

BULLETIN

OF THE ALL INDIA FEDERATION OF MASTER PRINTERS

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Editor-in-Chief—S. RAMU

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THE TRAINING OF APPRENTICES FOR THE INDUSTRY

The very first action of the All India Federation of Master Printers was to draw the attention of the Union Government to the dearth of technical personnel in the industry and to request them to start printing schools in the country so that the industry could have a continuous supply of properly trained workmen. In response to this the Government of India started four Regional Schools of Printing at Madras, Calcutta, Bombay and Allahabad. We are happy that the school at Allahabad would commence functioning from this academic year.

For a long time, the Government of Madras had a printing section in their Central Polytechnic where training had been given to a number of students who at the end of the course took a diploma in Printing Technology. This section was made over to the Regional School of Printing last year. The Government have appointed an Advisory Committee which, meeting from time to time, sent in recommendations to make the school more and more useful to the industry. This Committee had recommended that the school should be housed in a separate building, that more machinery should be purchased, that a separate Principal should be appointed and that the scales of pay of the Principal and the lecturers should be such as to attract really competent people to take up these posts. We are glad to announce that the Government of Madras and the Union Government have

now accepted the committee's recommendations and have decided to house the Regional School of Printing in its present building and to remove all other departments from there to the Industrial Estate at Guindy so that the Regional School of Printing can have ample space for its several departments. They would also be appointing a Principal very shortly.

They have also placed orders for additional equipment as per the recommendations of this committee. This school is sure to cater to the needs of all States in South India—Madras, Andhra Pradesh, Kerala and Mysore. Seats have been allotted for these various States so that those who are desirous of joining this institution from those places can have all the facilities required by them.

The Regional School at Calcutta was started with the co-operation of the Industry and is managed by two secretaries, one from the Industry and the other from Government. It is functioning very well indeed.

Last year, the Regional School of Bombay commenced functioning in a rented building. It is understood that the Government of Bombay and the Government of India are planning to put up a separate building and equip it with the latest machines. There is also an Advisory Committee attached to this school consisting of representatives of the Government and of the industry.

News is to hand that the Regional School at Allahabad would commence from this academic year. This School has purchased Rs. 2 lakhs worth of machinery last year and has recently advertised for lecturers and the Principal. The U.P. Government is sure to take the co-operation which the printing industry has offered to them.

In addition to these four regional schools, the Union Government inform us that the Delhi Polytechnic would have a printing department before long. There are such departments at Cuttack and Bangalore, which are also training technical personnel for the graphic arts.

While Government can start training centres, the responsibility for making them really successful institutions depends mainly on the Industry. These schools can provide good theoretical knowledge in the various courses and can also, perhaps, give them some practical training. But it is only at the actual printing presses that one would get a real opportunity for practical training, for here it is that the day-to-day difficulties are met with and solved. It is therefore the duty of every member of the industry to take in students who come out of these regional schools as apprentices and give them all facilities for their practical training. Such of those who could afford it should also pay these apprentices so that they can earn as they learn. By making them full-fledged and useful workmen at the end of their course, the industry would in the long run be really benefited by such small

(Continued on page 9)

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by

S. BOSE, B.L.,

Superintendent, Calcutta Association of Master Printers

'Lock-out and Closure'—It is very often found that confusion arises as to the exact implications of the above two terms. I shall discuss about them in the light of the Industrial Disputes Act and the decisions of various Tribunals.

Lock-out, according to the Industrial Disputes Act, means 'the closing of a place of employment or the suspension of work, or the refusal by an employer to continue to employ any number of persons employed by him.' From the above definition it is evident that a lock-out implies three conditions, viz.,—

1. Closing of the place of employment
2. Suspension of work
3. Refusal by an employer to continue to employ any number of persons employed by him.

Lock-out is the counterpart of a strike. While both the terms imply cessation of work, in strikes it is the employee who takes active part in stopping the work, and in lock-out it is the employer who takes the initiative. 'If the employer shuts down his place of business as a means of reprisal or as an instrument of coercion or as a mode of exerting pressure on the employees, or generally speaking, when his act is what may be called an act of coercion there would be a lock-out.' Lock-out does not effect any change in the conditions of service. It is simply the suspension of the services of the employees by the employer and therefore the relationship between them does not cease as a result thereof.

Let us now see what is not a lock-out. I give here some of the decisions of the various Tribunals.

1. If the employer pays the workmen but refuses to give them any work, it will not be lock-out.
2. Temporary suspension of work for want of raw materials is not lock-out.

3. Refusal to permit late-comers to work for the day is not lock-out.

4. Retrenchment of surplus labour is not lock-out.

5. If work is suspended in conformity with standing orders on account of stocks being exhausted, or else for genuine trade reasons it will not amount to lock-out.

An amount of malice or ill-will must be present in lock-out and this distinguishes a lock-out from closure. The provision regarding 'Closure' is a new addition in the latest amendment of the Industrial Disputes Act. It may be remembered that in the previous issue of the *Bulletin* I mentioned the uncertain position created by the promulgation of the *Industrial Disputes Amendment Ordinance, 1957 vis-a-vis* the Supreme Court judgment in respect of payment of compensation in cases of genuine closure. Now by the passing of the *Industrial Disputes Amendment Act, 1957* and by the inclusion of 'Closure' in a newly added section of the Act, all questions about the above anomalies have been finally(?) set at rest. I therefore think it necessary to reproduce here this new section of 'Closure' for the information of my readers.

Section 25 FFF of the amended Act deals with 'Closure' and reads as follows:—

25 FFF. (1) Where an undertaking is closed down for any reason whatsoever, every workman who has been in continuous service for not less than one year in that undertaking immediately before closure, shall subject to the provisions of sub-section (2), be entitled to notice and compensation in accordance with the provisions of section 25 F, as if the workman has been retrenched.

Provided that where the undertaking is closed down on account of unavoidable cir-

cumstances beyond the control of the employer, the compensation to be paid to the workman under clause (b) of section 25 F shall not exceed his average pay for three months.

Explanation.—An undertaking which is closed down by reason merely of financial difficulties (including financial losses) or accumulation of undisposed of stocks shall not be deemed to have been closed down on account of unavoidable circumstances beyond the control of the employer within the meaning of the proviso to this sub-section.

(2) Where any undertaking, set up for the construction of buildings, bridges, roads, canals, dams or other construction work is closed down on account of the completion of the work within two years from the date on which the undertaking had been set up, no workman employed therein shall be entitled to any compensation under clause (b) of Sec. 25 F, but if the construction work is not so completed within two years, he shall be entitled to notice and compensation under that section for every completed year of service or any part thereof in excess of six months.

Mention of Sec. 25 F has been made in the above section on 'closure'. Sec. 25 F deals with retrenchment relief and reads as follows:—

'No workman employed in any industry who has been in continuous service for not less than one year under an employer shall be retrenched by that employer until

(a) the workman has been given one month's notice in writing indicating the reasons for retrenchment and the period of notice has expired, or the workman has been paid, in lieu of such notice, wages for the period of notice:

Provided that no such notice shall be necessary if the re-

(Continued on page 14)

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**GOVERNMENT IMPORT POLICY FOR
JULY—SEPTEMBER, 1957
O.G.L. SYSTEM ABOLISHED**

Government do not propose to issue licences to established importers during the three months from July to September this year. It is designed to stay drawal of India's foreign exchange reserves. The licensing periods hereafter would be April—September and October—March instead of January to June and July to December.

Established importers would however be permitted to revalidate for the next period their outstanding licences expiring on 30th June and actual users would continue to get licences for essential raw materials.

Established importers can apply for extension of the period of validity of their six-monthly licences and seek conversion of the outstanding licence from a less essential to a relatively more essential item. Importers of machinery would also be enabled

to apply for their quota licences to be validated for the import of spare parts.

During the period July—September, it is not proposed to renew the open general licences expiring on June 30 except those relating to poultry, etc., from Pakistan which had been renewed for another three months. This was because importers have, in the recent past, effected substantial imports of items included in the current O.G.Ls.

Government require importers to establish their past performances in the basic period 1952-53 to 1955-56 in respect of items which were included in the current O.G.Ls. In the meanwhile, in order to maintain a steady flow of imports of essential raw materials, licensing authorities have been instructed to issue due *ad hoc* or actual users' licences for many

of the items such as zinc, lead, tin, copper, nickel, ferro-chrome etc., and certain kinds of scraps and alloys, aluminium, electrodes, tanning substances, hides and skins, sulphur, rock phosphate, wood pulp, raw wool, raw asbestos and books. At the same time, Government are anxious to see that the industry is kept up progressively and not starved out of any essential commodity. Licensing authorities have accordingly been instructed to continue to grant licences to actual users, both scheduled and non-scheduled for essential raw materials. But the import of commodities which are locally available or are required merely for securing superior quality will not be permitted. Actual users are therefore expected to ensure maximum economy.

Import licences for capital goods will continue to be issued on suitable deferred payment terms. Import licences will be given for projects which save or earn foreign exchange either by reducing imports or by increasing exports. Licences for machine tools will be given to established importers on *ad hoc* basis.

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Encouraged by the Industry's welcome to our Fluorescent Inks for the Silk Screen Process, which are now on display on posters throughout India, the COATES' Laboratories have now developed a range of Daylight Fluorescent Inks for Letterpress Printing.

Means are therefore at the Industry's disposal to brighten printed matter still further. Posters and Display Cards can for the first time be printed in bulk with Fluorescent Colours at a far lower unit cost than hitherto. Fluorescent Pigment Dyestuffs are of course more costly than ordinary colouring materials, but this is compensated by the striking results and greater coverage obtainable.

Because of their special nature the following instructions for using FLUORESCENT LETTERPRESS Inks must be noted carefully:

1. These Inks are not compatible with ordinary Inks. No additions should normally be necessary but where absolutely essential small quantities of Fluorescent Letterpress Reducer B6432 may be added.

No intermixing should be undertaken.

2. Only ordinary Composition (Gelatine/Glue) Rollers can be used.

3. After the wash-up a final cleaning with Methylated Spirits should be carried out to remove all traces of grease.

4. A smooth, hard surfaced paper such as first quality white M. G. poster will give the best results. The brighter and whiter the paper the greater the fluorescence.

5. The degree of fluorescence depends directly on the amount of ink deposited, and 2—3 times the normal film weight should be run.

6. Wash up with Methylated Spirits.

COATES INKS FOR GOOD PRINTING

The Cover colour of this issue of the Bulletin is printed in Fluorescent Yellow Letterpress B 6325.

FEDERATION MEETS CHIEF COMMISSIONER FOR IMPORTS

A DEPUTATION consisting of Messrs. P. M. Antony and R. Venkateswaran, Hony. Jt. Secretaries of the All India Federation of Master Printers and Sri V. M. Philip, Hony. Treasurer, waited on Sri S. N. Bilgrami, Chief Controller of Imports and Exports, on 8th July, 1957 at Madras, and presented the following Memorandum:

"The All India Federation of Master Printers submits the following Memorandum and requests that it may be given effect to, even as a special case, during the three months period from 1st July, 1957, falling which at least in the succeeding quarter as otherwise the printing industry will be facing a crisis very shortly.

While appreciating that the primary consideration of Government is conservation of foreign exchange, the All India Federation of Master Printers submits that for the development programme especially so far as education under the Second Five-Year Plan is concerned, the import of printing machinery by actual users should be allowed, particularly in view of the fact that established importers' quota has been completely suspended for the next three months. It will also be remembered that there is no manufacturing of cylinder printing machines in our country. Complete stoppage of import would therefore materially affect the industry as machines get old and becoming obsolete cannot be replaced.

2. The vital role which the printing industry has taken up in liquidating illiteracy as envisaged in our Second Five-Year Plan cannot be over-estimated and as such, the scheme of licensing Capital Goods should also include the import of printing and lithographic machinery required by this essential industry.

3. Component parts of printing and lithographic machinery:

Licences for import of these component parts by the Actual Users of printing and allied machinery should, it is submitted, be allowed inasmuch as most of the existing machines are too old and would inevitably have to be shut down for want of spare parts, a point already appreciated by you when a deputation of our Federation met you on 14-2-1957. In the circumstances, the Federation will be grateful if Actual Users' Licence is issued to printers who require spare parts and thus help at least the existing old machines to be kept on going and incidentally avoid recourse to retrenchment and unemployment which would inevitably result if the licence to import component parts is not given to Actual Users.

4. Ante-set-off powder and liquid:

This is a commodity which is necessary in colour printing and is not produced indigenously. As its value is too small, the import of this would not affect our foreign exchange reserve and so it may be permitted to be licensed.

5. Foreign newsprint is used by quite a few printers in our country in the production of books religious and sanctified which have great export value and are being sent to Middle and Far East countries where they command a wide and lucrative market. The Federation therefore requests that the import of newsprint for such purposes by those printers be permitted under the Export Promotion Scheme.

6. Hitherto, only Actual Users have been allowed to import

mild steel and binding wires. These wires are an important requisite in the binding work of small printers and bookbinders, a majority of whom are semi-literates and who as such, find it extremely difficult to obtain import licences on their own account. It is therefore requested that the established importers who have all along been supplying this item may be allowed to import this item sufficiently to meet the requirements of the aforesaid small printers and binders.

7. Re-import of parts of photo-engraving and printing machinery:

Certain parts such as camera lens, etc. are usually sent to foreign countries for repairing, cleaning, etc. and on their re-import, full duty is levied on them as if they were newly imported items, since the Port Customs Authorities are under the belief that only full units are importable and not their parts. The Federation hastens to point out that while full units can be imported under certain clauses, their component parts should, *ipso facto*, be also imported under the same clauses. The Federation therefore requests that instructions to Port Authorities be given to adopt a uniform policy of permitting the re-import of such parts without delay."

Regarding import of printing machinery, Sri Bilgrami regretted his inability to grant any licence in view of the critical foreign exchange position.

The deputationists urged that unless existing machinery which are beyond all repairs are replaced, the machinery will have to be kept idle, the printer would have to give a go-bye to all his subsisting commitments and face no other alternative than to retrench his personnel working with that machinery with all attendant troubles. The C.C.I. appreciated

(Continued on page 13)



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THE BOMBAY MASTER PRINTERS ASSOCIATION

The Annual General Meeting of the Association was held on Tuesday the 2nd July 1957 at 5-30 p.m. at the Commercial Printing Press with Mr. V. H. Thaker, the President in the chair.

Mr. N. J. Ardeshir the Secretary presented the Report of the Executive Committee for 1956-57 together with the accounts which were passed.

The report dealt with the import policy of Government which had its adverse repercussions on the industry. The Association issued forty-four circulars to its members to keep them informed of all day-to-day matters affecting the industry. Even industrial courts awards affecting the industry have been so circulated.

The levy of excise duty on waxed paper has resulted in much hardship. A special sub-committee consisting of Mr. A. F. Varawala, Mr. N. J. Ardeshir and Mr. G. V. Mehta took up this matter for clarification which has since been obtained to the following effect:—

"It has since been decided that 'waterproof paper' other than 'waxed paper' is not liable to Central Excise Duty. The Government of India have also exempted 'waxed paper' from the excise duty leviable thereon subject to the condition that it is proved to the satisfaction of the proper officer that the indigenous paper used in the manufacture of 'waxed paper' is duty paid (vide notification No. CER—8 (1) 57 dated 12th January, 1957.)"

Similarly, the levy of Sales Tax also offered some difficulty and the point was got clarified by the above special sub-committee.

The Minimum Wages Act was applied to the industry with effect from July 1956. The Government of Bombay prescribed the minimum quantity of output necessary to claim the minimum wages.

The Employees' Provident Fund scheme for the printing industry came into effect from August 1956.

A deputation of the Association waited upon the Chief Controller of Imports and Exports when he visited Bombay, and, later, the Director of Industries, Bombay and discussed with them the problems arising out of restrictions on Actual Users licences, the procurement of non-availability certificate from the concerned manufacturers and the restriction on the use of newsprint for printing religious literature. But in view of the poor foreign exchange position, the Government of India would not liberalise imports but, on the other hand, they were banning import of machinery by actual users and drastically cutting down paper imports. However, those who had previously themselves imported machinery on their own account and not through an established importer would be granted a quota to import machinery as 'established importers.'

The members serving on the Governing Council of the Federation have done good work towards the solution of many printing problems. The Federation has tackled several problems like paper sizes, excise duty on waxed paper, import licences for paper, board and printing machinery and the management of regional schools of printing.

Two large print buyers have set up their own printing presses. One of them had obtained licences for importing printing machinery to the detriment of printers who really need such licences. Such action on the part of the print buyers would doubtless cause large-scale unemployment and very great hardship to established printers. The Federation has taken up this matter.

The standardisation of paper by the Indian Standards Institution has caused much hardship to the Indian Printer. The opposition of the Federation notwithstanding, the sub-committee has standardised the A series and fixed a period of 10 years for the change-over instead of 15 years suggested by the Federation in the interests of the average small printer with limited resources.

The Bombay School of Printing has been functioning since June 1956. The Government of Bombay

have set up a Board nominating three member-printers, viz., Messrs. M. N. Cama, S. Ramu, and K. C. Raman. They report that the progress of the school is far from satisfactory. In fact, the Federation has suggested to the State Government that the School should be managed by an autonomous body in the interests of efficiency of the school.

There are a number of local problems one of which relates to the standardisation of wages, leave, dearness allowance, quantity of output, men per machine etc., so that the number of printing problems arising in printing presses may be kept down. The members were circularised, but the response is poor.

The Association has a panel of consultants on problems of Sales Tax, Income Tax, Provident Fund, Employees' Health Insurance, Factory Act requirements and labour questions. This would certainly presuppose a good reference library, an office and funds.

Executive Committee

Mr. N. L. Contractor (Popular Fine Art Litho Works) was elected as the President and Mr. N. J.

Ardeshir (Bolton Fine Art Litho Works) as the Hon. Secretary and Treasurer for the current year.

The Training of Apprentices for the Industry.

(Continued from page 1)

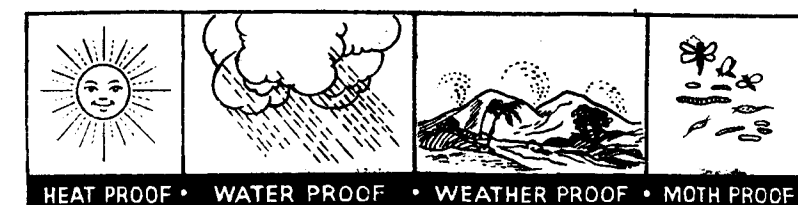
sacrifices that they might make now. Unless all the students of these regional schools are attached to some printing press or other, their education at these schools will hardly be satisfactory. It is no use condemning the students coming out of the school as not being able to handle our machines. They have their theoretical knowledge all right and it is our duty to give them the necessary practical training, however inconvenient it might be for us at the moment. We are sure that the printing establishments, especially at places where there are regional schools, will go all out to give this co-operation and take in as many apprentices as possible and train them up in such a manner that before long it may not be said of the graphic arts of our country that the quality of our printing as compared with that of other countries has gone down.

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ODDS & ENDS

Bitter Half

More than sixty per cent applications for loan have been turned down by the West Bengal Financial Corporation in the year 1956-57. The reasons for this rejection are—absence of adequate security, insufficiency of earning capacity to repay the instalments of the principal and to pay the interest, unsatisfactory financial position, unfavourable credit reports and inefficient management. Those who smell easy money at the establishment of the different institutional financing houses should be well advised to take their lessons from the above rejection. The unavoidable counter-part of borrowing is repayment and unless an industry is based on sure fundamentals, it can hardly qualify itself for the loans. The wisest motto should, therefore, be

'Desire and deserve.'

Between two fires

Now that the Parliament has passed a Bill to replace the Ordinance providing for compensation

to workers, if their services are terminated on account of the transfer of ownership or closure of undertakings for any reason whatsoever, closing down a business may be, in some cases, more expensive than running the same. Here is a hypothetical case cited by the Engineering Association of India in this connection:

If a factory of 20 years' standing, having a paid-up capital of Rs. 50 lakhs, employing 2,000 workers and paying a monthly wage bill of Rs. 3 lakhs, is obliged to close down, it will have to pay a month's wage as notice pay and 10 months' pay as compensation to workers. The total bill would amount to Rs. 33 lakhs. The company is unlikely to shut down

unless losses amount to 50% of the paid-up capital. So it appears that in the case of a losing concern which decides to close down, the amount of loss plus the retrenchment compensation would exceed the share capital of the concern. How ridiculous!

"We are the same on all sides—whether we close or run", the establishments may very well echo the great lady who had once told the Press photographers posing their cameras for a correct view, 'Worry not, gentlemen, I'm same on all sides—fat and round'.

Convenient Cloak

Conversion of rates in terms of Decimal coinage serves as an ideal excuse for stepping up prices—so it appears from the revised Price Lists of the Asoka Marketing Ltd., Indian Paper Makers Association and Indian Paper Mills Association.

	Old Price	Exact Conversion in nP.	Revised Price (nP.)	Increase due to revision.
Unbleached Printing	0 11 14	.70	.72	.02
White Printing	0 11 8	.73	.75	.02
Coloured Printing	0 12 9	.80	.83	.03
White Overland Bond	1 0 34	1.02	1.07	.05
White Poster	0 13 0	.81	.94	.13
Smooth Coated Art Board	1 0 4	1.02	1.12	.10
Art Board (Asoka)	1 2 3	1.14	1.20	.06

3 questions...

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tion. The prices now fixed in decimal coinage far exceed the actual figures obtainable from a faithful adherence to the official conversion tables. The wide gap may well be measured from a few instances below:

The reactions are already there; publishers of text books are contemplating an increase in the price of books and others may soon follow suit. The cause of our education and paper consumers is now at the mercy of a handful likely to make the most of the break.

Remember the Aesop's Wolf that wanted a plea 'for courtesy's sake'.

Where there's a will—

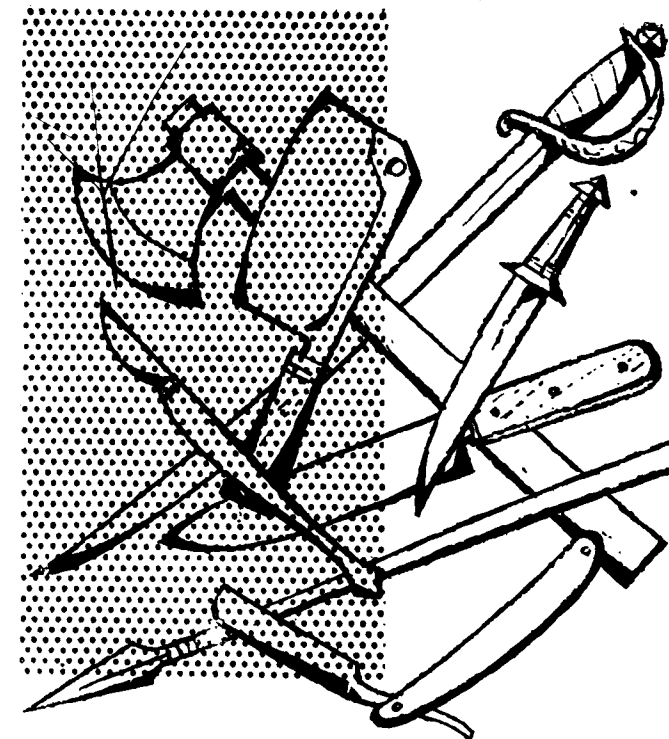
Total suspension of import licences for machinery has been found necessary for the sake of saving foreign exchange. The Ministry is, however, not averse to the application for import under Capital Goods on deferred payment scheme.

As very aptly described by our President Shri Gowardhan Kapur at the meeting of Import Advisory Council, 'the printing industry is the handmaid of all other industries and as such, it deserves all import facilities for machines and component parts. Of course, we do appreciate the foreign exchange considerations and the necessity of deferring the payments for as long a period as is feasible. But we hope, there will not be any reluctance in authoritative quarters to help the beautiful 'handmaid' on any account. Even if there is any difficulty,

—there is always a way.

Acknowledgment

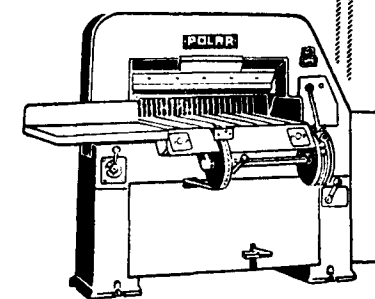
We are thankful to the Coates of India Private Ltd. for having supplied us with the Fluorescent Neoset ink for printing the cover page of this issue.



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NEWS & NOTES

Application of Minimum Wages Act, 1948 to Apprentices in Printing Industry.

The Officer on Special Duty, Labour and Social Welfare Department, Government of Bombay, writes as follows:—

"I am directed to state that rule 2 (c) of the Bombay Minimum Wages Rules, 1951, which defines the term 'apprentice', has since been amended to read as follows:—

"apprentice" means a person who is employed for the purpose of being trained in any scheduled employment provided that such person shall not be deemed to be an apprentice if the period of training in such scheduled employment or such process or branch of work forming part of such employment exceeds such period not exceeding *three years*, as the State Government may, by notification in the Official Gazette, specify in this behalf".

2. I am to add that the question of prescribing periods of apprenticeships for different jobs in the Printing Industry in the Old Bombay State area is under consideration of Government. Government do not consider it necessary to appoint a committee to consider this question, as suggested by the Federation."

Joint Committee of Printer and Paper Maker.

The All-India Federation of Master Printers had approached the Indian Paper Makers' Association suggesting that representatives of the Federation as well as this Association could meet and discuss the difficulties experienced by the printers in procuring paper and other problems common to them. It is with regret that this Association has informed the Federation that since it does not interfere with the sales policies of

its members, a meeting between the representatives of the Association and the Federation will serve no useful purpose. This is indeed strange!

TRADE NOTICE NO. 18 (MP) OF 1957.

Sub:—Paper—Ocean kraft and other waterproof varieties of paper —Waxed paper etc.—Excise duty on.

The following is reproduced for general information.

The Government of India have issued a Notification No. 14 dated the 23rd February, 1957 (appended hereto) in supersession of their Notification No. CER-8 (1)/57 dated the 12th January, 1957, exempting Waxed paper from the excise duty leviable thereon subject to the condition that it is proved to the satisfaction of the proper officer that the excise or customs duty leviable thereon in respect of the paper used in the manufacture of such waxed paper has been duly paid. The Central Board of Revenue have also issued orders that duty should not be recovered on clearances of waxed paper retrospectively with effect from 1-3-1955 the date on which the excise duty was imposed on paper but only with effect from the 30th July, 1956, the date on which the Board held that waxed paper is liable to duty under Central Excise Tariff relating to paper. The effect of these orders is that (i) waxed paper manufactured by using indigenous paper and cleared during the period from the 30th July, 1956 to the 11th January 1957, and (ii) waxed paper manufactured by using imported paper and cleared during the period from the 30th July, 1956 to 22nd February, 1957, is liable to duty and duty will have to be paid on the clearances of waxed paper made during

this period. No duty is required to be paid on waxed paper manufactured by either using indigenous or imported paper and cleared prior to the 30th July, 1956. The Collectorate Trade Notice No. 6 (MP) of 1957 mentioned above, should be considered as modified to this extent.

(Sd.) N. L. Mehta,

Collector of Central Excise, Bombay. File No. VI (X) 3-2/56.

Bombay, the 9th March, 1956.

GOVERNMENT OF INDIA, MINISTRY OF FINANCE (DEPARTMENT OF REVENUE), NEW DELHI.

CENTRAL EXCISES. NOTIFICATION.

No. 14—In exercise of the powers conferred by sub-rule (1) of rule 8 of the Central Excise Rules, 1944, as in force in India and as applied to the State of Pondicherry, and in supersession of the notification of the Government of India, Ministry of Finance (Department of Revenue) No. CER-8 (1)/57 dated the 12th January 1957, the Central Government hereby exempts waxed paper from the excise duty leviable thereon under section 3 of the Central Excise and Salt Act, 1944 (I of 1944), subject to the condition that it is proved to the satisfaction of the proper officer that the excise or customs duty leviable in respect of the paper used in the manufacture of such waxed paper has been duly paid.

(Sd.) S. K. Bhattacharjee,

Deputy Secretary to the Government of India.

No. 14 F. No. 21/6/57-CX. IV. (True Copy)

High prices of Paper and Board

A glance at the lists of revised prices of Paper and Board issued by the Asoka Marketing Ltd., and by the Indian Paper Mills Association shows that in converting the price under the old system of coinage into the decimal one, these manufacturers have erred on the other side viz., exceeding the correct equivalent. For instance, the Asoka Marketing Ltd. give the price of Art Board (Re. 1-2-3) as

Rs. 1.20 while the correct conversion gives us only Re. 1.14, i.e., six naye Paise less. This is not fair from the point of view of the consumer who has, besides this excess levy, to bear other inevitable excise and other duties.

It is hoped that better considerations will prevail with the above manufacturers and that they will come out with correctly calculated price equivalents.

(Continued on page 14)

Federation Meets Chief Commissioner for Imports

(Continued from page 7)

this position and called for total requirements and wanted the Federation to furnish him with the approximate total value of the licences required purely for replacement.

Regarding component parts, after persistent demands, the C.C.I. agreed to allow their import to the total value of Rs. 2 lakhs during the quarter, Rs. 75,000 each for Bombay and Calcutta and Rs. 50,000 for Madras.

The C.C.I. agreed to allow import of Ante-set-off powder and liquid subject to a maximum value of Rs. 5,000 for each port.

Regarding import of newsprint by Actual users for production of religious books under Export Promotion Scheme, Sri Bilgrami said that Government would grant permission for such import of newsprint on receipt of applications from such of those firms as deal in it.

The deputation was advised to take up the matter of import of mild steel and binding wires with the Steel Controller, since this commodity was within his jurisdiction.

Dealing with para 6 of the Memorandum, the Chief Controller suggested the Federation taking up the matter with the Customs Department.

THE NINTH INTERNATIONAL CONGRESS AT LAUSANNE

Some very thought-provoking papers were read at the recent Conference of International Printers at Lausanne.

Mr. Humphries of Messrs. Lund Humphries & Co. Ltd., Bradford, dealt with some side-lights on electronic engraving in the printing industry. He said that electronic memory can be utilised to collect together a mass of information available whenever indented upon and the signals received back at an unimaginable speed. These signals can be received at such speed only through electronic devices. But the speed of the delivery of the signals can be slowed down too in such a manner as would lead to the control of a great many of the repetition processes in printing.

Electronic scanners cause half-tone colour separation and can be suited to any set of process inks or tone of paper. We are now enabled to do away with much laborious handwork in this regard. It is now possible to quickly make half-tone blocks by scanning systems, to intensify contrasts, alter the sizes and to engrave in plastic or metal.

With a standardisation of the alphabet of typewritten characters, any variation between copy and proof can be recorded in scanning which may be used for printer's proof-reading.

Electronic photo-composition has made rapid strides. It is likely that the high speed of operations will be utilised by running the reproduction equipment by punched tape instead of by manual labour with the result that a number of operators could be used to feed one reproduction unit.

Such an electronic typesetting device takes in a 25" long cathode ray tube, taking letters from a lantern slide which are projected from outside the tube on to a sensitive layer at the rear. This layer sends forth an electron stream in the pattern of projected letters and figures. High speed

photographic recording takes in 10,000 words per minute, operated from perforated paper tape, magnetic tape, wire or radar signals, key-board selection or magnetic memory unit.

Light beaming out through electronic means is an easy way of dealing with mains fluctuations and can even out the exposure of camera operations and the making of offset printing plates.

Densitometers using electronic circuits are employed for the correct measurement of the density range of negatives and positives and the reflection densities of originals. Such instruments serve to measure colour strength and a colour bar at the stage of proof can be matched with a bar on the production line and a constant control kept up.

Accurate automatic detection of the slight variations in sheet feed which occur with automatic feeders is really a boon not given to many printers. This control is calculated to deal with very small variations in the front or side lays and to detect sheets with folded corners or those which have become crumpled during transfer from the cylinder to the delivery. On the appearance of these faults, the impression cylinder can be tripped and the press automatically stopped. This is of special importance in preventing lost production tone resulting from such accidents.

The Guillotine in binding

In the field of binding, the most interesting advance made is the electronic guillotine. Once started this will continue to repeat any system of cuts until the memory bands receive fresh instructions. One of such systems is designated as the '4 Band' system accurate to a thousandth degree.

Band 1 controls the backward movement of the back gauge adjustable to any position. Band 2 controls the forward movement of the back gauge. The paper pile and any number of cuts can be

recorded by simple pressing of a button. Band 3 controls the back gauge for the transverse cut. On Band 4 are recorded the various positions of the transverse cuts. The guillotine can be reset by merely 'cancelling' the information recorded.

There are a number of processes in a bindery which cannot be mechanised and which are assisted by dwell control. A moving band for instance can be halted for different periods merely by electronic means whereas the same, if done by mechanical means, costs more.

A small radio-active substance in the working head of the Beta Ray Substance Gauge emits a stream of Beta Rays which travel some distance through air and the web of the paper. The strength of the stream varies inversely as the heaviness of the paper.

Electronic electric motor speed control is flexible with scope for wide variations. The potentiality of electronic engineering in the future is great.

Block-making is the subject of another interesting paper. Mr. Andre R. Laurent said that offset and photogravure played a rather insignificant part in printing in America. He said that letterpress plants in U.S.A. are printing 90% of journals, 85% of books, 80% of catalogues and 65% of labels. The rest only are done by offset and gravure.

Ink and Paper supply is the subject of yet another paper by Mr. Pierre Lang of France who took up the subject of 'Improving relations between Printers and Suppliers of Ink and Paper.' He opines that the business relationship between the printer and the ink and paper supplier is all right, but that the relationship between them at a Corporation and trade association level is not happy enough. He called for co-operation and mutual goodwill between these two classes of people. He mentioned instances of resultant mistrust. In one case for instance, a printer acquired a large equipment, but no paper of the required width was in the market! The French Printers' Association have

taken up the matter with a view to remedy these defects.

Standardisation of Printing Inks for three-colour work was the subject taken up by Mr. Victor Letouzey. He based colour on spectrophotometric analysis. The eye is unable to match colours owing to its chromatic illusion in analysing the radiations of a composite colour. But modern advance has enabled instrumental measurement. He stressed that printers, in addition to their familiarity with the printing process, should also know paper and inks. There were difficulties in the way of standardisation which at most should have a clearcut and modest aim. Two sets of inks would suffice for the present. He opines that it is impossible to obtain equal fidelity in the three spectral bands, viz. blue, green and red.

Another topic of interest dealt with was "Trends in Type-design". It began with a historical development in letter construction. At first it was difficult in reproducing designed letters. This was a little overcome in 1834 when William Leavenworth of New York adapted the pantograph for the making of word type. Half a century later, Benton invented his pantograph machine for matrix cutting prior to the introduction of Linotype and Monotype casting machines. He treated of types intended mainly for text composition, display types and photo-composition's type requirements. The latest designs mirrored contemporary taste and theories.

George Scott's paper on Printing Research was full of interest. It is remarkable that in spite of all-round research the letterpress practically remained where it was. He dilated upon the Dow Etch plate and electronic scanning for plate-making and also upon the silver spray in electrotyping. There was practically no change in the quality or value of the letterpress papers. Far otherwise is the case with offset lithography. It has made very great advance. Contact screens had produced good results in halftone work. The tedium in retouching had greatly been relieved by masking processes and

electronic scanning. Side by side, there has been a great development in offset printing papers and coated papers resulting in offset process competing with letterpress. He also referred to advances in silk screen printing, unsewn book-binding and photo-composition.

News & Notes

(Continued from page 13)

Annual General Meeting of PATRA

We believe that the 27th Annual General Meeting of the Printing, Packaging and Allied Trades Research Association would have been held in London on July 3, with Sir Denis H. Truscott, President, in the Chair and with Viscount Chandos as the Principal guest at the luncheon.

Mark These, Please!

