VOL. XXXVI NO. 4 OF THE
MONOTYPE RECORDER

WITH ARTICLES ON TYPOGRAPHIC DESIGN

Reading the Specimen Book, p. 3; *The "Price" of the Second Colour*, p. 9

— AND TECHNIQUE:

R. C. Elliott on *Quadding*, p. 13; Harold Waite on *Vertical Rules*, p. 18;
Making and Testing a Paper Ribbon, p. 22, &c.

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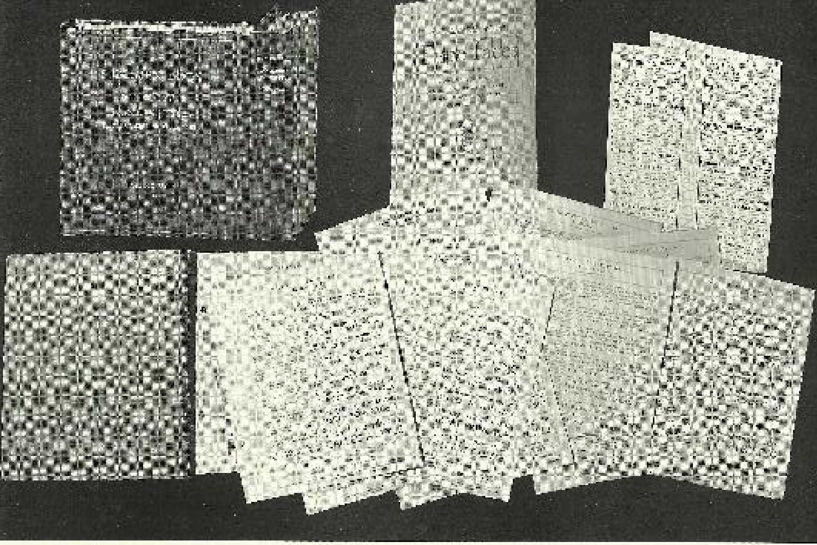

[illegible] Monotype [illegible] PRINTING OFFICES using Monotype [illegible] The "[illegible]" [illegible]

[illegible] The TYPE FACE CHART (top right), is a [illegible] typography.

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Monotype Recorder

A QUARTERLY JOURNAL FOR USERS & POTENTIAL USERS OF "MONOTYPE" MACHINES AND SUPPLIES

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THE MONOTYPE CORPORATION LTD., 43 FETTER LANE, LONDON

MONOTYPE *Registered Trade Mark*

A TYPEFOUNDER

OF THE EIGHTEENTH CENTURY

TEACHES HIS SUCCESSORS

"Finally, those into whose hands this specimen may come [illegible] unfortunately the entire series of type. Founders now judge merely by the names of fonts; however, [illegible] to imagine that founders never make any changes in them. Any particular type is susceptible of several arbitrary changes. It is possible to increase its body height or narrow the width so as to serve as *Philosophie* or *Parangon* as well; and to see the same face cast on several different bodies. These *changes* are often so skillfully made that one must be a connoisseur to recognize the face. As it is possible to be a skilled Printer without knowing much typefounding, I have therefore felt it my duty to make this observation for the benefit of those who may not be familiar with such matters . . ."

Translated from part of the Preface to

CLAUDE MOZET'S SPECIMEN BOOK, PARIS, 1743

READING THE SPECIMEN BOOK

PAGES WHICH TELL A STORY OF TYPOGRAPHICAL PROGRESS

Members of the printing and large publishing firms who possess our two-volume loose-leaf specimen book can deduce, from its successive numbered series, something of the history of "Monotype" machines and what they mean to the world. The Book Faces volume is apt to mislead the outsider, for the kerns seen in the current specimens of Series Nos. 1, 2, etc. were later improvements. Still, the series preceding No. 101 (Imprint, cut in 1912) do represent the period when it was a great triumph for us to be able to quote a letter (dated 1908) from Mr. John Murray, saying that he had "for some considerable time past" had many of his books set on "Monotype" machines, and had "never found any [illegible], or indeed any comparison, between type so set and type set by hand".

In those days it was enough for us to be able to prove that single-type machine composition was not lowering the standards so jealously maintained by the great book houses of England and Scotland. If the book faces of the day were rather dry and spiritless, compared to older designs, few people had asked the founders for anything better—and no one thought of asking, until Mr. Gerard Meynell and his colleagues on the *Imprint* magazine challenged us in 1912 to produce a twentieth-century re-statement of Caslon. But by that time our position in the book field had already been secured.

"JOBBING" A CHANGING TERM

The "Jobbing" volume is the more revealing of the two. It should be borne in mind that the attachment for casting types to 36 point for case was a new thing in 1908. What had happened in the meantime was that "Jobbing" series were demanded of us, and supplied, in sizes up to 12 point. This is important to note, because it helps to clear up a vexatious problem in nomenclature.

"Jobbing" means in effect "not continuous reading matter". A sans-serif or ornamental letter, or any other letter *differing in design* from normal roman and italic, is unfit for continuous reading. A bold is too black for continuous reading. *Any 36 point*, even of the most "normal" roman or italic design, is unfit for continuous reading. The Victorian printers lumped these three categories together—the too queer, the too black, the too large—and called them all "Jobbing Founts". "Founts", not "designs", because in those days a fount of type was a more "real" thing than it is to-day: it was not thought of as metal temporarily forced into this or that design, it was a purchased thing.

But the old categories have broken down. For example: Bembo 36 point type is certainly not book type. But the Bembo *Series* (design) is certainly a "book series", because its primary purpose is to be extremely readable and pleasant in the "book sizes"—around 12-point. So the modern printer speaks of "a display size" of Bembo, and looks for it in our Book Faces volume.

TYPE FAMILIES—A MODERN CONCEPT

But it needs some explanation when a press printer, having decided to install say 8, 10 and 12 point Garamond 156, has to turn from its specimen leaf in the Book volume to that of Series 201 in the Jobbing volume to find the suitably-related Bold of that same design, matrices of which he will put in the same matrix-case and use for the same text-book! Technically Garamond Heavy is still a "Jobbing Series", because its colour, which gives it such fine emphasis, is too heavy for continuous reading. But that means little to the printer of the post-Benton era.*

Linn Boyd Benton invented the mechanical engraver of punches and matrices in 1885, probably the most important date in the history of typography. Apart from making composing machines practicable, it changed everyone's attitude towards type faces, by transferring the emphasis from size to design. Benton's younger friend, Mr. Henry Lewis Bullen, of the American Type Founders' Company, who was also a friend of the great trade-printer Theodore L. De Vinne, was the first to seize on the immense implications of the change. The "related bold" and the concept of the "Type Family" (of one basic design) are main developments. Another was the idea of naming, not merely describing, book faces. Typographers to-day glibly say "Caslon" and mean a recognisable way of treating curves, serifs, stems and proportion so as to produce a well-known design. But it was Mr. Bullen, we believe, who thought up that label in place of such awkward ones as "The A.T.F.'s recutting of Messrs. Caslon's Old Face No. 1".

So what we have called the "post-Bentonian" has produced its utterly different attitude to type and type design. Our first "jobbing series" were reckless of design—girder-looking Latin Antiques and Grots, Plate Gothics, Albions and other series that showed in every line that they would never be allowed inside a book office. The Victorian handbill was just then turning into the newspaper "displayed" ad., and changing very little in its style. It was the standardised style developed by a generation in which all advertising was thought of as ranting, and therefore loud. It was the esthetic result of assuming that a type face was either fit for continuous reading or only fit for "jobbing", i.e. Outer Darkness. A bold was a distinct category of face—as distinct as a script.

ENTERING THE DISPLAY FIELD

So again our earlier series, this time in the Jobbing Book, put the new machine to merely providing what the founders could provide—and even then, only in the composition sizes, which prevented some of the worst monstrosities of 1907–8 from entering our repertory.

Our first "display repertory" consisted of a number of interesting jobbing faces imported from America. In 1913 we issued a book of 50 sheets of specimens of Display Matrices, with a card slipped in to a pocket at the front offering the matrices of 32 series (including six italics) on loan, in sizes from 14 to 36 point. The Introduction said "What may be termed 'Fancy Faces' are rarely met with to-day, therefore none have been included. Instead, we have confined ourselves to the purely legible". But that same page of Introduction heralded a time when there would be something handsomer than Clear Face Bold and the like, to put on the "legible" side, for that page happens to be the first appearance of our Series 110—Plantin—which was to become the spearhead of the post-war improvement of advertising typography.

