No. 848,824. PATENTED APR. 2, 1907.

T. HAWKINS.

APPARATUS FOR EMBOSSING NAME PLATES, &c.

APPLICATION FILED NOV. 13, 1902.

3 SHEETS—SHEET 1.

FIG. 1.

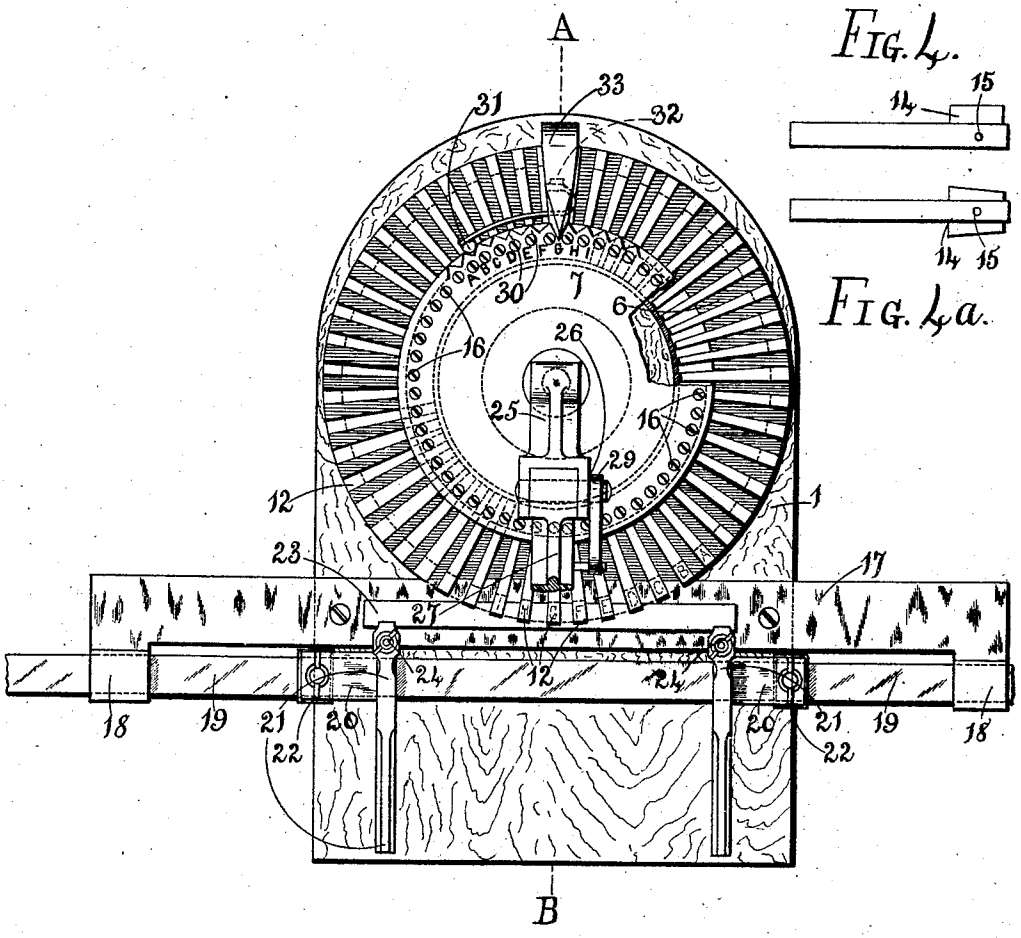


FIG. 4.

FIG. 4a.

Witnesses.
A. L. Annison
F. F. Meadows

Inventor
T. Hawkins
By Stanley Popplewell
Attorneys.

THE NORRIS PETERS CO., WASHINGTON, D. C.

No. 848,824. PATENTED APR. 2, 1907.

T. HAWKINS.

APPARATUS FOR EMBOSSING NAME PLATES, &c.

APPLICATION FILED NOV. 13, 1902.