(Continued from page 3)

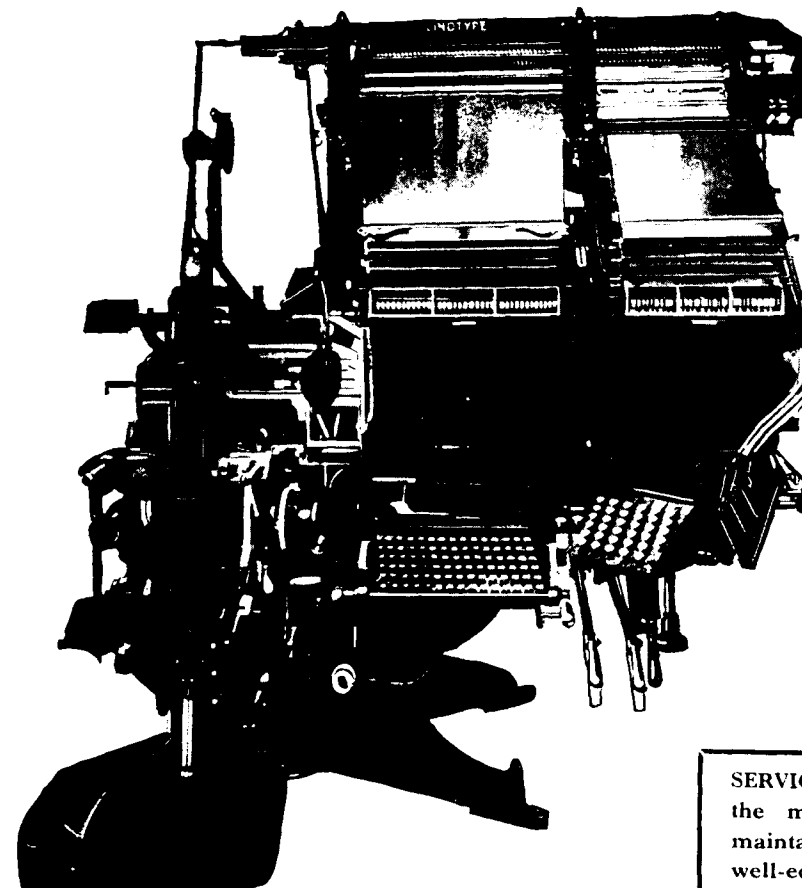
trenchment is under an agreement which specifies a date for the termination of service;

- (b) the workman has been paid, at the time of retrenchment, compensation which shall be equivalent to fifteen days' average pay for every completed year of service or any part thereof in excess of six months; and
- (c) notice in the prescribed manner is served on the appropriate Government.

A workman in order to be entitled to retrenchment relief must have to be in continuous service for not less than one year. Now, what is 'continuous service'? For the purpose of Section 25 F, a workman who, during a period of twelve calendar months, has actually worked in an industry for not less than two hundred and forty days shall be deemed to have completed one year of continuous service in the industry. In computing the number of days on which a workman has actually worked in an industry, the number of days of authorised leave or a strike which is not illegal, or a lock-out or a cessation of work which is not due to any fault of the workman will be considered as actual days of work.

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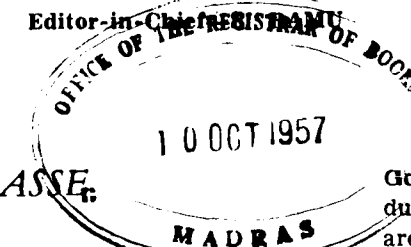
BULLETIN

OF THE ALL INDIA FEDERATION OF MASTER PRINTERS

Vol. 3 No. 1

Editor-in-Chief

August 1957



IMPORT IMPASSE

Our Government has suddenly realised, a bit too late, that we have been importing a lot of things and not exporting enough, that our foreign exchange position is threatening, that the much-talked of Second Five Year Plan may not go through as originally envisaged. Inflation is a fact; the difference in income of the low paid and the top executives in India, is the highest in the world; money is not available, and no one knows what taxes, direct and indirect, are coming. Import is drastically cut.

In this alarming state of affairs, what is the position of the small printer whose condition has never been enviable? We specially direct our attention to the small printer and not the other two categories—the big printer and the Government printer.

If you total the number of employees in all the Central and State Government presses, they will far exceed the number of employees in private presses. They have their own problems, but the most important of the problems—finance—does not worry them so much.

The second category—the big printer—is worried because he has not got a licence for importing costly paper, not enough licence for importing the latest type of

machines, no licence for getting new gadgets, chemicals and the like. May be, he envisages a reduction in his orders, as his clients too who have been importing a lot of merchandise do not get enough licence to import luxury, semi-luxury, and essential goods in great quantities. He may not be able to reduce his overheads nor the costly habits, good or bad, acquired in affluent times.

In these unholy circumstances, what are the chances for the small printer? He has always been living on marginal conditions. So a little more suffering is nothing new to him. He has never imported anything, and hence the new fear of 'no import licence' does not threaten him. He has always been short of money, so the tightness in the money market does not bother him. His source of business was not the big business houses, who were making money by imports. When their imports are curtailed, it does not worry the small printer.

If the small printer has sufficient enterprise left in him he can make good use of the present circumstances to do a little good business. He can compete with his big brother for jobs, as his overheads and working costs are much less. For finance, the various

Governmental aids for small industries and co-operative schemes are available. In fact, it will not be a bad idea for three or four of the small printers to group together and pool their resources. They can divide the functions—one can go out and meet customers, one can look after production, one can maintain accounts, and so on.

But the pre-requisite, apart from enterprise, is a good accounting system, to know the exact costs, profit, etc. The second is to maintain good quality which is a rare commodity in this class. The third is specialization. One can concentrate on cartons, one on reports, and one on books and booklets and so on.

These groups can have regular meetings and make a list of customers they are to meet, find new ideas to be submitted to the customers, produce them nicely and at competitive rates.

In our opinion, this is the best time for the small printers to consolidate their position and build themselves up, as their big brothers have no further opportunity of adding latest machines and developments.

So our advice is, think, unite, and act.

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REPORT ON GRAPHIC 57

The choice of Lausanne on the shores of Lake Geneva was a happy one, although initially there was a feeling that much could not be expected from an exhibition in a holiday centre. Well, quite a number of printers—and their wives—seemed to think otherwise, and already on the first day visitors were registered from Japan, Russia, India and the United States, not to mention practically every single European country.

Considered from a display point of view, GRAPHIC 57 was the best exhibition of the recent international series. The spaciousness of the halls, the precision of much of the materials used in the displays, the signs and the use of colour, gave visitors the impression of efficiency combined with charm. There was plenty of interest for the non-professional visitor—an educational feature showing the printing processes, exhibits depicting the history of printing, a magnificent display of posters from Toulouse Lautrec to Cassandre (cannot this fine collection be made available for exhibition throughout the world?), and a display of the work of selected graphic designers of all countries. Prominent in the last exhibit were many fine cover designs for British Aluminium, and some virile tempera portraits produced by well-known artists for the same company. A special exhibit of the research institute of the Swiss printing industry, UGRA, demonstrated, explained and investigated the relationship of paper and ink. This is a problem of vital concern to every printer, for it is here that errors are most frequent.

It is impossible for manufacturers and design teams to develop new features or entirely new processes for exhibition every year. It is reported that the Heidelberg works are to introduce a new press in the autumn: this demonstrates the fact that some exhibitors will not let themselves be rushed by exhibition dates—and wisely so! Well-tested machinery needs few improvements. Therefore some visitors may have felt disappointed because

of the lack of revolutionary changes and developments.

The post-war years have seen considerable advances in graphic arts techniques. Electronic engraving, Dow etching, multi-colour newspaper printing and the widespread introduction of premake-ready methods and automatic controls have brought about great changes. Developments have been rapid, it is only to be expected that some period of lesser activity is inevitable.

It is impossible to describe in detail many of the hundreds of exhibits shown at Lausanne. Major firms from the various countries producing graphic arts machinery were represented. Most of the American and British firms, for instance, exhibited through local agents. German firms, on the other hand, in many cases preferred to retain their own stands. The exhibition certainly gave ample opportunity for comparing various processes, machines and methods. In the makeready sector, for instance, chalk relief, plastic powder reliefs and the new American 3M makeready foil process could be seen. This latter is no doubt the most advanced of all the overlay processes found so far and completely eliminates error on account of faulty procedure, but a good many firms may still feel that they are too small for the installation of such equipment, requiring a special machine and some extra space. For the larger firms, however, this method of proofing a complete forme and making the image on the pull swell by heat treatment to produce an overlay film seems a real advance.

SOME HIGHLIGHTS

Composing room and pre-makeready

Swiss composing rooms, to judge from the exhibits, must be far more modern than those in any other country. There are several firms specialising in this particular field and many of them have involved basically similar approaches to increased efficiency and greater convenience. Great emphasis

is being laid on large and flat working surfaces covered in steel or wearproof plastics. Firms like Touswies, Dinther, FAG and German makers all have provided ingenious solutions to the space and work problem. These ideas are of real merit. The composing room is outdated in most plants and it is here where great economies and improvements can be made by the introduction of better methods. Some exhibitors, like Dinther, have developed conversion schemes for the utilisation of existing furniture, which they rebuild and adapt successfully or for which they give advice and draw up plans. This is a useful service, well worth imitating.

Sample settings of an interesting new method for Monotype tabular matter, developed by H. Osterwald, of Hanover, were shown by the Corporation. A fuller report on this is to be published in a later issue of this magazine.

One of the problems with which most printers are familiar and to which few satisfactory answers have been found up to now is the production of good reproduction pulls for litho or gravure. A novel German solution, H2 printing film (Perutz) seems to provide a fool-proof answer. The basic material of the method is a transparent film with an elastic layer on to which the type is proofed. We hope to give a user-report on this material in our next issue.

The new version of the Regiflex (J. Cahen) registering unit from Holland makes it possible to register-mount newspaper stereotypes for colour printing by simple optical means using a mirror system and exact positioning requiring very little skill.

A Danish Proof-Master press (Sadolin & Hokmbled) produces up to 25 pulls per minute and takes galleys 28½" long and 70 or 90 ems wide. Its use is chiefly in newspaper offices. Also called Proofmaster, the No. 20 (Soldana) is a British machine developed from earlier precision proof presses of this type, and permits proofing of whole formes with chase. The ink unit has a separate motor.

Useful for more reliable and efficient adhesive mounting of

plates is a compact French-made mounting press, a heat plater with thermostat and timing control giving reliable overall adhesion of any type double-sided foil. For unmounting plates, they are again placed in the machine and left for 2-3 minutes, when they can easily be lifted off (Mincel).

Hawthorn Baker exhibited a new 'pack' of MFB mounting base combined with honeycomb strips and clips. This new combination of base and plate mounting device meets the requirements of some ninety per cent of printers whose work mainly consists of printing from type and plate formes. The flexibility of this system, which allows type to be inserted within plate areas, and yet permits registration of plates by the well-tried honeycomb method, will prove very popular.

LETTERPRESS

Printing of the exhibition daily on a Winkler-Fallert rotary with a colour printing unit was officially started by 'Miss France-America' pushing the control button. The paper carries really up-to-date late news and proved favourite with exhibition visitors. A Daverio conveyor of novel rubber-roller design was used to transport papers to the despatch department, and it is claimed for this Swiss system that it positively eliminates smearing or damage to the finished papers.

A variable web-fed rotary for book printing was explained (not shown) by Marks and Flehming, a German maker. This press (30" and 36" sizes) prints from rubber stereotypes and is successfully employed for the printing of a famous series of German paper-bound pocket books of excellent quality. The need for simplified printing at higher speed is making rotary printing a centre of attention at present, and this machine and others of related design, such as the Automatic Variable, MAN Rotaman, sheet-fed (with an optional blower device for the delivery of bible paper at speeds of 4,000 i.p.h.) or the sheet-fed rotaries of Koenig and Bauer or the East German Polygraph are meeting with great interest. The introduction of simplified and cheaper platemaking methods will

certainly bring an expansion in this field, which until now has been the domain of newspaper and forme printing.

Sheet-fed letterpress flatbed machines of all makes were shown. They were in general developments of existing machine types, but some of them incorporated some interesting new features, such as the printomatic (SOAG) with adjustable delivery pile and automatic cylinder and inking controls. This machine is one of the few cylinder presses which have chain-gripper delivery and a very long driving way despite the compact machine (sheet size 18" x 22"). The Nebiolo RTAF is the latest machine in the series; it is now equipped to take a sheet 18" x 22½" and has an increased speed range allowing for a maximum of 5,000 sheets per hour. A special feature of this machine is the cylinder, which is much larger than on similar presses. A built-in roller washing unit, anti-offset sprayers and an adjustable ink blade are further features of this efficient press. The Albert Grala press now has a novel delivery drum and can be fitted with a sheet cutter, if desired. This aspect of supplying additional secondary units to printing machines is interesting in so far as several machine makers are making a special point of these advantages. The Rex Record VII sheetfed rotary, for instance, can now be used with a specially designed wheel-away folder and has a tapeless feeder. Further automation in bindery machinery will, no doubt, lead to other units being coupled to printing machines, as is in some cases already being done by printers on their own initiative.

The Czech Maxima Front (Kovo) is a medium-size stop-cylinder press 22" x 30" with built-in wash-up device and speeds of up to 3,600 i.p.h. A variation of the Glockner 16½" x 22" press is its use as a punching press at speeds of up to 3,500 sheets per hour. Cylinder makeready is unnecessary and a special plate is fixed on the forme. This is somewhat different from the principle of other cylinder presses adapted for such work which often employ a plate wrapped around the cylinder only.

Linotype and Machinery showed their newstyle Miehes, one of which equipped with a new electron-magnesium lightweight type bed permitting a speed increase of 10 per cent over previous models, with roll-back feeder equipped for continuous loading and permitting single or streamfeeding.

PROCESS RE-PRODUCTION

In the field of electronics, both Dr. Hell and J. F. Crosfield made preliminary announcements of electronic machines for correction of colour separations, and examples of work carried out on the prototype Crosfield SCANATRON aroused great interest. The machine, which will be demonstrated in about six months' time, scans three uncorrected colour separation negatives, and produces a set of 4 colour and tone corrected positives. Some of the examples shown were impressive, and if field tests bear out the early promise, this machine, which will cost about £21,000 and will produce a set of 4 corrected plates in a maximum size of 16" x 12" in 40 minutes, may do much to relieve the present day bottleneck in the production of 4-colour work. Fairchild photo-screeners may become available during 1958 and will produce a 120 screen, 8" x 10" negative in 10 minutes. A variable response unit will be built in for tonal adjustments and enlargement and reduction (up to 4½ times) will be possible.

Electronic engravers are now an accepted part of the scene. Developments are no longer revolutionary (even the Russians are bringing out a machine said to be based on the Elgrama). The Multi-Vario Klischograph is the new enlarging (4:1) and reducing (1:3) unit which can be equipped for the production of automatically corrected and separated halftone

(Continued on Page 7)

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by

S. BOSE, B.L.,

Superintendent, Calcutta Association of Master Printers

Hours of work and Working hours.—It may strike the readers that discourses on the same subject are repeated in this column from time to time. But if the readers take a little care they will appreciate that there is need for it. The labour laws and the industrial laws are undergoing quick changes by way of amendments, additions and alterations. What was a legal interpretation some time ago, becomes quite the opposite afterwards. It is therefore necessary to discuss an old subject in the light of the changes in the laws and regulations in order to keep the readers posted with the latest developments. Keeping this in view I shall deal with a subject already discussed by me before.

Chapter VI of the Indian Factories Act deals with 'Working Hours of Adults.'

Sec. 51. Weekly hours.—No adult worker shall be required or allowed to work in a factory for more than forty-eight hours in any week.

Sec. 54. Daily hours.—Subject to the provision of Section 51, no adult worker shall be required or allowed to work in a factory for more than nine hours in any day.

Sec. 55. Intervals for rest.—The periods of work of adult workers in a factory each day shall be so fixed that no period shall exceed five hours and that no worker shall work for more than five hours before he has had an interval for rest of at least half an hour.

Sec. 52. Weekly holidays.—(1) No adult worker shall be required or allowed to work in a factory on the first day of the week (hereinafter referred to as the said day), unless—

- (a) he has or will have a holiday for a whole day on one of the three days immediately before or after the said day, and
- (b) the manager of the factory has, before the said day or

the substituted day under clause (a), whichever is earlier,—

- (i) delivered a notice at the office of the Inspector of his intention to require the worker to work on the said day and of the day which is to be substituted and
- (ii) displayed a notice to that effect in the factory.

Sec. 61. Notice of periods of work for adults.—

(1) There shall be displayed and correctly maintained in every factory a notice of periods of work for adults, showing clearly for every day the periods during which adult workers may be required to work.

(10) Any proposed change in the system of work in any factory which will necessitate a change in the notice referred to in sub-section (1) above shall be notified to the Inspector in duplicate before the change is made, and except with the previous sanction of the Inspector, no such change shall be made until one week has elapsed since the last change.

I quote above the main sections of the Indian Factories Act dealing with the working hours of adult workmen. A new chapter as Chapter 11-A, has been added to the Industrial Disputes Act in its latest amendment. This Chapter deals with 'Notice Of Change'. I shall quote here the relevant portion of Sec. 9-A of this chapter, as this section bears much significance in relation to the change of period of work.

Sec. 9-A. Notice of change.—No employer who proposes to effect any change in the conditions of service applicable to any workman in respect of any matter specified in the Fourth Schedule (hereof), shall effect such change,—

- (a) without giving to the workman likely to be affected by

such change a notice in the prescribed manner of the nature of the change proposed to be effected; or

- (b) within twenty-one days of giving such notice.

The Fourth Schedule—(Sec. 9-A)

Conditions of service for change of which notice is to be given:

1. Wages including the period and mode of payment;
2. Contribution paid or payable by the employer to any provident fund or pension fund or for the benefit of the workmen under any law for the time being in force;
3. Compensatory or other allowances;
4. Hours of work and rest intervals;
5. Leave with wages and holidays;
6. Starting, alteration or discontinuance of shift working otherwise than in accordance with standing orders;
7. Classification by grades;
8. Withdrawal of any customary concession or privilege or change in usage;
9. Introduction of new rules of discipline, or alteration of existing rules, except in so far as they are provided in standing orders;
10. Rationalisation, standardisation or improvement of plant or technic which is likely to lead to retrenchment of workmen;
11. Any increase or reduction (other than casual) in the number of persons employed or to be employed in any occupation or process or department or shift, not due to forced matters.

Item No. 4 of the schedule mentions of 'Hours of work and rest intervals' which is a condition of service for the change of which notice U/Sec. 9A above will be necessary. But we have seen that U/Sec. 61 Sub-Sec. 10 of the Indian Factories Act only two conditions have been imposed for the purpose of effecting any such change, viz:—

- (1) the proposed change is to be notified to the Inspector in duplicate before the change is effected

(2) except with the previous sanction of the Inspector no such change shall be made until one week has elapsed since the last change.

The Factories Act does not provide for any notification to the workmen nor does it fix up a period of twenty-one days for such notification. A question may naturally arise as to which of the above two provisions shall have to be followed in the matter of change of period of work. It will not therefore be out of place here to discuss the point in some details.

Chapter VI of the Indian Factories Act deals with 'Working hours of adults', wherein the quantum of the weekly and daily working hours have been fixed and the process of spread over of those working hours and the necessary notifications therefor have also been prescribed. This spread over of the working hours can be interpreted as the 'Hours of work' of workmen and becomes a condition of their service. The two terms, 'working hours' and 'hours of work' must be construed to have two distinct meanings. The former indicates the quantum whereas the latter indicates the spread over or distribution of the former. Item No. 4 of the Fourth Schedule of Chapter II-A of the amended Industrial Disputes Act is 'Hours of work and rest intervals'. This necessarily means the spread over or distribution of the total quantum of the working hours. Any change therefore of the hours of work is connected with the condition of service of a workman and as such shall require a notice U/Sec. 9A of Industrial Disputes Act. A notice simply U/Sec. Sub. Sec. 10 of the Indian Factories Act will not be sufficient.

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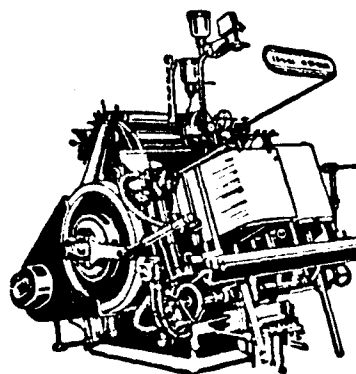
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ODDS & ENDS

Clay Foot

How did they reach the target for production of paper? Easy enough. The experience of the First Five-Year Plan was that the mills had a tendency to attain the target by producing heavier quality instead of thinner varieties which are more in demand. No, it is not our own version; the revelation comes from Sri C. C. Mukherjee and that, too, in his Presidential address at the 39th Annual General Meeting of the Calcutta Paper Traders' Association. He sprang some more home truths in his address. According to him, indigenous paper is very expensive. Per capita consumption of paper in U.S.A. is 400 lbs., in Sweden 260 lbs., and in France 92 lbs., but in India it is below 2lbs. With low purchasing power of average Indian the consumption could hardly increase unless prices were reduced. In Japan, the price of a common variety of paper used for education purposes is priced at about 56 nP, while a comparable variety in India is 80 nP per lb. Newsprint is quoted at present in India in the black market at 59 nP. Would the revelations improve the situation?

A cry in the wilderness!

New sprint

Newsprint industry in India takes a New sprint. Sugarcane refuse will soon prove a gold mine to the paper millers. While inaugurating the Advance Diploma Course in Pulps and Paper Technology at the Forest Research Institute at Dehra Dun, Dr. J. C. Ghose, Member, Planning Commission, disclosed that a project for the manufacture of 30,000 tons of newsprint from bagasse was now under consideration of the Government of India. Dr. Ghose also revealed that German Paper Technologists were in the position to offer a process to the Indian Government, based on carefully controlled treatment of bagasse with sodium sulphate, in which the cost of pulp production in India would

be considerably cheaper than that of imported newsprint pulp.

How many eyes will glitter and how many mouths will water now!

Juiceless stuff

May be juicy enough.

STILL RECEIVING ATTENTION

Printers' bills are pending before the Government for a long time, some for even ten years or more. The Controller of Printing and Stationery had about eight or nine months ago assured the printers of looking into the matter when his attention was drawn to it. The situation has not looked up since then. On 6th August last, a Conference was held at Delhi at the instance of the Union Works and Housing Ministry, where the Chief Controller's attention was again drawn to some cases of outstanding bills. The President and the Hony. Joint Secretary of our Federation along with Sri S. Ramu of Bombay (our Editor) and Sri S. N. Guha Ray of Calcutta represented the printers' cause in the Conference. The Controller reiterated his earlier assurances and said that he had been trying his utmost to clear all arrear bills and a special officer has been deputed for this purpose alone.

Man lives on hope!

REPORT ON GRAPHIC 57

(Continued from Page 4)

plates from flat reflection or transparency colour copy, taking originals up to 12" x 16". The new machine appears to suffer from some slight vibration caused by the to-and-fro movement of the copy table. But this is no doubt only an initial fault in this prototype machine and in any case does not seem to affect sharpness of dot. The new model of the Swiss Elgrama embodies a multiplier system coupled to a microscope unit and dispenses with photo cells. This is claimed to prevent light-impulse pick-up from

sources outside the machine—a fault which can be quite serious—and provides for improved grey scale reproduction. A new depth-indicator shows engraving depth; a useful feature as the machine engraves 13 different screens and also line plates.

A photographic process of interest to gravure and letterpress and litho printers is the Orthoklin method of H.P. Klauser, Switzerland, which permits full tonal value reproduction in copy photographs and diapositives from photographs. The method employs a secondary negative for tonal correction. It is claimed that no hand work is required as special photographic equipment does the work.

The PAWO photo-copying apparatus of Nottaris & Wagner is a development of the simple devices shown at DRUPA in 1954. One machine consists of the original photo-copying base with point-light and pivoted rotating filter selector, and an original development—a built-in diffusing circle selector. For producing unsharp masks an oscillating unit can be provided. Another machine incorporates copying and enlarging apparatus for use with contact screens, and for a great deal of work this equipment makes a process camera unnecessary.

Particularly interesting was the automatic PAWO developing dish, providing rhythmic agitation and temperature control of the developer. This little machine contains numerous automatic devices, permitting extremely accurate control of film development.

A highlight of the exhibition was the introduction by Pictorial Machinery of the new Lithotex-Dirats Powderless Etching machine. The prototype machine, flown in from America for the exhibition, will shortly be built in England, and provides the powderless etching of fine grain zinc for halftone, line and combination work (up to 133 screen) of plates 24" x 24" in 10 minutes to a depth of .020". A fuller report of this machine is given elsewhere in this magazine (see also *Print In Britain*, August 1956).

A simple one-step etching process using existing equipment and requiring only a new chemical, which is sold to licensees, is marketed by the Dutch Quod Bonum organization.

A French-made Mathelec automatic electrolytic etching machine for halftone zinc etching enables the operator to have the whole process done automatically without the need for retouching. The bath in this machine is constantly being filtered by a pump and this in conjunction with automatic timers, thermostat and air supply are claimed to provide for far better continuity in etching standards than could be possible by conventional means. Etching times are also reduced by this method, and the inventors, the French Graphic Arts Research Institute, are said to be working on a machine for copper etching. One bath is claimed to be sufficient for etching 22,000 square inches of flats and plate size makes no difference to the etching time.

DUPLICATE PLATES

Moulding presses made by several firms are now frequently equipped for multi-duty work. The McLaughlin main press platens have top and bottom heating and are also drilled for water cooling. On the front of the press is built a further hot plate complete with a hinged top hot plate which can be easily removed. The hydraulic back clamping unit is fixed immediately behind the main press and has its platens drilled for water cooling. The unit is capable of exerting squeeze of up to 40 tons and was produced for the large scale production of thermoplastic printing plates and rubber printing plates but can also be used for normal matrix moulding and electrotype plastic moulds.

A Chromos 150-ton moulding press permits savings of up to 75 per cent in the production time of plastic plates. Switzerland is the European country where plastic plates enjoy greatest popularity and the new hydraulic press employs high frequency for the heating of the plastic. Special attention has been paid to convenient design and ample working surfaces are provided.

OFFSET

Introduced two years ago at the London IPEX exhibition, the Faber and Schleicher 18" x 24½" Favorit press is now ready for sale. This is a machine of extraordinary sturdiness for a press of such size. Another press in the smaller size range (17¾" x 24½") is the new Chief 24, Swedish-built and now embodying several new design features differing from the original design. This machine is one of the most popular offset presses found in Europe today and permits speeds of up to 6,000 i.p.h. The Nebiolo Invicta OMH offset press for a printing size 21½" x 32" provides for a top speed of 7,000 i.p.h. and a novel-design feeder with electronic controls makes these high speeds possible. Inking rollers have been increased to four and constant-level water tank is built in. All sheet passage controls are electromagnetic.

A new German 15" x 22" offset press (the Klebu 3856) is a development of the larger 22" x 30" machine and indicates the attention which established makers are paying to this particular size range. The new design of the Champion (38½" x 26¾") offset press (color-metal-Consolidated) is fully encased and all mechanical drive parts run in an oil bath for smoother performance, giving speeds of up to 7,000 sheets per hour. The Mann Master British-built offset press has been further improved and now incorporates a remote control suction roller in the delivery, micrometer dampening and inking control as well as adjustment setting for the blanket cylinder and for different paper thicknesses.

The new fully automatic Mailander offset proofing press now has all roller spindle ends running in ball bearings and all inking rollers can be tripped by operating a lever. Hand damping is almost unnecessary and a new quick plate-clamp ensures that the plate can be adjusted in any direction after it has been clamped.

A new graining machine is the Velox, suspended from the ceiling to reduce vibration and noise. Different from its predecessors, the new model is fitted with a plastic lid and with automatic sand and water feed. This machine is suitable for installation in older plants, too, as suspension from the ceiling and the total absence of vibration do not cause constructional difficulties. Graining is also more uniform because of the smooth operation.

The vertical step-and-repeat machine SOLNA VERTICO is for copying offset plates up to 64" x 74" and has an interchangeable negative frame of maximum size 24" x 24".

The M100 Kt step-and-repeat machine (Krause-Biagosch) has electric table lift and automatic controls for lighting, etc. The machine is fitted with a water cooled Xenon lamp.

3M pre-sensitized and grainless plates will shortly become available in Great Britain in larger sizes. These plates are not affected by temperature or humidity after exposure. Because of the perfectly smooth surface, every detail in the original negative is reproduced with absolute fidelity and with astonishing clarity.

GRAVURE

Machinery in this field follows the established trend and the majority of presses are built to order. But interesting processes are being introduced. Carbon tissue is no longer required in the methods developed by Bekk & Kaulen and the German firm of Mettenheimer; and the Dutch Elbo process permits local corrections both to plates and cylinders, whether copper or chromed, by increasing or reducing depth of cells without affecting the screen structure. The Albert Gravuretest machine is a large pigment paper transfer machine designed for a fairly heavy volume of work and permits simultaneous transfer of several tissues.

The Thrissel Engineering Co., of Bristol, exhibited their Thrissell 24 rotogravure machine for printing, cutting and creasing cigarette cartons. A similar machine was recently exported to America, and it is understood that it has proved so satisfactory that another is likely to follow.

BINDERY AND CONVERTING

This is the field in which automation has made the most spectacular progress. There are so many makes of electronically, electro-

magnetically and photo-cell controlled guillotines of great merit that it is impossible to discuss them here in detail. One manufacturer, however, Harris-Seybold, produced a fine exhibition 'stunt' by installing a small auditorium-cinema on their stand, using the opening of the Saber guillotine as a cinema screen and providing earphones for listening in four languages.

The Furnival fully automatic electronic guillotine with repeater mechanism attracted attention, and the new Furnival 35 heavy duty precision hydraulic guillotine, was announced but not exhibited.

Three-knife trimmers, too, now embody electromagnetic features (Atlas, Pivano, etc.), and the new Trim TA 1 (Wohlenberg) can be coupled like other similar machines to gatherers. This machine has ejector controls and a special rear clamping station taking sizes from 7¼" x 5¼" to 15" x 11¼".

A new jogger (Betz) takes all stock from onion skin to heavy cartridges 28" x 40".

Interchangeable spiral bindings—quite new to Europe—are made possible by a Bohm (Stuttgart) machine which produces open

spirals over which a sliding bar is placed. Removal or insertion of sheets is by simply sliding off the bar. The Wiremaster of Sadolin and Holmbled is a combined perforator, wire-spiral producer and binder, also permitting work with plastic instead of wire, handling about 150 books per hour.

Wide use on telephone books used by various European administrations is enjoyed by the Martini flexible binder, which incidentally also handles the German edition of Reader's Digest. This large machine can be coupled to gatherers for continuous operation. A new Martini H. 39 Semi-automatic book serving machine handles 50-100 sections from 1½" x 1½" to 14" x 12" and has a speed regulator, with automatic paster for first and last section and automatic cutting off device.

A turntable collator for loose leafs taking sheets from 5¾" x 8" to 10" x 14" employs suction tubes to lift off sheets from the individual stations and collate them on a delivery station whence they are removed for feeding to a flexible binder. Stock from bible to cartridge paper can be handled by

this Mayfarth machine which is intended mainly for form printers.

Latest addition to Vacuumatic's range is a compact little machine for counting paper circles and labels. The first production model has been synchronized to work with a crimped cup-making machine.

Finally, Linson Book cloth, in which about 65-70 per cent of all British books are bound is now supplied in a dirt-resistant and repellent quality.

ELECTRONIC CONTROLS

Register, colour wets travel, cutting or slitting action, and countless other operations are nowadays controlled by electronic devices which can be fitted to presses and machinery. Most of them are designed for rotary machines and the British firm of J.F. Crosfield plays a leading role in this field also partly through having judiciously acquired main agencies from Sweden or America. A number of American, French, German and Swiss firms make one or other of the control units now available.

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NEOSET GLOSS INKS

The latest formulations of NEOSET GLOSS LETTERPRESS INKS upon which current supplies are based, represent an important technical advance. A greater degree of gloss is combined with an appreciably quicker setting time. The difficulties previously experienced with gloss printing, such as "set-off", sticking in the pile and drying on the press, have been largely overcome, although then normal precautions of anti-set-off sprays and limiting the size of the printed stack are still recommended.

The best results are obtained from Cylinder Machines and the fullest film which is practicable to run gives the best gloss, but too heavy a film causes mottling.

Overprinting: These Inks may be overprinted satisfactorily, but when so used driers must not be added. Normally the avoidance of driers is recommended.

Paper: The choice of papers is all important and only coated papers or board and hard smooth uncoated stocks should be used. These Inks should not be used on Film and Foil.

Reduction: Use only COATES Gloss Ink Reducer for easing tack and reducing consistency.

Printing Rollers: Gelatine Composition Rollers give the best results. Rubber Rollers, unless of the oil-resistant synthetic rubber type, should not be used.

COATES INKS FOR GOOD PRINTING

The Cover colour of this issue of the Bulletin is printed in Fluorescent Yellow Letterpress B 6325.

FEDERATION MEETS GOVERNMENT

The Government of India in a communication dated the 2nd August 1957, invited the Office-bearers of the All India Federation of Master Printers to a Conference which was held on Tuesday the 6th August 1957 at 10 a.m. in the Committee Room of the Development Wing (Ministry of Commerce and Industry), Room No. 176-C, Block No. 5, Shah Jahan Road, New Delhi.

The following officers represented the Government:

- Sri K. B. Rao, Chief Controller of Printing and Stationery
- " L. R. Nair, Director of Advertising and Visual Publicity
- " S. C. Nundy, Development Officer, Heavy Industrial Machinery Directorate
- " A. C. Sen, Controller of Printing and Stationery
- " S. R. Sethi, Dy. Controller, Printing and Planning
- " Bhawani Shanker, Assistant Controller of Printing
- " N. Viswanathan, Assistant Controller of Printing
- " D. P. Puri, Assistant Controller of Printing
- " U. K. Mallya, Manager, Publications Division
- " Melaram, Dy. Controller of Imports and Exports
- " N. K. S. Aiyengar, Dy. Development Officer (Paper)

The following Office-bearers represented the All India Federation of Master Printers:

- Sri Gowardhan Kapur, President
- " S. Ramu, Vice-President
- " S. N. Guha Ray, Vice-President
- " R. Venkateswaran, Hony. Jt. Secretary.

Sri K. B. Rao, Chief Controller of Printing and Stationery, presided over the Conference.

Welcoming the representatives of the Federation, he invited discussion on the various points raised by them and their President in his Presidential Address during the recent All India Printers' Conference. The following points were discussed:

1. Import of component parts:

Sri Guha Ray said that actual users' licence should be issued for the import of component parts not manufactured in India so as to keep the existing machinery going at least for some more years, especially as import of machinery had now been banned on account of the present foreign exchange position. Sri K. B. Rao agreed with Sri Guha Ray that some such arrangement should be made for keeping the existing machinery going. Sri Guha Ray instanced an order placed by a Calcutta firm with an established importer for component parts who refused to supply them since such supply would affect his quota. Sri Melaram said that such individual cases would be considered by the Chief Controller of Imports if brought to his notice. Sri Guha Ray suggested that established importers should be compelled to import spare parts also out of their quota allotment. Agreeing with this, Sri Melaram further said that Government have been preparing a scheme on the basis of which import of component parts would not be difficult in future. He also said that in order to avoid any emergency break-down, the Government had instructed each port authority to permit import up to a value of Rs. 500 to actual users. Sri Guha Ray pointed out that minor parts are locally made and it was only such parts as were not locally made were usually imported and these were invariably in the region of Rs. 2,000, and so suggested stepping up the value of such imports. Sri Melaram said that large scale applications are granted to actual users on an *ad hoc* basis at the Chief Controller of Import office in addition to licence holders being permitted to import spare parts against their licence for machinery. Sri Venkateswaran then drew the attention of Sri Melaram to the assurance given by the Chief Controller to a deputation of the Federation that

spare parts to the value of Rs. 2 lakhs for the quarter would be allowed under the present circumstances. Sri Melaram said that if the Chief Controller had said so, it stands.

