

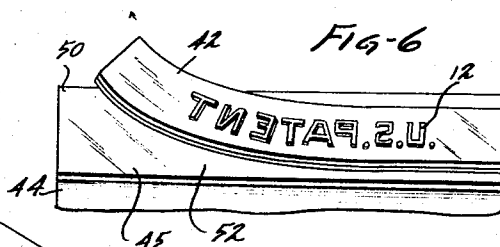
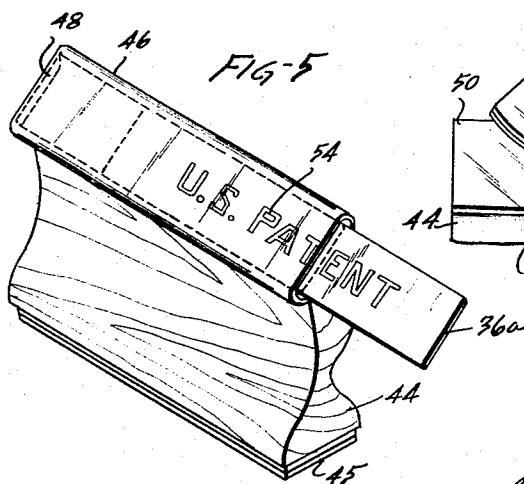
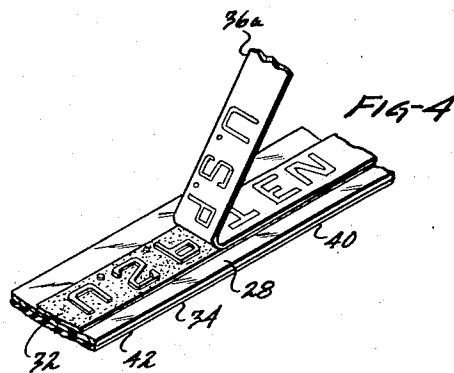
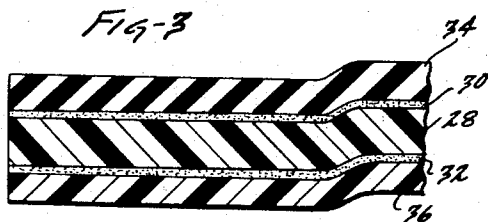
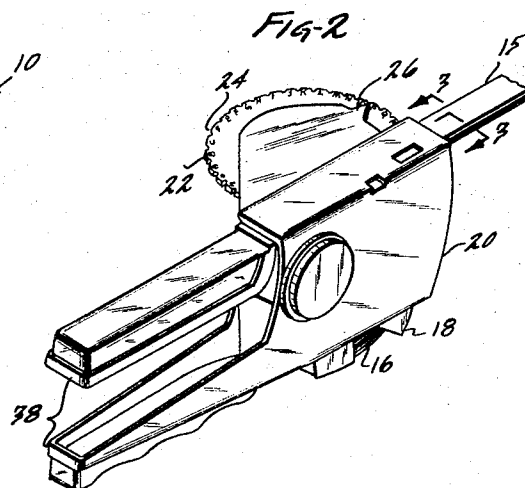
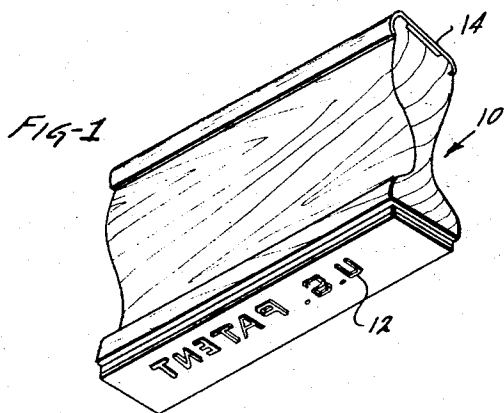
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3,315,601

HAND PRINTER AND METHOD OF MAKING SAME

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3,315,601 HAND PRINTER AND METHOD OF MAKING SAME

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The present invention relates to a hand printer or printing stamp for use in cooperation with an ink pad for repeatedly hand printing desired material, and to a method of making such a printer.

