

1371



PRINTECH

OFFICIAL JOURNAL OF THE INDIAN FEDERATION OF PRINTING TECHNOLOGISTS

Vol. III

MAY 1956

No. 10

1371
2-56

★ LOOK FOR THE RED CORE

 **GUMSTRIP** REGD.
SEALING TAPE
IN ALL WIDTHS - BROV 7 & COLOURS

THE PERFECT METHOD OF SEALING
PARCELS, CONTAINERS OR BALES.

“Gumstrip” Sealing Tape can be printed
in one or two colours, thus providing
attractive advertising at little extra cost.

Made by **Samuel Jones & Co. (Export) Ltd., London**

REPRESENTATIVES:

K. ORR & COMPANY
40, CHINNATHAMBI STREET, MADRAS 1
Phone: 3519 Grams: PRESUNDY



1143 on 211, 45394

NSS-3-10-

178499

Cable : "BHUVANA"

Phone : 8291

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

Printech

OFFICIAL MONTHLY JOURNAL

OF THE INDIAN FEDERATION OF PRINTING TECHNOLOGISTS - MADRAS

President

R. SIDDIQUE, D.I.P. (LOND)
M.I.P.T.G.M. (LOND)

Hon. Secretary

C. N. CHITTARANJAN, L.P.T.

Hon. Editor

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

Articles of technical interest
on Printing and Allied Trades
are invited for publication
from Master Printers, Techno-
logists and others connected
with the industry.

All correspondence regarding
matter for publication, sub-
scription and advertisements
should be addressed to the
Hon. Editor, PRINTECH, c/o
The Jupiter Press Private
Ltd., 7 Kondi Chetty Street,
Madras-1.

All payments should be sent
only by Crossed Postal Order
or Cheque, made payable to
the Indian Federation of Prin-
ting Technologists, Madras.
Please avoid Money Orders.

Annual Subscription Rs. 5

Vol. III

MAY 1956

No. 10

CONTENTS

Type Metal Alloy—1	...	3
Meet These People—An introduction to office- bearers of All India Federation of Master Printers, 1956-57	...	8
Better Cutting—2	...	13
News	...	21

*Please note the present address of the Fede-
ration office :*

c/o THE JUPITER PRESS PRIVATE LTD.

7 KONDI CHETTY STREET

MADRAS-1

500
94

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

AN ESSENTIAL MATERIAL FOR THE MODERN LETTERPRESS PRINTER

TYPE METAL ALLOY

By JOHN RIVERS

Studies of type metal problems in foundries made by the U. S. Government Printing Office are described in this article, THE FIRST OF A NEW SERIES

TYPE METALS, together with paper and ink, are the essential materials used by the modern letterpress printer. The alloy from which type is made is usually of lead, tin and antimony in various proportions. Movable hand-cast metal type was used until near the end of the nineteenth century. It was poured into punched moulds of sand, metal or clay, but was essentially like the machine-cast type of today. Type-casting machines were developed in 1885-7. Since then machine-cast type has practically displaced that used in earlier methods.

Small amounts of other materials may be present with the lead, antimony and tin in the type metal but these 3 materials have been used for several centuries. They are used because of their low solidification temperatures, good castability, ease of manipulation and relative cheapness. The relatively low solidification temperatures of these alloys, which range approximately from 463° F to 500° F, lower the heating costs, reduce the time interval required for cooling and lessen the corroding influence off the face of the matrices.

The quality of good castability possessed by these alloys is naturally valuable. They flow readily into the fine recesses of the moulds to form very sharp reproductions of the matrices. Upon solidifying, the alloys contract about 2 per cent. It has been suggested that zinc alloyed with 8 per cent aluminium and up to 1 per cent copper would suffice as a stereotype alloy. This alloy is physically harder, an advantage, but it has a casting temperature of about 300° F higher than the ordinary lead-antimony alloys.

The type casting machines include Ludlow, Linotype and Intertype, which cast slugs of column or page width. Monotype casts unit-type characters. The slug-casting machines operate at a casting temperature of 525° F to 550° F, while Monotype casting machines operate at 675° F to 750° F.

PROPERTIES OF LEAD, ANTIMONY & TIN

Lead, the major constituent of type metal alloys forms from 60 to 94 per cent of type-metal compositions. Besides being one of the heaviest metals known, its specific gravity is 11.34 and its melting point 621° F. Antimony is the second main constituent and forms from 3.5 per cent to 25 per cent of the composition. It is a silvery-white, brittle and hard metal having a high lustre. Its specific gravity is 6.68 and its melting temperature 1,167° F—the highest of the three type-metal components. Pure antimony expands upon solidification and this serves to counteract the shrinkage which would take place when a slug cools. Antimony also promotes fluidity.

Only 3 to 15 per cent tin is used in type metal. It has a specific gravity of 7.30 and a melting point of 450° F. It is the most expensive of the three constituents. Briefly, lead contributes cheap bulk, antimony hardness and fluidity and tin contributes fluidity and lowers the melting point. Tin also hardens when combined with antimony.

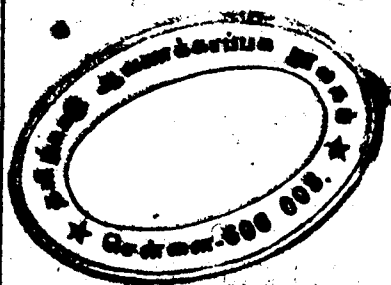
When these three metals are mixed in varying quantities the melting point of the composition varies. The mixture which gives the lowest melting point is

PRINTECH May 1956

JL
M163m21, 253PH
N55-3.10



THE BEST, FASTEST AND CHEAPEST
MACHINE FOR COMPOSING ENGLISH,
TAMIL, HINDI, MARATHI, URDU,
BENGALI, ASSAMESE, SINHALESE,
BURMESE AND MANY OTHER
LANGUAGES



LINOTYPE AND MACHINERY LTD.
14 MADAN STREET, CALCUTTA 13

10/29 MOUNT ROAD
MADRAS

11/13 ELPHINSTONE CIRCLE
BOMBAY

4 per cent tin, 12 per cent antimony and 84 per cent lead. This 'eutectic' composition as it is called, has a melting temperature of 463°F.

CASTING TEMPERATURE

Lead-antimony-tin alloys, except the eutectic composition, tend to segregate in the 'pasty' range when some constituents are in the liquid range and others in the solid. To restrain this effect the casting temperature of the type metals is generally kept within 100°F of the melting point temperature. The moulds into which the metal is cast are cooled, usually by water, but sometimes by air.

Inasmuch as type metals have to be heated, melted and cooled again in the course of their use, it is as well that type metal users should have an understanding of the thermal and other physical properties of the type metal alloys and the metals which compose them.