It was by cutting large sizes of "classic" faces like Plantin that we first exerted an influence on modern display style. Not until 1924 did we cut a series that was obviously designed for large sizes only—our Bold Face Outline. There was a great [illegible] of book faces to develop, and no time to do anything more in "jobbing" design than to keep pace with the demand for larger sizes. Gill Sans (1928) was our first important "origination" in this field, and even to-day we make no attempt to set new fashions in display. Our customers are fairly evenly divided between those who think we bring out too many new faces, and those who reproach us for not "seizing the [illegible] leadership" in display by issuing far more novelties! Our middle course is to originate display designs only when we feel certain that the new design will keep on being an asset to the printer—e.g. Albertus, which is [illegible] useful even to [illegible] Bold Letter.

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* [illegible] family of "Times [illegible]" [illegible] this issue.

The crumbling of the old wall between "book" and "jobbing", and the coming of new concepts like "display", "type families", [illegible], etc., has in many cases led our customers to abandon the old categories, and rearrange their books in alphabetical order of series names. That is why we had to include index-pages of names as well as of numbers. Anything is possible with a loose-leaf book (so long as it is kept up-to-date), and with the help of a few index-tabs it is easy to group the 27 sheets of the different Gill Sans series together, to put all Plain Gothics, etc., together and to label the two volumes simply A to M, N to [illegible], etc. We have not ourselves abandoned the two main categories, because most printers still think in series-numbers, and those who do not are more likely to leave the complete book on the reference shelf and use our Blue Portfolio (made up of selected sheets "likely to be consulted")* for use on the desk.

The latter is almost always made up of sheets regrouped in alphabetical order of names, so that one index is tabbed so as to locate an entire type family, such as the series comprising "Monotype" [illegible]. Those to whom this arrangement seems the only reasonable one may be reminded that it is based on typographical concepts which scarcely existed until our own generation, whereas the practice of quoting series numbers in specimens circulated by suppliers to printers is at least two centuries old. The hard-and-fast distinction between "book" and "jobbing" types is still older. It is still possible for a busy printer to equip himself with a book face without realizing that it has a relative bold face for combination setting on the same matrix case, perhaps because only the name index of our official specimen books brings the two series in juxtaposition.

For that reason we print on page 8-9 specimens of some of the principal series for which *bold weights of the same design* are available. These specimens give information as to the sizes cut to date. Not every classic book face has its own heavy or bold weight; indeed, it can be said that the announcement by us of the cutting of such a variant constitutes our recognition of a fairly widespread demand for the "combination fount" from the catalogue or other general printer outside the book field.

THE NEWEST TREND: ALTERNATIVE DESCENDERS

Indeed, types and faces have changed in forty years. The newest development has only begun to be indicated in our Specimen Books. It is the modern typographic practice of [illegible] casting, [illegible] the "x" of a letter—the part of the lowercase between the top and bottom serifs of the x—and [illegible] the actual point size of the type [illegible], according to whether it is wanted for a narrow column or a wide one. A 10-point face "on 9", or "cast" one point [illegible] on 11 with substituted long-descender sorts, all come to the same thing as regards legibility, but it is not the same [illegible] the 10-point face of the series on its own body. It is quite possible that in time to come all the best "permanently and universally good" faces will be equipped (as demand arises and as our Times New Roman has been equipped) with short descending letters suitable for narrow column (periodical) use, and alternatively with "book descenders"—long ones—allowing for a more graceful g.

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* The [illegible] "Blue Portfolio" [illegible]

Meanwhile the Specimen Books show 564 different numbered series, not counting italics. These include four Cyrillic, five Greeks, seven Hebrews, two versions of Tamil and some fine Devanagari, Gujarati, and Telugu. Our Frakturs (not normally included in the British volumes) number no fewer than 50 and the great increase in that group since 1933 tells its own story of a nationalistic revival of gothic. Faces cut at the private commission of famous houses such as the University Presses are not mentioned in the general Specimen Books; sometimes they account for missing Series numbers.

The not infrequent appearance in our Specimens of a series cut only in Didot points (with English equivalents) and the very general existence of special (extra) Didot sizes, shows that the demand for many faces originated with our Continental customers. The border section, by its strict numbering in chronological order, tells its story of the changes of taste that first produced this sort of thing 〰〰〰 (20) then this ✿✿✿ (243) and finally this ▩▩▩ (CB 763), as the endless strip border arrived with the Super Caster and unsentimental rule-work took the place of the ancient "flowers".

The Book specimens have grown with every reprinting, and the sight of [illegible]-point and 24-point full faces† now reminds the reader of two triumphs that opened up new fields for the Super Caster.

Our Specimen Books are never complete: they are fully up-to-date only about once in every year, for in between the mailings of supplementary and replaced sheets our News Letter announces and displays the newest "additional sizes" and new faces. But to the discerning eye, to the student who realises that the series numbers almost always represent the chronological order of the issue of series, these books serve as a document of the rapid changes—first in book work and then in the display field—which have brought "Monotype" machines from the days of Modern No. 1 and Latin Antique, from the days of the [illegible] headlines, to the days in which all of the "Fifty Books of the Year", all the modernised newspapers, most of the national campaigns, and the vast majority of all the "restyled" catalogues and general work of this and other lines, are set with "Monotype" machines.

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† [illegible]

RELATED BOLDS: SOME IMPORTANT BASIC DESIGNS WHICH HAVE PRODUCED BOLD AS WELL AS "NORMAL" WEIGHT AND OTHER "RELATIVES"

"Monotype" **ALDINE BEMBO** Bold 428, roman. A recent and successful bold cut to combine with "Monotype" Aldine Bembo 270 in 6, 8, 9, 10, 11 and 12 pt. composition matrices (to date). [illegible]

"Monotype" **BASKERVILLE** Bold 312, roman, cut to combine with "Monotype" Baskerville 169 in 6, 8, 9, 10, 11, 12 and 14 pt. composition; also matched roman in all display sizes 14 to 72 pt. [illegible]

"Monotype" **BODONI** Heavy 260, roman/italic, cut to combine with "Monotype" Bodoni 135 in 6, 6D ([illegible]), 8, 9, 10, 11 and 12 roman and italic, also 11D and 12D roman, composition, and as matched roman and italic in all sizes 14 to 72 pt. [illegible]

"RELATED BOLDS"—*continued from p. 6*

"Monotype" GARAMOND Heavy 201, roman/*italic*, cut to combine with "Monotype" Garamond 156 in 6, 8, 9, 10, 11, 12, 14 and 16 pt. comp., also as a mated display face in all sizes 14 to 72 pt. [illegible]

"Monotype" GILL SANS Bold 275, roman/*italic*, cut to combine with "Monotype" Gill Sans 262 or 362 in 5 to 14 pt. comp., also as a mated display face in 14 to 72 pt. (rom.), 14 to 72 pt. (ital.). [illegible]

"Monotype" GOUDY Bold No. 2, Series 441, roman/*italic*, cut to combine with "Monotype" Goudy Old Style 291, in 6, 8, 10 and 12 pt. comp. [illegible]

"Monotype" HORLEY Heavy 263 roman, cut to combine with "Monotype" Horley Old Style 199, in 6, 8, 9, 10, 11, 12 and 14 pt. comp. and as a mated display face in 14 to 72 pt.

"Monotype" IMPRINT Heavy No. 2, Series 410 roman, cut to combine with "Monotype" Imprint Old Face 101 in 6, 8, 9, 10, 11, 12 and 14 pt. comp. (This is an improved version of Series 312, Imprint Heavy No. 1.) [illegible]

"Monotype" ITALIAN O.S. Bold 149 roman, cut to combine with "Monotype" Italian Old Style 108 in 6, 8, 9, 10, 11 and 12 pt. comp. Available also in 7 and 14 comp. and 14 to 36 display.

