made but not an exact one.

To summarize, to keep mottle to a minimum, (1) do not use excessive impression, and (2) send the sheet to be run to your ink-maker to be used in matching your colour.

Courtesy: The Inland Printer

BEST GERMAN MACHINES

FOR BINDING DEPARTMENTS

FOMM BOOK BACKING MACHINE

Model: FGH

For working books of about 4" thickness and 15½" width. Indisplaceable for producing high quality books.

FOMM BOOK BACK ROUNDING MACHINE

Model: FBR 67

For books of any height upto 25½".
For faultless rounding of the backs of books.

FOMM LATEST THREE-KNIFE TRIMMER

Model: AHDN—30x37 cm.

FOR BOOKS OF

11⅝" x 11⅝" to 11⅝" x 14⅝"

Height of Pile approx.: 5½"

Fully automatic clamping for all heights, uniform strong pressure, completely enclosed construction and small space requirement, with built-in safety guards for hands.

For full particulars and prices write to:

Sole Agents for India

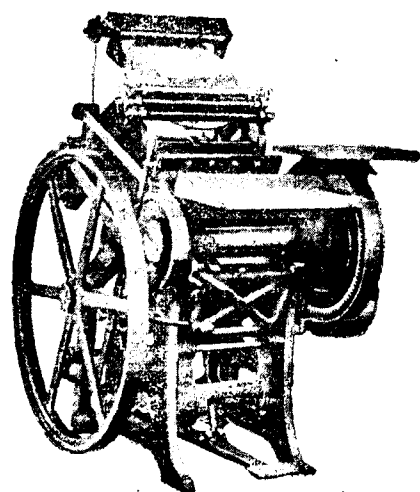
INDO-EUROPA TRADING COMPANY

AGAKHAN BUILDING, 9, DALAL STREET, FORT, BOMBAY-1

Also at: DELHI, CALCUTTA, MADRAS



" ORIGINAL "
AMERICAN REBUILT
CHANDLER & PRICE
PRESSES



AVAILABLE IN
F'Cap Folio (8" x 12") Crown Folio (10" x 15")
Demy Folio (12" x 18")

NORTON & CO.

SPARTAN TYPE FOUNDRY

CHOO LAI

::

MADRAS-7

SET IN 2 PIECES OF 18 Pt. BUTTERFLY BORDER Rs. 3-8-0 per lb.

PRINTECH

THE ORIGIN OF NEWSPAPERS

THE idea of recording current events, and circulating written accounts of them, originated with the Romans. When the Roman armies were fighting abroad, the people of Rome naturally felt a keen desire for news of their achievements. At first, this want was supplied to some extent by letters sent home by the military commanders, and communicated to the people by the Government officials.

Subsequently, a journal called *The Acta Diurna* was published. The intelligence was supplied, as at present, by reporters styled "actuarii", and the items published resembled the contents of a modern journal, embracing the proceedings of the courts of law and public assemblies, descriptions of public works and buildings in progress; lists of births, deaths, and marriages, and trials for divorce, which were of frequent occurrence among the Romans, were very fully reported.

Julius Caesar, on entering upon his Consulship in 59, B.C. authorised the publication of the proceedings of the Senate, upon which there had been, previously, an injunction of secrecy.

A Very "Old Established" Journal

As is well known, the Chinese invented a kind of printing from wooden blocks. Soon after they found out this art they utilised it by publishing, in about the ninth century, a newspaper or record. It announced such matters as changes in office, as they occurred from time to time, with information about laws, taxation, and public events; in fact, whatever the Government desired to communicate to the public.

This newspaper has been continued ever since, hence, it is the oldest existing newspaper in the world, being established many centuries. It is printed in Pekin, and called *King-Chan* or *Court Transcripts*, but Europeans generally

called it *The Pekin Gazette*, and its contents are compiled from the proceedings of the General Council of the Empire.

Liberal Views of Copyright

In China *The Pekin Gazette* may be reprinted in whole or in part by anyone so disposed. None of its items of news are copyright; so that they are correctly copied, without alteration or comment and anyone can appropriate them. In fact, in the provinces there is a large business carried on in transcribing the *Gazette* in portions, for persons who cannot afford to purchase the full number. The contents are very like the matter supplied by *London Gazette*, with the addition of the information collected by the Press Association, etc.

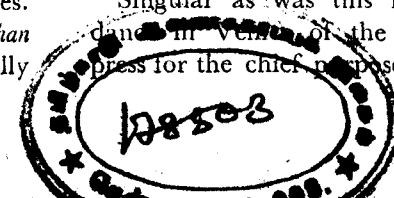
Written Newspapers

The Germans, it may be taken for granted, invented printing; and they were the first to apply the new method of inter-communication to the publication of pamphlets and proclamations. They never thought, however, of a periodical newspaper.

The first European newspaper was the *Gazette* issued by the Venetian Republic during a war which commenced in 1563—about a hundred years after the invention of printing—against Solymán II in Dalmatia; but although these gazettes contained military and commercial intelligence which was read at a fixed place or places by those who desired to learn the news, they were written and not printed. For many years they continued to be circulated in manuscript, notwithstanding the recognised utility and employment of the art of printing in the production of books.

Singular as was this long-continued avoidance in Venice of the use of type and the press for the chief purpose to which they are

JUNE 1957



BLOCKS!
&
PHOTOS!

↓

K
&
P

Klein & Peyerl

30 MOUNT ROAD
MADRAS-2

Phone : 84167 Grams : 'KLEINPYERL'

PRINTED

now applied, a similar state of things occurred in England, for the people of Great Britain were principally supplied with such news as they received during a large portion of the eventful seventeenth century, by written news letters rather than by printed newspapers.

The First Printed Newspaper

Using the word printing in the ordinary sense of taking impressions from movable type, it may be said that the first printed newspaper appeared in the early part of the seventeenth century. In fact, attempts were made, nearly simultaneously, to establish printed and regularly-published newspapers in Germany, France and England.

The first German newspaper in numbered sheets was issued in 1612. It was called an *Account of what has happened in Germany and Italy, Spain and France, the East and West Indies, etc.*

The first French newspaper was established at Paris, in 1632, by Renandot, a physician, famous for his skill in collecting news to amuse his patients.

The First English Newspaper

It was when the reign of the first James was drawing to a termination—when Ben Jonson wrote the poet's laurels, and the admirers of William Shakespeare were deploring his then recent death; when Cromwell was selling ale in Huntingdon; when Milton was a school boy trying his hand at Latin verses; and when Hampden was living as a retired country gentleman in Buckinghamshire—that London saw its first newspaper.

The puny ancestor of the present broadsheet was published in the Metropolis, in 1622, and was first offered to the British public by a gentleman of the name of Nathaniel Butter. It was a small quarto, of eighteen pages, called the *Certain News of the Present Week*.

The First Newspaper Prospectus

In comparison with the type of prospectus which we are all used to seeing to-day, the following extract from one issued over three hundred years ago will be interesting:

"If any gentleman, or other accustomed to buy the weekly relations of news, by desirous to continue the same, let them know that the writer, or transcriber rather of this news, hath published two former news, the one dated the second, the other the thirteenth of August, all which do carry a like title, with the arms of the king of Bohemia on the other side of the title-page, and have dependence upon one another; which manner of writing and printing he doth purpose to continue weekly, by God's assistance, from the best and most certain intelligence. Farewell, this twenty-three of August, 1622."

This is undoubtedly the first English journal; because it was the first publication of news which the editor publicly purposed to continue regularly. There are in the British Museum copies of a paper called *The English Mercurie*, purporting to be printed in 1588, and to be the first English newspaper; but one of the late librarians conclusively proved them to be forgeries, so that Nathaniel Butter goes down to history as the First Journalist.

He did not claim much originality or genius. His chief merit consisted in the fact that he was the first to put into type what he and others had been in the habit of giving to the world in manuscript. Like many projectors before and since, Nathaniel got more kick, than pence, and gained more notoriety than profit from his speculation. Wits sneered at him, and laughed derisively; the public did not support him; and Ben Jonson, after fourteen years of the *otium cum dignitate*, took up his pen, and wrote a comedy called *The Staple of News*, in which the poor editor and his paper were riddled with the shafts of ridicule.

Printing and Journalism

Cucheval Clarigny, in his *Historie de la Presse en Angleterre et aux Etats-Unis*, says: "The newspaper is the offspring of the art of printing; it could not exist without it. Rapidity of publication, regularity of appearance, the power of multiplying copies to infinity, condensation of a host of matters into a small space—all these

JUNE 1957

13

newspaper, could not be combined while the printing press had no existence."

Competition among Journalists

Nathaniel Butter continued his weekly newspaper for several years, sometimes with the second title of "*The Mercurius Britannicus*", but he provoked the ire of some who thought that the newspaper was likely, in some degree, to withdraw the popular favour from the drama, and of others, because it interfered with their occupation as news writers.

But Nathaniel, for a while, bravely bore "the stings and arrows of outrageous fortune," and he was not the first public benefactor who had, by a comedy, been held up to ridicule. His paper sickened towards the end of 1639, and appeared for the last time on the 9th of January 1640. So came to the birth, lived, and died, the first English newspaper.

competition in those days, and that Nathaniel had no opponents. Several sprang up to contest with him the honour and divide the spoil.

The exciting contest between the Puritans and Cavaliers, that finally brought Charles I to the scaffold, led to the publication of many news pamphlets, and to the establishment of a number of newspapers. It also developed the political organ, and gave birth to the first influential political editor, in the person of Marchmont Nedham, who, after savagely attacking the King and Court for a time, became an energetic champion of Royalty, and subsequently deserted the King when his fortunes waned, to become again an earnest advocate of the party of Cromwell and the Commonwealth.

Courtesy: Indian Print & Paper

3 questions...

GEVAERT

Litholine Ortho

PLATE-FILM-STRIPPING FILM

ALLIED PHOTOGRAPHICS PRIVATE LIMITED

(Mailing Department), Kasturi Building, Jamshedji Tata Road, Bombay 1.
Branch Offices: BOMBAY - CALCUTTA - MADRAS - NEW DELHI.