MELTING POINT

The specific heat of a metal may be defined as the amount of heat required to raise a pound of the metal through 1°F and is expressed in British Thermal Units. It is a constant for each metal or alloy but differs for various compositions of metals.

Another important thermal property of type metal is the latent heat of fusion. When a pure metal or eutectic reaches the melting point the temperature remains constant until all the solid metal has become liquid. The heat absorbed during the melting is a fixed quantity for that metal. The same quantity of heat is released when the metal freezes. This latent heat of fusion has a very important bearing on the flowing characteristics of the metal.

The ability of a metal to conduct heat varies widely and even varies for the same metal at different temperatures. Conductivity at temperatures near the melting point has an important bearing on the casting quality of the metal. The thermal properties affect the speed of operation of the casting machines and also the flowing quality of the metal. Factors affecting the speed of operation

WANTED

Well-known European/Indian importing firm of printing machinery and allied equipment has a vacancy for an executive or Head Clerk who has a good experience in correspondence on this subject with overseas Principals and also technical knowledge within this line.

Only candidates with experience as above need apply. The remuneration will be according to the qualifications of the candidate.

Applications will be treated as confidential and should give age of the candidate and salary expected.

Apply Box No. ONE
PRINTECH

C/O THE JUPITER PRESS PRIVATE LTD.,
7 KONDI CHETTY ST., MADRAS-1.

are the range of temperature between the melting point and the freezing point and, to some extent, the latent heat and the conductivity.

The flowing quality is also related to a number of factors among which are the temperature of the metal when delivered to the mould, the freezing range, the latent heat of the metal, its specific heat, the thermal conductivity, the temperature of the mould, and the surface tension of the metal as affected by impurities such as zinc, arsenic and copper. These, together with the velocity with which the metal strikes the face of the matrix, and the speed with which it freezes after striking the surface, are the most important conditions for overcoming the resistance of the molten metal to entering a space of capillary dimensions.

The temperature of the metal as delivered to the mould must be sufficiently above the melting point to permit the metal to flow freely. A metal of long

INCREASE YOUR PRODUCTION AS WELL AS PROFIT

BY USING
ORIGINAL GERMAN POLYGRAPH
QUALITY PRINTING MACHINES

MERCEDES AUTOMATIC Cylinder Machines	PLANETA Fm 2a Stop Cylinder Machine
M-0 13 $\frac{1}{2}$ " x 17 $\frac{1}{2}$ " Speed: 3500	With or Without Automatic Feeder
M-I 15 $\frac{1}{2}$ " x 22" Speed: 4500	Size: 21 $\frac{1}{2}$ " x 31 $\frac{1}{2}$ " Speed: 3000
M-II 18 $\frac{1}{2}$ " x 25 $\frac{1}{2}$ " Speed: 3500	

FOR
HIGH-SPEED PRECISION PRINTING ON PRACTICALLY ANY
STOCK IN ANY MULTIPLE OF COLOURS OF ALL KINDS
OF JOB WORK

Please ask full particulars from the Sole Agents for India

INDO-EUROPA TRADING CO.

9, DALAL STREET, FORT, BOMBAY-1

Also at: DELHI, CALCUTTA, MADRAS

freezing range must be operated at a higher temperature so as to have the same fluidity as a metal of short freezing range. This will slow the operation of the machine.

The latent heat affects the cooling of the metal. If more heat has to be absorbed into the mould from the metal, before the metal is frozen, it will take longer to freeze. If a metal of long freezing range drops below the melting point before it reaches the mouthpiece or other orifice, the constituent that first freezes out may attach itself to the walls of the orifice and restrict the flow. Antimony which separates in irregular dendrites will attach itself more readily than antimony-tin crystals which are cubical. As soon as the first constituent begins to separate, the viscosity will be increased. Since the shape and size of the primary crystals influence the flow the increased viscosity and the reduced flow (due to the restriction at the orifice) will reduce the effective pressure and velocity at the critical point of type. Surface tension is thus not sufficiently overcome and detail is lacking.

PRESSURE DEFORMATION

The metals used for the type have very little elasticity, but are easily deformed by pressure and will stand considerable deformation before they break. In discussing hardness there are taken into account the elastic limit, the yield point and the breaking point. These properties may be thought of in connection with tension, compression or binding. In type metals these points are not so well defined as in iron or other hard metals. In type alloy metals the hardness is generally expressed in terms of Brinell hardness number. In the Brinell hardness machine, a ball of 10 millimeters diameter, under a load of 500 kilograms, is applied to a sample of metal for one minute. The diameter of the resulting indentation varies with the hardness and is used in the calculation of the hardness number. The harder the metal, the greater the number.

The Brinell hardness numbers of typ-

cal commercial printing metals are as follows:

Slug-casting metal	.. 22
Stereotype metal	.. 23
Monotype metal	.. 26
Hard foundry metal	.. 32

USE OF TYPE METAL ALLOYS

Unless the formula of a metal is made to function in accordance with the characteristics of the casting machine where the metal is to be used many expensive operations will be encountered. The type metal pigs as produced and supplied by the manufacturer or refiner are used principally by the following:

Advertiser Typographers
Newspaper Publishers
Typesetters and Composition Plants
Stereotype Plants
Electrotype Plants
Printers.

The metals are used in connection with the various casting machines, such as:

Slug-casting metal:

Intertype, Linotype, Ludlow, Elrod.

Monotype metal:

Monotype Caster, Monotype Material Making, Thompson Caster, Giant Caster.

Stereotype metal:

Automatic Stereotype Caster, Semi-automatic Stereotype Caster, Pony Stereotype Caster, Flat and Curved Hand Casting.

(To be Continued)

Der Polygraph, the West German printing journal, reports on a new material for the production of blocks—polycon. The journal indicates that the polycon blocks are heated and then the matrix is impressed upon them. Polycon, it is reported, is unaffected by storage conditions and not subject to distortion. It is, however, only suitable for letterpress process. It appears that the new material has not been patented so far for Der Polygraph does not give the name of its producer or distributor.



Sri H. P. Ghosh
President

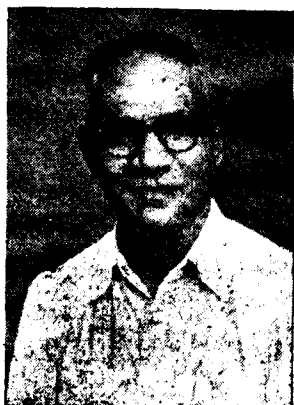


Sri S. N. Guha Ray
Vice-President



Sri S. Ramu
Vice-President

Sri V. M. Philip
Hony. Treasurer



Meet These People

AN INTRODUCTION TO OFFICE-BEARERS
OF ALL INDIA FEDERATION OF MASTER
PRINTERS, 1956-57

MR. H. P. GHOSH, President of the All India Federation of Master Printers for the year 1956-57 is the General Manager of the Indian Press Ltd., Allahabad, Managing Director of the Indian Press (Publications) Ltd., Director, Scientific Instrument Co. Ltd., Sitalpore Sugar Works Ltd., etc. From boyhood he is interested in the art of printing. After completing his education in the University of Allahabad, he joined his father's business—Indian Press and served as an

apprentice under the able guidance of his illustrious father late Chintamani Ghosh. After the death of his father in 1928, he took charge of the press under his brother late H. K. Ghosh, a well-known master-printer and a publisher in the country. In his premature death the burden of the press as also the other business activities fell upon him.

