March 6, 1945. W. J. KEUPER 2,370,735

LAUNDRY MARKING MACHINE

Filed Oct. 23, 1942 4 Sheets-Sheet 1

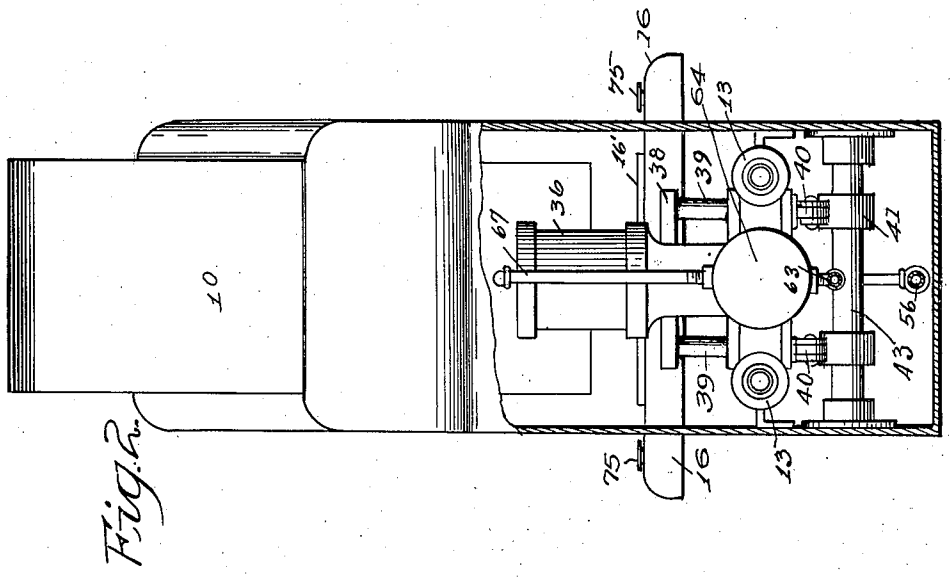


Fig. 2.

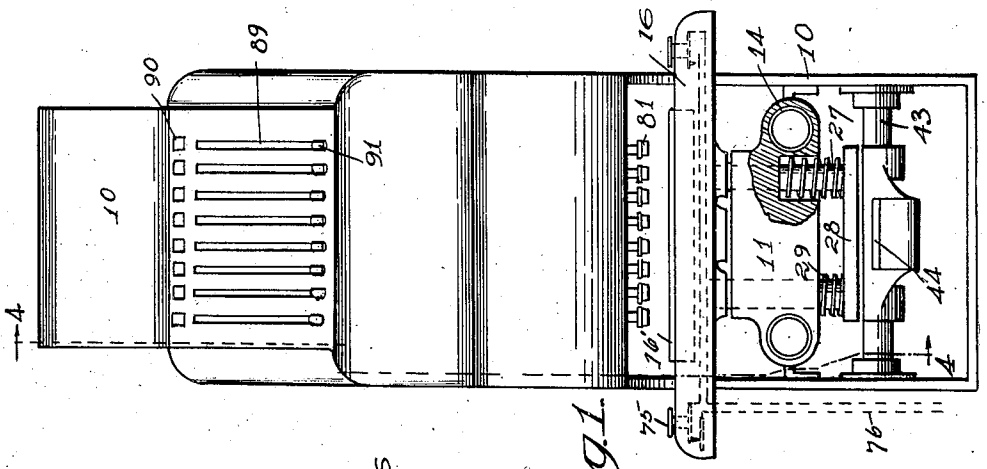


Fig. 1.

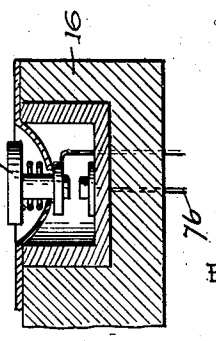


Fig. 3.

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LAUNDRY MARKING MACHINE

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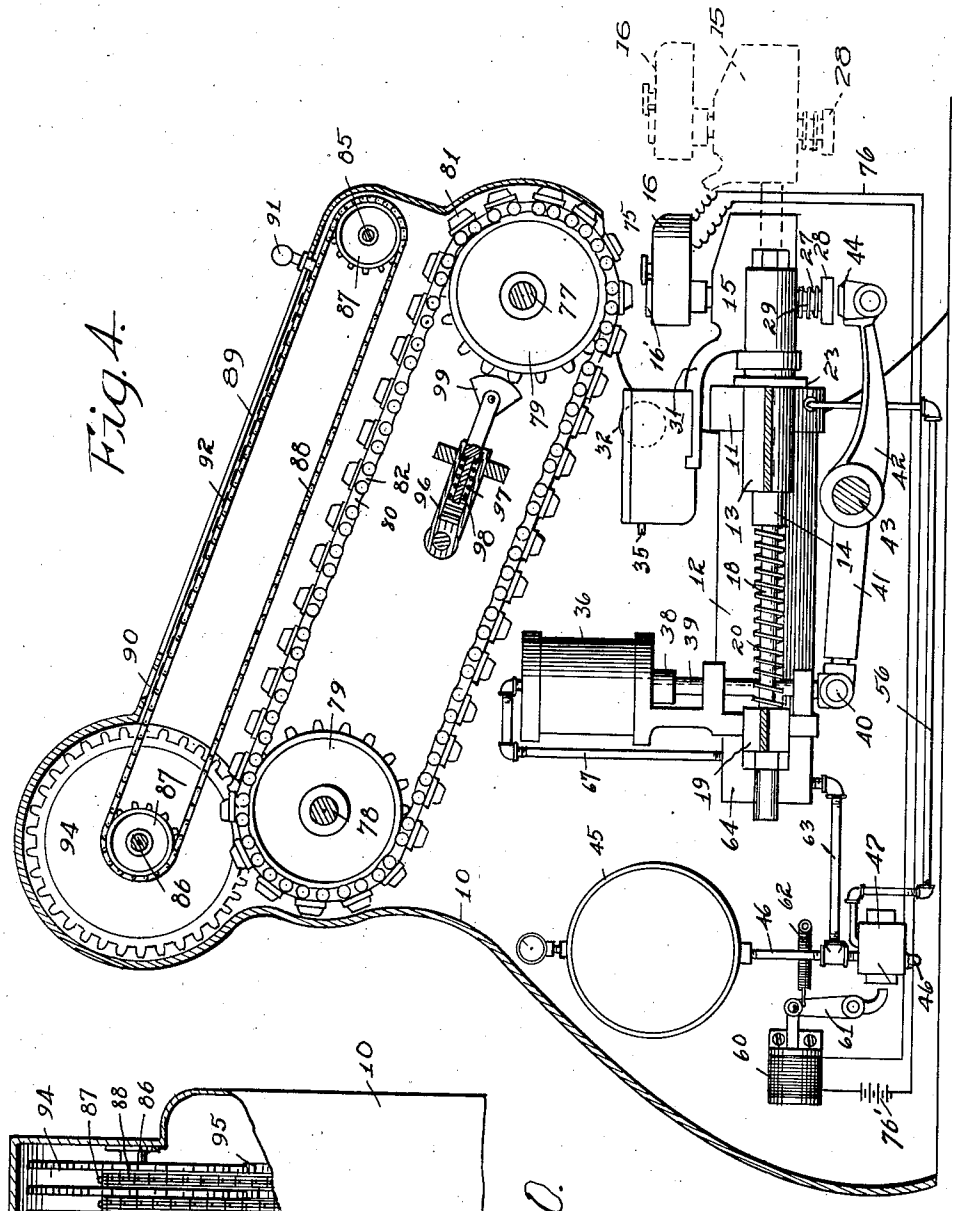


