101. PRINTING.

No. 881,559.

PATENTED MAR. 10, 1908.

W. P. DUN LANY.

MARKING MACHINE.

APPLICATION FILED DEC. 1, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

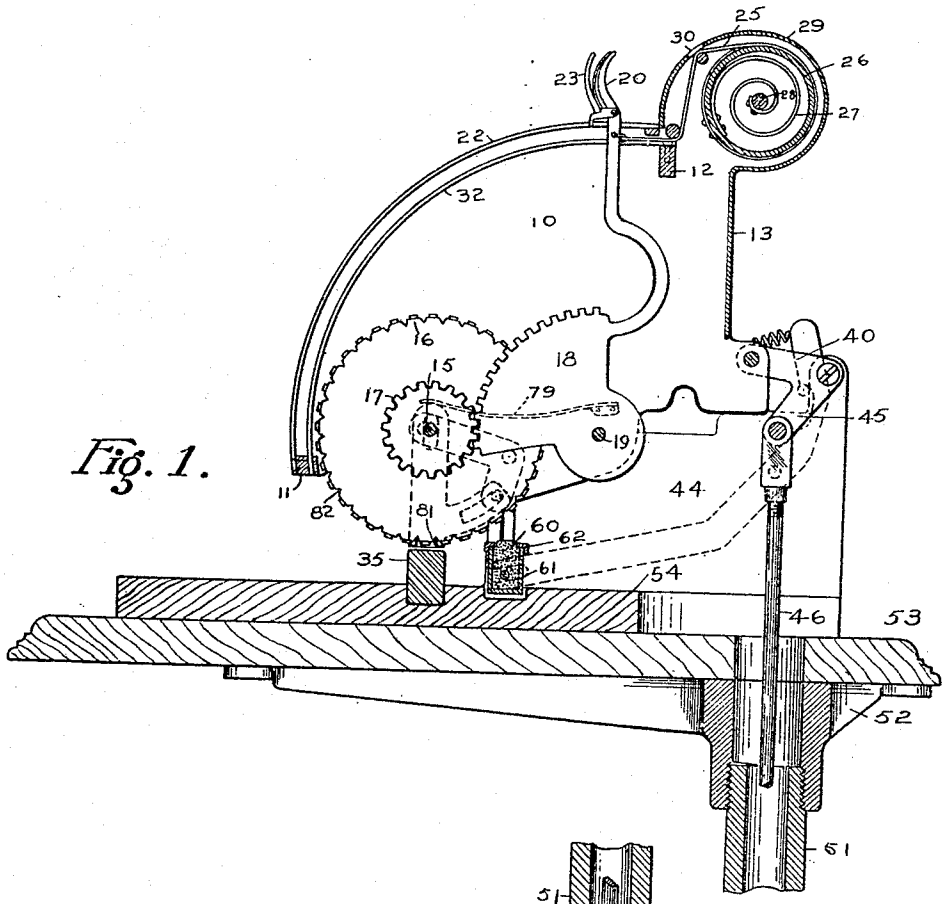
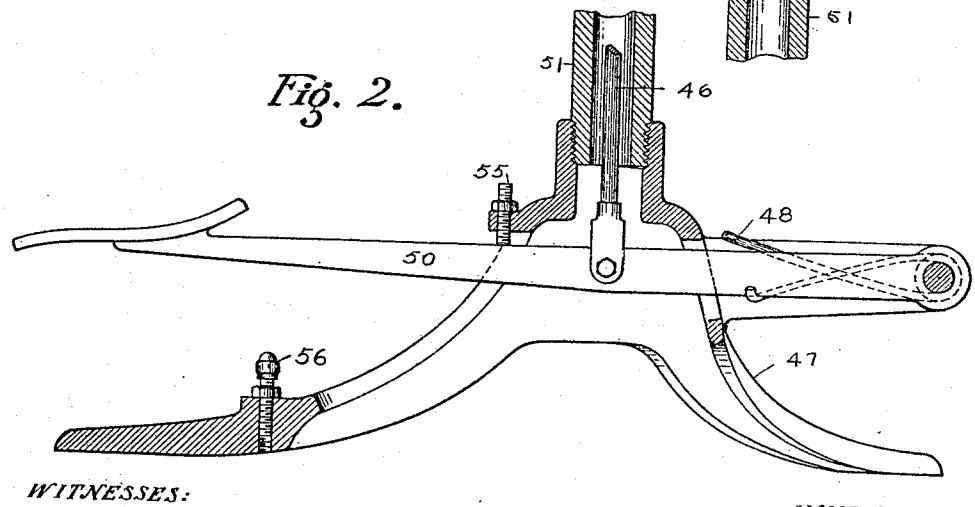


Fig. 2.



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2 SHEETS—SHEET 2.

