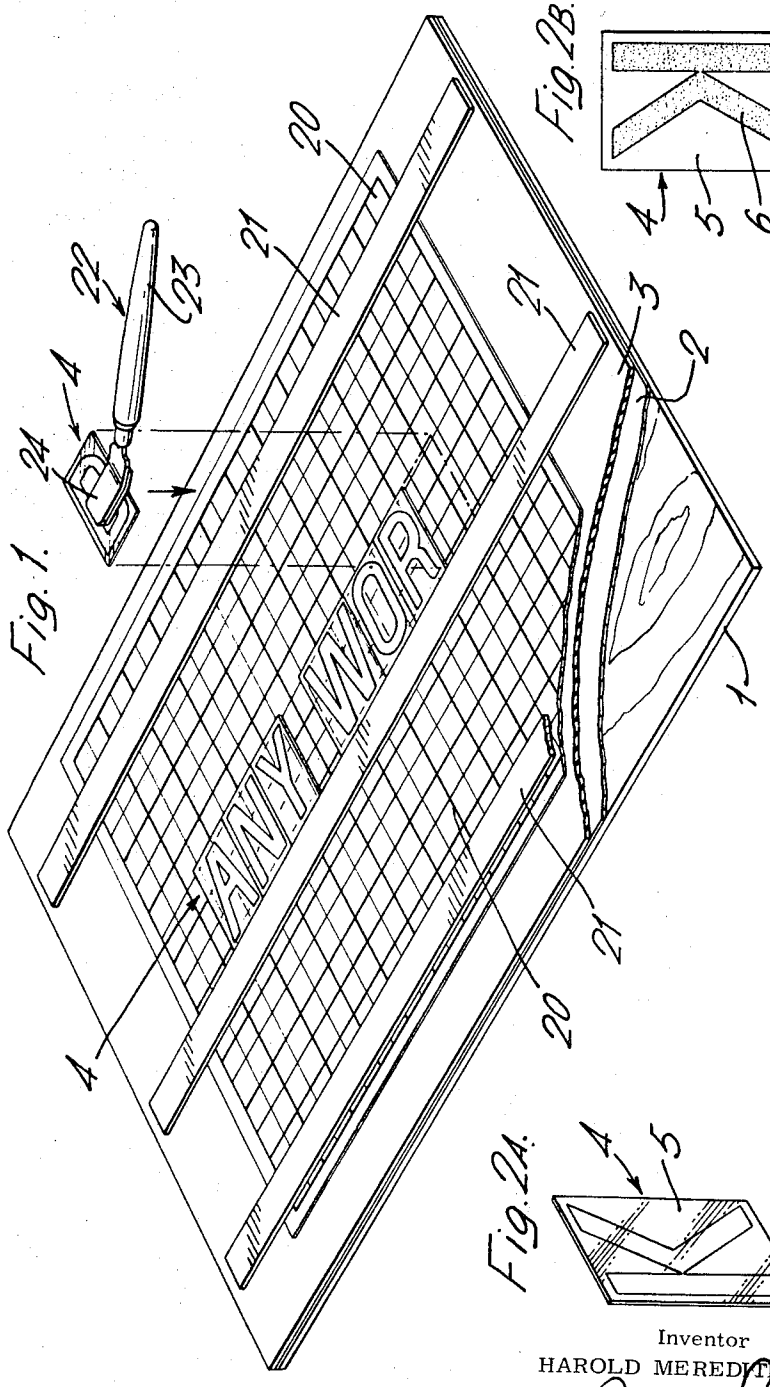
Aug. 6, 1968 H. M. POOK 3,395,632

LAYING OUT OF PRINTED CHARACTERS SUCH AS LETTERS OR NUMERALS

Filed Nov. 10, 1965 2 Sheets-Sheet 1



Inventor
HAROLD MEREDITH POOK
By
Attorney

Aug. 6, 1968 H. M. POOK 3,395,632

LAYING OUT OF PRINTED CHARACTERS SUCH AS LETTERS OR NUMERALS

Filed Nov. 10, 1965 2 Sheets-Sheet 2

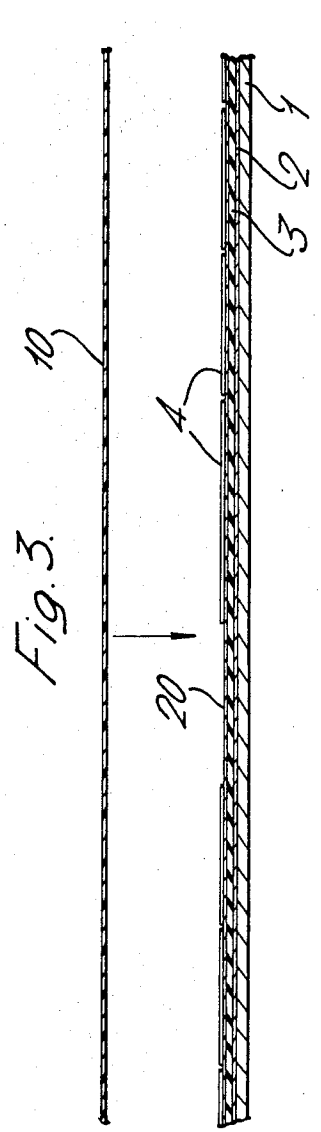


Fig. 3.