Hand printers or rubber stamps as they are sometimes called are widely used to neatly print words, messages, symbols or so on for which a need recurs. For example, considerable effort is avoided with no compromise in appearance by using hand stamps to print names, short instructions, and a wide variety of other short messages. Of course, a wide variety of processes have been used in the past to manufacture these hand printers and a wide variety of structures similarly have also been employed in their manufacture. However, in general, most of the prior printers or stamps have included a support block with one flat surface carrying raised rubber type in relief form while another opposed flat surface carries a tab or label identifying the type. Of course, the type on these printers must appear as a mirror image while the symbols on the identification tab are usually in their true form. Therefore, prior practice in making the type has been to cut the type from a block of rubber or similar material to accomplish the desired representations or other indications in relief and as mirror images of the true symbols to be printed. Such operation has required rather specialized equipment, therefore in the past, obtaining a custom printing stamp has normally entailed a substantial wait and significant expense. Furthermore, not infrequently, the identification symbols have failed to accurately and truly represent the printing type carried on the stamp, thus resulting in some inconvenience.

Accordingly, it is an object of the present invention to provide an improved method and apparatus for producing a hand stamp or printer, which is not subject to these and other disadvantages of the prior techniques.

Another object of the present invention is to provide an improved hand printer or rubber stamp, which is economical to produce and efficient to use as a printing instrument.

Still another object of the present invention is to provide a hand stamp and method of making such stamp whereby the printing type and the identification symbols are simultaneously produced, resulting in a saving in time and expense while providing accurate representation.

Still a further object of the present invention is to provide an improved stamp and method of making such stamp for hand printing, which incorporates the use of an embossable material into which type is set, and which has a surface that is ink retentive for printing purposes.

One further object of the present invention is to provide a hand stamp and the method of making such stamp which incorporates the use of at least two embossable layers in a composite sheet, which may be embossed in a single operation and thereafter separated to provide both the printing type and the identification tab or label for a hand printer.

Briefly, these and other objects and advantages of the present invention are achieved in accordance with the features and methods of accomplishing one example of the invention which includes a support block having an embossable sheet affixed to one surface thereof, which sheet is embossed with the desired printing type and which has an exposed surface that is ink retentive; the printing type

on the surface being raised with the desired symbols in mirror image form. The block may also carry an identification tab indicative of the print on another surface, in the form of a second embossable sheet that has been formed by embossing, simultaneously with the printing type.

The details of these and other novel features of the present invention along with the operation thereof and the method of practicing and further as well as additional objects and advantages of the invention will become apparent and will be best understood from a consideration of the following description taken in conjunction with the accompanying drawings which are all presented by way of illustrative example only; and in which:

FIGURE 1 is a perspective view of a hand stamp made in accordance with and incorporating the principles of the present invention;

FIGURE 2 is a perspective view of a machine suitable for embossing a medium to produce the structure of FIGURE 1;

FIGURE 3 is a fragmentary sectional view taken along line 3—3 of FIGURE 2;

FIGURE 4 is a perspective view illustrating one step in producing the structure of FIGURE 1;

FIGURE 5 is a perspective view illustrating another step in the production of the structure of FIGURE 1; and

FIGURE 6 is a perspective view illustrating still another step in the production of the structure of FIGURE 1.

Referring to the figures in greater detail, it is stressed that the particulars shown are by way of example only and for purposes of illustrative discussion and are presented in the cause of providing what is believed to be a useful and readily understandable description of the principles, methods and structural aspects of the invention. In particular, no attempt has been made to show or describe features of the apparatus or methods in more detail than is necessary for the fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art of hand stamps and their manufacture, how several forms of the invention may be constructed and embodied in practice. In addition, the detailed showing is not to be taken as a limitation upon the scope defined by the appended claims forming along with the drawings a part of this specification.

In FIGURE 1, a rubber stamp or hand printer 10 is shown with raised type 12 affixed across the bottom thereof for carrying ink from a stamp pad (not shown) to a printing medium that may be paper. The hand printer 10 may be formed of wood or various other materials, cut in a convenient block with somewhat opposed, relatively flat surfaces, the lower of which carries the type 12 while the upper carries an identification tab 14 which identifies the type 12. Of course, as very well known, the printer 10 may be used simply by urging the print 12 first against an ink pad from which it carries ink, then places it against a printing medium as paper upon which it prints.

In accordance with the present invention, the printer 10 is made by embossing a flat material to form the type 12. Furthermore, the same embossing operation may also be employed to coincidentally provide the identification tab 14.

