C. A. BUNKER.

LAUNDRY MARKING MACHINE.

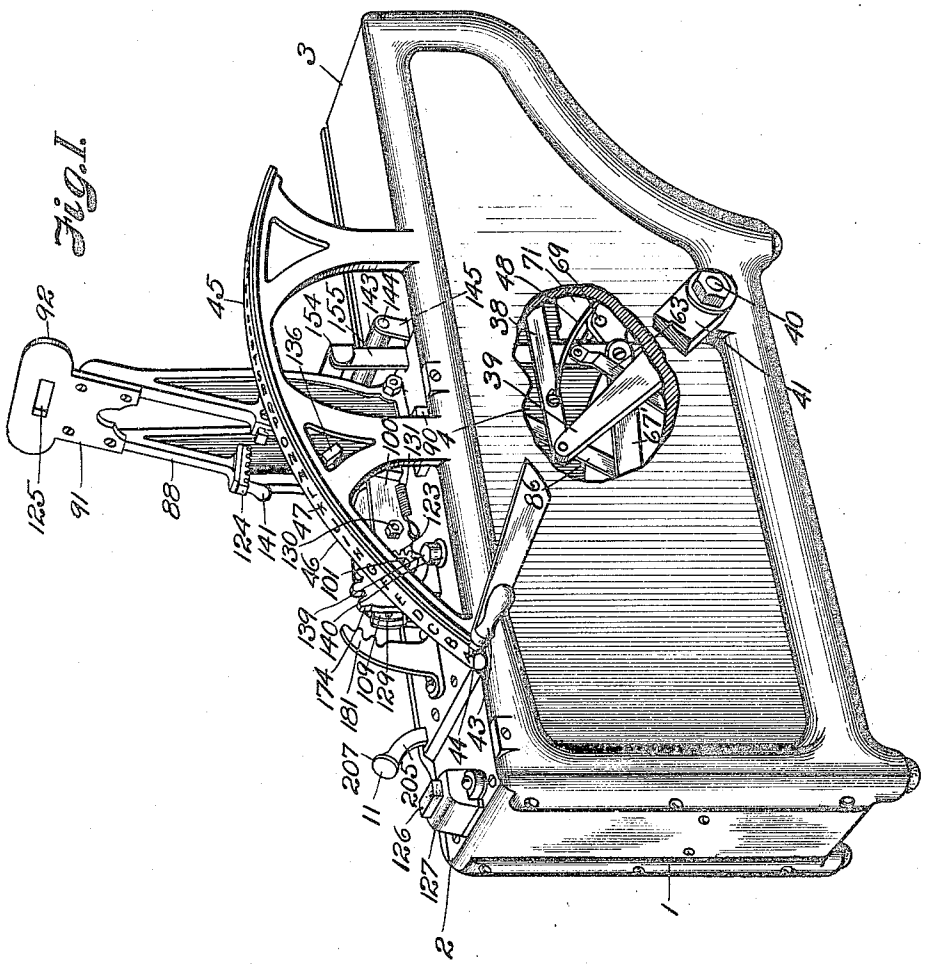
APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

Arthur W. Capps.

L. E. Coots.

INVENTOR

Chas. A. Bunker.

BY

Arthur C. Thom.

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

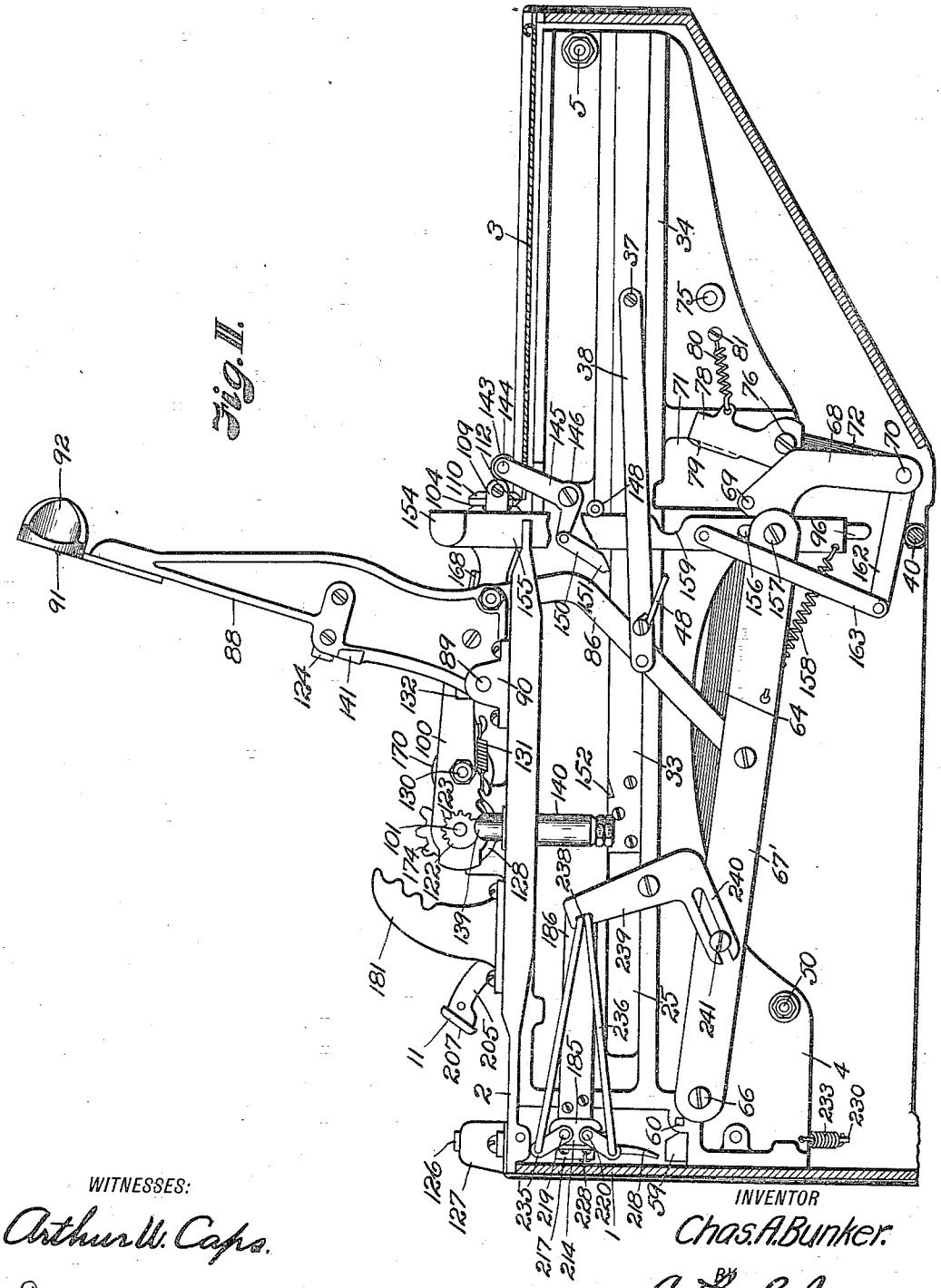
APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 2.

Fig. II.



WITNESSES:

Arthur W. Capps.

Leta E. Coats.

INVENTOR

Chas. A. Bunker.

By Arthur C. Brown

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

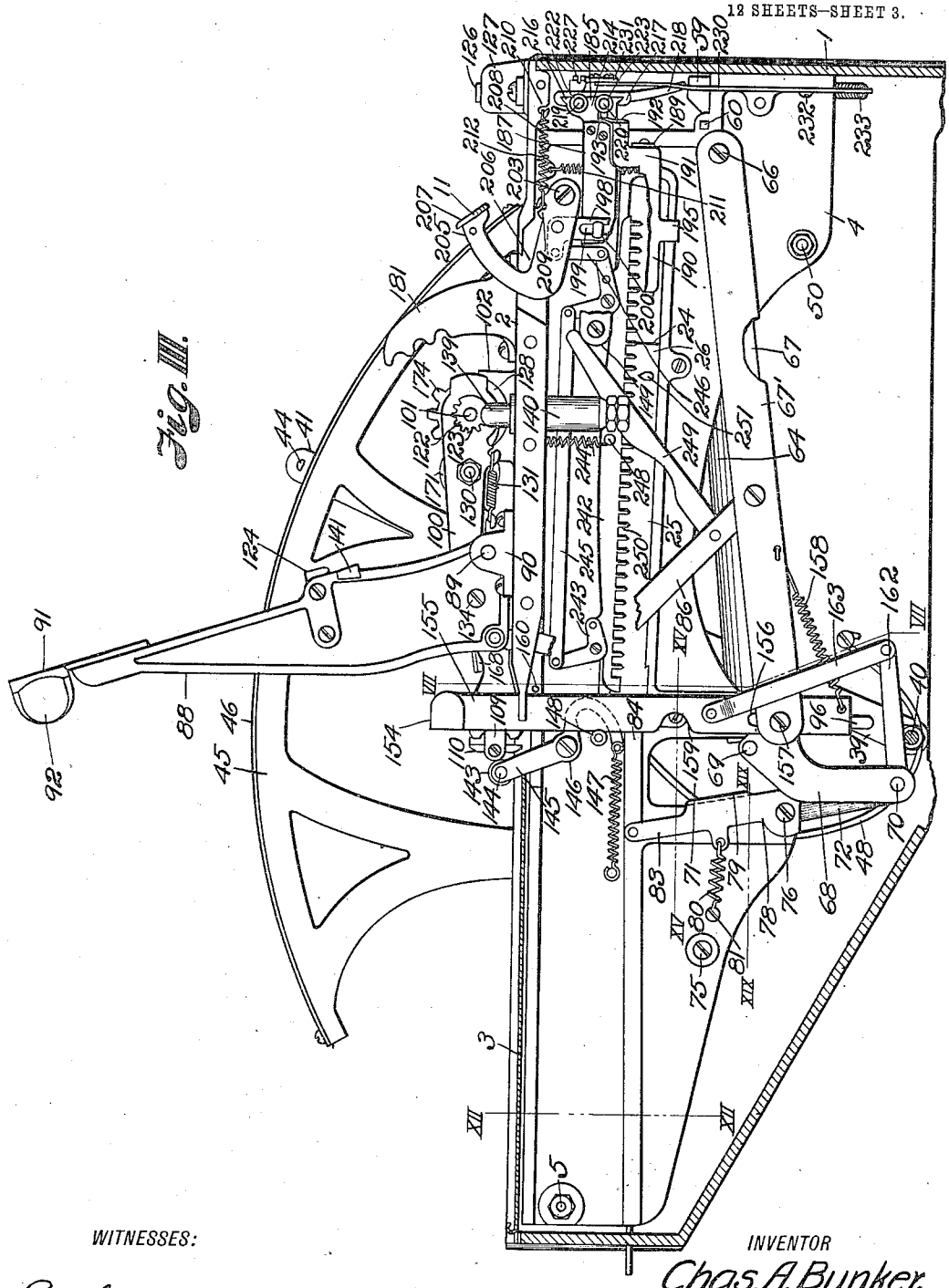
APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 3.

Fig. III.



WITNESSES:

Arthur W. Capps.