"Monotype" PERPETUA Bold 461 roman, cut to combine with "Monotype" Perpetua 239 in 6, 8, 10 and 12 pt. comp. and as a mated display face in 14 to 72 pt. [illegible]

"Monotype" PLANTIN Heavy 194, roman/*italic*, cut to combine with "Monotype" Plantin 110 in 6, 7 (rom.), 7½ (rom.), 8, 9, 10, 11, 12 and 14 pt. (rom.) comp., and as a mated display face in all sizes 14 to 72 pt. Also combines with Plantin Light 113. [illegible]

"Monotype" POLTAWSKI Bold 290 roman, cut to combine with "Monotype" Poltawski 304 in Didot composition sizes. (Polish.)

"Monotype" ROCKWELL Heavy 391, roman/*italic*, cut to combine with "Monotype" Rockwell 371 or rom. Light 390 in 6, 8, 10 and 12 pt. comp. and (rom.) all display sizes. [illegible]

"Monotype" TIMES Bold 334 roman, cut to combine with "Monotype" Times New Roman 327 in 5½, 6, 6½, 7, 7½, 8, 9, 10, 11 and 12 pt. Available in 14 to 36 pt. display. Another mated bold is Series 213. [illegible]

"Monotype" WALBAUM Medium 375, roman/*italic*, cut to combine with "Monotype" Walbaum 374 in Didot 6, 7, 8, 9, 10, 12, 14, 16 pt., 11 pt. Eng. roman/italic, and as a mated bold in display sizes 14 to 72 pt. roman. Same 375 in Didot 8, 10, 11, 12, 14 and 16 pt.; also 14 pt. Eng. comp.

NOTE: This Summary is concerned *only* with such Bolds as are designed specifically to mate with a particular series of normal weight roman, and does not include any mention of "independent designs" (bold, semi-bold) which can be arbitrarily combined with other faces. The "mated bold" is a comparatively new phenomenon in the history of type founding.

A FURTHER ILLUSTRATION TO "PLANNING THE MODERN BOOK"

LONG DESCENDER AND OTHER ALTERNATIVE SORTS

mentioned on page 5 as a new typographic tendency:

"Monotype" BASKERVILLE 169. Long [illegible] ascending and descending sorts have been cut for the roman and are now available in [illegible], and [illegible] for 12 point. This is [illegible] point 169. This is normal 12 point 169.

[illegible]

SPECIAL LONG DESCENDER & ASCENDER SORTS

"Monotype" PLANTIN 110: Varied effects produced by using alternative ascending and/or descending character sorts. These lines are set in the "11 for 14 pt." [illegible] font of the special Long ascender and descender sorts. Solid.

This is "Monotype" PLANTIN [illegible] here set solid to show the [illegible] compactness obtained by shortening the descenders of an already short descender large face. Special sorts [illegible] in place of those [illegible]

The normal 11 pt. for comparison

[illegible]

This is new "Monotype" Plantin 110, 10 point roman and italic. Note where the [illegible] and the [illegible] 11 pt. 110.

"Monotype" TIMES New Roman 327 was first cut with the extremely short descenders that are proper for the narrow measures of NEWSPAPER work. But the face so appealed to book publishers that the demand arose for alternative long descender sorts in roman and italic. The series is [illegible] 10 for 11 pt. [illegible] There is also a 14 pt. long descender for setting on 16 [illegible], and display sizes 18 and 24 pt. roman also have long descender sorts.

For comparison: lines of 327 12 pt. *with original short descenders set solid.* All the long descender and ascender characters shown here and above are *special sorts*, the numbers of which will be quoted on request. Further sizes can be cut to order.

This is a specimen of the version of "Monotype" Centaur cut for the Oxford University Press, for use in their famous Jubilee Lectern Bible.

Mr. Bruce Rogers redesigned the normal 22 pt. of Centaur to make it a [illegible] 16 pt.

Compare: 22 point "Monotype" Centaur No. 252 roman.

"Monotype" [illegible] has the same Lower Case as the "Monotype" FOURNIER 185, used in *This Line for Comparison*. But the CAPS of Series [illegible] are *Reduced in Height* (roman and italic). This Series, available in 10, 11, 12 and 13½ [illegible], was produced for use in the world-famous Nonesuch Press *Shakespeare*, published 1929-33. This is the 12 point size, cast on 13½ point. Or right, 12 point.

[illegible]

THE "PRICE" OF THE SECOND COLOUR

In every up-to-date class in typographic design (as distinct from the mere mechanics of layout) the question of the second colour is now being approached as something more than a matter of "taste". It is introduced first from the economist's, then from the functionalist's, point of view. The one most important thing to realize when one is considering the use of a second colour is that it adds "x" per cent to the cost of the job. Having "found x" in a particular case—let us call it 20 per cent to have a specific figure—the designer escapes the danger of being hurried away from the very idea of a second colour, as he often is, on the ground that it adds "a lot" to the cost. He now has the right to go ahead and demonstrate (if he can) that this extra 20-per-cent expenditure may bring in some 25 per cent "effectiveness", in which case he is proposing a very sound investment. If the job is not meant to persuade and impress people psychologically, then of course the question does not arise; but if it is (for example) an advertising folder or brochure, it is just as stupid to wave aside the second colour "on principle" as it would be to eliminate illustrations because blocks cost too much. The point is that one knows what the blocks will cost and what they will be there for: illustrations are not put in on their own but simply as a "matter of taste"; and the second colour deserves just as serious consideration. Too often its use is taken for granted by the fledgling designer, and too often on the other hand, it is thought of by old-school printers as a mere "nuisance round the press".

Such considerations belong to elementary instruction in the principles, as well as the practice, of layout. But this article is meant to go further into that question of the "cost" of the second colour than many textbooks on design are willing to go.

We may start with the obvious principle that no man deserves a second colour if he is not willing to pay for it. We may go on to agree that "payment" is not always wholly a question of money-payment, though money is generally a symbol of willingness-to-make-good (as when a dinner-guest breaks a Spode coffee-cup). Now we can talk about the whole fair "Price" of the Second Colour.

One great difficulty which confronts the instructor in typographic design is that he is bound to inculcate "guiding principles", yet is almost entirely debarred from showing how these principles are actually applied. While, as a conscientious teacher, he bids his students imagine typical problems; but until he has "supposed", in some detail, the amount which the customer can afford to spend and the degree to which the imagined printing office is equipped to return a good money's-worth, he has not stated the problem fairly. His temptation is to suppose too much, for the sake of his perfect for argument.

WHERE IS THE REAL "SECOND COLOUR"

Then he may point out, quite rightly, that before the second Red is considered, one must be quite sure that one has made ample use of the real "second" colour to Black, which is White—white space. Is it scattered about inadequately, or is it massed with dramatic effect? Are the margins sufficient, and is there ample leading between lines and paragraphs? If not, the business of putting in more White may necessitate extra pages or a larger format, or more expense of layout time, or a revision of the copy. At least it is obvious that until "the colour White" has been properly allowed for, the designer has not given the estimator the full facts on which the customer can be told how much more the job will cost in black and red. A percentage of "x" is a very unsatisfactory figure to give him; and to the customer "x" always means more than "the cost of printing the job in black". It means "the cost of securing the maximum possible money's-worth of black and white printed sheets that convey a message".

So much the designer can tell his students without going beyond the scope of his subject. To bring it down to practice, he may call upon each student to design (say) a brochure in two colours, and then show the class how one layout made the red forme add extra effectiveness to an already effective piece of black and white, while another merely fell back on the enlivening effect of red to put some "interest" into a basically feeble, undeliberate layout. In the good example, he would say, the designer has "paid the price of the second colour" by paying out thought and ingenuity on the black forme and the white paper. For the second case he can give as a parallel the young wastrel who counts on a rich uncle to get him out of his difficulties—until the uncle decides to invest in another object.

So far so good. The student's natural desire to splash about with vermilion has been dealt with tactfully; he has been taught to think of the use of red as a privilege to be earned, not as a crutch to be leaned on. But unfortunately he is still forced to consider the whole problem as one of layout, and in doing so he is taking something for granted which no practical printer would ever take for granted unless the matter were under his full control.

WHAT LAYOUT MAY IGNORE

For when a designer says "black" he is speaking of something over which he (as a designer) may have very little control: namely the effect of covering new type evenly with high-grade ink, after enough unhurried make-ready and trial proofing to ensure perfect justice for half-tones and type, and then printing it on the right paper with studied skill.