Fig. 4.

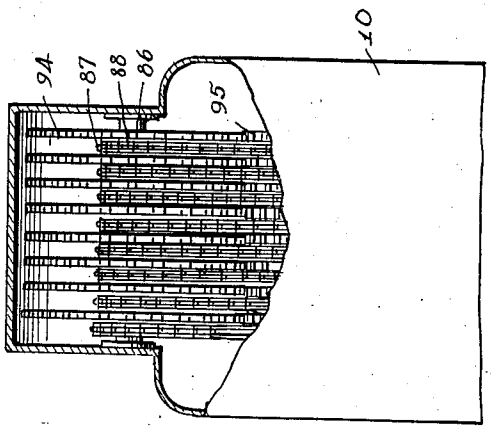


Fig. 10.

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LAUNDRY MARKING MACHINE

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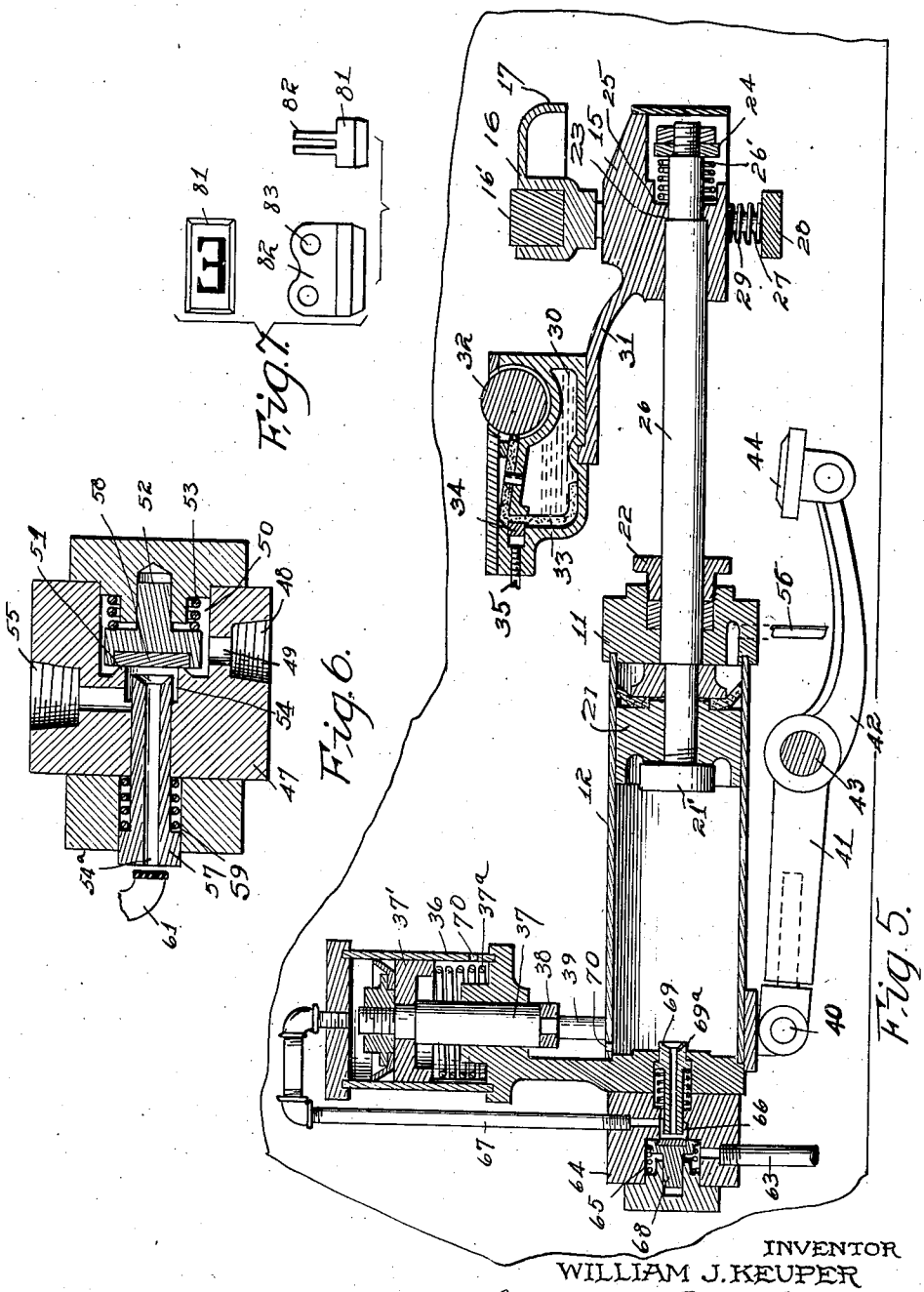


Fig. 5.