L. E. Coats.

INVENTOR

Chas. A. Bunker.

BY

Arthur C. Brown

ATTORNEY

C. A. BÜNKER.

LAUNDRY MARKING MACHINE.

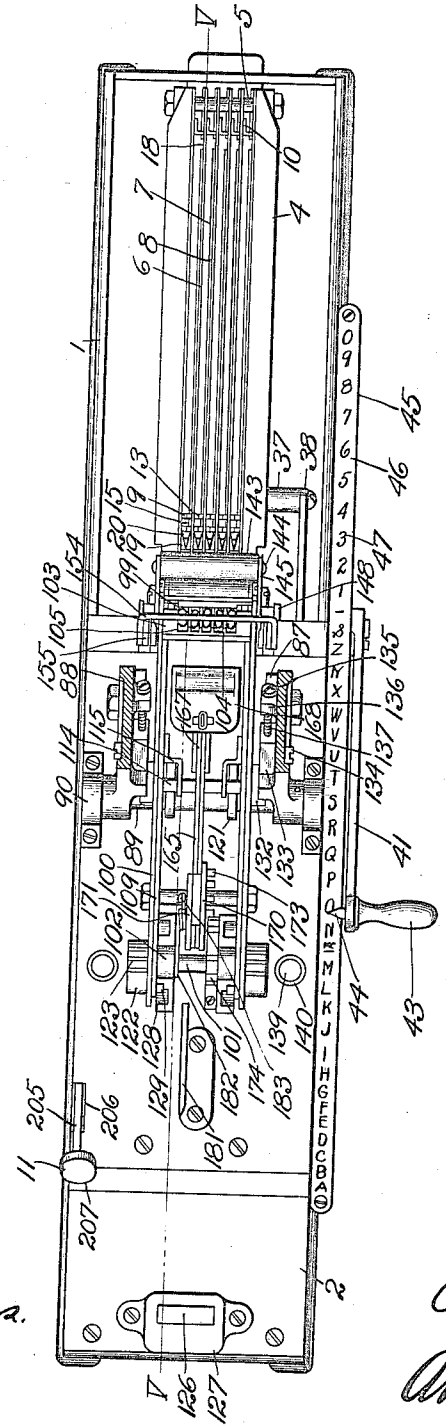
APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 4.

Fig. IV.



WITNESSES:

Arthur W. Capa.

L. E. Coats.

INVENTOR

Chas. A. Bunker.

BY

Arthur L. Thomas

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

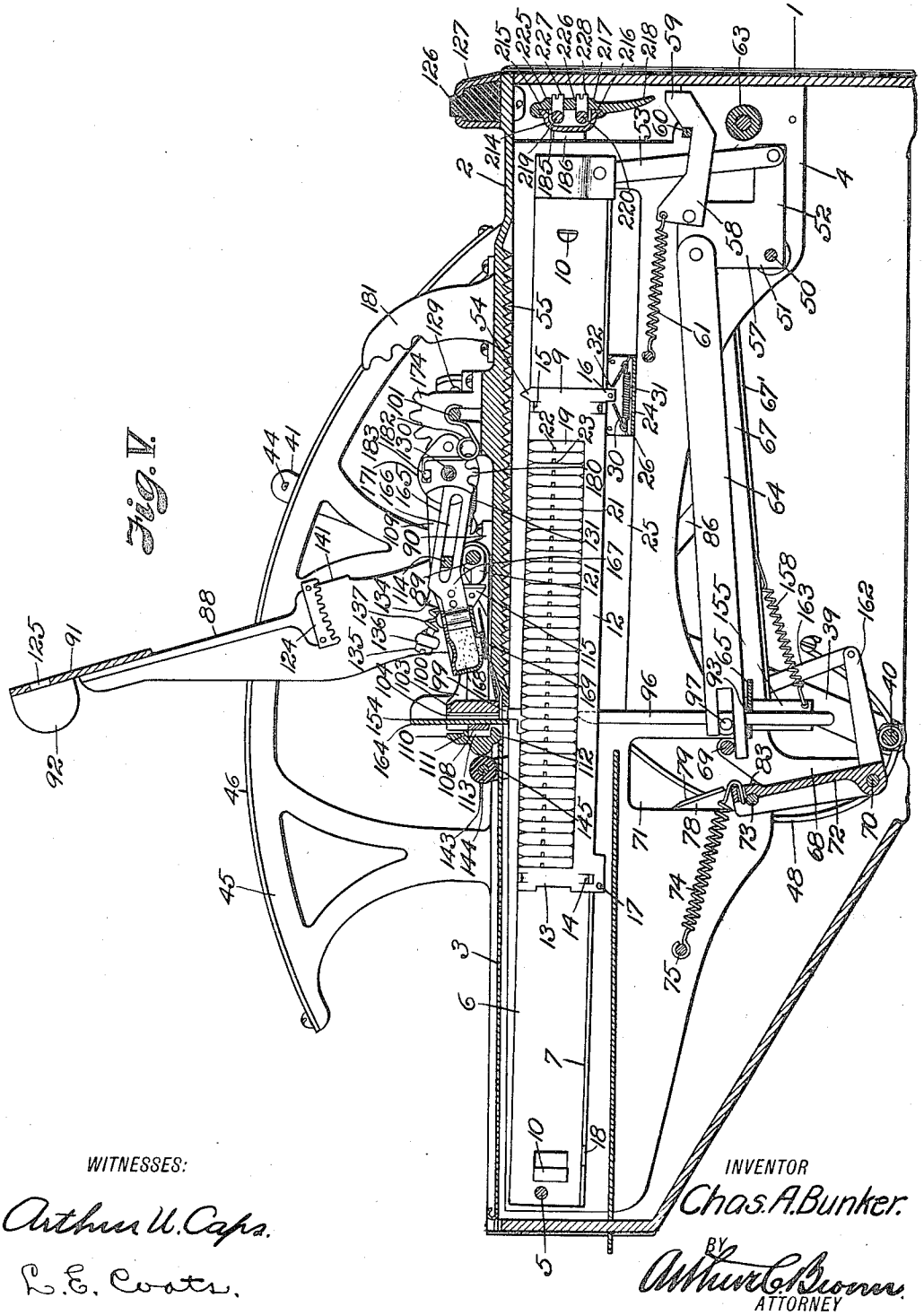
APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 5.

Fig. V.



WITNESSES:

Arthur U. Caps.

L. E. Coates.

INVENTOR

Chas. A. Bunker.

BY

Arthur C. Brown.

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

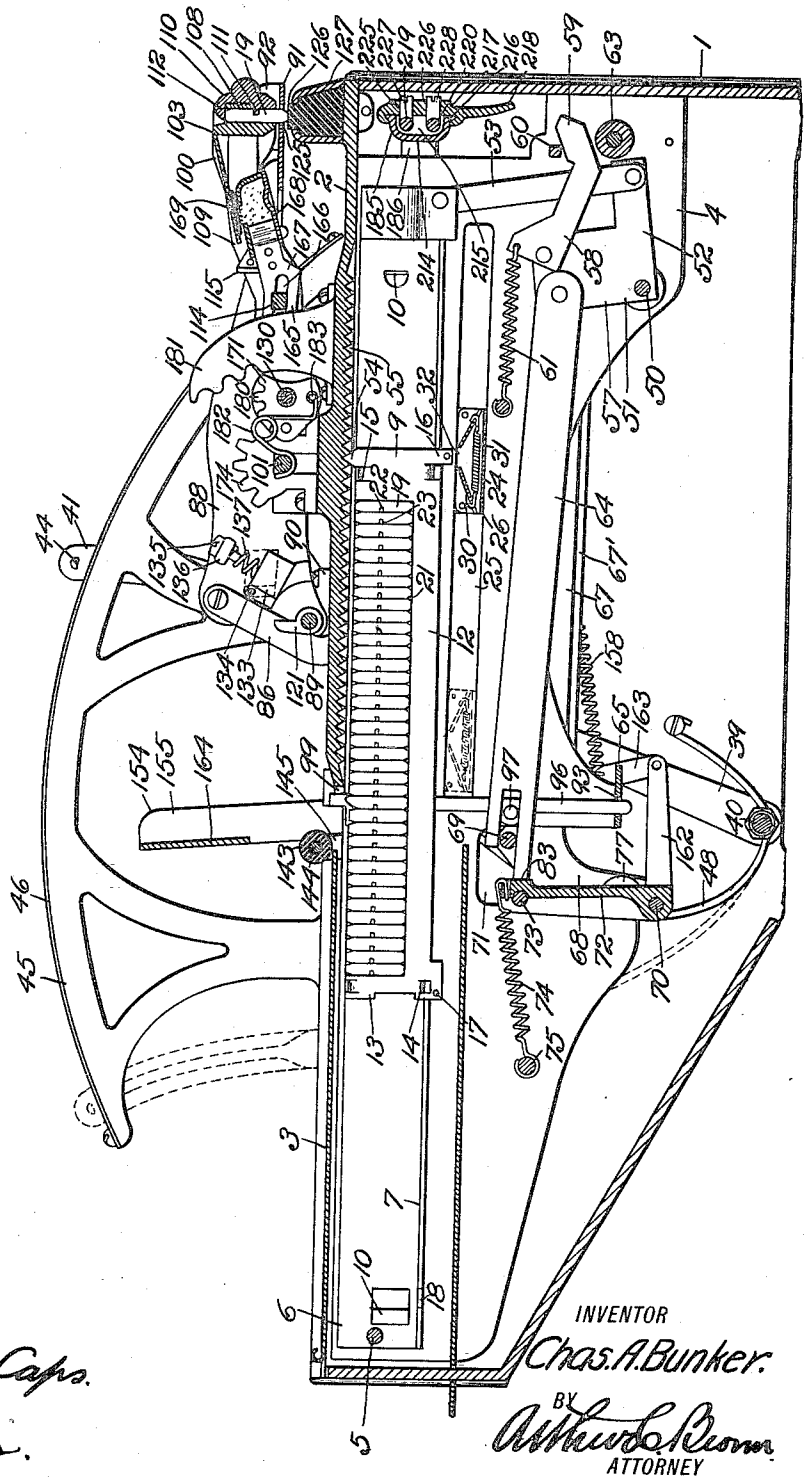
APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 6.

Fig. VI.



WITNESSES:

Arthur W. Capps.

L. E. Coats.

INVENTOR

Chas. A. Bunker.

BY

Arthur L. Brown

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 7.

Fig. VII.