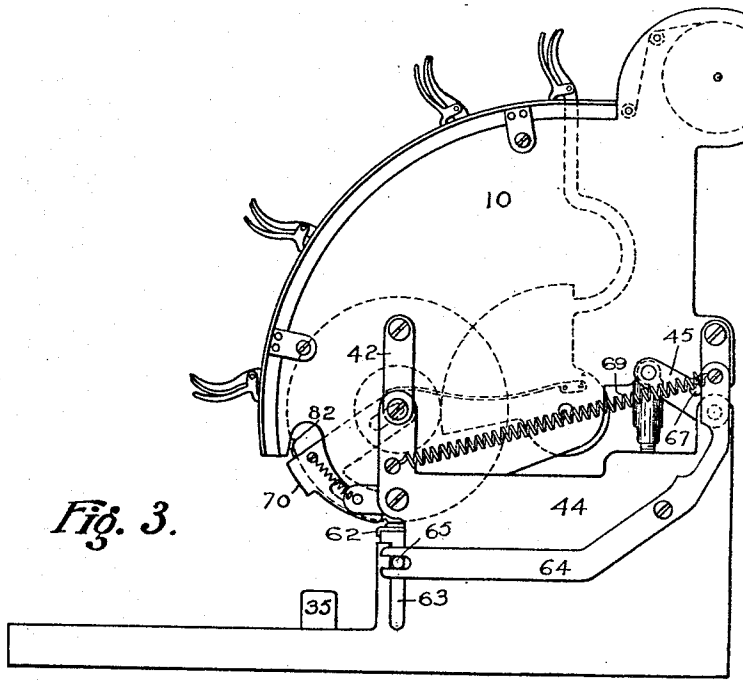


Fig. 3.

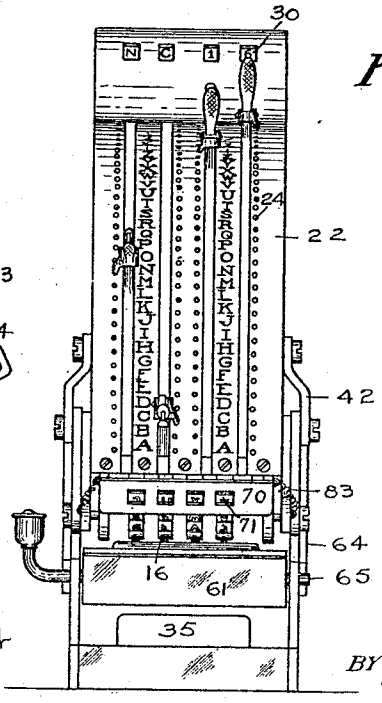


Fig. 4.

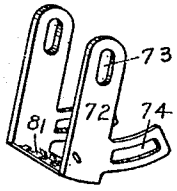


Fig. 7.

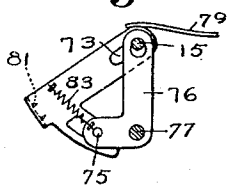


Fig. 5.

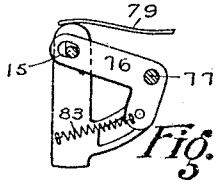


Fig. 6.

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UNITED STATES PATENT OFFICE.

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MARKING-MACHINE.

No. 881,559. Specification of Letters Patent. Patented March 10, 1908.

Application filed December 1, 1906. Serial No. 345,925.

To all whom it may concern:

Be it known that I, WILLIAM P. DUN LANY, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Marking-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide an efficient printing device adapted to print numbers, letters or other characters and allow their convenient and rapid change.

The invention is well adapted for embodiment in a laundry marking machine. It provides printing wheels having suitable characters on their periphery, means for setting such wheels as desired, suitable indicators, an inking device, means for moving the set wheels to effect the printing, and a suitable guard to prevent soiling the article being printed.

These and other features of the invention are hereinafter more fully explained, and the essential characteristics set out in the claims.

The drawings show my invention embodied in a laundry marker.

Figure 1 is a vertical section through such machine. Fig. 2 is a vertical section through the treadle which operates the machine,—this figure being a continuation in substantially the same plane as Fig. 1. Fig. 3 is a side elevation of the marking mechanism shown in Fig. 1. Fig. 4 is a front elevation of the marking mechanism. Figs. 5 and 6 are details in different positions of the guard and its guiding means, and Fig. 7 is a perspective view of such guard.

The machine has a movable or floating frame consisting of a pair of side plates 10, 10, and suitable cross members of which three are shown at 11, 12 and 13. Journaled on the shaft 15, extending between the side plates 10, are the printing wheels 16, of which four are shown. Each printing wheel has on its periphery the characters of which the selected ones are to be printed, which in the embodiment shown, consists of the alphabet and the digits. Rigid with each printing wheel is a pinion 17, with each of which meshes a corresponding sector 18 journaled on a cross shaft 19 and provided with an upwardly extending operating arm 20 which passes out through a slot between the strips 22, which constitute the front of the machine.

