

Aug. 25, 1959

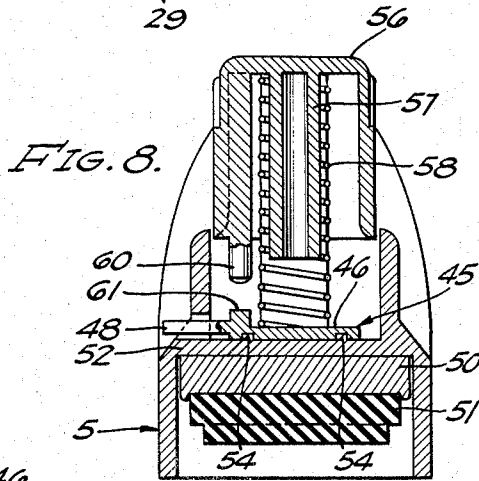
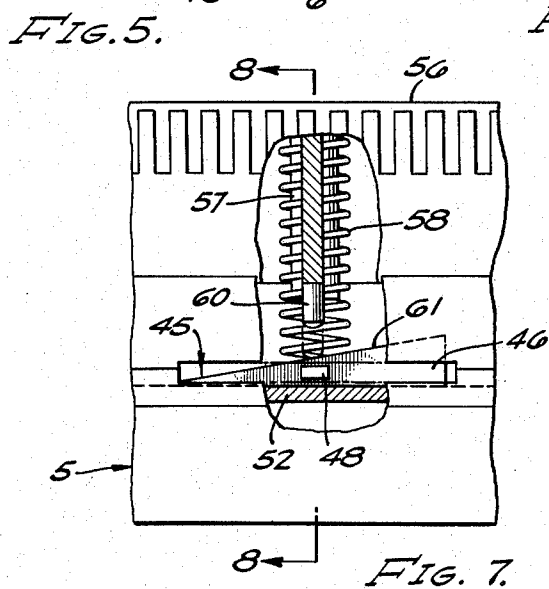
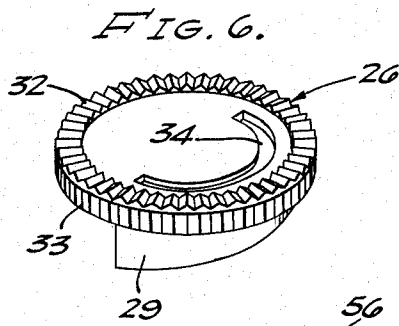
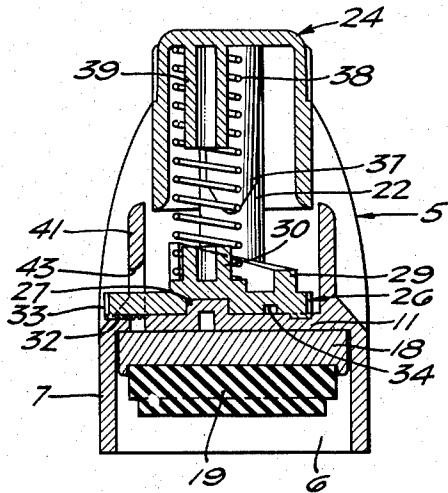
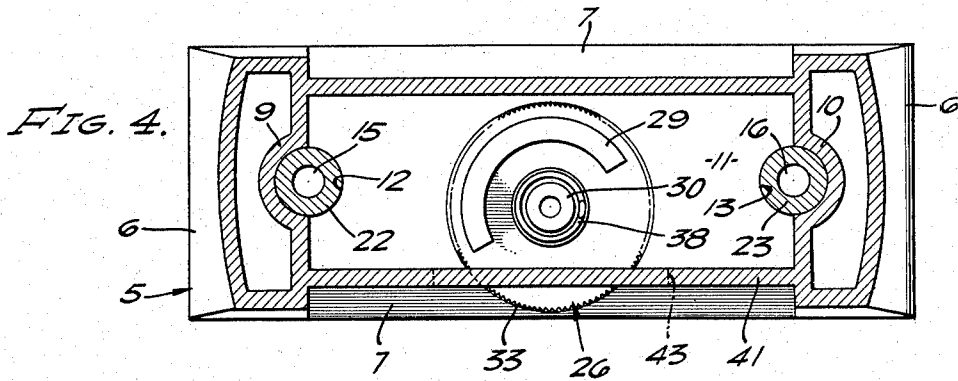
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2,900,902