- 1 Is it possible for a screen negative, without reduction or intensification, to give an image on metal which, without "scumming", will produce an excellent reproduction?
- 2 Fine white lines on a dark background; fine black lines on a light ground; sharp angles of intersection—can a subject like this be satisfactorily copied, when even an excellent wet-collodion plate will hardly give any result?
- 3 Is it possible, by using a single kind of film or plate, to make all kinds of screen negatives for offset work?

.....1 answer

Yes—with "Litholine Ortho"! For line work as well as screen negatives "Litholine Ortho" films and plates will give better quality, increased production and lower costs. To find out how "Litholine Ortho" can give better results yet requires less work—write to:

APPROPRIATE COLOUR COMBINATIONS

AUDRAY L. LIVERSEDGE

WHILE much colour planning for printing is achieved by rule of thumb, guess work, trial and error and experience, scientific methods may be employed to better advantage. When scientific principles are used, much time may be saved in preparation of the printed piece; the results can be foretold with a finer degree of accuracy, and greater possibilities in the colour field are opened.

Good Combinations

The accompanying tables, based on science and research, show the approximate proportions in which numerous pairs of bright, vivid colours will look well. The main colour is, for instance, named, and then the proportion of each of the other colours which would look well with it is named. For example, a job with pure strong purple as the dominant colour would work out this way:

Pure Strong Purple	...	75 %
Pink	...	25 %
		100 %

The colours used for this research were brilliant rich solid colours printed on coated stock. On soft stocks, English finish, Book and Carton, for example, the intensity of all these colours would be reduced, allowing more latitude in the approximate amounts which would look well.

The degree of absorption of the paper used for printing has an almost unbelievable effect on the colour of the ink. Besides reducing the intensity of the colour, the paper may change the colour entirely.

One of the colours of which the ink is compounded may have an affinity for, and be

absorbed by the paper, while another stays on top and gets more than its share of attention. The same blue, for example, may be greenish on coated stock and purplish on a soft stock.

If the ink maker is given a sample of the stock on which the job is to be run, and is told the make and model of press which will be used, he can adjust the ink to look exactly as required. Otherwise, the result may prove very unsatisfactory.

The refraction of light is different from different kinds of surface, and the psychological effect of suede, homespun, oatmeal, parchment, grained and embossed papers must be considered. The colours will look different on each surface, because of the difference in light refraction.

As the colours mentioned in the tables are pure hues, the red is neither purplish nor yellowish, the crimson is process crimson, the pink is neither bluish nor yellowish, the rose purple is between crimson and magenta. Magenta is between rose-purple and purple. Purple is neither purplish nor greenish, spectral blue is process blue. Blue-green is between process blue and green. Green is neither bluish nor yellowish. Yellow green is between green and yellow. Yellow is neither reddish nor greenish. Orange is half-way between yellow and red. Brown is neither warm nor cool. Maroon is dark red.

If the colours you wish to use are half strength, or pastel colours; the proportion of the second colour can be increased up to a 40-60 ratio. One colour should always dominate, to avoid monotony.

Black, White and Colours

Black and white will combine with any printing ink colours. Where two colours are used

JUNE 1957

PRINTECH

15

in addition to black the proportions given will prove just as satisfactory as for the two colours without black. Where the colours are used for line, or type, the density of the colour will be reduced by optical mixing with the background colour, with accompanying reduction in colour intensity.

Allowances must then be made and a larger proportion may successfully be allotted to the reduced colour. The great thing is to realise that almost any colour will go well with any other colour, if the proportion is carefully worked out. There are a very few definite exceptions for every colour which it is well to bear in mind.

It will be found that some very unusual and appealing colour arrangements may be achieved with only two colours or two colours and black, and much printing that might otherwise be carried out in black only might be brought in by showing something outstanding in two colours without black or two colours with black.

Following are the tables showing the approximate proportions in which two pure strong colours may be successfully combined in printed advertising. Take the first table for example. Use 20 per cent violet with 80 per cent pure strong red; or 25 per cent blue with 75 per cent pure strong red, which is the dominant colour in the first table, while the pure strong purple is the dominant colour in the second table, and pure strong blue the dominant colour in the third table. Colours listed in bold face type are complementary.

Pure Strong Red (10 choices) with **Second Colour**

20%	...	Violet
25%	...	Blue
15%	...	Spectral Blue
35%	...	Blue-green
20%	...	Green
30%	...	Yellow-Green
25%	...	Yellow
15%	...	Orange
40%	...	Maroon
40%	...	Brown

with pure red avoid magenta, pink and purple.

Pure Strong Purple (11 choices) with **Second Colour**

20%	...	Crimson
25%	...	Pink
5%	...	Rose purple
20%	...	Spectral Blue
10%	...	Blue-Green
10%	...	Green
35%	...	Yellow-Green
25%	...	Yellow
10%	...	Orange
10%	...	Brown
15%	...	Maroon

With pure purple avoid pure red, magenta, violet, blue.

Pure Strong Blue (14 choices) with **Second Colours**

20%	...	Red
35%	...	Crimson
40%	...	Pink
10%	...	Magenta
25%	...	Rose purple
10%	...	Purple
15%	...	Spectral Blue
10%	...	Blue-Green
10%	...	Green
10%	...	Yellow-Green
Any proportion	...	Yellow
25%	...	Orange
Any proportion	...	Brown
15%	...	Maroon

Courtesy: The Canadian Printers and Publisher

W. T.'S. Advertising Success

A direct mail folder designed and used by Wiggins Teape, to advertise the Gateway range of N. C. R. (no carbon required) papers and boards, has been awarded the Certificate of Merit in the Dudley Turner & Vincent cup Contest 1956-57. The Competition is sponsored by the British Direct Mail Advertising Association.

PRINTECH

Here we are to your rescue against the attack of import control on your supply line

ALL BRAND NEW MACHINES FULLY GUARANTEED

OPEN FOR IMMEDIATE SALE:

From Stocks:

1. **Nebiolo's Quad Crown RFTK / M Cylinder** with Automatic Feeder & Perfection Extended Pile delivery, Brand New with Elec. Motor & Accessories in original packing.
2. **'Nebiolo' Latest Model RTE** - The wonder press of Printing World - Double Crown Cylinder Fully Automatic with all accessories.
3. **Polygraph German Make Brand New Automatic Ruling Machine 36"** size for both sides ruling-Model Dulima with 4 colour ruling arrangement in single operation-complete with all accessories.
4. **Japanese make Fujita model 85 Double Crown Cylinder** with geared inkers & geared distributors, flyer delivery.
5. **German make Original Victoria A2 Cylindrical Inking Platen Printing Press**, Demy Folio size for power drive fitted with safety guard and all other accessories.

FROM INCOMING CONSIGNMENTS:

1. **Nebiolo's Double Demy Cylinder** Automatic, RFTD/M with automatic feeder and extended perfection pile delivery with elec. equipments and all accessories.
2. **Nebiolo's Latest Model Automatic Cylinder** to replace the Platens-Superaudax PVCC-Demy Folio size with rotating cylinder and independent running of cylinder & carriage-complete for high class colour work.
3. **Polygraph Original Victoria Kobald II** German make cylindrical inking platen press, crown folio size for treadle & power.
4. **Polygraph Original Victoria C** platen printing press, with cylindrical inking, single crown size of heavy construction for power drive.
5. **Perfecta Pivano-Johne Paper Cutting Machines** - Italian make fully automatic model FG. 82/A for power drive.
6. The above model 82/S semi automatic with hand clamping.
7. **Rebuilt D/Crown Dawson & Sons Cylinder**, Demi Folio, C/Folio, F/Folio & 7" x 11" size Chandler & Price Platen Press etc. etc.



For all your Printing Requirements contact the experts:

THE STANDARD PRINTING MACHINERY CO.

Phone: 55096

12/81, SEMBUDOSS STREET, MADRAS-1 T'Grams: PRINTMACHO

NEWS

PRINTECH Diary Page:

News of people, production and events in the Printing, Paper and Publishing World

Postal Transmission of Newspapers

Mr. Raj Bahadur, Minister in the Ministry of Transport and Communications, replied "no", to a question in the Lok Sabha recently whether the Government were aware that newspaper were sustaining a heavy loss since the introduction of the new coinage system under which they had to affix two naye paise stamps instead of one pice stamp on registered newspapers.

Replying the Minister said that in terms of naya paisa the value of one pice stamp worked out to 1.5625 naya paisa and this had been rounded off to two naye paise. He added that the Government were already incurring a loss of Rs. 1.15 crores for carrying newspapers and they could not afford to incur any more loss.

Diploma Course in Paper Technology

A post-graduate diploma course in pulp and paper technology, the first of its kind, approved by the Government of India, will commence at the Indian Forest Research, Institute, Dehra Dun, from August 5, 1957.

The course will impart thorough practical and theoretical training to students for key technical posts in pulp and paper mills. The diploma holders will also be able to carry on technological research in the subject.

According to an official Press release the minimum qualification for admission to this course is a degree in chemical engineering of a recognised university.

Rajahmundry Paper Mills

A Rs. 2 crore scheme for the expansion of the State-owned Rajahmundry Paper Mills is being implemented by the Andhra Pradesh Government, it is learnt. Machinery is to be imported to cope with the need for improved and increased production.

The mills produce kraft, unpleached and blue match paper. The Government have sanctioned about Rs. 16 lakhs for the purchase of additional machinery to produce bleached varieties of papers.

The expansion programme envisages a five-fold increase in production capacity, viz., from ten tons per day at present to 50 tons ultimately.

Association of Master Printers, West Bengal

At a General Meeting of the Association of Master Printers, West Bengal held on 25th May 1957 at 4 p. m. at the Bholanath Dham, 32/2, Beadon Street, Calcutta, the Executive Committee for the year 1957 has been elected as per list below.

PRESIDENT:

Sri H. K. Dass (Eagle Lithographing Co. Pr. Ltd.)

VICE-PRESIDENTS:

Sri Gopal Ch. Ray (Navana Ptg. Wks. Pr. Ltd.)
Sri N. K. Gossain (Gossain & Co. (Printer) Pr. Ltd., Sri A. K. Sen Gupta (Bengal Autotype Co.), Sri A. P. Bhargava (Cal. Phototype Co. Pr. Ltd.)