Each arm 20 is provided with a thumb detent 23 which is adapted to engage any of a series of holes 24 adjacent to the edge of the slot through which the lever operates. The lever may thus be locked in any desired position, locking the printing wheel correspondingly. By pressing the thumb lever 23 toward the main lever, the latter is unlocked, and may be shifted as desired.

A suitable indication is provided on some of the strips 22. As shown, two series of indications will enable the easy and rapid location of four sets of levers, the levers operating on opposite sides of the indications, as shown in Fig. 4. In such embodiment the holes 24 are in the other strips 22.

To form an efficient test as each lever is set at a character, I provide movable indicators, one for each lever, which are adapted to disclose a character corresponding to the position of the character for which the lever is set, this being the position of the character on the printing wheel which is in operative position. These movable indicators are shown as consisting of a series of tapes 25 wound on drums 26 which are connected by spiral springs 27 with a cross shaft 28. The drums are contained in a stationary hood 29 which forms part of the frame. Through this hood are windows 30 through each of which one character is visible. The characters appearing through these windows, as illustrated in Fig. 4, show the position of the printing wheels and form an accurate check on the setting thereof. Suitable guide strips 32 may be provided for the tapes, being arranged in an arc about the axis 19, this allowing the characters to be equally spaced on the tapes 25.

After the wheels are set to the desired characters, the printing is accomplished by moving the whole mechanism so far described downwardly and forward to bring the proper row of the printing wheels directly over the stationary impression platen 35, the article to be printed being held over this platen. To cause this downward movement, I provide the following mechanism: The frame members 10 are pivotally carried at the rear by a pair of bell cranks 40, and near the front are a pair of links 42 on opposite sides of the frame, which are pivoted at their upper ends to the plates 10, and at their lower ends to the stationary frame 44, axially with the shaft 15. These links 42 and the arms of the

bell cranks 40 which connects the floating frame with the stationary frame are of the same length, so that the floating frame is maintained parallel with the stationary frame, while the floating frame moves forward and downward.

To cause the forward and downward movement of the floating frame, the arm 45 of the bell crank 40 is simply pulled downward. This I have shown as accomplished by a treadle 50 which is connected with the arm 45 by a link 46. This treadle is shown as mounted in a base 47 and is normally maintained elevated by a spring 48. Rising from the base is a tubular standard 51 which loosely surrounds the link 46 and is connected at its upper end with a bracket 52 which supports the table 53. On this table is secured the base plate 54 of the stationary frame 44 referred to. Suitable adjustable screw stops 55 and 56 carried by the base 47 may limit the upward and downward movement of the treadle and thus limit the movement of the floating frame.

I provide an inking pad 60 which extends across the machine below the position of the printing wheels when idle. The inking pad is normally in engagement with the type wheels so that when these wheels are set for printing, they are already inked, and each time the floating frame returns to normal position, the wheels are again inked. I provide mechanism for withdrawing the inking pad to idle position when beginning with the depression. This mechanism is as follows: The inking pad 60 is mounted in a box 61 and it is covered with a suitable cap 62 through which the pad projects. This box has pins 65 projecting from its ends through guiding slots 63 in the stationary frame. Pivoted on the outer sides of this frame are levers 64 which at their forward ends have slotted connection with the pins 65. The rear ends of these levers lie directly behind pins 67 projecting from the bell crank arms 45. As soon as these arms begin to move downward, the pins release the levers 64, whereupon springs 69 connecting to the upper ends of the levers, force the forward ends downward, withdrawing the inking pad from the printing wheels.

To prevent the inked characters adjacent to those desired from soiling the material to be printed, I provide a suitable guard 70 having openings 71 through which the wheels may print. This guard extends across the wheels, as shown, and has a pair of arms 72 extending on the outer side of the extreme wheels. Slots 73 in this guard extend over the shaft 15. The guard has a pair of arc-shaped slotted arms 74 in which engage pins 75, projecting from bell cranks 76, which are pivoted at their elbows to the stationary frame at 77, and at their upper ends are slotted around the shaft 15. Leaf springs 79 bearing on the upper ends of the guard arms 73 hold the guard normally in the position shown in Figs. 3, 4, and 5 out of the way of the inking apparatus.