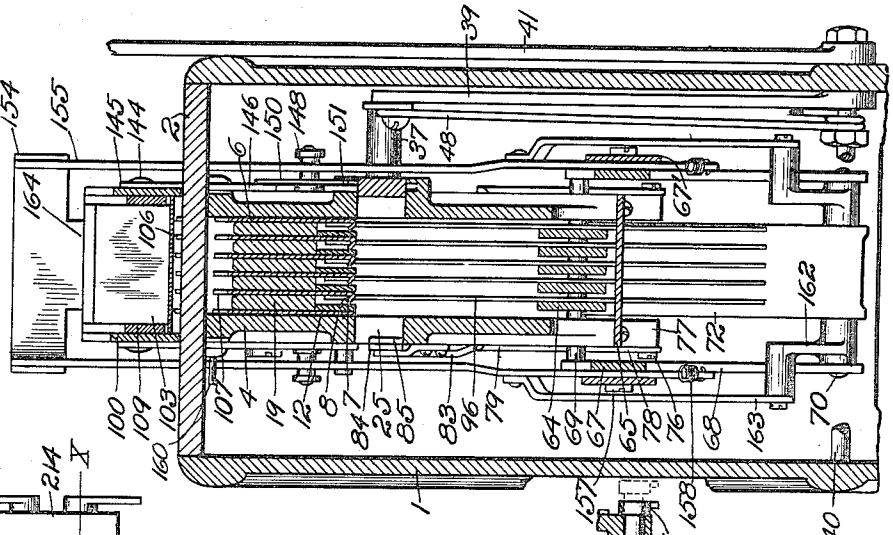


Fig. IX.

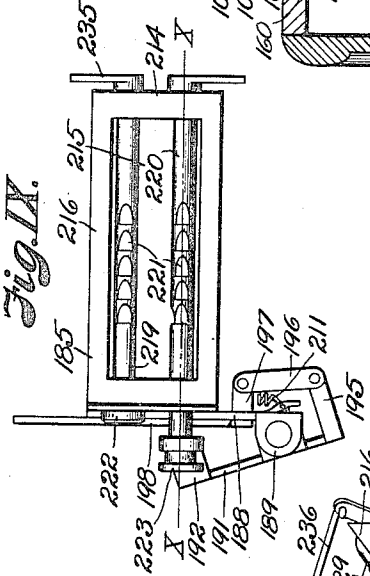


Fig. X.

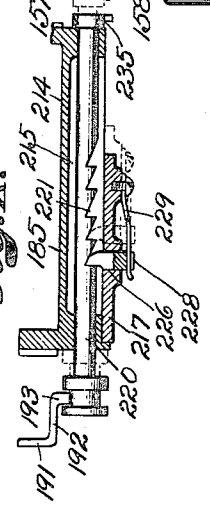
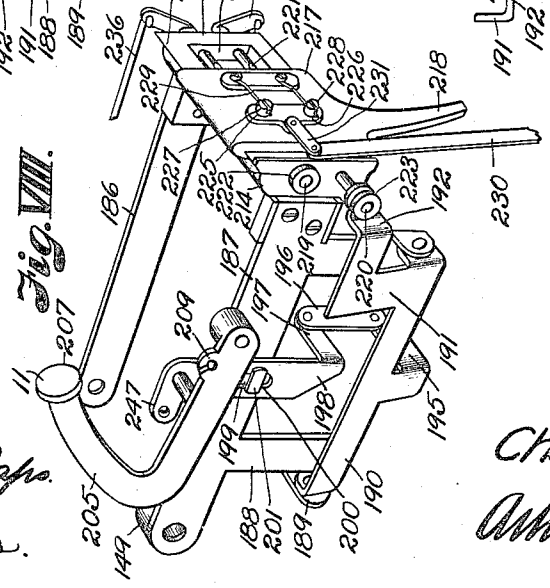


Fig. VIII.



WITNESSES:

Arthur W. Capp.

L. E. Coats.

INVENTOR

Chas. A. Bunker.

By Arthur C. Brown

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 8.

Fig. XV.

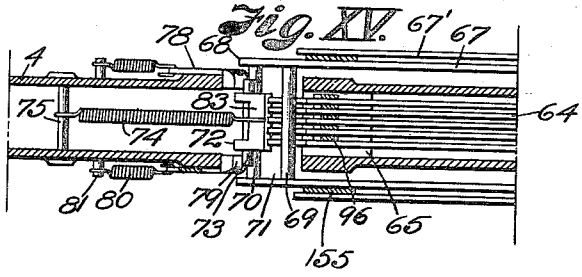


Fig. XII.

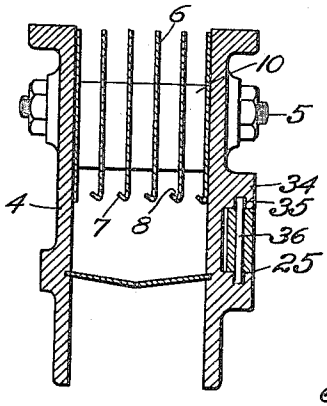


Fig. XIV.

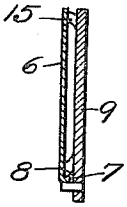


Fig. XIII.

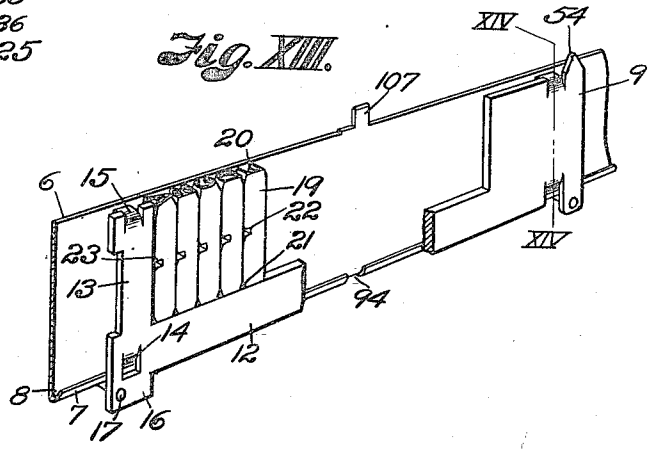
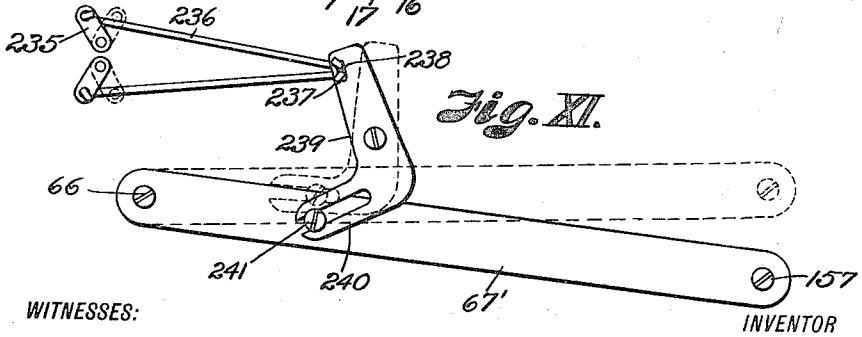


Fig. XI.



WITNESSES:

Arthur W. Cass.

L. E. Coats.

INVENTOR

Chas. A. Bunker.

BY

Arthur C. Brown

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 9.

Fig. XVI.

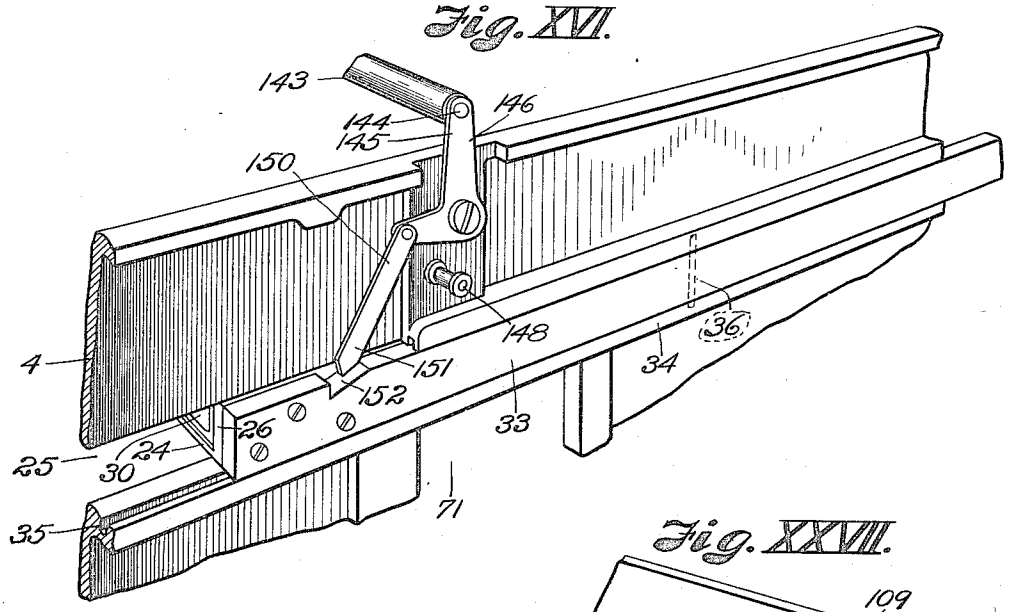


Fig. XXVIII.

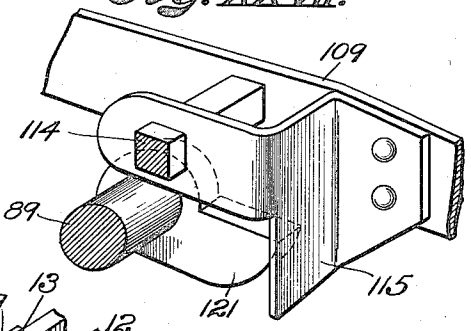
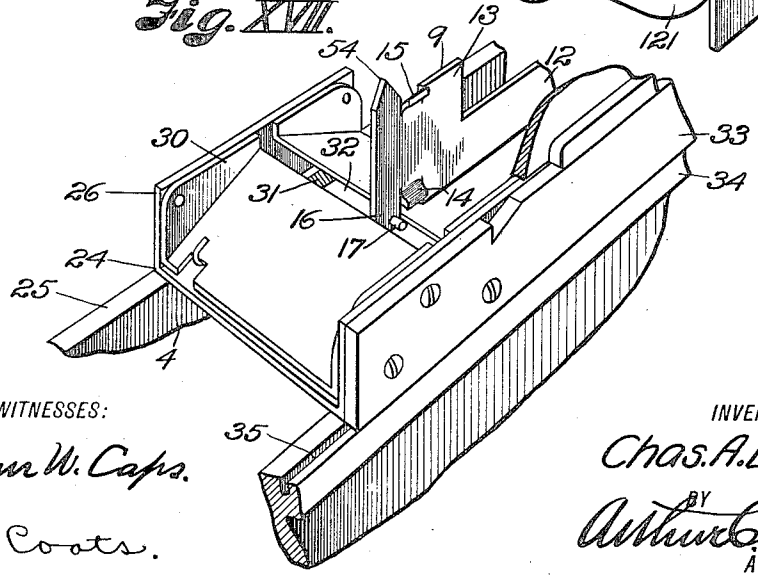


Fig. XVII.



WITNESSES:

Arthur W. Capps.

L. E. Coats.

INVENTOR

Chas. A. Bunker.

BY

Arthur C. Brown.

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 10.

Fig. XVIII.