The Indian Press Ltd., has its branches at Banaras and Calcutta and Indian



Sri S. Viswanathan
Hony. General Secretary



Sri R. Venkateswaran
Hony. Joint Secretary



Sri P. M. Antony
Hony. Joint Secretary

Press (Publications) Ltd. has got its branches and agencies in almost all the big towns of India. Today the Indian Press Ltd. caters to the needs of Hindi-speaking students in the Northern India in particular besides its importance in the country as one of the oldest quality printers. Mr. Ghosh looks after this vast business organisation in active co-operation of his younger brothers who have also distinguished themselves in the different branches of printing industry.

We hope under his able guidance the Federation will have many more achievements to its credit.

MR. S. N. GUHA RAY, Vice-President, born in November 1900. Passed Matriculation and Intermediate Arts Examination in First Division, graduated with high class Honours in History from Presidency College, Calcutta in 1920. Left the Calcutta University Post-Graduate class in 1921 at the direction of the Indian National Congress held in Nagpur. Joined non-co-operation and Civil Disobedience movement and worked under Deshabandhu C. R. Das and later

with Netaji Subhas Chandra Bose; was a prominent member of the Jugantar Revolutionary Party.

Started Sree Saraswati Press in 1923 with two partners, Sri Arun Chandra Guha (now Minister for Revenue and Defence Expenditure, Government of India) and Sri Manoranjan Gupta, a very well known revolutionary worker. Founder-Secretary of the Calcutta Printing Press-owners Association now Calcutta Association of Master Printers since 1936; Chairman, Reception Committee of the first All India Printers Conference held in Bombay in 1953. One of the promoters of the All India Federation of Master Printers of which organisation he was the first Vice-President. Became Hony. General Secretary of the Federation in 1954 which post he held till February when he was again elected as Vice-President of the Federation. Hony Joint Secretary of the Eastern Regional School of Printing Technology in Calcutta organised under the First Five-year Plan of the Government of India. Extensively toured Europe in 1953 visiting printing schools, printing presses and machinery manufacturers. Member of the Govern-

ing Body of the Government College of Arts and Crafts, Calcutta; Member, Executive Committee, Bangiya Sahitya Parishat (Bengal Academy of Letters); has a wonderful house library of over 5,000 copies of books on Graphic Arts, History, Philosophy and Political Science. Hobby: Reading and Photography.

Rising from the ranks Mr. RAMU built up his present stature by sheer dint of perseverance and zeal for hard work. He was the works manager of the Ceylon Daily for quite a number of years. In that capacity Mr. Ramu had tremendous opportunities for installing Linotypes and Newspaper Rotaries etc. He is at present the General Manager of Commercial Printing Press a subsidiary concern of Tata Sons Ltd. Mr. Ramu had visited the Drupa, Ipex and such other international Exhibitions. He had also travelled the continent on a study tour. An untiring worker with a zeal for accomplishing new things and setting up new standards. Mr. Ramu stands out today as a model in the Graphic Arts Industry of India.

MR. S. VISWANATHAN, B.A., Hony. General Secretary, born in Perinkulam, South Malabar on 19th September 1910 and educated at the Madras Christian College High School and the Pachaiyappa's College, graduated from the Madras University in the year 1930. He got apprenticed in the publishing trade under his cousin, Mr. R. Krishnaswamy, at Messrs. Rochouse & Sons Ltd., Madras and later took up the management of the well-known firm of Booksellers and Publishers, Messrs. P. R. Rama Iyer & Co. of Madras. Side by side with this, he was managing the Modern Lending & Circulating Library and editing "The Book World," a magazine devoted to literary review.

Mr. Viswanathan set up independent business as Publisher in 1940 and has since then published quite a number of books for college classes. His authors include among others, eminent statesmen like the Rt. Hon'ble V. S. Srinivasa Sastry, Sir C. P. Ramaswamy Aiyar, etc.

He entered the printing profession in 1942 when he purchased the Central Art Press in partnership with others, but this partnership was later dissolved in 1945 when he took over as sole proprietor. Though a very small press at the beginning, it has today grown to be a very well-equipped modern printing house.

He started the Subrahmanyam Educational Institute, a private tutorial institution in 1946 to cater to the needs of the students appearing for University examinations.

Mr. Viswanathan is the Secretary of the Madras Printers and Lithographers' Association since its inception. He was elected to the Governing Council of the All India Federation of Master Printers from the beginning of the Federation. He was President of the Federation in 1955-56.

In addition, Mr. Viswanathan is a Special Hony. Presidency Magistrate, the Hony. Secretary of the Publishers' Association of South India and a Member of the Advisory Committee for the Regional School of Printing Technology, Madras. He is connected with many other educational institutions in an advisory capacity.

Genial in disposition and energetic in spirit, Mr. Viswanathan possesses unlimited initiative and drive which manifest themselves in the successful accomplishment of anything he undertakes.

Sympathetic in outlook and generous and has thus earned a place in the hearts of his workers who are so much attached

to him that his entire establishment feels as one happy family. And many are the students who have found in him a patron on whom they could always count for help for education.

MR. R. VENKATESWARAN, L.P.T., C. & G. Full Tech. (Lond), Hony. Joint Secretary, took up part-time course in Printing Technology at the Govt. School of Technology (now Central Polytechnic) in the year 1932, and was apprenticed at Associated Printers, joined the Madras Publishing House Ltd. in 1934 and served in various capacities in all departments; was General Foreman in 1937. The same year he was awarded the L.P.T. Diploma by the Govt. of Madras, being the one of the first batch of students. He was also the recipient of the Full Technological Certificate in Printing by the City & Guilds of London Institute of London in 1938. In 1940 founded the United Printers Syndicate Ltd., one of the leading commercial firms in the city he being its Technical Director. He is the Hony. Treasurer of the Madras Printers and Lithographers Association, and Member of the Executive Committee of the Indian Federation of Printing Technologists. He is a member of the Board of Examiners of the Technological Diploma Board.

