Aug. 21, 1928. 1,681,882

J. F. SILVERMAN

POCKET SPACE STAMPING MACHINE

Filed Sept. 27, 1927 3 Sheets-Sheet 1

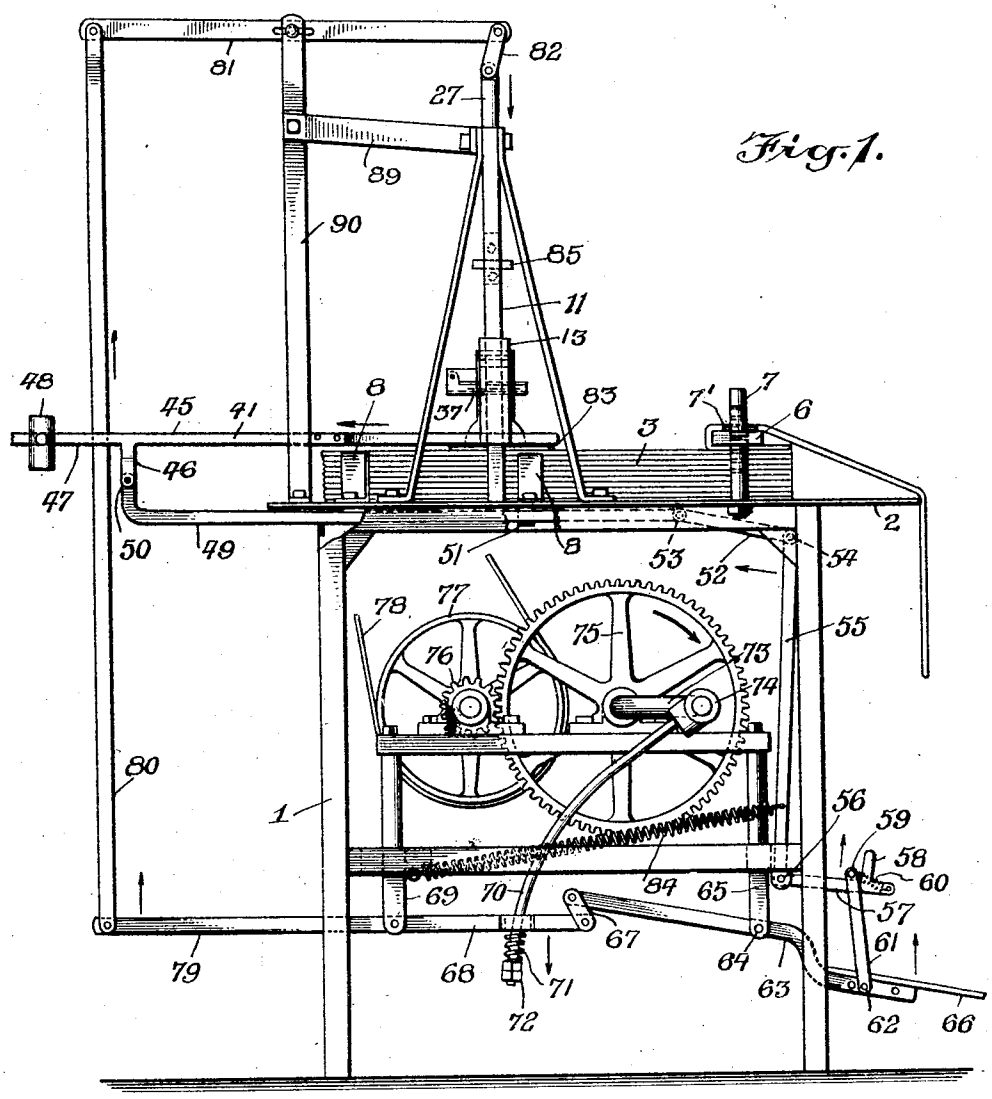


Fig. 1.

WITNESSES

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Fig. 6.