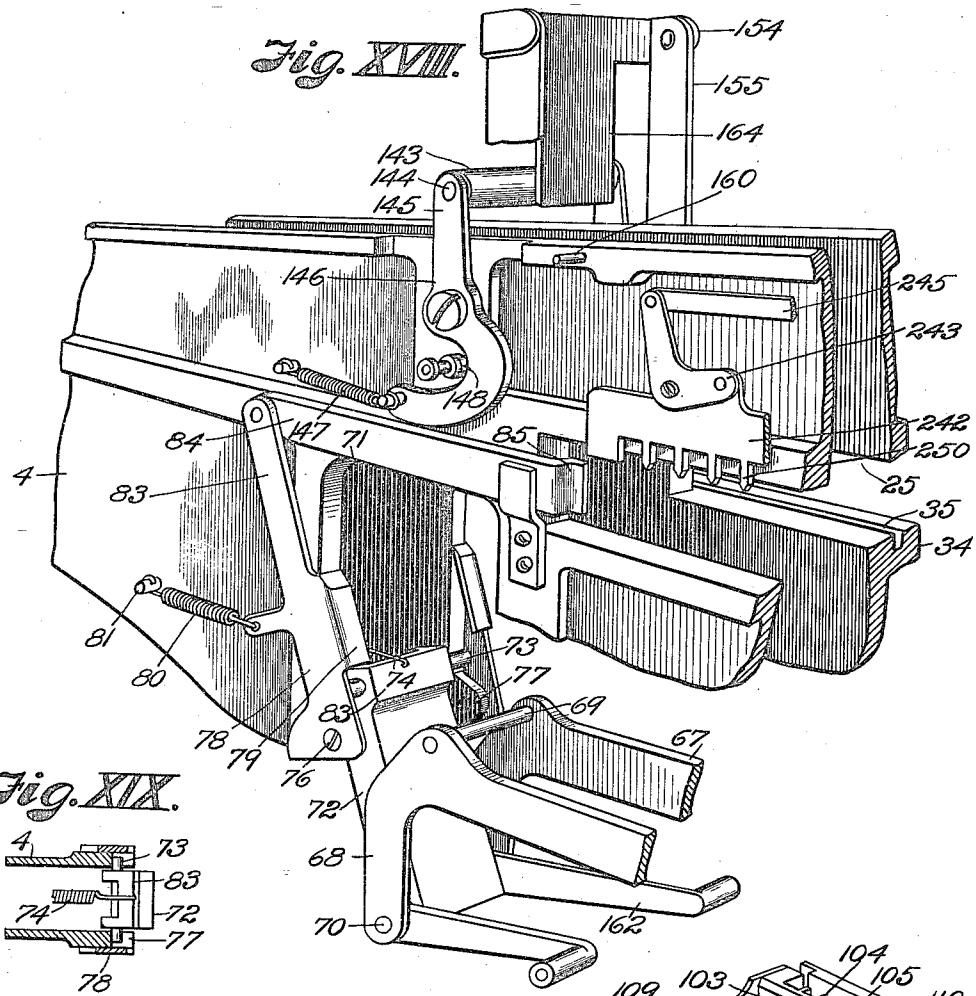
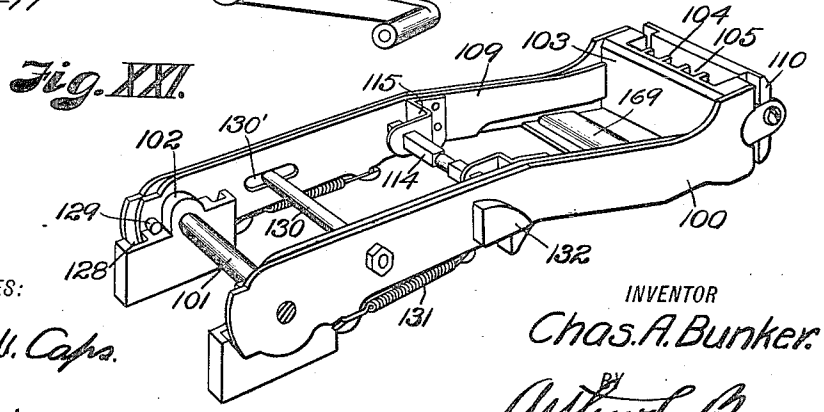


Fig. XIX.

Fig. XXI.



WITNESSES:

Arthur W. Capps.

L. E. Coates.

INVENTOR

Chas. A. Bunker.

BY

Arthur L. Brown

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 11.

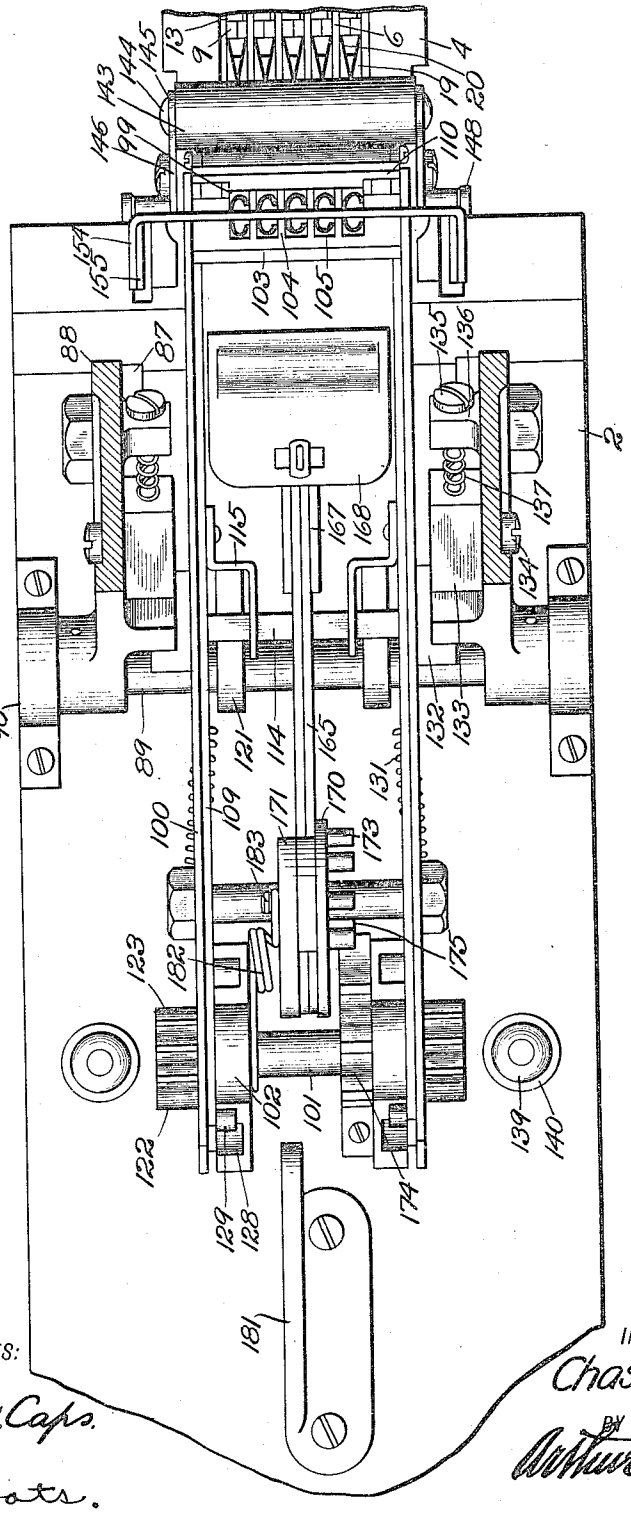


Fig. XX.

WITNESSES:

Arthur W. Capps.

L. E. Coats.

INVENTOR

Chas. A. Bunker.

BY

Arthur L. Brown

ATTORNEY

C. A. BUNKER.

LAUNDRY MARKING MACHINE.

APPLICATION FILED JULY 21, 1913.

1,127,728.

Patented Feb. 9, 1915.

12 SHEETS—SHEET 12.

Fig. XXIII.

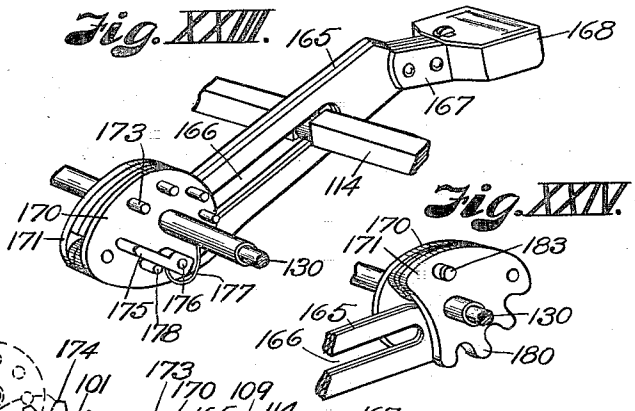


Fig. XXIV.

Fig. XXII.

Fig. XXV.

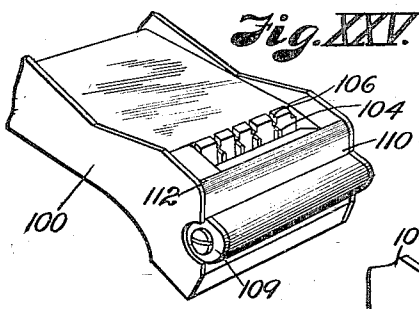


Fig. XXVI.

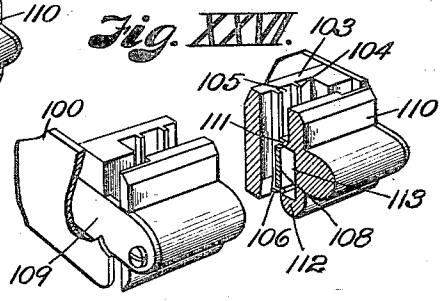
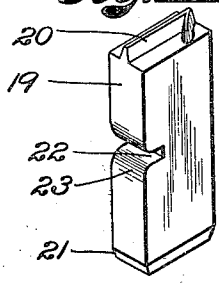


Fig. XXVIII.



WITNESSES:

Arthur W. Capes.

L. E. Coates.

INVENTOR

Chas. A. Bunker.

BY

Arthur C. Brown

ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES A. BUNKER, OF KANSAS CITY, MISSOURI, ASSIGNOR TO THE TRIUMPH MANUFACTURING COMPANY, OF KANSAS CITY, MISSOURI, A CORPORATION OF MISSOURI.

LAUNDRY-MARKING MACHINE.

1,127,728. Specification of Letters Patent. Patented Feb. 9, 1915.

Application filed July 21, 1913. Serial No. 780,209.

To all whom it may concern:

Be it known that I, CHARLES A. BUNKER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Laundry-Marking Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a type setting and distributing apparatus, and more particularly to an apparatus of that character for marking laundry, or the like, wherein a number of type members are assembled in a carriage and struck against the article to be marked.

In carrying out my invention I provide an apparatus comprising a number of independently mounted type racks having carriages for containing fonts of type and adapted for movement to bring any particular type character in the font to a feeding position from which the desired character may be transferred to a carriage to be inked and stamped against the article to be marked. In order to simplify the construction I provide a common trip member for releasing each of the independently operable type racks, and provide the racks with trip mechanism whereby they are adapted for automatic actuation in proper sequence, so that successive like operations of the trip member will release the racks in proper sequence. In other words, an initial actuation of the trip member will release the first rack, a subsequent operation the second, etc.; resetting of the racks returning the trip mechanism to its original condition, so that the sequence starts afresh when new matter is to be set.

