

(No Model.)

E. C. RYER.
SELF INKING HAND STAMP.

No. 454,499.

Patented June 23, 1891.

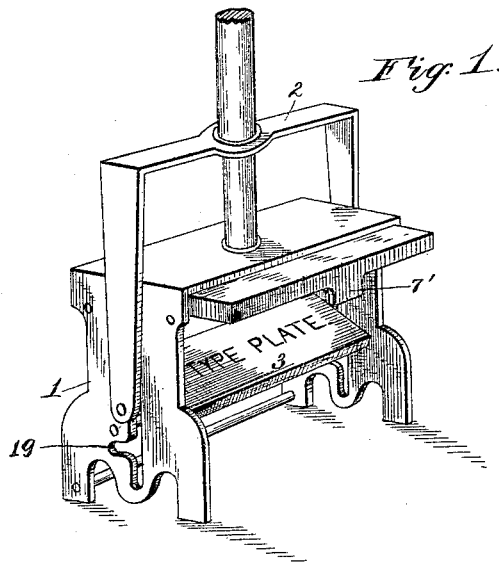


Fig. 1.

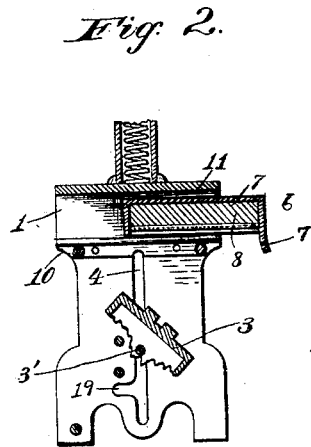


Fig. 2.

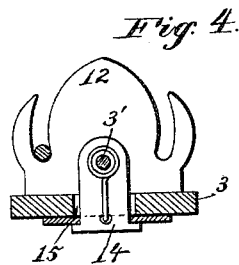


Fig. 4.

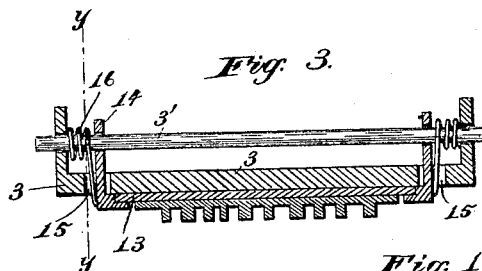


Fig. 3.

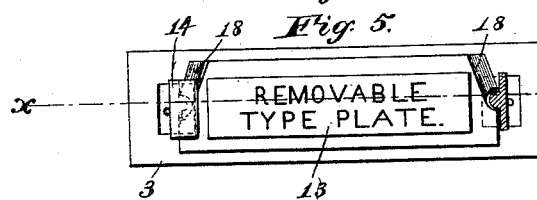


Fig. 5.

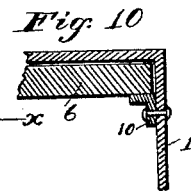


Fig. 10.

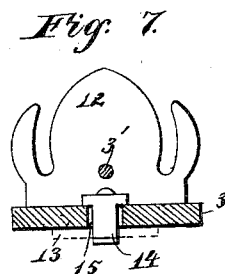


Fig. 7.

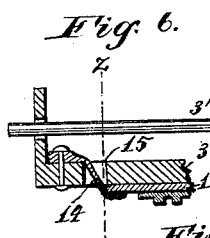


Fig. 6.

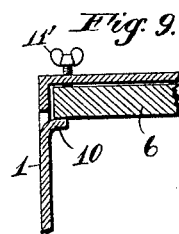


Fig. 9.

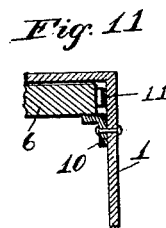


Fig. 11.

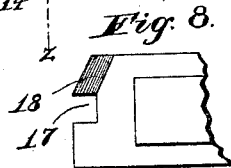


Fig. 8.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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SELF-INKING HAND-STAMP.

SPECIFICATION forming part of Letters Patent No. 454,499, dated June 23, 1891.

Application filed January 26, 1889. Serial No. 297,637. (No model.)

To all whom it may concern:

Be it known that I, EDWARD C. RYER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Self-Inking Hand-Stamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in self-inking hand-stamps.

My invention contemplates, first, the provision of an inking-pad which is capable of a lateral horizontal adjustment with relation to the type-bed, so that a fresh-inked surface can be presented to the type-bed in order to secure good impressions therefrom.