HONY. SECRETARY:

Sri S. C. Ghose (Calcutta Press Pr. Ltd.)

Jr. HONY. SECRETARY:

Sri S. N. Banerji (Lotus Press)

ASSTT. SECRETARIES:

Sri D. P. Chatterji (Dipti Ptg. & Binding Wks.), Sri Sukumar Banerji (Glasgow Ptg. Co. Pr. Ltd.), Sri Narayan Lahiri (Loyal Art Press Pr. Ltd.), Sri Dhruvaranjan Das (Cardboard Box of India.)

HONY. TREASURER:

Sri Anil Kumar Roy (Art Union Ptg. Wks. Pr. Ltd.)

EX. COMM. MEMBERS:

Sri Satish Ch. Mitra (Bengal Cardboard Industries & Printers Pr. Ltd.) Sri K. C. Chatterji (Eton Press Pr. Ltd.), Sri Indu Bhusan Lahiri (Homin Art Press), Sri Ajit Mohan Gupta (Bharat Phototype Studio), Sri S. Das Gupta (Reproduction Syndicate), Sri P. C. Burman (Dabur (S. K. Burman) Pr. Ltd.), Sri S. N. Mitra (Bodhi Press), Sri U. N. Dey (Eastern Type Foundry & Oriental Printing Works Private Ltd.), Sri Jitendra Nath Dey (Express Printers Pr. Ltd.), Sri K. Pal (Nabajiban Press), Sri Tridibesh Bose (K. P. Bose Ptg. Works), Sri Nootbehari Dutta (N. B. Dutta & Co.), Sri Heramba Kr. Baisya (Style-O-Print), Sri Jitendra Nath Bose (Indian Press Pr. Ltd.), Sri Prafulla Kr. Mukherji (S. Antool & Co. Pr. Ltd.), Sri Kalidas Munshi (Pooran Press), Sri Kanchan Kumar Mukherji (Bengal Phototype Co. Private Ltd.), Sri Ranjan Kumar Das (Calcutta Job Press Pr. Ltd.), Sri R. K. Dutta (Block & Print House Pr. Ltd.), Sri S. B. Mallik (Bani Press), Sri S. C. Mukherji (Radiant Process Pr. Ltd.) Sri Madan Mohan Mukherji (B.M.S. Ptg. Works), Sri A.K. Dhole (Kanai Press), Sri K. L. Verma (Sri Chitragupta Press).

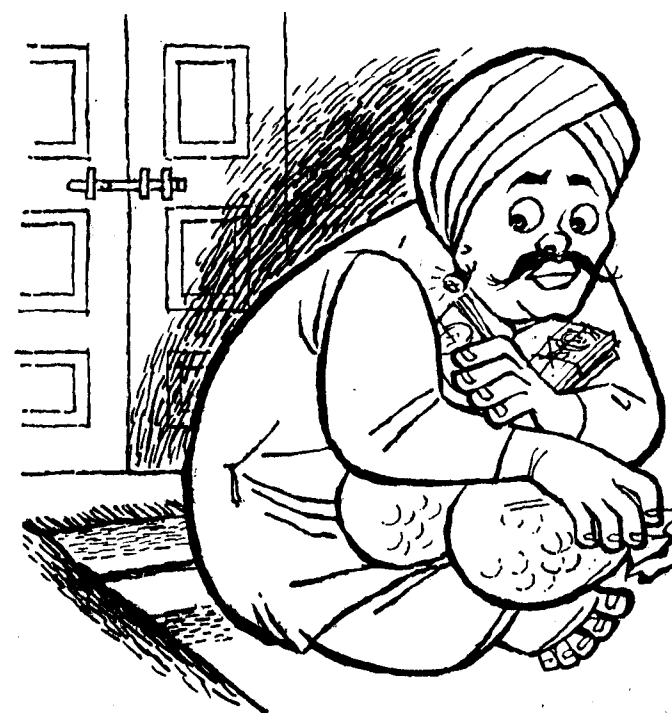
Folio Society Book praised by Mrs. Pandit

Her Excellency Mrs. Vijaya Lakshmi Pandit, High Commissioner for India, was the guest of honour at a party at the Folio Society held recently, to celebrate the publication of Niccolao Manucci's "Memories of the Mogul Court" and the opening of an exhibition of 17th and 18th century Indian paintings

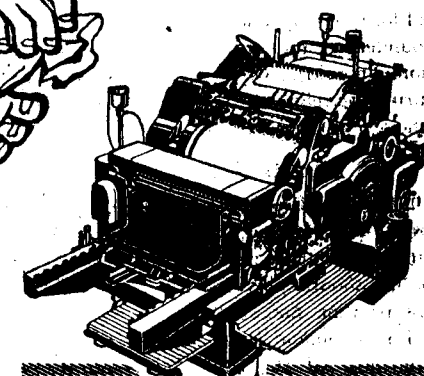
the word "possesses"

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

It's doubtful whether such incidental information will help you produce high-quality printing... but the words ORIGINAL HEIDELBERG (no 'ess' in either!) will guarantee you printing quality second to none. For an ORIGINAL HEIDELBERG Press combines versatility with speed and rugged performance. Proof? There are over 75,000 of them in use around the world.



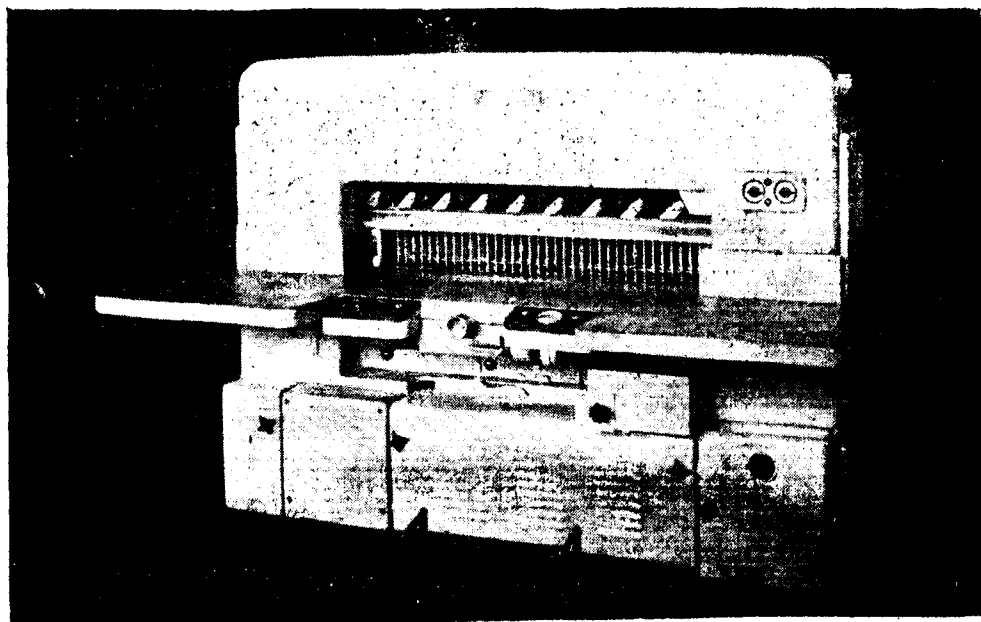
You cannot do today's printing with yesterday's machine and still be in business tomorrow.



Heidelberg Agents for Northern, Central and Southern India:

THE EAST ASIATIC CO. (INDIA) PRIVATE LTD.
Printing Machinery Section
Bombay, Madras, Delhi, Bangalore, Secunderabad

Three models to choose from:
Platens 10 3/4" x 15", 13 3/4" x 18 1/2" and the Cylinder Type 21 1/4" x 28 3/4"



VEB PERFECTA Bautzen announces a new Rapid Paper cutter model S 132. The machine is of solid construction and is equipped with many new features including hydraulic clamping, Two hand safety device, Electric hand guard programme cutting device and air cushioned table etc. The sole Agents for India are Messrs. Indo European Machinery Co. Private Ltd.

Mrs. Pandit praised the beautiful production of the book, which was printed by R. & R. Clark Ltd., Edinburgh and bound by Hunter & Foulis Ltd., of the same city. Illustrations were printed by Sun Printers, Watford. It is a Folio Society publication.

It has a striking cover design, by T. J. Widdaker, printed grey letterpress on bright yellow cloth. Setting is in 12 point Poliphilus, one point leaded. Display face used for title page and headings is the Amsterdam Type Founder's Rondo (a book-binders version appears on the spine in gold). Grey endpapers carry maps of India during the reign of Emperor Aurangzeb at the end of the seventeenth century.

Mr. K. C. Raman

Mr. K. C. Raman, Production Manager, The Times of India press, left Bombay by air for U. K. and the Continent on an extensive business tour.

During his sojourn abroad, he will visit the leading letterpress printing and photogravure presses to study modern production and management techniques.

As a member of the Advisory Committee of the School of Printing Technology, Bombay, he will visit the

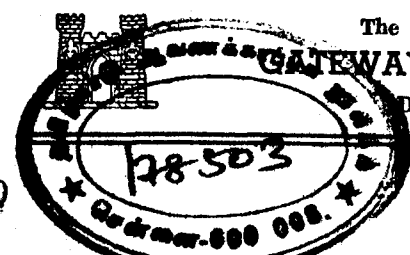
various leading printing machinery manufacturers and printing colleges.

Maximilien Vox

The Monotype Corporation Limited has pleasure in announcing that M. Maximilien Vox has accepted the post of typographical and artistic adviser to the Societe Anonyme Monotype, Paris.

M. Vox is a leading figure in the graphic arts internationally and in the field of book production in France. He is a printer and engraver, Member of the Salon d'Automne, winner of the Blumenthal Prize for typography in 1926, holder of the Saintour Prize of the French Academy of Historical Research, journalist and publisher, editor of the French printing annual, 'Caractere Noel', and founder of the Ecole de Lurs en-Provence.

Possibilities opened up by the advent of photographic processes in composition and printing lead the Corporation to hope that there will be outstandingly productive results from its association with M. Vox.