MR. P. M. ANTONY, B.Com., C.A., Hony. Joint Secretary, born in Travancore in 1927; educated at St. Xavier's College, Palamcottah, City College, Calcutta, graduated from the University of Calcutta in 1948—in 1949 passed the final Chartered Accountancy Examination and is now an Associate Member of the Institute of the Chartered Accounts of India. In 1952, joined as the Secretary of Messrs. Associated Printers (Madras) Private Ltd.,

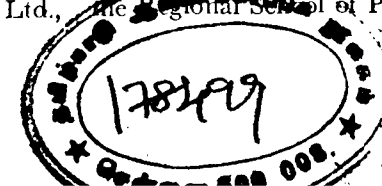
one of the concerns of amalgamated group of Industries, whose Chairman is Sri S. Anantharamakrishnan, the business magnate of South India.

Now Mr. Antony is Acting Manager of Messrs. Associated Printers (Madras) Private Ltd., a pioneer printing concern in South India, equipped with all sorts of modern machinery, both letterpress and photo-offset.

He is the youngest of the Office-bearers of A.I.F.M.P.

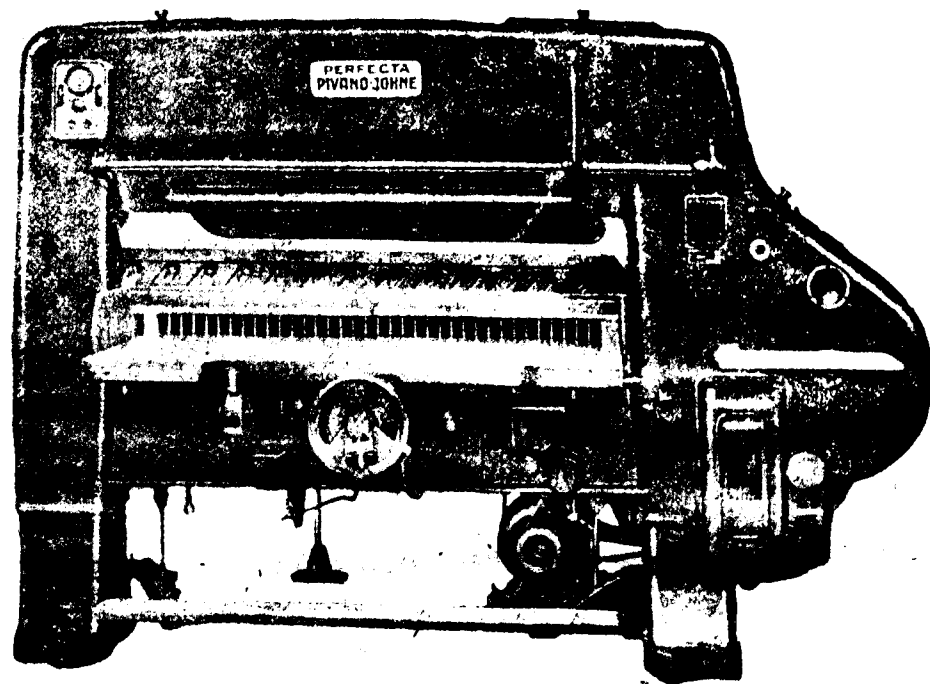
MR. V. M. PHILIP, the Hony. Treasurer, started his career as an apprentice in the S. P. C. K. Press from 1920 to 1922 and in the C. I. S. Press from 1923 to 1924. Then he was appointed as a General Foreman of the C. I. S. Press in 1925 and continued so till September 1930, after which he was appointed Manager of the Diocesan Press. In 1935 he left for U. K., worked in Apsley Mills of M/s. John Dickinson Ltd.; later joined the L. C. C. School of Photo-Engraving for study in Block-making and Offset printing. He gained experience from other presses such as the Oxford University Press, Oxford. He had travelled extensively in the U. K. and later went to Leipzig and worked for a short period in the factory of Karl Krause, and many other well-known firms; also visited the Leipzig Fair of 1936. After travelling Continent he returned to India. He had been Superintendent of the Diocesan Press ever since.

He is the President of the Madras Printers' and Lithographers' Association; Technical Adviser of the National Christian Council on matters relating to Christian Printing Presses; Member of the Board of Visitors of the Central Polytechnic, Madras; Member Advisory Committee of the Regional School of Printing.



IT'S JUST EASY—

only simple button pressing for accurate clear cuts—



PIVANO PERFECTA CUTTERS DO THIS JOB EASY—

Available in sizes of 32½", 42", 44½" and 52" etc.

equipped for Fully Automatic or Semi Automatic drive.

Full details and free catalogues from the selling and service agents in India

THE STANDARD PRINTING MACHINERY CO.

12/81, SEMBUDOSS STREET, G.T., MADRAS-1
Phone: 55096 Grams: PRINTMACHO

AND

THE STANDARD TYPE FOUNDRY

"PIONEERS IN SUPPLIES FOR THE GRAPHIC TRADE"

BOMBAY — DELHI — CALCUTTA

PART 2

BETTER CUTTING

FOR PAPER, CARDBOARD AND SIMILAR STOCKS

In the first part of this series we saw the causes and remedies of overcut which is one of the main classes of faulty cuts. In this issue we shall see other classes of faulty cuts and their remedies

UNDERCUT

Undercut is the term used when, after cutting, the top sheets are longer than the bottom sheets. The machine and the cut should first be tested as described on page 17 of last issue of PRINTECH (Vol III, No. 9). Undercut often occurs in cutting thick cards or board.

CAUSES AND REMEDIES

(1) Undercut may be caused through the knife standing obliquely in the knife-carrier (FIG. 1). An overhaul of the knife may be needed to remedy this fault.

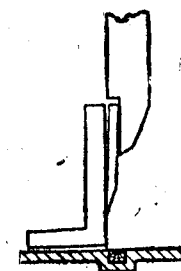


FIG. 1

(2) A common cause of undercut is an excessively fine bevel—this will cause the cutting edge to bend backwards into the clamped part of the pile—especially with thick,

hard boards (FIG. 2). In this case, the knife should be re-ground.

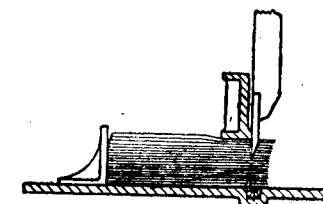


FIG. 2

It is wrong to assume that the accuracy of the cut, or the bending of the bevel, is dependent merely upon the thickness of the knife: the solid attachment of the knife to the knife-carrier is of even greater importance.