Fig. 6.

Fig. 7.

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LAUNDRY MARKING MACHINE

Filed Oct. 23, 1942 4 Sheets-Sheet 4

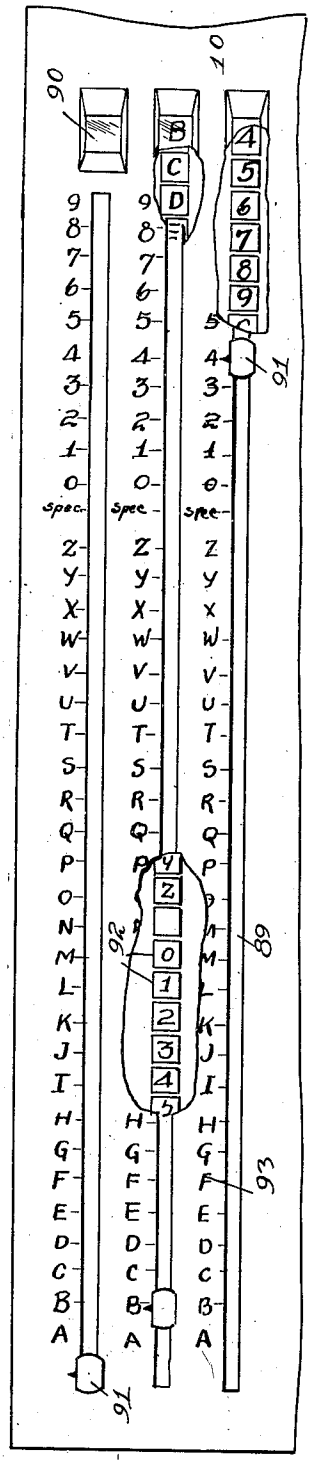


Fig. 8.

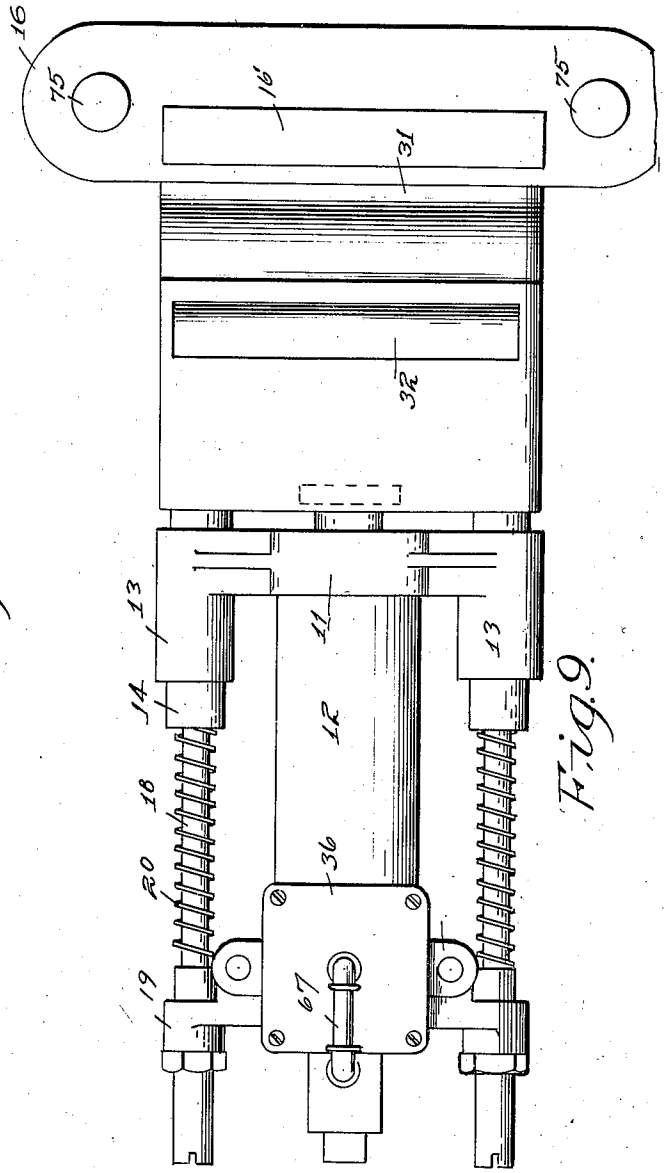


Fig. 9.

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Patented Mar. 6, 1945

2,370,735

UNITED STATES PATENT OFFICE

2,370,735

LAUNDRY MARKING MACHINE

William John Keuper, Cincinnati, Ohio, assignor to The National Marking Machine Company, Cincinnati, Ohio, a corporation of Ohio

Application October 23, 1942, Serial No. 463,082

19 Claims. (Cl. 101—325)

My invention relates to improvements in laundry marking machines and the principal object of my invention is to provide an improved machine of simple, compact and inexpensive construction, by means of which a number of identifying characters may be printed upon articles to be laundered, or other material, held upon the platen of the machine by the operator.

A further object of my invention is to provide a laundry marking machine having a platen, normally accessible at the front of the machine, upon which an operator may hold the material to be marked, and which is movable from its normal position to a printing position adjacent selected printing type and thereafter moved to carry the material against said type and take an imprint therefrom.

Another object of my invention is to provide a laundry marking machine with control means, readily accessible to the operator as he holds the material to be marked upon the platen of the machine, for controlling the extent or duration of the printing engagement between the material and the selected printing type. Some articles to be laundered are relatively thin and tightly woven while others are relatively thick and loosely woven, and the latter require more time to soak up the ink from the printing type, so that it is desirable to have some means under the control of the operator for determining the length of time that the printing engagement will be maintained. This is particularly desirable in the art of invisible marking, in which, during the engagement of the printing type with the material or articles to be marked, the material is impregnated in the desired pattern with a fluorescent dye contained in the ink, the visible marking being removed during the laundering operation while the fluorescent dye pattern remains to be rendered visible subsequently by ultra violet light or the like.

A further object of my invention is to provide such a machine in which the control means, while carried by the platen and readily accessible to an operator while he holds the material on the platen, are so located as to insure that the operator's hands will not be in position to be caught between the platen and the printing type.