3 SHEETS—SHEET 2.

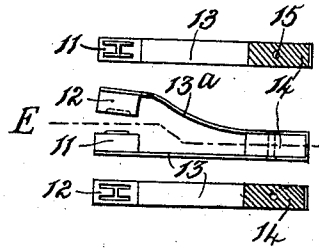


FIG. 3a.

FIG. 3.

FIG. 3b.

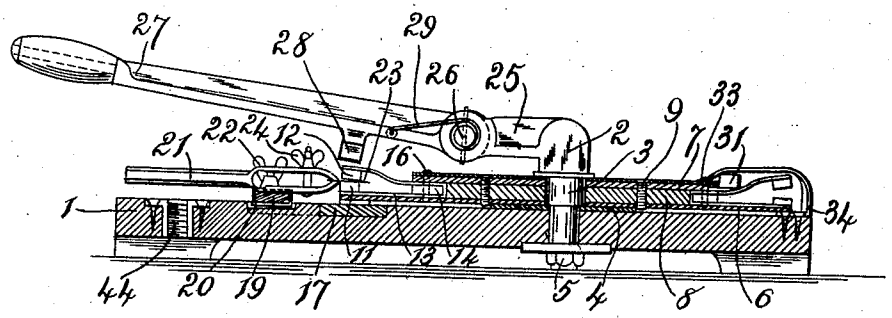


FIG. 2.

Witnesses.

A. L. Annison

F. F. Meadows

Inventor.

T. Hawkins.

By Franklin Pope Company

Attorneys.

THE NORRIS PETERS CO., WASHINGTON, D. C.

No. 848,824. PATENTED APR. 2, 1907

T. HAWKINS.

APPARATUS FOR EMBOSSING NAME PLATES, &c.

APPLICATION FILED NOV. 13, 1902.

3 SHEETS—SHEET 3.

FIG. 5.

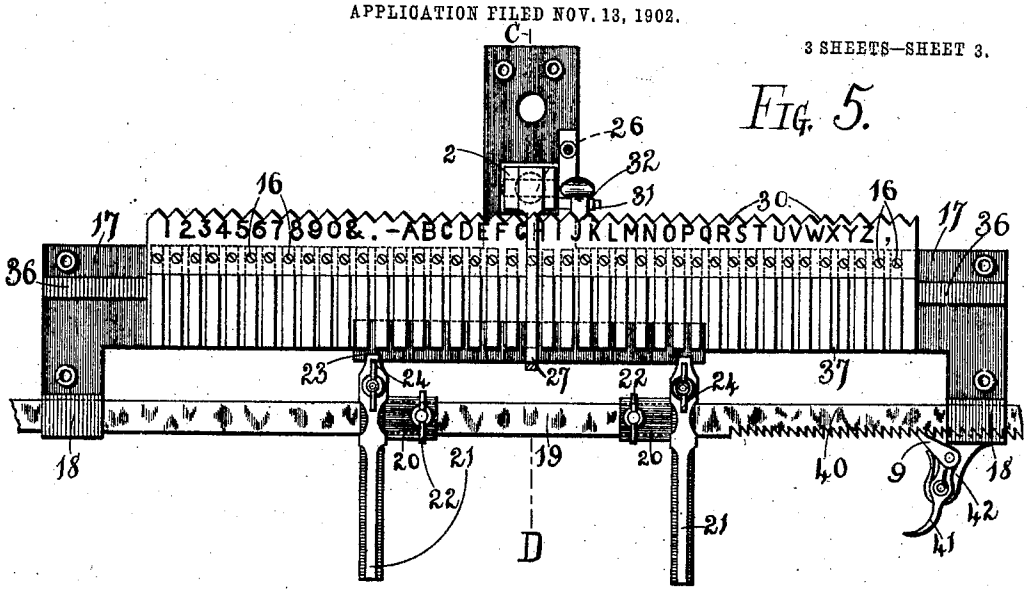


FIG. 6.