As the floating frame is moved forward and downward to bring the wheels into printing action, the shaft 15 carries forward and downward both the upper end of the guard and the upper end of the bell crank 76. This movement swings rearward the lower end of the bell crank, which, through the pin 75, draws the lower end of the guard rearwardly, so that as the printing wheels come into the position shown in Fig. 1, directly over the platen, the guard will be vertical and also over the platen. As illustrated in Fig. 6, the printing will be accomplished through the openings 71 in the guard, and the goods adjacent to these openings will be shielded by the guard and thus kept from being soiled.

Adjacent to the openings 71 of the guard are upturned portions of the metal 81 which engage in notches 82 in the type wheel insuring accurate presentation of the guard, and alinement of the several wheels. Springs 83 connecting the guard and the bell cranks 76 give sufficient leeway to allow the guard to be properly positioned.

It will be seen that my apparatus is very simple in construction and may be very readily operated. The levers are simply shifted to the desired point and the indications through the windows 30 are observed to insure accurate setting. Then the goods are placed over the platen and pressure applied to the treadle which causes the desired printing. When the pressure is relieved, other goods are placed in position and marked by the next depression. Each time the treadle rises, the wheels are carried back onto the inking pad and thereby reinked.

I claim:

1. In a printing machine, the combination of a floating frame carrying a series of wheels having on their periphery printing characters, means carried by said frame for setting said wheels as desired, means for moving the floating frame bodily to cause the wheels to come into coöperation with a stationary platen, an inking device adapted to stand in the path of movement of said wheels toward the platen and means for automatically moving said inking device to idle position.

2. In a marking machine, the combination of a series of printing wheels, individual levers for setting said wheels, indicators for said levers adapted to assist in positioning them, and another indicator comprising tapes visible through stationary sight openings, said tapes being connected at their forward ends to the levers, and spring barrels connected with the rear ends of the tapes, whereby an indication in a definite row is provided irrespective of the position of levers.

3. In a marking machine, the combina-

tion of printing wheels journaled side by side and bodily movable, an impression platen, a guard adapted to prevent soiling the material being printed, said guard being journaled substantially coincident with the axis of rotation of said wheels, and means for swinging said guard into and out of position.

4. The combination of printing wheels journaled side by side and bodily movable, means for inking said wheels, a guard journaled substantially coincident with the axis of rotation of said wheels, means for swinging said guard into position after the wheels are inked, and means for causing the wheels to print.

5. The combination of a frame carried on pivoted members and adapted to move forward and downward, a series of wheels journaled in said frame and having printing characters on their periphery, a guard mounted in the frame and extending across such wheels and having an opening through which the printing is accomplished, an inking pad, means for causing the same to bear against the wheels, means for moving the guard out of position before the wheels engage the inking pad, means for thereafter moving the wheels into position to print, and means for automatically moving the guard into position preceding the printing.

6. In a printing mechanism, the combination of a stationary frame, a floating frame supported thereby on links and adapted to move forward and downward to print, printing wheels carried thereby, a guard carried by the floating frame and extending across such wheels and normally in idle position, and means carried in part by the floating frame and in part by the stationary frame and adapted to swing said guard into active position as the wheels are brought into printing position.

7. In a printing mechanism, the combination of a frame adapted to move forward and downward to print, printing wheels carried thereby, a guard extending across such wheels and normally in idle position, and means adapted to swing said guard into active position as the wheels are brought into printing position, and means for automatically inking the type and for withdrawing the inking device.

8. The combination of a shaft, a series of printing wheels journaled thereon, a guard extending across the wheels and having arms mounted substantially axially with said shaft, means for moving the frame to cause printing, and means for swinging said guard on such mounting to cause it to come into position, whereby the printing is accomplished through the guard.

9. The combination of a frame, a series of printing wheels carried thereby, pinions rigid with said wheels, segments meshing with said pinions, levers connected with said segments, spring barrels, tapes secured at one end of the spring barrels and at the other end to the levers, and a hood extending over such spring barrels and having sight openings for such tapes.

10. In a marking machine, the combination of a stationary frame, a movable frame, a series of printing wheels carried thereby, mechanism carried thereby for setting said wheels, a platen, mechanism for inking the wheels, such inking mechanism being movably mounted on the stationary frame and adapted to occupy the path of movement of the printing wheels toward the platen, a guard mounted on the movable frame, and mechanism for moving said frame and for automatically and complementarily operating said guard and said inking mechanism.

11. The combination of a stationary frame, a series of bodily movable printing wheels, links connecting the same with said frame, and a guard having one portion connected with the axis of the printing wheels and another portion adapted to be held by the stationary frame, whereby the position of the guard is automatically changed as the printing wheels move.

12. The combination of a stationary frame, a bodily movable frame, a series of printing wheels journaled therein, links connecting said frames, and a guard having portions connected with each frame, whereby the position of the guard is automatically changed as the machine operates.

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

WILLIAM P. DUN LANY.

Witnesses:
W. L. McGARRELL,
J. B. HULL.