Still another object of my invention is to provide a laundry marking machine having an inking device which is movable with the platen, as the latter moves from normal to printing position, and which, during such movement of the platen, inks the faces of the selected type.

A further object of my invention is to provide a laundry marking machine that is operated by fluid pressure to print the mark upon the material held on the platen of the machine by the operator.

Another object of my invention is to provide a laundry marking machine in which the platen can not be moved toward the selected type, to take an imprint therefrom upon the material held upon the platen, until the platen has been moved from a normal to a printing position.

In the art of invisible marking for laundry identification, it is customary to use type faces much larger than is the practice in visible marking, and it is a further object of my invention to provide a laundry marking machine having an improved type-carrier and type selecting mechanism, of such a nature as to provide a compact machine while having the larger type used in invisible marking.

Further objects, and objects relating to details of construction and economies of operation, will definitely appear from the detailed description to follow. In one instance, I have accomplished the objects of my invention by the devices and means described in the following specification. My invention is clearly described and pointed out in the appended claims. A structure constituting a preferred embodiment of my invention is illustrated in the accompanying drawings, forming a part of this specification, in which

Fig. 1 is a view of my improved laundry marking machine in front elevation, a portion of the platen-carrier being shown in section.

Fig. 2 is a view of the machine in rear elevation, a portion of the rear of the casing being broken away.

Fig. 3 is a detail, sectional view showing the mounting of one of the control buttons in one end of the platen.

Fig. 4 is a vertical, longitudinal, sectional view through the machine, taken on the line 4—4 of Fig. 1, and showing the platen-carrier, platen and ink reservoir in printing position, in full lines, and the platen-carrier and platen in normal position, in dotted lines.

Fig. 5 is a vertical longitudinal, central, sectional view through the platen-carrier, platen, inking device, lifter lever and the cylinders and co-operating pistons for operating said parts by fluid pressure.

Fig. 6 is a detail, sectional view of the valve mechanism for controlling the admission of fluid pressure to the horizontal cylinder for moving the platen-carrier from normal to printing position.

Fig. 7 is a face, side and end view of one of the detachable printing types.

Fig. 8 is a fragmentary, top plan view of the machine casing, illustrating the indicia alongside the slots in which the handles for the selector chains work, parts being broken away to show the index plates carried by said selector chains.

Fig. 9 is a top plan view of the platen, the inking device and the means for moving the platen and inking device from normal to printing position, and vice versa, and

Fig. 10 is a view, in rear elevation, of the upper portion of the machine, a part of the casing being broken away to show the gearing for driving the endless type-carrier chains.

In the drawings, the same reference numerals indicate the same parts throughout the several views and the sectional view is taken looking in the direction of the arrows at the ends of the section line.

In general, the improved laundry marking machine of my invention comprises a number of shiftable type-carriers, each carrying a plurality of printing type, means for shifting the type-carriers so as to bring selected type to printing position, a platen upon which an operator may hold the material to be marked, and means for moving the platen from a normal position in front of the machine to printing position, and for moving the platen to carry the material thereon against the faces of the selected type to take an imprint therefrom. The type-carriers are preferably endless and may consist of a plurality of sprocket chains carrying the type and passing around sprockets. The means for shifting the type-carriers, to select the type to be presented at printing position, may comprise a plurality of selector chains passing around sprockets and having driving connections with the corresponding type-carrying chains, so that movements of the selector chains bring about corresponding movements of the type-carrying chains. Suitable indicating means are provided in connection with the selector chains to guide the operator in adjusting them to bring the proper type to printing position.

The machine includes a platen-carrier which is movable from a normal position to a printing position. A platen is provided which is slidably mounted upon the platen-carrier and, when the platen-carrier is in normal position, the article or material to be marked is placed and held by the operator upon the platen. When the platen-carrier moves from normal to printing position, the platen and the material carried thereby are brought beneath the selected type and the platen is then raised to lift the material against said type and take an imprint therefrom. Control means may be provided on the platen, accessible to the thumbs of the operator holding the material thereon, for initiating the movement of the platen-carrier from normal to printing position and said control means are so located that, in order to initiate such movement, the operator's thumbs must be in such positions that they can not be caught between the platen and the type. An inking device may be mounted on the platen-carrier to move therewith and, as the platen-carrier moves from normal to printing position, the inking device moves over the faces of the selected type to apply ink thereto.

Referring to the numbered parts of the drawings, my improved laundry marking machine has a frame or casing **10**. Mounted therein are a pair of spaced parallel shafts, **77** and **78**, on each of which there is journaled a series of sprocket wheels **79**. There is a pair of these sprocket wheels for each of the eight type-carrying chains, as shown in Fig. 10, which permits of the printing of an identification mark comprising eight characters. Each type-carrier consists of a sprocket chain **80**, passing around a pair of sprockets **79**, and carrying a plurality of printing type. As shown in Fig. 7, each printing type comprises a type body **81**, having the appropriate character on the type face thereof, and a pair of flat parallel flanges **82**, extending rearwardly from the type body and having holes **83** therein, which receive the pivot pins that connect the links of the chain. Thus the printing type are detachably mounted on the type-carrying chain with the type faces outermost. As will appear hereinafter, the printing position for these type is directly below the shaft **77** and, when the selected type have been brought to this position, the type face downwardly and are in position to be engaged by material placed upon a platen, which is moved upwardly against them.

To each of the sprocket wheels **79**, on shaft **78**, there is fastened a gear **95** (see Fig. 10), which meshes with a corresponding gear **94** journaled on a shaft **86** mounted in the frame **10**. To each of the gears **94**, there is secured a sprocket wheel **87** around which passes the corresponding endless selector chain **88**. These selector chains also pass around sprockets **87** mounted on a parallel shaft **85**, also mounted in the casing **10**. As a selector chain is moved, the sprockets **87** are rotated, thus rotating gears **94** and **95** and driving the corresponding type-carrying chain **80**. Gears **94** and **95** are of such size as to provide a gear reduction, so that movement of the selector chain through a given distance will move the corresponding type-carrying chain a greater distance.