2. Import of motors:

Import of variable speed motors which are not manufactured in India was taken up and Sri Melaram said that import of such special motors would be permitted depending upon the availability of exchange facilities.

3. Starting of printing press by print-buyers:

Sri Ramu drew the attention of the Government officials to the growing tendency of certain print-buyers setting up their own printing presses thereby affecting the printing industry vitally. He also suggested that Government presses should not import certain types of special machinery to conserve foreign exchange. Sri Melaram informed the meeting that Government had not so far given licences to any party for import of machinery for starting printing establishments and further assured the Federation that due consideration will be given to this aspect when occasions arise.

At this stage, Sri K. B. Rao said that the Chief Controller of Imports had offered certain special machinery displayed at the recent Printers' Exhibition to the Government for their presses and that he (Sri K. B. Rao) had requested the CCI to allot them to the private sector in preference to Government and only in cases where such offers were not accepted by the private sector should they allot to the Government.

4. Paper and Boards:

Sri N. K. S. Aiyengar informed the meeting that standardisation of specifications of papers was engaging the attention of the Indian Standards Institution. Sri Guha Ray informed the meeting that the Indian Standards Institution had standardised specifications for only blotting paper at present. Sri N. K. S. Aiyengar was requested to arrange for speeding up standardising specifications of paper.

Sri Guha Ray pointed out that the indigenous varieties of paper and board are too inferior in

quality and standard for good printing and requested a quota should be given for them. Sri N. K. S. Aiyengar said that he had instances where actual users did not specifically mention the type of paper and boards when applying for special licences. This had resulted in import of such varieties of paper and boards which the Government did not anticipate while sanctioning such licences. He hoped that applications should in future be specific as to the quality and type of paper and boards. The Federation offered every co-operation to the Government in seeing that such practices are discouraged and requested the Government to inform the Federation whenever such imports are made.

Regarding playing-card boards, Sri N. K. S. Aiyengar said that there was considerable increase in import of these items. Actually it had increased from 3,000 to 7,000 tons and yet, he said the demand was increasing and that too from mainly one firm. He said that the Government could not help very much since it was a luxury item. However, he assured the Federation that the Government would do the needful if the Federation gave a list of such special boards not locally made.

5. Paper prices:

The attention of the Government officials was drawn to the fact that many items of paper manufactured in the country were not available even in the major towns. Regarding increase in price, Sri Aiyengar said that Government had permitted an increase of 2 nP. on prices of paper recently. Regarding appointment of a tariff board, Sri Aiyengar said that this was entirely a different body and beyond the scope of the Development Wing.

Sri Ramu suggested standardising weight of paper as well.

6. Manufacture of printing machinery:

Sri Ramu wanted to know whether the scheme for manufacture of printing machinery was abandoned as was revealed by the Union Minister in the Lok Sabha. Sri S. C. Nundy said that this was not so and that at present, high level

negotiations were going on between reputable Indian firms and very well-known foreign firm for technical collaboration and that the Government were helping in such negotiations, and it is hoped that something tangible would come out of this negotiation very soon.

7. Inks:

Sri Melaram said that recently on account of issue of licences for import of special offset ink, actual users had imported such ink calling it special ink and as not manufactured in our country. The Government on an analysis of these imported inks found that there was nothing special about them and that they were almost the same as those manufactured indigenously. He requested the Federation for details of specifications of special offset ink since indigenous ink manufacturers had objected to the grant of such licences. Sri Guha Ray informed the meeting that the Paints Committee of the Indian Standards Institution which was standardising inks was not actually functioning now and suggested that this committee should standardise specifications of all types of inks.

8. Export promotion:

Sri Gowardhan Kapur appealed to the Government that books which had export value should be brought under the Export Promotion scheme and that all materials needed for the printing of such books should be given preference for import.

9. Production of certificates of manufacture:

Sri N. K. S. Aiyengar requested the Federation to give a list of items of paper and boards and machinery which are not made in this country to enable the Government to consider elimination of operation of this rule—production of manufacturers' certificate.

10. Payment of Bills:

Sri Kapur suggested that a committee should be set up to assist the Government in passing bills, levying penalty, etc. Sri K. B. Rao said that all possible delays in payment were avoided and only in cases where bills were incomplete, such as omission of statement of paper, acknowledgments etc. were payments delayed. Sri Guha Ray

said that despatch vouchers such as rail receipts and copies of duplicate delivery notes should be treated as acknowledgments and that the printing Directorate should not wait for acknowledgment from the different parties as such parties took their own time to acknowledge receipt of the books sent to them. It was also pointed out that in many cases, the Publications Division had not given despatch instructions for months after printing was over, thereby disabling the printers from submitting their bills. Sri Mallya admitted that there have been few instances where despatch instructions could not be given resulting in stock of books lying with the printers. He said that Government were considering opening of regional offices which could take over such stocks and until then, he requested the co-operation of the printers in this respect. With regard to production of acknowledgment receipts, Sri K. B. Rao said that if books could not be sent within a definite time, say a month after completion of the job, the printer himself may give a certificate of completion and claim his bill. Sri Mallya said that his department has been giving certificates of receipt of copies if the parties to whom books have been despatched do not acknowledge them even after three reminders.

Sri L. R. Nair said that so far as his department was concerned, whatever they print had publicity value only up to a specific period and so they had to insist on the penalty clause wherever there was undue delay in the completion of the contract. He also said that since his department was concerned with publicity, quality was very essential. He added that his department was paying 90% of the bill amount on receipt of despatch advices and they could do so since printers were supplying their own paper. He also assured the Federation members that the penalty clause was never enforced unless it was absolutely necessary.

Regarding schedule of rates for packing and delivery, both the Advertising and Visual Publicity and the Printing and Stationery departments had laid down a schedule of rates which were found

workable by all printers. Sri K. B. Rao said that his department would not be able to pay any part of the bill in advance since the value of paper supplied by Government was in many cases huge when compared with the bills. With the new system of certifying—the printer himself certifying when he has completed the job and holds stock of same and sending such certificate along with his bill—Sri K. B. Rao hoped that the delay in the settlement of bills would be reduced to the minimum. He hoped the Government could be able to pay the bill within thirty days.

Sri Guha Ray suggested that the Standard Conditions prepared by the Federation based on the British and American Federations of Master Printers should be adopted by the Government. Sri K. B. Rao said that Government had themselves prepared a set of conditions and if the Federation wanted any change, the Government would be prepared to consider the same.

Sri Gowardhan Kapur urged the Government to appoint a committee consisting of representatives of the Federation and the Government to draw up a panel of printers and for distribution of work to them. Sri K. B. Rao said that this was not necessary since the Government was consulting the regional printers' Associations and the Federation in such matters.

Sri Gowardhan Kapur suggested the formation of an *ad hoc* committee to go into such questions as would arise from time to time. Sri K. B. Rao said that the present meeting was only of an exploratory nature and the Federation was always welcome to meet any official of the Government with regard to any of their problems as and when they arose so that there was no need to appoint any standing committee for this purpose.

Sri K. B. Rao said that the present meeting had brought the printing industry and the Government closer and hoped that the discussions would be of great advantage to both the parties.

Sri S. Ramu thanked the officers of the Government on behalf of the Federation.

NEWS & NOTES

Import of spare parts.

We have received a communication from the Chief Controller of Imports and Exports to say that necessary instructions have been issued to the Port Authorities with regard to the import of spare parts for printing machinery and Anti-set-off powder, etc. Those who experience any difficulty in importing these materials will do well to contact the respective Port Authorities.

Planning and Building for Drupa 1958

A NEW HALL, which is expected to enable the organisers to cope with all possible demands for space, is under construction for the 1958 DRUPA exhibition. It is a three-storey building and will have seven lifts, two of which will take lorries and vans. The front of the hall is of all glass construction with an aluminium grid system holding the panes. The German glass industry is reported as considering it the most interesting building of its kind in the Federal Republic at the present time.

—By courtesy of *Printing World*

Aim of education for all major crafts in printing industry is being reached.

The City and Guilds of London Institute states, in its current Broadsheet, that its goal for printing education is now being reached. The aim is to provide syllabuses and examinations for all the major crafts in the printing industry, together with advanced subjects for those wishing to specialise in certain directions or preparing for managerial positions. The work of expanding the provision and filling the gaps, upon which the Institute's consultative committee and advisory committees have been engaged for some years, is virtually complete. The only outstanding commitment is a

scheme in screen printing, which it is expected will be drafted during the coming year.

—By courtesy of *Printing World*

NEW DRY SPRAY GUN FOR PRINTERS

Powder-spraying has been widely adopted by the printing and office equipment industries in place of the liquid type of anti-set-off spray since Aerostyle Ltd. introduced the first British made unit for the purpose in 1951.

Now, the same company is in full production with its Aerostyle Mark III dry spray gun, which incorporates many new features of design and operation resulting from experience gained from the use of similar equipment in printing and office applications.

Its outstanding feature is its ability to deliver exactly the right amount of powder at each actuation and to disperse it uniformly over the sheet of paper.

No adjustment of the gun is necessary. If more or less powder is needed the needle can be changed in five seconds without stopping the press.

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—By courtesy of *Printing World*

Industrial Dispute between the Workers of the Asian Printers, Chepauk, Madras-5 and the Management

In November 1956, the Madras Press Labour Union demanded on behalf of the workers of the Press for revision of Wages, grant of dearness allowance, bonus, institution of gratuity scheme, etc., before the Labour Officer, Madras-2.

The dispute relating to bonus for the years 1954-55 and 1955-56 was settled by the Labour Officer in April 1957 under a Memorandum of settlement.

In regard to the question of revision of wages, Sri T. Gopal, Welfare Officer of the Madras Printers and Lithographers Association assisted the Asian Printers who are members of the Association before the Labour Officer, and a settlement was reached based on the scales of wages approved by the Association at its meeting held on 17-3-'57. Each worker was given weightage for his service in the establishment and his wage was fixed at the suitable stage.

In the matter of dearness allowance, the Association approved of a uniform allowance of Rs. 20 but the Labour Officer advised that Rs. 25 will be more appropriate under the existing state of affairs and the management of the Asian Printers agreed to adopt the suggestion.

The management also agreed to institute a scheme of gratuity at the rate of half a month's basic wages for every year of service to be paid to workers at the time of their leaving service when they are retrenched, discharged or they voluntarily leave service; of course those workers who are dismissed for misconduct will not be entitled to the gratuity benefit.

The management agreed to confirm workers who have put in 240 days' service within the 12 months preceding 1st April, 1957.

STANDARDISATION OF BLOCKS, PLATES, CHASES AND GALLEYS

The standardisation of blocks and advertisement plates, and also of chases and galleys, has been under consideration by a technical

Committee set up by the British Standards Institute in January, 1956. Amongst members who have served on the committee, which recently held a meeting and made considerable progress in the formulation of suitable standards, are representatives of employers and workers in various sections of the printing industry. Both the Electrotyping and Stereotyping Employers Federation and the National Society of Electrotypers and Stereotypers accepted invitations to join the committee.

The BSI committee was set up as a result of suggestions made by a number of individual newspaper publishers that there was room for some measure of standardisation in the newspaper industry. There was already in existence a committee of the British Federation of Master Printers examining the question of standardisation in relation to productivity in the general printing industry and Mr. A. Kirk of the British Federation of Master Printers was invited to take the chair of the BSI committee.

—By courtesy of *Printing World*

3 questions...

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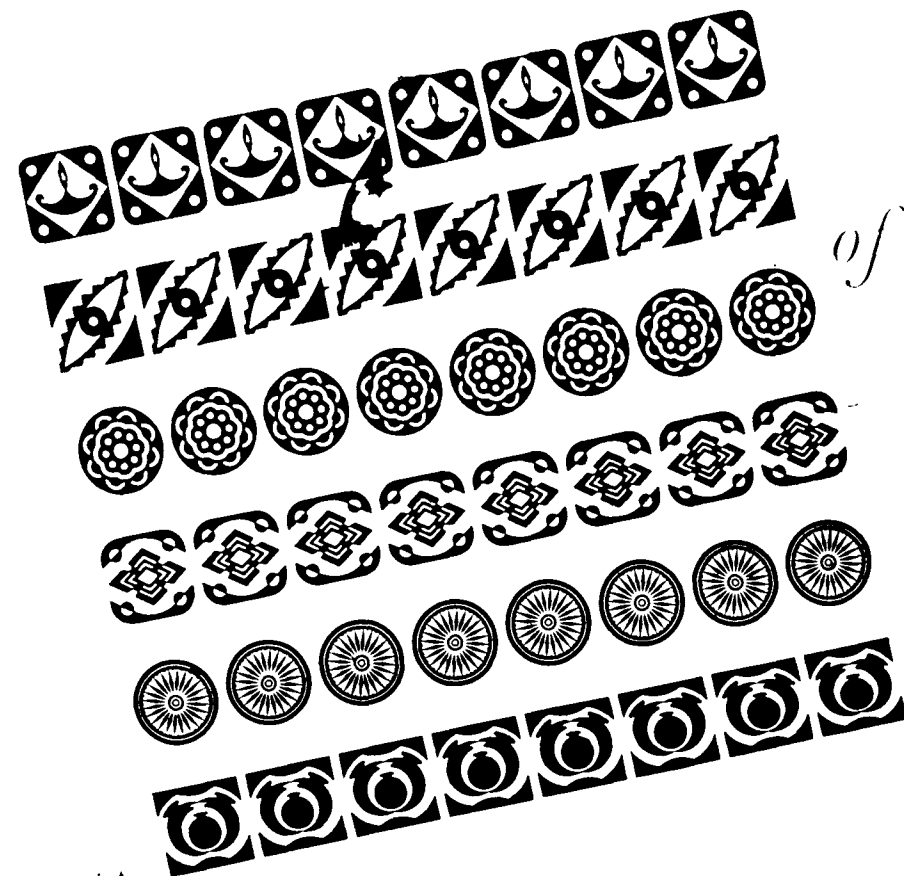


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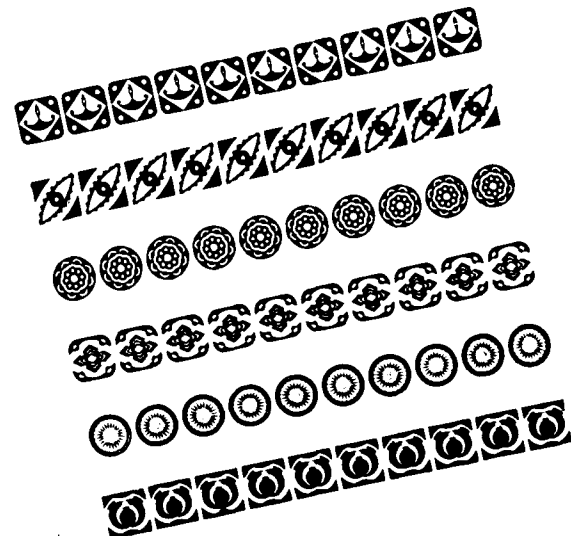
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BULLETIN

OF THE ALL INDIA FEDERATION OF MASTER PRINTERS

Vol. 3 No. 2

Editor-in-Chief—S. RAMU

September 19

15 NOV 1957

APPRENTICESHIP IN PRINTING INDUSTRY

It is not necessary today to emphasize the importance of an apprenticeship scheme. Apprenticeship is as old as human society. When occupations descended hereditarily, the son apprenticed with the father. In his *Arthashastra*, Kautilya advised the King to employ in his mines only those who had apprenticed in trade corporations.

According to Indian concepts of education and training, the *Guru-Sishya bhava* was very important in every phase of teaching. Probably our forefathers knew that such a method was more important than others, that they didn't bother very much about the importance of duplication of 'Knowledge'. Printing is probably the only science which our ancients did not practise or envisage.

But times have changed. Population is increasing at a terrific pace. Education is not keeping pace with it—partly may be due to the disinterested approach of the foreign ruler in the past, and partly may be due to lack of funds or want of proper approach by the present Government. Both Government and the public are now agreed on the principle of increasing the percentage of literacy to the maximum within the next few years. As such, the method of imparting knowledge through printed books has not only come to stay, but is going to be a much wanted thing. To meet the demand for more compositors, more pressmen and more binders,

are we making a systematic effort? No, not at all. When business is good, some presses pinch experienced men from other presses, which of course is a very unhealthy practice. Otherwise, whoever offers himself is given a case or a machine, in the fervent hope that he will be able to do something since most of these men say they have so many years' previous experience.

If a man can put type together in a stick, he cannot become a compositor; if a man can feed paper on the machine, he cannot become a pressman. The Compositor must know all types of work, composing, imposing, tying up, proofing, tabular work, music work, type measurements, type selection, style of the house, etc.; the pressman must know make-ready, behaviour of ink on various kinds of paper, mixing of inks, condition of rollers, packing and a host of other things. Apart from these, the most important aspect is, he must learn certain habits—very good habits—which can only be acquired by a fairly good period of apprenticeship.

Apprenticeship, to be really useful, must be at least for four or five years and not one year, as has been suggested in some quarters. In no country, in the world is the apprenticeship period less than four or five years. In that period, he acquires technical knowledge, practical experience, a knowledge of day-to-day troubles and how to overcome them, how

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to get along with co-workers and how to behave towards management. He gets used to routine discipline. When he learns a good deal, he begins to feel that there is a lot more to learn and specialize, and becomes humble; when he achieves good results he is satisfied with what he has produced and the pride of craftsmanship comes in.

Thus, it is important that a worker should go through a full course of apprenticeship before he becomes a craftsman. It will ennoble him and benefit the press. It is necessary for the industry. In no other country, printers are trained the way they are in India. They have to go through a rigid course of apprenticeship; hence the industry as a whole produces very good work.

There should be a common apprenticeship scheme for the whole country. If the industry or the unions are organized, they can institute a common scheme. We feel neither is competent at the present stage in India to undertake such an important task.

Then why not the Government draw up a scheme of apprenticeship for the printing industry, regarding period, allowance, training—both practical and theoretical—legal responsibilities, periodical and final tests, etc., and insist on the industry adopting the same.

More than anything else, this one factor will ensure the availability of good craftsmen for the printing industry, and raise the standard of printing as a whole in the country.

Let us pave the way now for the future of the printing industry of India.

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MY IMPRESSIONS OF THE IX INTERNATIONAL CONGRESS OF MASTER PRINTERS

by

K. C. RAMAN,

Production Manager, "Times of India," Bombay

In the year 1923 the idea of creating a permanent International Organisation of Master Printers was discussed at the first International Congress of Master Printers which was held in Gottenburg and little progress was made until 1928 when the second Congress was held in Cologne. At this Congress a Committee of five members was appointed to consider the scope of operations of the proposed Bureau, its location and estimated cost. During the third Congress held in London the Committee of Members suggested a scheme for setting up a Bureau in London and to work there until the end of the year after which it was to be located in Berlin. The scheme was adopted by the Congress and the Committee of five became the Council of the International Bureau.

The fourth Congress was held at Utrecht in October 1934 and the fifth at Budapest in the year 1937. On the outbreak of war in 1939 it was decided that the seat of the Bureau should be transferred from Berlin to London and all activities were suspended on 2nd October until further notice. Due to several demands made for the revival of the Bureau a meeting of the Council was held in London in 1946 when it was decided to resume the activities of the Bureau. The sixth Congress was held in August 1948 at Stockholm and the subsequent Congresses were held in London in July 1951 and in Venice in September 1954. The object of the International Bureau is to further the economic and technical interest of the Organisations affiliated to it.

The ninth Congress commenced its session on Monday, June 3rd, 1957 at 10 a.m. in the tastefully decorated Swiss Comptoir, Lausanne. Visitors and delegates from various parts of Europe started pouring in and a reception office situated at the railway station

helped those who needed hotel accommodation.

All the papers and badges relating to the Congress were sent in advance to the various hotels where the delegates were put up. Huge banners and well designed posters announcing the Graphic Exhibition were seen in the streets of beautiful Lausanne and the whole City presented a very picturesque appearance. Special buses were run frequently for the convenience of the delegates.

As the Swiss Comptoir (Conference hall) was situated in the exhibition grounds with several excellent restaurants serving light refreshments, it was very convenient for the delegates to attend the various sessions without running about unnecessarily.

The Lausanne Chamber Orchestra consisting of ladies played beautifully at the inaugural session of the Congress. Immediately after the music, the Congress was inaugurated by the high authority of representatives of the Canton of Vaud Government and the Town of Lausanne. The speeches welcoming the delegates were made in French and the printed translations in various languages were distributed to the delegates in advance.

As soon as the inauguration was over, the delegates adjourned for lunch which was given by the City of Lausanne. After eating several course lunch followed by Champagne and wine, both of which flowed liberally, the business sessions commenced at 3 p.m.

The delegates were grouped together according to the language spoken and were supplied with ear pieces for hearing the translation. Several charming girls with sweet voices were employed as translators and as the speaker was reading his paper, translations in various languages were simultaneously read.

All the papers that were to be read before the Congress by the main speakers were printed in various languages and distributed to the delegates in a beautifully bound box resembling the shape of a book. Those who wanted to participate in the discussions were asked to give their names with a brief note on what they were going to say before the commencement of the session and only they were allowed to participate in the discussions.

The paper entitled "International Co-operation among Printing Colleges to provide exchange facilities for Students" was read by Mr. W. E. Bertelsmann of Germany. Mr. S. Dahlback of Sweden read a paper on "How to Interest Management and Employees in Greater Productivity" and Mr. R. R. Vasseur on "How to Interest Management and Employees in the Running of the Firm". On "Work Study" Mr. H. W. Underhill of Great Britain gave a paper.

On June 4th the business session started at 9 a.m. punctually and the paper on "Productivity-Comparison for the use of Editor Book-binding Firms" was read by Mr. F. P. d'Huy of Holland. Then the paper on "How to Seek Industrial Peace by Means of Conciliation Procedure" was read by Mr. P. Mayeux of France and Mr. P. Lang of France gave a paper on "Improving Relations between Printers and Suppliers of Ink and Paper". Finally the last paper for the day was read by Mr. A. Laurent of France on "Development in Blockmaking".

After lunch all the delegates assembled at Lausanne Railway Station to go to Geneva by a special train for sight-seeing and to attend the reception and dinner given by the Geneva section of the Swiss Master Printers Association. It took hardly an hour to reach Geneva and several coaches with guides speaking various languages were waiting at the Geneva Station to take the delegates for seeing places of interest. After an interesting non-stop tour of the town for about two hours the entire party was taken to Parc des Eaux-Vives for drinks and refreshments. As the weather was really

delightful and sunny in the afternoon, very few took their rain coats but as ill luck would have it, dark clouds gathered and it started raining cats and dogs. There were quite a good number of charming ladies in the party nicely dressed for the dinner and as they were caught unawares in the rain, the nice evening was spoiled to some extent. However, at 8 p.m. the party was split up into various groups and were taken to four different hotels for dinner. The dinner consisted of several courses and plenty of champagne and wine were served and at about 9-30 p.m. the delegates were in good spirits.

After the dinner, delegates from various countries made brief speeches thanking the Organisers for the excellent evening and I also conveyed the greetings on behalf of the All India Master Printers Federation and thanked the Organisers for the courtesy and hospitality shown to me during my stay at Lausanne. The function came to an end at 10-30 p.m. and most of the delegates in high spirits by now moved slowly

to the Geneva Railway Station to catch the special train scheduled to leave for Lausanne at 11 p.m.

To relieve the monotony of travel, popular dance tunes were played in the train and several couples danced to their delight. At 12 p.m. the train reached Lausanne and the party dispersed to their respective hotels.

The next day, that is, 5th June the business sessions commenced at 9 a.m. and papers on "Standardisation of Printing Ink for Three Colour Work" by Mr. V. Letousey of France, "Some Aspects of the Application of Electronic Engineering to the Printing Industry" by Mr. E. Humphries of Great Britain, and "Trends in Type Design" by Mr. J. G. Dreyfus of Great Britain were read. In the afternoon two papers were read, namely, "The Influence of Paper on Production in the Machine Room" by Mr. F. Mayer of Holland and "Progress and Value of Fundamental Scientific Research for the Printing and Allied Trades" by Mr. G. Scott of Great Britain.

As some of the papers were really interesting and educative it is suggested that the Federation reproduce the important papers in the bulletin every month.

At 11 p.m. the Congress Ball was held and in spite of heavy rain quite a good number turned up to the ball with their wives and friends immaculately attired in evening dress.

On the 6th June visits to various printing plants were arranged and for those who were tired of business sessions, excursions to various beautiful spots like Lotschberg, La Gruyere and Saint-Cergue were available. I visited an offset plant in Vevey specialising in cartons, boxes, wrappers, labels etc. This plant employs nearly 300 people. I did not attend the delegates meeting on 7th June for passing resolutions as I had to leave for Zurich to visit some printing plants. Thus the ninth International Master Printers Congress ended and I shall always remember this session as it was very well

(Continued on Page 6)

GUIDING PRINCIPLES OF ILLUSTRATING TEXTBOOKS

by

K. C. KRISHNAN

A talk on the All-India Radio, Delhi, on August 6, 1957

Textbooks are as old as organised formal education. Through centuries their place in the school system has been increasingly important. In the present day educational scene textbook takes a dominant place in a class room from the Primary school to the college.

Ideas on what an ideal textbook should contain and be composed of have a good deal of material for debates. But on a contemporaneous study of the textbooks published here and in advanced countries, it would be clear that Publishers, Printers and Authors there have moved rapidly and today textbook is formally established as an indispensable learning and teaching aid. Many of the present day textbooks published in our country are open to severe criticism. Either the textual matter is not well prepared or the organization of the various topics is lacking in force or the physical aspects are very poor. The tender mind should be made to learn more. The author is expected to get more subject matter, better thoroughness and organisation of material to build up better minds, richer and finer interests, finer personality adjustments and better moral characters.

No matter however carefully the textual material has been organised in a book, unless the physical aspects of the textbook equally appeal to the child and the teacher it cannot attract them. Well organised content, attractive and suggestive illustrations, good paper, clear impression and finally durable fine printing are all the essential elements of a modern textbook.

In this talk I shall confine to the procedure and guiding principles of illustrating textbooks so as to make them serve the purpose for which they are intended.

Illustrations play a most important part in raising the standard of textbooks i.e., making them more attractive, useful and intelligible. With the rapid advances and latest techniques of printing, the art of preparing illustrations has risen to new heights. An objective analysis of the books of the most advanced countries will show marked improvement. By contrast, attention given to this aspect by our publishers and authors here seem to be disappointingly scanty and the results are deplorably disappointing. The disproportionate and unbalanced figures with little or no contrasting effects warrant thorough repair with fresh components if our textbooks illustrations are to serve the purpose for which they are included in the book. Often the author treats illustration as his last task. The artists are handicapped for lack of time and knowledge of the subject matter. He is provided with very little reference material and quite often he is ignorant of what exactly is desired of him. The block-maker and the printer cannot make use of their skill because they have to obey the orders of the publisher's indents. The publisher doubtless feels forced to economise because the consumers are not prepared to meet any additional cost. Such is the vicious circle of our textbook illustrations.

The task and the opportunity of improving the illustrations of our textbooks rests squarely in the hands of the entire group of people concerned with the preparing and producing a textbook i.e., the author and artist. It is only by a co-ordinated and co-operated effort will they succeed in making the much needed improvement. The present guide rules contained in this talk are based on this assumption and addressed to all concerned in the

country with the hope that the information may go a long way towards securing united action.

A little explanation of the interdependence of the various groups concerned with the textbook illustrations may be useful. The authors besides knowing the subject-matter should be essentially aware of the fundamental principles of illustrating a book and the feasibility of the different processes of preparation and reproduction of illustrations for getting it across. They should study the possibilities and limitations of illustrating a textbook. The artist besides his immediate job of preparing drawings mechanically should try to grasp the subject-matter or the concept that he is to express visually and also study how the reproduction process is likely to affect his style and method of treatment. Other individuals such as reviewers and textbook officers should know how to appreciate illustrations so that they can exercise considerable influence through their decisions. The consumers i.e., the parents and the teachers buying books for the children should likewise have a clear understanding of what they are paying for. It follows that the publisher who is equally concerned with all the several aspects of textbook has an overriding need to ensure that a proper co-ordinated effort is made for bringing out the best book to suit the needs of our schools.

The functions of textbook illustrations are manifold. There is a Chinese saying that 'One Picture is worth a thousand words'. I would modify this provided it is good that's thousand bad pictures may not be worth a word. Pictures are intelligible to children long before they are able to form ideas and grasp with any success from a word description however successfully given. The subject-matter cannot in all cases be presented clearly enough through any number of words. Illustrations help in clearing difficulties of comprehension. It enables the pupils to grasp intelligently the ideas and information the author intends to convey in each chapter. One can follow easily the visual description and

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- 3 Is it possible, by using a single kind of film or plate, to make all kinds of screen negatives for offset work?

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finally build up a more correct mental picture of the subject-matter. In fact, illustrations are meant to shed light on the matter in hand. Really good illustrations will make realize the contents more vividly and lead to appreciation. Pictures, as I visualize, are 'Silent organs of speech of immeasurable utilitarian value'. It conveys a message instantaneously. Illustrations especially in colour stimulates the minds of the readers and give life, force and picturesqueness to the book. They have fixing power inasmuch as they develop the retention and recollection of the subject-matter in the minds of the young children. From the disciplinary point of view, illustrations provide scope for cultivating the power of observation and perception. Good illustrations promote mental activity, stimulate thoughts leading to further imagination and suggest further investigation and activity.

Recent trends of illustrating educational books as is present in most of the American textbooks are to present the picture pre-viewing the subject-matter thereby giving in a nutshell a comprehensive idea of the whole chapter and arousing curiosity and interest about the text.

There are certain essential elements which constitute good pictures. While evaluating any pictorial composition one has to consider whether it is accurate and true to the description given in the text; whether it is relevant and scientifically based. A gross improbability will distract the attention. The anatomical details must be according to the intended age group. In the case of coloured reproductions, the colour should not only have a decorative value but the hue should resemble the actual specimen. For example it is injurious to show an elephant in yellow colour.

Every illustration should be interesting and must hold attention. The publishers, rather the authors and artists should visualize the likes and dislikes as well as the impulses of the children for whom textbooks are written. Bright colours, simple yet comprehensive design, suggestion of activity all

go to make an illustration more interesting. Only one thing at a time should be conveyed, in any picture. Mixing up more than one idea in a picture is bound to create confusion to the tender mind of the child.

The artist has to be judiciously chosen for this type of highly specialized job to ensure the right quality of illustrations for our children. The complexities of skill in the art of picture preparation, which at first glance appear to be simple, need careful planning and treatment. It is only years of experience preceded by good training can make one a competent textbook illustrator. To make a child know that subtraction is the process of taking away a single or a group from a large group and addition is taking into a particular group a single or a group, he should be in a position to understand what each means. To achieve such an understanding power he needs a large meaningful and specialized vocabulary of his own which he finds in nature. Such a knowledge should be sustained permanently. With the pictorial foundation of study he will never be confused. Even if he has forgotten the facts he needs to know, he has acquired the means to rediscover them.

Artists should have originality in every second drawing prepared by them. Publishers should discourage the parrotilike repetition and/or copying from other books or literature. Of course it is very healthy to preconceive a mental picture or by sketch drawings an idea of the composition by inter-connecting what has been found in some of the good books produced here and abroad. Textbook artists should aim at rich illustrations which are concrete, inviting, dramatic, rhythmic and tangible in every respect.

The idea of size in illustrations should be conveyed by comparison with the size of the some known object. The artist has to locate that particular angle of view to bring out the important points more clearly. Illustrations especially those intended for children should have a bold treatment and major details should be plainly brought out. Unnecessary

shading and hatching should be avoided. The quality of lines should be precisely maintained. The edges of lines should never be broken and the tone should be in form and continuous. Black solids should be held up to keep the highlights as white as possible. Drop out screen in any area where white will help. Drawings should have wide contrasts. Where the range of tone value is less, close gradation is lost. Where tones are in marked contrast, this stands out clearly. Great reduction in size should be avoided. Actual size or slightly enlarged good drawing will ensure faithful reproduction. Wherever possible art material should be prepared in one complete unit. Fine lines should be carefully hatched. Where considerable reduction is necessary lines should be thick. Plenty of white space should be allowed all around the figures to render reading easy. Colour has the power to attract as it also has the equal power to detract if used indiscriminately. Unless full colour realism could be brought out in illustrative material, it is wise to limit to the use of one single colour rather attempting the use of too many colours and damaging the communication potential of the illustrations by distorting the colour realism.

—By courtesy A.I.R. Delhi

(Continued from Page 4)

My Impressions of the IX International Congress of Master Printers.

organised and well conducted. Finally I should like to thank Mr. E. Kopley, Head of the International Bureau of the Federations of Master Printers for evincing personal interest in arranging for my visits to various printing plants in Europe and I have no doubt that under his able stewardship the International Bureau will grow from strength to strength.

STANDARD FOR PROOF CORRECTION SYMBOLS

I.S.I.'s DRAFT

The work of evolving uniform symbols for correction of proofs in English as well as Indian languages, aimed at elimination of linguistic symbols, has been taken in hand by the Indian Standards Institution.

Widespread growth of literacy in the country is leading to considerable increase in reading material, specially in Hindi and other Indian languages. The need is therefore felt for a standard on proof correction symbols which could be used throughout the country by all presses dealing with publications in English and Hindi and other Indian languages.

In correcting proofs, two symbols are employed for each correction, one used within the text and the other in the margin. Printing presses in the country generally employ the same set of symbols in correcting proofs in Roman script

and in Indian languages. While the symbols used within the text are not linguistic, some others, which are used in the margin, such as 'trs' for transpose, 'stet,' etc., are linguistic. It is desirable that symbols used for proof correction in Indian languages should not be linguistic.

In a draft standard issued by the Indian Standards Institution, an attempt has been made to use the same or similar non-linguistic symbols both in the text and in the margin wherever possible. Still, the list proposed in the draft contains about a dozen symbols which are linguistic and which should be replaced by non-linguistic symbols.

Suggestions to replace the linguistic symbols as well as comments on the draft are invited by the ISI before Nov. 10, 1957.

This draft standard has been prepared by the Documentation Sectional Committee of the ISI under the Chairmanship of Dr. S. R. Ranganathan, Editor, Annals of Library Science. The members of the committee include, among others, representatives of Union Ministries, Government libraries, library associations, printers and publishers.

Copies of the draft standard can be obtained from the Indian Standards Institution, 19, University Road, Delhi-8, and its branches at 40/40 A. Cawasji Patal Street, Fort, Bombay; P-11 Mission Row Extension, Calcutta; and 23, Nungambakkam High Road, Madras.

The subject of proof correction is also on the agenda for the International Technical Committee for Documentation and a standard, if prepared excluding linguistic symbols, would provide a useful working paper for producing an international standard on the subject.

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Paper: Smooth coated papers and boards, most flints, glacines, etc., are suitable. For rough papers underprint with a Base Size. Specify paper with a reducible sulphur content of less than 2 parts per million.

Driers and Reducers: Must *not* be added. An increase in the proportion of Varnish may give improved working properties but loss of brilliance.

Overprinting: Make MAJESTIC GOLD INK the last working.

Blankets and Rollers: Must be oil-resistant. Composition rollers and synthetic rubber blankets are most suitable.

Wash-up: with White Spirit or Paraffin.

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*The Cover colour of this issue of the Bulletin is printed in
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MANUFACTURE OF PRINTING MACHINERY IN INDIA

The Central Government have, for some time past, devoted attention to the question of manufacturing printing presses in the country. There are not many firms in this field at present and, besides, the level of production is not substantial. Further, the country is yet to develop the know-how for various types of printing presses.

