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M. E. BOEKELOO ET AL

2,884,858

SELF-INKING HAND STAMP

Filed June 3, 1957

2 Sheets-Sheet 1

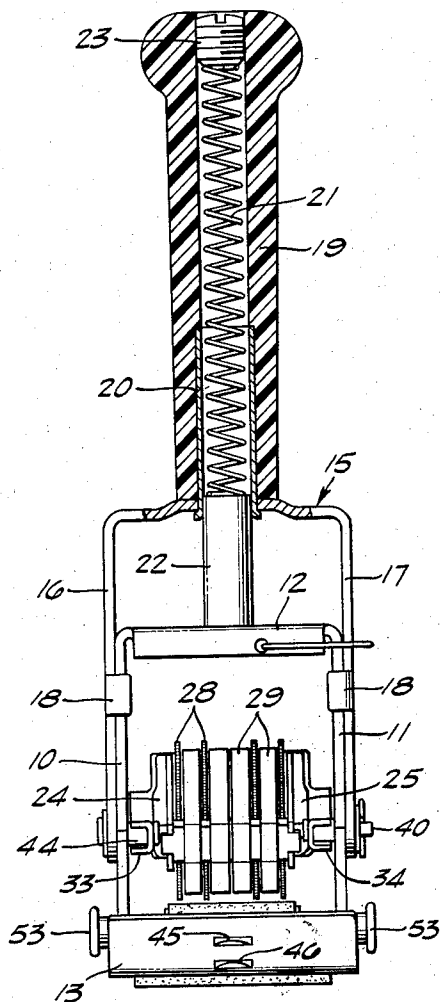
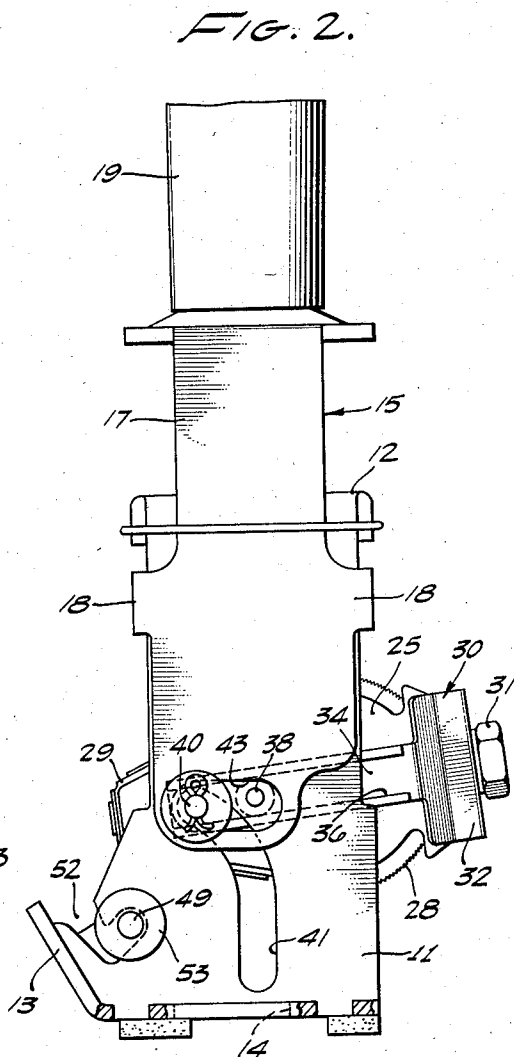


FIG. 1.