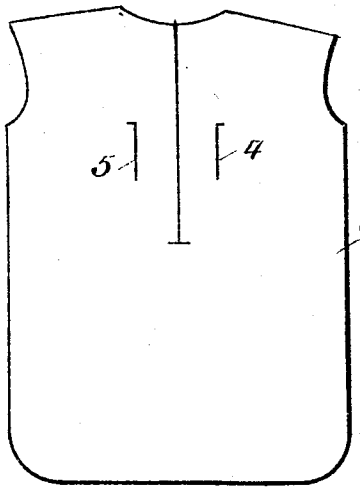
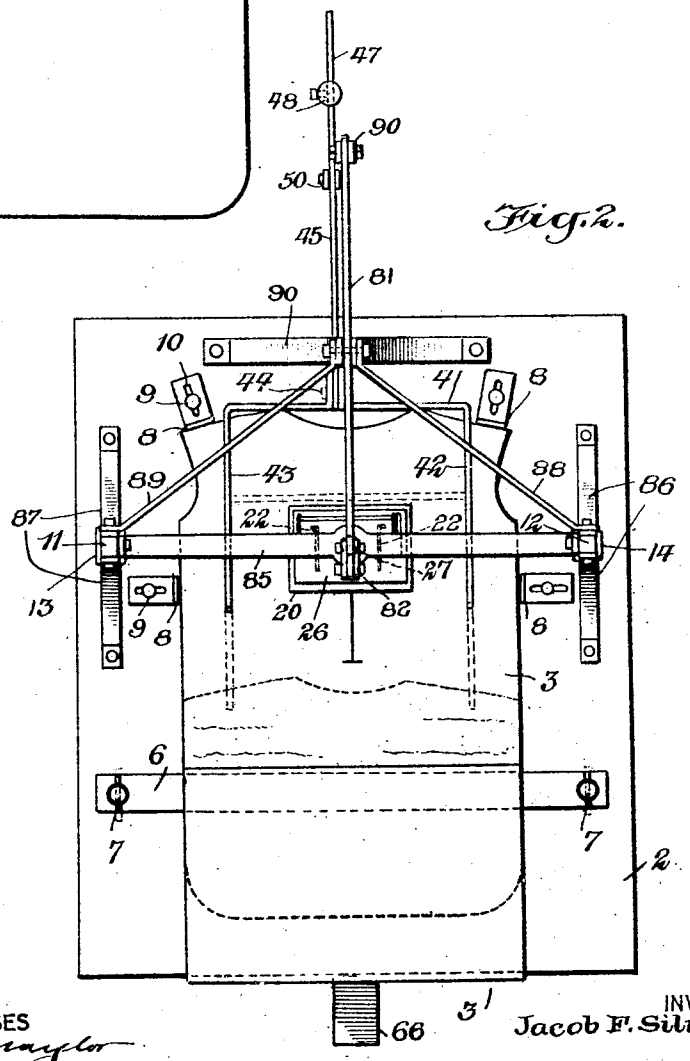


Fig. 2.



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Fig. 3.

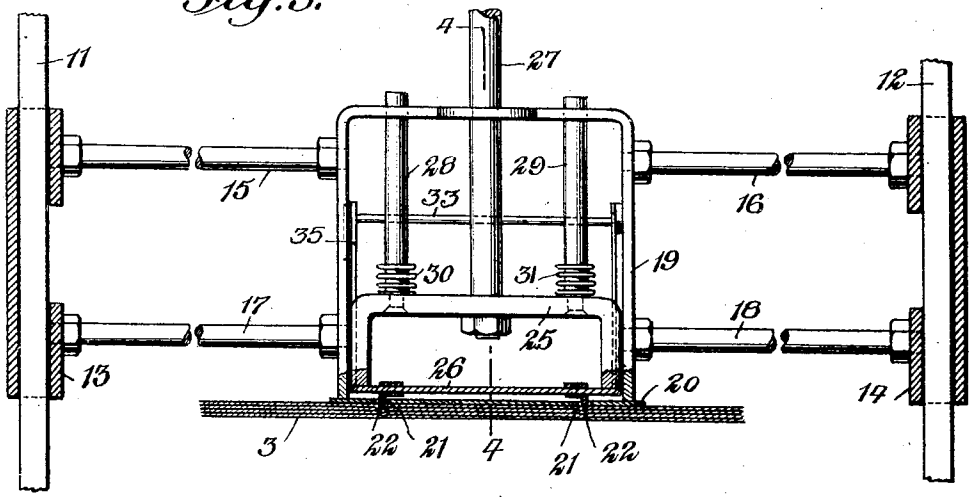


Fig. 4.