My invention further contemplates a removable type-plate and mechanism for holding said removable type-plate on the ordinary type-bed, so that it can be detached therefrom without adjustment or removal of any of the parts of the ordinary stamp, thereby enabling a type-plate having one inscription to be replaced by another one of a series of type-plates, each having a different inscription on its exposed face.

My invention also contemplates the provision of means for holding the type-bed out of contact with the inking-pad when the stamp is not in use and in a convenient position for expeditiously removing the type-plate, all as will be hereinafter more fully described and claimed.

To enable others to understand my invention, I will now proceed to describe the same in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of my self-inking hand-stamp. Fig. 2 is a vertical central sectional view. Fig. 3 is a detail vertical sectional view, on an enlarged scale, through the type-bed, the removable type-plate, and the clamps for holding the type-plate, the section being taken on the line *x x* of Fig. 5. Fig. 4 is a vertical sectional view on the line *y y* of Fig. 3. Fig. 5 is a detail bottom plan view, partly in section, of the removable type-plate, the type-bed, and the clamps for detachably connecting said

type-plate and type-bed. Fig. 6 is a detail sectional view of a modified form of clamp for holding the type-plate on the type-bed, and Fig. 7 is a corresponding view on the line *z z* of Fig. 6. Fig. 8 is an enlarged detail view of one end of the removable type-plate. Figs. 9 and 10 are detail vertical sectional views of different forms of devices for holding the adjustable inking-pad in place. Fig. 11 is a detail sectional view showing a modification of the holding-spring arranged between the end of the inking-pad and the frame or stand.

Like numerals of reference denote corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 is the stand or frame of the ordinary self-inking hand-stamp, and 2 the reciprocating cross-head which carries the reversible type-bed 3. As is usual, this cross-head straddles the stand or frame 1, and the type-bed 3 is carried by a rod or shaft 3', that is journaled in the lower extremities of the arms forming a part of the cross-head, this shaft or rod passing through vertical aligned slots 4, formed in the vertical legs of the stand or frame, as shown.

No novelty is herein claimed on the mechanism for operating and reversing the type-bed, and I have therefore not deemed it necessary to illustrate and describe mechanism for accomplishing these ends, as any reversing mechanism may be used in connection with a hand-stamp embodying my improvements.

I employ a horizontal inking-pad 6, arranged at the upper end of the stand or frame between its legs or sides and immediately beneath the solid flat top thereof. This pad comprises a flat dish or tray 7, preferably of metal, and has an open lower side and a filling 8 of a porous absorbent material, preferably gelatine. By the use of this flat dish or tray I am enabled to reverse the inking-pad after the ink has been used on one side thereof, and thus present a fresh inked surface for the type-bed to impinge against, thereby utilizing both sides of the pad.

I have demonstrated that a very large number of impressions—say from two to five thousand—can be secured from a single inking-pad constructed in accordance with my

invention—namely, the horizontally-movable tray resting on suitable supports within the stand and adapted to be moved a distance equal to the width of the line of type when a part of the pad has become exhausted and the reversible pad supported in said metallic tray between the depending sides thereof and below the closed top and adapted to be reversed or turned over to present its unused surface to the inscription-plate. A different color may be applied to the two surfaces of the reversible pad, which is very desirable. This porous absorbent filling may be of a mucilaginous nature to cause it to adhere to the dish or tray, and it may be covered with a pervious fabric or other material, as indicated in Fig. 2.

The inking-pad is supported on suitable fixed guides 10, so that it can be moved laterally of the vertical plane of movement of the reversible type-bed to adapt the pad to present a fresh surface to the type-plate when the impressions from the latter are faint or obscure. These fixed guides 10 may consist of the usual transverse rods, which are employed to brace the parallel sides of the frame or stand 1, or they may be made by stamping out lips or flanges, or a continuous flange in each side of the stand, (see Fig. 9,) or by means of angle-plates, which are riveted to the inner opposing faces of the sides of the frame. (See Fig. 10.)