UNIFORM PRESSURE HAND STAMP

Filed April 14, 1958

3 Sheets-Sheet 2



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3 Sheets-Sheet 3

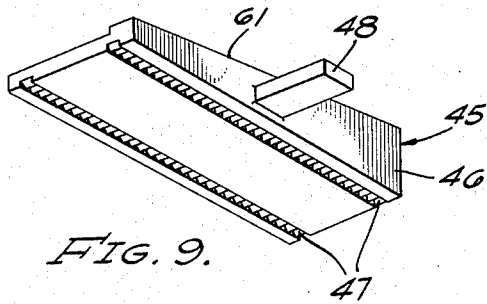


FIG. 9.

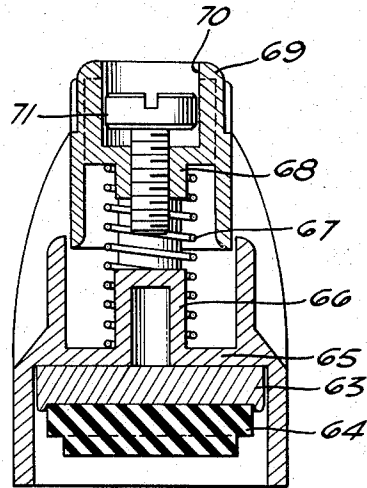


FIG. 10.

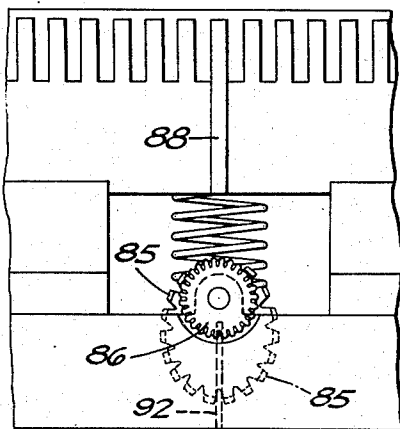


FIG. 11.

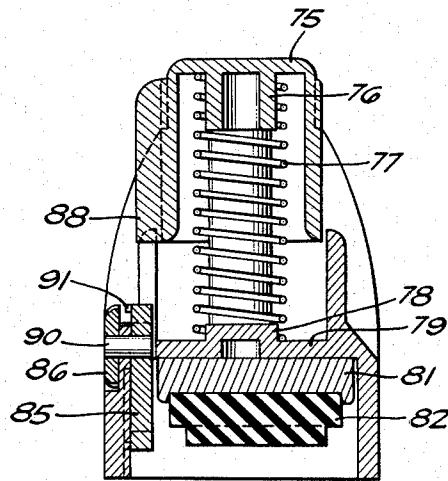


FIG. 12.

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2,900,902

UNIFORM PRESSURE HAND STAMP

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10 Claims. (Cl. 101—368)

This invention relates to hand printing stamps and particularly to stamps in which the ink materials or substances used for printing are incorporated in the stamp itself.

In hand stamps in which the ink materials are incorporated, thus eliminating the use of ink pads for contacting the stamp, it has been found desirable to control the pressure of impression of the stamp on the material being stamped. The stamp itself may be of the type claimed in U.S. Patent No. 2,777,824, of January 15, 1957, and usable for a great many impressions with only the ink materials incorporated within the stamp. It has been found that such a hand stamp will produce various degrees or densities of impressions, depending on the manipulation of the stamp. The present invention will provide a uniform impression at all times. The invention utilizes a case in which the stamp is resiliently held above the material to be stamped and has included therein a pressure control of the impression so that with use, the stamp will always provide the same degree or density of impression during its life.

Also, the invention prevents bleeding of the ink materials from the stamp, since the stamp can never contact any material except at the time of use. This feature also prevents smearing and protects the stamp from dust and dirt.

The principal object of the invention, therefore, is to facilitate the stamping of materials with a hand stamp.

Another object of the invention is to provide an impression hand stamp with variable impression control.

A further object of the invention is to provide an improved hand stamp in which the ink materials are incorporated and which will provide a uniform impression during the life of the stamp.

A still further object of the invention is an improved hand stamp which protects the stamp itself as well as prevents objects from contacting the stamp.

A better understanding of this invention may be had from the following detailed description when read in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view of a hand stamp embodying the invention.

