Sept. 21, 1954 E. L. CLARKE 2,689,519

COMBINED HAND STAMP WITH INKER

Filed Nov. 8, 1951

Fig. 1.

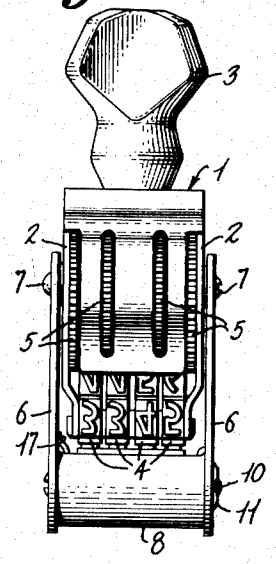


Fig. 2.

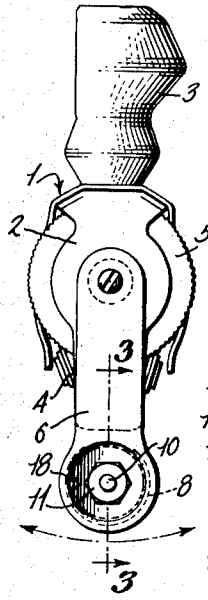


Fig. 3.

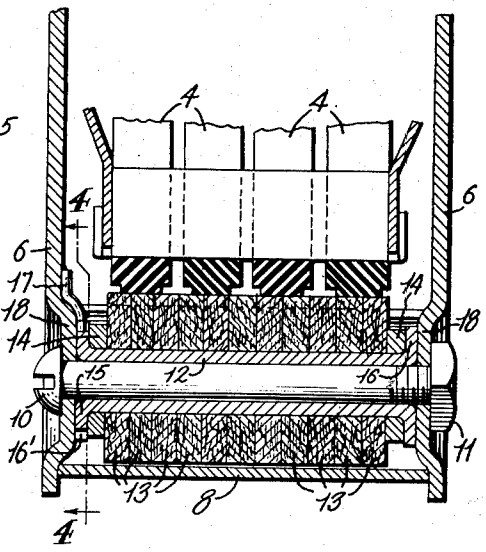


Fig. 4.

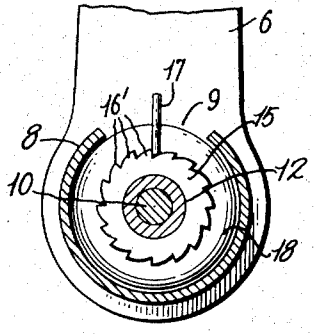


Fig. 5.

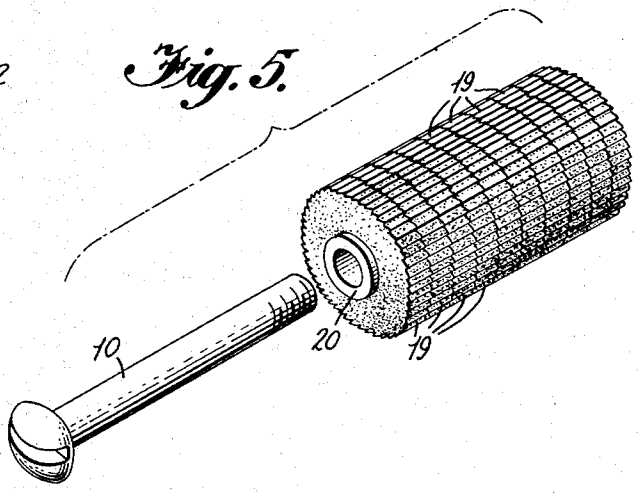
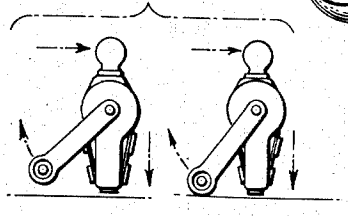


Fig. 6.



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Patented Sept. 21, 1954

2,689,519

UNITED STATES PATENT OFFICE

2,689,519

COMBINED HAND STAMP WITH INKER

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Application November 8, 1951, Serial No. 255,380

4 Claims. (Cl. 101—103)

1

This invention relates to a combined hand stamp with inker, the general object of the invention being to provide an inker which is freely suspended from the stamp so as to be capable of swinging like a pendulum, and including a pad element that in one part of the arc of free swing makes surface contact with the printing face of the stamp, reinking the type, while in another part of its arc it is lateral with respect to the line of printing movement, so as to enable the skilled user, timing his printing strokes with the lateral phases of the inker, to repeatedly print on an underlying surface between successive inking applications of the inker, at the same time adding a modicum of energy to the swinging inker at each printing stroke, to keep it swinging indefinitely, that is, so long as the repetitive printing tempo is maintained.