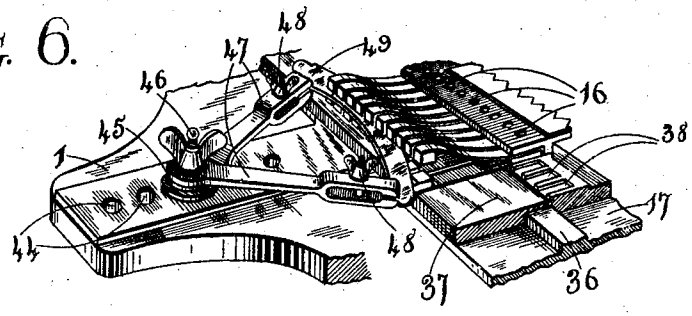


FIG. 7.

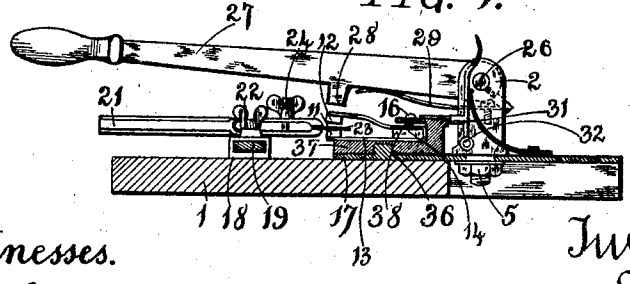
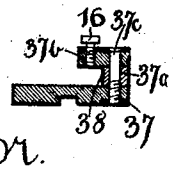


FIG. 8.



Witnesses.

A. L. Annison

F. F. Meadows

Inventor.

T. Hawkins.

By Stanley, Popplewell & Co.

Attorneys.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS HAWKINS, OF LONDON, ENGLAND.

APPARATUS FOR EMBOSSING NAME-PLATES, &c.

No. 848,824. Specification of Letters Patent. Patented April 2, 1907.

Application filed November 13, 1902. Serial No. 131,147.

To all whom it may concern:

Be it known that I, THOMAS HAWKINS, a citizen of the United States of America, residing at 40 Marchmont street, Russell Square, London, England, have invented certain Improvements in Apparatus for Embossing Name-Plates, &c., of which the following is a specification.

My invention relates, first, to apparatus for embossing and producing labels, name-plates, or other embossed surfaces for various purposes—for example, metal plates for attachment to doors, &c., for hats or hat-pegs, &c., or for bags, dog-collars, or almost any other object, or for mounting on a holder as a hand-stamp, or for the manufacture of dies and counter-dies for embossing addresses, &c., upon paper, or for the printing of surfaces in Braile type for blind readers, or for perforating for any ornamental or useful purpose, and many other objects.

In one form of my invention metal or other plates or labels can be embossed with any desired name or lettering, such plates being either already cut to the desired shape and size or produced from a strip or sheet and having holes by which they can be secured upon doors, drawers, or in any desired place.

An essential feature of my invention consists in providing dies which are adapted to be held at one end and to emboss at the other end. The apparatus I may employ for embossing purposes may include a pair of superimposed disks fixed together and between which are held radial tongues carrying the dies, or said dies may bear upon their inner and adjacent surfaces dies and counter-dies of alphabetical letters, numerals, or any other denomination, each disk bearing one set of said dies arranged in series on radial tongues near to and concentric with its outer edge.

In a modification of the apparatus I may provide two parallel bars adapted to reciprocate longitudinally upon a base-plate, one carrying the series of dies, which may be of the form described above, and the other provided with clips or the like for holding the material to be operated upon.

I may also make very cheaply special dies for embossing the characters.

Referring to the accompanying drawings, which illustrate my invention, Figure 1 is a plan of the embosser, showing a plate ready to be operated upon. Fig. 2 is a section on line A B of Fig. 1. Fig. 3 is a side view of a pair of radial tongues supplied with dies adapted to emboss a given character. Figs. 3^a and 3^b are sections on E F of Fig. 3 looking down and up, respectively. Fig. 4 shows a plan of a die having a parallel-edged shank adapted for an arrangement of embossing-tongue side by side in a straight line. Fig. 4^a shows a similar plan, in which the shank has two tapered edges adapted for an arrangement such as illustrated in Fig. 1. Fig. 5 is a plan of a modified form of embosser, showing a plate ready to be operated upon. Fig. 6 shows in perspective an arrangement for holding a curved plate to be embossed. Fig. 7 is a section on line C D of Fig. 5. Fig. 8 is a cross-section of the die-holding strip of the embosser shown in Figs. 5 and 7 in a slightly-modified form.