That is what "black" means, or should mean, to the designer. And if he has any say at all beyond the layout stage, he has the right to emphasize the difference between "black" in his sense and the "dapple grey" which results from economizing printing type (worn or new) and blocks with the cheapest inks, then allowing them insufficient make-ready, and then hurriedly printing upon the cheapest variety of the specified kind of paper.

The practical printer often cannot afford to split hairs that way. He knows that the difference between cheap and high-grade ink can be as much as 5s. a pound; he knows (in minutes) the difference between perfunctory and assiduous make-ready, and nothing irritates him more than to work for a customer who appreciates the extra value of good machining, on paper that is "right for the job". But he also knows that if he estimates for every job on the understanding that the black forme is to have absolutely "A1 treatment", he must either lose or revise a considerable number of estimates.

It is morally wrong, the printer says, to revise his estimate by simply knocking off the profit, because if it were his profit (as an individual) that he would sacrifice, he would be robbing his firm and endangering its health as a firm. Price-cutting in this sense, is morally wrong because it connives with the customer to rob the firm of its fair profit. But (the printer goes on to say) no reproach whatever is attached to the straightforward Re-statement of a Re-price: so much less value for so much less price. It need not be stated so bluntly, either, for the rule *caveat emptor* applies to any such bargain.

WHAT PRINTERS WILL REALIZE

There is always a point at which the customer perceives the absurdity of saving any more pennyworths of ink, and faces the logical question whether he should not save the whole cost of the job by simply abandoning it. Unfortunately it is not to the printer's interests to instil hope to that effect. The nearest that practical printer can come to it is to say "Really, you know, you're looking for a cheap-jack house. We can't afford to use the dirt-cheap materials you want, and we can't afford to let our craftsmen imagine that there are two standards of workmanship under one roof. We don't buy our blocks in the lowest market, and we shouldn't be able to retain our highly-skilled machine minders very long if we stifled them in the 'price cutter's atmosphere', in which scrupulousness is considered a luxury." The practical printer can, and does, imply all that in the very few words in which he turns down certain kinds of requests for estimates. But it is a pity that he does not often resolve to say it out loud, and to go on and show why his own customers are very content indeed that he should make a privilege of treating his workmen fairly (by not insulting their pride on shoddy materials) and treating every job fairly, by giving it impeccable presswork.

But the independent typographic designer often has no way of telling in advance, while he is making his layout, whether the job is to be handed to a good printer to be produced on his own fine terms, or whether it is to go to a house which has become bitterly cynical about the customer's ability to see anything wrong with a cheap job, short of a glaring misprint or a penny on the bill that was not on the estimate.

Yet until that fact is ascertained, the designer is unable to find out whether the customer *is willing to pay*, in the whole realistic sense, for the first colour. If he is not, he has no moral right whatever to a second colour. Any sort of robbery is wrong, including the robbery of Peter to pay Paul, and this one would be particularly stupid, for the job, instead of looking like a *modest failure*, would look like an extravagant and pretentious failure. The page that has a milky or spotty black impression is bound to be overprinted with a thin, feeble red or blue; and crudity and vulgarity make all the difference in the world to the second colour.

This is, of course, none of the layout man's business. He is paid to arrange ("lay out") words and pictures in effective order and style. But that is precisely *where* a mere layout man differs from, or falls short of being, a designer.

A DESIGN IS "AN INTENTION"

To design means to intend, to have or perceive certain definite intentions, and to "realise" those intentions. A bad design is one in which it is difficult to spot the precise intention; it has been befogged or dissipated at some stage. Hence the first and unending responsibility of the true designer is to make quite clear what the person "in charge" really intends. If he finds a swarm of vague, half-formed, contradictory intentions, it is his duty to ask leading questions and even to preach and advise. If he finds that the strongest single intention is to Save Money, he naturally recommends saving all the money except the Advisory Fee which he charges to bring them to their senses and make them value his advice. He has the right to do this questioning and following-up because he is a *designer, a carrier out of intentions*, and he has not earned his money until the whole intention has been faithfully carried out. In typography that means until the printed copies are in the hands of the readers whom they were intended to reach. Anything that goes wrong in between, from a flimsy envelope that delivers the job crumpled back, through bad presswork, careless binding and badly spaced composition, back to his own choice of type faces, paper, etc., can be laid at his door so long as he has engaged to *design a piece of printing*, and not merely to "make a layout". Awareness of that makes him a realist. He learns to cut his coat according to the cloth, and above all to take the blame, and take it eagerly, for his decision. For the man who cannot be blamed cannot be thanked; and where no thanks will be due, no designer is needed — the job can "go through on its own".

Realising this, the good designer of typographic design will take vastly more interest in presswork than he has generally shown in the past. And he will not hesitate for a moment to point out that, when one must deal with a "dis-spirited" printing office, where a low general standard of presswork obtains, it is best to offer the "price" of the second colour by informing that startled and incredulous house that its estimate for the job should be based on the finest possible machining, the finest ink, ample time for make ready, and paper worth printing on. After that they may print only one. They choose a good printer, accept his fair price and take the machining, etc., for granted.

In that way the customer is prevented from getting his second colour by cheating. It is the misfortune (and glory) of good designers that they cannot keep morality out of their work; and that it paralyses their wits, their source of livelihood, to connive at cheating. Incidentally, it breaks their hearts to see the intention of the job wrecked by bad craftsmanship. Hence we shall have better and more dependable designers when all of them are taught to feel as "responsible" for the quality of presswork as for the layout; and when they all refuse to talk about a second colour to a man who is not prepared to pay what his Black and White deserves.

IT IS WELL KNOWN that William Caslon closely followed Dutch type designs in his famous old face. At the time that he began to work, there was probably more Dutch than English type used in England. Joseph Moxon, the doyen of English writers on the craft, extolled the qualities of Dutch types and says "I like their Letter so well, and especially those that were cut by *Christoffel van Dijck of Amsterdam*."

Moxon in praising Van Dyck's letter was of course indirectly paying a tribute to the skill of those founders who had preserved intact the style and proportions of the first old face which was cut by Francesco da Bologna for Aldus Manutius in 1495. The high reputation which the Dutch founders enjoyed in the early years of the eighteenth century was due to the tradition of designing and cutting maintained by such masters as Garamond and Granjon.

The present version of Van Dyck's type is based on printed specimens and has been interpreted by Mr. J. van Krimpen, the designer of Lutetia, Romanée, and the Antigone Greek. In the italic the [illegible] had the advantage of the Great Primer of Van Dyck which is still in the possession of the celebrated Foundry of Enschedé & Sons of Haarlem, Holland.

The style of this type is [illegible] [illegible] to the [illegible] It is instructive to compare it with contemporary faces such as Caslon's old face and the Fell type. "Monotype" Van Dyck is more regular, lighter in colour than the large sizes of Caslon, and with a serif formation that is [illegible] to study.

The type may be recognized by the [illegible] of its projection [illegible] [illegible] [illegible] This lowercase is [illegible] and the [illegible] [illegible] [illegible] [illegible] the [illegible] [illegible] Caslon's italic. The *k* [illegible], the lower bowl of *g* is flattened, and the *v* is swashed. *M*, *N* and *W* are most elegant; the *g* is uniquely [illegible], and the *J* is unusual in form. Note also *fj* and the italic [illegible].

"MONOTYPE" VAN DYCK

SERIES NUMBER 203

ABCDEFGHIJKLMNOPQRSTUV
WXYZÆŒ& 1234567890
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyzæœ
ABCDEFGHIJKLMNOPQRSTUV
WXYZ ÆŒ& abcdefghijklmnopqrstuv
wxyz æœ [illegible]
[illegible]

FACTS ABOUT "MONOTYPE" VAN DYCK 203

THIS IS NOT AN ART PAPER PAGE. [illegible]

ABOVE: This text is set in [illegible] point "Monotype" Van Dyck, Series No. 203 [illegible]

RIGHT: [illegible] point "Monotype" Van Dyck [illegible]

"Monotype" Van Dyck [illegible] italic is available in the above 2 sizes only. Other sizes are in progress and will shortly be available.

THE QUADDING AND CENTRING ATTACHMENT

Our Quadding and Centring Attachment has reached delivery stage, and many have already been supplied.