The invention also comprises mechanism for distributing type from the carriage to the racks, comprising, in a general way, and in combination with means for holding the racks after the type has been set in the carriage, means for pushing type members out of the carriage and back into their proper places in the racks.

The invention also consists in various details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:—

Figure I is a perspective view of a laundry marking machine constructed in accordance with my invention. Fig. II is an elevation of the right hand side of the machine, the casing being in section to show the interior mechanism. Fig. III is a similar view from the left hand side of the machine. Fig. IV is a plan view of the machine, parts being cut away and others removed. Fig. V is a longitudinal section on the line V—V, Fig. IV, illustrating the initial position of the levers and parts. Fig. VI is a section on the line V—V, Fig. IV, showing the parts in printing position. Fig. VII is a vertical cross-section on the line VII—VII, Fig. III. Fig. VIII is a perspective view of the single key mechanism for tripping the type racks. Fig. IX is an enlarged front elevation of a portion of the same. Fig. X is a longitudinal section on the line X—X, Fig. IX. Fig. XI is an elevation of the levers for actuating the single key ratchet, the releasing position being shown in dotted lines. Fig. XII is a vertical section of the type racks on the line XII—XII, Fig. III. Fig. XIII is a perspective view of a portion of a type rack and carriage. Fig. XIV is a section of same on the line XIV—XIV, Fig. XIII. Fig. XV is a plan section on the line XV—XV, Fig. III, showing the mechanism for returning the type elevators to initial position. Fig. XVI is a perspective view of the slide for controlling the type racks, and their locking mechanism. Fig. XVII is a perspective view of the rack setting slide. Fig. XVIII is a detail perspective of the type distributer and carriage resetting parts. Fig. XIX is a horizontal section of a portion of the same on the line XIX—XIX, Fig. III. Fig. XX is a plan view of the printing mechanism and inker. Fig. XXI is a detail perspective of the type carriage. Fig. XXII is a longitudinal section of the printing mechanism showing the type carriage and inker, the action of the inking device being shown in dotted lines. Fig. XXIII is a perspective view of the cam member for actuating the inker. Fig. XXIV is an opposite perspective view of the inker cam and arm, parts being broken away for better illustration. Fig. XXV is

a perspective view of the type carriage clamp in closed position. Fig. XXVI is a similar view of same in open position. Fig. XXVII is a perspective view of one of the dogs for stopping the type carriage lever in set position. Fig. XXVIII is a detail perspective of one of the type members.

Referring more in detail to the parts:—1 designates the casing of the machine, which may be of any desired shape and size and has a top plate 2 extending over its forward portion, the rear of the casing being provided with a removable cover 3 through which access may be had to the type racks. Suspended from the top plate, and extending longitudinally within the casing, are vertically disposed plates 4 upon which most of the operative parts of the machine are mounted.

Pivotally mounted on a rod 5, which is carried by and extends between plates 4 at the rear of the machine are frames 6, corresponding in number to the fonts of type with which the machine is equipped, and having up-turned flanges 7 (Fig. XII) at their lower edges, forming track grooves 8 within which the type racks 9 are adapted for longitudinal travel independently of the pivotal movement of the frames. Each frame has a laterally turned ear 10 at each end for spacing it from an adjacent frame and stopping its type rack, and each is connected, by independent mechanism (presently described) with a common trip lever 11, whereby the frames are released, so that they may be automatically lifted to a position from which the type may be moved from the racks to a carriage.

Each of racks 9 comprises a rail 12 (Fig. XIII) having upturned ends 13, provided with legs 14 which project into the track grooves 8 of the frames 6 to slidably support their rack, and with laterally turned ears 15 which bear against the upper portion of the supporting frame to space the rack therefrom; each end of the rack being also provided with a depending ear 16, having a pin 17 projected beneath the frame and adapted to slide therealong. It is apparent that the type racks are thus slidable longitudinally on the frames, but are prevented from lateral or vertical movement independently thereof.

In order to assemble the above named parts, I provide the frame flanges 7 with slots 18 through which the rack legs 14 may be inserted.

Mounted on end and in alphabetical or numerical order in each rack 9 is a font of rectangular type members 19, each having a different character, 20, on one end, and having the edges of the other end beveled, as at 21, the front edge of each type member having a transverse groove 22 provided with the curved edges 23.

In order to move the type racks longitudinally to bring the proper type into position for feeding into the carriage, I provide a slide 24 (Fig. XVII) which is adapted for longitudinal travel in grooves 25 in the plates 4, and comprises a U-shaped member 26 having its sides located within the grooves. Pivotally mounted on the sides 26 are trap plates 30 which extend upwardly and inwardly toward the center of the slide and are held in their inclined position by a spring 31 which engages the lower edge of each trap plate and holds the lower edges thereof in contact with the bottom of the slide, in which position the upper edges are spaced to form a mouth 32 into which the depending ear 16 of each of the type racks is adapted to project, so that, when it is in place, movement of the slide in either direction will carry the rack therewith.

Fixed to one side of the slide 24 is a bar 33 which is adapted for travel between the spaced shelves 34 that project laterally from one of the plates 4 and have track grooves 35, within which pins 36 on the bar are adapted to travel to retain the bar between the shelves while permitting free longitudinal movement thereof.

Projecting laterally from the rear end of bar 33 is a stub shaft 37 (Fig. II) and pivotally mounted on shaft 37 is a link 38, which is connected with an arm 39 on a shaft 40 that is journaled in bearings in the lower portion of the casing, and projects from one side thereof, and has a hand lever 41 keyed thereto and extended along one side of the casing. The lever 41 has a handle 43 at its upper extremity and has a laterally projecting finger 44 overlying an arch 45, which rises from the casing and carries a strip 46 bearing characters 47 that correspond with the characters in the fonts of type, the slide 24 and its connections with the handle lever being such that when the finger 44 overlies a particular character on the arch, corresponding type members in the racks will be in a feeding position. The link 38 carries a spring 48 which is anchored to the side of the casing and is adapted for automatically throwing the slide 24 and handle lever 41 to the rearward limit of their travel when all of the type racks are released from the slide, in order that a single forward movement of the handle may cause the slide to pick up all of the racks, as will presently be more fully described.

The type rack frames are normally inclined downwardly at the front of the apparatus, but when a type member is to be transferred from its rack to the carriage the frame is swung upwardly to release the particular rack in which the desired character is located from the setting slide and bring the type in the rack into feeding position, the movement of all of the frames being

effected from a common setting lever and from like mechanisms, one of which will be described in detail, with the understanding that such description relates equally to all.

Pivotally mounted on a rod 50 that is carried by and extends between the side plates 4, is a right-angled lever 51, one arm, 52, of which extends forwardly and is pivotally connected with the forward end of frame 6 by a link 53 so that when the forward end of the right-angled lever is raised, the type frame connected therewith will be lifted, and vice versa, the upward movement of the frame being sufficient to release the ear 16 of the type rack from the slide 24 and to bring a tooth 54 on the upper end of the rack into any one of a plurality of sockets 55 corresponding in number to the type in the rack, and being beveled in order to automatically position the rack, so that the type characters will fit properly beneath the feeding port in the top of the apparatus. The rear arm 57 of the lever 51 extends upwardly and has a forwardly directed latch 58 pivotally connected therewith, the front end of the latch being provided with a head 59, which projects beneath a cross-bar 60 that is carried by and extends between the side plates 4 and is held against the bar by a spring 61 which is connected with the base of the latch and tends to yieldingly lift the head 59. The upper edge of the head 59 is beveled outwardly in order that it may slide along the bar, and the lower edge thereof is parallel with the upper edge in order that the head may travel snugly but smoothly between the bar and a buffer 63 which is carried by the side plates 4 and further serves as a stop for the right-angled levers 51.

Pivotally connected with the rear arm 57 of the right-angled lever 51 are bars 64, which extend rearwardly beneath the type frames and have bifurcated rear ends adapted for support on a plate 65, which is secured to and extends between the side plates 4, the lower leg of the bifurcated bar being longer than the upper end, for a purpose presently set forth.

Pivotally mounted on studs 66 at the front of the apparatus, and extending rearwardly therefrom at the outside of plates 4, are levers 67 and bars 67′ the former having their rear ends turned downwardly adjacent the ends of the bars 64 to form the heads 68, the upper ends of which are connected by a rod 69 and the lower ends thereof by a rod 70, the rod 69 being extended through an inverted U-shaped opening 71 in the side plates 4 and across the projecting leg of the bar 64.

Pivotally mounted on the rod 70 is a rocker bed 72 (Fig. XVIII) having pins 73 projecting laterally therefrom and adapted for engagement with the forwardly facing edges of the recessed part 71 of the plates 4, a spring 74 being connected with the free end of the rocker bed and with a rod 75 carried by plates 4 rearwardly of the opening 71, so that such free end is yieldingly tensioned backwardly and the pins 73 contact with the edges of the recess.

Pivotally mounted on pins 76 on ears 77, which project forwardly from the rear edges of the recessed portions of the plates 4, are arms 78, each of which has a lip 79 overlying the edge of the recessed portion and held yieldingly thereagainst by a spring 80 which connects the arm with a pin 81 on the corresponding plate 4, the forward projection of the ears 77 resulting in an inclined position of each lip 79, so that the upper edge only of the lip contacts the edge of the plate 4, to provide a mouth at the lower end of the lip into which the pin 73 on the rocker bed may pass on the upward travel of the bed, the upper ends of the lips being also beveled so that after the rocker bed pins have passed up beneath the ears, they will be conducted over the outer faces of the lips on downward travel of the bed, and thereby force the bed forwardly, so that the head 82 on the loose end of the bed is forced into contact with the ends of the long legs on the bars 64, to move said bars forwardly and reset the latches 58, or as many of them as have been tripped. One of the arms 78 is provided with an extension 83 which is pivotally connected with a forwardly directed slide arm 84, having an inwardly offset tip 85 projected into the groove 25 wherein the type carriage slide is adapted for travel, in order to push the slide backwardly when the latter is at the rearward limit of its travel, and under conditions of operation which will be presently described.

Pivotally mounted between the levers 67 and bars 67′ are levers 86 (Fig. II) which extend upwardly through slots 87 in the cover 2, and are pivotally connected with an operating lever arm 88 which is rigidly fixed on a shaft 89 that is journaled in bearings 90 on the top of the apparatus, and is provided with a head 91 having finger holds 92 by which the arm may be manipulated, it being apparent that when the lever arm is revolved to bring the head 91 toward the top plate 2 the levers 67 and bars 67′ will be raised, and that the raising of the levers 67 will lift the rocker bed 72. It is also apparent that when one of the latches 58 has been released to allow a particular type frame to pass to discharging position, its bar 64 is projected backwardly until the short leg thereof overlies the rod 69 on the levers 67 so that when the levers 67 are raised, as described, the bars 64 will be lifted therewith.

