April 23, 1929. A. J. MARKS 1,710,633

HAND STAMP

Filed March 14, 1927 2 Sheets-Sheet 1

Fig. 2.

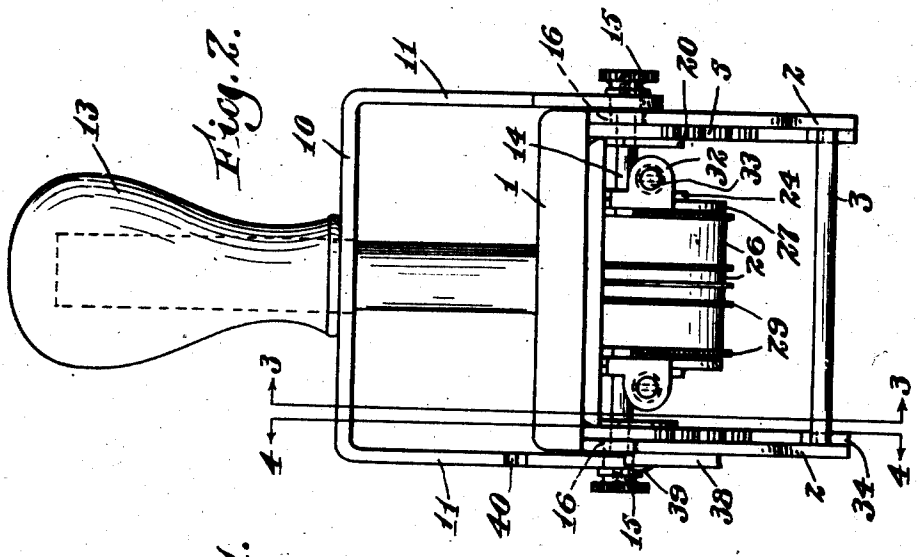


Fig. 1.

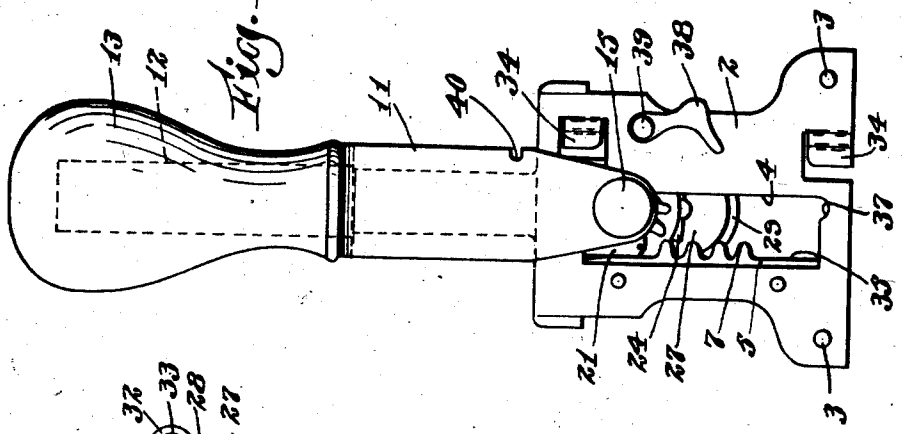
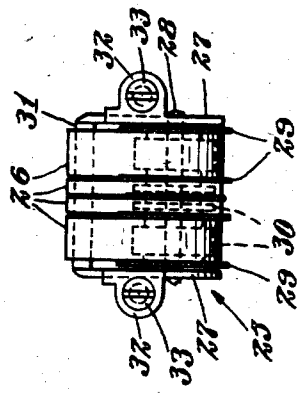


Fig. 3.



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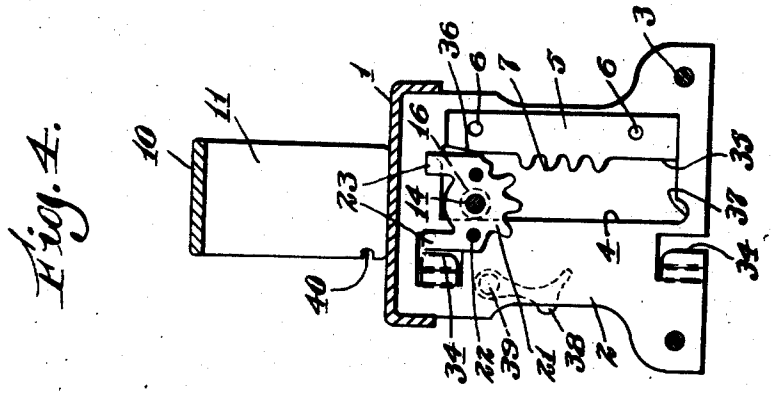


Fig. 4.