Another object of the invention is to provide in the combination as above set forth, a pad in the form of an ink impregnated roller, with means for imparting step rotation unidirectionally to the roller for bringing a fresh surface into contact with the type, for each impression.

Other objects of the invention will appear as the following description of a preferred and practical embodiment thereof proceeds.

In the drawing throughout the several figures of which the same reference characters have been used to denote identical parts:

Figure 1 is a front elevation of a stamp embodying the principles of the invention;

Figure 2 is a side view of the stamp shown in Figure 1;

Figure 3 is a vertical section taken along the line 3—3 of Figure 2;

Figure 4 is a vertical cross-section taken along the line 4—4 of Figure 3;

Figure 5 is a perspective view of a modified form of ink pad;

Figure 6 is a diagrammatic view illustrating two modes of technique in operating the combined stamp and inker.

The invention does not concern itself with the stamp per se, consequently, the stamp as illustrated and which is of conventional form, will be referred to only in general terms. It consists of a frame 1, having parallel side portions 2, and a handle 3. The frame supports a plurality of rubber belts 4 in side by side relation, the belts each having type in the form of a series of figures, from one to zero, and the belts being independently adjustable by means of the finger wheels 5 to present any number within the capacity of the stamp in a common flat printing surface.

The inker comprises a pair of similar arms 6, pivotally mounted on the side portions of the stamp by means such as the screws 7 to swing freely on a common axis. At their lower ends the arms 6 support between them a casing or shield 8, which is open as shown at 9 in Figure

2

4, on the upper side which faces the printing surface.

The arms 6 also support a screw 10, which extends through aligned apertures in the arms 6. The screw has a nut 11 at its far end, and when the nut is tightened, the arms are spaced by the casing 8. The screw forms a bearing for the pad unit.

The pad unit, as shown, comprises a spool 12 which rotatably fits the shank of the screw 10, and which carries series of disks 13 of felt or other suitable ink retaining material. These disks are side by side. The stack of disks is flanked by suitable washers 14, and the ends 15 and 16 of the spool 12 are peened out against the washers, holding the series of disks under slight compression. The pad unit is impregnated with ink and is expendable, being replaced by a new one when it becomes dry. In the operation of the device the pad, which is in fact a roller, wipes lightly against the face of the type. This slight friction imparts rotation of the pad unit about the screw 10. In order to present fresh surfaces of the roller to the type, this rotary movement is made unidirectional by forming one of the outwardly peened ends 15 with ratchet teeth 16', as shown in Figure 4. A light spring 17 is soldered or otherwise secured to the adjacent arm 6, and engages the teeth 16', as shown in Figure 4.

In the specific form shown in Figure 3, the arms 6 are inwardly embossed with circular lands 18, which enter the ends of the casing 8 and retain it. In replacing the pad unit, the screw 10 is loosened and removed. This permits the arms 6 to be pushed apart so that the casing 8, together with the expended pad unit may be withdrawn. Since the ends of the casing are open, a new unit may be readily inserted. When assembled, the top of the ink pad extends slightly above the edges of the casing which define the opening 9.

That which characterizes the present invention is the complete freedom of swinging movement of the inker. Stamps are known in which the inker swings, but in every case, insofar as applicant's knowledge extends, there is some device intentionally provided for imposing some action or restraint mechanically controlling the swinging movement of the inker. The present invention is the outgrowth of a pressing need particularly by super markets and self serve stores, for having the price marked on every item of merchandise. For example, each can in every case of goods sold must be marked with the price, for the benefit of both customer and cashier, and since prices change from day to day, it is necessary for a clerk manually to stamp the price on each item. At the present time, such stamping can be only fifty percent efficient, involving two movements for each printing operation, one for inking the type, and one for printing on the

goods. An enormous number of man hours are devoted to printing the prices on the merchandise, and a device which halves the printing time as does the present device, is an outstanding contribution to the advancement of the art.