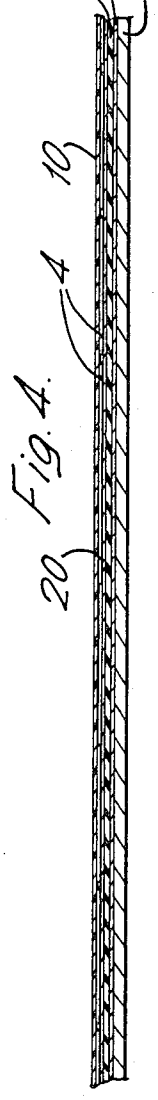


Fig. 4.

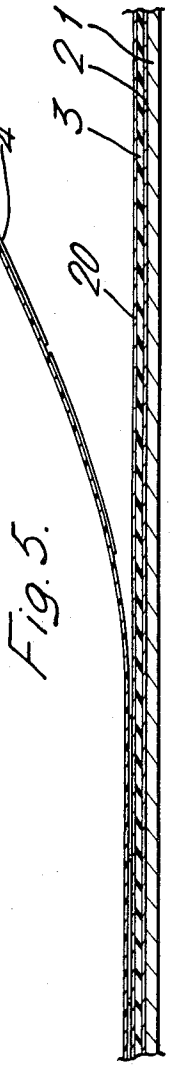


Fig. 5.

Inventor

HAROLD MEREDITH POOK

By

Attorney

United States Patent Office 3,395,632
Patented Aug. 6, 1968

3,395,632

LAYING OUT OF PRINTED CHARACTERS SUCH AS LETTERS OR NUMERALS

Harold M. Pook, 56 Whitcomb St., London, England

Filed Nov. 10, 1965, Ser. No. 507,129
Claims priority, application Great Britain, Nov. 16, 1964, 46,484/64
4 Claims. (Cl. 95—85)

ABSTRACT OF THE DISCLOSURE

For use in the laying out of printed letters, numerals or other characters, a lay-out board adapted to accommodate a lay-out to be arranged, a plurality of characters arrangeable in any required combination, the lay-out board having a magnetized surface and the characters being formed on sheet material by a coating including metallic matter capable of being influenced by a magnetic field, and a receptor sheet made of a transparent preferably synthetic plastic material which on being placed over the lay-out board, with characters arranged thereon, produces a combined electrostatic and suction effect between itself and the characters so that when lifted again it will draw the characters with it, still in their arranged condition.

This invention relates to the laying out of printed letters, numerals and characters for use in display or for the purpose of reproduction by photographic means. By the term characters it is intended to include any symbol or pictorial representation other than letters and numerals as such. For convenience, reference will hereinafter be made to "letters," but this is purely for illustrative purposes and it is to be understood that the term "letters" as used herein is intended to include within its scope numerals and characters, that is as and where applicable.

With the increasing use of the process known as offset lithography for reproducing printed matter, a corresponding need has arisen for the provision of economic methods of producing so-called "master copies" from which plates or blocks may be produced. One known method of producing a master copy is to print by letter press what is known as an "art pull," and to stick this on to a sheet of paper to form the master copy. Another known method is to build up the required words by means of transfer type lettering which is sometimes known as pressure sensitive transfer lettering.

Both these known methods are comparatively expensive in time and the skill required to produce the perfect result essential for a master copy. In both cases it is necessary to pre-plan the size and type of the lettering used, and a final lay-out cannot be fully apparent until the finished master copy is produced.

The present invention has for its object to provide means whereby words and/or designs can be quickly and easily formulated for use in display or for the purpose of reproduction by photographic means.

To this end according to this invention there is provided in combination a lay-out board adapted to accommodate a lay-out to be arranged, a plurality of letters which can be arranged to produce words as required, the lay-out board having a magnetized surface and the letters being formed on sheet material by a coating including metallic matter capable of being influenced by a magnetic field, and a receptor sheet which on being placed over the lay-out board, with letters arranged thereon, and then lifted therefrom again will draw the letters with it, still in their arranged condition.

By the above means a lay-out may be built up and arranged very quickly and easily as no skill is required

other than the ability to select and arrange letters, hereinafter referred to as "type elements," in line. A lay-out can be altered or re-arranged in any way until a required result is achieved, whereupon it may be fixed ready for display or reproduction to produce a master copy.

A feature of the type elements is that they are of standard dimensions and identical in measure with the equivalent printers' type.

In the accompanying drawings:

FIGURE 1 is a general perspective view showing the combination of means, with the exception of the receptor sheet, in accordance with the present invention, some parts thereof being broken away.

FIGURE 2A shows an individual type element from one side, and

FIGURE 2B shows this type element from the other side; and

FIGURES 3, 4 and 5 are diagrammatic sectional views showing the various stages in the use of the means as shown in FIGURE 1, including the receptor sheet.