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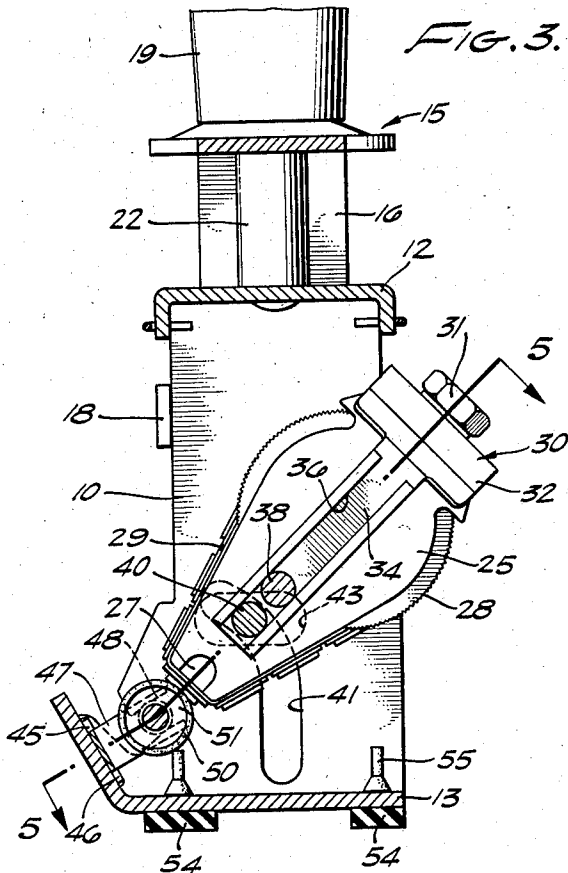
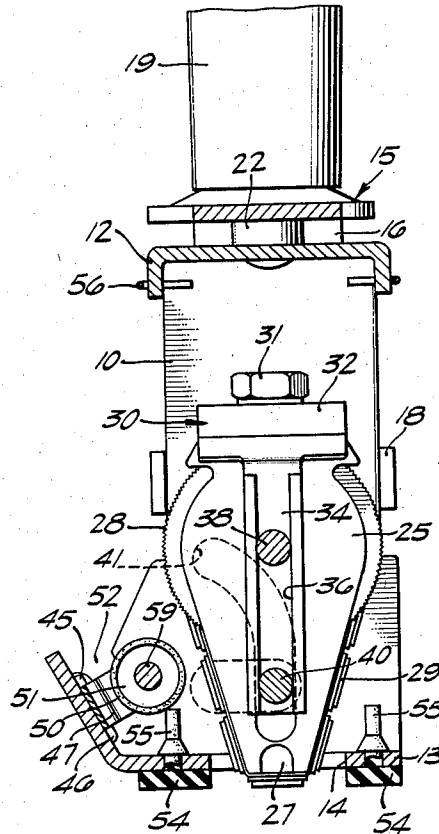
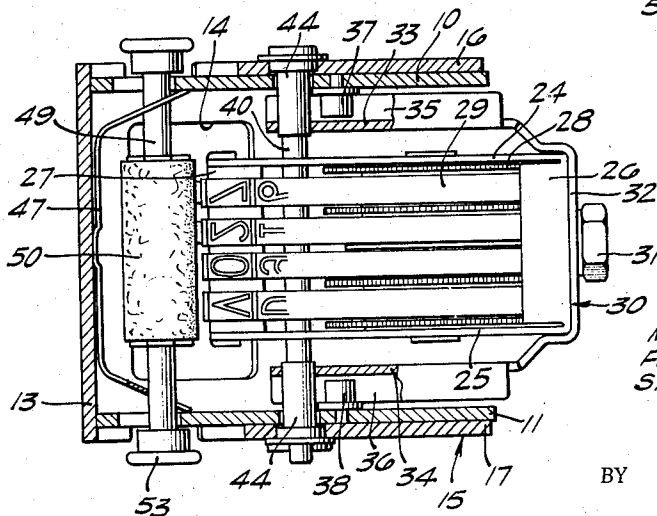
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SELF-INKING HAND STAMP

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1 Claim. (Cl. 101—327)

This invention relates to improvements in hand stamps of the type wherein there is a frame adapted to be positioned against the article to be stamped and a handle is movably mounted on the frame to move the die stamp that is mounted on the frame into engagement with the article that is to be stamped.