The demand for this attachment has exceeded our expectations, orders for over one hundred and fifty having been placed since our first announcement two months ago. Nearly all of these orders were placed after demonstrations at our School in Fetter Lane.

Deliveries are now being made at the rate of [illegible] attachments per week, so it will be understood that it will be some time before we can catch up with our orders. We extend our apologies to those customers who find it hard not to be impatient regarding the unavoidable delay on our part in effecting delivery, and inform users of "Monotype" machines who have not yet ordered this time-saving and type-saving attachment that deliveries can only be effected in rotation according to the date of receipt of order.

For the benefit of customers who have not seen the device the following description may be of interest.

The device is an attachment to the caster, the only alteration to the standard keyboard being a special scale, two special keybars, and two special keybuttons.

The caster attachment consists of small fittings to the paper tower and column pusher, the purpose of which is to cause the paper ribbon to remain stationary while quads or sorts are required to be repeated. The attachment serves two purposes. One purpose is to cause quads or characters to be repeated in groups of five or ten, *where the quantity required is known*; the other purpose is to cast quads or sorts continuously until the required number has been cast, when *the quantity required is not known.*

For the purpose of distinguishing these two different functions, the former process is termed "quadding", the latter "repeating", although both actions are really repeatings, one being intermittent and the other continuous.

The keyboard operator decides which process shall be adopted by depressing either the "quadder" or "repeater" key, and the final results are automatically carried out on the caster. When the quadder section is brought into use the paper ribbon is held up for five revolutions, and then released for one revolution and again locked. This action is repeated until the line is complete in length.

In left-hand quadding the "repeater" position causes the paper ribbon to remain locked until sufficient quads have been cast to make the line complete, when the line support causes an air valve to be opened to release the ribbon.

For centring a word or words in a line no estimate of the length of the word is necessary. The operator depresses the "repeater" key before recording his em scale, puts in a couple of spaces, sets the word, then two more spaces. The em scale then indicates to him how many ems are needed after the words to cause the words to be cast centred. The "quadder" takes care of these after the words, in groups of five, and the "repeater" sees to it that sufficient quads are cast before the words to make the line correct in length. By the "repeater" key a whole line of quads, no matter what the measure may be, is composed by one key depression.

The usefulness of the device is not confined merely to right and left quadding and word centring, but may be applied to a multiplicity of open-spaced jobbing work, or work where many leader lines are included. Also for [illegible], where it is only necessary to perforate once for a whole line of quads, instead of once for every one that is required.

EXAMPLES ILLUSTRATING THE PRACTICAL APPLICATION OF A "MONOTYPE" QUADDING AND CENTRING ATTACHMENT

I.—Quadding on the Right-Hand

Jones, J.
Featherstonehaugh, Rev. G.
Cawdor, D. C.

II.—Quadding on the Left-Hand

Jones, J.
Featherstonehaugh, Rev. G.
Cawdor, D. C.

III.—Centring Words in a Line

[illegible]

CENTRING LINES QUICKLY AND ACCURATELY

"MONOTYPE"

Registered Trade Mark

IV.—Price Lines: (1) Centred; (2) Right and Left Hand; (3) Right and Left with Centred Running Headings

(1)
(2)
(3)

[illegible]

[illegible]

[illegible]

THE MONOTYPE RECORDER [illegible]

[illegible] AN ILLUSTRATED JOURNAL OF TYPOGRAPHY

FURTHER EXAMPLES OF THE PRACTICAL APPLICATION OF THE QUADDING AND CENTRING ATTACHMENT

V—Leader Work (Close Limit)

Cooper, George Thomas	12	6	5	[illegible]	[illegible]	[illegible]	4	[illegible]	10
Cole, Frederick	9	8	1	100	0	0	95	0	0
Dodd, Frank Charles	14	6	5	18	13	0	30	0	0
Fillmore, Ernest	23	11	8	25	12	11	75	0	0
[illegible], John	12	0	6	15	12	6	22	10	11
[illegible], Carl	12	0	9	122	12	6	67	10	0
Holland, Frederick	7	0	6	14	11	6	9	0	0

[illegible], Mrs. M., Sheffield	12	0	0
Hall, W., Greaves, J. H., Sheffield	12	0	0
Johnson, E., Sheffield	13	0	0
Johnson, H. T., Sheffield	28	6	6
Richardson, J. H., Sheffield	25	8	11
[illegible], W., Sheffield	10	19	6
Morley, W., Sheffield	20	18	10

Hodgson & Son, Limited	Chancery Lane, W.C.2
Printers & Publishers (S.E.) Limited	[illegible]
[illegible] News, Limited	[illegible]
Chiswick & District News	[illegible] High Road, Chiswick
[illegible] & Co., Limited	[illegible]
[illegible], Limited	[illegible]
[illegible] & District Times	[illegible]

VI—Words on Right and Left: Centred Title

[illegible]	"Round the Map"	*[illegible]*
[illegible]	"The Spring Chicken"	*[illegible]*
[illegible]	"Broken Doll"	*[illegible]*
[illegible]	"Souvenir de Printemps"	*[illegible]*

ATTACHMENTS & ACCESSORIES

FOURTH REVISED EDITION OF OUR POPULAR PAMPHLET NOW AVAILABLE GRATIS

The latest revised edition of our illustrated list of Attachments and Accessories for "Monotype" machines might have been suitably recommended to readers in our recent Anniversary Number, as this pamphlet is in itself an interesting summary of the chief mechanical and technical developments of single type composing machines since the appearance of the Standard keyboard in 1908.

The one most astonishing feature of twentieth century printing, more striking to outsiders than its improvement in appearance, is its variety: not only the multiplicity of its processes, but the almost incredible number of kinds of printed matter which exist. Some of these varieties are in the hands of specialist houses, but even so the modern general printer faces in the course of a week's business, for instance, more varied challenges than his grandfather would have met in a lifetime. The printer realises of course that the greater his versatility, the wider his markets; but he also realises that it often pays him to acquire a reputation for one particular category of work. With these two aims in mind, he first guards against any inherent mechanical limitations: in other words he sees to it that no door which he might in the future wish to open up shall be barred in advance by the wrong choice of equipment. Then, having examined the "normal performance" of his equipment, he looks to see which of its potentialities for extension are most suitable to his own particular ambitions. These he develops, as occasion arises, without attempting to go at once at one stroke not only the ability to

Fig. 1

[illegible]

INTRODUCTORY NOTE

THE demand which has led to a fourth edition of this booklet itself so clearly shows that the modern printer no longer looks with suspicion on Attachments or other "extras" produced by manufacturers of machinery to secure more trade.

Instead, the modern printer appreciates the special convenience and economy of being able to convert his "Monotype" composing machine to new uses, without either having to buy a separate machine or having to buy, as "standard equipment", facilities for which he may have little or no use.

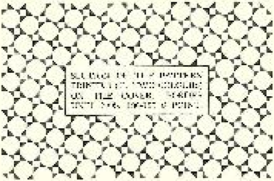
The attachments, etc., described in this book have all been put on the market in response to demands from various kinds of printing offices, newspaper, trade, etc., to reduce production costs and increase output of any particular class. A few have proved so universally useful that we have made them "standard equipment", several are in very general use. But as an example of the convenience of Attachments, let us take the case of a printer who finds "spare time" at the keyboard and starts adding attachments to his composition caster, and eventually gets his business expanded sufficiently to warrant the purchase of a Super Caster.

For the benefit of those who wish to "keep up-to-date", the most recent Attachments, etc., are marked in our Index.

TWO PAGES IN

[illegible] almost complete [illegible], but above all the special facilities which we ought or might not want in a type.

Figure 1 reproduces the page of Instructions in the new edition of our Attachments Book, in which the inherent advantage of "Monotype" machines under twentieth-century conditions is emphasized. Figure 2 reproduces a page at the end of the forthcoming edition which is a supplementary to the general index and indicates some of the most interesting functions of the machine when fitted with optional attachments. Of these the newest is the device which permits extra close spacing by abolishing the "minimum" space allowance and separating words in the line merely by equal fractions of the total space left over at the end of the line. By this means there are no separable spaces in the line, as the first letter of every word (except of course the first in the line) is simply cast with extra thickness at the left of that type. This attachment has been proved advantageous in actual use in narrow column matter requiring extra close spacing, and the ten per cent. average saving in metal, machine-hours and paper is an incidental advantage.