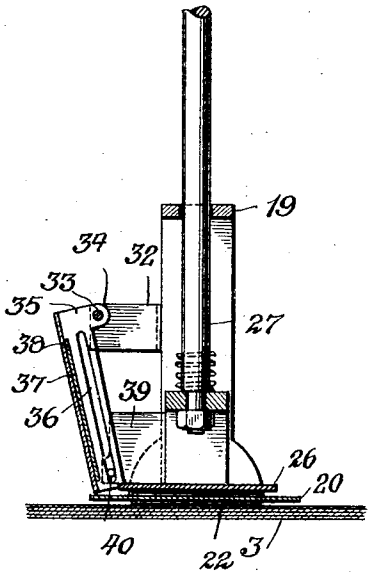
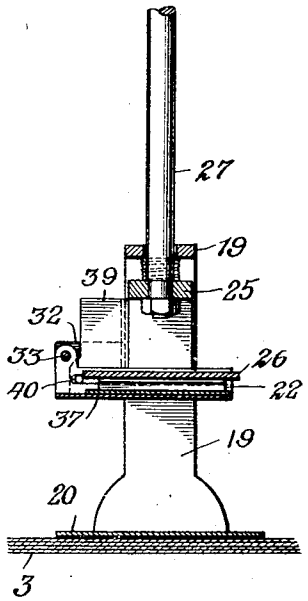


Fig. 5.



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UNITED STATES PATENT OFFICE.

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POCKET-SPACE STAMPING MACHINE.

Application filed September 27, 1927. Serial No. 222,326.

The invention relates to stamping devices, and particularly to an improved stamping device for stamping shirt fronts for indicating the correct position of the pockets, the object being to provide an improved stamping machine wherein a large number of fronts may be marked or stamped quickly and accurately.

Another object of the invention is to provide a pocket space stamping machine, wherein means are provided for holding in place a plurality of shirt fronts, together with means for successively and accurately stamping the fronts to indicate where the pockets are to be placed.

A further object is to provide a pocket space stamping machine wherein a shirt front is accurately stamped to indicate the position of one or more pockets, the structure being such that a minimum amount of manual labor is necessary to successfully operate the machine and manipulate the fronts being marked.

In the accompanying drawings—

Figure 1 is a side view of a pocket space stamping machine, disclosing an embodiment of the invention.

Figure 2 is a top plan view of the structure shown in Figure 1.

Figure 3 is an enlarged fragmentary sectional view through the stamping mechanism forming a part of the present invention.

Figure 4 is a fragmentary sectional view through Figure 3, approximately on line 4—4.

Figure 5 is a view similar to Figure 4, but showing the parts in a different position.

Figure 6 is a plan view of a shirt front, stamped and ready for receiving pockets.

Referring to the accompanying drawings by numerals, 1 indicates a suitable frame which is provided with uprights and horizontal members, together with bracing means of angle iron or other desired members. Arranged on the frame 1 is a platform 2 designed to receive a supply of shirt fronts 3 to be marked. As indicated in Figure 6, the fronts are substantially completed, except for the pockets, and the machine embodying the invention is intended to place the marks 4 and 5 correctly on the fronts so that the workman may readily place the pockets against the marks and then sew them permanently in position. The device is designed to be used preferably on workmen's shirts, wherein the pockets are an outside or patch-pocket formation, and the pocket structure is merely sewed in place without cutting the shirt front. In the accompanying drawings, means have been shown for placing marks 4 and 5 on the fronts, but it will be evident that one mark or more than two could be provided, and that these marks could be adjusted to different positions as preferred.