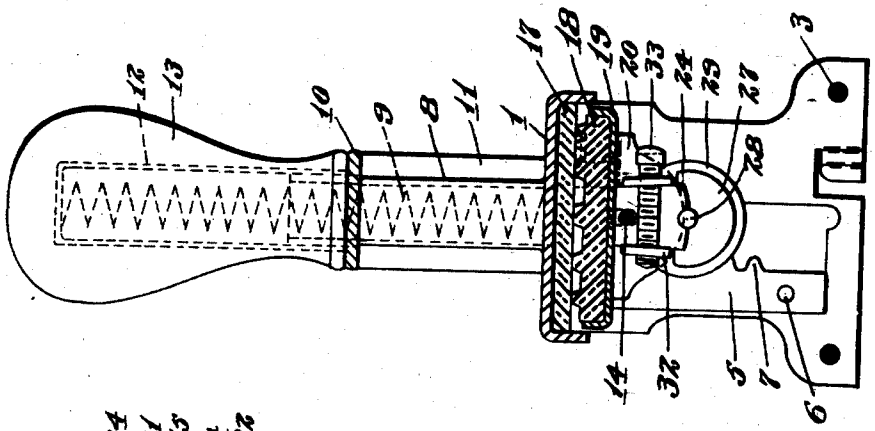


Fig. 3.

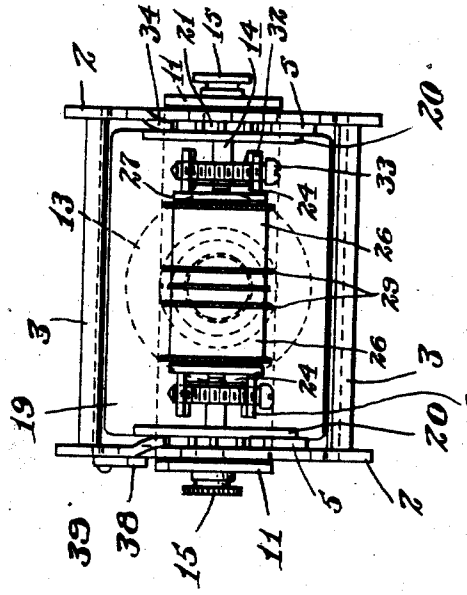


Fig. 6.

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Patented Apr. 23, 1929. 1,710,633

UNITED STATES PATENT OFFICE.

ALBERT J. MARKS, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO JOSEPH LEVY, OF BOSTON, MASSACHUSETTS.

HAND STAMP.

Application filed March 14, 1927. Serial No. 175,217.

My present invention relates to hand stamps, and more particularly such hand stamps embodying reversible platens.

An important object of the present invention is the provision of such a hand stamp of extremely simple construction, comprising a minimum number of parts.

My present novel hand stamp is efficient, positive in operation, rugged in construction because of the simplicity thereof, long lived because of the ease of operation, and inexpensive to manufacture.

In carrying out my present invention, I provide a frame in the upper part of which is carried an inking pad or the like against which a platen bears. Projecting upwardly from the frame and centrally thereof is a tubular stem in which is carried a coiled spring. Mounted over this tubular stem is a stem of larger diameter than the first named stem and having a closed upper end, against which one end of the coiled spring bears. A yoke extends from the outer tubular stem and depends over the ends of the frame. Mounted between the ends of the yoke is the platen, which may consist of a single stamping plate, or a plurality of the same, or one fixed plate and one changeable plate, or any desirable stamping means. Means are provided for ready disassembling of the stamping or printing media, and replacement of the same without disassembling the entire machine. At each end of the frame is a fixed rack, and mounted on the shaft controlling the operation of the platen, are a pair of gear segments, one at each end, and each adapted to engage with the rack on the frame. Guiding means are provided on each side of the frame, and both at top and bottom adapted to be engaged by the plate in which is formed the gear segment, upon reversal of the platen by the rack and gear, thus insuring positive alinement of the platen in both printing and ink receiving positions. I also provide on the shaft on which the platen is mounted a pair of rollers, one at each end adapted to engage the side of a slot in the frame, for smoothness and ease of operation.