Secured to each selector chain **88** is a handle **91**, which extends through a corresponding slot **89** in the casing **10**. Each handle **91** is movable, within the limits of slot **89**, and alongside each slot the characters **93**, appearing on the several types of the type-carrying chain, are marked on the casing **10**. The type are so mounted on the type-carrying chains, and the driving connections between the selector chains and said type-carrying chains are such, that when a handle **91** is moved to a position opposite one of these characters, the type on the corresponding type-carrying chain, bearing the corresponding character, will be brought to printing position. The casing **10** is provided with a plurality of sight openings **90**, one for each selector chain, in line with and above the upper ends of the slots **89**, and each selector chain has secured thereto a plurality of index plates **92**, bearing characters corresponding to those on the type. These index plates are so positioned on the selector chains that, when the handles **91** have been moved opposite certain characters **93** on the casing, the corresponding characters on the index plates **92** will appear in the sight openings **90**, thus enabling the operator to tell what identification mark has been set up for printing.

For the purpose of aligning the selected type at printing position, I have provided a type-aligning device which comprises a tube **96**, mounted on the frame of the machine, in which a plunger **97** is slidably mounted, said plunger being pressed outwardly by a spring **98** housed within tube **96**. The forward end of the plunger **97** carries a rounded aligning bar **99**, engaging all of the sprockets **79** on the lower shaft **77**. As these sprockets revolve, the plunger **97** yields against

the pressure of spring 98, permitting the teeth to pass. When the type-selecting movements of the type-carrying chain 80 have been completed, spring 98 will exert a pressure through bar 99 upon the teeth of the sprockets 79 to align the selected type inprinting position.

The laundry marking machine shown herein has been designed especially for use in the invisible marking of articles and material for laundry identification. In the method, as now practiced, of invisible marking for laundry identification, it is customary to use characters very considerably greater than those used for visible marking. For instance, this machine has been devised to provide characters having a type face as large as 5/8" x 3/8". As shown in Fig. 8, each type-carrying chain has type thereon for printing 37 different characters and this requires a possible movement of 38 inches for each type-carrying chain. Obviously, if these chains were set directly this would require a very cumbersome machine but, by providing the selector chains shown and appropriate gearing connecting the selector chains and the type-carrying chains, I am enabled to secure this extended movement of the latter with a much smaller movement of the selector chains, well within the range of a compact setting panel on the top of the machine casing.

The platen-carrier 15 (Figs. 1, 4 and 5) has secured thereto a pair of tubes 14, which extend rearwardly therefrom and are slidably mounted in bearings 13 provided at the sides of a crosshead 11, mounted on the frame of the machine. These tubes 14, in turn, are slidably mounted on guide rods 18 fixed to a cross-bar 19, which is also mounted in the frame of the machine. Thus, the platen-carrier is mounted for horizontal movement from a normal position to a printing position, and vice versa. Springs 20 surrounding the guide rods 18, and compressed between the cross-bar 19 and the ends of the tubes 14, tend to move the platen-carrier forwardly to the normal position.

The platen 16 has a flat upper surface and a flange 17 extends downwardly from the end and forward edges of said platen, forming a recess between said flange and the body of the platen to receive the fingers of the operator, as he holds an article or material to be marked upon the flat upper surface of the platen. An insert 16', which may be of rubber or other yieldable material, is mounted in the upper surface of the platen so that, when the platen is in printing position, said insert will be opposite the selected type and, when the platen is lifted, said insert will press the material thereon yieldingly against the faces of the selected type.

A pair of rods 27 are secured to the platen 16 and extend downwardly therefrom through vertical bores in the platen-carrier 15. A crossbar 28 is secured to the lower ends of the rods 27, below the platen-carrier, and springs 29 surrounding the rods 27 are compressed between said cross-bar 28 and the body of the platen-carrier and yieldingly hold the platen in its lower position. Thus, it appears that the platen-carrier is movable horizontally from a normal to a printing position, against the pressure of springs 20, and the platen may be moved, with respect to the platen-carrier, vertically against the pressure of springs 29.

An inking device is mounted on the platen-carrier, to move therewith, upon a flange 31 projecting rearwardly therefrom. This inking device includes an ink reservoir 30, an inking roller 32, and a wick 33, one end of which is in the ink in the reservoir while the other end is arranged to bear against the surface of the inking roller 32, to supply ink drawn from the reservoir 30 to the surface of said roller. A wick compressing bar 34 is provided, which engages the wick and is adjusted relative thereto by a screw 35, for regulating the flow of ink by capillary attraction through the wick to the inking roller. The inking roller is so located in the inking device, and the inking device is so supported from the platen-carrier that, at each movement of the platen-carrier from normal to printing position, the inking roller will be carried across the faces of the selected type and apply ink thereto. When the platen-carrier is in printing position, the inking device stands to the rear thereof, as shown in Fig. 4.

A drawbar 26 is slidably mounted in the crosshead 11 and extends through a packing gland 22, carried by said crosshead. The forward end of the drawbar extends through the platen-carrier 15 and has a reduced portion, forming a shoulder engaging a corresponding shoulder 23 in the platen-carrier. A spring 26', surrounding the reduced portion of the drawbar 26, is compressed between the body of the platen-carrier 15 and a nut 24 screwed upon the forward reduced end of the drawbar. The spring 26' presses the platen-carrier 15 rearwardly so that shoulder 23 seats on the shoulder of drawbar 26, but this connection will yield to permit the drawbar to move rearwardly with respect to the platen-carrier 15. A piston 21 is fastened to the rear end of the drawbar 26 by a nut 21' and works in a cylinder 12, which is carried by the crosshead 11. When fluid pressure is admitted to the cylinder 12 in front of the piston 21, the piston is moved rearwardly pulling the drawbar 26 and the platen-carrier 15 rearwardly, against the pressure of springs 20, until the platen-carrier hits the packing gland 22 when it arrives at printing position. Piston 21 and drawbar 26 can move still further to the rear, after the platen-carrier reaches this position, because of the yielding of spring 26'. The reason for the further movement of the piston 21 and drawbar 26 will be pointed out hereinafter.