Similar parts are designated by similar numerals throughout the drawings.

Referring now to Figs. 1 and 2 of the drawings, showing the form of embosser which consists, essentially, of two superimposed disks, 1 is a base-piece, which may be of wood. 2 is a stationary pivot having a shoulder 3, which bears upon a washer 4, the whole being secured to the base-piece by nut 5. 6 and 7 are lower and upper disks, respectively, having a spacing-washer 8 between them, the two disks and the washer being held together by screws 9 and adapted to revolve about the pivot 2. The lower disk has a raised broad ring and is larger than the upper disk. Radial channels are milled out or formed in said ring for the purpose of receiving the shank ends of the dies. One form of such dies is shown in Figs. 3, 3^a, and 3^b, wherein 11 and 12 are male and female dies, respectively, and are attached to a spring-steel staple-shaped piece 13, which has a distance-block 14 held in place by a rivet 15. The side 13^a is preferably shaped as shown for the purpose of keeping the dies normally apart, although this could be effected by substituting a spring or a block of resilient material for the block 14. Said shank ends are inserted in the radial channel and fit tightly therein sidewise, but are preferably allowed a little play vertically. The dies are then secured in place by set-screws 16. While the manner of holding the dies is a convenient one, I may secure dies which are capable of embossing at their free ends in other ways.

For instance, I may use only one disk and secure such dies to the edge of same in any suitable manner. Such dies may be either of the solid, laminated, or back-up form. 17 is a plate secured to the base I and having sockets 18, within which slides the bar 19. Said bar has mounted thereon sockets 20 20, which are provided with clips 21 21, said sockets being held to the bar 19 by thumb-screws 22 22. The plate to be embossed or otherwise operated upon is shown at 23 and is held in place by the thumb-screws 24 24. A short arm 25, rigid with the pivot 2, has fulcrumed thereto at 26 an operating-lever 27, provided with a lug 28. The lever is adapted to be depressed in order that the lug may bear upon the upper die 12, and so emboss the plate 23, a spring 29 returning the lever to its raised position. The mechansm for spacing the characters may consist of notches 30 30 in the edge of the upper disk 7 and a spring-actuated pawl 31, fixed at 32 to a pointer 33, (hereinafter mentioned,) secured at 34 to the base 1. Said pawl is adapted to enter the notches 30, as shown in Fig. 1. The disk 7 may further serve the purpose of an indicator having the characters corresponding with those of the dies and arranged so that the character under the tip of the pointer 33 will correspond with that under the lug 28. The mechanism for spacing the characters on the plate 23 may be the same as that provided for a similar purpose in the form of embosser shown in Fig. 5, hereinafter described.

In operation the plate 23 (which may be cut to shape and perforated either before or after embossing) is secured within the clips 24 24 and then carried along between the dies by longitudinally moving the bar 19. The lever 27 is then depressed so as to strike the upper die 12, between which and the lower die the plate is thus embossed. In order to bring different characters under the lever, the spring-pawl 31 is drawn back and the disks moved round as desired, when the pawl is allowed to return and enter a fresh notch. For different lengths of plate 23 the positions of the clips 20 on bar 19 can be altered.