To insure positive alinement at the printing or stamping moment, of all the figures, dates, wording, etc., on the platen, particularly where I utilize changeable date indicia, for example, I provide novel tapered wedging means to prevent the misalinement of the changeable type or indicia. When the platen and its component parts are assembled, the changeable or movable indicia holding means are adjusted with relation to these tapered wedging means. Thereafter, regardless of the pressure or impact to which the platen is subjected, the removable or changeable portion of the platen will not be driven or disturbed from efficient printing position, since all pressure or force exerted thereon is against the tapered wedge, which efficiently prevents misalinement of the removable portion of the platen with the fixed portion thereof.

I believe that such a hand stamp, as above described, is novel, and I have therefore claimed the same broadly herein.

Referring to the drawings, illustrating a preferred embodiment of the present invention,

Fig. 1 is an end elevation of the same;

Fig. 2 is a side elevation thereof;

Fig. 3 is a cross sectional view on the line 3—3 of Fig. 2;

Fig. 4 is a cross sectional view on the line 4—4 of Fig. 2;

Fig. 5 is a side elevation of the changeable printing unit; and

Fig. 6 is a bottom plan view of the stamp.

As shown in the drawings, my present novel hand stamp comprises a frame 1 having depending arms 2, 2, which arms constitute the supports and base for the stamp, these arms being united at their lower edges by cross rods 3. A slot 4 is provided in each of the supporting arms 2, and a rack 5 is affixed to the inside of each arm by rivets or the like 6, the toothed portion 7 of the rack extending into the slot 4. Projecting upwardly from the central part of the frame 1 is a hollow or tubular stem 8, within which is housed a coiled spring 9. A yoke comprising a bridge portion 10 and arms 11 has a thimble or tubular member 12 mounted thereon, over which fits a suitable handle 13. The coiled spring 9 projects into the tubular member 12 and handle 13, normally holding the yoke and handle in raised position. The arms 11 straddle the frame 1, and are apertured at their lower ends to receive a shaft 14. This shaft is removable, being adjusted to proper degree of tightness by thumb screws 15, 15. The

shaft 14 is adapted for movement up and down the slots 4 in the side arms or supports 2, and rollers 16, 16 are provided on the shaft for free movement thereof, the rollers 16 rolling on the side of the slot opposite the rack 5.

The frame 1 is constructed and arranged to hold an inking pad 17, against which printing devices 18 normally bear. These printing devices are preferably of rubber or the like material, and are held in a platen 19. Depending from this platen, and at each end thereof, is a web 20, to which web is affixed a gear 21, by means of rivets or the like 22. Guiding arms 23 form a portion of the gear, the teeth of which gear are adapted to mesh with the rack 5 on movement of the platen up or down. Depending also from the platen 19, at predetermined points, are a pair of wedging members 24, preferably integral parts of the platen. The shaft 14 projects through the gear 21 and web 20, and the platen 19 and component parts reciprocate or rotate around the shaft. A removable printing or stamping element 25 is provided, and is adapted to be positioned between the wedge members 24, and to have the stamping or printing strips 26 alined with the printing or stamping indicia 18. This device consists in a frame having arms 27, 27 between which extends a small shaft 28. On the shaft 28 are a plurality of knurled wheels 29 adapted to be manually operated to rotate hubs or spools 30, thus turning or moving the flexible printing elements 26 around the hubs 30 and over the bridge portion or arm 31. Extending from each arm 27 are a pair of ears 32, and a screw 33 unites these ears 32, tightening of the screw 33 tending to bend the ears 32 toward each other. When inserted in the device, the wedging members 24 extend outside of the arms 27, inside of the screw 33 and between the ears 32. The largest portion of the wedges 24 is away from the platen 19, so that, when the ears 32 are drawn toward each other by action of the screw 33, they will clamp around the wedge 24, the ears 32 adapting themselves to the shape of the wedge, and thus securely preventing movement of the separable or movable printing element 25 out of alinement with the balance of the printing or stamping members 18. This wedging feature is of great importance, since it insures alinement of all the printing or stamping indicia held in the platen 19, resulting in an even contact of same with the inking pad 17, and upon reversal, with the article to be stamped.