A lifter lever is fulcrumed on the shaft 43, supported in the frame of the machine, and comprises a pair of rearwardly extending arms 41 and a pair of forwardly extending arms 42. A lifter bar 44 is carried by the forward ends of the arms 42. When the platen-carrier has moved from normal to printing position, as shown in Fig. 4, the crossbar 28 secured to platen 16 is above the bar 44 of the lifter lever and, when the lifter lever is rocked counterclockwise, with the parts in this position, the platen will be lifted against the pressure of springs 29 to carry material held thereon by the operator against the faces of the selected type. The rear end of each of the rearwardly extending arms 41 of the lifter lever is pivotally connected at 40 to the lower end of a rod 39, secured to one end of a crossbar 38, and said crossbar 38 is secured to the lower end of a piston rod 37 extending through the base of a cylinder 36 and having a piston 37' secured to its upper end and working in said cylinder. A spring 37a, compressed between the base of cylinder 36 and the piston 37', tends to move said piston and the piston rod 37 upwardly to rock the lifter lever clockwise, but, when fluid pres-

sure is admitted to the cylinder 36 above the piston 37', it moves said piston downwardly in the cylinder against the pressure of spring 37a and thereby rocks the lifter lever counterclockwise to lift the platen. Vents 70 are provided in the walls of the cylinders 12 and 36 to permit the escape of air from said cylinders on the working strokes of the pistons.

Fluid pressure is used as the source of energy for operating the printing mechanism of this machine. A source of fluid pressure, such as the tank 45 filled with compressed air, is provided and connected by pipe 46 to inlet 48 of a valve mechanism 47 (see Fig. 6). Inlet port 48 is connected by a passage 49 to the valve chamber 50, in which there is a valve seat 51 intermediate the chamber 50 and another chamber 54 communicating with an outlet port 55. A valve 52, having a seating member 58 adapted to engage the valve seat 51, is slidably mounted in the body of the valve mechanism 47 and is pressed toward the valve seat 51 by a spring 53. A plunger 57 is slidably mounted in the valve body, with its inner end projecting into the valve chamber 54, and is pressed outwardly away from valve seat 51 by a spring 59. An exhaust passage 54a extends longitudinally through the plunger 57 and, in the position of the parts shown in Fig. 6, connects the valve chamber 54 with the atmosphere. A pivoted lever 61 (see Fig. 4) has its free end adjacent the outer end of the plunger 57 and is provided with a finger adapted to close the outer end of the exhaust passage 54a, when the lever 61 is rocked counterclockwise from the position shown in Fig. 4. Said movement of the lever not only closes the exhaust passage 54a but also pushes the plunger 57 inwardly, against the pressure of spring 59, until the inner end of the plunger engages the seating member 58 and moves it away from its seat 51, thus establishing communication between the inlet port 48 and the outlet port 55.

In the normal position of the parts, as shown in Fig. 6, the fluid pressure in tank 45 is connected through port 46 to the valve chamber 50, but is cut off from the outlet port 55 because of the seating of member 58 on valve seat 51. Outlet port 55 is connected by pipe 56 to the forward end of the cylinder 12 in front of the piston 21 and thus, in the normal position of the parts, the space in cylinder 12 in front of piston 21 is connected to the atmosphere through pipe 56, outlet port 55, chamber 54 and exhaust passage 54a. However, when lever 61 is rocked counterclockwise to seal the exhaust passage 54a and press inwardly the plunger 57, the valve member 58 is unseated and a connection is established between inlet port 48 and outlet port 55 so that fluid pressure from tank 45 is admitted in front of piston 21 in cylinder 12. This moves the piston 21 rearwardly against the pressure of springs 20 and draws the platen-carrier 15 rearwardly from normal to printing position. When the lever 61 is rocked clockwise to release the plunger 57 and open the exhaust passage 54a, the valve member 58 again seats on valve seat 51, cutting off communication between the tank 45 and pipe 56, and the outlet port 55 is connected to the atmosphere through passage 54a, so that the pressure in cylinder 12 in front of piston 21 is vented to the atmosphere.

A valve mechanism 64, similar in most respects to the valve mechanism already described and shown in Fig. 6, is mounted at the rear end of cylinder 12. A pipe 63, which branches off from pipe 46, is connected to the valve chamber of valve mechanism 64, corresponding to the valve chamber 50 shown in Fig. 6. A valve 68, corresponding to valve 52, is pressed against its seat, corresponding to valve seat 51, by a spring 65. Valve chamber 66, which corresponds to chamber 54 shown in Fig. 6, is connected by pipe 67 to the upper end of the cylinder 36 above the piston 37'. A plunger 69, having an exhaust passage 69a and corresponding to plunger 57 shown in Fig. 6, is spring pressed forwardly. With the parts in the position shown in Fig. 6, the valve 68 cuts off communication between pipe 63 and pipe 67 and the latter, which is connected to the upper end of cylinder 36, is connected to the interior of cylinder 12 through the passage 69a in plunger 69.

When fluid pressure is admitted to cylinder 12 in front of piston 21, it moves the piston rearwardly against the pressure of springs 20 and draws the platen-carrier 15 rearwardly until the latter strikes the packing gland 22, thereafter, the fluid pressure in the cylinder moves the piston 21 still further rearwardly, spring 26' yielding to permit this and, during such further movement, the nut 21' engages plunger 69 and presses it rearwardly, thus unseating the valve 68, establishing communication between pipe 63 and pipe 67 and, at the same time, sealing the passage 69a. Thus, fluid pressure can flow from pipe 63 through the valve mechanism 64 to pipe 67 and into the cylinder 36 above the piston 37, and force the latter downwardly against the pressure of spring 37a, thus rocking the lifting lever counterclockwise and lifting the platen 16 to carry material held thereon by the operator into printing engagement with the selected type and take an imprint therefrom.

The operation of this fluid pressure mechanism is under the control of control members located on the platen 16, at the ends thereof and accessible to the thumbs of an operator, while he holds material to be marked upon the flat upper face of said platen. One of these control members is shown in Fig. 3 and consists of a push button switch 75, biased by a spring to open position, and connected in an electric circuit 76 which includes a source of electric energy 76' and the solenoid 60. The switches are so connected in the circuit that both of them have to be closed, by depression of the push buttons 75, to complete a circuit which will energize the solenoid 60. The armature of solenoid 60 is connected to the upper end of the lever 61 so that, when said solenoid is energized, the lever will be rocked counterclockwise to seal the exhaust passage 54a and press inwardly the plunger 57, as already described. A spring 62 is connected to rock the lever 61 clockwise, when the solenoid is de-energized. The buttons 75 are carried by the platen and located near the ends thereof and these buttons are accessible to the thumbs of an operator, while he is holding material upon the upper face of the platen. It is necessary, to start and maintain the fluid pressure mechanism in operation, that both of these buttons be depressed and this insures that the hands of the operator will not be in position to be caught between the platen and the printing type, because, if either hand is in that position, it can not hold the button depressed to maintain circuit 76 closed. As soon as one of these buttons is released, the corresponding switch opens and the circuit is broken, which causes

the immediate return of the platen to normal position.