As shown in FIGURE 1 there is provided a lay-out board which consists of a wooden base **1**, a metallic stiffening plate **2** and a sheet **3** of magnetic material all laminated together. The sheet **3** is made from a moulded rubber having a ferrous material mixed into its mass in such a way as to permit magnetisation thereof in the form of linear poles whereby closely spaced horizontal lines of magnetic field are produced over the whole of the upper surface of the sheet **3**.

The lay-out board may be of any desired size so that it is adapted to accommodate a lay-out which it is desired to arrange.

Type elements **4** (see FIGURES 2A and 2B) are formed by printing, for example with black or white ink, on a transparent synthetic plastics sheet material **5** such as polyethylene terephthalate. Letters are printed in reverse (FIGURE 2B) so that they show through the sheet material **5** the correct way round (FIGURE 2A). The ink used is treated with a magnetisable powder, as indicated at **6** in FIGURE 2B.

In actual practice a plurality of letters would be printed on a large sheet which would then be cut up to produce type elements **4** of standard dimensions and identical in measure with the equivalent printers' type. Type elements would be stored in any convenient manner, for example in trays, folders or the like ready for use when required.

A receptor sheet **10** is made of polyvinyl chloride.

While the lay-out board, the type elements and the receptor sheet make up the essential combination of means, certain other accessories are conveniently provided. Thus a sheet **20** of thin paper may be provided for covering the face of the lay-out board, this sheet having thereon, for example, a series of vertical and horizontal lines forming large squares. The sheet may be marked in any other desired way. Strip steel bars **21** may be provided for holding a sheet **20** in position while a lay-out is prepared. Finally a hand tool **22** may be provided for manipulating the type elements. This hand tool has a wooden, synthetic plastics or other non metallic handle **23** with a magnetic head **24**, the magnetic field produced thereby being weaker than that produced by the sheet **3** of the lay-out board. Thus the hand tool **22** will pick up a type element from its storage tray or the like, but will surrender it to the sheet **3**.

The procedure for producing a lay-out for a master copy will now be described.

A sheet of paper **20** is first placed on the sheet **3** of the lay-out board. The strip steel bars **21** are then placed on the sheet of paper **20** and due to the magnetic attraction between them and the sheet **3** the sheet of paper will be firmly held in position. Type elements **4** are then arranged

on the sheet of paper **20** as required (FIGURE 3), the lines thereon facilitating the positioning of the type elements and the magnetic attraction between the treated ink of the type elements and the sheet **3** firmly holding the type elements in position. For convenience the words "ANY WORD" are shown in FIGURE 1. When the required lay-out has been completed the receptor sheet **10** is placed over the type elements (FIGURE 4) and rubbed to ensure intimate contact between it and the type elements. Finally the receptor sheet **10** is lifted or pealed off and, due to the combined electrostatic and suction effect between it and the type elements, the latter will remain adhering to the receptor sheet (FIGURE 5).

The receptor sheet is then photographed to produce the required master copy. Once this has been done, the type elements may be peeled off the receptor sheet and stored away for use again.

It will be appreciated that a receptor sheet with type elements adhering thereto may be used as it is for display purposes.

It is pointed out that in FIGURES 3, 4 and 5 the thickness of the sheet **20**, the type elements **4** and the receptor sheet **10** has been exaggerated for the purpose of clear illustration.

It is envisaged that the receptor sheet **10** may comprise a piece of transparent film such as for example regenerated cellulose or cellulose acetate having one side coated with an adhesive. When such a receptor sheet is laid, adhesive side down, on the arranged type elements, the latter will positively adhere to it and in effect become set or fixed in position. To prevent the sheet **20** also adhering to the receptor sheet **10**, the sheet **20** is

treated with a suitable waxy or silicone compound to make it resistant to the adhesive on the receptor sheet.

I claim:

1. For use in the laying out of printed characters, a lay-out board adapted to accommodate a lay-out to be arranged, a plurality of characters arrangeable in desired combinations, the lay-out board having a magnetized surface and the characters being formed on sheet material by a coating including metallic matter capable of being influenced by a magnetic field, and a receptor sheet made of transparent synthetic plastic material which on being placed over the lay-out board, with characters arranged thereon, produces a combined electrostatic and suction effect between it and the characters, so that when lifted therefrom again will draw the characters with it, still in their arranged condition.

2. The combination as claimed in claim **1** wherein the receptor sheet is made of transparent polyvinyl chloride.

3. The combination as claimed in claim **2** having also a ruled substantially paper-like sheet for placing on the lay-out board to facilitate the arrangement of characters and magnetisable striplike members for holding such sheet of paper in position.

4. The combination as claimed in claim **1** wherein the sheet material is made of polyethylene terephthalate.

References Cited

UNITED STATES PATENTS

2,002,077	5/1935	Darling	95—85 X
2,259,238	10/1941	Bernhard	95—85

JOHN M. HORAN, *Primary Examiner.*