At the top and bottom of each side 2 is formed a guiding lip 34, inturned a sufficient distance so that the edges of the lower lips 34 will be alined with the bottom edges 35 of the rack 5. The upper lip 34 is likewise inturned a sufficient distance to aline with the edge 36 of the rack 5, thus guide ways are provided at the top and bottom of each side frame 2. When the platen is in the position indicated in Fig. 3, the guiding arms 23 of the gear 21 are upward, and on the handle 13 being depressed, the lip 34 and edge 36 will hold the platen substantially level until the teeth of the gear 21 engage the teeth 7 of the rack 5. Thereupon, continued pressure of the handle 13 downwardly will continue the meshing of the gear 21 with the rack 5, causing the platen 19 and the printing indicia carried thereby to reverse itself, until, at reaching the bottom of the toothed portion of the rack 5 the printing surface of the platen is toward the bottom of the stamp, but still above the printing point. The arms 23 will then be guided by the edge 35 of the rack 5, and the lip 34, guiding the printing indicia downwardly in a level position, until the moment of printing or stamping impact. A groove or depression 37 is provided to receive the rollers 16 when the platen has reached the lowermost point. When it is desired to lock the platen in depressed position, for reinking of the stamp pad, this is readily accomplished by means of a latch 38, pivoted at 39 on one side 2, the point of which engages a notch 40 in the side 11 of the yoke. On releasing the latch 38 from the notch 40 pressure of the spring 9 will force the handle, yoke, and platen upwardly, the meshing or engagement of the rack or gear, reversing the platen to normal position and again presenting the stamping indicia to the inking pad.

The operation of my present novel stamp is simple, and will be readily understood. It being desired to print any desirable data, the knurled wheels 29 are adjusted until the proper indicia appear on the platen surface, thereupon the handle 13 is depressed against the pressure of the spring 9. The platen 19 and its component parts descends in a level position until the guiding arms 23 on the gear 21 have cleared the edge 36 of the rack 5, and the lip 4, at which point the teeth of the gear 21 will commence to mesh with the teeth 7 on the rack 5. This causes the platen, which is secured to the gear 21, to reverse itself, the length of the rack 5 being predetermined to turn the platen from face upward to face downward position. Upon completion of the meshing action of the gear and rack, the guiding arms 23 and 24 will then engage the lip 34 and the edge 35 of the rack 5, being thus guided downwardly in a level position until the moment of stamping impact. Release of pressure on the handle will permit the spring 9 to force the handle, yoke and platen upwardly to normal position.

By having the rack and gear arrangement on each side of the frame, smooth, even operation of the device is made possible, and

the novel wedging arrangement heretofore described prevents the changeable stamping indicia from being disalined from the remainder of the stamping indicia on contact with the paper or article being stamped, the wedge arrangement effectually preventing upward movement of the removable data at the time of impact.

I believe that my hand stamp, as above described, is novel, and I have therefore claimed the same broadly herein.

While I have necessarily described my present invention somewhat in detail, it will be appreciated that I am not limited thereto, but may vary the size, shape and arrangement of parts within reasonably wide limits without departing from the spirit of the invention.

My invention is further described and defined in the form of claims as follows:

1. A hand stamp of the kind described, comprising a frame, a reversible platen carried by said frame, a removable printing device associated with said platen, a pair of wedges on said platen, and adjustable gripping means on said removable printing device engaging each of said wedges to hold said device in position.

2. A hand stamp of the kind described, comprising a frame, a reversible platen carried by said frame and normally in contact with an inking device, a removable printing element associated with said platen, a pair of wedges on said platen, adjustable gripping means on said removable printing element engaging said wedges to hold said element in position in said platen, a rack attached to each inner side of said frame, a gear on each end of said platen, said rack and gear being adapted to mesh on depression of the platen to reverse the platen from ink receiving to printing position, grinding means at the top and bottom of each of said racks, inturned guiding lips at the top and bottom of each side of said frame, means on said gears cooperating with said guiding means and said lips to maintain said platen in horizontal position before and after meshing of the racks and gears, and means to retain said platen in printing position.

3. A hand stamp of the kind described, comprising a frame having a slot in each side thereof, a rack on the inside of each side of said frame projecting partially over said slot, a tubular stem carried by said frame, a coiled spring in said stem, a yoke carried by said stem and extending over each side of said frame, a handle for said yoke, said spring extending into said handle, a shaft mounted between the lower ends of said yoke and adapted for vertical reciprocation in said slots, a type holding platen mounted on said shaft, a removable printing element associated with said platen, depending wedge-shaped webs on said platen, gripping members on said removable element adapted to engage said wedge members, means to adjust the grip of said members on said webs, a gear affixed to each end of said platen and adapted to mesh with said racks, guiding means on said gears and said frame to maintain the platen in horizontal position before and after meshing of the racks and gears, said meshing action reversing the platen from normal position to inking position.

In testimony whereof, I have signed my name to this specification.

ALBERT J. MARKS.