From the description of the parts heretofore given, the operation of my improved laundry marking machine should be readily understood. The operator first shifts the handles 91 opposite the characters on the casing 10, adjacent the slots 89, which indicate the identifying mark to be placed on the articles or material. The shifting of these handles 91 results in the adjusting or shifting of the type-carrying chains 80 to bring the selected type to printing position for printing the selected characters comprising the mark. The platen 16 is in its normal position, at the front of the machine where it is readily accessible to the operator, who places an article to be laundered, or other material to be marked, on the platen 16 and holds it thereon. While holding the material on the platen, his thumbs are adjacent the buttons 75 both of which he now depresses to start the fluid pressure mechanism in operation. This closes the circuit 76, energizes solenoid 60 and rocks lever 61 counterclockwise against the pressure of spring 62, to close the exhaust passage 54a and admit fluid pressure from tank 45 to the portion of cylinder 12 in front of piston 21. This causes piston 21 to move rearwardly against the pressure of springs 20, drawing the platen-carrier 15 rearwardly until it arrives at printing position and hits the packing gland 22. Then, the platen-carrier remains in printing position while the spring 26' yields and permits piston 21 and drawbar 26 to move still further rearwardly. During this rearward movement, the nut 21' hits the end of the plunger 69 and pushes it rearwardly, establishing communication between pipe 63 and pipe 67 and closing the exhaust port 69a. Thus, the space in cylinder 36 above the piston 37' is connected with the source of fluid pressure and piston 37' is forced downwardly against the pressure of spring 37a, rocking the lifter lever, 41, 42, counterclockwise. The movement of the platen-carrier 15 to printing position brought the crossbar 28 above the bar 44 of the lifter lever and, when the latter is rocked counterclockwise, bar 28 and platen 16 are lifted to carry the material held on the platen upwardly against the faces of the selected and inked type. The printing engagement between the material and the inked type is maintained as long as the operator holds both of the buttons 75 depressed.

When the operator releases one or both of the buttons 75, solenoid 60 is immediately de-energized. Spring 62 then rocks the lever 61 clockwise, which uncovers the exhaust passage 54a and permits spring 59 to move the plunger 57 outwardly, so that the member 58 can seat on the valve seat 51 and cut off communication between the source of fluid pressure and the space in front of piston 21, which is then vented to the atmosphere through the exhaust passage 54a. Spring 26' immediately moves drawbar 26 and piston 21 forwardly, while the platen-carrier 15 remains stationary. This movement of piston 21 is sufficient to uncover the exhaust passage 69a and permit plunger 69 to move forwardly to cut off communication between the source of fluid pressure and the space in cylinder 36 above the piston 37', which is then vented to the atmosphere through passage 69a, the interior of cylinder 12 and vent 70. Spring 37a immediately forces piston 37' upwardly, which rocks the lifter lever, 41, 42, clockwise, so that springs 29 force the platen 16 downwardly carrying the material held thereon away from the type. Springs 20 act to move the piston 21, drawbar 26 and platen-carrier 15 forwardly to the normal position. Thus, the first forward movement of piston 21 results in the lowering of the platen before continued forward movement of said piston and drawbar 26 moves the platen-carrier 15 to the normal position. In this way, the blurring of the mark by movement of the platen horizontally, while the material is in engagement with the type, is prevented.

The operator can control the time of engagement of the material with the printing type by the control buttons 75, while holding the material on the platen 16, and thus regulate the duration of the printing engagement in accordance with the character of the fabric or material upon which the imprint is to be made. If, after the platen has moved to normal position, the operator believes that a further impression is necessary, he can again depress the control buttons 75 and take another imprint on the material by a repetition of the procedure just described.

I am aware that the laundry marking machine disclosed herein is susceptible of considerable variation, without departing from the spirit of my invention, and, therefore, I claim my invention broadly as indicated by the appended claims.

What I claim is:

1. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier movable horizontally from a normal position to a printing position, a platen mounted on said platen-carrier for vertical movement, a lifter, a member rigidly connected to said platen and normally out of operative relation with said lifter but brought into operative relation therewith by movement of the platen-carrier to printing position, and means for actuating said lifter.

2. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier movable horizontally from a normal position to a printing position, a platen mounted on said platen-carrier for vertical movement, a lifter, a member rigidly connected to said platen and normally out of operative relation with said lifter but brought into operative relation therewith by movement of the platen-carrier to printing position, and means, operating automatically upon completion of the movement of said platen-carrier to printing position, to actuate said lifter.

3. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier, means for moving the platen-carrier horizontally from a normal position to a printing position, a platen mounted on said platen-carrier for vertical movement, a lifter, a member rigidly connected to said platen and normally out of operative relation with said lifter but brought into operative relation therewith by movement of the platen-carrier to printing position, and means, operating automatically upon completion of the movement of said platen-carrier to printing position, to actuate said lifter.

4. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier movable horizontally from a normal position to a printing position, a drawbar yieldingly connected to said platen-carrier whereby said drawbar is permitted further movement after the platen-carrier reaches printing position,

means for actuating said drawbar, a platen mounted on said platen-carrier for vertical movement, a lifter, a member rigidly connected to said platen and normally out of operative relation with said lifter but brought into operative relation therewith by movement of said platen-carrier to printing position, and means, operated automatically by said further drawbar movement, for actuating said lifter whereby the platen is lifted to carry material placed thereon against the selected type to take an imprint therefrom.

5. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier movable horizontally from a normal position to a printing position, a drawbar yieldingly connected to said platen-carrier whereby said drawbar is permitted further movement after the platen-carrier reaches printing position, fluid pressure means including a piston connected to said drawbar for actuating the latter, a platen mounted on said platen-carrier for vertical movement, a lifter, a member rigidly connected to said platen and normally out of operative relation with said lifter but brought into operative relation therewith by movement of said platen-carrier to printing position, and means, operated automatically at the end of the piston stroke, for actuating said lifter whereby the platen is lifted to carry material placed thereon against the selected type to take an imprint therefrom.

6. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier movable horizontally from a normal position to a printing position, a drawbar yieldingly connected to said platen-carrier whereby said drawbar is permitted further movement after the platen-carrier reaches printing position, pneumatic means including a piston connected to said drawbar for actuating the latter, a platen mounted on said platen-carrier for vertical movement, a lifter, a member rigidly connected to said platen and normally out of operative relation with said lifter but brought into operative relation therewith by movement of said platen-carrier to printing position, and fluid pressure means, operated automatically at the end of the piston stroke, for actuating said lifter whereby the platen is lifted to carry material placed thereon against the selected type to take an imprint therefrom.

7. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a slidably mounted platen-carrier, spring means acting on said platen-carrier and tending to move it laterally of the type to normal position, a cylinder, a piston working therein, a drawbar fastened to said piston, yielding connections between said drawbar and said platen-carrier, means for admitting fluid pressure to said cylinder to move said piston against the action of said spring means and draw said platen-carrier to printing position, said yielding connections permitting a further movement of said piston, a platen mounted on said platen-carrier and adapted to receive the material to be printed upon, when the platen-carrier is in normal position, and means, controlled automatically by said further movement of the piston, for moving said platen with respect to the platen-carrier toward the type to carry said material against them and take an imprint therefrom.

8. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier movable horizontally from a normal to a printing position, a platen, a pair of guide rods secured to said platen and extending downwardly through vertical bores in the platen-carrier, a crossbar secured to the lower ends of said rods, springs on said rods compressed between the platen-carrier and said crossbar, and means, effective with said platen-carrier in printing position, for lifting said crossbar vertically to move the platen upwardly and carry material placed thereon against the selected type to take an imprint therefrom.

9. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier movable horizontally from a normal to a printing position, a platen, a pair of guide rods secured to said platen and extending downwardly through vertical bores in the platen-carrier, a crossbar secured to the lower ends of said rods, springs on said rods compressed between the platen-carrier and said crossbar, a lifter so located that horizontal movement of the platen-carrier to printing position brings said crossbar into operative relation with the lifter, and means for actuating said lifter.

10. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier movable horizontally from a normal to a printing position, a platen, a pair of guide rods secured to said platen and extending downwardly through vertical bores in the platen-carrier, a crossbar secured to the lower ends of said rods, springs on said rods compressed between the platen-carrier and said crossbar, a lifter lever pivoted on a fixed axis and having one end thereof located below the said crossbar when said platen-carrier is in printing position, and means for rocking said lifter lever.

11. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen-carrier movable horizontally from a normal to a printing position, a platen, a pair of guide rods secured to said platen and extending downwardly through vertical bores in the platen-carrier, a crossbar secured to the lower ends of said rods, springs on said rods compressed between the platen-carrier and said crossbar, a lifter lever pivoted on a fixed axis and having one end thereof located below the said crossbar, when said platen-carrier is in printing position, a cylinder, a piston working therein and connected to the opposite end of said lifter lever, and means for admitting fluid pressure to said cylinder to rock said lifter lever and lift the platen vertically, carrying material placed thereon against the selected type to take an imprint therefrom.

12. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a flat platen upon which the material to be marked may be placed, the forward portion of said platen having a depending flange forming a recess in the lower portion of the platen adapted to receive the fingers of an operator holding said material across the upper face of the platen, and means for moving said platen to carry said material against the selected type to take an imprint therefrom.

13. In a machine of the class described including a type assembly adapted to locate type

at printing position, the combination of a flat platen upon which the material to be marked may be placed, the forward portion of said platen having a depending flange forming a recess in the lower portion of the platen adapted to receive the fingers of an operator holding said material across the upper face of the platen, a cushion inserted in the upper face of said platen and adapted to yield when said material is pressed against the type, and means for moving said platen to carry said material against the selected type to take an imprint therefrom.

14. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen upon which the material to be marked may be placed, a control member carried by said platen and accessible to the operator when he is holding said material across the platen, and means under the control of said member for moving said platen to carry said material against the selected type to take an imprint therefrom.

15. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen upon which the material to be marked may be placed, control members carried by said platen adjacent the ends thereof and accessible to the hands of the operator while holding the material across the platen, and means under the control of said members for moving said platen to carry said material against the selected type to take an imprint therefrom.

16. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a flat platen upon which the material to be marked may be placed, the forward portion of said platen having a depending flange forming a recess in the lower portion of the platen adapted to receive the fingers of an operator holding said material across the upper face of the platen, control members carried by said platen adjacent the ends thereof and accessible to the thumbs of said operator, when he is holding said material across the upper face of the platen, and means under the control of said members for moving said platen to carry said material against the selected type to take an imprint therefrom.

17. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a flat platen upon which the material to be marked may be held by an operator, control members carried by said platen adjacent the ends thereof and accessible to the thumbs of said operator, when he is holding said material across the upper face of the platen, means under the control of said members for moving said platen horizontally from normal to printing position, and means, effective when the platen is in printing position, for moving it vertically to carry the material thereon against the selected type to take an imprint therefrom.

18. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen upon which the material to be marked may be held by an operator, a pair of control switches carried by the platen at opposite ends thereof and accessible to the thumbs of the operator while holding said material on the platen, an electric circuit controlled by said switches, and means controlled by said circuit for moving said platen to carry the material held thereon against the selected type to take an imprint therefrom.

19. In a machine of the class described including a type assembly adapted to locate type at printing position, the combination of a platen upon which the material to be marked may be held by an operator, a pair of control switches carried by the platen at opposite ends thereof and accessible to the thumbs of the operator while holding said material on the platen, an electric circuit controlled by said switches, means controlled by said circuit for moving said platen from normal to printing position, and means, effective when said platen is in printing position, for moving the platen toward the selected type to take an imprint therefrom on said material.

WILLIAM JOHN KEUPER.