Explanatory of the present invention, hand stamps of this general character have heretofore been devised wherein an ink pad has been mounted on the top of the frame. The die stamp in such constructions is elevated and swung from its lowermost or stamping position through an arc of 180° in moving into its uppermost position so as to engage the ink pad. Such constructions are disadvantageous in that the letters or numerals on the die stamp tend to form permanent or semi-permanent impressions in the ink pad so that when the die stamp is adjusted to expose different letters or numerals the depressions formed in the ink pad are so deep that portions of the new numerals or letters may not be adequately inked. Another objection to that type of construction is that ink from the ink pad tends to settle from the ink pad onto the type of the die stamp and to dry thereon, with the result that the type becomes objectionably loaded with ink filling such depressions in the type as occurs in the numerals 4, 6, 8, and 9, and in such letters as p, r, and b.

An object of the present invention is to provide an improved hand stamp of this general character wherein the die stamp, instead of being swung or rotated relatively to the frame through an arc of 180° is merely swung through an arc of approximately 90°. With such an arrangement the mechanical structure of the hand stamp is simplified and can be made quite rugged in that the overall movement of the die stamp is relatively small. This construction also enables the arrangement of a rotatable inking roller on the frame arranged to be traversed or wiped by the die stamp in the course of its movement from its uppermost or inoperative position into its lowermost or stamping position. As the movement of the die stamp brings about or involves a rotation of the inking roller no permanent or semi-permanent depressions are formed in the inking roller which would detract from subsequent proper inking of the type when type changes are made. Furthermore, there is no opportunity for ink from the inking roller to run therefrom onto the type while the stamp is not in use and load the type.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claim, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a view in front elevation of the improved hand stamp;

Fig. 2 is a view in side elevation of the same, the die stamp being shown in its uppermost position;

Fig. 3 is a sectional view illustrating the position of the die stamp in the course of acquiring ink from the inking roller;

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Fig. 4 is a view similar to Fig. 3, but illustrating the die stamp in its lowermost or stamping position; and Fig. 5 is a sectional view taken substantially upon the line 5—5 upon Fig. 3.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, the improved hand stamp comprises a rectangular metal frame having opposed sides 10 and 11 connected by an integral top 12 and by a bottom plate 13 in which an aperture 14 is formed through which the die stamp can be projected as illustrated in Fig. 4.

A yoke 15 has opposed sides 16 and 17 slidably mounted for vertical movement relative to the frame, the sides having arms 18 which extend partially around the edges of the sides 10 and 11 of the frame. This yoke has a handle 19 mounted thereon such as by a ferrule 20 and a compression spring 21 is disposed within the handle and is compressed between a stud 22 extending upwardly of the top 12 of the frame, and a screw plug 23. The compression spring 21 yieldably urges the yoke 15 into its uppermost position relatively to the frame.

Within the frame there is disposed a die stamp which may or may not conform to conventional construction. It is shown as having a pair of side plates 24 and 25 connected to each other by a top 26 and by a die plate 27. Between the plates 24 and 25 there are independently rotatable drums having knurled handles 28 and rubber bands 29 are trained over the drums and over the die plate 27. These rubber bands have the type molded thereon and as the bands are on drums they are independently rotatable. Each band is individually adjustable so as to press the desired letter or numeral over the face of the die plate 27.

The die stamp is detachably mounted in a holder 30, such as by a bolt 31. This holder has a top 32 with which two side arms 33 and 34 are integral. These side arms provide outwardly open channels 35 and 36 in which studs 37 and 38 are slidable and rotatable. The studs are rigidly mounted on the sides 10 and 11 of the frame and project inwardly therefrom into their respective channels. A pin 40 extends between the side plates 24 and 25 of the die stamp, through the backs of the channels of the side arms 33 and 34, and through cam slots 41 formed in the sides 10 and 11 of the frame and through horizontal slots 43 formed in the lower ends of the sides 16 and 17 of the yoke. The ends of this pin may be equipped with anti-friction rollers 44.

As will be observed from an inspection of Figs. 2 and 4, the cam slots 41 have their lower ends vertically arranged in the frame. The upper ends of these cam slots curve toward the front of the hand stamp and terminate at a location approximately horizontal from the studs 37 and 38. The arrangement is such that when the yoke 15 is depressed by forcing handle 19 downwardly relatively to the frame the top edges of the horizontal slots 43 are effective on the rollers 44 on the pin 40 to first swing the die stamp from the approximately horizontal position shown in Fig. 2, through the position shown in Fig. 3, and into an approximately vertical position. Continued downward movement of the handle 19 moves the die stamp vertically downward relative to the frame into the stamping position shown in Fig. 4. During these movements the studs 37 and 38 merely turn in or slide in their respective channels 35 and 36 as is required.