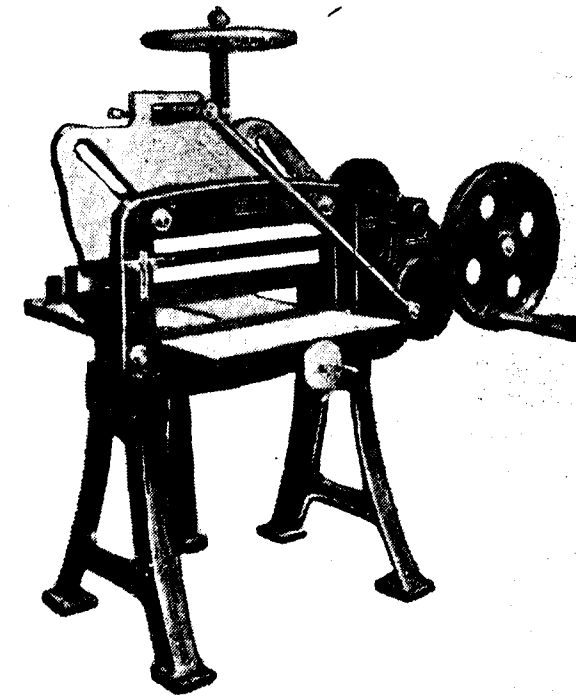


The Cover of this issue is printed on
GATEWAY PAPER, "Proven" White Art
Double Crown, 45 lb., 500 sheets



PRINTECH

Machines that Every Printer Needs



PAPER CUTTING MACHINE

Cutting length 24 inches. Height of clamp 5 inches.

This is a heavy and sturdy machine, constructed on the model of the famous "Karl Krause" Cutter. Wheel and Gear System. Diagonal Cutting movement, Double gearing draw rods, etc., are the important features. **Fitted with Sheffield Knives.**

Large number of machines in daily use all over India, Ceylon, etc.

MADE BY

The Madras Type Foundry

38, JONES STREET, G. T., MADRAS-1

Phone : 3 8 4 9

Grams : " PRINTYPE "

NELSON & CO.

(The Fine Art Type Foundry)

TYPE FOUNDERS, PRINTERS' ENGINEERS & SUPPLIERS

ESTABLISHED 1916

Manufacturers of

Printing Types in English, Telugu, Tamil,
Kannada, Hindi, Sanskrit, Devanagaree,
Malayalam, Ornamental Borders, etc.

Suppliers of

New & Rebuilt Treadles, Wharfedales, Paper
Cutting, Perforating, Mitreing, Wire Stitching,
Lead and Rule Cutting, etc., Machines,
Brass Rules, Printing Materials, etc.

Office at

SWAMI PILLAI ST., CHOO LAI, MADRAS 7

Post Box 452

Phone: 2722

Grams: NELSONCO

Factory at

AMINJIKARAI, MADRAS 29

Phone 61736

PRINTECH

OFFICIAL JOURNAL OF THE INDIAN FEDERATION OF PRINTING TECHNOLOGISTS

Vol. IV

JULY 1957

No. 12

for

PRINTING INKS

QUALITY PAPERS

GERMAN LITHO PLATES

GERMAN PROCESS ZINC SHEETS

"BUTTERFLY" GUMMED PAPER

"BUTTERFLY" GUMMED TAPE

Indenting Agents

PRINTING MACHINERY

PAPER

MATCH CHEMICALS

IRON & STEEL

AND

PRINTERS' SUNDRIES

Individual Consideration

is always given to your own

Particular Requirements

Contact

K. ORR & COMPANY

40, CHINNATHAMBI STREET, MADRAS-1

Phone: 3519

Grams: PRESUNDRY

Handwritten notes in a circular stamp:
11/43/211, 45284
NS-4-11-12
128503

Cable: "BHUVANA"

Phone: 84469

SWADESI TYPE FOUNDRY

51, Guruvappa Chetty Street

CHINTADRI PET

MADRAS - 2

Producers of

TYPES IN FOURTEEN LANGUAGES
HALF-TONE & LINE BLOCK MANUFACTURERS

Manufacturers of:

Perforators, Lead Cutters, Mitreing Machines

Dealers in

ALL KINDS OF PRINTING MACHINERIES AND ACCESSORIES

Direct Importers of

Both New & Rebuilt Printing Machines from U. K. and U. S. A.

*Large stocks of all kinds of machines from Wharfedale to
platen and all varieties of printing materials including
roller composition are always available.*

ENQUIRIES SOLICITED

T. A. SUBRAMANIA MUDALIAR
Managing Partner

VOL IV JULY 1957 No 12

PRINTECH

The Official Monthly of The Indian Federation of Printing Technologists Madras

President

R. SIDDIQUE, D.I.P. (LOND)
M.I. PTG. M. (LOND)

Hony. Secretary

S. SRINIVASA RAO, L.P.T.

Hony. Editor

V. R. SIVARAM, L.P.T.

All correspondence regarding the Federation should be addressed to the Hony. Secretary.

Regarding matter for publication, subscription and advertisements should be addressed to the Hon. Editor.

All payments should be sent only by crossed postal order or cheque, made payable to the Indian Federation of Printing Technologists, Madras.

AVOID MONEY ORDERS

**ANNUAL SUBSCRIPTION
FOR PRINTECH Rs. 5**

CONTENTS

- 2 I F P T NOTES
- 3 PRE-MAKEREADY
- 7 PLATES FOR SMALL OFFSET
- 10 SOME MACHINES FROM NEBIOLO SOCIETA
- 16 BOOK REVIEW
- 18 PATRA REPORT ON THE STORAGE AND HANDLING OF GRAVURE CYLINDERS
- 19 NEWS

Office

**7, Kondi Chetty Street
MADRAS-1**

Grams: "PRINTECH"

IFPT NOTES

Notice to Members

Members would be happy to hear that we are now entering into the fifth year. It is your co-operation and interest that goes a long way to build up the strength of the Federation. Members are reminded that their annual subscription is now due and an early remittance would be very much appreciated. Copies of PRINTECH will not be despatched for those members who are in arrears of subscription as on 15th August 1957.

Members are requested to contribute articles and other interesting news from time to time to our publication.

Acknowledgement

We wish to place on record of our sincere thanks to our well wishers and our advertisers on the eve of our entering into the fifth year of

publication. It is their support and co-operation that is responsible for the progress of the publication. We are sure that their support and co-operation would be extended in larger measure in the coming years.

Notice to Readers

Readers of this publication who are non-members of the Federation are reminded that their ANNUAL SUBSCRIPTION for the next volume is now due. They are requested to send postal order or crossed cheque only for Rs. 5/- drawn in the name of Federation so as to reach the Hony. Treasurer, IFPT, 7 Kondi Chetty St., Madras 1 on or before the 15th. August '57 so as to ensure the supply of future copies (Volume V. No. I. August 1957.)

S. SRINIVASA RAO,
Hony. Secretary

3 questions...

GEVAERT

Litholine Ortho

PLATE-FILM-STRIPPING FILM

- 1 Is it possible for a screen negative, without reduction or intensification, to give an image on metal which, without "scumming", will produce an excellent reproduction?
- 2 Fine white lines on a dark background; fine black lines on a light ground; sharp angles of intersection—can a subject like this be satisfactorily copied, when even an excellent wet-collodion plate will hardly give any result?
- 3 Is it possible, by using a single kind of film or plate, to make all kinds of screen negatives for offset work?

.....1 answer

Yes—with "Litholine Ortho"! For line work as well as screen negatives "Litholine Ortho" films and plates will give better quality, increased production and lower costs. To find out how "Litholine Ortho" can give better results yet requires less work—write to:

ALLIED PHOTOGRAPHICS PRIVATE LIMITED

(Mailing Department), Kasturi Building, Jamshedji Tata Road, Bombay 1.
Branch Offices: BOMBAY - CALCUTTA - MADRAS - NEW DELHI.

D-37a

pre-MAKEREADY

A. N. DAISH

If one is asked to define the difference between makeready and pre-makeready the answer is that makeready consists of all the operations which are carried out from the moment the forme is placed on the machine until the forme and the machine are ready to print. Pre-makeready consists of all the measures and operations which may be undertaken with the forme and the machine before either are brought together as a printing unit.

The ratio of makeready and pre-makeready time varies enormously between printing establishments and in fact between particular jobs in the same establishment and it is largely this ratio which determines whether the pressroom is giving the maximum output.

Printing or Non-printing Hours?

One of the surest guides to the efficiency of the pressroom is the total of machine impressions. A non-running machine means idle capital and loss of printing hours and unless the operator is occupied elsewhere increases the number of non-chargeable hours. It is clearly recognised that a certain number of hours must be occupied with makeready and although such time is chargeable they are non-printing hours during which time the machine itself is largely idle.

It is only when the machine is making printed impressions that it is being fully utilised and thus we might say that the aim of pressroom production is minimum pre-printing hours and maximum printing hours; although both are, in fact, fully chargeable.

The aim of pre-makeready therefore is to reduce makeready to the minimum and secure

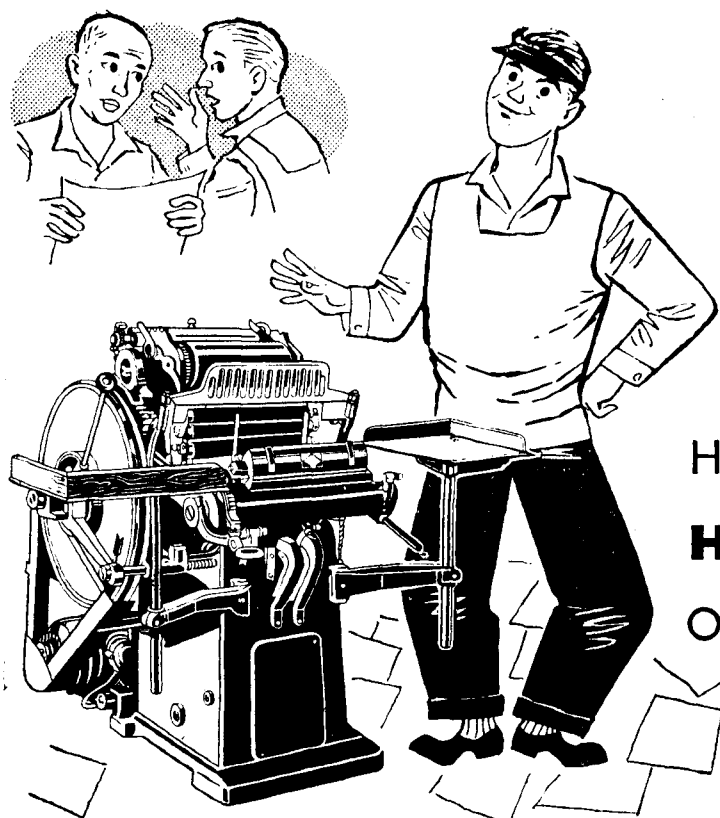
the maximum printing hours. It is this basic principle which should determine the use of pre-makeready organisation and techniques within a printing office, large or small. Pre-makeready is not merely a matter of predetermined heights or prepared overlays but should be an attitude of mind towards all the many operations involved in printing.