(3) If the few top sheets only are longer than the rest of the pile (FIG. 3), clamping on cutting line is too weak, the top sheets being

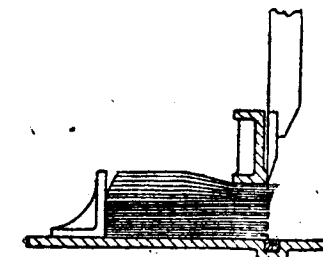


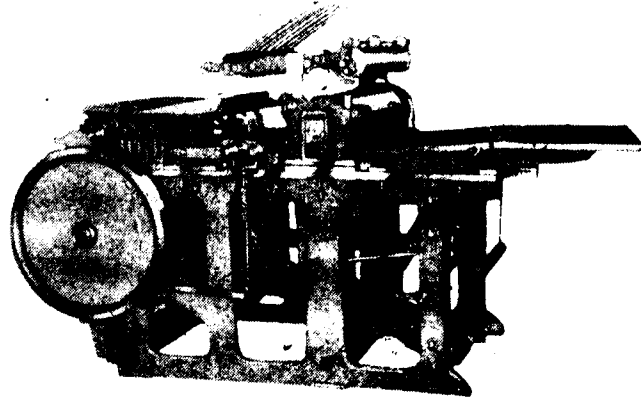
FIG. 3

bent down through the greater pressure exerted by the knife. Another result of the give of the pile under the pressure of the

"Morikawa" STOP CYLINDER PRESS

(Demy-Size—Japan Make)

This machine is simple in construction and easy for operation. For accurate printing and colour work this machine is best suited. The simple mechanism of the machine enables easy dismantling and erection.



SPECIFICATION

Maximum Print area	24½" × 18½"
Floor Space	50" × 34"
Height	45"
Revolutions per min.	160
Impressions per hour	2400
Horse Power required	1 H.P.
Net weight	2465 lb.
Gross weight	3086 lb.

EQUIPMENT

Geared Inkers
Balanced flyers
Double Cog wheels
Fast & Loose Pulley
Roller Mould
Roller Runners
Chases, Oil Can
Spanners.

WE ARE SOLE AGENTS FOR SOUTH INDIA

Our Printing Types, Borders, Blocks etc. are famous for their quality, durability, capacity to serve longer and ability to give satisfaction.

We also supply

Every article of utility to the Printing & Allied Trades, such as Rotary Cutting Machines, Perforators, Proof Presses, Lead & Rule Cutters, Hand Presses, Rule Mitreing Machines, Ruling Machines, Brass Rules, Cases, Stands, etc.

Write Today for Free Catalogue

NORTON & CO.

SPARTAN TYPE FOUNDRY

1/16, Baker Thiruvengada Mudali St.
CHOO LAI : MADRAS 7

Phone : 3001

Grams : CLEANTYPES

knife, is that the top sheets are torn off rather than cut off, and therefore pulled forward.

Undercut due to this cause may be particularly apparent with soft (spongy) papers which are pressed firmly together when clamped, and when the knife is blunt.

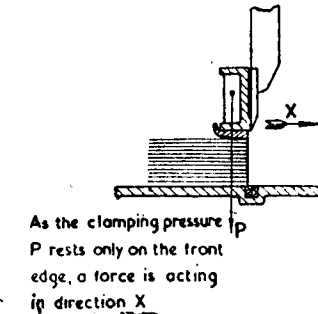


FIG. 4

The remedy is to use a clamp cover-plate with pressure strip, as supplied to special order (FIG. 4), and a sharp knife with a 19° bevel. (In place of the special clamp-plate, a pressure strip of hard cardboard can be

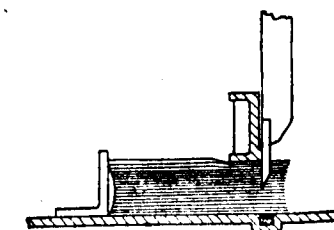


FIG. 5

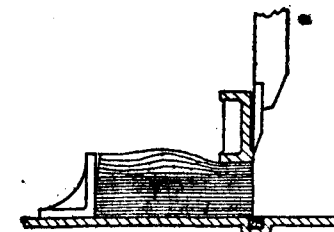


FIG. 6

glued under the clamp, flush with the cutting line. This strip should be approximately ½" wide and ⅜" thick, and should be chamfered at the back edge.)

A pressure strip should not be used with hard stocks, as the increase of clamping on the cutting line would lead to too much pressure and might damage the knife.

The clamping pressure should increase with the height of the pile. With a pile 4½" high it should reach approximately 135 lb. per inch of cutting line. The full amount of clamping pressure must be applied to the pile before the cut commences.