A wide variety of embossing machines suitable for use in practicing the present invention exist in the prior art; however, one exemplary form of such embossing machine is shown in FIGURE 2 and will now be considered in detail. The embossable medium for use in practicing the present invention may be contained in a roll 16 provided in a cartridge 18 within an embossing tool 20. The medium from the roll 16 is threaded to pass through the embossing tool 20, between embossing dies that are carried in mating relationship on the internal surfaces of a

pair of revolable wheels 22 and 24, between which actual embossing takes place. The arrangement of the dies formed on the wheels 22 and 24 is such that the symbolic representations formed in the medium 15 are debossed or lowered when viewed as true images. That is, conversely stated, the images formed in the medium 15 by the embossing dies on the wheels 22 and 24 are in mirror image form when viewed as raised symbolic representations or in relief.

To accomplish the desired embossing, the lower wheel 22 carries raised, or male dies which are in mirror image form and which mate with recesses or female dies formed in the upper wheel 24. This mating relationship serves to emboss a mirror-image symbolic representation on a section of the medium 15 in accordance with the symbol indexed by a pointer 26 on the upper wheel 24. In other aspects of operating structure, the machine or tool 20 may comprise an apparatus substantially as shown and described in United States Patent 3,129,800 issued April 21, 1964.

Considering the embossable medium 15 in greater detail, reference will now be had to FIGURE 3 showing an exemplary multi-layer form thereof in section. The composite layer structure includes an embossable medium in a layer 28 having adhesive coatings 30 and 32 on the surfaces thereof. The upper adhesive coating 30 bonds a layer 34 of rubber-like material to the layer 28, while the adhesive coating 32 bonds a release sheet 36 to the layer 28, which sheet 36 is also formed of embossable material. Of course, the embossable layer 28 may comprise various materials which can be deformed to a permanent set without rupturing, including various plastics as polyvinyl chloride, metals and so on. The release sheet 36 may be formed of various similar materials treated so that when removed from the layer 26 the adhesive 32 remains on the layer 28. Of course, the adhesive 32 must be of such character to permit such a release and in general various pressure-sensitive adhesives have been found suitable. A similar adhesive may be employed in the coating 30 to permanently bond the layer 34 of rubber-like material, which may comprise latex, to the layer 28.

The section of the multi-layer medium formed somewhat as a tape, and as shown in FIGURE 3, carries a portion of an embossed symbolic representation and it is to be noted, that as embossed by the machine or tool 20, the rubber-like layer 34 is raised while the release sheet 36 is debossed or indented. Although not apparent in FIGURE 3, it is also to be understood that the symbolic representations embossed into the medium or tape are presented as mirror images of the true symbols when viewed from the side of the rubber-like layer 34.

Now, in view of the above preliminary description, of the present invention, a complete understanding thereof may best be completed by considering an exemplary process of forming the printer 10, while referring to FIGURES 4, 5 and 6, along with the somewhat coincident introduction of elements not previously identified or considered.

As an initial step in producing a hand stamp with a desired printing type thereon, the tool 20 is employed to emboss the print on the tape medium 15. Of course, as well known in the art, this operation may be accomplished by setting the desired symbols on wheels 24 and 26 (FIGURE 2) in an operative position and clamping these wheels together by means of the handles 38 to mate the dies. Thus, each of the individual symbolic representations of the type 12 are formed as previously described resulting in a section 40 of the medium as shown in FIGURE 4 carrying the desired print.

As shown, by the section 40, a length of release sheet 36a, also embossed with the symbolic representations is removed, exposing the adhesive coating 32 surfacing the remainder of the section 40 which includes the embossed

layer 28 and the rubber-like layer 34. The removal of the release sheet 36a thus leaves a type sheet 42.

With the section 40 of embossable medium formed and the sheet 36a separated, from the composite type sheet 42, these elements are ready for application to a block or print carrier as shown in FIGURES 5 and 6. The block 44 which may be formed of wood as previously indicated, has a flat bottom surface 45 and a window 46 on an upper surface thereof defining a channel 48 for receiving the section of release sheet 36a. Initially as shown in FIGURE 5, the release sheet 36a may be slipped into the channel 48 to identify precisely the printing type 42. This operation may be easily accomplished as a result of some depth in the channel for proper sizing relative the debossed sheet 36a, now comprising an identification tab.