Referring now to the modified form of embosser shown in Figs. 5 and 7, the essential difference between this and the former type is that the dies are arranged on a longitudinally-sliding piece. The construction and arrangement of the mechanism for holding the plate 23 to be embossed may be as before. The plate 17, however, has a rib 36 throughout its length, on which the die-holding strip 37 slides longitudinally. This strip may be built up as shown in Fig. 8, wherein the piece 37^a is placed between the strips 37 and 37^b, the whole being secured together by the screws 37^c, or instead of constructing the strip as shown in Fig. 8 it may be formed all in one piece, as shown in Figs. 6 and 7, in which case the recesses 38 may be milled out. The die-shanks are held down by the set-screws 16. With the construction of strip shown in Fig. 8 I may use the form of die as shown in Fig. 4, which has the block 14 extended sidewise sufficiently to separate it from its neighbor, and this form of die with tapered block, as shown in Fig. 4^a, may also be used in the embosser illustrated in Figs. 1 and 2. The form shown in the upper portion of Fig. 4, having a parallel-edged block, is more particularly suitable for the type of machine illustrated in Fig. 5. The mechanism for spacing the characters is on the same principle as described with reference to Figs. 1 and 2, and the mechanism for spacing the characters on the plate 23 may be on the well-known ratchet-and-pawl principle and may consist in providing a ratchet 40 in the bar 19 and a spring-controlled pawl 9 in engagement with said ratchet and actuated by handle 41, which is pivoted on a bracket 42, attached to the socket 18. The operation of this form of apparatus is similar to that already described with reference to the first form.

My apparatus is not confined to embossing only in straight lines, but may be easily adapted to emboss in curved lines. For the latter purpose I may adopt a plan which is illustrated in Fig. 6. In this figure 44 are sockets in the base-piece 1, one of which has screwed therein a stud 46, which has a fly-nut 45 for the purpose of holding thereon radial arms 47 47, having clips 48 48, as before, for holding the plate 49 to be embossed. To emboss a portion of a circular plate, it is only necessary to secure it within the clips, as shown, and partially rotate it so as to bring the parts to be embossed under the lever as before. For portions of circular plates of varying radii the stud 46 may be changed from one socket 44 to another as desired. Plates of irregular curves may be embossed in curved lines by moving them about within the clips 48 and will be easily understood. The mechanism for spacing the characters upon the plate 49 may consist in providing a notched disk on the stud 46 and a pawl to suitably engage such notches as described.

In all the same cases mentioned each die is operated quite independently of and does not affect its neighbor.

Having thus described my invention, what I claim is—

1. In apparatus such as hereinbefore referred to the combination of a die-carrier, a row of staple-pieces the upper halves of which are resilient fixed at their inner ends to said die-carrier, and dies upon the outer ends of said staple-pieces.

2. In apparatus such as hereinbefore referred to, the combination of a die-carrier with a row of dies 11 and 12, staple-pieces 13 upon which said dies are fixed the upper

halves of said staple-pieces being resilient and retaining the dies 11 and 12 normally apart, distance-blocks 14 fixed to said staple-pieces, and means for holding said staple-pieces in position upon the die-carrier.

3. In apparatus such as hereinbefore referred to the combination of a die-carrier, staple-pieces the upper halves of which are resilient fixed at their inner ends to said die-carrier, dies upon the outer ends of said staple-pieces, a serrated edge upon said die-carrier, and a spring-detent which is adapted to enter the serrations for the purpose of retaining the die-carrier in desired position.

4. In apparatus such as hereinbefore referred to, the combination of a die-carrier, a row of staple-pieces the upper halves of which are resilient fixed at their inner ends to the die-carrier, means for controlling the die-carrier, movable means for holding the plate to be embossed, means in operative connection with and adapted to support said movable means and means for operating the dies.

5. In apparatus such as hereinbefore referred to, the combination of a die-carrier, a row of staple-pieces the upper halves of which are resilient fixed at their inner ends to the die-carrier, dies upon the outer ends of the staple-pieces, means for controlling the die-carrier, a fixed plate opposite the die-carrier, sockets within the plate, a bar adapted to slide within said sockets, sockets adjustably secured to the bar, clips fixed to the last-mentioned sockets for holding the plate to be embossed, means for operating the bar, and means for operating the dies.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

THOMAS HAWKINS.

Witnesses:

HARRY T. P. GEE,

C. GORDON WARREN.