As one of the basic requirements for developing the industry would be to have an estimate of the nature and extent of demand for different types, sizes and makes of printing presses, which is not possible from the trade statistics, the Government decided in 1955 that an enumeration of printing presses already in use would be useful in this direction. From the statistics thus collected, it was considered feasible to make this estimate and to assess the probable demand during the Second Plan period for printing presses, both by way of replacement and expansion.

Survey of Existing Machines

First, a pilot survey was carried out in the Delhi State; the work was then extended in detail to the States of Bombay, Madras, Uttar Pradesh and West Bengal. The presses installed in nineteen other States were also partly surveyed. This work revealed that there were 12,549 printing houses in the country, 70 per cent of which were located in the five States of Bombay, Delhi, Madras, Uttar Pradesh and West Bengal.

Full details of 22,213 presses in the country, including their countries of origin, sizes, types, age, etc. were collected during the course of the survey. This number was made up of the following types of presses:—

(i) Proof presses	5,249
(ii) Platen presses	12,036
(iii) Flat bed machines—	
(a) Stop cylinder type	3,761
(b) Two revolution type	725
(iv) Rotary presses (all types)	442

This number represented the total of about 70 per cent of the

printing presses in the five States referred to above and of about 60 per cent in the remaining States.

Results of Survey

The results of this survey are summarised below:—

(i) Proof presses—More than 99 per cent of the numbers surveyed were of hand-operated types. About a third of the entire number was of demi-folio size, namely 12" x 18". Another 11 per cent were of smaller sizes, while the remaining were of "Galley" and larger sizes. Over 40 per cent of the machines were not more than 10 years old and about 30 per cent were between 10 to 15 years of age. Nearly half the total number happened to be of British origin and another 41 per cent were of indigenous make.

(ii) Platen presses—Nearly 96 per cent of the presses covered in the survey were of hand-operated types. Over 40 per cent were of the treadle driven pattern, the remaining being motor driven. Disc inking was the most popular method of spreading ink, accounting for nearly 85 per cent of the total. Roughly 45 per cent of the presses could take paper of the crown folio size, namely, 10" x 15", 31 per cent more were of the foolscap size, namely 8¾" x 13½". American designs accounted for about 53 per cent of the installed machinery and German designs for another 20 per cent. About 44 per cent of the total number were not more than 10 years old, while another 41 per cent were less than 25 years old.

(iii) Flat Bed Machines—It would be seen from above that about 84 per cent of the numbers surveyed were of the stop cylinder types. However, in the case of both the types, almost all the machines were sheet-fed, there being practically none of the web-fed type.

Among stop cylinder machines surveyed, about 90 per cent were of the hand-fed types, roughly 30 per cent of the machines could take paper of the double crown size, namely, 20" x 30", while an

equal number was for various smaller sizes. Coming to the question of age, about 43 per cent of the machines were not more than 10 years old and about 33 per cent were between 10 and 25 years. Two-thirds of all the machines surveyed happened to be presses of British origin.

In the case of two-revolution presses, mechanically operated types were a little more common, being about 21 per cent of the total. Nearly 33 per cent of the machines surveyed were of the double demi-size, namely 22½" x 30"; 28 per cent were of smaller sizes. American designs accounted for about 55 per cent, British types coming next with about 31 per cent. About 44 per cent were of 10 years or less in age, 37 per cent being between 10 and 15 years.

(iv) Rotary presses—These were in use for letterpress, off-set and gravure work. Numerically, off-set presses were most popular. Nearly 69 per cent of them were of English designs and nearly 80 per cent of the total were installed after 1947. Most of the off-set presses in use were of a single unit type and for printing in single colour. The double demi-size of 23" x 30" accounted for a quarter of the total number.

Among letterpresses, roughly 35 per cent were for types with four units. One-unit and two-unit types accounted for another 40 per cent. Single colour designs constituted about 75 per cent of the numbers surveyed. As regards age 60 per cent were installed after 1947. Both the English and American designs were common in this field.

There were only a few gravure rotaries in use, mainly of U.K. origin, and nearly a half of them were modern installations. One-unit machines formed the biggest proportion. The same was true of single colour types as well.

Meeting of Printers

When the details of the survey were available to the Government, it was felt that consultations with the users, importers and existing manufacturers of printing machinery in the country would be useful. Accordingly, the Government convened a meeting of these per-

(Continued on Page 11)

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(Continued from Page 9)

Manufacture of Printing Machinery in India.

sons in July 1956. The available data were furnished to them and based on these and from their experience, they estimated that, during the Second Plan period, there would be a demand for about 2,500 proof presses, 8,000 platen presses and 2,700 flat bed presses. As, in the beginning, the indigenous manufacture would necessarily have to be of such types and sizes as were in greater demand, the meeting was also requested to indicate the sizes for which there was a scope for immediate development. The general opinion was that in the case of proof presses, the size 35 cm. x 75 cm. would be appropriate; 30 cm. x 45 cm. in the case of platen presses and 60 cm. x 90 cm. for flat bed machines. It was felt that the manufacture of rotary presses would not be developed, in view of the small demand and until the engineering industry in the country could undertake to make the rollers required for them. The meeting was definitely of the view that the stop cylinder types of flat bed machines should be taken up for indigenous development to start with.

It will be noticed, that, while the results of the survey have been given in terms of the British measure of length, the meeting's recommendations follow the metric system. This has been done deliberately. The Indian Standards Institution has concurrently studied the question of standardising the paper sizes in the country in metric sizes. Already, a tentative decision has been taken that the sizes must be restricted to the so-called 'A' series, although for quite a number of years those of 'B' and 'C' series may also be in vogue.

The time has come for the country to direct its attention to the development of this important industry on an organised pattern and according to designs popular in the country. The manufacture of proof presses is not difficult and it should be possible to improve upon the know-how already available within the country, but, in the case of other types, the knowledge and experience gained by the advanced countries over a

number of years would be welcome, for it would enable India to make a quick start.

Scope for Additional Indigenous Capacity

This study clearly indicates the scope which exists for setting up additional indigenous capacity in this field. It is hoped that entrepreneurs will come forward with schemes intended to produce adequate number of machines of good quality in the directions indicated. They can seek for this purpose assistance and advice from the Development Wing, Ministry of Commerce and Industry, Shahjehan Road, New Delhi, where full details of the survey are also available.

We have received the above Bulletin from the Development Officer, Heavy Industrial Machinery, Directorate of the Ministry of Commerce and Industry, Government of India, about the manufacture of Printing Machinery in India.

Editor.



Mr. K. P. Rajagopalan, Process technician, Messrs. Allied Photographics Private Limited, returned recently from the Continent. He visited the factories of Gevaert Photo-Produkten N. V., Belgium, Johnsons of Hendon Ltd., London and Charles Champion Co. Ltd., London where he underwent intensive training in Process and Graphic Arts. The knowledge he acquired at these factories should be of great benefit to the Process trade in India.

WHOLETIME COURSES IN PRINTING

Whole-time courses exist in a number of countries for the training of students for executive positions in the printing and allied trades such as future printing works managers and the information collected by the International Bureau of the Federations of Master Printers, London, in this connection is set out below, country-war:—

London School of Printing and Graphic Arts,
Back Hill, London, E.C. 1
and
61, Stamford St., London, S.E. 1
Principal: Mr. Ellis Thirkettle
Year of Foundation: 1894
Authority: London County Council
Number of Teachers:

Whole-time	102
Part-time	210
Total	312

Number of Students:	
Whole-time	254
Part-time (day)	3,223
Part-time (evening)	3,587

Total .. 7,064

Whole-time Students

Minimum age of entry: 16 years.
Usual length of course: 2 or 3 years.

Students are trained for management. Other whole-time courses are for (i) Design, (ii) Photography, and (iii) Graphic Reproduction. Students are accepted from all countries.

Part-time Students (Day)

Part-time students are usually apprentices, except those such as designers, photographers and clerical workers. They usually attend school for 7 hours each week, but some are limited to 3½ hours either by their employers, or by the school because of lack of space. They attend day classes for 3, 4 or 5 years. They commence at the age of 15 or 16.

Part-time Students (Evening)

All evening students are employed in the printing industry, or in advertising, publishing, photography, papermaking, inkmaking, etc. On an average evening students attend classes during four



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hours each week, and on an average for a total period of three years.

Whole-time course for Young Managers

The subjects of instruction during the first year are: Theoretical instruction in management (6 subjects), chemistry and physics, engineering science, and design. Theoretical instruction supplemented by workshop practice in typesetting, letterpress printing, lithographic drawing, lithographic printing, bookbinding and warehouse work.

The subjects of instruction during the second year are: Theoretical instruction in management (9 subjects), applied science, and design. Theoretical instruction supplemented by workshop practice in typesetting (including Ludlow), process camera operating, letterpress printing, lithographic printing, silk screen process, bookbinding, and warehouse work.

The subjects of instruction during the third year are: Theoretical instruction in management (11 subjects), applied science, and design. Theoretical instruction supplemented by workshop practice in Monotype keyboard and caster, line composition, platemaking (photo engraving, photolitho, photogravure), electro and stereo, letterpress rotary printing, and photogravure printing.

The students work 6 hours each day and 30 hours each week. They work 38 weeks during one year.

The academic year is divided into three terms from September to December, from January to March, and from April to July.

The number of whole-time students who work in one class is 24.

THE BULLETIN

ADVERTISEMENT TARIFF

Full page	Rs. 125
Half page	Rs. 75
Quarter page	Rs. 40
Per column inch	Rs. 4

Rebate for contract for one year 10%, for six insertions 7½%

Mechanical Data: 3 columns (13-ems each), 9" a column.

STATE AWARDS FOR EXCELLENCE IN PRINTING AND DESIGNING OF BOOKS AND OTHER PUBLICATIONS

The Ministry of Information and Broadcasting instituted the Annual State Awards for excellence in printing and designing of books and other display publications in 1955. The competition for the Award would be held this year also in the month of November. The Awards will be in the following categories.

The entries for all these items will be limited to the productions completed after 15th August, 1956. There will be two sets of prizes in each category (a First and a Second Prize to the publisher or designer and a First and Second prize also to the printer) in addition to certificates of merit.

Entries are being invited from publishers, printers, business houses, advertisers, advertising agencies and commercial art studios. A Board of Judges comprising eminent artists, scholars, and representatives of trade will be constituted for judging the entries and recommending the awards.

There will be an exhibition of the entries at New Delhi during November, 1957. Separate entries for every category may be sent by registered post, addressed to Shri M. S. Samant, Exhibition Officer, Jamnagar House, Shahjahan Road, New Delhi, so as to reach him on or before 15th October, 1957. Every entry should bear a slip giving the name and full address of the competitor and the category for which it is entered and the other relevant details vide proforma given hereunder. The entries may not be returned.

CATEGORIES:

1. Children's books for children below 10 years.
2. Children's books for children over 10 years.
3. Illustrated books.
4. Art books.
5. (i) Book Production (English), (ii) Book Production (Indian Language).
6. Books on Indian-made paper.
7. Daily Newspapers: (a) English, (b) Indian languages.

8. Display advertisement Layouts.
9. Art Magazines.
10. House Journals.
11. Periodicals.
12. Posters.
13. Folders: (a) Offset or photogravure, (b) Letterpress.
14. Calendars: (a) Offset or photogravure, (b) Letterpress.
15. Diaries.
16. Devanagari Type Faces.
17. Publicity Booklets.
18. Labels.
19. Best bound book.

Proforma for Submission of Entries.

- I. Children's Books: (below or above 10 years), Illustrated Books, Art Books, Book Production (Indian Languages), Books paper, Art Magazines, House Journals, Per Calendars, Diaries, Publicity Booklets.

For Entries in the above categories, please give the following particulars:—

1. Publisher or Advertiser.
2. Artist or Designer.
3. Printer.
4. Process of Production.
5. No. and names of colours used.
6. Subject of the book, Calendar, etc.
7. Size.
8. Paper Used.
9. Type of binding.

- II. Posters, Folders and Labels. As in I above, except binding.

- III. Daily Newspapers.

1. Publisher.
2. Printer.
3. Size.
4. Price.

- IV. Devanagari Type Faces.

1. Name of the Foundry.
2. Name of the Designer.
3. Name of the type.
4. Pt. sizes in which available.

- V. Display Advertisement Layouts.

1. Advertiser.
2. Advertising Agency.
3. Art work by
4. Layout by
5. Typography by

NEWS & NOTES

THE ASSOCIATION OF MASTER PRINTERS, WEST BENGAL

At a meeting of the Executive Committee of the above Association held on 3rd September, '57 at 32, Upper Circular Road, Calcutta-9, the following resolutions were passed.

RESOLUTIONS

Resolved that the Association of Master Printers, West Bengal, be incorporated under the Companies Act, 1956 with one of the objects to take over and acquire the assets and liabilities of Calcutta Printing Press Owners' Association, an association (Company) registered under the Indian Companies Act, 1913 and also of Calcutta Association of Master Printers, an unregistered association. The Hony. Secretary, Calcutta Printing Press Owners' Association be requested to arrange and transfer the assets and liabilities of the abovenamed two associations to the Association of Master Printers, West Bengal.

Resolved that a sub-Committee consisting of Sri S. N. Guha Ray, Sri S. C. Ghose and Sri G. C. Ray be and is hereby formed to register the Association of Master Printers, West Bengal, under Companies Act, 1956 at a very early date. Resolved further that the above Committee is hereby authorised to alter the Memorandum and Articles of Association as might be necessary.

Be it further resolved that a copy of these resolutions be forwarded to the Hony. Secretary, Calcutta Printing Press Owners' Association.

At the same place on that day, the Calcutta Printing Pressowners' Association held a meeting of their Executive Committee and passed the following resolutions.

Read the letter of the Hony. Secretary, Association of Master Printers, West Bengal, requesting the Calcutta Printing Press Owners' Association to transfer its assets and liabilities to the Association of

Master Printers, West Bengal and

Resolved that an Extra-ordinary General Meeting of this Association be convened for the purpose of considering the dissolution of this Association and to transfer its assets and liabilities to the Association of Master Printers, West Bengal and to adopt necessary steps and procedures for the purpose.

Also resolved that the Hony. Secretary be and is hereby requested to take all necessary steps in this regard at an early date.

Further resolved that a copy of these resolutions be forwarded to the Hony. Secretary, Association of Master Printers, West Bengal.

MASTER PRINTERS' ANNUAL 1957

The 1957 edition of *The Master Printers' Annual* contains all the latest agreements concluded last year in the printing industry. Anyone interested in reliable information about rates of pay, working conditions, cost of living index rates etc. will find this Annual most useful. As usual, it contains the names and addresses of about 5,000 member firms of the British Federation of Master Printers. Another chapter deals with the legal responsibilities of printers in regard to the printing of bank notes, postage stamps, betting and lottery tickets, copyright, designs and trade marks, factory regulations, safety, employment of women and young persons, imprint, indecent matter, libel, sedition, etc.

The International Section gives names and addresses of associations of employers engaged in the printing and allied trades in all parts of the world, together with the names of their presidents and secretaries, the bye-laws of the International Bureau, dates of Conferences, and similar information of interest to printers.

The Master Printers' Annual is edited by R. A. Austen-Leigh, immediate past-president of the International Bureau. Copies may be obtained at the price of 27s. 6d.

from the publishers: Spottiswoode, Ballantyne & Co. Ltd., 1, New Street Square, London, E.C. 4.

—By courtesy of
International Bulletin

A PATRA—CONFERENCE

Over 20 papers on Newspaper and Rotary Letterpress developments.

At the Patra Newspaper and Rotary Letterpress Conference to be held in Harrogate this autumn, over 20 papers on the latest technical developments will be given by leading authorities in newspaper printing. The conference is to be held at the Majestic Hotel from October 28 to 31.

The broad objects of the conference will be twofold—first, to find out what are the main problems affecting the industry so as to see how PATRA can help to overcome them, and second, to provide an opportunity for delegates to hear and discuss the views of authorities in all branches of newspaper and magazine production, including suppliers to the trade.

Conference delegates will receive preprints of the papers to be presented and these, together with full reports of the discussions, will be subsequently published in a bound volume. One copy of the Conference Proceedings will be circulated to all those attending.

Over 20 speakers will follow an introductory talk given by G. L. Tillotson, chairman of Tillotsons and Son, and they will cover the whole range of newspaper production. First speaker will be Dr. V. G. W. Harrison, director of research at PATRA, who will speak on research and rotary letterpress printing.

The conference is open to any newspaper published in the United Kingdom whether members of PATRA or not. Those newspaper houses who have not already indicated how many places they are likely to require are requested to write without delay to K. N. Hoare, the Secretary, PATRA, Leatherhead, Surrey.

By courtesy of *Printing World*

Drupa 1958 Internationale Messe Druck Und Papier

Duesseldorf, 16th May, 1958

Accommodation Register of the
"Verkehrsverein Duesseldorf"

With its comprehensive range of exhibits covering an area of 65,000 sq. m., the DRUPA 1958—International Fair Print and Paper—to be held from 3rd to 16th May 1958 is the largest trade fair for printing and paper.

Accordingly, people of the trade in all parts of the world are making preparations to visit this Fair. Thousands of visitors from all over the world have already notified us of their coming. It is therefore only natural that all the hotels in the city are already completely sold out for this period. You will nevertheless not have any worries concerning accommodation because there are a sufficient number of hotel accommodations available in the very close vicinity of Duesseldorf (only 25 to 40 minutes to the DRUPA by rapid transit tram or bus). It will therefore not take you any longer to reach the DRUPA than it would take you in London, Paris or New York to reach the city from one of the suburbs.

There are also a sufficient number of private rooms available in Duesseldorf, rooms which have been examined thoroughly by trained personnel. The Duesseldorf citizens are happy to provide lodgings for the foreign guests, as they did during the DRUPA 1954.

With effect from December 1957, all requests for room reservations will be dealt with in accordance with their date of arrival.

GOVERNING COUNCIL MEETING

The Governing Council of the All India Federation of Master Printers will meet at 10 a.m. on Tuesday the 29th October, 1957 at The Indian Merchants' Chamber Hall, Indian Merchants' Chamber Building, Back Bay Reclamation, Church Gate, Bombay.

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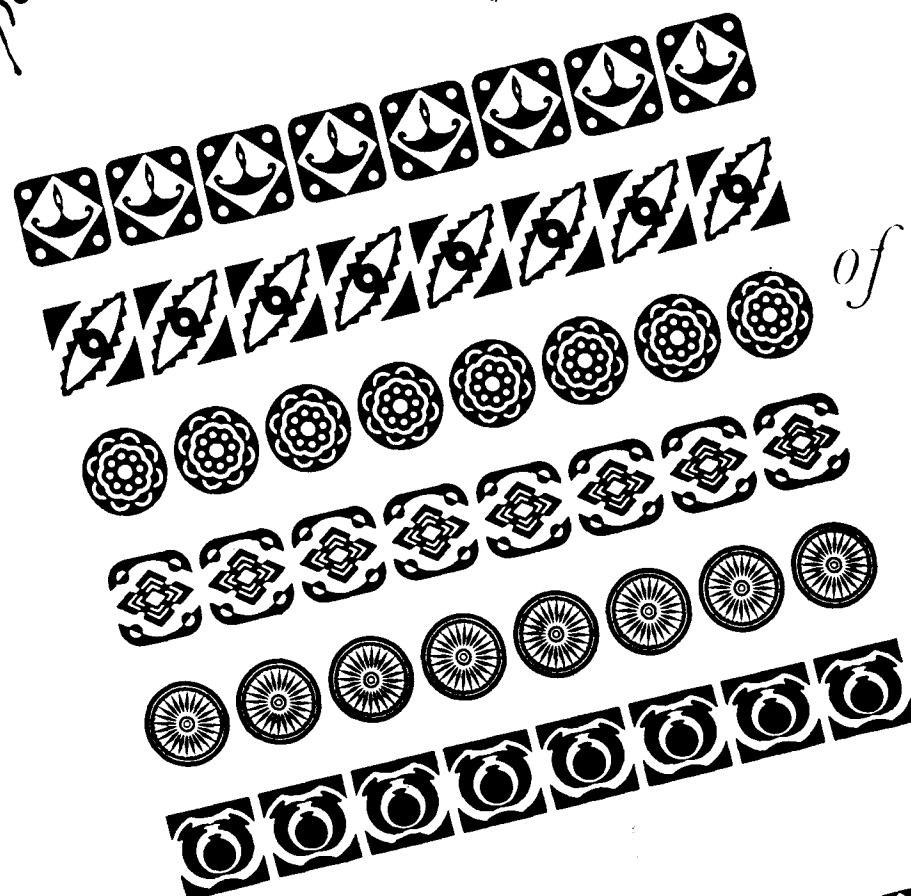
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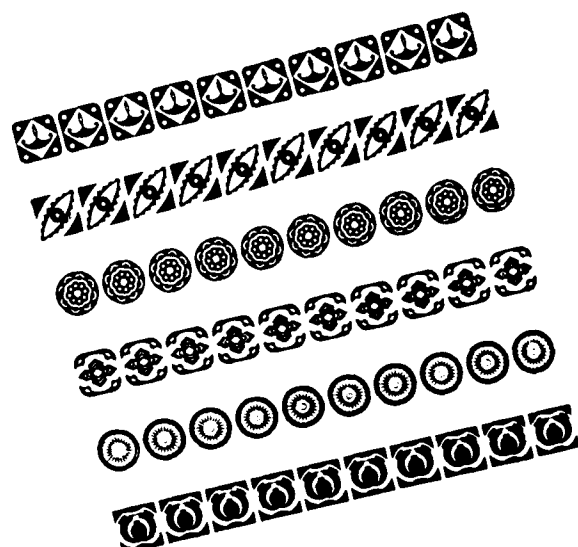
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BULLETIN

Vol. 3 No. 3

Editor-in-Chief—S. RAMU

October 1957

SAVE THE PRINTER

It is agreed on all hands that India's foreign currency is not what one would like it to be. We have been spending it at such a fast rate that the Government have been forced to take such drastic steps as to stop all imports of printing machinery in addition to several other items. As Indians, ourselves, we do appreciate the position and are prepared to rise to the Government's expectations. But as businessmen, we would want Government to be practical in whatever it might do.

While expansion of industrial units can wait, the existing machinery has got to work. This depends to a very great extent on a liberal import of spare parts. To mitigate the difficult situation caused at present, the licences granted by the Chief Controller of Imports to the established importers which have been suspended may be transferred to the actual users so that they can obtain the necessary spare parts as during this period they are unable to import new machinery to replace the old.

As regards printing, many are the items which we do not

manufacture in our country and without which we cannot get on. Graphic Arts have taken such tremendous strides in recent years that one has to go round both the hemispheres to acquaint oneself with these advances which determine the progress and development of printing both scientifically and artistically.

One new feature in the development is the introduction of offset printing in our country. This has replaced letterpress printing wherever multicolour printing as also mass printing becomes necessary, and it is a sad fact that while it is possible for us to manufacture a great number of things indigenously, we cannot produce photographic films or plates to enable the offset printers to take their negatives. Even as the Radiologist has to depend on the import of X-ray negatives, so has the printer to rely on his foreign import of this commodity, and unless it is allowed he will have no alternative except to close down his business. We would request the authorities to include this item among the essential commodities import-

ed, without it the industry will be for a serious crippling. We are one with our Minister and the Finance Minister to tighten our belts and wait for the day when we would have completed our Second Five Year Plan and see the bright future before us—the day when we would be manufacturing printing machinery in our own country. But, as we have stated already, facts have to be faced and Government should provide for essential things which we cannot do without. Let it realise the importance of the Printer's role in a developing economy like ours and come to his aid by enabling him to run his business smoothly.

Let the established importers who have put up the price of every commodity because their imports have been curtailed largely also ponder over the hard situation that has arisen. It is not correct if they calculate on the basis that since their import has been cut down to twenty-five per cent, they shall have to get all their profits from this limited quantity. We hope that they will rise to the occasion by making matters easier with a sense of social duty which they too have to perform.

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PROGRESS IN BOOK PRODUCTION

Nylon printing plates, photo-composition and faster presses

Earlier this year at a conference sponsored by the American Text-book Publishers Institute some hundred American text-book publishing editors heard of the latest technical developments that might shortly be expected to be applied to the production of books.

Nylon printing plates, new fountain damping devices, photo-composition, pigmented printing papers, less stiff offset papers, new offset printed cloth, and faster presses were among the developments reviewed by a panel of experts directly related to the production side.

Speaking on the process of making engraved plates from nylon Keith Johns of the Bookwalter Co. is reported by Book Production as having said that a run of four-and-a-half-million could be expected from such plates.

Engraved plates from nylon

Supporting his talk with an example of a plate which had been used in 'Life' (in the issue in question 96 nylon page plates had been used) he went on to describe their manufacture and application.

Ground nylon is beaten together with a sensitizing material in a beater just like that used for making paper, and then extruded into sheets of any desired thickness or size. The plate can be made up to 76 ins. square, and the tolerance for thickness is one-quarter of .001 in. The elasticity is so controllable that the material can absorb very minute difference in height even when it is mounted, as is done for rotary presswork, on an aluminium shell, so that make-ready becomes a matter of minutes only. Rotary plates are extruded in curved form, and the negative fastened in place on the plate and exposed. Non-printing areas are dissolved by a very simple fluid which washes unwanted areas away rather than etching them. The result is a plate in which there is no undercutting and only straight walls under the

printing area. No powdering or other treatment is needed.

The speaker considered that commercial production facilities for the plates would be available in the near future. Installations would be made in the factory itself rather than relying on trade houses.

Growth of photo-composition

The application of photo-composition was reviewed by Bruce Gentry of the H. Wolf Book Mfg. Co. Tracing its growth from the earliest forms of typewriter composed copy, he asserted that the development of emulsion-to-emulsion contact by the Photosetter had been the greatest advance in the development of film typography.

Several models of the electronically operated Photon are now engaged in setting book type, and the first two models of the Linofilm are now in use. The corrector for the latter operates at about 3 lines per minute while the major unit is said to be five times as fast as the average Linotype keyboard and limited only by the speed of the operator.

Intertype has still to solve its problem of letterspacing in tight lines of lower case, while the Monophoto, utilizing the standard Monotype keyboard unit but with a special camera unit, has now made its initial bow in this country.

Wade Criswod of the Lithograph Technical Foundation pointed out that the largest U.S.A. lithographer actually does more printing by other processes than he does by offset. While offset has undoubtedly made great strides, the development of the nylon plate bids fair to put letterpress right into stiff competition.

Lithographers, although making increasing efforts to do more book printing, still don't begin to scratch the slate, Mr. Griswood asserted. Lithographing cloth covers, however, offer further possibilities than have been currently realised.

From letterpress to offset

Mr. Johns, asserting that the great majority of elementary Text-

books hitherto printed by letterpress had been switched to offset, was less alarmed about this fact, than the growing use of other media of communication such as tape, television, etc.

Under some conditions rotary letterpress can outrun offset, Johns continued, pointing out that plant cost, length of run, possibility of reprints, were factors which affected the unit cost of presswork.

From one-third to one-fifth the cost of presswork is caused by getting an original to print. As runs lengthen, he continued, the price break in favour of letterpress rotary gets better. As an example he quoted approximate prices for both processes on two colour work on a 52 x 76 sheet. At 20M, offset will give a figure of .021 cents; letterpress, .032 cents. At about that figure you will have offset is .016 cents; for letterpress, .014 cents. At about that figure you will have to make new offset plates, but the letterpress plates can continue to run. Around 27 or 28 M is the area of cost break, he added.

In the question and answer programme which concluded the session, in response to a question from Daniel Bianchi, he pointed out the progressive proofs can never be matched from sheets taken while running, as progressives are pulled as dry proofs, one at a time. There is no four colour proofing press comparable to a running press.

Excessive rejections

The subject of damaged books came up again, and Mr. Johns denounced what he termed as the excessive rejections by some school text-book buyers, and described the damage to a one-year-old geography from being used as a football, guided missile in a school bus, and, the space between cover and back as a handy receptacle for pens, pencils, and rulers.

There was considerable discussion over the potentialities of vinyl treated book cloth, which most seemed to feel held promise as a more destruction proof binding material.

— By the courtesy of 'Printing World.'

COATES Product Information Series No. 6.

(Cut this out and keep it in your Press Room)

METAFOIL INKS

These Inks are specially designed for Letterpress printing on metal foil surfaces upon which they dry to a hard non-scratch film. Best results are obtained from Cylinder Machines, using a hard packing on the impression cylinder. Accuracy of impression setting is very important to avoid "edging" on the print. If possible, and if the design is suitable, the use of rubber plates will give even better results.

Reduction : If necessary, small additions of Boiled Linseed Oil may be made.

Drying and Set-off : To give hard drying on metal foil these Inks are relatively quick drying on the press, and the lubrication of roller ends with a preparation such as EASOL is recommended. In no circumstances should these Inks be left on the machine for long periods.

As metal foil is impermeable, interleaving, ball-racking or similar handling of printed sheets is desirable whilst the Ink is drying. Under normal circumstances META-FOIL Inks give hard drying overnight.

COATES INKS FOR GOOD PRINTING

THE 1958 DRUPA

The Third International Print and Paper Fair (Drupa) will be held at Dusseldorf-on-the-Rhine between the 3rd and 16th May 1958. A new hall for the exhibition as described in the August issue of the 'Bulletin' is under construction.

The Drupa has been universally acclaimed the largest market of the Graphic Arts Industries. This unique position is due to the brilliant idea and organization underlying it and to the intelligent publicity given thereof, as well as to the labours of the members of the Drupa Committee who have co-operated with a single-minded purpose to make Drupa the world's leading printing and paper trade fair.

No wonder the entire exhibition space has been even over-booked up months before the opening of the exhibition. An almost feverish enthusiasm for Drupa has been developed as evidenced by the pouring enquiries for reservation. The choice and the wealth of products offered will doubtless make the display all comprehensive. The Committee have so organised the exhibits as to produce clarity and to make the exhibition a universal shop window for the industry.

It will vividly demonstrate the new concepts arising from specialisation in technical operations, rationalisation, mechanisation and automation. The main function of the exhibition is to focus attention upon all these aspects. This in fact is the mission of the present Drupa and of its organisers.

Technical features of Drupa 1958

Much has been written on atomic energy discovered in the second half of the twentieth century. It will go down to posterity and be remembered as quite a far-reaching invention. But a no less important role is played by automation. Among the industries in which it could play a great role is the Graphic Arts.

On the eve of this world exhibition, it is just as well to survey the field of the Graphic Arts in all its bearings.

Letterpress

This is the oldest printing process enjoying widest popularity in comparison with the other processes. This is true of any country. Letterpress is frequently found to compete with the other printing processes. It is often a question of individual preference for deciding which process to use. This will engage the attention of the visitor to the Drupa. A decision for or against this process will decide the future of this process. Drupa 1958 will see important innovations, especially in composing machines. Automatic composing machines familiar in newspaper composing rooms is now invading the domain of text-matter for books. The Drupa will demonstrate new composing techniques, such as machine composition in which European Printers are now following the American trend of using new type instead of foundry type.

Forme preparation

Pre-makeready has been a much discussed question. A good plant avoids stoppages during press makeready by separating the forme preparation from the press room. A wide range of products exists here and only a Drupa can throw light thereon. Stereos and electros which require special machinery also come under this head. They play a great role in printing with several innovations.

Elastic plates

The methods for making them are quite recent and vary from country to country. And new developments are frequently taking place. They have their own limitations in use notwithstanding their advantages. Drupa 1958 would show the latest advances in rubber and plastic plates.

Letterpress machines

The modern trend in printing press is towards increased impression strength, improved inks, rapid colour modifications, continuous feed piles and greater printing speed. The exhibition will show newly designed exhibits from several countries.

Rotary printing

This comprehends newspaper printing involving a series of operations. In all these fields there will be innovations concerned primarily with the automation of production. Presses would certainly incorporate new developments in multi-colour printing with its own problems such as ink, paper control and register devices etc.

Apart from newspaper printing there would be sheet-fed rotaries.

Flexography or aniline printing as it was originally called, now ranks as a major process for printing packs, 'metal foil,' transparent foil etc. The rotary principle enables a high output as also the possibilities which the adaptability of the equipment offers, including the coupling of presses with converting units or driers, re-reeling devices etc.

Converting machines with new features will also be shown at Drupa 1958 thus proving the adaptability of flexography.

Letterpress plate making

Much advance has recently been made in this field. Plates can be produced mechanically and the automatic engraving machines developed in various countries will be an attractive feature of any exhibition. The latest advance is the production of sets of multi-colour printing plates from colour originals.

Process engraving has very much been mechanised since the end of the second world war and the introduction of the magnesium etching methods has greatly contributed to it, though this type of etching is not yet fully appreciated by many European technicians.

Gravure

Compared to letterpress this process has the advantage of offering single text or illustration printing. This process is intended for the reproduction of many illustrations, printing at high speeds and as such has become a mainstay of illustrated newspaper, catalogue printing as well as packaging printing.

Drupa 1958 will demonstrate improved methods for forme production, cylinder and plate making.

These are rather difficult operations making gravure work less easy than it could be. Visitors will find the gravure exhibits essential.

Lithography

Press design tends towards the construction of machines printing several colours in one operation. Of special interest are the small offset presses which deserve attention. The several photo-mechanical processes for the production of offset printing plates present a wide field of study. The exhibits at the Drupa would range from 'raw' bi- and tri-metal plates to plate whirlers, and from grinding marbles to high-precision reproduction cameras. The variety of lithographic processes with their frequent additions of new inventions would capture the visitor's attention.

Bindery

A printing work has both 'converting' or 'bindery' sections, for which a number of machines are required. The trend is towards high speed for all machinery. Recent advances in guillotine designing is

only one of the singular improvements incorporating such features as automatic spacing.

Drupa 1958 would display, not merely improvements in the binding machinery, but also quite an entirely novel equipment. The printed book today has remarkable sales; but competition demands attractive productions at minimum cost. Mechanisation is being introduced in book-binding as an art. Some very fine machinery will be displayed at the Drupa 1958.

Related fields

The Drupa will, besides showing processes like cardboard converting, packaging, screen, process, also exhibit specialised methods like vacuum or photoprinting. The wary visitor will also see inks, rollers, chemicals, bronze utensils and accessories for composing and press room or office.

The Graphic Arts Industry is in the midst of revolutionary changes. The new idea of automation has already permeated manufacturing processes. The question is, to what extent automation is practicable. The Graphic Arts of five centuries

standing has not exploited the several opportunities which the several processes offer for more and more of mechanisation. Even in the leading printing countries of Europe, many progressive firms have not yet taken to and utilised the technical developments to their fullest and thereby introduce mechanisation of processes and work and thus rationalise their production. These are little inclined to experimentation. The majority of printers still stick up to methods of 30 or more years ago and are not economy-minded. It evidently results in underproduction. High production at lowest cost can only be achieved by modern methods and inventions. There is a wide field for this in the Graphic Arts in which much that is old-world is still clinging fast. It is just here that Drupa 1958 comes to the rescue. It will show technique which in every respect is new and novel and pave the way to greater rationalisation which means higher productivity. The Drupa will focus light on all these aspects. The intelligent visitor can easily discern them for himself.

CO-OPERATION AMONG PRINTING SCHOOLS FOR THE PURPOSE OF HELPING WHOLETIME STUDENTS TO SPEND A PERIOD OF TRAINING ABROAD*

by

W. ERNST BERTELSMANN

It would appear that the statement contained in the title is an accomplished fact. However, that is not so. Let us consider it here as a plan, a programme, an aim.

What do we expect of such a plan?

Why do we especially want to strengthen the contacts among printing schools?

Printing schools have been established in European countries for the purpose of training future generations of craftsmen. In April 1956 the International Bureau sent out an enquiry to a certain number of schools in Europe to ascertain the structure of their syllabus, and from the information received, it became clear that each country has gone its own way, and this is a good thing. Just as each nation has developed its own crafts in its own way, so the printing schools had to develop to meet the needs of each individual country. All have the same aim in common: to prepare the future craftsmen and managers for their duties in the trade.