Next, the printing type sheet 42 is applied. On the opposed surface 45 at the base 50 of the block 44, a cushion pad 52 is provided as shown in FIGURE 6. The print type sheet 42 as shown in FIGURE 4 and with the release sheet removed is thus laid onto the pad 52 as shown in FIGURE 6. As a result, the embossed letters forming the type 12 (FIGURE 6) are in mirror image form and therefore print true letter images. Conversely, the symbols 54 on the release sheet 36 are debossed and are in true image form as viewed through the window 46. Therefore, the print resulting from the type 12 in using the stamp formed as described above is exactly manifest by the identification provided by the tab or sheet 36a. Of course, this consideration results because the type and the identification sheet are simultaneously formed during individual embossing steps. As a result, deviation between the identification and the printing type is somewhat impossible and an exact representation is provided.

It is readily apparent that a wide variety of different embossable mediums may be employed in the practice of the present invention. For example, the sheet 36a may be formed of metallic-appearing paper to enhance the appearance of the printer. Furthermore, the tape may be variously formed to provide other ink retentive surfaces than the surface provided by the rubber layer 34 as described above and as known in the art. Thus, it is apparent that a variety of structures and methods are easily usable for forming hand stamps in accordance with the present invention, which are inexpensive and permit rapidly making a stamp ready for use. There thus has been described an example of a system of forming a hand stamp in accordance with the present invention which achieves the objects and exhibits the advantages as set forth hereinabove.

What is claimed is:

1. A printing structure for carrying ink to a printing medium, to print predetermined true symbols thereon, comprising:

- 55 a printing type means including a layer of embossable material set to provide raised symbols in mirror image form and having an ink retentive surface, said symbols coinciding to said predetermined symbols in true image form;
- 60 a handle block providing a pair of substantially flat surfaces at opposed ends thereof;
- means fixing said printing type means on one of said flat surfaces whereby said ink retentive surface is externally exposed;
- 65 an identification means including a layer of embossable material set to provide lowered symbols in true image form and having a size such that the lowered symbols on said identification means and the raised symbols on said printing type means can fit snugly together; and
- 70 means fixing said identification means on the other of said flat surfaces.

2. A printing structure for carrying ink to a printing medium to print predetermined true symbols thereon, comprising:

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printing type means including a layer of embossable material embossed to provide raised symbols in mirror image form of said predetermined true symbols, and having an ink retentive surface;

a handle block providing a pair of substantially flat surfaces at opposed ends thereof;

means fixing said printing type means on one of said flat surfaces whereby said ink retentive surface is externally exposed;

an identification means including a layer of embossable material identically embossed as said printing type means to provide lowered symbols in true image form coinciding to said predetermined true symbols and having a size such that the lowered symbols on said identification means and the raised symbols on said printing type means can fit snugly together; and means fixing said identification means on the other of said flat surfaces.

3. A printing structure according to claim 2 wherein said means fixing said printing type means, comprises a cushion pad secured to said one flat surface and adhesively receiving said printing type means.

4. A method of making a hand printing block which comprises the steps of:

embossing a multi-layer medium including a first embossable layer with an ink retaining surface, and a second embossable layer, whereby said ink retaining surface is raised to provide mirror image symbols; fixing said first embossable layer to one surface of a support block with said ink retaining surface exposed; and

fixing said second embossable layer to another surface of said support block to reveal true image symbols.

5. A method of making a hand stamp for printing predetermined symbols, comprising the steps of: embossing a sheet, which includes at least two emboss-

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able layers one of which has an ink retaining surface, with said predetermined symbols whereby said ink retaining surface is raised to manifest said symbols as mirror images;

fixing said first embossable layer to one surface of a support block with said ink retaining surface exposed; and

fixing said second embossable layer to another surface of said support block to reveal true image symbols.

6. A method of making a hand stamp for printing predetermined symbols, comprising the steps of:

embossing a sheet, which includes at least two embossable layers one of which has an ink retaining surface, with said predetermined symbols whereby said ink retaining surface is raised to manifest said symbols as mirror images;

fixing said first embossable layer to one surface of a support block with said ink retaining surface exposed; and

fixing said second embossable layer to another surface of said support block with said true image symbols presented in debossed form to manifest the print of said block.

References Cited by the Examiner

UNITED STATES PATENTS

1,172,273	2/1916	Gammeter	101—395
1,438,815	12/1922	Elsen	40—136 X
1,815,154	7/1931	Larson.	
2,049,599	8/1936	Weissman.	
3,279,368	10/1966	Wilson	101—269

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