Fig. 2 is a cross-sectional view of the hand stamp shown in Fig. 1.

Fig. 3 is a cross-sectional view showing the stamp of Figs. 1 and 2 in impression position.

Fig. 4 is a cross-sectional view taken along the line 4—4 of Fig. 2.

Fig. 5 is a cross-sectional view taken along the line 5—5 of Fig. 2.

Fig. 6 is a perspective detail view of the cam embodied in the stamp shown in Fig. 1.

Fig. 7 is a cross-sectional view of a modification of the impression control shown in the stamp of Fig. 1.

Fig. 8 is a cross-sectional view taken along the line 8—8 of Fig. 7.

Fig. 9 is a perspective view of the pressure control unit shown in Figs. 7 and 8.

Fig. 10 is a cross-sectional view of another modification of the pressure control unit of the stamp shown in Fig. 1.

Fig. 11 is another modification of the pressure control unit of the stamp shown in Fig. 1; and

Fig. 12 is a cross-sectional view of the pressure control unit shown in Fig. 11.

Referring, now, to the drawings in which the same reference numerals identify the same elements, a triangular shaped casing shown generally at 5 has curved end sections 6 and curved side sections 7. Depending from the upper edges of end section 6 are parallel ribs 9 and 10, to the bottom edges of which is attached a plate 11 having openings 12 and 13 therein. Through the openings 12 and 13 are two pins 15 and 16, respectively, which have one end of each attached to a stamp backing plate 18, to which is attached a stamp 19 of the type disclosed in the above-mentioned patent.

Surrounding the pins 15 and 16 are cylindrical sections 22 and 23 of a pressure plate 24. The lower ends of the sections 22 and 23 also pass through holes 12 and 13 in the plate 11 so that pressure on plate 24 will move the backing plate 18 and stamp 19 downwardly as shown in Fig. 3. To control the impression of the stamp 19 on the material to be stamped, a cam shown generally at 26 in Fig. 6 is mounted on a stud 27 of the plate 11. This cam has a 180 degree section 29 and a hub section 30. The lower surface of the cam (upper surface in Fig. 6) has serrations 32, while the rim of the cam unit is knurled as shown at 33. The cam is also provided with a 180 degree groove 34 in which is inserted a pin 35 mounted on the plate 11. This pin in the groove 34 limits the rotation of the cam unit 26 to 180 degrees. A groove 36 in the plate 11 has serrations corresponding to serrations 32 to hold the unit 26 in any adjusted position.

To limit the movement of the pressure plate 24, a projection 37 is mounted on the inner surface thereof, the beveled end of which is adapted to contact the edge of cam 29. The pressure plate is depressed against the tension of a spring 38, having one end on the stud 30 of the cam unit 26 and the other end on a stud 39 on the inner surface of the plate 24. Thus, when the stamp 19 is new and fully impregnated with ink material, the cam unit 26 is adjusted to provide a certain contact pressure between the stamp and the material to be stamped. This is obtained by rotating the cam unit 26, a portion of which extends through a slot 43 of wall 41 of the casing 5 as shown in Fig. 1. As the ink material within the stamp is gradually depleted, the cam unit 26 is adjusted to provide a greater pressure of the stamp on the material being stamped.

In Figs. 1 to 6, therefore, a certain type of pressure impression control is illustrated. In Figs. 7, 8, and 9, another type of pressure impression control is illustrated, this modification using the same casing 5 as shown in Figs. 1 to 6, inclusive. In this second modification, a tapered slide unit shown generally at 45 in Fig. 9 is used, this unit having a tapered body 46 and two rows of serrated grooves 47 and a handle 48. In this unit, a backing plate 50 with its stamp 51 abuts the lower surface of the casing plate 52, this plate having two rows of serrations 54 to correspond with serrations 47 to lock the slide wedge unit 45 in any adjusted position. The pressure plate 56 has an inner stud 57 on which is a spring 58, the other end of the spring abutting the upper surface of the unit 45. When the pressure plate 56 is depressed against the tension of the spring 58, it is limited by an inner stud 60 adapted to abut the tapered edge 61 of the slide wedge unit 45. The handle 48 extends externally of the casing so that it is accessible for adjustment of the wedge unit 45.