The pad may be made of any preferred width and thickness, and it may be made wider than the width of the frame or stand, so that both side edges of said pad may extend beyond the corresponding edges of the stand, in which event the pad can be detached from the stand by merely sliding it edgewise and placed in a suitable receptacle when the stamp is not in use. When the width of the pad is equal to the top of the stand or frame, the pad can be readily withdrawn from the frame and inverted, so that the inked surface of the pad is contiguous to the top of the frame, thereby excluding dust, dirt, &c., from accumulating on the surface thereof. The inking-pad merely rests on the fixed guides or supports 10, provided for its support on the stand 1, and it can be easily and readily moved in a horizontal direction to cause the type-plate to strike or impinge against the porous absorbent filling thereof at different places. The pad can also be removed entirely from the stand or frame for the purpose of reinking the same or of replacing it with another pad, a handle or thumb-piece 7' being provided to enable the operator to adjust and manipulate the pad without soiling the fingers. The porous absorbent filling 8 terminates a short distance within the edges of the open lower side of the dish or tray 7 of the pad, so that the pad is supported by the edges of the dish or tray resting on the supports or guides 10 to obviate coating the latter and the frame or stand with the coloring-matter contained in the filling 8.

In order to prevent lateral displacement of the pad, owing to the jar produced by bringing the implement down upon the surface on which the impression is produced or by the type-bed striking against the filling of the pad, I have provided a friction-spring for holding the pad in the position to which it has been moved or adjusted. This spring I preferably make of the flat leaf-spring class and arrange it between the rigid metallic dish or tray of the pad and the flat top of the stand or frame, (see Fig. 2;) but it is obvious that a spring of another form can be used, and the spring can be differently arranged without departing from the spirit or sacrificing the advantage of my invention. I may also use a thumb-screw 11' (indicated in Fig. 9) for holding the pad in place, as is obvious.

The type-bed 3 has the usual sides 12, in which are formed the cams for reversing the bed as it reciprocates vertically and through which is passed the rod or shaft 3', by which the bed is carried. This type-bed proper consists of a flat rectangular plate, and against one of the lateral faces of the same bears a removable type-plate 13, which is detachably connected to the type-bed by means of clamps 14. This removable type-plate is smaller than the type-bed and bears the desired inscription on its exposed face, the plate being made of metal and having a rubber inscription molded or cast thereon, as indicated in Figs. 3 and 6, or the type-plate with its inscription may be stereotyped or cast in a single piece of metal. I prefer, however, to cast or mold the rubber inscription on a metallic type-plate.

Near opposite ends of the type-bed I provide transverse apertures or openings 15 of sufficient size to permit the clamps 14 to pass through and have the requisite lateral movement or play therein, and through each of these openings is passed one end of each clamp, so that it will project below the type-bed a sufficient distance to engage with the type-plate when the latter is inserted between the two clamps.

In Figs. 3, 4, and 5 of the drawings I have shown a clamp made of rigid material, preferably cast metal, which is loosely hung at one end on the rod or shaft 3', and is normally forced and held in position to engage the type-plate by means of a spring 16, one end of which is connected to said rigid clamp and the other end of which is coiled around and connected to the rod or shaft 3' at a point between the side of the type-bed and the upper end of the clamp. (See Figs. 3 and 4.) In Figs. 6 and 7 I have shown a simpler and preferred construction of clamp, which is made of a single piece of spring or elastic metal and riveted or otherwise secured at one end directly to the type-bed. It will be noticed that the free unconfined ends of the clamps at the opposite ends of the type-bed fit below the lower face of the removable type-plate and that they have a tendency to force

or press the type-plate closely to and against the type-bed; and in order to more firmly secure the removable type-plate in proper position on the type-bed I have provided notches 5 or recesses 17 in the ends of the type-plate, into which notches the clamps are forced and held, whereby lateral displacement of the type-plate on the type-bed is effectually prevented.

10 To facilitate the insertion of the type-plate between the clamps, each end thereof is beveled or inclined, as at 18, on one side of the notch or recess 17 therein, against which inclined edge the clamps impinge when the 15 type-plate is forced edgewise between the clamps, as is obvious.

To remove a type-plate from the type-bed it is only necessary to force one of the clamps laterally out of the notch or recess in one end 20 of the plate and then move the plate edgewise, as upon a pivot, with the opposite end engaged by and resting on the other clamp until the plate has been moved sufficiently beyond the implement to enable it to be readily 25 removed.

To fit another type-plate with a different inscription in position for service on the type-bed the plate is turned so that the inclined edges 18 thereof will first impinge against the 30 clamps, and the plate is forced edgewise between the clamps until the latter springs into the notches or recesses 17 in the ends of the plate, the clamps yielding laterally or giving to the plate until they enter the notches. The 35 clamps fit beneath the type-plate and against the ends of the latter to press said type-plate against the type-bed and each other, and as the clamps also fit in the notches of the type-plate to prevent its lateral displacement it is 40 obvious that the type-plate is firmly and securely held in position on the type-bed.