Pre-makeready means in fact that the work of the pressman is made as simple and trouble-free as is humanly possible by the provision of precision formes and machines together with the most suitable papers and inks. Blocks properly levelled and metal mounted (with interlay's if desirable), overlays already prepared, the forme made up to give exact register and the machines itself in perfect order will ensure that makeready on the machine will take the minimum of time. Consequently more time will be available for printing which is the actual purpose of the machine.

Using Capital Wisely

Few businesses can afford the luxury or stupidity of using the machine bed as a stone, when corrections and adjustments to the forme are being made. The difference in cost of an imposing surface and a machine is in fact the amount of capital which is idle; when full advantage is not taken of pre-makeready techniques. There is ofcourse the more obvious expense of the waiting time of the pressman which increases the departmental costs.

From the point of view of all the operatives engaged in the printing office the aim of such techniques is to simplify and pre-plan the work of the pressman as far as possible and thus



He's a
Hohner
Owner...

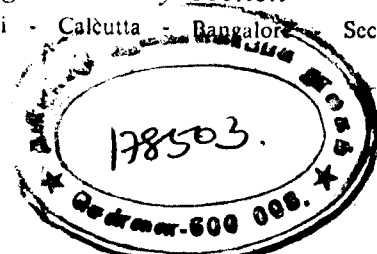
No wonder then he's pleased... for he has *no* printing problems whatsoever. The versatile HOHNER Platen Press is ideal for small print jobs—producing quality printing without rival—except from *another* HOHNER of course!

Special Features: ★ Cylindrical Inking ★ Excellent Rolling Power
★ Sturdy Impression ★ Long Life

For further details please consult:

THE EAST ASIATIC COMPANY (INDIA) PRIVATE LIMITED
Printing Machinery Section

Bombay - Madras - Delhi - Calcutta - Bangalore - Secunderabad



PRINTECH

allow him to direct his attention more to the press and actual printing and less to the forme and any idiosyncrasies of ink and paper. It means foreseeing and solving as many of his problems before they arise on the machine.

This implies the shifting of more of the responsibility for forme preparation, machine adjustment and ink and paper tests from the pressman to other personnel and here there may be need to modify traditional attitudes within the various departments.

Adopting a new attitude

Against the feeling of 'carrying the pressman' or passing the buck to the composing department, the office or another department there must be stressed the importance of printing as a combined operation and not a competitive exercise between departments.

If some irate pressman should complain that in spite of every pre-makeready device and maximum co-operation of all departments, actual makeready is still a skilled and demanding task and his responsibilities continue to increase rather than decline, let me say that from practical experience I am in full agreement. Higher speeds, different inks and papers, sprays and automatic devices, have far removed him from the days when he could spend a few hours locking and unlocking the forme and placidly work his way through the handfed reams on a Wharfedale or a platen.

I have always felt that more of the words directed to the pleasures and perils of the compositor's work and typographical design might well be given to the pressmen in transferring those ideas from the type to the paper often by the thousand or million at very high speed.

Without in any way belittling the contribution of any other department, it is as well to remember that it is the pressman in charge of an expensive machine, handling perhaps thousands of pounds' worth of material in the shape of paper and ink, watching the effect of temperature and humidity conditions, taking over all the expense and outlay already incurred by the composing department, and a due percentage of 'overheads,' who is performing a vital task in the chain of printing opera-

tions.

Pre-makeready may be regarded therefore not as something new but the rationalisation of ideas and practices already consciously or unconsciously pursued. The acquisition of the many pre-makeready aids is but one part of a policy of increasing the efficiency and output of the printing office, but of equal or perhaps greater importance in the review of inter-departmental responsibilities and the routine of printing methods regarded as a combined operation.

Pre-makeready for the Composing Department

The compositor will be unable to implement a policy based on the maximum use of pre-makeready techniques unless his department is reorganised and equipped to supply with the least delay precision formes. It is not a matter of a new type-high gauge or a modern mitring machine but a complete overall review of working methods and the materials in use.

Thus regular assays of metal and checking of type heights, replacing of furniture, and other spacing material, and the discarding of worn and battered items are all facets of a comprehensive pre-makeready policy.

Pre-makeready is in fact aiming to simplify every operation within the printing office and to eliminate the causes of wasted time as for example searching for leads and finding them rising on the run!

Concerning the Small Printer

To the smaller printer pre-makeready is a matter of real importance and if he is unable to afford some of the more expensive items of equipment it is possible for him to find ways of improving his working methods without incurring undue expense. A moral might be drawn from the small or 'one-man' printer who, having to both set his type and work it off on his platen, realises at once that if his typesetting is at fault he himself will have to deal with the fault when he comes to print.

The Logic of Pre-makeready

Whatever emphasis may be placed on the
(Continued on page 14)

JULY 1957



WHERE THERE IS PROGRESS

Among the most powerful influences in India today are newspapers, technical journals and school books. But they must be good, plentiful and cheap. They can be!

The LINOTYPE composing machine is the World's most economical and efficient tool for setting printed matter. With equal ease it can set Roman, Hindi, Marathi, Bengali, Assamese, Tamil, Burmese, Sinhalese or Urdu—in fact, over 850 languages and dialects.

WHERE THERE IS PROGRESS THERE IS A
LINOTYPE

LINOTYPE AND MACHINERY LTD.

14 MADAN STREET, CALCUTTA 13

10/29 MOUNT ROAD
MADRAS-2

11/13 HORNIMAN CIRCLE
BOMBAY-1

The Letterpress Printers' Guide to the Production of

PLATES FOR SMALL OFFSET

This short summary of small offset plate making is intended to answer some of the questions which will be asked by letterpress printers when they take up small offset. So that the article shall demonstrate its subject it has been printed by small offset on a Rotaprint Machine.

The quality of a plate depends largely upon the excellence of the negative (or positive), and these depend equally upon the original copy. No plate maker can get a satisfactory result from a dull photograph, a wiskey-washy drawing or a grey or blurred type pull. Good copy should be crisp and clean; the type matter really black, the illustrations of full tonal range. For monochrome reproduction it is preferable to have a black and white original as tinted papers or coloured inks may need more expensive panchromatic film to reproduce it well.

Types of Negatives

There are four main types of negatives: line, half-tone, line and tone, and highlight. Line negatives are used to reproduce ordinary black and white originals such as line drawings, diagrams or type matter. The copy is placed in the copy holder of the process camera and photographed in exactly the same way as a photographer would take a studio picture. The process camera is larger and more intricate, of course, and it takes a comparatively large film; but the method is same. Enlargement or

reduction is made at this stage so that the resulting negative is the same size as the desired eventual reproduction. Illustration is provided by open arc lamps the brightness of which enables a negative material of finer grain and therefore slower speed than that used in ordinary photography. After exposure, the film is developed, fixed and washed in exactly the same way as any other negative is processed.

To reproduce the tones of a photograph or a wash drawing a half-tone negative is made. To achieve the visual effect of many tones of grey in one printing a screen is used, placed between the lens of the camera and the film. The screen is a composite sheet of glass on which are ruled fine cross lines. The fineness of the lines varies but for offset-litho there are usually 120 or 133 lines to the inch, eachway. The effect of this screen is to break-down and concentrate the light reflected from the original into dots of varying sizes. From a dark portion of the original the small amount of light reflected will produce a very tiny dot on the negative, but as the tones get lighter so the dot gets larger until from the highlights so much light is received that the dots join leaving a clear dot surrounded by opaque black negative. In this respect, the reproduction of tone by offset lithography is similar to the method used by letterpress (but not photogravure). Apart

HERE.....is a large variety of Machinery
for you to choose from :—

MAXIMA Model N78 Cutting Machine,
Brand New Czecho-Slovakian make, Size
30 $\frac{3}{4}$ ", Hand-Clamp, Power-Driven.

GEBLER Model 14F Wire Stitching Machine
for Treadle-Operation, mounted on stand,
taking round stitching wires from 22 to 28
guage, Thickness 1/2" Brand New, German
make.

Genuine U. S. Rebuilt Chandler & Price
Presses in 8"x 12", 10"x 15" and 12"x 18" sizes.

AND a wide range of other machinery and
materials which you need for your Day-To-
Day work.

Write to us today for all particulars:

NORTON & CO.

SPARTAN TYPE FOUNDRY

CHOO LAI

::

MADRAS-7

from the insertion of the screen, the preparation of the half-tone negative follows the same procedure as for a line negative.

When an original drawing contains not only tones but solid black-and-white work as well, a line and half-tone combination negative is made. There are two ways of doing this. Where the original is simple and the tones are not inextricably mixed up with the line, the inexpensive method is to prepare both a line negative and a half-tone negative and join them together by 'stripping in'. However, if it is impossible to join the two negatives in such a fashion, they are each "printed" on to another film in exact register, the unwanted portions of each having been painted out. From this film—which ofcourse, is positive—a contact negative is then made.

The fourth kind of negative, the highlight is used for the reproduction of pencil drawings and similar artwork, and corresponds to the deep-etch half-tone block in letterpress. The most satisfactory method involves three stages. First, a continuous tone negative is made (without a screen) from which a screen film positive is made. This positive is then skilfully etched to remove the unwanted background dots. Finally a negative is made from the retouched positive.