After the shirts 3 have been placed on the platform 2, as shown in Figure 1, a comparatively heavy apertured bar 6 is placed loosely over pins 7, said pins having apertures whereby locking pins 7′ may be inserted to hold the bar 6 in place whereby the shirt fronts 3 may be properly clamped in position. After the first front has been marked, it is pushed automatically toward bar 6 so as to be out of the way of the second marking. While the second marking takes place, the workman pulls the marked front 3 over bar 6 as shown in Figure 1. The second front is marked, automatically pushed over, and then manually turned over bar 3 in the same manner. This is carried out until all of the fronts in the pile are properly marked. The marked fronts may then be removed and a new supply provided, and the operation repeated. In placing the fronts in position, the same are accurately positioned by reason of the various stops 8 which are adjustably mounted on the platform 2 and are clamped in the desired adjusted position by clamping screws 9 extending through suitable slots 10 and into the platform 2.

The printing structure is shown more particularly in Figures 3 to 5, from which it will be seen that there are provided side guides 11 and 12 preferably square in cross section. Tubular members 13 and 14 are fitted onto the guides 11 and 12 and to these tubular members are secured rods 15, 16, 17 and 18. These rods are preferably screwed into the guides 13 and 14 and locked against accidental removal by suitable nuts. The inner or adjacent ends of these rods are preferably screwed into a U-shaped frame 19, and the rods are locked to this frame by suitable nuts as shown in Figure 3. At the

bottom, the frame 2 is provided with a presser plate 20 secured to the frame 19 by welding or in any suitable manner. This plate is provided with suitable openings 21 through which the stamping or printing members 22 move when the parts are moved to a printing or stamping position as shown in Figure 3. Within the frame 19 is an auxiliary U-shaped frame 25 carrying a supporting plate 26 on which the respective stamping or printing members 22 are mounted.

In operation, the auxiliary frame 25 moves up and down, and when in an upper position, receives ink as hereinafter fully described. In order to accomplish this action, a power shaft 27 slides loosely through the upper part of the U-shaped member 19 and is bolted or otherwise rigidly secured to the auxiliary frame 25. Guiding pins 28 and 29 are riveted or otherwise rigidly secured to the auxiliary frame 25 and extend loosely through apertures in frame 19. Springs 30 and 31 surround the guiding pins 28 and 29 and act to cushion the movement of the auxiliary frame 25 as the power rod 27 moves the same upwardly and then moves upwardly frame 19 and all the parts connected therewith. Springs 30 and 31 are comparatively short as shown in Figure 3 and, consequently, there will be an appreciable loose motion between the auxiliary frame 25 and the U-shaped frame 19. This permits the presser plate 20 to be forced downwardly against the fronts 3 for smoothing the same and holding the same in place during the stamping or printing operation as follows shortly after the plate 20 has engaged the fronts 3.