SECTION OF THE PATTERN PRINTED IN TWO COLOURS ON THE COVER, SHOWING [illegible] 6 POINT

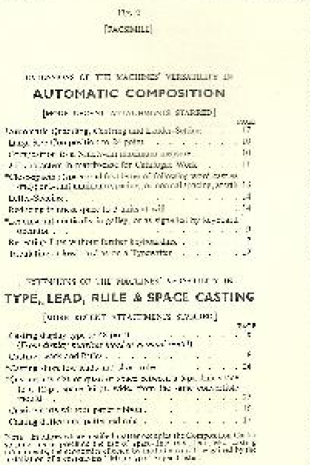


FIG. 2

[FACSIMILE]

EVIDENCES OF THE MACHINES' VERSATILITY IN

AUTOMATIC COMPOSITION

[WITH RECENT ATTACHMENTS STARRED]

	PAGE
Automatic Quadding, Centring and Leader-Setting	17
Large-Size Composition to 24 point	10
Composition from [illegible]	10
[illegible] for Catalogue Work	11
*Close-spacing: [illegible]	13
Letter-Spacing	14
Reducing the [illegible] space to 2 units of set	14
*[illegible] operator	9
Re-setting Lines without further keyboarding	7
[illegible] Typewriter	2

EVIDENCES OF THE MACHINES' VERSATILITY IN

TYPE, LEAD, RULE & SPACE CASTING

[WITH RECENT ATTACHMENTS STARRED]

	PAGE
Casting display type up to 72 point ([illegible])	5
Casting Leads and Rules	6
*Casting [illegible]	24
*[illegible] metal	32
[illegible]	12
Casting [illegible]	1[illegible]

Note. [illegible]

The Automatic Quadding and Centring Attachment, mentioned in the pamphlet, is described with examples in a special folder which is available gratis on enquiry.

The booklet will form a useful souvenir for visitors to our Demonstration Room, and a helpful reference work for those who are unable to make the visit but still wish to "keep up with 'Monotype' machines".

ON THE USE OF
VERTICAL RULES

BY HAROLD E. [illegible]

FROM THE STATISTICAL ASPECT it might be an interesting mental exercise to estimate the length of brass rule used in the printing offices of this country in twelve months. We might then learn how far, or how many times round the equator, it would reach, or if the vertical pieces were placed end to end, how many times higher than the Nelson column they would measure. Unlike most statistical calculations, such an effort would be of small value as a guide to future action, for with the growing number of installations of "Monotype" machines, printers are quickly appreciating the advantages of the lead-and-rule attachment for their composition casters; or are installing the Super Caster, feeling more confident with an efficient "typefounder" at the right side of their own doorsteps.

Even so, there are times when it is a greater economy to have a job complete with rules when it leaves the caster, and it is in these instances where the use of the vertical rule will be found to have a practical application.

Vertical rules can be cast to any thickness of the body required for the job, but for convenience let us consider the vertical rule cast on an 18-unit body and that cast on a 9-unit body. The assigned vertical rules are required for boxes, the ends and centre pieces of which complete the set. An example, taken from a stationer's catalogue, is given in Fig. 1, and as it is for measurement, the advantage of having it all at the job within a minute or two after it has left the caster is perfectly obvious.

It is, however, the 9-unit vertical rule which has in many ways been found to have a little more elasticity in use. Imagine a table, as in Fig. 2, with the items separated by horizontal rules. Such a job would need dozens of pieces of rule just an em long for the lines between the columns. By introducing the vertical rule matrix in a 9-unit position, the job is immensely simplified, the "Monotype" machine casting also the vertical rule as required and [illegible], as shown in the single specimen (Fig. 2).

Other specimens could be given to illustrate the same principle. The example shown in the diagram in Fig. 3 was produced on the keyboard as part of the ordinary day's work. The present writer knows from personal observation that the operator "filled" the copy as if it were an ordinary "Table" of a Fig. For Fig. 3 the special em-centred matrix No. [illegible] was used, on an 18-unit body, the vertical rules being on a 9-unit body, an 18-unit body could, of course, have been used if more convenient.

These examples give some indication of the variety of purposes to which the vertical rule can be applied.

CROPS

		[illegible]	[illegible]	[illegible]
Rice, Shelled, Milled		[illegible]	[illegible]	[illegible]
Whole Shelled, Mixed	Local	[illegible]	[illegible]	[illegible]
Broken Shelled, Milled	Ex.	[illegible]	[illegible]	[illegible]
All Others, mixed varieties	community	[illegible]	[illegible]	[illegible]

FIG. 3

Many other applications will suggest themselves to individual printers. There is the bill-head or invoice form, the local time-table or price list, the shop bill or ledger sheet etc. The vertical rule will be found an efficient and economical substitute in any job in which short pieces of rule have formerly been needed.

Let us now discuss the setting of these jobs, and give a few hints which experience has suggested.

Handling a variety of work on a "Monotype" keyboard teaches the operator many things not found in the official instruction books. Keyboard men instinctively develop a private technique of their own demanded by the special kind of work in the offices in which they are employed.

BAGGAGE RATES

NETHERLANDS INDIES AND AUSTRALIA

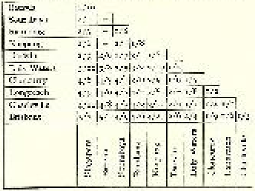


FIG. 3

Even so, when making up the measure for column work, every operator knows the value of keeping to even ems and ens. Working to odd units, while not specially difficult, adds a complication to the job. Generally, when a 6-unit vertical rule is in use, it is advisable to think of it as being 18 units thick, and in operating to allow a 6-unit space on either side.

This method could not, of course, be applied when setting Fig. 3, as the vertical rule border must be only 6 units wide. There are eleven 6-unit rules to be allowed for, making 3 ems 12 units. There are ten columns, occupying altogether a width of 17 ems. Therefore deduct 20 ems 12 units from the full measure of the table; the remainder will indicate the width of the first column, to which the keyboard measure should be adjusted. Compose the first column, ending with an em 3 units. Then compose the figure columns (without referring to the em scale), double justify and reverse. Use the 6-unit vertical rule key to separate the columns, but when composing ems and ens for the blank ends of line use the 6-unit low spaces in place of the vertical rules. Reference to the em scale is not necessary when setting figure columns, as these columns will align automatically.

Such work as shown in Fig. 4 needs a rough layout before composition is attempted. The outside dimensions of the job are marked off on a sheet of squared paper, each square representing an em of the set being used. The several groups of copy are then cast off, the position of each being marked on the layout and the vertical rule being drawn in where required. With such a scheme as a guide, the time saved by the keyboard operator will well repay that spent in the preparation of the layout. Errors of cast-off, being corrected on the layout, are not of such serious importance as would be the case if they were left undiscovered until the job was half set.

One further point, applicable to all vertical rule work. It is well known that the unit system of "Monotype" machines makes it possible to compose lines without using the units of space, this method of composition being known as "fixed space work". The operator is therefore advised always to use

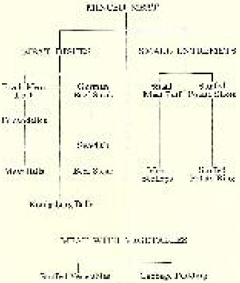
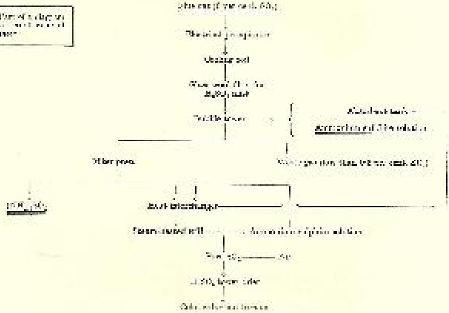


FIG. 4

fixed spaces for vertical column work, unless some unusual circumstance makes this method unavailable. By using the fixed 6-unit spaces one avoids the possibility of microscopic plus and minus errors which might be incurred by employing the variable space, and each section of a table will be spaced out with pre-determined accuracy. The exactness of this plan will be made perfectly clear if it is recalled that, when an allowance—say, 6¼ ems—is made for one of the gauges, it means in that allowance 112½ units, and that if the number of units taken by the words is deducted from the total and the balance made up by using fixed spaces, the result will be exactly 6¼ ems—no more, no less. With every line worked out on this principle, the vertical rules are always in the same correct vertical position, and thus fall one under the other and produce an unbroken line.