Step-and-Repeat

A word should be said here about the making of plates with a large number of small images, such as a sheet of labels or small stickers. Accuracy, of course, is essential and each label must be at exact distance from its neighbours. There are machines which will lay down on to a plate any number of prints from a single negative but a preferable way is to prepare a negative on which are the requisite number of images. If this is done, then extra plates may be prepared subsequently in one operation which is much quicker and cheaper.

Such a negative is usually made mechanically by highly complicated apparatus the accuracy of which is controlled to a thousandth of an inch.

Retouching and Stripping

After preparation of the negative and before the actual plate making, work is frequently carried out on the negative to improve or adapt it, spotting, ruling, painting out, retouching and stripping are all done at this stage.

Spotting and painting out are done with a pen or, more usually, with a brush, and is used to correct imperfection, dust spots, shadow lines, etc., on the negative. Half-tone negatives, too, may be 'cut-out' or 'squared-up' with this medium, and it may be sprayed on to a negative with an air-brush to improve the gradation of a vignette.

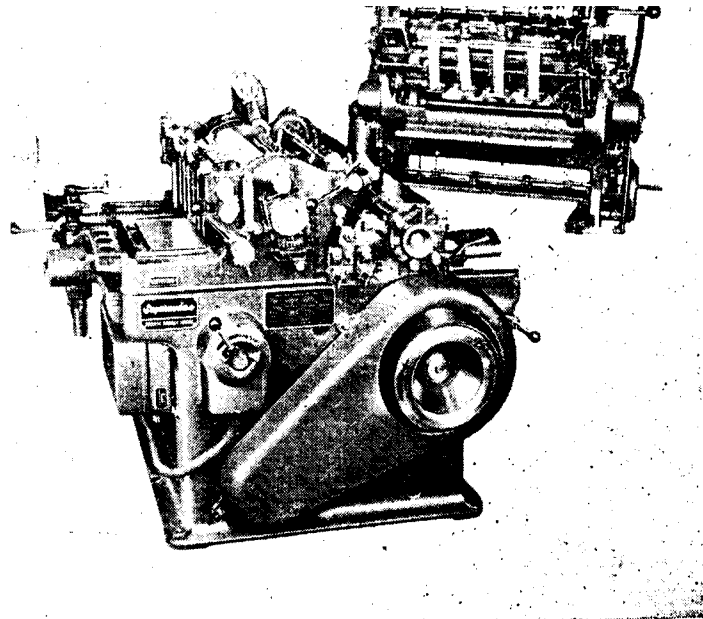
Ruling and retouching is done with a sharp scraper blade. These operations have the reverse effect to painting out as they remove portions of the opaque negative thus adding to the eventual printing image. Imperfections of type matter, broken lines, etc., may be remedied in this way and half-tone solids may also be made more dense by removing the fine dots on the negative.

Stripping involves the cutting and joining together of two or more negatives and is performed when alterations to existing negatives are required; when identical negatives are to be joined for printing several images at once; or when combining line and half-tone negatives. In this operation the films are superimposed or aligned on a lightbox and cut in one operation. A simple enough job but one requiring absolute precision and a delicate touch.

Printing Down by the Albumen Process

The final stage—printing down from the finished negative to the metal plate—corresponds to the making of a paper print from the 'snapshot' negative. The metal plate must first be made sensitive to light and this is done in three stages. First it receives an etch with a weak solution of phosphoric acid followed by a thorough rinsing in water. This thoroughly cleans the metal. The clean plate is put into a machine called a whirler which is virtually an enclosed variable speed turn-table with a heater

(Continued on page 14)



The Superaudax PVCC Single Revolution Press.

Some Machines from Nebiolo Societa

SUPERAUDAX PVCC

ITALY for some reason, is not usually associated with the graphic arts to the same extent as for instance Britain, Germany or the U. S. Yet Italian type and printing machinery have been of considerable importance for many years in such markets as France, South America, North and East Africa and Middle Eastern countries, etc. One of the most important and certainly one of the most comprehensive manufacturing plants in Europe is the Societa Nebiolo of Turin (Italy) founded in 1838. This firm makes letterpress and offset printing machinery, some auxiliary equipment and case types.

Nebiolo build several types of letterpress machines from plants to two revolution presses and also one offset machine and two paper cutters. Some of the most successful post-war machines, the Superaudax PVCC single revolution press, the RTE and RTA, reduced stop cylinder press, have found wide acclaim abroad. These presses embody several unusual design features and now that many of these

Italian made machines have been installed in printing shops all over the world, it seems right that a detailed description should be given in these pages.

A Press to Replace the Platen

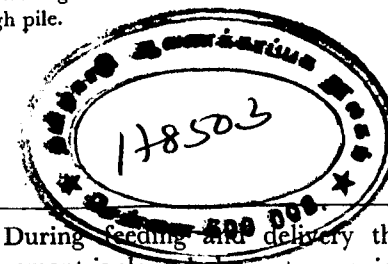
With a speed of up to 5500 I.p.h., the Superaudax PVCC is certainly one of the fastest small automatics, and it is claimed to be the only machine of its type in the size range 12 $\frac{3}{8}$ " x 16 $\frac{1}{2}$ ". This machine, compact in design and a good saver of floor space, produces high quality work at great speeds while needing a minimum of supervision and permitting quick change-over.

The PVCC is a single-revolution automatic cylinder. Bed motion is slow during the printing stroke and fast during the return, and to absorb shock pneumatic buffers are fitted at both ends of the press. The continuous cylinder drive is operated directly from the bed by means of a rack and crown wheel, ensuring faultless registration between cylinder and bed

PRINTEC

TOP: The complete accessibility of the printing parts in the Superaudax PVCC is evinced by this picture of the cylinder and skeleton cylinder completely open. This can be obtained by simply lifting the feedboard.

BOTTOM: The Feeder is fitted with movable telescopic suckers having double pneumatic connections which ensure an efficient suction on soft and uneven papers also. The feeder stock pile board is lifted by an automatic electromagnetic control and can be loaded with a 12" high pile.

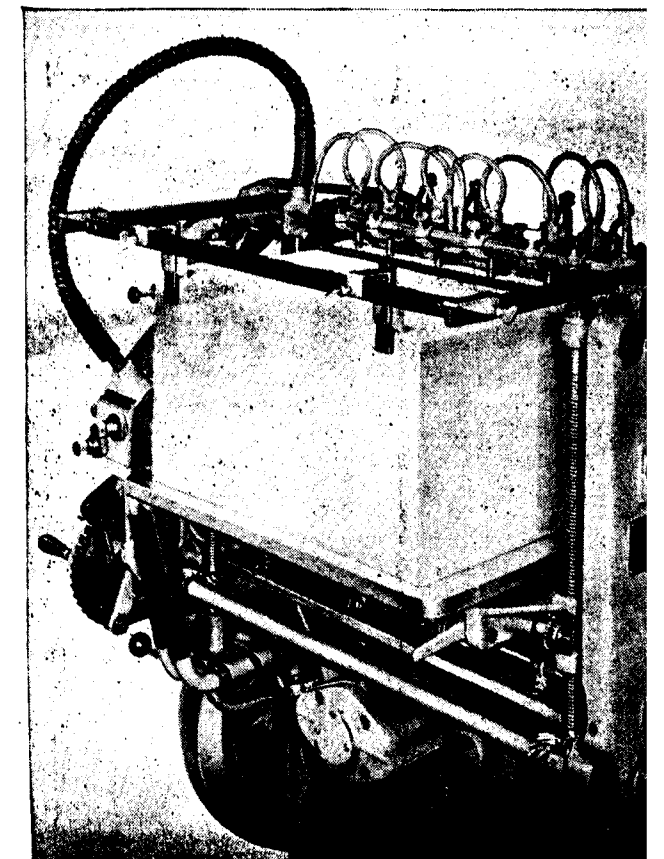
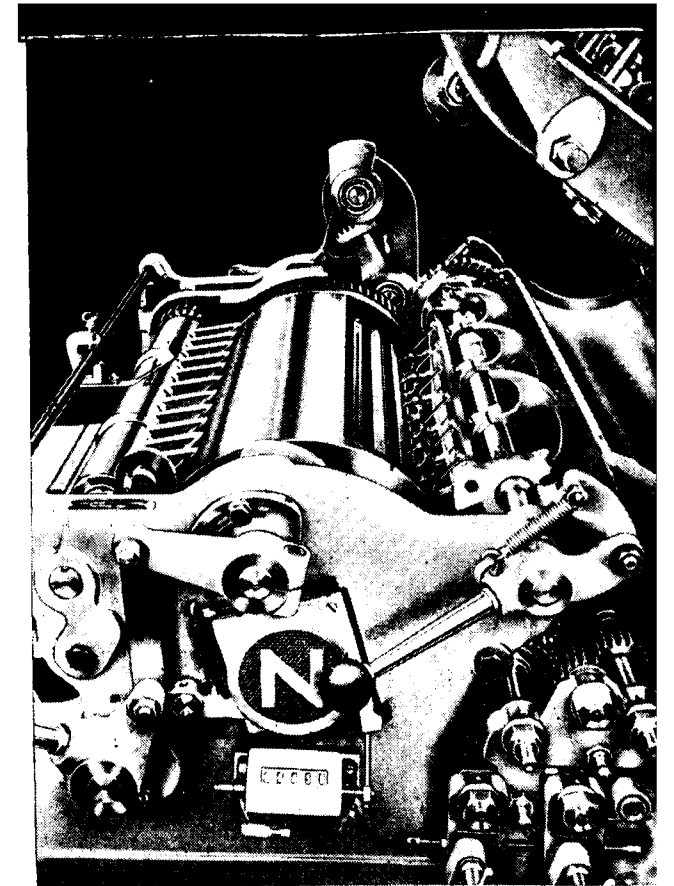


movement. During feeding and delivery the cylinder movement is slowed down to provide the best conditions for smooth sheet travel through the press. The large size cylinder, incidentally, is easily accessible and equipped with a simple tensioning device for the packing.