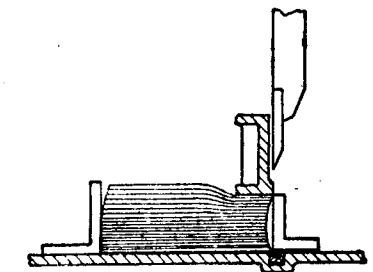


FIG. 7

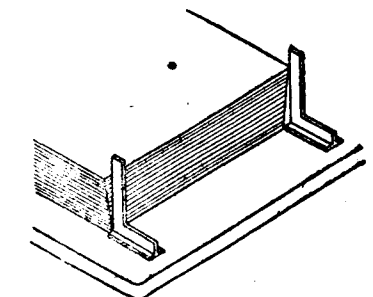
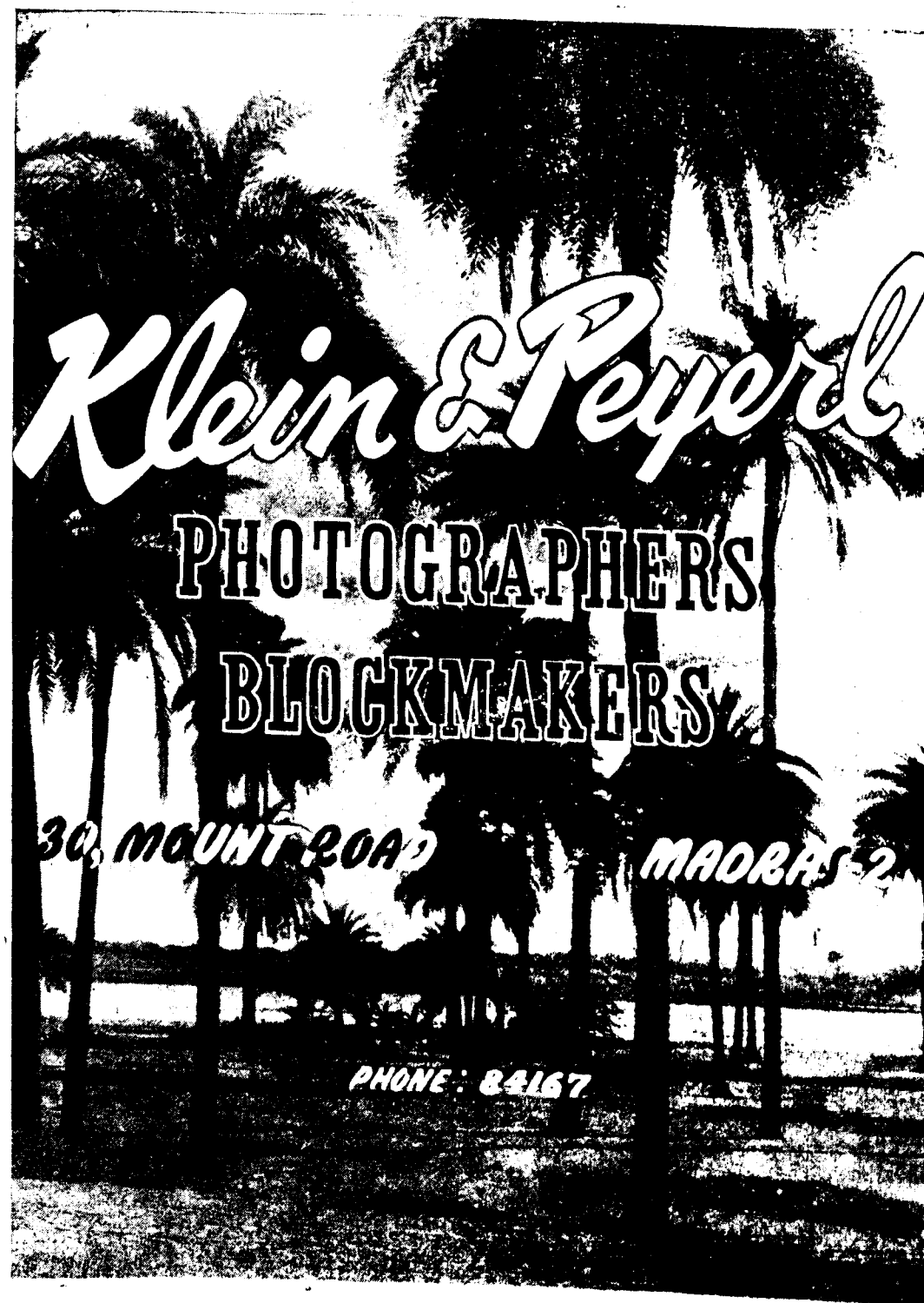


FIG. 8

(4) A blunt knife or too great a bevel angle, may, when cutting thick cardboards, lead to cutting faults whereby the top and bottom sheets are of the same length whilst those in the middle of the pile, having been pulled off the backgauge are shorter (FIG. 5). This fault can be corrected by regrinding the knife.



(5) When cutting wavy papers, the top sheets will always be longer than the bottom sheets, as the latter are pressed flat through the weight of the pile (FIG. 6).

(6) When cutting thick cardboards with too fine a knife bevel, a *concave cutting face* (FIG. 7) may occur. This can be corrected by grinding the knife to a 22° bevel and keeping the knife sharp.

(7) A *distorted cutting face* (FIG. 8) may occur with paper or cardboard of uneven thickness, resulting in overcut on one side and undercut on the other, leaving the paper out of square. This is caused by the uneven clamping of the pile, consequent upon its uneven height. On the more strongly clamped parts, the knife is pushed away from the pile, and on the less strongly clamped parts it is drawn into the pile. The pressure over the pile can be equalised by packing with waste paper, or by turning over one half of the pile.

BOW OR HOLLOW CUT (FIG. 9)

This condition is frequently caused through uneven height of the pile, with consequent uneven pressure. The unevenness of pressure can be easily tested by inserting the point of a penknife into the clamped cutting face, when, with reasonable pressure, it should penetrate not more than 5/32" into the pile. If the stock consists of several narrow piles, the uneven height of the individual piles leads to distortion of the lower, insufficiently clamped ones, resulting in distorted cut-offs and inaccurate sizes.

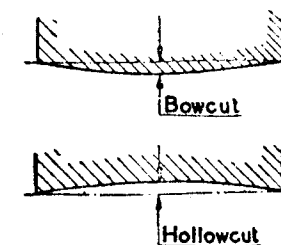


FIG. 9

In these cases, the pile heights should be equalised by adding waste paper to the insufficiently clamped part.

Note 1.—The test of irregularity of cut must be carried out with the pile still clamped, using an exact square. The customary test of putting the cut edges together is far from accurate; for example, with wavy paper, corrugated paper and cardboard, it is quite likely that the actual cut is perfectly straight while the pile is still clamped, although the cut edge of the released sheet might show a bow-shaped line.

The accepted tolerance for straightness of cut is + .008" for one yard of cutting length.

Note 2.—Some wavy papers have waves so fine that they are only noticeable by running the fingers along the paper. These papers usually show a curved cutting edge after being released from the clamp. This apparent hollow cut can be avoided by increasing the pressure in the middle of the pile, thus causing an artificial bow cut which would become a straight when the sheets are released from the clamp.

OUT-OF-SQUARE CUT

This may be due to one of the following causes:—

(1) *Backgauge not parallel to the knife* (FIG. 10) or loose in its guide.

This fault should be remedied in the following way: bring the knife to its lowest

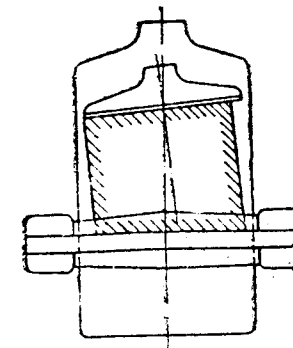
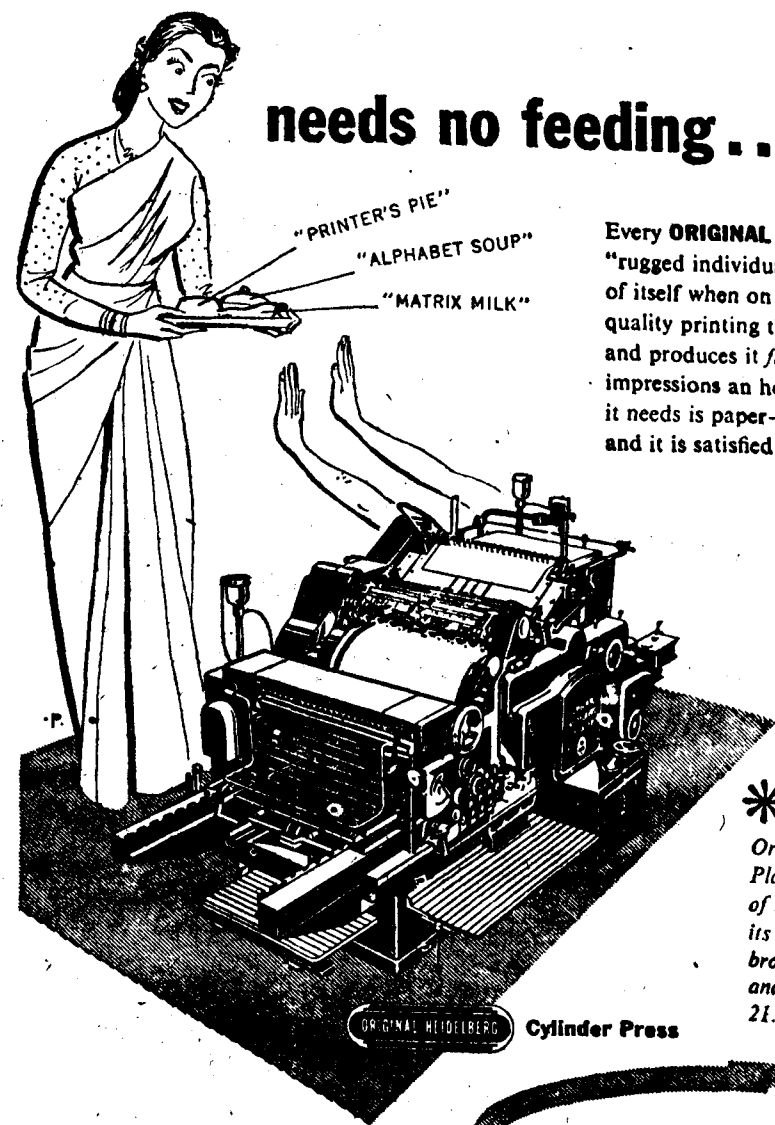