The bottom 13 of the frame has its forward end bent upwardly and equipped with two opposed tangs 45 and 46 between which there is positioned a U-shaped leaf spring 47, the ends of which are bifurcated as indicated at 48, to receive the ends of a spindle 49 on which an inking sleeve 50 is disposed. This inking sleeve consists of a sleeve of felt which may or may not have a rubber core indicated at 51, and the felt is saturated with

ink. The ends of the spindle are disposed in L-shaped slots 52 formed in the sides of the frame so as to be rotatable therein and are held against longitudinal or axial sliding by means of handles or caps 53. The leaf spring 47 is thus effective to urge each end of the spindle 49 independently toward the rear end of its L-shaped slot 52, but either end of the spindle may recede from the end of the slot 52 independently of the other as may be occasioned by the movements of the die stamp. In other words, if only two letters or numerals are used on two of the bands 29 at one side of the die stamp somewhat as is illustrated on Fig. 5, then one end of the inking roller can be urged forwardly of the extreme end of its L-shaped slot 52 without necessarily involving a movement of the other end of the spindle 49. If type on all bars is being employed, then both ends of the spindle 49 may be caused to recede as the die stamp moves through the position shown in Fig. 3.

The bottom of the frame is preferably provided with rubber pads 54 having shouldered stems 55 which are drawn through apertures in the bottom plate.

The operation of the above-described construction is substantially as follows:

When the die stamp is in the position shown in Fig. 2 and the handle 19 is depressed the top edges of the horizontal slots 43 cause the pin 40 to move downwardly in the cam slots 41 swinging the die stamp from the position shown in Fig. 2, through the position shown in Fig. 3, and into the position shown in Fig. 4. As the die stamp moves through the position shown in Fig. 3 it engages and has ink transferred from the inking roll or felt 50 to the exposed type. This movement involves a rotation of the inking roll by turning the spindle 49 in the L-shaped slots 52. The ink is thus transferred by the type from the inking roll to the article that is to be stamper. When the handle 19 is released the compression spring 21 is effective to lift the yoke 15 relative to the frame and the die stamp is returned from the position shown in Fig. 4 through the position shown in Fig. 3, to the position shown in Fig. 2.

It will be noted that in the position shown in Fig. 2 that the inking roll is not engaged so that no permanent or semi-permanent depressions will be forced therein by the type. It will also be observed that the die stamp merely swings through a yoke of approximately 90° so that movements of the die stamp are relatively small.

These small movements of the die stamp contribute towards a sturdier construction, a smoother operation, and a reduction of wear on all moving parts.

In order to hold the die stamp in a vertical position within the contour of the frame, a pivoted bail 56 is mounted on the frame and can be swung over the top of the yoke 15 to hold the yoke in a partially depressed condition against the action of the compression spring 21 wherein the die stamp is intermediate the position shown in Fig. 3, and the position shown in Fig. 4. That is, the die stamp is arranged vertically in the frame but is not in its lowermost position as illustrated in Fig. 4. The pin 40 in this position is disposed in the top of the vertical portions of the cam slots 41. With such an arrangement the hand stamp is confined in a relatively small volume to facilitate shipment or storage.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the appended claim.

We claim:

A hand stamp comprising a frame, a yoke slidably mounted thereon for vertical movement relatively thereto, spring means urging the yoke into its uppermost position relatively to the frame, a die stamp disposed within the frame having channels on its sides, studs on the frame extending into the channels forming a slidable and rotatable connection between the frame and the die stamp, pin means on the die stamp extending through cam slots in the frame and into slots in the yoke whereby when the yoke is depressed relative to the frame the die stamp will be caused to swing into a vertical position relative to the frame and then descend vertically relative to the frame, and an inking roller rotatably mounted upon the frame arranged to be traversed by the die stamp in the course of its swinging movement relative to the frame.

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