The pile feeder with front suction and telescopic suckers handles soft or uneven stock efficiently. Sheets are slowed down as they reach the front lays and are transferred by swinging grippers to the cylinder grippers. Exact sheet control is maintained at all times and this makes for good register. Feeding of two or more sheets, at the same time is prevented by a built-in control, and the pile lift is operated electromagnetically. For make-ready and access to the ink duct the feeder can be swung out.

Front delivery dispenses with tapes and the table with built-in automatic joggers lowers automatically. The delivery can also be swung away to provide access to the bed.

The inking unit is cylindrical to ensure even distribution and milling; and the large capacity duct has micrometer adjusting screws and is collapsible for wash up, without disturbing the blade settings. Rollers are controlled



JULY 1957

BLOCKS!
&
PHOTOS!

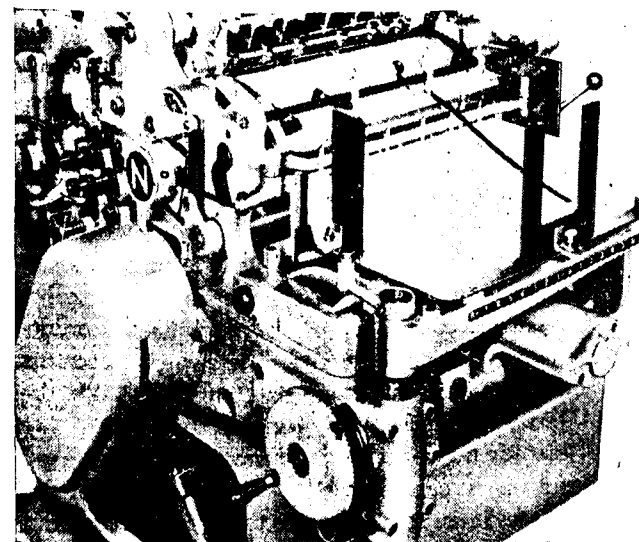
↓

K
&
P

Klein & Peyerl

30 MOUNT ROAD
MADRAS - 2

Phone : 84167 Grams : 'KLEINPYERL'



The three-side action sheet joggers :
Sheets weighing 0.04 oz. per sq. feet
can be easily printed and jogged at
the speed of 1,500 prints per hour.
A special device allows the automatic
lowering of the delivery board and
the paper pile can reach a height
of 5".

by a pre-selector unit for automatic stopping or normal operation during cylinder lift.

This press is to 'replace a platen'. Quite obviously the size of the machine is comparable. It is really a traditional platen size, and some printers may ask why they should, even so much as look at a machine which will obviously be more expensive to buy. Well, nobody doubts, that platens are excellent machines for many kinds of work. Their main limitations are speed and inking. Stresses and vibration in a platen are considerable and less easy to overcome than in a cylinder press. In a platen pressure is simultaneously applied to the whole of the forme and is nearly 25 times higher than on a cylinder press.

Ink distribution, too, is much more efficient on cylinder presses than on platens, where the rollers move to the forme for inking and thus break contact with the distributors.

Technical Details :

Maximum paper : 12 $\frac{5}{8}$ "x17 $\frac{3}{8}$ "
Minimum paper size : 4 $\frac{3}{8}$ "x4 $\frac{3}{8}$ "
Inside chase : 12 $\frac{5}{8}$ "x16 $\frac{1}{2}$ "
Maximum print area : 11 $\frac{3}{8}$ "x16 $\frac{1}{2}$ "
Speed (with 13 speed adjustments upto :
5500 i.p.h.

JULY 1957

Height of feeder pile : 12 $\frac{1}{2}$ "

Height of Delivery pile : 5"

Dimensions : 61"x44"x54"

Suppliers in India are Messrs. Standard Printing Machinery Co., 12, Sembudoss St., Madras-1 and the Standard Type Foundry at Delhi, Calcutta and Bombay.

New 'kodalith' Developer

A new high capacity, high contrast line developer has been introduced by Kodak Ltd., specially for continuous processing of 'kodalith' materials. It is known as the 'kodalith' Super Line Developer Powder and substantial economics are claimed by its use.

Resistance to aerial oxidation results in a longer dish life and the high capacity factor eliminates the need of the frequent preparation of fresh solution. The developer can be mixed even with slightly hard water as there is little tendency to precipitation, and inspection during processing is facilitated by the clarity of the solution, which is maintained without regard to the number of negatives which have been developed.

The standard 'kodalith' developer is still recommended for half-tone work and the Fine Line Developer for fine line process work.

(Continued from page 9)

built into the lid. The sensitizing solution is poured on while the plate rotates and is spread evenly over the surface. The lid is closed and the viscosity of the coating solution are interdependent and can affect the quality of the work.

The negative is next laid in position on the sensitised plate—due precautions being taken to ensure accurate positioning—and both are put into a vacuum printing frame. This device incorporates a large arc lamp for the exposure, and a series of frames. After the insertion of the negative and plate an air pump extracts the air from the frame thus ensuring intimate contact between negative and plate.

The development of the exposed plate is effected by rolling with a special developing ink which adheres to the exposed hardened portions of the plate, the remainder being removed by running water. It receives a weak etch to desensitize it, a wash to remove the acid, and finally a coating of gum to preserve it until required for printing.

Offset Deep Etch Plates

The above notes refer to the preparation of an ordinary 'albumen' plate; the image on which is retained by the normal fine grain of the surface of the metal. For extra long runs, however, a deep etch plate is often ordered and here the image is etched *into* the metal to approximately two thousandth of an inch.

When the negative for deep etch is made it is reversed through a prism attached to the lens of the process camera and then a contact film *positive* is made from it. This positive is printed down to the metal in a similar fashion to the albumen process but the sensitizing solution is of bichromated gum which is developed by rubbing with acidified calcium chloride. This produces, in effect, a stencil over all the non-image areas so that the subsequent etching 'bites' only the image. After the etching and a thorough cleansing, the developing ink is applied over a lacquer base and the stencil removed by soaking and brushing.

From the foregoing description of the process it will be seen that there is more in offset plate-making than meets the eye. It is complicated by the fact that, as in photogravure, make-up must be done before the plate is laid-down. Photographs drawings, lettering type-setting must be assembled before photography commences and clear and concise instructions from the customer are an essential pre-requisite of successful work. At Rotaprint, they solve this problem by issuing comprehensive order-books for customers' use in which space for such matters as image size, paper size, bleeds-binding margins and gutters, type faces, lay out for make-up etc., are provided. The need for such careful methods will be appreciated when it is remembered that, for colour and other precision work when glass negatives are used in place of film and when many hours of retouching and other special operations are called for, the cost of the work may be considerable and the correcting of errors and omission can be very expensive.

—Courtesy: Paper and Print

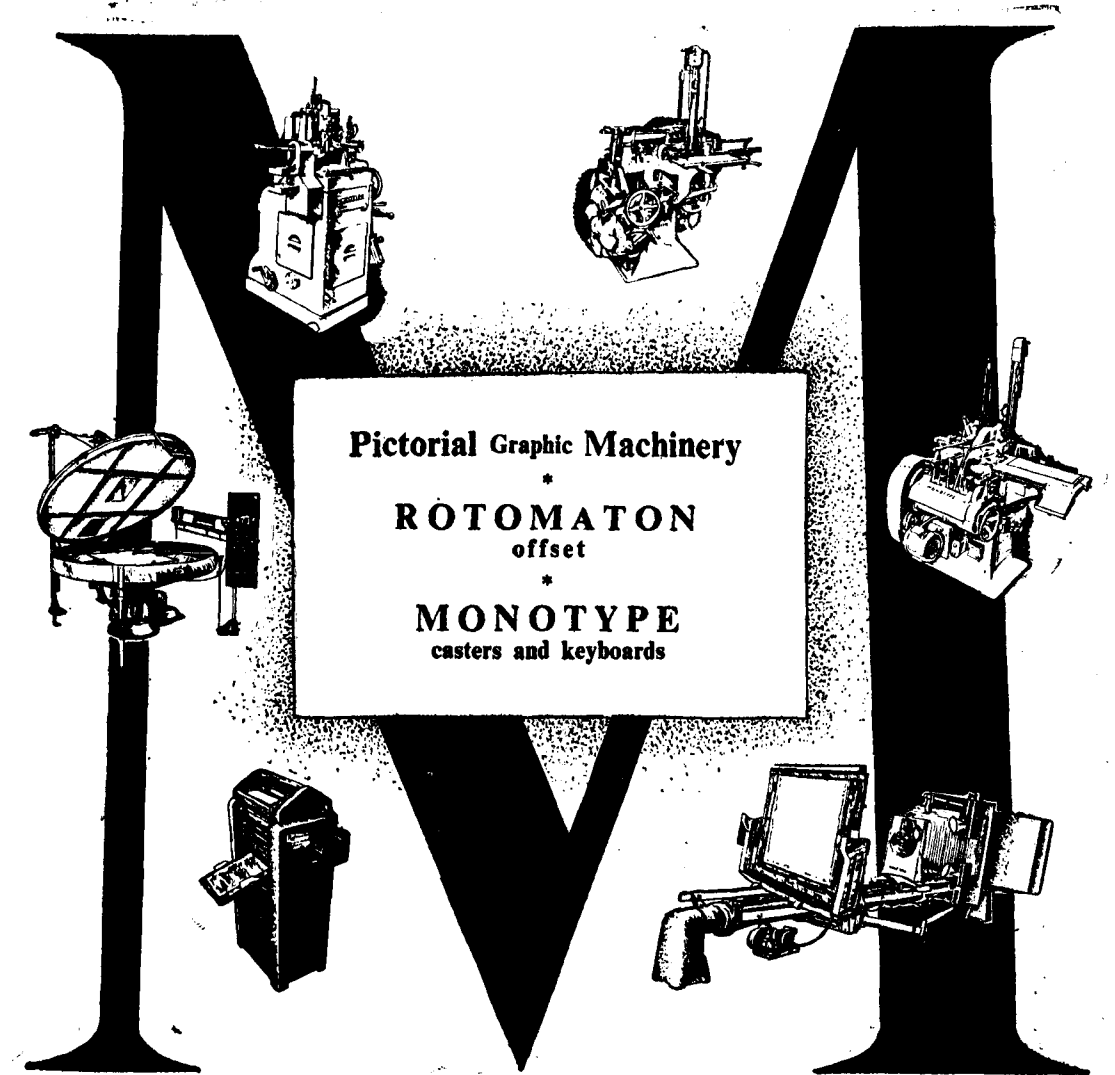
(Continued from page 5)

value of pre-makeready and the distinction to be made between it and actual makeready as traditionally understood, the subject is one that suggests the most practical and profitable means of increasing the productivity of the industry.