However, the training through printing schools is not the only way.

All schools provide concentrated training under the best possible teaching staff. Therefore it is possible to compare the schools, and with willingness to co-operate it should not be impossible to bring about the realisation of our objective.

One will no doubt point out that all schools are already attended by a small number of students from other countries, and why not leave it at that? But I should like to see a seriously prepared course to run side by side with the existing visits of foreign students.

If I am right, one of the functions of the International Bureau, the organisers of this Congress, is to bring together members of the printing industry in Europe. One of the main functions, therefore, is to establish contact between individual mem-

bers in the various countries. What could be more effective then, than to start at the root the matter and to give the future master printer the opportunity to take a closer look at the industry outside his own country. An understanding parent will always try to give his son the opportunity to equip himself with the best possible training in order to become his capable successor. Next to his knowledge of the trade, and his technical skill, it is essential to enlarge his horizon.

Even in politics we find the beginnings of closer contacts between nations. Everywhere we hear words of encouragement and even success.

We, the printing industry, cannot and will not wait until all obstacles have been removed by the authorities. This is a problem we must tackle by ourselves, and I should like to see anybody trying to prevent us, once we have made up our minds to co-operate in solving it.

Looking at the situation of the future master printers in Germany, I am glad to say that our young men now have an opportunity of training outside their own districts.

Our generation longed for the opportunities which are now open to young people and which, with the right guidance from home, could help to develop the mind and strengthen the character.

Young people are always ready to try and understand each other and are curious enough to investigate anything new which crosses their path. The generation now growing up is free from all the difficulties we had to overcome, and is ready to extend the hand of friendship to other nations.

As already mentioned above, the training through printing schools is only one of many ways.

It should not be too difficult for a student who has attended a concentrated course of studies in his own country to follow a similar course at a foreign school.

There are two ways in which this could be done:

(1) A student having completed his studies in his own country, could for an agreed time attend a course at a foreign school.

(2) The student would be allowed to interrupt the course at his home school to attend part of a course at a school abroad, this period to count as part of his home course. It is essential that the student has a fair command of the language of the country he visits. But only after absorbing the technical terms used in the field of printing will he be able to understand the trade fully.

It will encourage him to study the language more thoroughly. He will come to know the origin of the terms and compare them with his own language.

At the school the young people soon become friends, and learn to understand each other's ways, thus breaking down the barriers of national prejudice.

I am convinced that such friendships—apart from their value as human contacts—could lead to relationships which would make it possible for our sons to get to know, by way of exchange, the factories, the workers, and the methods in foreign countries. The personal contact of people with common interests is a far better basis for an exchange than the neutral interventions of a well-meaning trade association.

I would also like to mention other influences of educational value, which would result from a visit to a foreign school.

Away from home, the young man must get used to standing on his own feet. He must learn to understand and tolerate others, which will

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* Paper read at the IX International Congress of Master Printers, 1957, at Lausanne.

strengthen his character and will show him his own weaknesses, which in turn will teach him to be modest. For what can be more valuable than weighing up and comparing his own ideas of the foreign country with everything he encounters?

What could be more advantageous to his own development than to undergo all the new and wonderful experiences only an unknown world has to offer, whether in the creative, technical or administrative side of our industry?

In short I consider the meeting of young people from different countries so valuable that all obstacles should be removed to make it possible.

I spoke about the investigation the International Bureau had conducted into the structure of the existing schools:

This included only schools in France, Denmark, Great Britain, Holland and Germany. The result of this investigation has encouraged me to submit a proposal for co-operation.

As soon as the schools have agreed upon the tuition they are in a position to offer the guest student within the framework of their existing curricula, it will be up to the young men to make the most of the possibilities provided for them.

The International Bureau will publish a summary of the schools giving details of their instruction programme, and the Federations of Master Printers and the schools will see to it that the publication is made available to all those interested.

I shall now give you a few details about the German schools.

Discussion speakers will report about the schools in London and Paris.

If we speak only of four schools at this Congress, we do this only to make a start. These schools devote much of their time to whole-time courses for future executives and master printers. This does not mean

that we intend to neglect any promising young men who happen to be in our works.

In Germany there are two schools of this type, i.e. the "Akademie für das graphische Gewerbe, Meisterschule für Deutschlands Buchdrucker," in Munich, and the "Höhere Fachschule für das graphische Gewerbe," in Stuttgart.

Besides these, there are quite a few other schools which, however, do not come into consideration here.

The schools in Munich and Stuttgart are suitable for our plans, because their workshops are well equipped.

Much attention is also paid in these schools to creative subjects, which would tend to acquaint guest students with the German way of life and mentality.

Workshop instruction and classes in creative subjects are easily adapted for the purposes of closer co-operation among schools, so that students gain in technical knowledge.

The Munich school was founded in 1927. Its principal is Professor Pest, who continues a good tradition commenced by Paul Renner and Georg Trump, three names which interpret a programme, three typographers, artists of international repute.

The Stuttgart school was founded in 1903 and raised to the status of a technical high-school in 1953. The principal is Dr. Barthel. A new section of this school is the photo-gravure department, which is well equipped.

Both schools are closely connected with trade schools for the training of apprentices.

The whole-time course at Munich takes 3 years (6 half-year terms), and at Stuttgart 2 years (4 half-year terms). Instruction occupies about 40 hours a week in about 40 weeks a year.

These figures mean for our purpose that one has to find a way to select a suitable period in which to fit the foreign students.

It is of course important that the visiting students should have reached

a certain standard of proficiency at their home school, so that they are able to follow the instruction in the foreign school.

The basic curriculum of each school must continue to be suited to the requirements of the students at home and should not be influenced by any consideration in favour of foreign students.

In fact, the foreign student should become acquainted with the scholastic peculiarities of the country he visits.

The guest scholar should therefore be fitted into existing courses according to his individual knowledge and requirements.

Most probably there will never be a large number of students wanting to visit foreign schools, but always a certain type of young person. It will therefore be possible to advise them individually and agree on a certain course of instruction.

Quite naturally, the attendance at foreign schools will in the first place be by those students who are in a position to finance their stay abroad, but one should try to make it possible also for promising young craftsmen by providing scholarships for studies abroad.

The minimum age of students at the German schools is linked up with the conditions for entering examinations for the diploma of master craftsman. Foreign students should not be expected to take examinations abroad. A certificate should, however, be issued at the end of a course at a foreign school indicating only the period of attendance. This should be submitted to the home school.

I conclude my report hoping that representatives of schools at this Congress may take advantage of this opportunity to discuss and examine the possibilities of some measure of co-operation.

The Federations of Master Printers, with the assistance of the International Bureau, will not fail to support any movement designed to help our Y.M.P.s.

I appeal to the Y.M.P.s to make good use of their opportunities.

KNOW YOUR INKS

by

C. D. BISSET

Inks for Ledger and Bond papers

Inks for ledger and bond papers are specially formulated to suit hard sized surfaces. They are usually short stiff inks and in general are fairly satisfactory to work with. Their greatest disadvantage is their unpredictable drying behaviour both on the machine steels and rollers. To understand the properties of such inks it is essential to know a little about paper.

Ledgers, bonds, banks, parchments, ivory and ivorex boards allow for practically no ink absorption and therefore the drying is almost entirely on the paper surface. Inks for such surfaces are mainly powerful oxidisers and are seldom left on the machine inking units overnight.

'Sizing' to many only signifies the resistance of paper to writing inks or water. In practice different papers are so sized to resist water, water vapour, surface absorption, or to be resistant to penetration by non-aqueous liquids such as oil, varnish, printing inks or aniline and gravure inks. Tub sized papers were originally intended to resist writing inks, but are also resistant to the oil in printing inks, whereas the resin-sized papers which followed the earlier papers do not possess this same property. Other papers sized with starch have a degree of oil resistance to water. Paper bags are sized to resist moisture with its weakening effect but not sized to resist ink, and as one must deduce the ink-paper-printer co-operation is absolutely essential.

Starch is about the oldest of sizing agents, but has given way considerably to resin size during the last century, and in recent years to plastic resins. To impart 'snap' and 'rattle' to the paper, starch is still used as an auxiliary sizing agent. It also adds to transparency and improves colour. Potato starch is often used because of its large size granules. Like starch, sodium silicate has a cementing action during the

drying of the web and is added as a viscous and sticky solution combined with the starch. Thus a higher retention of both loading, size, and colour results, and the 'snap' and 'rattle' of the finished sheet is increased. Alum ensures complete precipitation of the size. Engine sizing is the term generally used referring to resin sizing. Gelatine, or glue and casein have also been used, but today it is seldom that animal size is added to the beater stock owing to the low retention properties, and its cost, and the results are not entirely satisfactory. Such papers are termed animal sized and are not to be confused with animal tub-sized which usually denotes that paper has been sized with gelatine after it has gone through its manufacturing process.

Therefore we now possess a paper with ink resistance and of greater intensity than most other papers machine printers have to handle. Writing inks do not penetrate this surface, and eraser qualities are improved, making such papers as bonds and ledgers very suitable for their purposes.

Drying by oxidation

An ink for calendered or super-calendered paper must be rather viscous and tacky, to help prevent set-off before the ink has had an opportunity to dry. The ink cannot penetrate to any great degree because of the compressed state in which the paper fibres lie. During calendering the still wet paper passes between huge hot steel rollers at great pressure to ensure smooth, hard surface. This pressure flattens out the fibres and fills up the interstices which arise in the paper-making process. Printing on such surfaces, and more especially when heavily sized paper is used (bonds, ledgers) requires a considerable amount of drier in the ink to accelerate its oxidation. Hard surfaces do not allow much absorption and inks for such surfaces should be formulat-

ed to dry mostly by oxidation, as well as a certain amount of absorption.

Working qualities

The working qualities of a printing ink are controlled by the body or vehicle in which it is ground. As bond and ledger papers fall into the hard class, the body content of the ink for such papers should possess the same essential characteristics as most other inks for other kinds of papers: keeping the forme clean: printing the sheets with a smooth sharp impression filmed with ink, allowing the sheets to rest lightly upon each other without smearing or set-off, and allowing the ink to dry sufficiently for handling within eight to twenty-four hours.

The body of an ink should be as stiff as possible to obtain the best working conditions. Stiff ink is less likely to set-off than a soft ink especially on the hard surfaced bonds and ledgers. It is fairly common knowledge that an even stiffer ink is more often used on platens than on flat-bed and cylinder machines.

Should the ink be inclined to pick the surface of the stock this trouble can occasionally be overcome by softening the ink with a softer-bodied ink of the same colour rather than revert to adding other reducing ingredients such as lard oil, castor oil, vaseline, liquid or paste driers etc. Should the opposite effect take place and the ink require stiffening, add a stiffer bodied ink rather than such ingredients as beeswax, magnesia powder, boiled linseed-oil, varnish, etc.

Ink manufacturers make various grades of ink to suit the different sized bonds and ledgers in general use today. Try and carry the correct inks for the different grades of stock.

When working on such hard papers with coloured inks not specially formulated, $\frac{1}{2}$ oz. paste driers to 1 lb. of ink and a proportionate quantity of a stiff varnish or patent stiffener should be added to avoid the wiping effect often obtained by using inks which are too thin for hard papers.

For ledger paper headings, where only a short run is involved and

'backing up' has to take place you need a good dense stiff, quick-drying black run rather sparingly with a slightly heavier than normal impression to avoid off-set from the tympan owing to the quick 'backing up' of the printed sheet.

A hard packing seems best suited for dealing with impressions on hard sized papers and a firmer, level, overall pressure on the printed areas of the sheet allows the ink to lie slightly below the top surface further assisting air circulation.

Inking mechanisms

In studying the inking system to distribute ledger bond inks adopt the normal procedure of accurate duct and roller setting. Make sure the rollers possess good tack which will assist in the breaking up and distribution of an ink which is much stiffer than normal inks. Keep the ends of the inking system (if not in use) smeared with a light coating of grease or anti-oxidant mixture, otherwise there will be a greater tendency for the ink to dry on the roller ends and steel surfaces where it lies in a much thinner film.

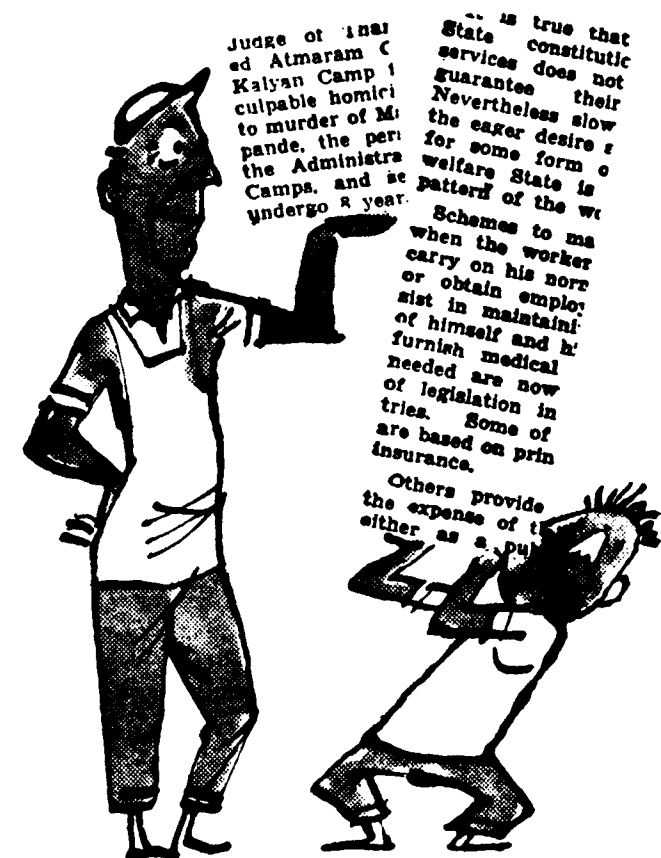
During a long run there is the possibility of the ink drying up. This is sometimes detected by a stronger odour than usual coming from off the drying ink on the running machine. There is no alternative but to stop the press and have all the surfaces washed up.

While makeready is proceeding work with a slower drying ink, especially if makeready is likely to take hours. This will help to prevent ink drying up on the machine, but immediately the press is ready to 'run on' the correct bond or ledger ink can be placed in the ink duct and the job successfully printed off.

Anti set-off spray

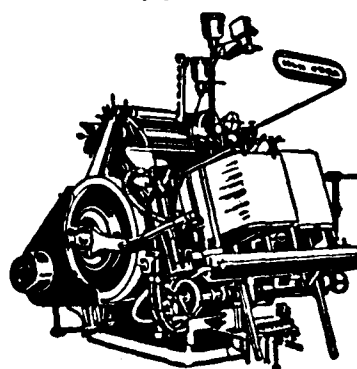
Although the anti set-off spray is mostly used in conjunction with illustrations, colour work and carton printing, it is worth while recalling that in the printing of ledgers and bonds, machine printers depend on the ink drying mostly by oxidation. That means a fair quantity of air being allowed to circulate between the printed sheets. Therefore a light 'puff' of spray will assist in quicker and safer drying.

—By the courtesy of 'Print in Britain.'



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WHOLETIME COURSES IN PRINTING

We have published in the previous issue about these courses as obtaining in England. We propose dealing with these courses existing in other countries in this and succeeding issues. EDITOR

Akademie für das graphische Gewerbe
(Meisterschule für Deutschlands Buchdrucker)

München 2, Prandlstr. 2
(Germany)

Principal: Professor Herbert Post
Year of Foundation: 1927

Authority: München County Council

Number of teachers:

Wholtime	12
Part-time	22
Printing trade school teachers	6
Total	40

Number of students:

Wholtime	200
Part-time (day and evening)	200
Total	400

Wholtime students

Minimum age of entry: 21 years.

Usual length of course: 3 years.

Students are trained for management. Other wholtime courses are for (i) Book-binding, and (ii) Design. Students are accepted from all countries.

Part-time students (Day)

Part-time students are not apprentices. Times of attendance and age of entry vary.

Part-time students (Evening)

Evening classes are only provided for book-binders. All students are employed in the trade. Times of attendance and age of entry vary.

Wholtime course for Young Managers

The subjects of instruction during the first semester (half-year term) are: Theoretical instruction in book-keeping, finance, commercial arithmetic, letterpress estimating, law. Theoretical instruction supplemented by workshop practice in hand and machine composition, letterpress printing, design, photography, stereo and electro, bookbinding and engineering.

The subjects of instruction during the second semester are: Theoretical instruction in book-keeping, finance, paper-making, letterpress estimating, art, law. Theoretical instruction supplemented by workshop practice in hand and machine composition, letterpress printing, design, stereo and electro, book-binding, and engineering.

The subjects of instruction during the third semester are: Theoretical instruction in book-keeping, correspondence, letterpress estimating, budgetary control, factory organisation, advertising, economics, art, law, insurance. Theoretical instruction supplemented by workshop practice in letterpress printing, process engraving, elements of lithography, elements of photogravure, book-binding, and paper converting.

The subjects of instruction during the fourth semester are: Theoretical instruction in book-keeping, correspondence, letterpress estimating, photogravure estimating, budgetary control, factory organisation, advertising, economics, law, taxation, lithography estimating. Theoretical instruction supplemented by workshop practice in letterpress printing, stereo and electro, elements of lithography and litho printing, elements of photogravure, book-binding.

The subjects of instruction during the fifth semester are: Theoretical instruction in advanced accountancy, estimating for all processes, budgetary control, economics, publishing, state and society, labour policy, copyright and commercial law. Theoretical instruction supplement-

ed by workshop practice in rotary printing, lithography and litho-printing, photogravure.

The subjects of instruction during the sixth semester are: Theoretical instruction in advanced accountancy, estimating for all processes, budgetary control, factory statistics and economics, publishing, State and society, labour policy, copyright and commercial law. Theoretical instruction supplemented by workshop practice in Monotype, electrotyping, process engraving, lithography and litho-printing, photogravure.

During the third year (5th and 6th semesters) groups of 10 students each spend two hours a week during four weeks on visits to the Polytechnic (paper testing and converting) and to the research institute.

The students work about 8 to 10 hours each day and about 40 hours each week. There are no classes on Saturday. They work about 40 weeks during one year.

The academic year is divided into two semesters from 15th September to 15th February, and from 16th February to 15th July.

The number of wholtime students who work in one class is about 30, during lectures about 60, during workshop practice only about 5.

HOHERE FACHSCHULE FÜR DAS GRAPHISCHE GEWERBE
Stuttgart W, Seidenstr. 43 (Germany)

Principal: Dr. Gustav Barthel
Year of Foundation: 1903

Authority:

Ministry of Culture, Baden Württemberg and Stuttgart County Council.

Number of teachers:

Wholtime	31
Part-time	10
Total	41

Number of students:

Wholtime	120
Part-time (Day)	115
Part-time (Evening)	1167
Total	1,402

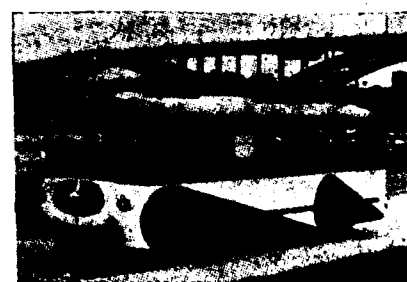
(Continued on page 14.)

PRINT SHOP ON WHEELS WILL TOUR BRITAIN

The Print-shop on wheels—a Chief 24 offset press installed in an ordinary singledecker bus—will tour Britain in October. The Pershke-Price Service Organisation say that they expect the bus to arrive during the first week of October and to stay about 4-5 weeks.

By then it will have completed about 125,000 miles of touring through almost every European country west of the iron curtain. These tours began in March 1953 and, according to AB Printing Equipment, the Swedish manufacturers of the press, have played a considerable part in the successful introduction of this popular small offset machine.

The bus parks as near to a printing



works as local regulations will allow, and both directors and staff have an opportunity of examining the press while it is being run from the engine of the bus. The main body of the bus forms a comfortable office complete with table and chairs.

The Pershke-Price Service Organi-

sation are now collecting a list of names of printing firms who would like the Chief 24 bus to call. Sales Director Eric Tanzer said: 'This machine is something quite unique and we therefore hope that as many printers as possible will be able to inspect it on their own doorsteps, whether or not they are actually considering buying a new machine.'

The established lithographer will be interested in this 18 in. x 24 in. offset press with an eye on his shorter, good-quality runs, while the small offset user finds the Chief an excellent machine for doing work which is larger and better than that of which office-type presses are capable.'

—By courtesy of 'Printing World.'

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NEWS & NOTES

A new synthetic roller

During the past few years a great deal of research has been carried out to produce an alternative covering for inking rollers. The ideal has been to produce a covering which incorporates all the advantages of the conventional gelatine composition without its disadvantages.

Many materials have been tested including natural rubber, synthetic rubber and various plastics, both separately and combined.

During the past few years Messrs Usher-Walker Ltd, have been carrying out extensive research into the use of a synthetic material which has not been fully exploited in this field. It is a polycondensation product comprising a single molecular weight chemical compound which is not thermoplastic because of the absence of softeners. Because of this, shrinking and swelling problems due to the action of solvent extraction are eliminated and the material offers complete resistance to oil, petrol and water. This is a completely new approach compared with many rubber-like covering materials which are composed of chemical units built into long chains and which required the addition of softeners in order to acquire the desired properties.

The roller itself is moulded directly on to the conventional roller stock which is specially prepared before moulding takes place. In appearance the finished roller is a pale amber in colour and is completely transparent. The surface has a smooth glass-like finish which is the result of considerable engineering research into the production of the specially designed equipment used in its manufacture.

These rollers have been extensively tested both in the manufacturer's printing research department and independently in the field under actual working conditions: as a result

of these tests it is claimed that these rollers are the nearest approach to the perfect roller which has yet been produced.

The results of trials have just been released and the following properties are claimed for 'treothene' rollers (the maker's trade name for them).

They are completely unaffected by changes in temperature and humidity or by frictional heat. They possess a good permanent surface tack and perfect impression recovery, thus eliminating flats etc. They are unaffected by solvents or water and their rejection of bleed by the ink pigment enables them to be quickly washed up and colour changes to be made both rapidly and effectively. Finally these rollers show consistent inking properties and once they are accurately set on the machine they require no further setting other than that which might be demanded by job-changes.

In price these rollers compare favourably with other coverings and in them the machine printer may well find many of the answers to his plea for a perfect roller.

—By the courtesy of
'Print in Britain.'

A new Patra ink drying time tester

A new model of the PATRA Ink drying time tester has been developed and is now available to members. The instrument works on the following principle: a glass plate is rolled up with the ink under test and a stylus needle rests on it. The plate rotates slowly and a track is made by the stylus on the ink. A smooth track is produced so long as the ink is wet, but becomes jagged when the ink dries. The start of the jagged track is noted and, as the speed of rotation

is known, the drying time of the ink can be calculated. The tester costs £11 10s. Further details may be obtained from PATRA.

—By the courtesy of
'Print in Britain.'

A new technique for combining halftone and line work

The United States Department of Commerce's Printing Division has developed a new technique for combining halftone and line work on a single negative, even when several different reductions are required for offset use. This is reported in the *Inland Printer*, which states that the method not only does away with stripping but also improves quality by making it possible to place line work and halftones closer together and eliminating dot distortion at the edge of halftones. Another use of the process is to reduce copy for inserts requiring smaller type.

—By the courtesy of
'Print in Britain.'

PATRA APPOINTMENT

Dr. G. Macdougall has been appointed Deputy Director of Research of the Printing, Packaging and Allied Trades Research Association. Dr. Macdougall has held the position of Information Officer since 1947. He will continue to be responsible for the Information side of PATRA's activities and will act as Director of Research when

THE BULLETIN

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Dr. Harrison is away from the laboratories.

From Hampton Grammar School Dr. Macdougall went to Battersea Polytechnic and took his B.Sc. (Hons) and Ph.D. degrees, and did post-graduate research in physical chemistry under Professor C. W. Davies. In 1933 he joined the staff of the Research Association.

Publications by Dr. Macdougall have appeared in the Proceedings of the Royal Society, in the Journal of the Chemical Society, and the Journal of the Society of Chemical Industry. These papers reported investigations into various aspects of the lithographic printing process. Dr. Macdougall has also published reports on the warping of book-covers. In 1945 he visited printing firms in America and Canada and a report of this visit was published by PATRA the following year.

By courtesy of 'Printing World.'

Letterpress machine room precision aids

Microscopes and magnifiers are the subjects of the latest pamphlet in the B.F.M.P. series on precision aids in the letterpress machine room. A number of various types are described and illustrated with particular reference to halftone work, enlarged samples of which are depicted. This is the 21st and final pamphlet in the series which have been compiled by the B.F.M.P. Technical Advisory Service, 11, Bedford Row, London W.C. 1.

By courtesy of 'Printing World.'

Patra's Newspaper Conference

The use of wire and radio transmission in newspaper production, teletypesetting, photo-composition and electronic engraving are among the subjects to be discussed at PATRA's Newspaper Conference, which is to take place this autumn. The conference, which will cover rotary magazine as well as newspaper printing, will be held at

Harrogate, in October. Geoffrey L. Tillotson is to take the chair.

In all, some 25 papers dealing with many aspects of newspaper production will be given.

Chemical for fire-proofing paper

An American chemical developed by Synco Resin Co. is suitable for fire-proofing paper and board. Paper treated with the new chemicals is stated to be non-inflammable even when brought in contact with an open flame. Very high intensity heat or flames may char the paper but will not inflame it. The treatment is also claimed to increase tensile strength of dry or wet paper and improves acid resistance.

WHOLETIME COURSES IN.....

(Continued from page 11)

Wholetime students

Minimum age of entry : 23 years

Usual length of course : 2 years

Students are trained for management. Other wholetime courses are for photogravure printing. Students are accepted from all countries.

Part-time students (Day)

There are two day courses to prepare students for the examinations of master craftsmen. Part-time students are not apprentices. Students attend school for 16 hours a week. A day course is for one year. Students commence courses at the age of 23.

Part-time students (Evening)

All evening students are employed in the printing and allied trades. They attend classes for 2, 2½ or 3 hours each week for a period of six months. There are also courses spread over several semesters.

Wholetime course for Young Managers

The subjects of instruction during the first year are : Theoretical instruction in design, book-keeping,

estimating, budgetary control, economics, labour policy, German. Theoretical instruction supplemented by workshop practice in typesetting, letterpress printing, reproduction, lithoprinting, photogravure, book-binding.

The subjects of instruction during the second year are : Theoretical instruction in design, works management, advanced accountancy, estimating, budgetary control, commercial book-keeping, economics, law, German, psychology. Theoretical instruction supplemented by workshop practice in typesetting, letterpress printing, reproduction, lithoprinting, photogravure, book-binding.

Third year courses are not yet envisaged.

Students work from 6 to 9 hours each day, and from 39 to 41 hours each week. They work 40 weeks during one year.

The academic year is divided into two semesters from 15th March to 31st July, and from 1st October to 15th March.

The number of wholetime students working in groups are approximately 32 in typesetting, 16 in letterpress printing, 12 in reproduction, 12 each in photogravure retouching, etching, and press work, 12 in litho-printing. Several groups are joined into classes for other subjects, and all wholetime students of one semester sometimes attend lectures together.

PLEASE NOTE

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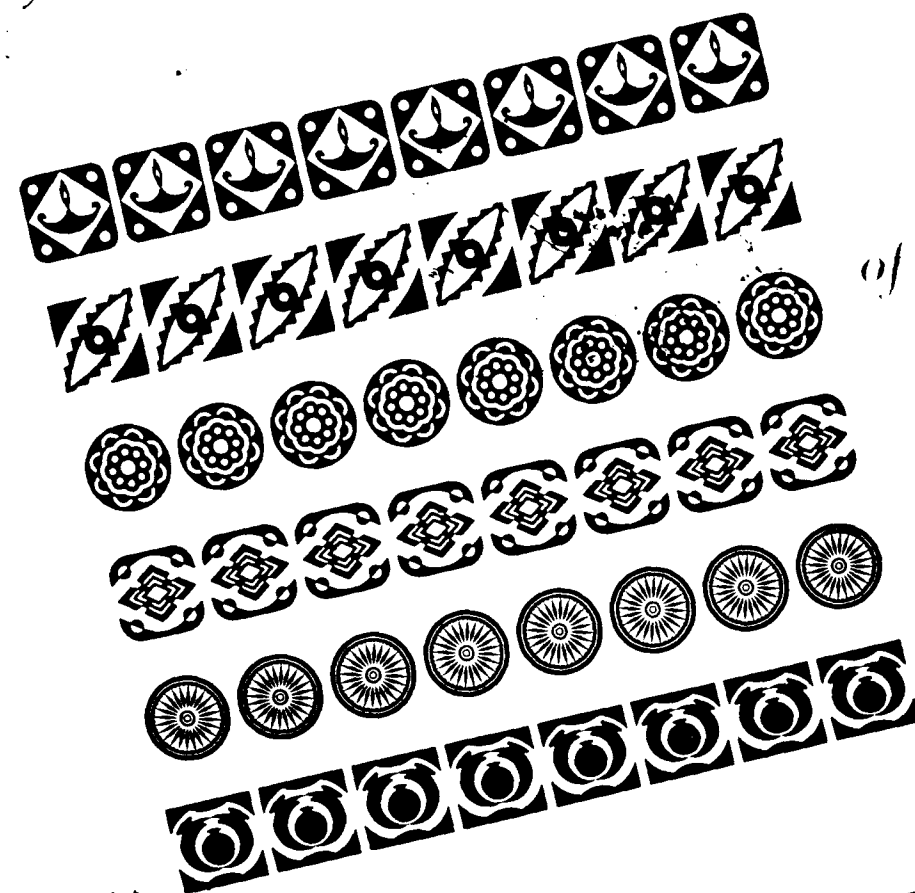
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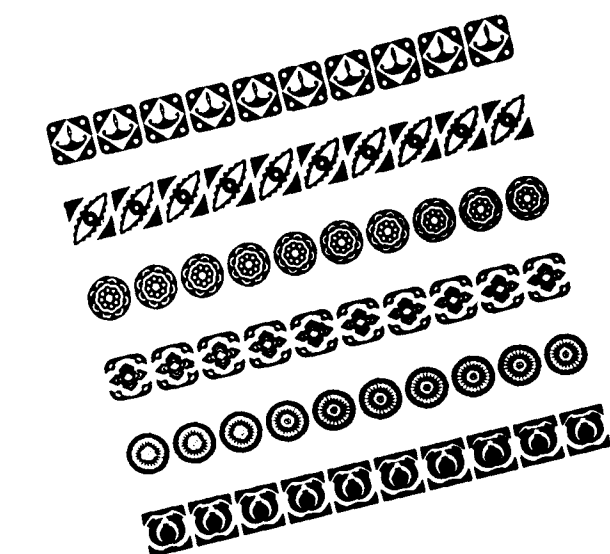
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NATIONALISATION OF TEXT BOOKS

In ancient Greece, people considered their problems twice, once when they were drunk and a second time when they were sober. But in Free India, a land of prohibition, also our leaders consider our problems twice, once when they are sober, and a second time when they become more sober by experience. This has been the case with the various experiments in our educational system since Independence.

An educational system built up to meet the needs of an alien bureaucracy could not satisfy the requirements of a free nation. There was no doubt that it needed drastic reform. Education had to be made more broad-based, and it had to meet the needs of a growing population, which, by all standards, is poor and leads a sub-standard level of existence. This fact has been a major consideration in many of the reforms launched by our States Governments, although such measures as abolition of English and its immediate replacement by Hindi were periodically mentioned to satisfy the resurgent nationalist sentiment. One such reform is the latest scheme for nationalisation of text books.

There is no doubt that nationalisation of public utility services like transport, power, post and telegraph, etc., benefits the society at large by making the services available to the public at cheapest rates. But publication of text books and their supply to school students cannot be compared with such large-scale public utility enterprises. Text books fall

under a different category altogether and they have therefore to be considered from a different angle.

What are the factors which have induced some States Governments to talk of nationalisation of text books? It is alleged that there has been a good lot of exploitation of authors by publishers. It is true that some publishers enter into unhealthy competition and even indulge in illegal gratification to Government officials and school authorities in order to get their books prescribed. There is also the factor of these books being highly priced and beyond the capacity of a large majority of students. Lastly, the printing and get-up of these books has not been up to the standard and commensurate with the prices charged; so that in the final deal, the publishers and sellers have been making undue profits.

But is nationalisation a proper remedy for these evils? Nationalisation envisages the State Government taking over the printing, publishing and sale of these text books. This was attempted by some States Governments and Universities about a year back; and the result was the students in various schools had to go without text books for nearly six months. The inconvenience caused to teachers and students can best be imagined. In Bombay too, an attempt was made in 1956 to introduce the same measure, but when it was found there were no text books available when the schools reopened, the Government had to retrace their steps. Such immature attempts as

these will only injure the education of our younger generation and not improve it.

It is the point in undertaking such ventures as these when the Government presses are not themselves able to cope even with their present work? Almost every Government publication is delayed, because their presses are overworked and not able to meet the demand. The irregular and delayed appearance of the State Government Gazettes is an instance in point. When that is the case, why take over the work of printing text books which are required in hundreds of thousands?

To meet this exigency there has been talk of setting up a separate press by the Government or expanding the existing presses. The result would be that each State Government would be importing a lot of printing machinery from foreign countries, expending thereby foreign exchange which is already very scarce and needed for other more immediate developmental purposes.

This apart, the country has a number of good printing presses, big and small, whose printing capacity is not yet fully utilised. It is well-known that a number of small presses, in some cases even big ones, are still having idle capacity. It will be more in keeping with the employment schemes of the Second Five Year Plan to devise ways and means of utilising this capacity of our printing industry and keeping people fully employed therein, instead of increasing unemployment by starting new government presses. There will be a double waste here:

(Continued on page 12)

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GOVERNING COUNCIL MEETING

The Governing Council of the All India Federation of Master Printers met at 10 a.m. on Tuesday the 29th October 1957 at the Indian Merchants' Chamber Hall, Indian Merchants' Chamber Building, Church Gate, Bombay with Sri Gowardhan Kapur, President of the Federation, in the chair. Fifteen members from all over the country were present.

The President, welcoming the members, referred to the Government's present import policy banning import of printing machines and restricting import of process materials, panchromatic plates, etc., to a fraction of the originally imported quantities. He pointed out how this would affect presses engaged in photo-offset printing and block-makers and stressed upon the importance of representing to the Government the necessity for liberalisation of their policy so far as these materials are concerned.

2. He said that he had received from the Ministry of Commerce and Industry a copy of the minutes of a meeting attended by the machinery importers of the country wherein they had suggested that certain items required by printers should be classified under different heads. He wanted the Governing Council to analyse this list and see if the classification could be improved. He expressed his happiness that the Central Government had invited him as the representative of the Federation to attend the two meetings of the Import Advisory Council.

3. The Hony. General Secretary then presented his report as hereunder :—

Standardisation of Paper. The Federation has repeatedly brought to the notice of Government that the size recommended by them, viz., the 'A' size would harm the industry since it does not conform to the size widely in use in the country. Government were addressed requesting that at least the 10 years period fixed for switching over to the new size should be extended to 15 years. But Government have not accepted it.

Import Advisory Council. The present import policy of Government is the result of the lack of foreign exchange which they wish to conserve as much as possible with the result that the industry experiences great difficulties in importing even indispensable machinery. Everyone including the printing industry will have to co-operate with Government in seeing that the present import crisis is passed over.

Tariff Commission. At the last conference, a resolution was passed requesting Government to ask the Tariff Commission to go into the price structure of paper since the present prices were fixed years ago. But Government have replied in the negative.

Paper prices. The Federation addressed the Indian Paper Makers' Association and the Indian Paper Mills Association for a joint meeting with the Federation to discuss their mutual difficulties. But they have replied expressing their inability to meet as they would not interfere with the sales policies of their members. It is not known why they fight shy to meet their customers.