Another modification of the pressure impression control is shown in Fig. 10, wherein the stamp backing plate 63 with its stamp 64 abuts the lower surface of the casing

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plate 65. In this modification, the plate 65 has a stud 66 thereon on which is mounted a spring 67, the other end of the spring being mounted on a stud 68 of the pressure plate 69 having an opening 70 therein. In the opening 70 is the head of a screw 71, the other end of which may be variably adjusted with respect to the upper end of the stud 66. Thus, the depression of the pressure plate 69 and the movement of the stamp 64 are controlled by the position of the end of the screw 71 with respect to the other end of the stud 66.

A further modification of the pressure impression control is shown in Figs. 11 and 12, wherein a pressure plate 75 has an inner stud 76 on which is mounted a spring 77, the other end of which surrounds a stud 78 of a plate 79 of the casing. The stamp backing plate 81 has a stamp 82 attached thereto as in the other modifications. In this modification, the backing plate 81 and stamp 82 are offset to accommodate an ovate cam 85 which is adjustable by hand knob 86. The position of the cam 85 with respect to the end of the side 88 of the pressure plate 75 controls the pressure of the stamp 82 against the material being stamped. As shown in Fig. 12, the cam 85 and hand knob 86 are mounted on the same shaft 90, while the side of the cam 85 has projections therefrom as shown at 91 to be accommodated in a groove 92 to hold the cam in any adjusted position.

Thus, the above type of hand stamp mounted in the general type of casing shown at 5 in Fig. 1 may have the impression of the stamp thereof controlled by either a rotary cam unit 26, a slide wedge 45, an adjustable screw 71, or a rotary ovate cam 85. In each instance, however, the same result is obtained, namely, that the pressure may be adjusted during the life of the stamp to provide the same degree of impression at all times.

I claim:

1. A hand stamp comprising a casing having a portion adapted to contact material to be stamped, a fixed plate within said casing, a movable pressure plate adapted to be moved toward and away from said fixed plate, an impression stamp mounted within said casing and movable by said movable pressure plate, resilient means for maintaining said stamp in a predetermined position within said casing, an element extending from said movable pressure plate, a second element relatively fixed with respect to said fixed plate and extending toward said first-mentioned element, and means for adjusting the distance between said elements to control the pressure of said stamp on said material to be stamped when said movable pressure plate moves said stamp to said material.

2. A hand stamp in accordance with claim 1 in which said second element is a rotary cam mounted on said fixed plate and said last-mentioned means is a portion of said cam extending externally of said casing for adjustment thereof.

3. A hand stamp in accordance with claim 1 in which said second element is a wedge slidable along said fixed plate and said last-mentioned means is a handle on said

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wedge extending outside said casing for adjustment thereof.

4. A hand stamp in accordance with claim 1 in which said first-mentioned element is a screw in said pressure plate and adjustable with respect to said second element.

5. A hand stamp in accordance with claim 1 in which said second element is a rotary cam on said casing and said last-mentioned means is a knob for rotating said cam.

10 6. A hand stamp comprising a tapered rectangular casing having a portion adapted to contact material to be stamped, a fixed plate within said casing, a movable pressure plate having a portion within said casing and adapted to be moved toward and away from said fixed plate, and an impression stamp mounted on extensions of said pressure plate passing through openings in said fixed plate and adapted to be moved by movement of said pressure plate, resilient means interposed between said fixed plate and said pressure plate for maintaining said stamp within said casing, an element extending from said movable pressure plate, a second element relatively fixed with respect to said fixed plate and extending toward said first-mentioned element, and means for adjusting the distance between said elements to control the pressure of said stamp on said material to be stamped when said movable pressure plate moves said stamp to said material.

20 7. A hand stamp in accordance with claim 6 in which said second element is a circular cam mounted on said fixed plate, said first-mentioned element being adapted to contact said cam, said last-mentioned means being a portion of said cam extending externally of said casing.

30 8. A hand stamp in accordance with claim 6 in which said second element is a wedge mounted on said fixed plate, said wedge being slidable along said fixed plate, said last-mentioned means being a handle on said wedge extending externally of said casing.

40 9. A hand stamp in accordance with claim 6 in which said first-mentioned element is a screw adjustable in said pressure plate, and said second element is a projection on said fixed plate contactable by the end of said screw.

45 10. A hand stamp in accordance with claim 6 in which said second element is a rotary cam mounted on the inner side of said casing, and said last-mentioned means is a knob for rotating said cam.

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