FIG. 10



needs no feeding...

Every **ORIGINAL HEIDELBERG*** is a "rugged individualist" ... can take care of itself when on the job ... produces quality printing that's second to none—and produces it fast: upto 5,000 impressions an hour! The only feeding it needs is paper—and it is satisfied with any type.

* The smallest Original Heidelberg Platen takes paper sheets of maximum 10 1/4" x 15", its sturdy bigger brother 13 1/4" x 18 1/4" and the Cylinder 21 1/4" x 28 1/4".

Make Printing Pay the Heidelberg Way

Heidelberg Agents for Northern, Central and Southern India:

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

position, with a distance-piece check the distance between the knife and backgauge at each end, and adjust accordingly. The parallelism should be checked at various distances of the backgauge from the knife. On modern machines, provision is made for taking up any play in the backgauge guide.

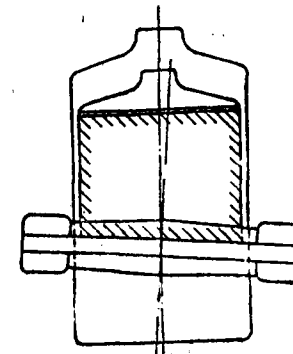


FIG. 11

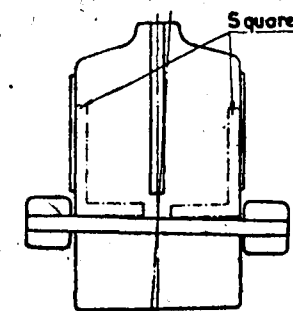


FIG. 12

(2) *Table out of square with the knife* (FIG. 11). To check the position of the table in relation to the knife and frame, an exact square should be placed against the rear table side-plate and the knife (FIG. 12). If a large enough square is not available, a piece of thick cardboard cut to 90° can be used. The squareness of the table to the knife can be adjusted by loosening the table securing-screws, setting the table square by adjusting the set-screws to the frame, and tightening the securing-screws.

Out-of-square cut may also be caused as shown on page 17, item 7, and in the "Bow or Hollow Cut" section.

MISCELLANEOUS CUTTING FAULTS

(1) A *wavy cutting face* (FIG. 13) is the result of cutting hard papers and cardboard with a knife which has too fine a bevel. It can be remedied by re-grinding the knife to 22° bevel. In many cases it will be satisfactory to hone the bevel to 22°.

A wavy cutting face will also occur when the knife is too soft—the steel being either

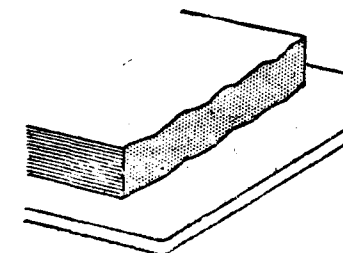


FIG. 13

not properly hardened, or annealed in grinding.

(2) A *scored cutting face* is due to chips in the knife edge. Chips occur either through particles of dirt in the stock, or through faulty tempering, grinding or honing of the knife. If the knife rubs against the clamp, as a result of being too thick, or having burrs on the top, it will soon chip. If the knife is too hard it will chip on hard cardboard.

(3) A *soiled cutting face* occurs when the knife rubs on the rear frame or the clamp, or through incorrect lubrication of the knife carrier guides.

(4) A *rough cut face*, and the cut edges sticking together, are signs of a blunt knife. Other indications of a blunt knife are:—

- (a) Swarf on the paper edges, which are bent downwards,
- (b) Sticking together of the cut-off pile or trims, and
- (c) A cracking noise when the knife goes through the bottom sheets.



At the Opening Ceremony of the Second Annual International Calendar Exhibition, Dr. K. A. Nag, President of the Society, is delivering lecture as to how calendars can play in promoting international cultural co-operation. In the middle is seen Prof. N. K. Siddhanta, Vice-Chancellor of Calcutta University, who opened the Exhibition after the meeting. S. N. Guha Ray, Vice-President of All India Federation of Master Printers is in the extreme left.

One Dacca newspaper, *The New Nation* had already ceased publication. Mr. Matri said.

He added: "Many other papers are threatened with a similar fate. District papers and periodicals are the worst sufferers". Mr. Matri said the shortage was caused by an alleged delay in the issue of import licences for newsprint and an improper distribution system of the Government.

Plan for Publication of Books in South Indian Languages by Trust

The Southern Languages Book Trust, which was inaugurated in October last by the Prime Minister in Madras to sponsor the publication and distribution of high quality low-priced books in large numbers in the four major South Indian languages, Tamil, Telugu, Malayalam and Kannaḍa, has proposed to issue eighty books a year, 20 in each of the four languages.

As much as 50 per cent of the books chosen will be by Indian authors or on Indian subjects. The range of subjects to be covered will include Indian and world classics, significant current and traditional works in history, philosophy, science, fiction, poetry, *belles-lettres*, drama, arts, social sciences, religion, travel, children's books, 'how-to-do it' books and reference books.

The Advisory Committees on various languages are at present engaged in the preliminaries. Books published by the Trust will be of the type popularly known as 'pocket books' resembling in appearance the 'Penguin' or 'Mentor' series of books.