Excise Duty on Waxed Paper. This has since been removed as from 30-7-1956.

Indian Standards Institution. It is holding its third Convention in Madras during December 1957 when, *inter alia*, it would discuss standardisation of proof correcting, details of which had been circulated individually. Since it is a matter of great importance to the industry, the Hon. General Secretary would request the Governing Council to constitute a committee which would go into the draft standard issued by the Institution and lead the Convention aright.

Regional Schools of Printing. The Government of India have stated that provision has already been made for starting a school of printing technology in the development programme for the Delhi Polytechnic under the Second Five Year Plan.

While the regional school of Printing in Calcutta is managed by an autonomous body consisting of members of the industry and of Government, the other schools are managed by Government alone with an advisory body.

Representations to Government. At the last Conference in New Delhi, Sardar Swaran Singh, the Minister, had



Governing Council in Session

promised to appoint a committee to meet the Federation to acquaint themselves with the difficulties experienced by the industry. Accordingly Government appointed a committee which met the office-bearers of the Federation on 6th August 1957 at Delhi when a number of problems were discussed, the more important of which are set out below :—

Import of component parts. The Government revealed that in order to avoid any breakdown in work, port authorities have been instructed to permit import of component parts up to Rs.500 to actual users and that large-scale applications have been granted to actual users on an *ad hoc* basis at the C.C.I.'s office. In addition, established importers have been permitted to import spare parts against their licence for machinery.

Import of motors. The Federation is informed that import of variable speed motors which are not manufactured in India would be permitted depending upon the availability of exchange facilities.

Ink. The Federation requested the Government to move the Indian Standards Institution to standardise all inks through their Paints Committee.

Payment of Bills. The Federation brought to the notice of Government the inordinate delay in their payment of printers' bills. Government appreciated this and have now formulated a procedure to minimise the printers' difficulties in this regard. The Publications Division would hereafter be giving the certificate in cases where their agents fail to acknowledge receipt of copies sent to them by printers. Printers have now been permitted to certify the stock of printed copies held by them if despatch instructions be not given to them within 30 days of the date of completion of the work.

Starting of printing presses by print buyers. It is learnt that Government have not given any licences to any party to import machinery for setting up printing establishments and Government have assured the Fed-

eration that they would bear in mind this matter when occasions arise.

Printing machinery manufacture. It is learnt that "high-level negotiations are going on between reputable Indian firms and well-known foreign collaborators and it is expected that the manufacture of printing machinery on sound lines would shortly be established in the country".

Paper supply and prices. The ban on import of paper has been taken undue advantage of with the result that the prices of imported paper have been artificially raised. The price of indigenous paper also has increased so that the printer has to face a great difficulty, *viz.*, while his production charges have increased considerably, both on account of labour and the raw material, he is unable to charge his customers adequately. Something should be done to adequately safeguard the printers' interests.

Membership on public bodies. Sri H. K. Dass (Calcutta) has been nominated by the Calcutta Association to the Printing Ink sub-committee

while Sri S. Viswanathan (Madras) has been nominated to the co-ordinating committee of the All India Council of Technical Studies in Applied Arts.

IX International Congress of Printers, Lausanne. Sri K.C. Raman, Production Manager, Times of India Press, Bombay and a former member of the Governing Council attended the Congress on behalf of the Federation and his impressions thereof have already been reported in the September issue of the Bulletin.

The next exhibition, the biggest ever held, is the Drupa 1958 to be held in May 1958. As many members of the Federation as possible should visit it and acquaint themselves with the latest in the printing industry. Recently Sri D.D. Gangal (Poona) of the Governing Council visited the All-Asian Printers' Conference in Japan.

Delhi Branch of the Federation Office. At the last Conference in Delhi, an unanimous resolution for closure of the office was passed since it is not used by any of the members. This decision was reaffirmed now also as the matter was sought to be raised again.

The Bulletin. It has become a source of income to the Federation. If the publication be continued on the same basis as hitherto, it would be a very good source of income to the Federation for all time.

4. Minutes of the Governing Council meeting held on 1-4-57 at Delhi, already circulated to members were taken as read and Sri N.K. Gossain proposed and Sri N.L. Contractor seconded that the Minutes be confirmed. This was passed unanimously.

5. The Council considered the letter received from the Government regarding standardisation of paper and every member reiterated the view that the size recommended as standard will not be advantageous to the industry since the present machinery could not take in this size. The Council resolved, especially in view of the fact that import of printing machinery is totally banned thereby disabling the industry from importing machinery that could take in this size, to request the Government not to adopt this size but to give a period of 15 years after

machinery which can take in this size be either manufactured in our country or allowed to be imported, before insisting on such standardisation.

6. The Council then considered the Minutes the President had received from the Ministry of Commerce and Industry in detail and made certain additions and alterations in the classifications. The President was requested to point out to the Government the disappointment felt by the Federation in not having been invited to this meeting and to send the revised list to the Government.

7. Sri N.L. Contractor urged the Federation should pursue the request for appointment of a Tariff Commission for fixation of price of paper.

8. Members expressed regret that the Paper Mills Associations had declined their request to send representatives with whom members of the Federation could discuss matters of common interest especially the supply position of paper. Sri N.K. Gossain pointed out that a major portion of what the paper mills was producing is taken over by the Government and hence is the difficulty in obtaining supplies. Sri G. U. Mehta pleaded for direct supply of paper from mills to the consumer. Every member present expressed that indigenous paper was not easily available even in important towns of the country and if and when available, the prices were not uniform. There were instances when printers had to pay much more than the prices fixed by the mills. The following resolution proposed by Sri N.L. Contractor and seconded by Sri N.K. Gossain was unanimously passed :

"The Governing Council of the All India Federation of Master Printers views with grave concern the present shortage of paper and boards in the country. The consumption of paper and boards is increasing rapidly with the increasing tempo of literary drive and industrialisation and the indigenous production is not sufficient to meet the ever increasing demands in view of the restrictions placed on import of foreign materials. Paper and boards being as important as food and clothing

for the civilisation and industrialisation of any country, it is hereby resolved to request the paper manufacturers and the Government of India to take necessary steps to make available indigenous paper and boards in sufficient quantities."

A committee consisting of Messrs. N.K. Gossain, S.C. Ghose, H.K. Dass, G.U. Mehta and N.L. Contractor, with Sri N.K. Gossain as convener, was appointed to go into the supply position of indigenous paper and boards and to report their findings to the General Secretary.

9. Some of the members informed the Council that printbuyers were still given licences for import of printing machinery to enable them to instal printing presses in spite of the representative of the Ministry of Commerce and Industry assuring the Federation office-bearers at their meeting on 6-8-57 that such licences have not been issued. It was decided to draw the Government's attention to this fact when full details of such permits given were made available to the Secretary.

10. Sri N. J. Ardeshir proposed that the Hon'y. General Secretary be paid his expenses when he travelled on Federation business. Sri S. Viswanathan amended this to read as "the expenses be paid, if claimed." This was unanimously accepted and passed.

11. The application from the Vijayawada Master Printers' Association requesting affiliation to the Federation was considered. On Sri A.P. Nagan proposing and Sri J.R. Bardapurkar seconding it, it was resolved unanimously to affiliate the Association.

12. The Secretary then read the letter dated 15-3-57 from the Andhra Pradesh Printers' Association notifying change of their name from Hyderabad State Printers' Association. Sri A.P. Nagan, President of the Andhra Pradesh Printers' Association, informed the Council that the change was only in name and that the Association would confine its activities to its old area and would do all that is possible to make printers at other places in the Andhra State to form Associations and get themselves affiliated to the Federation.

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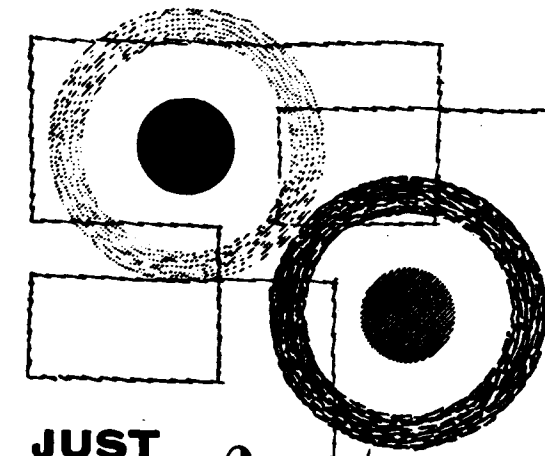
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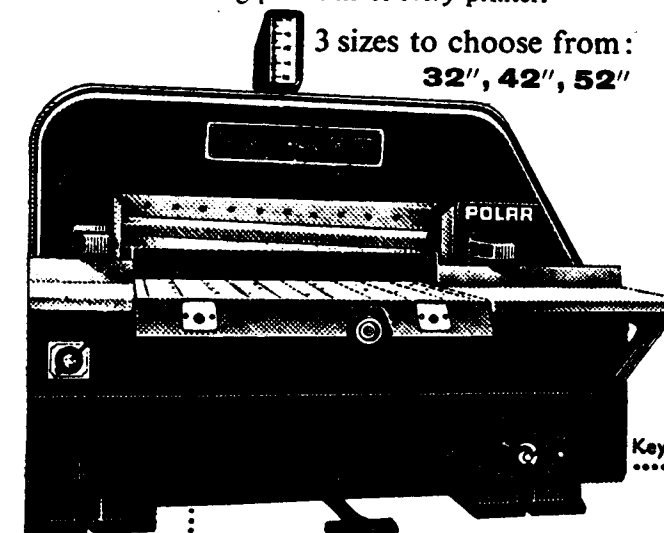
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13. Letter from the Association of Master Printers, West Bengal, dated 12-6-57 notifying the Federation of the change in their name from the Calcutta Association of Master Printers was read. Sri H.K. Dass, President and Sri S.C. Ghose, Hony. Secretary of the Association informed the Council that their Association would confine its activities to Calcutta. The Secretary was authorised to incorporate the change of names of the two Associations in the books of the Federation.

14. The recommendations made by the committee appointed with regard to drawing up the procedure for election of the President of the Federation was placed before the Council by the Secretary. The procedure stated that,

- (1) Every Association shall elect its representatives on the General Body and Governing Council on or before 15th December every alternate year and inform the General Secretary of same so as to reach him on or before 20th December of that year.
- (2) The Secretary shall send names of members so elected to every affiliated association and the Governing Council members.
- (3) The Hony. General Secretary shall call for nominations to reach his office on or before 31st December every year.
- (4) Candidates who are desirous of withdrawing should do so on or before 15th of January.
- (5) Thereafter, the General Secretary shall inform the members of the Governing Council of the names of the candidates standing for election.
- (6) A meeting of the Governing Council will be convened before the end of February every year, where the President of the Federation shall be elected by ballot.
- (7) Governing Council members attending the meeting may bring with them proxies duly executed by the other Governing Council members of their respective Associations.
- (8) The President of the Federation or, in his absence, the

Chairman of the meeting, shall be the Presiding Officer at the election meeting and he shall nominate any two members of the Governing Council other than the candidates seeking election, for scrutiny. The result of the election shall be announced at the end of the meeting.

- (9) The Secretary shall inform members of the General Body of the election of the President within a week of the Governing Council meeting.

The President moved that the recommendations be duly accepted, and this was passed unanimously.

15. The Secretary then placed on the table the recommendations made by the committee appointed for purposes of suggesting amendments to the Press and Registration of Books Act, 1867, and resolved that the Secretary should address the Central Government that they should not insist printers to print their imprints on the following :

- (1) Reprints and translations without comment or annotation of All India laws published in India.
- (2) Price lists and tradesmen's circulars.
- (3) Catalogues of books and other articles, auctioner's notices and trade advertisements.
- (4) Play bills comprising advertisements of theatrical and musical entertain-

ments. (5) Decisions of courts of law without notes or commentaries. (6) Petitions and appeals addressed to constituted authority under the provisions of law. (7) Testimonials of private institutions, individuals or public officers. (8) Annual reports of schools, banks, societies and firms. (9) Almanacs and calendars. (10) Labels affixed to articles of commerce. (11) Invitation and greeting cards. (12) Transport tickets. (13) Books and papers printed or published under the orders of Government or for official purposes.

Proposed by Sri G. U. Mehta and seconded by Sri N. L. Contractor, this resolution was passed unanimously.

16. The Council then took up for consideration the recommendations made by the committee for institution of Fellowship for studies in printing technology, so that technical personnel might always be made available. The President said that his original proposal would involve a vast amount of money which the Federation could not command at present. He therefore proposed that the committee's findings, viz., to request large establishments to provide apprenticeship facilities for such persons as were recommended by the Federation be accepted. This was unanimously passed and the Secretary of the Federation was au-

thorised to fix up the qualifications etc., of such candidates.

17. The President drew the attention of the Council to the fact that very few Associations sent representatives to attend meetings of the Governing Council and, at his proposal, it was resolved that the Council request every Association to see that at least one member from every Association attended the Council meetings. Passed unanimously.

18. The Secretary brought to the notice of the Council a press report that the Madras Government was intending to expand its press and that two other presses also were to be opened by the Central Government in South India. The Council considered the effects of such an expansion and felt that this would affect the private sector materially, especially as they are not having enough business already. The following resolution proposed by the President was passed unanimously :

There is now sufficient capacity available in the private sector of the printing industry to meet the demand of the Central and State Governments and therefore, this Council would request these Governments not to expand their presses any further, especially as they would thereby conserve much foreign exchange which is so much needed by the Country.

19. The President also brought to the notice of the Council the intention of the various State Governments to nationalise text-books. It was pointed out that a number of presses were now depending on the printing of such text books for their work, and nationalisation would therefore take away from them all their business. Sri S. Viswanathan proposed and Sri G. U. Mehta seconded the following resolution which was passed unanimously :

The Federation views with grave concern the attempts made by the various State Governments and Universities to nationalise text books as this will take away from the printing industry in the country a large volume of work which is their main subsistence.

20. The letter received from the Indian Standards Institution regarding the draft Indian Standard Proof Corrections for Authors and Printers

was considered and it was decided that every member of the Council should give his views to the Secretary who would place the same before the Indian Standards Convention to be held in Madras.

21. The Secretary requested that every member serving on any public body should report to him all communications received by him and pointed out how the Indian Standards Institution had drawn up their draft on proof correction without the Federation having their say in the matter. He said that if members would send him all such communications, it would be possible for him to circulate the same to all member Associations and obtain their views and pass them on to the member concerned, so that he might go to the meeting armed with the opinion of the Federation.

22. Sri S. Viswanathan or his nominee and Sri S. Ramu were elected to represent the Federation at the Indian Standards Convention to be held in Madras during December 1957.

23. The Secretary read the letter from the Chairman, Reception committee of the Indian Standards Convention, asking for a subscription of Rs. 250 as membership fee to the Reception Committee. The President proposed that this amount be paid. It was passed unanimously.

It was resolved that Sri R. Venkateswaran, Hony. Jt. Secretary of the Federation, will also operate on the current account of the Federation with the United Bank of India Ltd., Madras in the place of Sri S. Viswanathan, Hony. General Secretary.

24. The Secretary read a letter from the Hony. Secretary, Bombay Master Printers' Association, about the alarming condition in which the printing industry is placed on account of the restrictions imposed on import of process films and plates. Members present felt that this would affect not only printing presses doing lithographic and photo-offset printing, but also process-engravers. It was pointed out that with the present import, such presses and process-engravers will have no alternative except to close their business as without these which form the basic material, they would not be able

to run their business for long. The President proposed the following resolution which was passed unanimously :

This Federation views with grave concern the difficulties experienced by the printing and block-making industries owing to non-availability of process films and plates and request the Central Government that immediate steps should be taken to issue licences more liberally for import of these materials to actual users as otherwise, a number of business houses will be compelled to close down.

The Council also appointed a committee consisting of the President Sri Gowardhan Kapur, Sri N. J. Ardeshir, and Sri H. K. Dass, to wait on a deputation on the Central Government to impress on them the gravity of the situation.

25. Sri H. Ghosh pointed out that in spite of the new Copyright Act which had not come into effect, spurious editions of text books were published on a large scale and suggested that such malpractice should be stopped immediately. He proposed the following resolution which was seconded by Sri S. Viswanathan and passed unanimously :

Resolved that the Law Depart-

ment of Government of India, Ministry of Law, be requested to let this Federation know the date from which the new Copyright Act of 1957 which has received the assent of the President on June 4, 1957, has been enforced. If not, it is requested that the Act be put in force immediately to put a check on numerous cases of infringement of Copyright.

It is since learnt that the Act would come into force early this month.

—Editor.

26. The Council considered the following resolution given notice of by Sri S. N. Guha Ray :

Whereas the majority of the printing presses in India has to depend on foundry types, and whereas there is no standard specifications for type metal used in foundry types, this meeting of the Governing Council of the All India Federation of Master Printers request the Council of Scientific Research to conduct research in the production of one or more type alloys suitable for manufacture of foundry types keeping in view the requirements of types for vernacular languages.



Dinner given by Sri N. L. Contractor to the members of the Governing Council



Another view of the Dinner Party

Since the Indian Standards Institution have been standardising all such items, it was unanimously decided to request this Institution to standardise type metal as well. Proposed by Sri S. Viswanathan and seconded by Sri N. J. Ardeshir. Passed unanimously.

27. Sri J. R. Bardapurkar moved the following resolution :

The Secretary of the Federation shall include a summary of the activities of every affiliated Association in his report to the Governing Council of the All India Federation of Master Printers.

The Hony. General Secretary said that this would not be practicable and suggested that members of the Governing Council may give a brief summary of the activities of the Association they represent at the Governing Council meeting of the Federation. Sri Bardapurkar accep-

ted this suggestion and this was passed unanimously.

28. Sri A. P. Nagan, President of the Andhra Pradesh Printers' Association, invited the Federation to hold their next Conference at Hyderabad in 1958. This invitation was unanimously accepted.

The President thanked the Bombay Master Printers' Association for the convenient arrangements they had made for holding the Council meeting and for entertaining the members so liberally.

Sri S. Viswanathan, Hony. General Secretary, thanked the President for having conducted the meeting in such a manner as to cover the entire agenda in so short a time, at the same time, giving opportunities to all the members to partake in the discussion.

The members of the Governing Council were entertained at a lunch at the Taj Hotel by the Bombay Master Printers' Association.

In the night, the President of the Bombay Master Printers' Association, Shri Noman L. Contractor, gave a Dinner to the members as well as to other printers of Bombay at the Radio Club. The President of the All India Federation of Master Printers, Shri Gowardhan Kapur, thanked the Bombay Master Printers' Association for all the convenience they had given to the visiting members and for their hospitality.

Sri S. Viswanathan, the Hony. General Secretary of the Federation, said that it was Bombay that gave birth to the All India Federation of Master Printers and that ever since its birth, the Bombay Master Printers' Association have been nursing it very carefully and that therefore, printers in the country were indebted to what the Bombay Association had done. Sri S. Viswanathan added that by doing so, the Bombay Association had enabled brother-printers in the various places to know each other.

THE FIRST ASIATIC PRINTERS' CONFERENCE, 1957

Speech delivered by Shri D. D. Gangal (India) at the First Asiatic Printers' Conference held at Yokahama on 10th October, 1957.

Mr. President, delegates from the Asiatic Countries, and brother members of the Japanese Printers' Association,

I feel it my duty to express my deepest sense of gratitude towards the office-bearers and members of the Japanese Printers' Association for their initiative and efforts in convening this first Asiatic Printers' Conference.

When International organisations like the UNO, UNESCO, WHO etc., are striving hard for bringing about world cooperation in political, social, educational and scientific fields, it is only natural and appropriate that printers' fraternity should try to widen their sphere of activity from national to international basis. The Asiatic Printers' Conference is an important step in that direction. It has certainly created an opportunity for the delegates of the Asiatic countries to come together and find out the possibilities of solving problems of mutual interest by pooling together all the resources available and by cooperation on as wider a field as it can cover.

The All India Federation of Master Printers whom I represent is a young organisation of recent origin. The efforts to build up such an organisation, however, were made about twenty years back. The Poona Press Owners' Association, Ltd., which is one of the oldest organisations in India and of which I am a primary member had convened two sessions of the All India Printers' Conference and Exhibition successively in 1937 and 1939 with a view to form an All India Printers' organisation. But the last war came in the way of its establishment. It was only in 1953 that Mr. Paramanand Mehra, a very enthusiastic Bombay printer successively organised in co-operation with other Bombay printers an All India Conference of Master Printers in which the All India Federation of Master Printers was estab-

lished. Since then annual meetings of the Federation and annual conferences are being held regularly. During this short period the Federation has made remarkable progress in all directions.

Now coming to the purpose of this Asiatic Conference, one important point should be borne in mind. America, England, Germany and many other western countries have been enjoying political independence for a very long time. They had therefore an opportunity to develop their industries, including printing industry, commensurate with their requirements.

Many of the Asiatic countries, on the other hand, achieved their political freedom just recently in the post-war period. These countries have to carry on their administrative responsibilities under the stress of warshattered economic conditions and with undeveloped industries. These industries therefore, are in earnest need of help and cooperation from all quarters to equip themselves to shoulder the newly added responsibilities.

Mechanical compose : an urgent need

During the last 50 or 60 years the printing machines have undergone constant changes and improvements in their construction with the result that an average printer has, within his reach, a printing machine which is far superior in speed and quality to the one of his predecessor. But all the advantage of these machines has been set at naught by the laborious and time consuming process of type setting which has not undergone any material improvement since the day of Gutenberg. This is especially true in the case of scripts other than Roman. I know, there have been machines like the monotype, the linotype etc., but they are mainly used for roman types, even if many other scripts have been set on them. The main handicap about these machines is their prohibitive price which comes in the way of their common use.

An important step in advance in this direction was taken by the Japanese Printing Machine Manufacturers when they built up a monotype for Japanese script about nine years back. I had an opportunity to see its working in its experimental stage through the courtesy of Messrs. Kyoto Kikai Kosakusho. During the past years the machine appears to be perfected as it has been manufactured on a commercial scale by Messrs. Tokyo Kikai Kosakusho and placed in market. As the diecase of this machine contains some 2250 characters, I wonder whether it would not be possible within one-fourth of its size to include both the Hindi (Indian official) and Roman scripts together. Obviously there are some technical difficulties. But once they are overcome, it is just possible to set practically Roman and all other scripts prevalent in Asiatic countries on this machine. The price of the machines in this case also will still be an important point of consideration.

Facilities of training and apprenticeship by mutual co-operation

One of the reasons of the printing industry lagging behind in the underdeveloped countries is the absence of appropriate facilities for the training of workers in the craft, especially in processes where a high degree of skill is involved. Even if it is the primary duty and a responsibility of the industry itself to provide such facilities, may be with Government help at some stage, it is a matter of regret to say that very few schools with appropriate equipment and qualified staff exist in India. A beginning has been made in this direction with the establishment of three regional schools, through the cooperation of the Government and the Federation lately, but it is yet too early to evaluate the benefits to the industry. Probably similar conditions exist in most of the Asiatic countries.

Even after graduation from the school, a candidate requires some practical experience by way of apprenticeship before he can take up his job with confidence in the exact-

(Continued on page 14)

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

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0 81 LITHOLINE ORTHO
0.003" thick, thin base for line or screen positives, or negatives.
0 82
in regular base, same emulsion—0.006" thick.

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

P 23 FILM
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GRAPHIC P 2 PLATE
for making continuous-tone separation negatives from colour transparencies or copy. Same photographic characteristics as P 23 film. Ideal for masking process.
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Dintelstraat 15, Amsterdam-Z (Holland)

PRINCIPAL : M. H. GROENENDAAL

Year of Foundation : 1918

Authority : A Board of Representatives of Federations of Employers and Trade Unions. The State contributes 70 per cent and the town of Amsterdam 30 per cent towards the maintenance of the School.

Number of Teachers :

Whole-time	... 25
Part-time	... 28
Total	... 53

Number of Students :

Whole-time	
(Management course)	98
Whole-time	
(Other courses)	257
Part-time (day)	663
Part-time (evening)	524
Total	1542

Whole-time students :

Minimum age of entry : 13 years.

Usual length of course : 3 years.

Students are trained for management. Other whole-time courses exist for hand composing, letterpress printing, bookbinding, lithography, offset printing, photography, and photo engraving. A whole-time course for machine composing (Linotype and Monotype) may be taken after completing a one-year course in hand composing. The whole-time course for designing and retouching lasts four years. Students are accepted from all countries on condition that they can speak the Dutch language.

Part-time students (Day)

Part-time students are usually apprentices. They attend 8 lessons each of 50 minutes on one day during each week over a period of four years. They commence at an age between 14 and 15 years.

All evening students are employed in the printing industry. On an average evening students attend classes during 3 or 4 or 6 hours each week, and for a total period of one or two years, the school year being from 1st October to 1st April. Almost all evening classes consist of workshop practice. There is also a two-year course for printing school teachers.

Every winter evening courses are also available at the Graphic Arts University during 5 or 6 evenings a week. These courses are for managers, deputy managers, and overseers (foremen). The Director of these courses is also Mr. Groenendaal.

Wholtime course for Young Managers

The subjects of instruction during the first year are : Theoretical instruction in mathematics, physics, chemistry, Dutch and English, book-keeping and accountancy, estimating, economics, law, costing, management, art, paper technology. Theoretical instruction supplemented by workshop practice in hand composing, letterpress printing, book binding, drawing, design, and physical training.

The subjects of instruction during the second year are : Theoretical instruction in mathematics, physics, chemistry, Dutch and English, book-keeping and accountancy, estimating, economics, law, costing, management, art, paper technology. Theoretical instruction supplemented by workshop practice in hand composing, Monotype composing, letterpress printing, lithography and litho printing, photography, photo-gravure, drawing, design, and physical training.

The subjects of instruction during the third year are : Theoretical instruction in physics and chemistry, Dutch and English, book-keeping and accountancy, estimating, economics, law, costing, management, art, paper technology, advertising, materials and research. Theoretical instruction supplemented by

workshop practice in hand composing, Linotype composing, letterpress printing, process engraving, drawing, design, and physical training.

The students work every Saturday morning in a workshop. This practical training takes place in a composing room during the first year, in a letterpress or offset machine room in the second year, and in the accounts department of a printing office during the third year.

The students attend 8 lessons each of 50 minutes every day from Monday to Friday. The School year consists of 42 weeks. It is divided into three terms from 1st September to 23rd December, from 6th January to 10th April, and from 10th April to 20th July.

The number of students who work together in one class varies from 30 to 36 in the first year, and from 25 to 30 in the second and third years, and during workshop practice from 15 to 18.

NATIONALISATION OF TEXT BOOKS

(Continued from page 1)

one, of the precious foreign exchange, and two, of the idle capacity of the presses.

Instead, it would be wiser for our States Governments to devise other ways of making available good and cheap text books to our students. At times there are malpractices connected with the prescription of text books. To avoid these, the Government should no doubt exercise some control. They can lay down certain printing standards, and also impose certain price controls. To protect the writers of text books, the Government can prescribe graduated scales of honorarium for authors of different categories of text books. Such measures as these would minimise the malpractices, and, at the same time, help the small printing presses with work and keep them going, which is most essential. It is to be hoped that past experience will induce second thoughts in our States Governments and that they would consider ameliorative measures other than such wasteful schemes as nationalisation of text books.

GOLD INK PRINTING REQUIRES PRODUCTION KNOW-HOW

The customer's request to have a job printed with gold frequently presents the printer with perplexing problems. His normal desire is to do as much of the job as possible within his own plant so that he can control quality and keep the costs down.

There are six available methods for reproducing with gold. These are : (1) Gold ink, (2) gold bronzing, (3) gold dusting, (4) gold-stamping, (5) gold stock, and (6) gold foil.

How shall we determine which of these methods to use ? The sample submitted to us by the customer must be thoroughly analyzed in terms of stock, length of run, use of the end product, costs, time involved in production, and available equipment. This calls for a thorough understanding of what is involved in each of the six methods.

Gold ink cannot be kept long

Gold ink, unlike most inks, is sold in its component parts for the pressman to mix just before putting the ink in the fountain. Gold pigment is not a pure form of gold, and because of the nature of its composition tends to tarnish when in liquid form. It cannot, therefore, be kept for use from one job to another. Ink manufacturers will deliver it only in liquid form when the source of supply is close at hand and the ink is to be put into the fountain immediately. For normal use the pressman receives the gold ink in a powdered form and a suitable vehicle with which to mix it.

Gold ink presents many problems as an ink. The gold particles are not readily distributed through the vehicle as is common to most other coloured inks. The particles tend to remain suspended on the surface. This means that plant preparation for such an ink takes time, thoroughness and know-how. Gold ink is considered to be one of the most difficult inks to run on the press. It dries quickly, often caking on the rollers, and this necessitates frequent wash-ups. It has a tendency to fill up fine type matter and serifs of type

usually catch and pile up the ink.

This is one ink whose drying time ink manufacturers strongly suggest not to tamper with. This recommendation is made because of the very nature of the ink and the way in which it must be run. To secure the required brilliance, gold ink must be laid in a fairly heavy film, sometimes requiring at least two impressions before the desired brilliance is attained. Thus, this must be a rapid drying ink. Should the normal drying rate be slowed down, a loss in the degree of brilliance may occur, and offsetting can be expected.

Gold ink can best be run under conditions of controlled temperature and humidity, preferably in plants with air-conditioning systems. Sudden changes in temperature and humidity may have the same adverse effects as attempts at slowing down its drying rate. Further, these sudden changes, resulting in heavy offsetting, may cause the printed stock to stick together in the delivery pile.

The type of stock used with gold ink will directly affect the degree of brilliance. Experience has shown that smooth-surfaced stock, calendered, supercalendered, and enameled stocks give best results. Gold inks tend to dry by evaporation and oxidation. They are surface drying inks. They therefore require hard papers so that they may dry on the surface of the stock. If soft papers are used, these papers tend to absorb the ink. This has the same effect as slowing down the drying rate.

Soft stock gives dull look

In addition, since the vehicle will be absorbed more readily than the pigment particles, there is a greater tendency to flaking. The end results of use of soft stock with gold ink is a dull finish. To compensate, and results are never those quite desired, the printer is compelled first to use a gold size, and then print one or more times with gold ink.

Visually, printing with gold ink

gives the best results when the gold is used *en masse*. Reverse copy and solids which utilize type matter should avoid the use of script faces, small sizes, and serified letters.

The foregoing might tend to discourage the average printer from using gold ink. There are conditions however, which warrant the use of printing with gold ink. When speed is required, when the customer is willing to meet the increased cost necessitated by the additional press runs, when proper temperature and humidity exist, and when the proper stock is selected, the printer need have little fear that a successful job can be run.

Presses used for a job with gold ink should use new rollers and have excellent ink distribution. New rollers have plenty of tack in them, and can lay down a film of ink more evenly and uniformly. Good roller distribution is essential to breaking up the pigment particles more finely.

Since some platen presses have poor roller distribution, and a short span from ink disc to roller to form, it is not recommended that these presses be used for large size forms to be gold printed. Small solid areas print very well, but usually with two impressions.

Powdered gold comes in a number of different values and strengths. It can be secured as pale gold, rich gold, on the greenish side (cool) or on the reddish side (warm). The correct gold powder to be used for a specific job depends upon the results the customer desires. A sample of the customer's work or artist's sample for colour should be submitted to the ink manufacturer together with blank stock to be utilized on the actual job.

Use Ink House information

It is advisable when purchasing gold powders and vehicles to obtain the services of an ink house specializing in metallic inks. Such an ink plant is in the position of providing information on exactly how the job should be run to secure best results. Information that could be furnished should include the number of times the job has to be run through the press, whether to use a gold size,

or a yellow or red base before overprinting with gold ink, the proportionate mixture of powder to varnish, whether to use heat on the job or not, and whether or not the no-offset sprays are permissible.

Close cooperation with the ink manufacturer is of paramount importance in keeping down production costs. Premakeready time (see *The Inland Printer, Pressroom Department*, April, 1957) can boost costs spectacularly if, in attempting to get up the correct colour, the pressman has to go through as many as six or more wash-ups.

It is the tendency of the pressman to mix powder and varnish in such quantities as experience has taught him will give the correct body to the ink. There are few pressrooms which contain accurate measuring instruments and scales. The pressman mixing a 50-50 gold ink mixture finds it difficult to judge visually the equality of portions between a solid and a liquid. At best it is a result of trial-and-error plus experience.

Problems can pile up !

Once an ink body of working consistency is determined, sample sheets are run. Now the fun begins ! Color not strong enough ? Run the sheets through twice. Results are not quite as brilliant as desired. Wash up the press. Try a base. What base ? Perhaps regular gold sizing with one impression of gold ink will do the trick. Suppose this doesn't work out satisfactorily. Well then, suppose we wash up the press again, and try a warm yellow as the base, and one or two impres-

sions of gold ink. Not good enough ? Wash up the press, and change the proportions of powder to varnish.

And so it goes, sometimes through the entire day—perhaps into the night shift. This of course represents only the problem of getting up the colour. Think of the additional non-productive press time involved in solving such problems as offsetting, flaking, picking, rubbing off, smearing, etc.

It might be more expeditious and even cheaper in the long run to have the job gold bronzed. This is a process which involves the use of a special machine attached to a regular printing press. The press prints the job in gold sizing or a base which will provide a proper undertone. The wet sheet comes off the delivery and enters the bronzing machine. It is automatically dusted with particles of gold powder, and the surface brushed free of excess powder as the sheet leaves the bronzing machine.

This operation does not require mixing powder and vehicle. The base or size acts as a bonding agent which "glues" the gold particles to the stock. Because the powder is not mixed with anything, full brilliance is achieved with one impression. Furthermore, such problems as mentioned previously are eliminated to a large extent.

However, there is a major drawback to the use of this process for every gold ink job. Due to the nature of the process, gold powder is of necessity dusted over the entire sheet. No matter how carefully the sheet is brushed free of the excess, particles of gold powder will cling to unprinted parts of the sheet. These gold specks will appear in the finished job.

When using the process for darkly coloured sheets such as blue, green, black, brown, etc., the gold specks become even more pronounced. The softer the stock the greater the specking will be. In subsequent embossing operations, there is also a tendency for the gold particles to cling to the dies, which could have an adverse effect on the quality of the embossing.

By courtesy of 'The Inland Printer'

THE FIRST ASIATIC PRINTERS CONFERENCE, 1957

(Continued from page 11)

ing daily routine of the industry. But looking to the heavy expenses incurred on these projects, it is suggested that mutual exchange of trainees and apprentices in different countries would go a long way in achieving this objective. The establishment of a centre for research and advice on technical matters may as well be feasible at a later stage.

Cheap literature

Literature plays an invaluable role in the national development in all fields. In order to percolate knowledge into the masses it should be easily available and inexpensive. Leaving aside other subjects, for the time being, abundant and cheap literature on science and technology is the pressing need of the day. It is worth considering whether we can do something about it by collaboration.

There are many more problems before the conference but they may be considered in detail in the deliberations of the conference.

Ladies and Gentlemen, before I conclude, I have again to express my heartfelt thanks towards the organisers of the conference for their very elaborate arrangements and for the comforts and hospitality they have extended to the foreign delegates. I have also to thank you all for the patient listening.

PLEASE NOTE

The Telegraphic Address of the All India Federation of Master Printers is

'FEDERATION, MADRAS'

and

the Telephone No. is

85838

NEWS & NOTES

The Delhi Printers' Association

The Annual General Body meeting of the Association was held on the 24th Sept. 1957 in the new premises of the Delhi Press, Shri B. L. Baluja presiding.

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

Presenting his report Shri Vedavrata, the Hony. General Secretary, briefly referred to the attempts made during the last two years to broaden the Association and to promote the interests of the printers of Delhi.