In the first instance it calls for a review and reorganisation of workshop routines and the questioning of traditional inter-workshop relationships and certain craft practices. It is thus an attitude of mind and a matter of management policy besides providing particular aids in composing and presswork operations. Such aids should be the consequence of an enlightened and up-to-date policy and are in fact another token of the silent revolution in printing techniques and organisation.

—Courtesy Caxton Magazine

A Strong Team



THE MONOTYPE CORPORATION LIMITED

8, MISSION ROW EXTENSION
CALCUTTA 1

* Registered Trade Mark.

Book Review

FACTORS IN CHOICE OF TYPE FACES

By Geoffrey Dowding

Published by Wace & Co. Ltd, 3-11 Eyre Street Hill, Clerkenwell, London E C 1. Price 10s 6d.

Here is a thoroughly practical book that tells not only the beginner but also the more experienced typographer what points should be observed when selecting type face for different printing processes and for different papers. The book is an example in itself for fine typography. The setting is unusual in so far as the

pages have been set with an uneven right-hand edge. The setting is close and even spacing. An other unusual feature is the use of paragraph marks for the paras throughout the book. It is well illustrated. A practical appendix discusses the various mechanical setting methods, including photo composition.

The text is set in 10/12 Monotype Imprint, designed by J. J. Mason R D I and printed on Wiggins Teape Dover Opaque Offset Snow White Paper, full calico bound with gilded title on the spine.

It is a book that should be in the shelf of every printer. Copies can be ordered through by us remitting the cost to the Hony. Treasurer. (Rs. 9/-).

BEST GERMAN MACHINES

FOR BINDING DEPARTMENTS

FOMM BOOK BACKING MACHINE

Model: FGH

For working books of about 4" thickness and 15 $\frac{3}{4}$ " width. Indispensable for producing high quality books.

FOMM BOOK BACK ROUNDING MACHINE

Model: FBR 67

For books of any height upto 25 $\frac{1}{2}$ ". For faultless rounding of the backs of books.

FOMM LATEST THREE-KNIFE TRIMMER

Model: AHDN—30x37 cm.

FOR BOOKS OF

1 $\frac{3}{16}$ " x 1 $\frac{3}{16}$ " to 11 $\frac{13}{16}$ " x 14 $\frac{9}{16}$ "

Height of file approx.: 5 $\frac{1}{2}$ "

Fully automatic clamping for all heights, uniform strong pressure, completely enclosed construction and small space requirement, with built-in safety guards for hands.

For full particulars and prices write to:

Sole Agents for India

INDO-EUROPA TRADING COMPANY

AGAKHAN BUILDING, 9, DALAL STREET, FORT, BOMBAY-1

Also at: DELHI, CALCUTTA, MADRAS

QUALITY in

PRINTING INKS

means many things...

- brilliance
- depth of colour
- covering power
- drying capacity
- workability
- fastness to light etc.

in **GANGES** inks

the emphasis is on QUALITY

used and proved for 29 years



GANGES PRINTING INK FACTORY PRIVATE LTD.

Factories at

HOWRAH—BOMBAY—MADRAS

It is anticipated that she will arrive in August and will visit all states of the commonwealth.

During this tour, master printers, graphic arts associations and student bodies will have the opportunity of meeting Mrs. Warde, hearing her speak, and discussing with her various aspects of typography and design.

A Useful Card for Linotype Operators

Operators of Linotype composing machines now have a handy means of checking the exact dimensions in inches, and millimetres where appropriate of Old English, American-British and Didot type body sizes. The Old English sizes are those used by Linotype and Machinery Limited in manufacturing mould liners where, in certain cases, American-British sizes are not used.

Seven different sizes are clearly set down on a card measuring only 2½" x 3¼"—small enough to be slipped into the L & M diary for safe keeping, though strong enough, by reason of a study plastic coating, to withstand harder wear in the packet and also contact with oil.

Among other things the card shows, for example, the Brevier is not identical with the 8 pt. of the American-British point system in popular use in this day. An incorrect assumption that they are the same, or 'near enough' is liable to cause trouble.

Death of T. E. Griffiths

Death occurred to the well-known lithographer and author of several lithographic books Mr. Thomas E. Griffiths on the fifth of May '57.

He was apprenticed to the trade in 1896 and after serving his indentures was employed as a lithographic artist at Vincent Brooks, Day & Son Ltd., a leading lithographic house in those days. In 1935 he moved to the Baynard Press who, in 1950, absorbed the firm for whom Griffiths had previously worked and thus he renewed his association with Vincent Brooks, Day & Sons, as chairman of the Company.

Few lithographers have possessed so much skill and experience as Thomas E. Griffiths. He wrote a number of standard works on autolithography. *The Technique of Colour Printing by Lithography, Colour Printing and The Rudiments of Lithography.*

Enamel paper with lower absorption than normal chromos

A new kind of enamel paper suitable for printing, without varnishing, by litho, letterpress or gravure, is one

of the interesting developments reported in the *Puckering Abstracts* published by Patra. It is stated that the rate of absorption of inks is slightly slower than that of normal chromos. The Ph of the coating is within the normal limits of high finish chromos and art papers. Glue lines in cartons, or gum on labels, can dry rapidly through the coating. The coating can be applied to esparto body stocks, pulp boards and folding carton boards, and most adhesives readily adhere to it.

Litho newscolour

Employment of colour in offset newspapers is being made the subject of joint research by the Rochester Institute of Technology and the St. Petersburg (Fla) *Times*. The work is being done by the Graphic Arts Research Department of the Institute, which printed an experimental Sunday supplement for the Times on a Webendor for web offset press.

The short-run colour process of the Eastman Kodak Company served for plate making, and halftone separation negatives were made from colour film transparencies with 150-line contact screens. Enlargements were made from the negatives to produce the 100-line halftone positives employed with the Linure plates used for printing the edition of 85,000 copies.

The text matter of the supplement was printed in black and three colours used for the halftone illustrations, the latter printed with inks specially formulated by Pope & Grey concern.

—*Printing World*

Picture Post goes

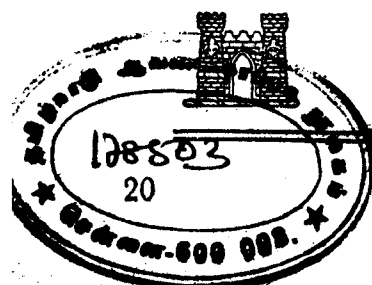
Increasing production costs forced Hulton Press Ltd. to cease publications of Picture Post with June 1st issue. Present conditions made its publication "completely uneconomic" said Sir Edward Hulton, Chairman.

"Costs of production continue to increase enormously. The demands, of the public are changing. Thus, television is doing so well much of the work which we pioneered in Picture Post" he declared.

He referred in his statement to Hulton Press having "a number of positive plans for the immediate future." Hulton said later that they intend keep the title of the magazine in their own hands.

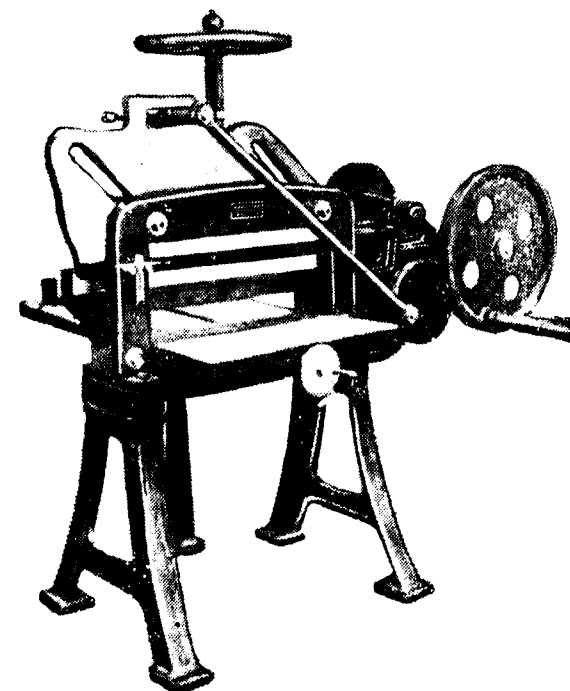
—*Printing News*

The Cover of this issue is printed on
GATEWAY PAPER, "Proven" White Art
Double Crown, 45 lb., 500 sheets



PRINTING

Machines that Every Printer Needs



PAPER CUTTING MACHINE

Cutting length 24 inches. Height of clamp 5 inches.

This is a heavy and sturdy machine, constructed on the model of the famous "Karl Krause" Cutter. Wheel and Gear System Diagonal Cutting movement, Double gearing draw rods, etc., are the important features **Fitted with Sheffield Knives.**

Large number of machines in daily use all over India, Ceylon, etc.

MADE BY

The Madras Type Foundry

38, JONES STREET, G. T., MADRAS-1

Phone : 3849

Grams : "PRINTYPE"

NELSON & CO.

(The Fine Art Type Foundry)

TYPE FOUNDERS, PRINTERS' ENGINEERS & SUPPLIERS

ESTABLISHED 1916

Manufacturers of

Printing Types in English, Telugu, Tamil,
Kannada, Hindi, Sanskrit, Devanagaree,
Malayalam, Ornamental Borders, etc.

Suppliers of

New & Rebuilt Treadles, Wharfedales, Paper
Cutting, Perforating, Mitreing, Wire Stitching,
Lead and Rule Cutting, etc., Machines,
Brass Rules, Printing Materials, etc.

Office at

SWAMI PILLAI ST., CHOOLAI, MADRAS 7

Post Box 452

Phone: 2722

Grams: NELSONCO

Factory at

AMINJIKARAI, MADRAS 29

Phone 61736