Extending transversely across the apparatus between the plates 4, and slidably mounted in apertures 93 in the plates 65,

and in apertures 94 (Fig. XIII) in flanges 7 of the type rack frames, are push bars 96, each of which has a laterally turned boss 97 projected between the legs of the bifurcated end of an individual bar 74 and adapted for free movement therein, so that when the bar 64 is lifted by the rod 69, as heretofore described, the push bar will be raised to engage one of the type members in a corresponding rack and push same through a feeding port 99 in the top of the casing, and into a type carriage, which will presently be described.

The type carriage and printing mechanism, which I prefer to employ as a part of the apparatus, consists of a frame 100 comprising spaced arms which are rigidly mounted on a shaft 101 which is journaled in bearings 102 on the top plate 2. Fixed to and extending between the ends of the frame arms is a block 103 having forwardly projecting ribs 104 forming compartments 105 over the type racks in line with the port 99 through which type is fed over the racks 6, the head having grooves 106 in its lower edge in line with the ribs 104 into which lips 107 (Fig. XIII) on the type rack frames are adapted to project to center the frames so that the type may be properly projected through the feed port, the lower edge of the block 103 being beveled to assist in directing the type members to the carriage.

Fixed to the block 103 and extending thereacross in front of the compartments 105 is a bar 108 for holding the type members loosely within the compartments after the members have been projected thereinto and prior to the closing of the carriage clamp.

The clamp for holding the type members in the carriage comprises slide bars 109 which are adapted for longitudinal travel along the frame arms 100 and carry a plate 110 having a rib 111 extending longitudinally along its inner face and adapted for projection into the groove 22 of the type members, and having a bed 112 on its lower edge adapted to pass beneath the bottoms of said members and support same within the carriage, the body of the plate having a recess 113 adapted for receiving the cross-bar 108 when the plate is moved toward the carriage block. The arms 109 are provided with a cross bar 114 and with brackets 115 (Fig. XX) for engagement by cams 121 that are fixed on the shaft 89 which carries the main lever arm 88, the forward faces of the cams being rounded and the cams being so arranged on the shaft that as the lever arm is raised and the carriage brought over the type feeding port the rounded faces will contact the brackets 115 to move the carriage clamp forwardly to open the carriage for the reception of type, and that as the lever arm is lowered the cams will engage the cross-bar 114 and move the clamp back to grip the type within the carriage.

Rigidly secured to the end of shaft 101 are disks 122 having peripheral teeth 123 adapted for engagement by racks 124 on the main lever arm 88 so that as said lever arm is turned on its pivotal mounting the racks will engage the tooth disks and cause the shaft 101 to revolve to carry the carriage frame about through the arc of a circle, the lever arm and type carriage being so arranged that the carriage swings between the arms of the lever, and so that type carried in the carriage may be projected through a slot 125 in the head 91 that is carried by the lever arms, a cushion 126 being mounted on a boss 127 at the front of the frame in position for receiving the impact of the type, and upon which articles to be marked are placed prior to the operation of the type carriage.

In order to hold the clamp 110 to the carriage block 103, while the carriage is moving through its printing swing, I provide the bearings 102 with arcuatile slots 128, and the arms 109 with pins 129 which are adapted for travel through said slots while the carriage frame is traveling through its printing swing and thereby positively holding the clamp to the carriage head.

In order to stiffen the carriage frame I provide same with a cross bar 130 which is rigidly fixed to the arms 100 and projects through slots 130′ in the clamp arms 109 so as not to interfere with the longitudinal sliding movement of the clamp arms, and in order to hold the clamp to the carriage before the pins reach their position in the slots I provide springs 131, which are connected with the arms 100 and with the arms 109 and serve to yieldingly hold the clamp against the carriage block prior to the positively locking actuation of the pins 109 in the bearing slots.

In order that the carriage may center over the type feeding port I provide the arms 100 with laterally projecting bosses 132 which are adapted for wiping engagement with blocks 133, that are pivotally mounted on pins 134 carried by the main lever arms and adapted for adjustment by the screws 135 that project through brackets 136 on said lever arms and carry springs 137 whereby the brackets 133 are held yieldingly in adjusted position.

In order to cushion the printing lever arm when it is lowered at each printing operation, I provide plungers 139 which are adapted for vertical movement in wells 140 that are carried on the top plate of the apparatus and work against springs (not shown) contained within said wells, the lever arms being provided with buttons 141 which are adapted to contact the upper ends of the plungers at about the time the lever

arm reaches its lowermost position, the plungers also serving to throw the printing arm back after each marking operation and thereby render the machine to some extent automatic.

In order to cushion the type carriage when it is thrown back into position over the type feeding port, and thereby obviate damage to the carriage or the frame parts, I provide a buffer comprising a fiber, or like roller, 143, having a shaft 144 carried by arms 145 on bell crank levers 146, which are pivotally mounted on the side plates 2, one arm of the lever being connected with a spring 147 whereby the buffer roller is yieldingly projected toward position for engagement by the descending end of the type carriage clamp, and being adapted for engagement by a stop 148 whereby the bell crank lever is stopped when the roller is in proper position. The other arm of the bell crank lever (Fig. II) has a latch 150 pivotally mounted thereon and provided with a pointed end 151 which is adapted to drop into a notch 152 in the bar 33 when said bar is at the outer limit of its travel, in order that the buffer may be manually moved back out of the path of the type carriage when it is desired to lower the carriage into receiving position without using the force necessary to drive the buffer out of the carriage path.

In order to distribute the type members from the carriage back to the racks after the printing operation, I provide an ejector 154 comprising an inverted U-shaped member, the sides 155 of which lie along opposite sides of the plate 4 with their lower ends projected between the levers 67 and bars 67′ said lower ends of the ejector legs being provided with slots 156 through which pins 157 that are carried by the levers 67 and bars 67′ are projected, so that the ejector has limited vertical play relative to the levers 67 and bars 67′ and may pivot on the pin 157. Springs 158 are connected with the lower ends of the ejector legs and with the bars 67′ and tend to throw the upper end of the ejector to the back limit of its travel where it will be clear of the type carriage, so that the latter may swing through its pivotal arc without interference from the ejector plate, the backward pivotal movement of the ejector throwing notched parts 159 of the ejector legs against the stop 148 for the buffer 143, and a step 160 that projects from the side plate 4 at the opposite side of the frame, to provide for the backward pivotal movement of the ejector and limit the rearward travel thereof. In order to bring the ejector back to a perpendicular position over the type carriage, I provide the rocker bed 72 with arms 162 which are pivotally connected with the ejector legs through links 163, so that when the levers 67 are lowered and the pins 73 moved over the lips 79 the links serve to pull the ejector forwardly and downwardly along the slots 156 so that an ejector plate 164 will engage the ends of the type members in the type carriage, push same back to their proper positions in the racks, and quickly return a short distance as the pins 73 snap off the lips 79, the lowering of the bars 64 and levers 67 serving to remove the push bars 96 as the ejector is lowered, to make way for the type members, the push bars having been retained in the spaces in the type racks left by the type members when the latter are moved into the carriage, in order to retain the proper spaces for the type members when the latter are moved back from the carriage.

Operating synchronously with, and forming part of the type carriage mechanism, is an inking device comprising a body bar 165 which lies between the arms of the type carriage frame and has a longitudinal slot 166 through which the cross bar 114 is projected, so that the body bar of the inking device may slide on the cross-bar 114. The outer end of the body bar has an offset shank 167 upon which a pad 168 is rigidly mounted and adapted, through the mechanism presently described, for projection to an inking contact with the faces of the type members carried by the carriage and for retreat back of the carriage head to contact with a pad 169, which is adapted for covering the inking pad when the machine is at rest, to prevent same from becoming soiled. The inner end of the body bar 165 is also offset and projected between cam plates 170—171 on the rod 130 that is carried by the carriage arms 100. The cam plate 170 has pins 173 projected laterally therefrom adjacent one edge and adapted for meshing with a circumferential rack 174 on the upper edge of the bearing 102, within which the main carriage shaft 101 is journaled, the cams and pins being so arranged, however, that when the inking pad is idle the cam's pins would miss the rack teeth unless the cam were pivoted on its shaft in order to throw the teeth into mesh. To accomplish the initial pivotal movement of the cam, I provide the plate 170 with a pawl 175 which is pivotally mounted on a pin 176 which projects laterally from the cam plate, and has a spring 177 whereby it is yieldingly tensioned outwardly against a stop pin 178. When the pawl is idle its end rests adjacent one end of the series of pins 173, so that when the carriage frame revolves, the end of the pawl will contact the end tooth in the rack 174 and throw the cam about on its pivotal mounting to bring the succeeding teeth into mesh with the rack teeth. As the body bar 165 of the inking device is pivoted at the end of the cam which is projected toward the rack, when the parts are at rest, the piv-

otal movement of the cam will throw the body bar, and the pad which is carried thereby, outwardly, lifting the pad from its cushion and eventually bringing the face of the pad into contact with the faces of the character members carried by the carriage. The pivotal movement of the cam, brought about through the meshing of the rack teeth with the cam pins, produces the inking travel, the return travel of the inker to its rest position being induced by the opposite cam plate 171. The plate 171 has circumferential rack teeth 180 arranged oppositely to the pins on plate 170 and adapted for engaging a segmental rack 181 which is supported on the top of the casing, immediately following the forwarding operation of the inker, contact between the racks 180 and 181 being made before breaking of the contact between pins 173 and 174, so that the cam member is under a constant positive actuation by the oppositely arranged racks during the entire forward travel of the inker. As the inker reaches its forward limit, and the rack 180 leaves its contact with the rack 181, the cam is thrown back to its original position by a spring 182 which is mounted on the shaft 101 and on a pin 183 that projects from the face of the cam plate 171, the returning of the cam to its original position throwing the pins 173 out of the path of the rack 174, so that when the type carriage is turned back to its first position the pins will not contact with the rack, and the inking pad will rest in its idle position against the pad 169. The spring 182 also serves to throw the cam, immediately upon release of the rack 180 from the stationary rack 181, so that the inker is thrown quickly away from the type carriage, and danger of injury to the inker or carriage, on account of interference by the pad, is obviated. By providing the V spring illustrated in the drawings it is apparent that the spring will act to retain the cam in idle position at both limits of its travel, or whenever the cam is free from the racks, so that it is necessary for some cam part to positively engage one of the rack parts in order to produce operation of the inker.

The single key mechanism for successively releasing the independent type racks comprises a carriage 185 having supporting bars 186—187 by which it is pivotally mounted on the side plates 4 so that the carriage may pivot vertically in front of the type rack frame. Depending from the bar 187 are arms 188, each having ears 189 at their lower ends. Pivotally connected with the ears 189 is a trip lever 190 having an upturned arm 191 at its forward end which is in turn provided with an inturned ear 192 having a forwardly directed cam 193. Projecting inwardly from about the center of the trip lever 190 is an arm 195, and pivotally connected with the inner end of said arm is a link 196 which extends upwardly and is pivotally connected with the inturned arm 197 of a vertical slide 198. The slide 198 has a slotted part 199 which is adapted for guided travel over a pin 200, having a flat head 201 whereby the slide is held to the main carriage bar 187 while allowing free sliding movement thereof. The upper end of the slide is connected with the trip lever 11 which is pivotally mounted on a pin 203 carried by the adjacent side plate 4, and has a finger 205 projected through a slot 206 in the cover 2, and provided with a button 207 whereby the lever may be lowered against the tension of a spring 208, having its respective ends connected with a hook 209 on the trip lever and a hook 210 depending from the under face of the cover 2. The trip carriage is yieldingly supported in initial or upper position by a spring 211 which is connected with the lower end of the forward depending arm 188 and with a hook 212 on the under face of the top plate 2, so that the spring normally holds the carriage at the upper limit of its travel, but yields to allow the carriage to be forced downwardly on its pivotal mounting when the top of the slotted part 199 of the bar 198 engages the pin 200 when the trip lever is lowered.