Adverting to the labour problem of the Delhi presses, Shri Vedavrata opined that though it is a universal problem, its bad effects have been aggravated by the indiscriminate policy of the persons at the helm. The labour laws arise out of problems confronting bigger industries and not the smaller ones and yet the latter also by virtue of their contemplation under the Factories Act have become subject to these laws. He cited an instance of this in the Industrial Disputes Act and said it has caused strained relations between the employer and the employee even in small-scale industries like printing presses and yet with the least benefit to labour. The rigour of all laws checking unemployment has been applied to printing presses which create no unemployment at all. Sri Vedavrata said that his intervention at the Association level has greatly checked the rising trend of strikes, lock-outs etc. in the local printing trade. He also advised the press-owners to standardise the terms of service in presses and enlist the cooperation of its employees. He further said that Government have taken up for scrutiny the laws adversely affecting the small-scale industries and he hopes that something good might emerge.

Listing some of the difficulties and problems facing the Delhi Printers and the steps taken by the Association to redress them, Shri Vedavrata referred to the staggering electric supply under which the Delhi presses had to take Tuesday as their weekly closed day instead of Sunday with the resultant hardships and handicaps. The matter has now been taken up with the State Electricity Board and favourable results are expected.

Similarly the Association has taken up with the concerned authorities, the proposal of Government to shift presses away from residential quarters which again is fraught with serious consequences.

Sri Vedavrata reported that the Delhi Administration have included the printing industry also in their scheme of cheap credit to small industries. He said that the State Bank of India and the small-scale Industries Corporation remain to be tackled to include presses in their

scheme of credit and hire-purchase facilities.

Referring to the starting of a school of Printing Technology in Delhi by the Central Government, he said that the place of its actual location is under consideration.

After surveying the other activities of the Association, Shri Vedavrata referred to the recent Fifth Session of the All India Printers' Conference and Exhibition which was held in Delhi and which was a tremendous success viewed from any point. It was a good collection of up to date printing machinery. The highlight of the Exhibition was the visit thereto of the Prime Minister Jawaharlal Nehru through whose good offices the severity of the rule requiring the exhibition machinery to be sent back to their country of origin was relaxed and their disposal by sale either to Government or private presses permitted. Shri Vedavrata thanked the Prime Minister and the Government of India in this matter.

Finally, he said that the industry is in need of healthy conventions and ethical code. He thanked his colleagues for their full cooperation.

The following is a list of the names of the new office-bearers of the Association and of its Executive Committee.



Office-bearers of the Delhi Printers' Association

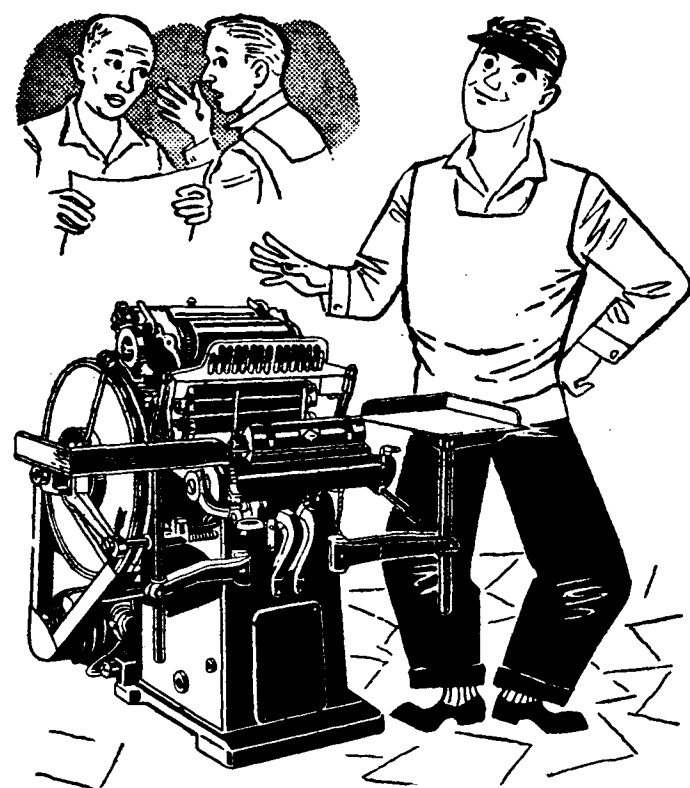
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With a group photo of members present and thanks to the chair, the meeting terminated.

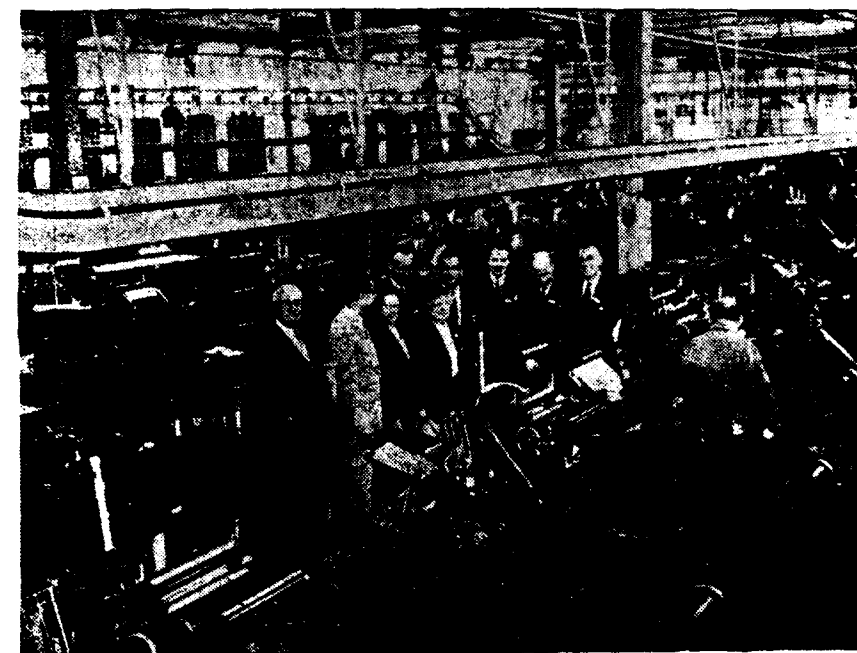
Technical Assistance for Offset Printers

Messrs. Indo European Machinery Co. Private Ltd., Sambava Chambers, Sir P. M. Road, Fort, Bombay 1, in collaboration with their Principals Messrs. Roland Offset-maschinenfabrik, Faber & Schleicher AG, Offenbach Am Main and Messrs. Hoh and Hahne Hohlux GmbH, Offenbach/Main, Germany, have arranged to engage an experienced photo litho technician in order to give assistance and training to their various customers throughout India. The technician has already arrived and will be assigned with different customers from time to time. It is also proposed to set up their reproduction centre in Bombay at a later date as soon as the equipments required for the purpose could be imported. This centre in addition to providing first class production jobs, will be used for training of Indian technicians. Further information can be had from Indo European Machinery Co. Private Ltd., on request.

Inauguration of Plant Wiesloch Schnellpressenfabrik A G Heidelberg and the International Representatives' Meeting from 13th to 15th July 1957

On 13th July 1957, the new plant of Schnellpressenfabrik A G Heidelberg at Wiesloch was inaugurated. The entire world-wide sales and service organisation was invited to Heidelberg on that day to participate in the opening ceremonies together with members of the parent company. At the same time a representatives' meeting of the entire Heidelberg sales and service organisation took place. More than 300 ladies and gentlemen of the sales organisations from Germany, Europe and countries abroad accepted the invitation and came to Heidelberg.

The opening ceremonies of the new factory were conducted on the morning of 13th July 1957. Then there was an inspection of the new hall for manufacture of the automatic platen presses, the office and of the reception buildings by the guests who formed small language



Inauguration of Plant Wiesloch—The long manufacturing hall where 10 × 15" and 12 × 18" Original Heidelbergs are machined and assembled

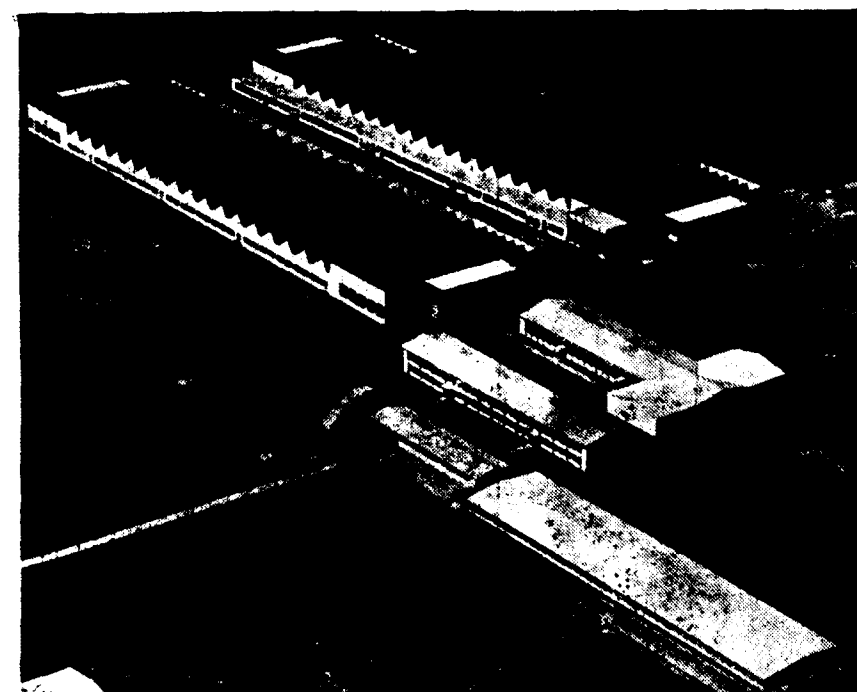
groups. The guests then saw for the first time three new 15 × 20½" Original Heidelberg Cylinders which were demonstrated on the stage of the meeting hall next to a 21 × 28"

Original Heidelberg Cylinder and the 10 × 15" and 12 × 18" Original Heidelberg Automatic Platen presses. The machines ran at their maximum speed. After the inspection of the 15 × 20½" Original Heidelberg Cylinder, the official meeting took place which was followed by individual discussions with the members of the sales and service organisations.

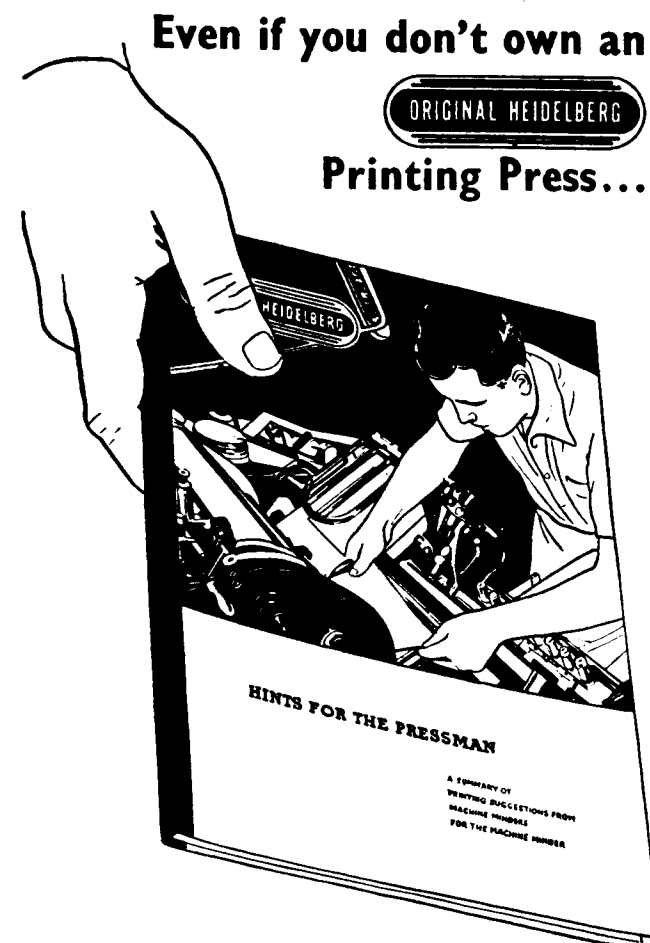
Finally on Monday, the 15th July 1957, the chief fitters and the salesmen were given an opportunity to study the new machine, the newly developed gantry and the lifting device.

After the inauguration ceremonies and the discussions, the eventful days in Heidelberg also included very many happy hours for all participants.

The function ended with a merry dinner in the evening of the 13th July and a boat trip on the Neckar on 14th July 1957.



View of the new plant Wiesloch of Schnellpressenfabrik AG Heidelberg



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The Indian Standards Convention

This is to be held in the Senate House, Madras from 22nd to 28th December 1957. Shri Morarji Desai, Minister of Commerce and Industry, Government of India, will inaugurate the Convention on Monday, the 23rd December 1957, at 11-00 hours.

It is learnt that the Ministry of Railways have been pleased to grant concession of return tickets in any class on payment of single fares (mail fares being charged for second and third class tickets) to those attending the Convention. The concession, however, is not admissible to those whose travelling expenses are to be borne by the Central or State Governments or by local authorities or statutory bodies. The topic of importance to printers viz. documentation would, *inter alia*, come up on Saturday, the 28th December, 1957.

ACKNOWLEDGMENT

We thank Mr. Banerjee of the Glasgow Printing Co. (P) Ltd., Howrah, for having pointed out that the present period of apprenticeship in the printing industry in Germany is three years. Evidently, the period has been curtailed on account of the acute shortage of technicians. But I have no doubt the training course must be much more rigorous.

We would be grateful if Sri Banerjee and people like him, who have served abroad, would come forward with some good and constructive suggestions for the successful introduction of apprenticeship in the printing industry in India.

Editor

The discerning printer

takes great care in selecting

the materials for his work—

fine paper, good ink, clear type

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because he knows

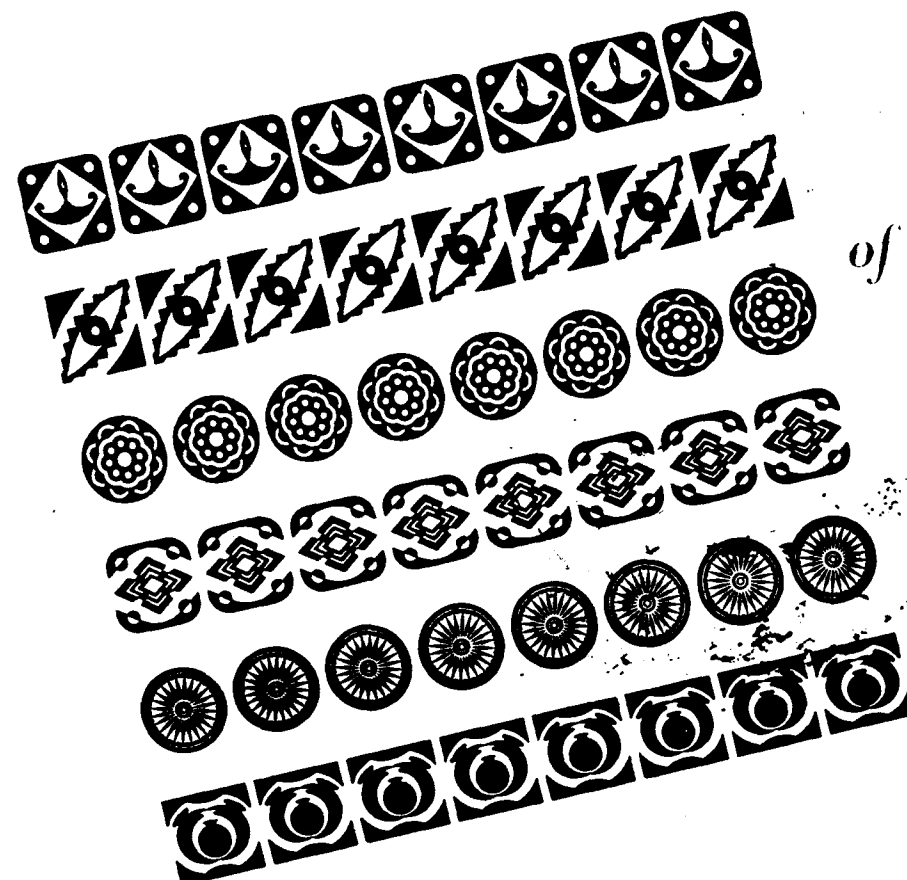
he can rely on them for

QUALITY

ECONOMY

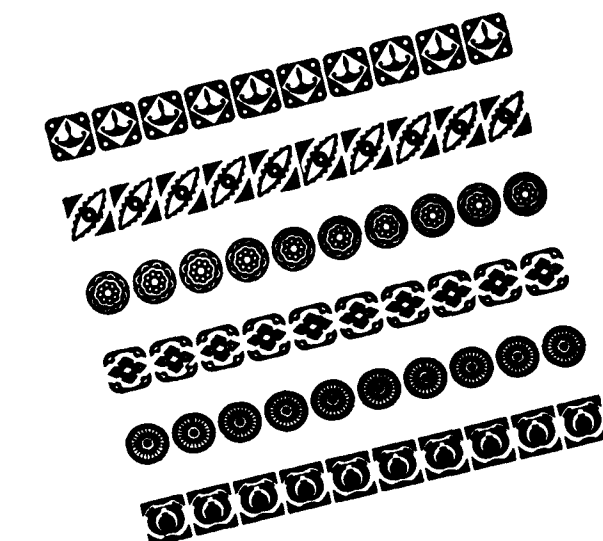
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Just a few
of the hundreds
of Borders

No. 5

Editor-in-Chief—S. RAMANATHAN

December 1957

GOVERNMENT'S IMPORT POLICY

The recent curbs imposed on foreign imports by the Union Government are in the main motivated by the steep decline in the country's sterling balances and the widening trade gap as well as by the bleak prospects of securing any large-scale foreign aid in the near future. New Delhi has therefore done well in adopting a policy of import austerity in order to conserve India's foreign exchange resources. In the final analysis, it will be observed that there are a good many items of imported goods which are necessary neither for developmental purposes nor for the good living of the people ; and indigenous industries have been started in recent years for the manufacture of many of these luxury goods. And the Government have indicated protection to such rising indigenous industries.

All the same, the import policies and practices of the Union Government have not been without avoidable drawbacks and deficiencies. We would like to draw attention in this connection to the crippling effects of the new import restrictions on the printing industry of India. At the same time these restrictions have not been uniformly or impartially imposed since the adoption of the new policy. Since the blanket ban in July, new licences have been issued to the tune of Rs. 50.2 lakhs for the import of printing machines and accessories. In addition some State Governments have been pronouncing threats to start new presses of their own for printing school text books, etc. The Andhra and Madras

Governments have stated that they would be importing printing machinery worth Rs. 6 to 8 lakhs each. If each State Government is led to adopt the same policy, then in the course of the next twelve months, the thirteen States of the Union would be importing or asking to import printing machinery worth about a crore of rupees, a formidable sum in the present foreign exchange position of the country.

This is not the whole story. The film industry as a whole has been given permission to import new films to the extent of 60% of their last year's import quota. One knows not under what compelling reasons the Union Government have issued the licences for this purpose. Is it more important than the education of illiterate masses ?

We have only mentioned two instances of laxity in the administration of import policy ; but we have strong reasons to believe that there will be found many more such instances, if only one delves deeper to collect all the information. But we loathe to do it.

In the overall situation of the country today, education is an important matter ; and the Planners have given reasonable priority to this problem in both the First and the Second Five Year Plans. On the basis of the targets proposed in the Second Plan 63% of the children in the age group 6 to 11 years, and 22.5 per cent of the children in the age group 11 to 14 would receive the benefit of free and compulsory education. The number of pupils will

increase by 7 millions at the primary stage and 1.5 million at the middle stage. These targets will require the establishment of 53,000 new primary schools and 3,500 new middle schools.

In the achievement of these targets and in the process thereof, there will be a tremendous upsurge in the demand for illustrated children's books and pictorial magazines. After all, one picture is worth a thousand words ; and visual impressions last longer on the impressionable minds of children and adults too ! Herein the printing industry of India will be called upon to play its role, by its readiness to bring out the illustrated books and magazines needed for use in the schools. But this it will not be able to do unless Government co-operation is forthcoming, by making the necessary materials available to the industry. Pictorial books cannot be produced without the materials for blockmaking and processing, which in turn would require the photographic materials and other artists' requirements. These are items which are not yet manufactured in India and which therefore have to be imported. Strangely enough, while the Union Government allowed the film industry to import raw films worth 60% of last year's quota, they have imposed drastic cuts on the imports of the above materials required for the production of pictorial books so essential for children's education. Considering the fact that the block-making and offset printing industry will be only a small percentage of what is being spent on motion

(Continued on page 14)

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STATE AWARDS FOR PRINTING AND DESIGNING



Dr. B. V. Keskar, Union Minister for Information & Broadcasting, speaking on the occasion.

On the occasion of the grant of State awards by the President of India, Shri R.K. Ramadhyani, I.C.S., Secretary, Ministry of Information and Broadcasting, said that the technique of printing and designing has progressed much with the increased output of printed matter and increasing interest evinced by the public in books. Improvement and efficiency in printing is an obvious necessity. Unless printing be good, reading matter will not be attractive. Among the entries have been included some from the Directorate of Advertising and Visual Publicity. These entries are meant to set up a standard for the rest of the field. There is however need for research in printing in this country. We have the advantage of the enormous amount of research and technical development which has taken place in various parts of the world though our scripts do not lend themselves to such fine printing as western scripts.

Dr. Rajendra Prasad while giving away the State Awards made the following speech :—

It gives me great pleasure to be present here today at this function



Shri L. R. Nair, Director of Advertising and Visual Publicity, Ministry of Information and Broadcasting, showing to the President, Dr. Rajendra Prasad the smallest type of Hindi print at the exhibition of Books and publications.

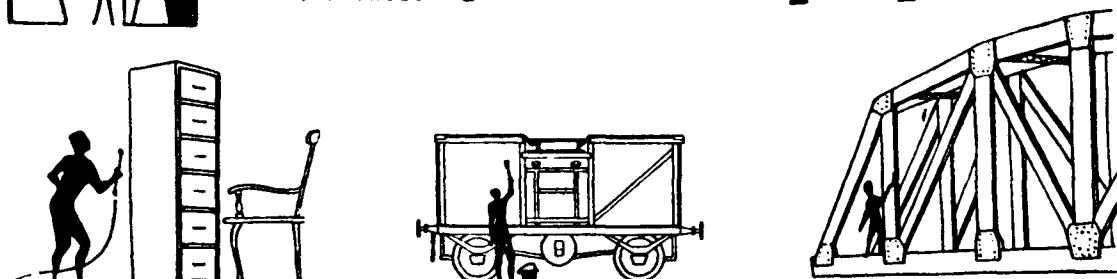
Dr. B. V. Keskar, Union Minister for Information and Broadcasting, is also seen in the picture.

for giving away awards to winners in this year's competition for excellence in printing. I must compliment the Ministry of Information and Broadcasting for instituting these awards in their effort to encourage the printing industry and other graphic arts in India. Such a step, while recognising the rapid progress made by this industry in recent years, also provides a definite impetus to the improvement in technique and workmanship in printing and allied arts.

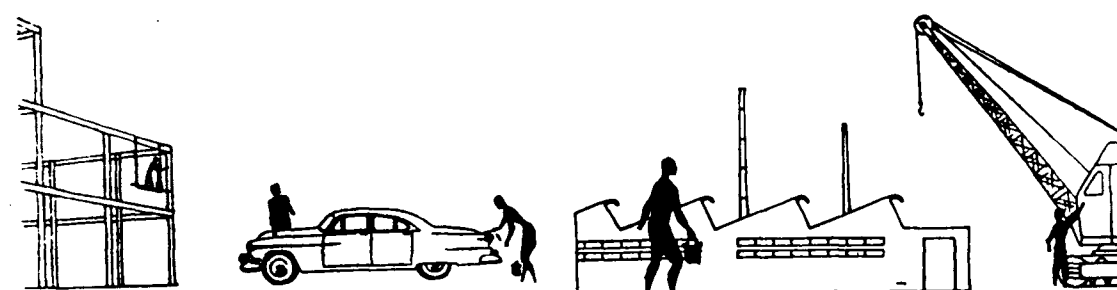
Today as I see the great strides we have made in this country in the art of presenting the printed word, I am perforce reminded of those days when in the late twenties I was in some way connected with two journals in Patna. Those were the days of hand-setting when legibility was the sole criterion of excellence in a newspaper or periodical. Newspaper readers were not so many those days and the number of dailies, weeklies and other periodicals was still less. As in other spheres of activity, great progress has been made in recent years in printing craft also. Not only has the number of journals gone up, the art of display and presentation has also made much headway.



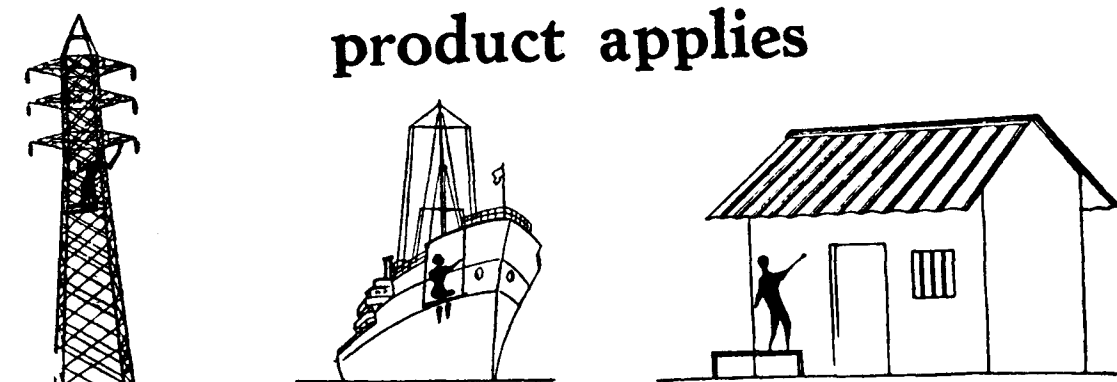
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The President, Dr. Rajendra Prasad, looking at the prize winning entries in Daily Newspaper Section of the exhibition.

Dr. B. V. Keskar, Union Minister for Broadcasting is also seen in the picture.

With the invention of newer and better machinery, the technique of printing may be said to have undergone almost a metamorphosis. In India we have beautifully illustrated journals with wide circulation, journals representing all interests and all walks of life, from political parties to vegetable growers' co-operatives. It is not thus the speed in excellence and printing alone which has registered a remarkable advance but the range and readership of journals have also widened very considerably.

There is another important aspect of our life which vests improvement in printing with great significance. As a rising nation we are firmly resolved to eradicate ignorance and illiteracy from India. That is a stupendous task which we cannot hope to achieve without the printer's co-operation. Whether it is the text-books meant for our teeming school-going children or pamphlets, posters or periodicals published for the dissemination of information and knowledge, it is the art of printing which has to be pressed into service at every stage. A printed word has thus become perhaps the most potential medium of educating the people.

The Ministry of Information and

Broadcasting which deals with newspapers and periodicals and which is also responsible for the production of many official journals and useful publications, is best fitted to organise a competition like this and to confer

State Awards on those who have been adjudged best in the various branches of printing and graphic arts.

I am glad this competition covers a wide field and has kept in mind the need of giving special encouragement to the production of books and journalistic literature in Indian languages. It is only two years that these awards were instituted, the first competition having been held in 1955. Judging from the number of entries you had this year, which is more than double the figure in 1955 and about 50 per cent higher than in 1956, one could say that the competition is gaining in popularity and that you have succeeded in enlisting the co-operation of the newspaper industry and the printing and publishing trades in the country. I have no doubt that it is a constructive step towards raising the general standard of printing. Though, compared to the standards obtaining in Western countries like the United Kingdom and U. S. A. and also in some Eastern countries like Japan, we are still lagging behind, your determination to go ahead is a sure sign that sooner or

(Continued on page 14)



The Judges busy at looking the Newspapers, magazines and posters for making selection of the State Awards.

PROPER PRESS CLEANING LEADS TO BETTER PRODUCTION

Supervisors of pressrooms and administrators of printing plants are generally under the assumption that cleaning the press should be done whenever time permits. This is a mistaken notion. Unfortunately, the constant demand to keep the presses running does not allow for time out for cleaning. Cleaning the press is regarded as an unimportant operation which could always be put off until the pressman has nothing else to do. This is false economy and foolhardy.

Failure to allow for proper press cleaning leads to an infinite number of costly production problems, press breakdowns, and lost man-hours. A continual build-up of grit and dirt can result in clogged hoses and air lines, fouled transfer table and gripper bar suction holes, jammed and bent fountain keys, poorly operating sheet pickups, etc. Where conditions such as these exist, the chances are good that many others also are prevalent or are in the process of developing.

The harried pressman who has a strict production schedule to meet can take time out to rectify only the immediate cause of any individual problem. He seldom has the time to do a thorough overhauling and cleaning of all the units concerned with a particular segment of the press.

Dirt is enemy of quality

The writer has witnessed pressmen attempting to correct improperly functioning side guides during a critical register job reach for an oil can and shoot the fluid into the side guide channels. This, they believed, would loosen the dirt or grit and permit the smooth operation of the pull-guide. They guessed wrongly. They failed to realize that the only way in which they could remove dirt in the channels was to actually open the channels to inspection. The oil served only to solidify the dirt particles.

Dirt is an insidious enemy of quality production. When done *properly and consistently*, the cleaning

of almost any of the functioning parts of the press takes only a matter of minutes. To accomplish this, however, it is advisable to set up a press cleaning schedule which would list those tasks that must be performed daily, weekly, semi-monthly, etc.

The cleaning of parts which are common to most presses will be discussed in this article. For those special parts which are peculiar to particular types of presses, the manufacturers' instruction booklet should be consulted.

Recommended procedure calls for each press to be thoroughly cleaned at least once in every 24-hour period. Such cleaning should generally take place when an order is completed and prior to the start of a new job. However, if a job is on the press for a prolonged period of time, the press must still be cleaned at least once daily.

Prior to beginning the daily cleaning, it is suggested that (1) no forme be on the press, (2) the fountain be devoid of ink, (3) forme and ductor rollers be removed from the press, (4) no finished job be in the delivery, (5) no new stock be in the feeder, and (6) the old packing be left in place until cleaning has been done. In cases where it is inadvisable to remove the forme, take ink out of the fountain, or disturb the packing, the ink fountain and forme should be covered with a stiff stock, such as bristol index or other card material, in order to prevent dirt from falling on these vital work areas. The covering stock should be stiff enough to allow removal of the dirt without it rolling off the sheet. **ALWAYS SHUT OFF PRESS POWER BEFORE CLEANING.**

Cleaning kit easy to build

An efficient method of preparing for the cleanup process is to have the materials and cleaning agents located near the press. More time is lost by pressmen hunting for supplies than it actually takes to clean the press.

A good method is to build a

cleaning kit. This kit consists of a rectangular plywood box with a handle. The box is lined with aluminium or galvanized metal to prevent cleaning agents from dripping. This is also a safety device since most cleaning agents are highly flammable. The box is divided into compartments so that the rags are separated from the cleaning agents. Various types of cleaning brushes are kept in another compartment. A cleaning kit of this kind can be used for more than one press, is easily transportable, and is always available for immediate use.

In selecting cleaning preparations for use on the press, care must be taken to see that the correct cleaner is applied. For cleaning painted press surfaces a volatile cleaner may be used. Ink solvent, a paint remover, should not be used to clean any of the painted parts of a press.

Solvents are flammable

The volatile solvents used are flammable and *must* be employed with caution. For this reason, it has been recommended that all power be shut off. These solvents should be kept away from open flames and direct contact with electrical switches. Presses equipped with gas-operated devices should be checked to be absolutely certain that these elements are not operating. These solvents should always be kept in safety cans.

The cleaning solvents used should remove all ink, dirt, and oil from the press. They should evaporate completely, leaving no film of any kind to dirty the job or interfere with the normal functioning of the parts. The solvents should not in any way affect the metal parts by pitting or corrosion and must not subject them to oxidation.

Some of the more commonly used cleaning solvents are aviation gasoline, kerosene, carbon tetrachloride, benzol, benzine, trisodium phosphate, and mixtures of these sold commercially or developed by individual shops.

Aviation gasoline, an expensive cleaning solvent, gives highly satisfactory results. It is very flammable, but generally cleanses completely. For the sake of economy, it is often

replaced by cheaper grades of gasoline. These do a less effective cleaning job, but are less flammable.

Benzine is not as effective as gasoline because it is not commercially sold as a pure substance. In practical use it is cut even further by the addition of a little oil which slows down the evaporation rate and leaves a desired protective film. A light oil, such as No. 15 or No. 20 grade, which is easily obtainable from regular service stations, is generally used for this purpose.

Benzol is good cleaner

The lower grades of benzine have a characteristic and objectionable odour. Pure water-white benzol, the finest quality, is an extremely good cleaning solvent, however. In its pure form benzol is an even better solvent than aviation gasoline. Its use is recommended in cases where aviation gasoline fails to remove hardened ink and dirt. In comparison to the cheaper grades of benzine, pure benzol has a pleasing odour.

Kerosene is not a powerful solvent, but is useful where it is desirable to leave an oil film. It has a high enough flash point (150°F.) to make it fairly safe for ordinary cleaning use. Kerosene has no objectionable odour.

The above solvents are usually not harmful or irritating to the skin. They can be applied without the use of gloves.

Carbon tetrachloride is a less efficient cleaner than gasoline. However, it is non-flammable, and is thus recommended where fire hazards exist. It is particularly effective for cleaning oils and greases. Since it does not contain an oil base, persons sensitive to its drying action should wear gloves.

Trisodium phosphate is used to remove oil, rust, or dark stains which collect on the natural finish of metal press parts. It is generally used in a 15 per cent solution which is toxic. Rubber gloves should be worn when handling this solution. Metal parts which have been cleaned with this solution should be oiled after cleaning to prevent rust.

Press pans, located beneath the presses to catch oil and grease

drippings, may be cleaned with any of the volatile solvents such as benzine, gasoline, kerosene, commercial press wash-up solutions, or ink solvents. They may even be cleaned with ordinary soap and water, but this is not effective against heavy dirt and crustation. The pan should be thoroughly dried with a soft clean cloth after it has been cleaned. It should be the last item of the daily cleanup since it will catch all fallen dirt, oil, or grit.

Suitable cleaning cloths

Rags used for cleaning the press and its parts should be free from snaps, buttons, hooks, and other attachments which could scratch or mar metal surfaces. They should also be lint-free and closely woven, so that when used for rubbing surfaces they will not shred. It is advisable to use washed rags, although laundered press wipes are readily available. The most suitable material for cleaning cloths is cotton.

There are many firms, which for economy measures, make it a practice to buy bales of unassorted washed rags. This means that the pressman has to go through a pile of rags to find those most suitable. Unassorted rags contain material of silk, wool, satin, and have other synthetic fibres. Some of these have hard-surfaced finishes and have poor absorbency. Others may react in a detrimental fashion with the solvents being used in cleaning. Still others may stain so deeply as to make recleaning very difficult. It pays in the long run to purchase sorted washed cotton rags, or to rent press wipes. Consistent performance without trial and error is real economy.

Rags used with volatile cleaning fluids should be kept in covered containers when not in use. They should never be stored, even when covered, near sources of heat.

Brushes for cleaning presses and parts are as varied as the parts they are used for. The cleaning kit should contain several types. A stiff bristle scrub brush is needed to remove the dried and hardened ink from parts of the press on which the solvent has been ineffective. This brush should be made from strong vegetable

fibres. The fibres should not snap or break when pressure is applied and should not pull out of the brush frame when saturated with the solvent.

Vegetable fibres are best for this type of work since they do not have an affinity for ink. Animal and nylon fibres have a high degree of ink affinity and such brushes would tend to pick up ink from the areas being cleaned and transfer it to other areas.

At least two soft camel's hair brushes are needed. One should be two or three inches wide. This is for cleaning large areas of the press which have received deposits of paper lint, no-offset spray powder, and normal pressroom grit. Employing a rag to do this job usually takes longer, because the rag fibres hold the dirt and redeposit these particles on the press. Then there is always the problem of shaking out the rag. With the brush, the dirt is swept onto a piece of paper or onto the pressroom floor.