Fig. 4—Part of a diagram [illegible]



TECHNICAL QUERIES

[illegible] BY CORRESPONDENTS [illegible] TO OUR DEMONSTRATION ROOM, AND

ANSWERED BY R. C. ELLIOTT

Q.—[illegible]

A.—Theoretically [illegible] necessary. In the early days of "Monotype" [illegible] the normal wedges were made of [illegible] and were then not graduated [illegible] at present [illegible] of the wedges. [illegible] use of the [illegible] and quad lines to be slightly short owing to the lesser number of type bodies in the quad line. This [illegible] the wedge in the machine [illegible] a certain number of spaces [illegible] number of bodies in a quad line nearer to the number in a type line, and thus improve the "apparent" justification of the space lines. Imperfect sizing is the cause of long or short space lines and this is remedied [illegible] by introducing many bodies amongst the quads.

Q.—[illegible]

A.—This question is really answered in the reply to the preceding question. By including spaces in a quad line it takes longer to cast [illegible] through the mould [illegible] the cooling of the line, thus keeping the mould cooler. This is [illegible] running the [illegible]. On the [illegible] and leader lines cannot be [illegible] spaces, although being larger than quads, they [illegible] from the mould quicker. Therefore, with correctly [illegible] wedges and accurate type sizing, the [illegible] of [illegible] in quad lines should not be necessary.

Q.—[illegible]

A.—Any unknown number of quads may be set to the left of words by the [illegible] depressing a "Reverse" key before setting the words. On the [illegible] the words [illegible] the [illegible] ribbon [illegible] line is complete [illegible] opened, causing compressed air to be fed to the paper tower to release the paper [illegible]. Complete quad lines are thus composed by one key depression, plus justification to enable the line to be taken to the galley by the caster.

Q.—[illegible]

A. The attachment referred to is known as the [illegible] "Monotype" Attachment, which provides for two extra rows of [illegible] operated in the [illegible] direction. The only alteration to the key board is in the keybar frames, [illegible] being [illegible] to provide for the extra [illegible] new matrices. The speed of operation is [illegible]. On the [illegible] much time may be saved in make-up, especially in [illegible] composition.

Q.—[illegible]

A.—Operators used to "single" justification when employed over long periods often forget to "double justify" when put to multi-column work. By double-justification, all [illegible] "get the habit", and avoid this [illegible]. It is just as quick and easy to double justify as to single-justify. It also [illegible] the caster, which is [illegible] ready for [illegible] straight composition.

Q.—[illegible]

A.—It is rarely [illegible] a piece of type [illegible] the same reading [illegible]. By placing the justification wedges in the 3-8 position and then casting [illegible] with the type [illegible] wedge in operation and [illegible] with the space transfer wedge in operation, the [illegible] of [illegible] error in the [illegible] must appear [illegible] by measuring [illegible] types.

Q.—[illegible]

A.—The [illegible] held [illegible] in our schools [illegible]. The day classes are from [illegible] and the evening classes from 6 p.m. [illegible]. The fee charged for a complete course is [illegible].

THE IMPORTANCE OF A PAPER STRIP

One of the advantages of type composition on "Monotype" machines is the separation of the two functions of keyboard operation and type casting. The operator of a "Monotype" keyboard is thus able to concentrate solely on composition without being distracted by the details of type casting; similarly the type caster is able to devote his attention solely to the production of good type.

These two functions may be separated by distance or time; the link between them is maintained by a paper ribbon. Type composition is recorded by means of perforations to the ribbon in the same way as in a pianola strip, and the casting mechanism is eventually controlled by the perforations which have been made by the keyboard operator.

This ribbon acts therefore both as a link and as an instrument, and the efficient working of "Monotype" machines depends largely on its character.

For this reason considerable care is taken in the manufacture of this paper and many printers will be interested to learn of the exacting tests required before it is passed for service.

Printers throughout Great Britain are familiar with the blue ribbon which plays such an important part in their composing departments. A printer in the West of England showed his appreciation of this some years ago by using the stamped-out pieces as confetti at his wedding. British printers may be surprised to learn that this familiar blue is not inevitable: in the United States of America and Spain, white paper is used; in France, it is sometimes pink; in Germany, it is more greenish than in England; in Switzerland, it is yellow.

There are also independent manufacturers of this paper and their products are occasionally sold at a lower price.

The paper offered by The Monotype Corporation Limited is sold at little above cost price, and is manufactured mainly as a safeguard to users of "Monotype" machines, so that no undue premium may be placed upon what is a vital accessory. There might be a disproportionate rise in price if its manufacture were allowed to pass wholly into independent hands.

It is for this reason that another grade of paper has been recently introduced by The Monotype Corporation Limited, and this is now available at a slightly lower price. This grade is brown and bears a label of that colour.

The manufacture of the paper is governed by many factors in order that it may come up to the work required. Certain standards of weight, toughness and also smoothness, must be maintained. These standards are decided by the materials used in its making and the manner in which they are treated. The kind of fibre, the time the pulp is beaten, the amount of sizing and the degree of calendering or polishing, and the moisture content are all important.

The whole purpose of the various tests to which the paper is subjected is to ensure perfect working of the paper throughout its period of service.

The paper is received at our Works at Redhill in large rolls which are 23 inches wide and from 18 to 21 inches in diameter. These rolls weigh about two hundredweight.

Let us take a look into the laboratory where the tests are made and watch the experts at work.

The first test is for absorbency which must conform to narrow limits. As paper expands when it becomes damp and contracts when it subsequently dries, extreme movement between these limits might adversely affect both the timing of the marginal perforations and also the character perforations. Careful tests regarding the effect of changes in atmospheric conditions provide against this possibility, with consequent maintenance of requisite timing of the guide perforations on the spur wheels and efficient correspondence of keyboard perforations with the caster air-tubes.

Moisture receptivity is tested by the apparatus shown in Fig. 2. The balance contains a sample of the paper from the roll. This is weighed and, after having been dried of the moisture it contains, is weighed again.

The weight of the paper is next tested. Each spool, as supplied to users of "Monotype" machines, is manufactured to contain about 50,000 perforations from the keyboard and to weigh 2 oz. The number of character perforations that can be accommodated in this weight of paper is worked out from the weight of a square metre, in order to know the required number of perforations per roll. The paper must not be too thick or too heavily sized, yet must be tough enough to do its work properly.

As the foregoing factors affect the tensile strength of the paper, it is necessary that this should be determined. Fig. 3 shows the apparatus that is used for this purpose. A piece of the paper, 10 inches long and 5/8 inch wide, is cut longitudinally from the roll and stress is applied to it, the testing length under test being 9 inches. The paper is held, as can be seen in the illustration, in upper and lower clamps. By lowering the bottom plate by means of a screw thread, an increasing load is placed on the paper. The stretch of the paper before breaking is also recorded by the relative movement between the pointer (which moves downwards) and a rod (held in position by friction) which moves downwards according to the amount of stretch in the paper.

The fibres of paper generally lie along the length of the roll. This tends to give a greater degree of tensile strength in this direction. The varying humidity of the atmosphere also affects the grain of the paper to a greater degree in a transverse than in a longitudinal direction and this factor must also be considered. The paper is tested for expansion and contraction under atmospheric conditions from a strip 9 inches by 5/8 inch which is cut across the grain of the paper; that is to say, at right angles to the length of the roll. This test is made to safeguard against excessive expansion or contraction which might take place between the perforation of characters on the keyboard and the use of the paper on the caster.

The test is made by measuring the movement of the paper strip between complete dryness and thorough saturation. The strip is suspended overnight for twelve hours in an air-tight metal cylinder until it is saturated. The strip is then suspended in a circular chamber (see Fig. 4), the upper end of which is fixed and the lower end clamped to a movable indicating arm. The indicator is set at zero by means of a screw and the circular chamber closed. The air and the moisture are then extracted by means of a vacuum pump, the moisture being absorbed at a point between the circular chamber and the pump. The degree of vacuum (which is not complete) is read off on a barometric tube, the degree being maintained for each sample of paper that is tested. The degree of variation in humidity involved in the test is, of course, far greater than that which would occur under actual working conditions in a normal atmosphere, but as the movement of the paper is proportionate to alteration in the humidity of the atmosphere, these tests form an excellent basis for the comparison of different deliveries of paper stock.