As indicated in Figure 4, a bracket 32 is riveted or otherwise rigidly secured to the U-shaped member 19 and, consequently, is stationary therewith. This bracket carries a pin 33 extending through the ear 34 of the inking frame 35. This inking frame is provided with a longitudinal slot 36 and a supporting bottom 37 for supporting an inking pad 38, which pad is almost vertical when the parts are in the position shown in Figures 3 and 4, but is substantially horizontal when functioning to ink the members 22. The auxiliary U-shaped member 24 is provided with a bracket 39 which is secured thereto in any desired manner and carries a pin 40 extending through slot 36. By reason of this structure, whenever the frame 25 moves upwardly, it will swing the inking pad 38 and associated parts so that the pad will strike the members 22 for inking the same substantially at the time the springs 30 and 31 come under tension. On the downward movement of the various parts, pin 40 swings the inking pad and associated parts to one side as shown in Figure 4. It will thus be seen that the up and down movement of the shaft 27 causes the inking pad to function, and also causes the printing or stamping members 22 to function to mark the various fronts 3. The movement of shaft 27 is sufficient to raise the plate 20 an appreciable distance away from the fronts so that the automatic front shifting structure 41 may function. This structure is formed principally of L-shaped members 42 and 43 bolted or otherwise secured together at 44 for presenting a substantially U-shaped structure when looking down upon the same as illustrated in Figure 2. A bolt or other fastening means which connects members 42 and 43 together, also connects them to a rearwardly extending bar or rod 45 having a downwardly extending portion 46 and a balancing portion 47 carrying a slidable weight 48. A rod or bar 49 is pivotally connected at 50 to the extension 46 and extends through suitable openings in the frame 1 and through a supporting strap 51 to link 52 to which it is pivotally connected at 53. Link 52 is also pivotally connected at 54 to a bell crank lever 55, said bell crank lever being pivotally mounted at 56 on a suitable extension from frame 1. The horizontal leg 57 of bell crank lever 55 is provided with a stop or pin 58 for limiting the movement of the pin 59 in one direction, said pin extending across leg 57. A retractile spring 60 acts normally to hold pin 59 against pin 58. Pin 59 is carried by a link 61 which is pivotally connected at 62 to the lever 63 pivotally mounted at 64 on a depending bracket 65 secured to the frame 1. A foot pedal or platform 66 is secured to the end of lever 63 so that the parts may be operated by the feet if desired. A link 67 pivotally connects lever 63 with lever 68, said lever 68 being pivotally supported by brackets 69. Lever 68 has an aperture through which the rod 70 loosely extends, said rod carrying a spring 71 bearing at one end against lever 68 and at the other end against a suitable stop, as for instance, a nut 72. Rod 70 is preferably curved in order to extend through lever 68 almost at right angles, said rod at the upper end being pivotally connected to the crank 73 by a suitable fitting 74. Crank 73 is rigidly secured to the gear wheel 75 which is continually meshing with the pinion 76 and said pinion is rigidly secured to a pulley 77 driven by a belt 78, which belt is operated from any suitable source of power. The lever 68, by reason of the action of the rod 70, moves in one direction through power derived from the crank 73. Rod 70 pulls upwardly on one end of lever 68 and, consequently, forces the end 79 downwardly for pulling the link 80 downwardly. As link 80 moves downwardly, it will swing the lever 81 for pulling upwardly on the link 82 which is pivotally

connected with the shaft or rod 27. In this way, the shaft 27 and associated parts heretofore described, will be moved upwardly. As this action takes place, link 61 will be pulled for moving leg 57 downwardly and the upright portion of the bell crank lever 55 toward the right as shown in Figure 1. This will cause the bell crank lever to pull link 52, rod 47, rod or bar 45 and the members 42 and 43 so as to force the same to the right in Figure 1. Each of the members 42 and 43 is provided with a short spur 83 which projects a short distance into the top front 3, and when a movement is made as just described, the top front 3 is forced toward the bar 6 and is later swung over this bar by hand. As soon as the rod 75 releases lever 68, spring 84 will pull on bell crank lever 55 and quickly move the bar 49 and members 42, 43 and 44 back to their former position, ready for the next operation. While these parts are moving back to their former position, the marking or stamping members 22 are moving downwardly to again function. This movement is caused by the spring 84 which swings a leg 57 upwardly and, consequently, swings the link 67 downwardly. The movements of these parts are sufficient to cause the stamping or printing structure shown in Figures 3 to 5 inclusive, to function. As the parts function, rod 27 moves upwardly and downwardly guided at one point by a bar 85 and through the sleeves 13 and 14 and bars 11 and 12. The bars 11 and 12 are braced and held in position by suitable bracing members 86 and 87, and the diagonal braces 88 and 89 connected to the upright structure 90. The lower ends of the bars 11 and 12 may be secured to the platform 2 in any desired manner, as for instance, by having the parts reduced, threaded, and a nut mounted on the threaded portion for clamping the bars in place.

In operation, when the parts are in the position shown in Figures 1 and 2, the machine is operating and the fronts 3 are being successively marked. When all of these fronts have been marked and turned over the bar 6, the machine is stopped, bar 6 removed, and then the fronts transported to some other place. A new supply of fronts is placed in position shown by fronts 3 in Figures 1 and 2, and then bar 6 is slipped over the pins 7. The power may then be turned on and the marking operation continued for the second batch of fronts. When the second batch of fronts has been marked, they are removed and a third batch supplied. This is repeated as often as desired. When fronts of a different size are to be marked, the various brackets 8 are shifted to properly center the new size fronts, and then the same operation takes place. In this way, the position of the pockets is accurately determined so that a workman may quickly and accurately place the pockets in position and then stitch the pockets firmly to the fronts.