The second camel's hair brush should be approximately one half inch in width. This brush will be used for getting into small crevices, channels, seams, etc. Camel's hair brushes are not affected by the waste oil or volatile cleaners.

Brushing the dirt and grit from the press is the first cleaning operation after the removal of the rollers, the forme, and ink from the fountain. This is done so that the loose dirt does not fall on the rollers, the forme, or in the fountain.

All brushes should be carefully cleaned after use with the proper solvent and allowed to dry.

Under no circumstances should any abrasive materials such as steel wool, pumice powders, or sand paper be used to remove hardened ink or dirt from the press parts. These will only mar the metal surfaces, expose the metal to corrosion, and may even damage them enough to impair their proper function. Use of the proper solvents, cleaning cloths, and brushes, plus a daily press cleaning, will keep the press in smoothrunning order and will avoid long and costly cleanups.

—By courtesy of *The Inland Printer*.

PICKING: ITS CAUSES AND THEIR PREVENTION

by
JACK DELLER

Picking occurs when the ink is too stiff or tacky for the paper being used. This is mainly experienced when printing on coated papers or on boards, the ink tending to lift or 'pick' the surface coating from the base sheet.

Picking can be caused by any one of the following reasons :

Paper too new or 'green.'

Paper coating not adhering properly to base sheet.

Damp paper (either not sufficiently protected from weather, or kept in damp paper store).

Ink too tacky for paper.

Ink left on rollers over lunch break or longer periods.

Ink film too heavy.

Ink drying on rollers.

Press and rollers too cold.

Paper handled roughly, causing cracks in coating.

Too much impression causing coating to crack at edges of solids or halftones.

Insufficient impression—ink not being removed cleanly from forme.

Sheet jerked instead of peeled away after impression.

Press run at excessive speed.

Selection of paper

Newly-made or 'green' paper is more likely to pick than paper which has matured or seasoned under conditions similar to those prevailing in the pressroom. Similarly, if the paper has been stored or exposed to a damp atmosphere the coating will part readily from the base sheet when subjected to the pull of the ink film.

Faulty adhesion of the coating to the base paper may also occur during the process of manufacture. Printing solids or halftones on such paper will create so many problems that, whenever possible, it is wiser to reject the paper rather than risk taking an excessively long time to produce an inferior job.

Before rejecting the paper it is advisable to make certain that it is the actual paper at fault and not the ink or other factors involved in

printing the job. A quick way to test the adhesion of the coating is to wet the ball of the thumb and press it firmly on the sheet. If particles of the coating adhere to the thumb it indicates that trouble can be expected during printing. Crumpling a sheet of paper into a ball and then unfolding it over another sheet of paper will reveal whether the coating is loosened excessively by this treatment.

Both these tests are rough and ready ; to be really certain and to obtain an accurate assessment of the condition of the coating it is far better to use a Dennison's Wax Pick Test. This consists of a set of 18 different waxes with graded adhesive powers ranging from 2A, which has the least adhesive strength, to 26A, which has the greatest.

The wax pick test is carried out by placing a sheet of the paper on a smooth surface. A wax stick is heated over a low gas flame until the end is melted. The melted wax end is then quickly placed on the specimen sheet with firm but not undue pressure. After the wax has been allowed to cool for 15 minutes a wooden block is placed over the stick of wax, which then protrudes through the hole in the block. The block is held down firmly with one hand while the other pulls the wax from the sheet with a quick jerk at right angles to the paper surface. The end of the wax stick and the paper specimen is examined and the procedure is repeated using stronger waxes, until the paper surface being tested picks, blisters or breaks. The number of the wax which picks the paper is then checked against the required standard.

A stiff, tacky ink will easily pick unless both paper and general conditions are ideal. The halftones and solids which are usually printed on coated papers need a soft ink which will offer little resistance when applied to the paper. If in doubt, it is worth sending some sample sheets of paper to the ink

maker together with details of the nature of forme, press and speed at which the job is likely to be printed ; he can then make certain that the ink supplied will be suitable for the particular paper being used.

Effects of temperature

If the ink has been specially supplied for the paper and picking still persists, it may be due to the temperature of the pressroom being too low. If the temperature is much below 70° F. the ink will stiffen, and this condition, in conjunction with the cold rollers and paper, is almost certain to cause picking. In such a case, it will help if the ink is warmed before use ; placing the tin on a type metal heating pot or electric control box will help to make the ink softer and less likely to cause picking. Positioning a portable electric heater under the duct and distributing rollers will also warm the press and assist in making the ink flow.

One printing works, where picking was a regular occurrence every morning in the wintertime, greatly eased the problem by switching on the heaters situated under the duct about a half hour before work started in the morning. At least one press manufacturer has even experimented with an electric heating element inside the duct roller. Finally, warming the press and rollers and softening the ink can often be achieved by running the press at a high speed for a few minutes without actually printing.

Once picking has been overcome and the job is running satisfactorily, it is not advisable to leave the press standing over the lunch break or even during the morning tea break, since the ink will tend to thicken and become tacky on the rollers ; often the first sheet printed after such an interval will be pulled out of the grippers and carried round the rollers.

Liquid and paste reducers

The problem of picking has probably caused far more concoctions to be added to the ink than any other single problem. Many liquid reducers overcome the picking by reducing the tack or stiffness of the ink, but often cause some further problem : they will weaken the

colour strength of an ink and the pressman may run a heavier ink film than normal in an effort to match the original colour. Such action can easily lead to problems such as set-off, mottle and sticking.

Some proprietary brands of pastes and greases will also overcome picking, but unless used discriminately they may either prevent the ink from drying, or cause chalking. If the ink is going to be overprinted with another colour the grease or paste added to the first colour may also prevent the second colour from printing clean and sharp.

To avoid such problems it is worth consulting the ink maker. He can supply a reducer which will be the same as used for the actual vehicle of the ink except that it is slightly thinner. The use of such reducers will make it unlikely that any unforeseen problems will occur.

Faults of impression

The use of either too much or too little impression can also cause picking. Too much impression will

often crack the surface coating of the paper, leaving tiny particles on the forme. To avoid this, the impression should be carefully regulated and cut-outs used to relieve the pressure on the edges of solids and halftones. If insufficient impression is applied, the ink on the blocks will tend to pick the coating off the paper. Experience will gradually allow the apprentice to recognise the general effect resulting from this cause of picking.

When handling coated papers or boards, it is important to roll the sheets, not to bend or handle them roughly in any way.

When picking occurs one should make certain by observing the faulty area through a magnifying glass, since the effect could be caused by paper dust or tiny spots of anti-set-off powder. If ink is reduced to overcome these defects then it is being weakened unnecessarily. When picking occurs it is usually quite easy to see that the paper surface has been plucked or raised, a rather different effect from that caused by spots of

paper or spray dust scattered over the plate.

If picking occurs reducers should not be added to all of the ink in the duct. Three-quarters of the ink should be replaced in the tin and the reducer thoroughly mixed with the ink remaining in the duct. This will mean that most of the ink will not be reduced and, as the press and rollers warm up, it will probably be possible to add ink to the duct without any further need to reduce it. Picking very often occurs on platens mainly because the sheet is jerked away rather than gradually peeled away in a gentle motion as on a cylinder press. Positioning frisket fingers to lessen the jerk or snatch of the sheet will probably overcome the picking.

Finally, the speed of the press can be the cause of picking. At high speeds the sheet tends similarly to be jerked from the forme rather than pulled gently. As a last resort, slowing the press may prove the answer.

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FRANCE'S LARGEST PRINTING COLLEGE

Ecole Estienne's high reputation under Monsieur Ranc

by

R. V. CANNON, A.R.P.S.

Situated in the suburbs of Paris, Ecole Estienne is the largest printing college in France. Built in 1886 it remained comparatively unknown until after the second world war since when it has attained a high reputation under its present Director Monsieur Ranc.

The main work of the college is the training of between three and four hundred wholetime students who commence the course between the ages of fourteen and seventeen. The course lasts for four years and during that time they are given practical and theoretical instruction in the following departments: design, which has the rather practical sounding title of Drawing for Publicity; hand composing and machine composing, the latter also being known as Foundry; Galvanotype, the name of the department which provides instruction in stereotyping and electrotyping. A bookbinding section and finally, one of the largest departments in the college, Graphic Reproduction which provides instruction in photoengraving (known as photogravure in France), photolithography, and lately photogravure or as the French call it heliogravure. Classes are also provided for copper plate engraving and the work of this section appears to be of a very high standard. The use of stone in litho drawing is now a thing of the past.

Possible future executives

At the completion of their four years training the students are employed in the industry as possible future executives. An interesting feature is the system of free tuition for all students. The college also has a large number of part-time day students. They are apprentices from the industry who attend for only one half-day each week. No practical instruction is provided for these students; teaching consists of theory lectures only. It

would be interesting to know the reaction of French apprentices to this scheme.

Technical examinations are conducted by the French Ministry of Education and there appears to be an increasing importance placed upon examination results.

Many of the text books used at the college are also prepared by the French Ministry. This is something which is badly needed in the education and organisation of our own industry.

The teaching staff consists of about sixty wholetime teachers who provide instruction for both day and evening classes. Unlike our own system there are no part-time teachers employed at the college.

Student publications

During the session, the students produce many projects or publications. The finest of these is an annual magazine Les Cahiers D'Estienne, an excellent production with many full page illustrations by photoengraving and offset in monochrome and colour. The attendance for four years by wholetime students is obviously a contributing factor to the high quality of this work.

All the departments are fairly large and quite well equipped; Machine composing having a number of 'Linotype' machines and half-a-dozen 'Monotype' casters, and the bindery a very good range of tools for monograms. Extensive alterations have been made during recent vacations. Most of the internal walls have been painted white and provide excellent light in all the rooms. An interesting feature is the fitting of long venetian blinds to all the windows. This has the effect of cutting out the glare of the sun without cutting out the light.

Graphic reproduction research

My own interest in the college when I made a visit there last year

was, naturally, centred mainly on the department of Graphic Reproduction. For the number of students dealt with it is very well equipped. They now have a Dow Rapid Etch machine operating and this has been installed by the French Societe de Magnesium under a special arrangement with the school whereby demonstrations are to be given to the industry in return for the free use of the machine in the college.

I was very much impressed with the camera studio; an oblong shaped room with an excellent layout. It has eight gallery cameras and one of the modern dark room type, all evenly spaced and parallel to each other down the centre of the studio, excellent sink units of brown plastic are fitted down one side of the studio, each one having an overhead daylight lamp. One sink is fitted up with a combined viewing light and water spray. On the other side of the studio, at the back of the cameras are the darkrooms with sodium vapour safe lights. Each darkroom has a drainage hole in the centre of the floor. In front of the darkrooms are long tables for various uses. Other equipment includes, four densitometers, a large contact printing box, a Kodak drying cabinet and some modern spectrometry equipment.

Wet collodion only at first

Although the wet collodion process is still taught in the college, it is only for the first two years of the course. During the third and fourth years all negative work is done on film or dry plate.

Printing on metal and photolitho platemaking are referred to as 'copying' and the equipment for both of these sections is fitted into one small room. The coating of plates for both sections is done on powered photolitho machine whirlers; there is no hand whirling. Printing frames are the large single vacuum type and open twin carbon arcs are the main light source. Several light boxes and a 'Novertex' step-and-repeat machine complete the equipment. Sinks are fitted with temperature control.

A large area of the etching room is sectioned off for fine-etching benches

and rolling-up for line etching. Sinks, etching machines (which are all made of porcelain and of the square-shaped paddle type) and rocking baths for acid etching are housed in a separate small room adjoining the main etching room. There is another separate room for ferric chloride machines and 'still bath' and a smaller one used as a dusting room for resin and bitumen, both of which are used extensively for line etching. Generally speaking, the equipment, although ordinary, is adequate.

Different line etching method

The method of line etching taught at the college is different from that practised in this country. Basically it is Gillotage, named after the

Frenchman Gillot who invented line etching. Briefly the method consists of rolling-down two or three times with a very thin letterpress ink to form a relative thick shoulder which allows for a long etch to obtain good printing depth; cleaning off the ink and removing the shoulder by further etching. Rolling, which calls for considerable skill, is followed by powdering with resin and bitumen. No Dragon's Blood is used.

In their third and fourth year, students have considerable practice at etching large commercial-size batches of line work.

Instruction on the Ben Day Mechanical Tint process is not provided for present day students because the industry now considers that other methods are more suitable.

Half-tones mainly on zinc

Practically all half-tone etching (coarse and fine screen) is etched on zinc with a cold enamel type resist. The type of zinc used is a cadmium zinc alloy and a little thicker gauge to what is used in this country. Most of the work appears to be of the straightforward type.

A small routing and mounting section and two modern cylinder presses for proofing complete the department of Graphic Reproduction.

In summing up, although it is difficult to strike a comparison with similar colleges in this country, I gained the impression during my visit that, for its size, Ecole Estienne is a very well equipped printing college.

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WHOLETIME COURSES IN PRINTING

School voor de Grafische Vakken Jutfaseweg 3, Utrecht (Holland)

Principal : L. C. H. De Jong
Year of Foundation : 1901
Authority : The Government

Number of Teachers :	
Whole-time	... 20
Part-time	... 6
Total	... 26
Number of Students :	
Whole-time	... 113
Part-time (day)	... 483
Part-time (evening)	... 266
Total	... 862

Whole-time Students

Minimum age of entry : 13-24 years.

Usual length of course : 3 years.

Students aged 17 and 24 are trained for management. Other whole-time courses exist for management, composing, letterpress printing, book-binding, offset printing, machine composing, photogravure, photography, and process engraving. Students are accepted from all countries.

Part-time Students (Day)

Part-time students are usually apprentices. They usually attend school for 8 hours each week during a period of four years. They commence at an age between 16 and 19 years.

Part-time Students (Evening)

All evening students are employed in the printing industry. On an average evening students attend classes during 3 or 6 hours each week, and for a total period of 2 or 4 years.

Whole-time Course for Young Managers

The subjects of instruction during the first year are : composing, letterpress printing, photography, process engraving, mechanics, metallurgy, science, estimating, economics, ac-

countancy, advertising, law, Dutch, design.

The subjects of instruction during the second year are : composing, letterpress printing, lithography, book-binding, mechanics, metallurgy, science, estimating, costing, economics, accountancy, advertising, law, Dutch, design.

The subjects of instruction during the third year are : composing, letterpress printing, machine composing (Linotype and Monotype), photogravure, paper technology, management, mechanics, metallurgy, science, estimating, costing, economics, accountancy, advertising, law, Dutch, design.

The students work 7 hours each day and 35 hours each week. They work 43 weeks during one year.

The academic year is not divided into terms. It runs from 1st August to 31st July.

The number of whole-time students who work together in one class is 25.

College Technique estienne 18 Boulevard Auguste Blanqui, Paris 13 (France)

Principal : M. Ranc.
Year of Foundation : 1889
Authority : Ministry of Education and Town of Paris

Number of Teachers :	
Whole-time	... 43
Part-time	... 6
Total	... 49
Number of Students :	
Whole-time	... 343
Part-time (day)	... 906
Part-time (evening)	... 397
Total	... 1646

Whole-time Students

Minimum age of entry : 14 years.
Usual length of course : 4 years.
Students are trained for management. Other whole-time courses exist for the training of master

craftsmen. These are attended by 242 students. Students are accepted from all countries.

Part-time Students (Day)

Part-time students are usually apprentices. They attend classes during 4 hours a week over a total period of four years. They commence at an age between 14 and 16 years.

Part-time Students (Evening)

Almost all evening students are employed in the printing and allied trades. Some of them are students from other schools, such as grammar schools and schools of arts and crafts. On an average evening students attend classes during 1½ hours each week over a period of 12 months.

Whole-time Course for Young Managers

This course runs for one year only. Students work during 48½ hours each week for 36 weeks in the year.

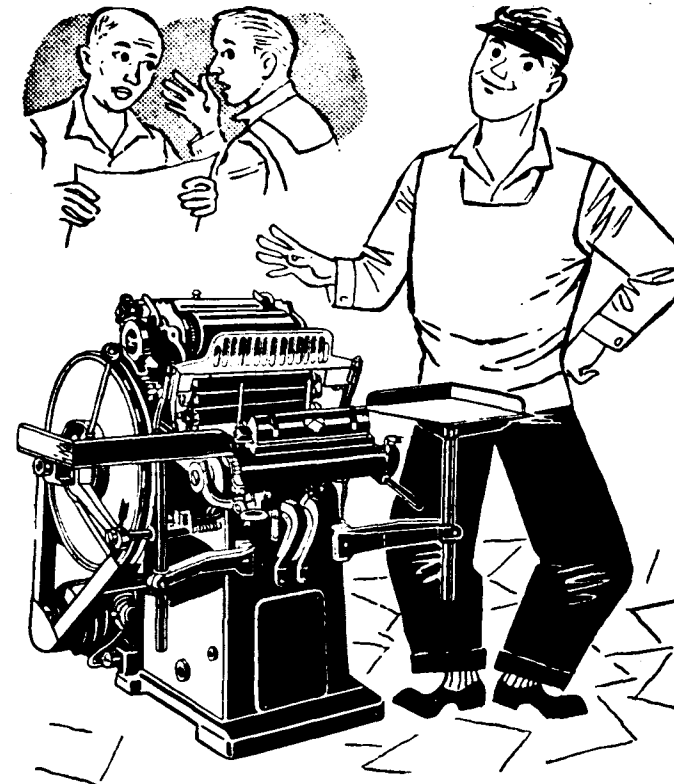
The academic year is divided into three terms from 1st October to 31st December, from 1st January to 31st March, and from 1st April to 30th June.

The number of whole-time students who work in one class is 15.

Den Grafiske Højskole 3B, Julius Thomsens Gade, Copenhagen V (Denmark)

Principal : Svend Jensen
Year of Foundation : 1943
Authority : The Danish Graphic Arts Employers' Association.

Number of Teachers :	
Whole-time	... 6
Part-time	... 50
Total	... 56
Number of Students :	
Whole-time	... 50
Part-time (day)	... 0
Part-time (Evening)	... 200
Total	... 250



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Whole-time Students

Minimum age of entry : on an average 20 years.

Usual length of course: 18 months.

Students are trained for management. Another whole-time course is available for instruction in graphic arts design. Students are accepted from all countries on condition that they understand the Danish language.

Part-time Students (Evening)

Almost all the evening students are employed in the printing industry. On an average evening students attend classes during 2 hours each week, and for a total period from one to four semester.

Whole-time Course for Young Managers

The subjects of theoretical instruction include printing technology, colour work, paper technology, optic reproduction, letter analysis, letter designing, layout, workshop arrangement, physics, chemistry, mathematics, economics, book-keeping and accountancy, costing, budgetary control, advertising, art labour relations. Workshop practice includes typesetting, letterpress printing, lithography, process engraving, and book-binding.

The students work 6 hours each day and 34 hours each week. They work 35 weeks during one year.

The academic year is divided into two semester from 6th January to 30th June and from 1st September to 15th December.

The number of whole-time students who work together in one class is about 25.

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NEWS & NOTES

Mudrak Parishad, Patna

The first annual general meeting of Parishad was held on 28th November 1957 at Patna at which the following office-bearers were elected.

Office bearers

President :

Sri Aswini Kumar Sinha, Vaishali Press, Patna.

Vice-President :

Sri Girdhari Lal Sharma 'Garg' Janmbhoomi Press, Patna City.

Hony. General Secretary :

Sri Ashok Kumar, The United Press Ltd., Patna.

Hony. Joint Secretary :

Sri Mohit Mohan Bose, Tapan Press, Patna.

Hony. Treasurer :

Sri Mohan Lal Bishnoi, Mohan Press, Patna.

Members of the Executive Committee :

1. Sri Jainath Mishra, Ajanta Press, Patna.
2. Sri Maithili Sharan Singh, Himalaya Press, Patna.
3. Sri C. L. Dutta, National Art Press, Patna.
4. Sri Mani Shanker Lal, Nav-Jivan Press, Patna.
5. Sri Murlidhar Gupta, Shyam Bihari Press, Patna.
6. Sri S. H. Razi, Union Press, Patna.
7. Sri Brahmdeo Prasad, Kalika Press, Patna.
8. Sri Ram Krishna Thakur, Hunkar Press, Patna.
9. Sri A. S. Virley, Swatantra Press, Patna.
10. Sri Ayodhya Prasad Jha, Hindustani Press, Patna.

GOVT.'S IMPORT POLICY

(Continued from page 1)

picture films, a reasonable attitude would dictate priority to these over raw films.

Besides, there is another point which should be taken into consideration in the administration of our import policy. There are about 20,000 printing presses in India, big and small. Although many of these require major improvements to produce standard quality work, still there are quite a few which can turn out work, comparable with that of the best presses in the world. Like our proverbial agriculturist, many of these printing presses are under-employed and under-utilised. Many of them have enough work only for a part of the year. There is therefore a large amount of idle capacity in our printing presses, which can all be brought under utilisation to meet the prospective increase in the demand for printed books, with the planned development of education envisaged in the Second Plan. This should be done before the States Governments are allowed to set up new presses and thereby add to the existing idle capacity in the industry. Therefore to allow the States Governments to import printing machinery at this stage would only mean a prodigal use of our valuable foreign exchange.

There is an urgent need for a sincere and practical approach to the

import policy with regard to the printing machinery and for graphic art goods for photoengraving and offset printing industry. There is no necessity to fritter away lakhs of rupees worth of foreign exchange for Central or State Government presses now, when there is idle capacity available with private presses. It is absolutely essential to give enough licence for process plate and litho films etc. so essential for education and propaganda, especially when the amount required is only a few lakhs.

STATE AWARDS FOR PRINTING AND DESIGNING

(Continued from page 5)

later we shall catch up with those countries.

I offer my congratulations to all the winners who have been given State Awards this evening.

State awards for 19 categories of entries in the third competition for excellence in printing and designing had been presented by the President Dr. Rajendra Prasad at the opening ceremony of the Exhibition of Books and Publications, on November 21, 1957.

The competition, sponsored by the Union Ministry of Information and Broadcasting, to encourage higher standards in graphic arts attracted this year about 7,000 entries, as compared with 5,000 last year. The categories for which awards have been made are : Books for children below and above ten years ; illustrated books ; art books ; book production (English) ; book production (Indian languages) ; books on Indian-made paper ; daily newspapers in English and Indian languages ; display advertisement layouts ; art magazines ; house journals ; periodicals ; posters ; folders (offset, photogravure and letterpress) ; calendars (offset, photogravure and letterpress) ; diaries ; type faces (Devnagri) ; publicity booklets ; labels ; and the best bound book.

The following is the full list of awards :

Title	Printer	Publisher
Category 1—Books for Children below ten years		
FIRST PRIZE Chabi Anka-Kha.	Sree Saraswaty Press, Ltd.	Narendra Nath Dutt, c/o. Shishu Sahitya Samad (P) Ltd., Calcutta.
SECOND PRIZE The Escape From Agra—Scenes from Indian History.	Western Printers & Publishers, Bombay.	Oxford University Press, Bombay.
Category 2—Books for Children above ten years		
FIRST PRIZE Din Dupuray.	Modern India Press.	The Signet Press, Calcutta.
SECOND PRIZE Raja Sivaji	Karnatak Press, Bombay	Karnatak House.
CERTIFICATE OF MERIT Buddh Charith.	Karnatak Press, Bombay.	Karnatak House.
Category 3—Illustrated Books.		
FIRST PRIZE The Way of the Buddha	Times of India Press.	Publications Division.
SECOND PRIZE Hundred Years of the University of Calcutta.	Sree Saraswaty Press.	University of Calcutta.
Category 4—Art Books		
Nil.	Nil.	Nil.
Category 5 (a)—Book Production (English)		
FIRST PRIZE Bolt & Nut Catalogue and Price List.	Bennett Coleman & Co. Ltd.	Guest, Keen, Williams Ltd.
SECOND PRIZE Visva-Bharat & its Institutions.	Gouranga Press (P). Ltd., Calcutta.	Visva-Bharat, Santiniketan.
CERTIFICATE OF MERIT Bituminous Road Construction.	Bennett Coleman & Co., Ltd.	Burmah-Shell Ltd.
Category 5 (b)—Book Production (Indian Languages)		
FIRST PRIZE Kankavati.	Navana Printing Works.	Navana.
SECOND PRIZE Bichitra Bibana.	Modern Indian Press.	The Signet Press, Calcutta.
CERTIFICATE OF MERIT (1) Ramayana. (2) Everest Veera. (3) Sadain Jawan Sadain Nirogo.	Sree Saraswaty Press. The Wesley Press, Mysore. Hindustan Sahitya Malla, Bombay.	Shishu Sahitya Samad. Kavyalaya Publishers, Mysore. The Hindustan Sahitya Malla, Bombay.
Category 6—Books on Indian-made Paper		
FIRST PRIZE Glossary of Indian Medicinal Plants.	Catholic Press, Ranchi.	Council of Scientific & Industrial Research, New Delhi.
SECOND PRIZE Babir Bandhu (Children's Story Book).	Sree Saraswaty Press.	The Signet Press, Calcutta.
CERTIFICATE OF MERIT The Wealth of India.	Government of India Press, New Delhi.	Council of Scientific & Industrial Research.
Category 7 (a)—Daily Newspapers (English)		
FIRST PRIZE (1) "The Statesman," Calcutta. (2) "The Tribune," Ambala.	The Statesman Printing Press, Calcutta. The Tribune Press, Ambala.	The Statesman (Private) Ltd. The Tribune.
SECOND PRIZE "Evening News of India," Bombay.	The Times of India Press, Bombay.	Bennett Coleman & Co., Ltd.
Category 7 (b)—Daily Newspapers (Indian Languages)		
FIRST PRIZE "Hindustan" (Hindi), New Delhi.	Hindustan Times Press.	Hindustan Times Press.
SECOND PRIZE "Nav Bharat Times," Bombay.	The Times of India Press, Bombay.	Bennett Coleman & Co., Ltd.
CERTIFICATE OF MERIT "Prajavani", Bangalore.	Deccan Herald Press, Bangalore.	Deccan Herald Press, Bangalore.

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Title	Printer	Publisher
Category 8—Display Advertisement Layout		
FIRST PRIZE Display Advt. Layouts (Group).	D. J. Keymer & Co., Ltd., Bombay (Advt. Agency).	Burmah-Shell.
SECOND PRIZE Display Advt. Layouts (Sales Bulletin).	J. Walter Thompson & Co., Private Ltd., (Advtg. Agency).	Air India International.
CERTIFICATE OF MERIT (1) Display Advt. Layouts (Sanforised).	J. Walter Thompson & Co., Private (Advt. Agency).	Cluett Peabody & Co. Inc.
(2) -do- (Calicloth)	Shilpi Private Ltd.	Calico Mills, Ahmedabad.
Category 9—Art Magazines		
FIRST PRIZE Marg.	Commercial Printing Press, Bombay.	Marg Publications.
SECOND PRIZE Art in Industry.	Sree Saraswaty Press.	M/s. Indian Institute of Art in Industry.
CERTIFICATE OF MERIT Indian Photography.	Gossain & Co., (Printers) Private Ltd., Calcutta.	Progressive Publications, Calcutta.
Category 10—House Journals		
FIRST PRIZE Stanvac Magazine.	The Times of India Press, Bombay.	Standard-Vacuum Oil Co., Bombay.
SECOND PRIZE Dunlop Gazette.	Gossain & Co. (Printers) Private Ltd.	The Dunlop Rubber Co. (India) Ltd.
CERTIFICATE OF MERIT Burmah-Shell News.	The Times of India Press, Bombay.	Burmah-Shell Oil Storage & Distributing Co. of India Ltd.
Category 11—Periodicals		
CERTIFICATE OF MERIT (1) The Times of India Annual, 1957. (2) Navaneet (Hindi-Digest).	The Times of India Press, Bombay. The Associated Advertisers & Printers, Bombay.	Bennett Coleman & Co. Ltd. Navaneet Prakashan Ltd., Bombay.
Category 12—Posters		
FIRST PRIZE Air-India International—India.	Bombay Fine Art Offset & Litho Works, Bombay.	Air India International.
SECOND PRIZE Banares—India.	M/s. Bolton Fine Art Litho Works, Bombay.	Directorate of Advertising & Visual Publicity.
CERTIFICATE OF MERIT (1) Indian Coffee. (2) Handloom.	Associated Printers (Madras) Private Ltd. G. Claridge & Co., Ltd., Bombay.	Coffee Board, Bangalore. The All India Handloom Fabrics Marketing Co-operative Society Ltd.
(3) Arvind Quality Fabrics.	G. Claridge & Co., Ltd., Bombay.	Arvind Mills Ltd., Ahmedabad.
Category 13 (a)—Folders (Offset/Photogravure)		
FIRST PRIZE Banares—India.	The Eagle Lithographing Co. Private Ltd., Calcutta.	Directorate of Advertising & Visual Publicity.
SECOND PRIZE Codel Cortone—Tablets.	Ganges Printing Co. Ltd., Silpore, Howrah.	Martin & Harris Private Ltd.
CERTIFICATE OF MERIT Dumex.	M/s. New Era Printing Press, Bombay.	Dumex Private Ltd., Bombay.
Category 13 (b)—Folders (Letterpress)		
FIRST PRIZE Crystal Room Air Conditioner.	The Times of India Press, Bombay.	Voltas Ltd., Bombay.
SECOND PRIZE Wise Shopping (Hindi).	M/s. New Era Printing Press.	D. J. Keymer & Co., Ltd., Bombay.
CERTIFICATE OF MERIT What Do You Mean By Value?	Rational Art & Press Private Ltd., Bombay.	Glaxo Laboratories (India) Private Ltd., Bombay.

Title	Printer	Publisher
Category 14 (a)—Calendars (Offset/Photogravure)		
FIRST PRIZE Burmah-Shell.	The Eagle Lithographing Co., Private Ltd., Calcutta.	Burmah-Shell.
SECOND PRIZE Air-India International.	The Times of India Press, Bombay.	Air-India International.
CERTIFICATE OF MERIT (1) National Savings.	M/s. Bolton Fine Art Litho Works, Bombay.	Directorate of Advertising & Visual Publicity.
(2) Birds.	The Times of India Press, Bombay.	Guest, Keen, Williams Ltd.
Category 14 (b)—Calendars (Letterpress)		
FIRST PRIZE Handloom.	Glasgow Printing Co. Private Ltd., Howrah.	Directorate of Advertising & Visual Publicity.
SECOND PRIZE Birds of India.	M/s. Caxton & Co., Calcutta.	M/s. William Jacks & Co., Ltd. Calcutta.
CERTIFICATE OF MERIT (1) Musical Instruments of India. (2) Indian Steamships.	Sree Saraswaty Press Ltd., Calcutta. Gossain & Co. (Printers) Private Ltd., Calcutta.	J. Walter Thompson Co., Calcutta. Alpha Advt. Service, Calcutta.
Category 15—Diaries.		
FIRST PRIZE (1) India—1957—Pictorial Diary. (2) 1957	Glasgow Printing Co., (Private), Ltd., Howrah. Tata Press (Commercial Printing Private Ltd.)	Directorate of Advertising & Visual Publicity. Tata Industries (P) Ltd.
SECOND PRIZE 1957—Pocket Diary.	Thackers Press, Bombay.	Burmah-Shell.
Category 16—Type Faces (Devnagri)		
FIRST PRIZE 8 point Body Type.		Sree Type Foundry, Calcutta.
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CERTIFICATE OF MERIT 20 Point Book Face.		do
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CERTIFICATE OF MERIT "Safety First" (Hindi)	The Times of India Press, Bombay.	A.C.C. Bombay.
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CERTIFICATE OF MERIT Brooke Bond Tea.	The Calcutta Photo-type Co., Private Ltd.	M/s. Brooke Bond India (Private) Ltd.
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FIRST PRIZE Choice Handicrafts From India.	The Caxton Press Private Ltd.	All India Handicrafts Board, New Delhi.
SECOND PRIZE All-India Rural Credit Survey Volume I	The Times of India Press, Bombay.	The Reserve Bank of India, Bombay.
CERTIFICATE OF MERIT Diary 1957	Bengal Book Binding Co., Calcutta.	The Calcutta Chemical Co., Ltd., Calcutta.

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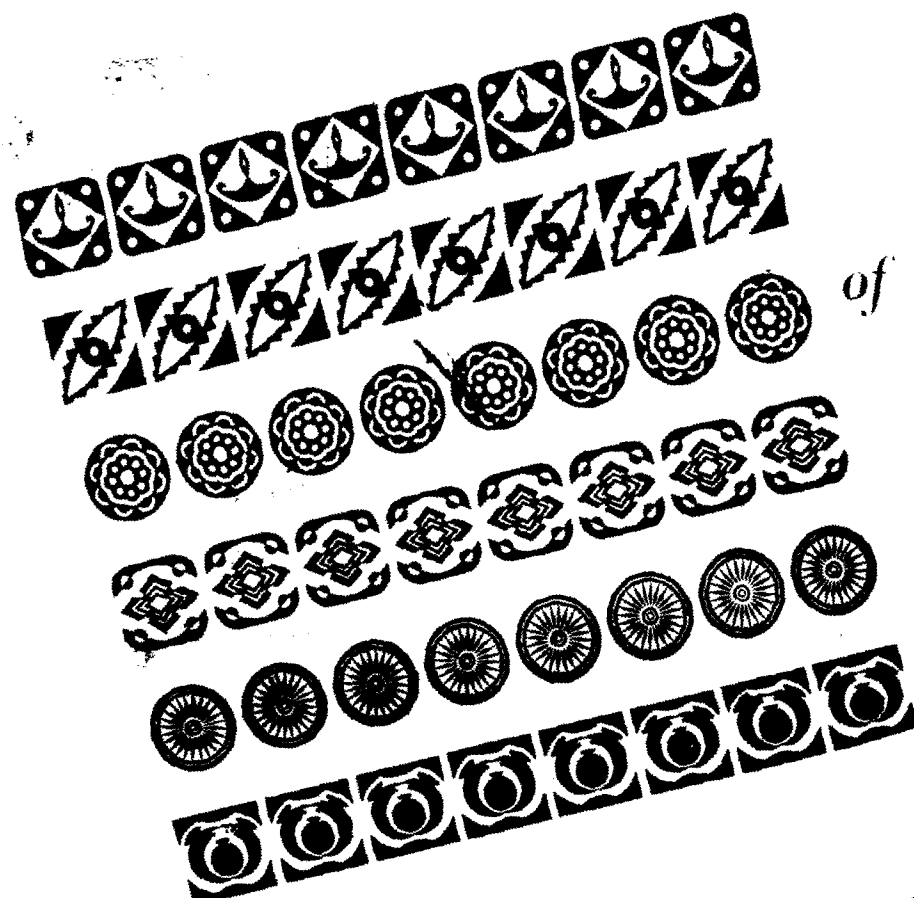
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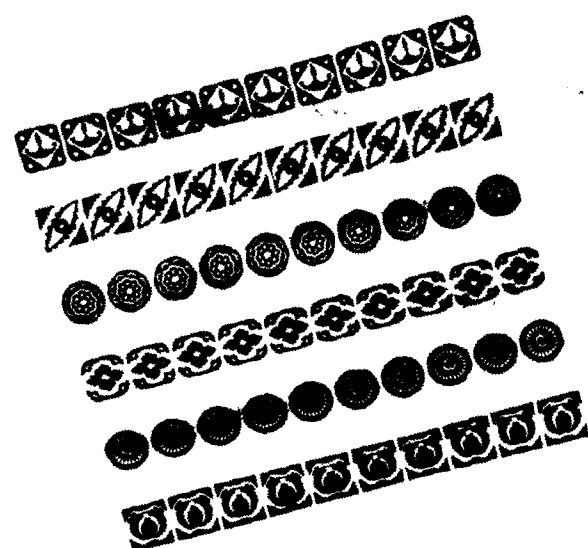


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