Referring particularly to Figure 2 and the lefthand side of Figure 6, the stamp is operated by setting the inker into swinging movement, as indicated by the arcuate arrows at the bottom of Figure 2. When the inker has swung laterally to one side or the other, the operator makes his downward printing movement. The ink pad is out of the way and does not obstruct the vertical descent of the stamp. In a very few minutes the operator acquires such skill that the inker is set into continuous oscillation from one side to the other, there being time for a printing movement between each pass. The printing can be done just as fast as with the present conventional stamp, but the alternate interval for inking is entirely omitted.

A slightly modified form of technique may be employed in the operation of the stamp which is illustrated in the righthand part of Figure 6. The operator moves the stamp to cause the inker to swing slightly laterally in one direction. Then he moves the stamp down vertically in printing direction, but before the stamp reaches the surface to be impressed the inker contacts said surface on a slant and moves out further in a lateral direction while the stamp surface contacts the surface to be impressed. When the stamp is lifted vertically, the inker swings down into vertical position and inks the stamp. By a very slight lateral movement of his hand at the same time that he moves the stamp downward, the operator is able to cause the inker to swing out rhythmically each time to the position shown in the righthand side of Figure 6, before the type touches the merchandise.

Regardless of which method of operation is practiced, a component of the movement of the stamp toward the printing point adds a little energy each time to the swinging inker, to keep it in continuous oscillation so long as the repeated printing movement is continued, and the slight friction of the pad against the type and of the spring 17 against the ratchet teeth 16' is altogether negligible in its effect upon the oscillation of the device.

In Figure 5 a modified form of the pad unit is shown, in which the ink impregnated disks 19 are sheared or otherwise corrugated on the outside. The corrugations, like the teeth 16 in the previously described form of the invention, have abrupt shoulders at one side. This produces unidirectional movement of the roller as it wipes the faces of the type, and obviates the need of the ratchet end 15 of the spool 12. The spool 20 employed in this form of the invention has plain flanges at both ends.

While I have in the above description disclosed what I believe to be a preferred and practical embodiment of the invention, it will be understood by those skilled in the art that the specific details of construction as shown and described, are by way of illustration and not to be construed as necessarily limiting the scope of the invention.

What I claim is:

1. Combined hand stamp with inker, comprising a hand stamp having side plates, and type at its lower end, and a U-shaped member having two arms and transverse bridging structure between the arms at one end, said bridging structure including a pin fixed between said arms, an ink containing roller journaled on said pin, and an open topped casing retained between said arms encompassing said roller, exposing it through said top opening, said arms being freely pivotally connected to the side pieces of said stamp, said U-shaped member being freely swingable through an arc which brings said roller in wiping contact with said type whereby said roller is frictionally rotated, and means for determining unidirectional rotation of said roller.

2. Combined hand stamp with inker, comprising a hand stamp having side plates, and type at its lower end, and a U-shaped member having two arms and transverse bridging structure between the arms at one end, said bridging structure including a pin fixed between said arms, an ink containing roller journaled on said pin comprising a spool having a ratchet wheel at one end and being clothed with a cylindrical ink impregnated pad, said arms being freely pivotally connected in embracing relation to the side pieces of said stamp, said U-shaped member being freely swingable through an arc which brings said roller in wiping contact with said type, whereby it is frictionally rotated, and a holding pawl fixed to one of said arms, engaging said ratchet wheel for determining unidirectional rotation of said roller.

3. Combined hand stamp with inker, comprising a hand stamp having side plates, and type at its lower end, and a U-shaped member having two arms and transverse bridging structure between said arms at one end, said bridging structure including a pin fixed between said arms, an ink containing roller journaled on said pin, said roller comprising a spool clothed with a cylindrical ink impregnated pad, the surface of said pad being finely corrugated in an axial direction with corrugations having abrupt shoulders facing in the same direction, said arms being freely pivotally connected to the side pieces of said stamp, said U-shaped member being freely swingable through an arc which brings said ink pad in wiping contact with said type whereby said roller is rotated, the surface corrugations determining unidirectional rotation of said roller.

4. Combined hand stamp with inker, comprising a hand stamp having side pieces, and type at its lower end, and a U-shaped member having two arms and a transverse bridging portion between the arms at one end including an ink pad, said arms being freely pivotally connected in embracing relation to the side pieces of said stamp, said U-shaped member being freely swingable through an arc which brings said ink pad in wiping contact with said type, said U-shaped member having a repose position in which said ink pad is beneath said type and being freely swingable in opposite directions with reference to said repose position, said ink pad being a roller frictionally rotated through contact with said type, and means for determining unidirectional rotation of said roller.

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