Fixed on the forward ends of the bars 186—187 is a head 214 having a depressed body portion forming a chamber 215 and upper and lower edge rails 216. Slidably mounted on the rails 216 is an apron 217 having a depending push bar 218 located above the heads 59 of the latches 58, the end of the push bar being reduced so that when the trip carriage is lowered the bar will contact the particular latch which it overhangs at the time of the lowering of the trip carriage without touching or interfering with any of the other latches, in order to insure the release of but a single type rack at any one time. Journaled in the ends of the head 214, and extending through the chamber 215, are pins 219—220; the latter being adapted for longitudinal sliding movement in its bearings, and the central portion of each being provided with notches 221 on its outer face. One end of the rod 219 has collar 222 which holds it against longitudinal movement in its bearings, and the corresponding end of the rod 220 is provided with a divided collar 223, the members of which lie on opposite sides of the cam 193 of the trip lever arm 191, so that when the trip lever is rocked the rod 220 will be moved longitudinally within its bearings in the head 214. The apron 217 has apertures 225—226 in line with the rods 219—220 and pawls 227—228 are slidably mounted in said apertures and held in yielding engagement with the notched parts of said rods by springs 229, so that when the lower rod 220 is pushed laterally, upon depression

of the single trip lever, the pawl 228 will be engaged by one of the ratchet teeth 221 on the rod 220 and the apron moved one space along the carriage head. As the apron is moved by the pawl and notch combination, the pawl 227 slides over the notched part of the upper pin 219 and holds the apron against backward movement, which is induced by a lever 230, connected with the apron by a link 231, and pivotally mounted at 232 on the adjacent side plate 4, a spring 233 being connected with the lower end of the lever and with a part of the casing, so that there is always a tension tending to return the apron to its initial position.

Fixed on one end of each of the rods 219—220 is a lever 235, the outer end of which connects with a rod 236 having a hooked end 237 engaged in a slot 238 in a bell crank lever 239 that is pivotally mounted on one of the side plates 4. The opposite arm of the bell crank lever has a slotted bar 240 projected over a post 241 on the adjacent bar 67′ so that after type has been set in the type carriage, and the main printing lever is lowered to remove the ejector from the carriage head, upward movement of the bar 67′ will rock the bell crank lever, which in turn rocks the links 236 to revolve the pins 219—220 so that the notched parts move beneath their pawls and are released therefrom, with the result that the apron is automatically returned to its initial position, the pawls sliding over the smooth portions of the pins during the back travel of the apron.

In order to lock the trip lever mechanism and prevent the release of a type rack except when the carriage is in position to properly receive the type members, I provide a lock bar 242 which is pivotally mounted on bell crank levers 243 and provided with a spring 244 whereby it is yieldingly held in elevated position. The bell crank levers are connected by a link 245 so that actuation of one of the levers will actuate both in order that the ends of the lock bar may move evenly, and one of said levers is connected through a link 246, with an ear 247 on the trip lever arm 198, so that when the trip lever is lowered the bell cranks are rocked to lower the lock bar 242. The bar 242 is, however, provided with a laterally directed pin 248 which is adapted for engagement with an arm 249 that is pivotally mounted on the link 86 and adapted for loose travel over a sleeve 149 to which the rear end of the trip lever arm 187 is secured, when the arm is elevated by the downward actuation of the main printing lever. When the printing carriage is in receiving position over the type racks and the bar 96, and connected parts, are in their lowered positions, the arm 249 will be spaced from the lock bar so that the latter may lower and allow the trip lever and its releasing parts to operate to release the type racks successively. The lower edge of the lock bar 242 is provided with teeth 250 which are adapted for engagement with a tooth 251 on the slide 24, so that when the slide is in any of its various positions, and the lock bar is lowered, the teeth 250 will engage opposite sides of the slide teeth and hold the slide firmly in position.

In using the apparatus, presuming the parts to be constructed and assembled as described, and it is desired to mark laundry with the initials A B C, the printing lever arm 88 is moved to the vertical position (Fig. III) so that the type carriage will be over the port 99 and the ejector plate within the carriage, the carriage proper being held open by the cams 121. With the carriage in place, the pointer arm is moved over the arch until the pointer overlies the letter A. By having the pointer arm connected with the slide bar 28, as described, and by having all of the type racks connected with the slide 24 through the rocker plates, when the pointer arm is moved in either direction the slide travels relatively thereto and moves all of the type racks forwardly or back, so that when the pointer overlies an indicated character on the arch a like character in all of the type racks will be in position beneath the feeding port that underlies the carriage. When the pointer is in proper position, and the racks set as described, the trip lever 11 is pushed downwardly to release the first type rack, the releasing operation being as follows: Downward movement of the trip lever lowers the slotter arm 198 and rocks the bar 190 so that the lower sliding rod 220 moves laterally along the head 214 until the finger 218 is directly over the head of the latch 58 controlling the first type rack frame, and the pawl 227 moving over the upper rod 219 until it engages the first notch 221 therein, and the lower pawl 228 engages a corresponding notch in the lower rod 220. Continued depression of the trip lever causes the upper end of the slotted part of the bar 198 to engage the post 200, and rock the trip carriage comprising the bars 186—187 downwardly, the lowering of the trip carriage causing the finger 218 to push the latch 58 off of the bar 51 so that the spring 56 can draw the latch and the angle lever 57, on which the latch is mounted, backwardly, thereby lifting the first type frame to bring the type members in the rack carried by that frame into close relation to the feeding port. When the frame is lifted as described, the lug 16 on the rear end of the rack is lifted out of the rocker bars in the slide 24 so that particular rack is entirely free of the slide, and the point 54 at the top of the rack projects into a notch in the under face of the top cover to properly register the type mem-

ber with the feeding port. As the trip lever is moved downwardly the rack bar 242 is moved downwardly through its bell crank mounting and link connections with the slotted bar 198, so that the teeth on the rack lie at opposite sides of the tooth 251 on the slide to hold the slide steady while the type rack is being removed therefrom. As soon as pressure is removed from the trip lever the spring 212 pulls the lever back into initial position, the trip carriage returning to upper position and the lower bar moving back to the left, its notched face sliding under the lower pawl 228, the apron being held, however, in its advanced position over the first type rack latch by engagement of the upper pawl 227 with the first notch in the upper rod 221.

Having set the first type rack, the pointer arm is moved to bring the pointer over the letter B on the arch, such movement carrying all of the type racks, except the first, longitudinally until the B characters are beneath the feeding port 90. The trip lever is then again lowered with the result that the second notch of the lower rod 221 engages the lower apron pawl and moves the apron to position over the second type rack latch, and continued downward movement of the trip lever pushes the latch to release the said second type rack frame as described relative to the first frame. The second type rack frame is then released and the slide operated to bring the remaining type rack frames into position with the C characters beneath the feeding port and the push lever is again operated to release the third frame. As each of the type rack frames is thrown upwardly to its set position by elevation of the forward arm 52 of the angled lever 51, the rear arm 57 of said lever is thrown backwardly, moving the upper leg of its bifurcated rear portion over the pin 69 on the bar 64, so that when all of the characters are set the upper legs of the bifurcated parts overlie said pin. With the parts so arranged, the printing lever arm is pulled backwardly so that it lifts the bars 67 and 67′ and through them lifts the ejector frame 155 to remove the tongue 164 from the type carriage in order to make room for the type characters. Simultaneously with the lifting of the bars 67 and 67′ and the ejector frame, the pin 69 lifts the bars 64 which have the upper legs of their bifurcated portions overlying said pin, the upward movement of said bars lifting the relative push bars 96 so that the upper ends of the bars push against the lower ends of the type characters in relative racks which are located thereabove, and push said characters out of their racks into the type carriage, the upper ends of the push bars remaining in the spaces left by the ejected type members in order to prevent adjacent members from filling said space and eventually interfering with the distribution of the type back to the racks from the carriage. After the printing frame has been lowered initially, or to a sufficient extent to throw the type characters into the carriage, the cams 121 leave their holding contact with the brackets 115 on the carriage arms 100, so that the springs 131 pull the clamp inwardly to grip the type members in the carriage and project the ribs 111—112 into the grooves 21 and beneath the lower edges of the type members, so that said members are held rigidly within the type carriage, the cams coming to rest against the bar 114 to hold the clamp positively in place. Further downward movement of the printing frame brings the racks 124 into contact with the circumferential racks 122 on the shaft 101 to which the carriage frame is fixed, so that downward pressure on the printing frame will tend to revolve the shaft and the carriage frame which is fixed thereon. As the carriage frame starts to revolve, the pins that project laterally from the sides of the inking cam plate 170 are brought into proximity to the segmental rack 104 and the first teeth of said rack engages the pawl 175 and pushes the inking cam against the tension of spring 182 until the rack teeth on said plate mesh with the teeth of the segmental rack 104. When the teeth mesh, continued movement of the carriage frame causes the cam plate to revolve, and, owing to the offset arrangement of the pad arms 165, projects the pad outwardly and causes it to contact with the face of the type members that are carried by the carriage. Immediately after the inking contact the pins on plate 170 leave their contact with the segmental rack 174, and the rack 180 on the plate 170 is thrown into mesh with the internal rack 181 so that the connecting cam is positively moved backwardly to withdraw the inking pad from the face of the carriage, the connection of the cam plate with the internal rack being maintained until the plate has passed a center relative to the spring 182 when the plate leaves its contact with the internal rack and the spring acts to throw the cam plate forwardly, and thereby quickly withdraw the inking arms to their limit and insure the clearing of the pad prior to the striking contact of the type carriage. After the inking operation, downward movement of the printing frame causes the carriage frame to lower, and the type carriage is eventually brought into close proximity with the head of the printing frame, so that the exposed ends of the type members strike through the aperture 81 in the head of the frame and against an article to be marked (not shown) which has previously been placed over the cushion 126. As the printing frame is lowered, the

lugs 141 thereon come in contact with the spring plungers 140 and the plungers are lowered against the tension of their springs to cushion the printing blow, the plunger serving to automatically lift the carriage after the printing operation and thereby make the operation of the frame to some extent automatic. After each printing blow, pressure on the printing frame is released so that the plungers may throw the frame upwardly and revolve the inker backwardly to make room for the insertion of a fresh article to be marked, and so that the type may be reinked. Should the type carriage be thrown entirely over on the return travel, the carriage head will cushion against the buffer 143 to prevent its striking solidly against the top of the frame, the buffer yielding against the tension of its springs and moving on its pivotal mounting to allow the carriage to pass under the cushioning blow. The operation of the type carriage is repeated until all the laundry or other articles to be marked with the initials carried in the type carriage have been marked, after which the type is distributed from the carriage back to the racks in the following manner:

When the type is to be distributed, the type carriage is allowed to return to its initial position with sufficient force to displace the buffer, and the printing frame is pushed back to the upright position, the backward movement of the frame opening up the carriage head to free the type members, returning the bars 67 and 67′ to their initial lowered position so that the pin 69 pushes the bars 64 downwardly, withdrawing the push bars for the individual type racks, and lowering the ejector plates through the carriage head to push the type back into their racks. When the printing frame arms were lowered to feed the type members from their racks into the carriage, the rocker bed 72 was raised so that the pins 73 move up beneath the ears 79 rocking the ears forwardly so that they might pass thereabove. Upon the downward movement of the bars 64 the pins engage the forward inclined faces of said ears, and are pushed forwardly so that the head of the rocker bar engages the projecting lower legs of the bifurcated forward ends of the bars 64 to push said bars backwardly, the backward movement thereof rocking the angled levers 51, lowering the type rack frames, and resetting the latches 58. After all of the frames have been lowered to their initial position, the pointer arm is moved forwardly or back in order to bring the slide into contact with all of the depending lugs 17 on the individual type racks, the rocking plates 30 of the slide yielding downwardly to allow the lugs to pass to the holding slot, so that when the slide is again moved the racks will be carried therewith. After the type has been distributed, and the racks gathered by the slide, a new set of initials or type characters may be set up in the carriage and the marking operation just described repeated, it being apparent that there may be as many fonts of type as may be desired and that the characters may include numerals or designations other than letters of the alphabet.