It has been said that the paper has a greater tensile strength along its length because of the general direction of the fibres. The mean bursting strength of the paper is tested by the apparatus shown in Fig. 1 where a piece of paper is seen clamped. A load is applied by fluid pressure on the underside of a circular rubber diaphragm which is forced up to the paper, eventually causing it to burst. The amount of pressure required to cause bursting is indicated on the dial. The maximum air pressure to which paper is subjected on a "Monotype" machine is 15 lb. per square inch and, in addition to the foregoing physical tests, the porosity of the paper is tested to withstand a pressure of 15 lb. per square inch during a spell of one second's duration without any air passing through it. As the paper has to be comparatively thin and light to give the required number of character perforations per lb., this resistance to the passage of compressed air is attained by the quality of the pulp used in making the paper and by the sizing and calendering.

Tests are also made of the amount of dust which constant perforation produces. A short and brittle fibre would tend to produce a greater amount of dust, which, although not of great importance, might be troublesome if allowed to accumulate in the air pipes.

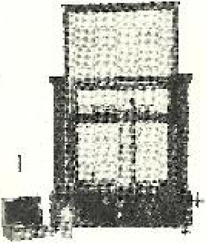
When the paper has passed these several tests, the large rolls are ready for slitting and perforating into their familiar form. They are slit into six sections of the correct width on the machine shown in Fig. 4. Each separate section is then transferred to the perforating machine (Fig. 5) which perforates the edges and stops automatically when the spool is wound to a weight of 2 lb.

The spools are packed into 60 lb. paper cartons, each containing 30 spools of 2 lb. each. They are labelled brown or light blue according to the quality of paper which they contain and are then ready to be despatched to users of "Monotype" machines to play their part in the production of clean, sharp accurate types for modern printed matter.

Owing to the restricted economic conditions prevailing in European countries, which include severe limitations of imports, it has become necessary for The Monotype Corporation Limited to install paper slitting and perforating machinery in France, Germany and Switzerland. In Belgium the duty on paper already prepared with marginal perforations is so excessive that it has become necessary to supply users of "Monotype" machines there with special perforating devices attached to the keyboards so that the plain paper ribbon is automatically perforated with marginal holes as the operator taps out the copy.

Our more intimate customers in England will therefore appreciate the much thought, attention and care that is bestowed upon the production of the paper which they use on their "Monotype" machines. It is certainly not in the general interests of users to encourage the sale of inferior paper ribbon, as a poorer paper, for example, may prove to be very expensive when it comes to correcting the proofs. For example, cheap paper exported to India has been found utterly useless for its purpose. Our own tests, therefore, have to provide for conditions which prevail in India, Australia, Fiji, and other countries, as well as for the conditions which prevail in the vicinity of Fetter Lane, London.

For the benefit of printers who wish to use the same perforated paper ribbon many times over and over again, such as for casting Founts, we supply a special thick variety of paper, which stands up remarkably well to continued heavy usage. One such ribbon, converted into an endless band, and used in connection with the Line Repeating Attachment, and which had been in continuous use for over eighty hours, was shown to us. Although begrimed, it seemed good enough for another eighty hours' use. Users of "Monotype" machines who have much repetition casting are strongly recommended to purchase a few rolls of this special paper although it is not to be advised for general composition purposes.



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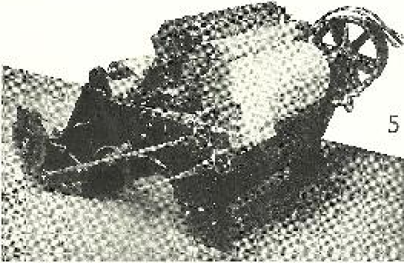

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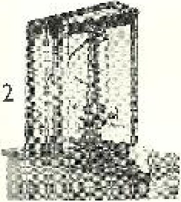


2

A selection of the [illegible]

THE LABORATORY OF A PAPER MILL

1 Balance for [illegible]

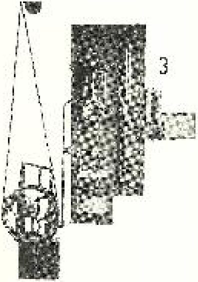
2 Apparatus for testing tensile strength

3 Apparatus for testing [illegible]

4 Apparatus for testing bursting point

5 Sizing machine

6 [illegible] machine



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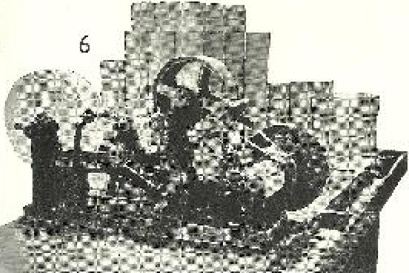

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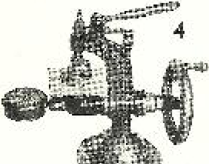


4

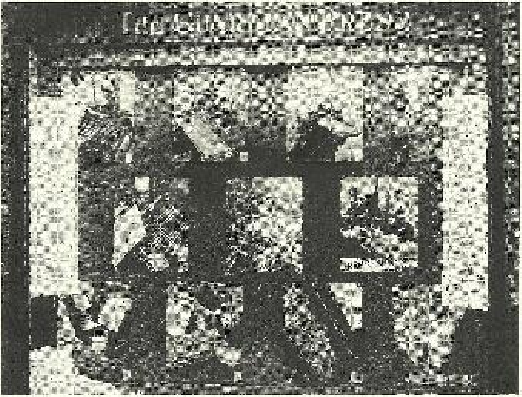
THE PICTURE BOOK OF "MONOTYPE" MACHINES

[SECOND EDITION]

This second edition of our photographic "Picture Book" has recently been issued. The slight revisions are all calculated to increase the value of the book to our customers, both as window and shop display material, and as an interesting presentation piece to buyers of print. Any user of "Monotype" machines who has not yet applied for a complimentary copy of this book is invited to do so. Extra copies in quantities up to one dozen can be purchased for 6d. apiece, and larger quantities at special rates.

The book has been used in many ingenious ways by proud owners of the machines. Below we show the photograph kindly sent to us by Messrs. Mackie & Co. Ltd. showing a very successful window display arranged by their Mr. Marsden.

The photographs in the book were taken with a miniature camera during actual demonstrations by Miss Joan Beard, Messrs. Percy Lund Humphries & Co. Ltd.



THE MONOTYPE CORPORATION LIMITED

43 Fetter Lane, London, E.C.4
Telephone: Central 9224 (5 lines)

Representatives of The Monotype Corporation [illegible] at any time to [illegible] on methods of increasing output, [illegible] "Monotype" machines and their supplies and [illegible] trial settings and advice on new type faces.

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Birmingham	King's Court, 115 Colmore Row. Central 1205
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Leeds	3 Stansfeld Chambers, Great George Street. Leeds 21355

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China	The Monotype Corporation Ltd., 17 The Bund, Shanghai
India	The Monotype Corporation Ltd., 8 Waterloo Street, Calcutta; P.O. Box 305, Bombay; P.O. Box 336, Mount Road, Madras
South Africa	Monotype Machinery (S.A.) Ltd., 6 and 7 Boston House, Strand Street, P.O. Box 1580, Cape Town
Australia	The Monotype Corporation Ltd., 319 Castlereagh Street, Sydney, N.S.W.
New Zealand	210 Madras Street, Christchurch. (Representative) C. J. Morrison

CONTINENTAL ADDRESSES

France	Société Anonyme Monotype, 85 Rue Denfert Rochereau, Paris (XIV°)
Germany	Setzmaschinen-Fabrik Monotype G.m.b.H., Berlin SW68, Puttkamerstr. 19
Holland	The Monotype Corporation Ltd., 142 Keizersgracht, Amsterdam
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We beg to remind our friends and the trade generally that the word MONOTYPE is our Registered Trade Mark, and [illegible] that the goods to which it is applied are of our manufacture or merchandise. Customers are reminded to [illegible] keyboards, casters, matrices, paper and other goods of the kind supplied by us bear the Registered Trade Mark in proof that they are genuine.

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