Mr. Jack Schulman of the Cambridge University Press and Mr. Martin Levin, Vice-President of Wonder Books and Treasure Books of the United States had discussions with the authorities of the Book Trust regarding the price and cost of printing and the methods of publication, distribution and sales of the books published under the auspices of the Trust.

India's First Newsprint Factory

India's first and Asia's biggest newsprint factory, the National Newsprint and Paper Mills, was officially declared open in Nepanagar on April 26th, 1956 by our Prime Minister Mr. Jawharlal Nehru.

Mr. Nehru said newsprint was essential for expanding the readership and thus increasing literacy. He said India should have more newspapers.

A vast gathering of over 50,000 heard the Prime Minister that day. Sri Ravi Shankar Shukla, Chief Minister of Madhya Pradesh, and Dr. A. Ramaswami Mudaliar, Chairman of the Board of Directors, spoke on the occasion.

THE FACTORY

Built at a cost of Rs. 6.5 crores, the Nepa Mills is scheduled to produce 100 tons of newsprint per day, thus meeting 40 per cent of the annual requirement of 90,000 tons of newsprint required for India's 330 journals with a total circulation of two and a half million copies.

Established in 1948 first as a private company, the Nepa Mills is now a State-aided industry for which the Government of India have given a loan of Rs. 2.5 crores while the Madhya Pradesh Government have shares worth Rs. 2 crores and the remaining is covered by private shares.

The Mills began production early last year with imported chemical pulp. Later, by the end of the year, production was started with completely Indian materials.

First, the production ranged from 10 to 15 tons per day and today it has reached the 63-ton mark.

The first sample of newsprint from indigenous 'salai' wood and imported chemical pulp was produced in the mill on Jan. 11 last year. Over 2,000 tons of newsprint were produced till the end of October last, using unbleached groundwood pulp.

Government Press Superintendents Conference in the City

A two-day inter-State conference of Superintendents of Government Presses of Madras, Hyderabad, Mysore, Travancore-Cochin and Andhra took place on 7th and 8th May at Government Press, Madras, to discuss problems relating to labour, machinery and overtime employment in large printing presses.

First of its kind, the conference was organised by the Madras Government at the suggestion of Mr. H. G. Stookes, Controller of Printing and Stationery, Madras.

The conference was attended by Mr. Ghulam Rasool, Director of Printing and Stationery, Hyderabad, Mr. Gurubasavappa, Director of Printing, Mysore, Mr. N. Gopala Menon, Superintendent of Travancore-Cochin Govt. Press, Mr. G. F. Amalanathan, Superintendent of Andhra Government Press, Mr. R. Siddique Superintendent of Madras Govt. Press, and Mr. H. G. Stookes.

One of the main items of business discussed at the two-day conference was the question of absenteeism and of how to check this growing tendency among workers.



Supts. Conference at Govt. Press Madras—Picture shows Messrs R. Siddique, H. G. Stookes and Gurubasavappa in the foreground and Messrs Ghulam Rasool and G. F. Amalanathan on the opposite side.

The conference was of the opinion that workers should be educated to realise their responsibility in the matter and special efforts should be made to encourage attendance by providing a 'regularity' allowance. To secure increased output of work, it was felt that some sort of a bonus scheme might also be tried.

The problems relating to welfare of employees were discussed and the conference held the view that some sort of a Welfare Fund should be established but felt that the staff on the administrative side was not sufficient to meet the ever-increasing administrative problems in this regard. Where large numbers of employees were concerned, the conference felt, steps should be taken to redress grievances promptly.

The consensus of opinion at the conference was that problems confronting the printing trade were more or less similar everywhere and it would be useful for representatives from all over the country to meet at least once a year to discuss and find solutions.

At the conclusion of the conference, the delegates visited the Government Press in Mint. They were taken round by Mr. R. Siddique, Superintendent.

Oliver Simon Dead: Loss to Typography

OLIVER SIMON, O.B.E., Chairman of the Curwen Press, for thirty years a leading figure in the printing trade, died in the month of March 1956.

Only a fortnight before his death his autobiography "Printer and Playground" was published.

In 1919, at the age of 24 Mr. Simon began his 35-year connection with the Curwen Press. In 1922 he founded *The Fleuron*, a Journal of Typography, and was

one of the founders of the Double Crown Club. In 1936 he founded the quadrimestrial of Typography and Graphic Arts entitled *Signature*, which has achieved world wide fame for its critical articles on the arts of printing and design, calligraphy, and typography. His own work as a typographer is world famous and easily recognizable.

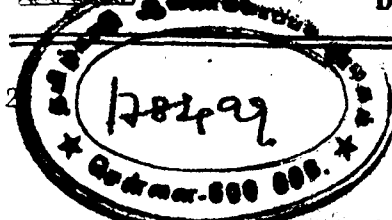


His *Introduction to Typography* appeared in 1945 and was then offered to a wider public in 1954 by Penguin Books as a "Pelican." This book was originally written over a period of four years during brief intervals of leisure in the Second World War.

Many of our readers who are very familiar with this book will ever remember the Late Oliver Simon.

NEW ITEMS MAKE NEWS ITEM

Post Your report to PRINTECH

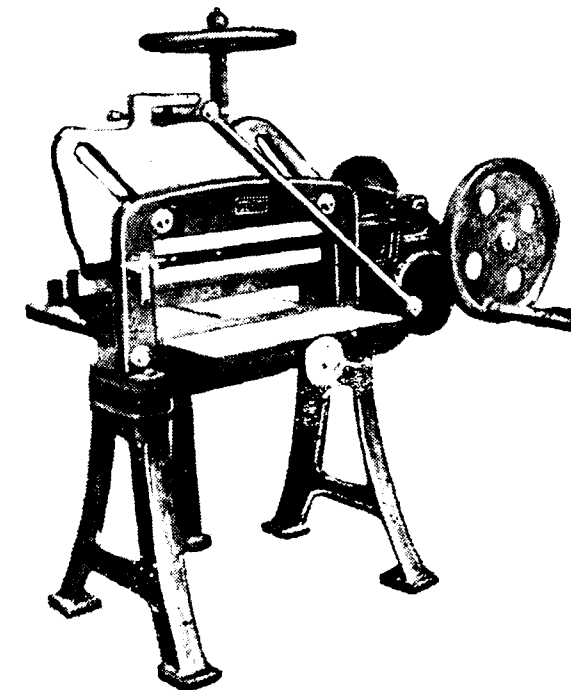


The Cover of this issue is printed on
GATEWAY PAPER, "Proven" White Art
Double Crown, 45 lb., 500 sheets



PRINTECH May 1956

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: "PRINTECH"

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 .

Post Box 452 Phone : 2722 Grams : NELSONCO

Factory at

AMINJIKARAI, MADRAS 29

Phone 61736