Near the lower extremities of the vertical slots 4 in the sides of the frame or stand 1 I provide lateral extensions 19, which are arranged at right angles to the axis or length 45 of the slots 4 themselves, into which lateral extensions the shaft or rod 3' of the reversible type-bed can be fitted to prevent the bed from moving upward, thus locking the bed in 50 its lowered position and preventing it from coming in contact with the inking-pad. When the shaft or rod 3' fits in these lateral extensions, the type-bed stands in a vertical position, so that access to the type-plate can be 55 easily and readily had to insert or remove the same from the type-bed.

The operation of my invention will be readily understood from the foregoing description in connection with the drawings.

60 I am aware that changes in the form, proportion of parts, and details of construction can be made without departing from the spirit of my invention.

Having thus fully described my invention, 65 what I claim as new, and desire to secure by Letters Patent, is—

1. In a self-inking hand-stamp, the combination, with a stand or frame and a reversible type-bed, of a horizontal adjustable and reversible pad supported in suitable guides 70 below the head of the frame, said pad consisting of a metallic tray or dish having the depending sides, and an absorbent pad or filling held within said tray between the depending sides thereof and reversible therein, substantially as described, for the purpose set forth. 75

2. In a self-inking hand-stamp, the combination, with a stand or frame having the horizontal guides or ways on the sides thereof and a reversible type-bed, of a flat inking- 80 pad resting on said guides and having the metallic open-bottom dish or tray and an absorbent filling, and a device which forcibly impinges or presses against said metallic tray of the inking-pad to positively hold the 85 same in a fixed position within the stand or frame, substantially as described.

3. In a hand-stamp, substantially as described, the combination of a stand or frame having the fixed guides or ways, an adjustable inking-pad supported on said guides, and a friction-spring arranged between the stand and inking-pad for holding the latter against lateral displacement, substantially as described. 95

4. In a hand-stamp, substantially as described, a frame or stand having the lateral slot-extensions formed at right angles to the length of the vertical slots 4 near the lower ends thereof, in combination with a reciprocating type-bed carried by a shaft or rod 100 which passes through said slots 4, substantially as described.

5. In a self-inking hand-stamp of the class described, the combination, with a stand or 105 frame and a reversible or rotating type-bed, of a flat inscription-plate whose lower surface is continuous and provided with the desired inscription, and the spring-clamps arranged compactly on the reversible type-bed 110 and engaging the ends and lower face of said inscription-plate to force the latter against the flat type-bed and hold said plate between themselves, substantially as described, for the purpose set forth. 115

6. In a self-inking hand-stamp, the combination, with a stand or frame and a reversible or rotating type-bed, of a flat inscription-plate bearing directly on or against one face of the type-bed and provided in its ends with 120 notches or recesses, and the spring-clamps arranged compactly on the type-bed and having the angular ends which enter the notches or recesses in the inscription-plate and impinge directly against the lower face thereof, 125 whereby the clamps serve to hold the inscription-plate between themselves against endwise and lateral play and to press said plate firmly against the type-bed, substantially as described, for the purpose set forth. 130

7. In a self-inking hand-stamp, the combination, with a stand or frame, of a perforated

reversible type-bed, a flat inscription-plate fitted laterally against one face of said type-bed, a rod or shaft on which the type-bed is hung, and the spring-clamps fitted on said rod
5 or shaft within the ends of the type-bed; said clamps passing through the perforations in the type-bed and having the lower ends thereof formed to impinge or bear directly against the lower exposed face of the inscription-
10 plate to force the latter firmly against the type-bed, substantially as described, for the purpose set forth.

8. In a hand-stamp, the combination, with a type-bed, of an inscription-plate having the
15 inclined or beveled edges at its ends and on one side of central notches or recesses in said ends, and spring-clamps carried by the type-

bed, substantially as and for the purpose described.

9. In a hand-stamp, the combination of a 20 type-bed having the transverse apertures near its ends, the clamps passing through the apertures in said type-bed and having the free unconfined ends terminating beneath said type-bed, and an inscription-plate fitted be- 25 tween said free ends of the clamps and the type-bed, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD C. RYER.

Witnesses:

EDWARD S. DUNNING,
GEORGE W. SELTZER.