What I claim is:

1. A pocket space stamping machine, comprising a platform for receiving an article to be stamped, a printing structure for stamping marks on said article, power driven means for moving said printing structure against said article and away from said article, and automatically actuated means for moving the printed part of said article to one side immediately after each printing operation.

2. A pocket space stamping machine for stamping shirt fronts for indicating the position in which the pockets are to be placed, said machine comprising a platform adapted to receive a stack of fronts, a printing device adapted to be moved downwardly and forced against the uppermost front of said stack, power means for moving said printing device downwardly against said topmost front, means for returning said printing device to an elevated position, and a reciprocating automatically actuated member connected with said power means for moving the uppermost front thereon from beneath said printing device after the printing operation.

3. In a machine for stamping shirt fronts to indicate the location of the pockets, a platform adapted to receive a plurality of fronts arranged in a stack, means for guiding and holding the fronts in a given position, a bar for clamping one end of the fronts in position, power actuated means for forcing a stamping mechanism against the topmost front, spring means for moving said stamping mechanism away from the fronts, and a pusher member operated by said spring means for pushing a stamped front toward said clamping bar whereby the stamped front may be manually folded over the bar out of the way of the second stamping operation.

4. In a stamping machine of the character described, a platform adapted to receive a stack of articles to be stamped, electrically moving printing apparatus adapted to move downwardly and stamp the topmost article and then move upwardly, mechanically operated means for causing said up and down movement of said printing apparatus, and a reciprocating pushing member operatively connected with said power means positioned to engage and force the uppermost article to one side immediately after each stamping operation.

5. In a stamping machine for stamping the position of pockets on shirt fronts, means for supporting a stack of fronts, a reciprocating stamping member for stamping said fronts, and a reciprocating pusher member acting in time relation with the printing structure for pushing the printed fronts to

one side immediately after each printing operation.

6. In a stamping machine for stamping shirt fronts to indicate the location of the pockets, a platform for receiving the fronts to be stamped, printing means coacting with said platform for stamping said fronts one at a time, and a pusher structure for pushing the fronts to one side after each stamping operation, said pusher structure including a reciprocating member formed with a spur for engaging the fronts successfully, and a lever mechanism for moving said pusher back and forth, power means for moving said lever mechanism in one direction, and spring means for moving the lever mechanism in the opposite direction.

7. In a stamping machine for stamping shirt fronts to indicate the location of the pockets, a platform adapted to receive a plurality of fronts arranged in a stack and printing means for printing said fronts, said printing means including a reciprocating U-shaped frame, a plate connected with said frame for pressing on said fronts, said plates having openings therein to hold the same against accidental movement, printing elements adapted to be forced through said openings for printing on said fronts, means carrying said printing elements, and a power member extending loosely through said U-shaped frame and secured at its ends to the means for supporting said printing elements whereby when the power member is actuated, the printing elements, U-shaped frame and associated parts, are moved in both directions while a loose motion is permitted between the means carrying the printing elements and the U-shaped frame.

8. In a stamping machine for stamping shirt fronts to indicate the location of pockets, a printing structure comprising a reciprocating frame formed with a U-shaped member and a presser plate for pressing the fronts into a smooth condition, said presser plate having openings therein, a reciprocating auxiliary frame arranged in the first mentioned frame and reciprocating independent thereof within certain limits, stamping members carried by said last mentioned frame positioned to be forced through the openings in said presser plate when the parts are in printing position, an inking pad, and means operated by said last mentioned frame for moving the inking pad to a position against said stamping members when the stamping members have been moved away from a stamping position.

9. In a stamping machine for stamping shirt fronts to indicate the location of pockets, a printing device, power operated means for actuating said printing device and a pusher structure for pushing the fronts to one side after each printing operation, said pusher structure, including a substantially U-shaped member having prongs for engaging the fronts, an operating bar formed with an extension, a slidable counterbalance mounted on said extension, and means for connecting said bar with the power mechanism, said means functioning to move the pusher structure in one direction, and spring means for moving the pusher structure in the opposite direction.

Signed at Brooklyn in the county of Kings and State of New York this 27 day of September, 1927.

JACOB F. SILVERMAN.