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

1. A laundry marking machine comprising a type carriage, type racks adapted for independent movement toward the carriage, and a single key for controlling movement of the racks.

2. A laundry marking machine comprising a type carriage, a plurality of type racks adapted for independent movement toward the carriage, mechanism for setting the type racks, and a single key for controlling the rack actuating mechanism.

3. A laundry marking machine comprising a type carriage, a plurality of independent type racks adapted for independent movement toward the carriage, separate means for setting each of the type racks, and a single key for controlling all of the rack setting means.

4. A laundry marking machine comprising a type carriage, a plurality of independent type racks, separate means for setting each of the type racks, a single key for controlling all of the rack setting means, and mechanism for feeding type from said racks to the carriage.

5. An apparatus of the character described, comprising a type carriage, independently operable type racks, means for holding the type racks in inoperative position, yielding means for carrying the racks to feeding position when released from their holding means, means for feeding type from the racks to the carriage, and a single key for actuating the rack holding means.

6. An apparatus of the character described, comprising a type carriage, independently operable type racks, means for holding the type racks in inoperative position, yielding means for carrying the racks to feeding position when released from their holding means, means for feeding type from the racks to the carriage, a single key for actuating the rack holding means, and means for moving the carriage to printing position.

7. A laundry marking machine comprising a type carriage, a plurality of independent type racks, separate means for setting each of the type racks, a single key for controlling all of the rack setting means, means for anchoring said racks in set posi-

tion, and mechanism for feeding type from said racks to the carriage.

8. A laundry marking machine comprising a type carriage, a plurality of independent type racks, separate means for setting each of the type racks, a single key for controlling all of the rack setting means, means for centering said racks relative to the carriage, and mechanism for feeding type from the racks to the carriage.

9. An apparatus of the character described, comprising a type carriage, independently operable type racks, means for holding the type racks in inoperative position, yielding means for carrying the racks to feeding position when released from their holding means, means for feeding type from the racks to the carriage, a single key for actuating the rack holding means, means for rocking the carriage to printing position, and mechanism, operable by the rocking means, for locking the type in said carriage.

10. An apparatus of the character described, comprising a casing, having a feed port therein, a carriage adapted to seat over said port, individually operative type racks adapted for movement toward and from the port and having teeth adapted for locking engagement with said casing, means for actuating the racks, a single key for controlling the actuation of all of said racks, and means for feeding type from the racks through said port to the carriage.

11. In a laundry marking machine, a casing having a top portion provided with notches on its under face and having a feeding port, type racks pivotally mounted within the casing and having teeth adapted for projection into said notches to center type beneath the feeding port, mechanism for individually lifting said type racks to set position, and a single key lever for controlling the rack lifting mechanism.

12. A laundry marking machine comprising a type carriage, a plurality of type racks, means for locking the racks, mechanism for individually releasing said racks, a single key for controlling said mechanism, and means for feeding type from the released racks to said carriage.

13. In a laundry marking machine, a type carriage having a plurality of individual stalls, a plurality of type racks, individual devices for lifting said racks into proximity to the carriage, mechanism for individually locking said racks, a single mechanism for controlling said lifting devices, and means for moving type from the releasing racks to said carriage.

14. An apparatus of the character described, comprising a movable type rack, an angular lever pivotally mounted adjacent the rack, a link pivotally connected with one arm of said lever and with the type rack, a spring tensioning said lever in a direction to move the rack when the lever is unrestrained, means for holding said lever against the tension of said spring, and mechanism for releasing the holding means.

15. An apparatus of the character described, comprising a pivotally mounted type rack, an angular lever pivotally mounted adjacent the type rack, a link pivotally connected with one arm of said lever and with the type rack, a latch pivotally connected with the opposite arm of said lever, a spring connected with said latch and adapted for tensioning said lever in a direction to move the type rack, means for holding said latch against the tension of said spring, and means for releasing said latch.

16. In a laundry marking machine, a type carriage, a rack pivotally mounted below the carriage, a lever pivotally mounted adjacent the rack and connected therewith, a spring tensioning said lever in a direction to lift the rack when the lever is unrestrained, means for holding said lever against the tension of said spring, releasing mechanism for said holding device, and means for actuating said carriage.

17. In a laundry marking machine, a type carriage, a rack pivotally mounted below said carriage, an angular lever pivotally mounted below the rack, a link pivotally connected with one arm of said lever and with the type rack, a latch pivotally connected with the opposite arm of said lever, a spring connected with said latch and adapted for tensioning said lever in a direction to lift the type rack, means for holding said latch against the tension of said spring, and means for releasing said latch.

18. In a laundry marking machine, the combination with a plurality of pivotally mounted type racks, of a pivotally mounted angular lever for each of said racks, a link connecting each of said levers with one of the racks, a latch pivotally connected with each of said levers, a spring connected with each of said latches and tensioning its lever in a direction to lift the type racks connected therewith, means for holding said latches against the tension of their springs, a single mechanism for successively releasing said latches, and a type carriage adapted for receiving type from said racks.

19. In a laundry marking machine, a plurality of individually operative, pivotally mounted type racks, angular levers, each having pivotal mounting at its apex, a link connecting one arm of each of said levers with one of the type racks, a latch pivotally connected with the opposite arm of each of said levers and having a head on its free end provided with a rearwardly facing shoulder, a spring connected with each of said latches and adapted for rocking same and for rock-

ing the angular lever to elevate the type rack, a bar for engaging the shoulders of said latches and retaining said racks in a lowered position against the tension of said springs, and means for successively releasing said latches.

20. In a laundry marking machine, a plurality of individually operative, pivotally mounted type racks, angular levers, each having pivotal mounting at its apex, a link connecting one arm of each of said levers with one of the type racks, a latch pivotally connected with the opposite arm of each of said levers and having a head on its free end provided with a rearwardly facing shoulder, a spring connected with each of said latches and adapted for rocking same and for rocking the angular lever to elevate the type rack, a bar for engaging the shoulders of said latches and retaining said racks in a lowered position against the tension of said spring, means for successively releasing said latches, a type carriage adapted for receiving type from said racks, and means for elevating type from said racks to the carriage.

21. In a laundry marking machine, the combination with a plurality of rack frames extending longitudinally within the machine, and having upwardly curved lower edges forming troughs, of type racks extending parallel with the frames and having legs secured thereto and slidably seated in the frame troughs, a type carriage, and means for feeding type from said racks to the carriage.

22. In a laundry marking machine, the combination with a suitable casing, of type rack frames extending longitudinally within the casing, type racks extending parallel with the frames and having upturned ends, ears on the upturned ends of said racks for spacing the racks from the frames, type members seated on the edge of the rack body, and pins carried by the racks and extending beneath the frames.

23. In a laundry marking machine, the combination with a suitable casing, of type rack frames extending longitudinally within the casing and having troughed lower edges, type racks extending parallel with the frames and having upturned ends, ears on the upturned ends of said racks for spacing the racks from the frames, type members seated on the edge of the rack body and pins carried by the racks and extending beneath the frames.

24. In a laundry marking machine, the combination with a suitable casing, of type rack frames extending longitudinally within the casing and having troughed lower edges, type racks extending parallel with the frames and having upturned ends, ears on the upturned ends of said racks for spacing the racks from the frames to type members seated on the edge of the rack body and pins carried by the racks and extending beneath the frames, lips on the frames for limiting travel of the type racks, a type carriage, push bars adapted for projection between the type racks and their frames, and means for actuating said push bars.

25. In a laundry marking machine, the combination with a suitable casing, of type rack frames pivotally mounted and extended longitudinally within the casing and having troughed lower edges provided with slots, type racks extending parallel with the frames and having supporting legs adapted for sliding travel in the frame troughs, a type carriage, means for bringing the type frames and racks into proximity to the carriage, and push bars adapted for projection through the slots in the frame troughs, for the purpose set forth.

26. In a laundry marking machine, the combination with a casing having a feed opening, of a type carriage adapted to seat over the feed opening in said casing and having slots in its under face, type rack frames adapted for movement toward or from the carriage and having lips adapted for projection through the casing into the carriage slots, type members carried in the frames, mechanism for actuating said frames, and means for feeding type from the frames through the casing opening to said carriage.

27. In a laundry marking machine, the combination with a suitable casing, of type rack frames extending longitudinally within said casing having troughed lower edges provided with slots, a type rack for each frame comprising a bar extending parallel with the frame and having upturned ends provided with spacing ears whereby the rack is spaced from the frame, a type carriage located above the type racks, a push bar for each of said racks adapted for projection through the slot in the troughed lower edge of its frame, individual actuating levers for each of said push bars, and a single key lever for successively releasing said actuating mechanism.

28. In a laundry marking machine, the combination with a type carriage, of a plurality of type racks, mechanism for setting the racks, a single trip device adapted for stepped travel over parts of the setting mechanism and whereby said mechanisms are actuated successively, and means for feeding type to the racks from the carriage.

29. In a laundry marking machine, the combination with a type carriage, of a plurality of type racks, yielding means for automatically moving the racks to a set position, latches for holding said racks, a single trip device for releasing said latches, and

means for feeding type to the racks from the carriage.

30. In a laundry marking machine, a plurality of type racks, yielding means for automatically moving the racks to a set position, latches for holding said racks, a single trip device comprising a pivotally mounted carriage, an apron adapted for stepped travel on the carriage and for successively tripping latches upon successive downward movements of the trip carriage, and means for moving type from the racks.

31. In a laundry marking machine, the combination with a type carriage, of a plurality of type racks, yielding means for automatically moving the racks to a set position, latches for holding said racks, and a single trip device comprising a pivotally mounted carriage, an apron adapted for stepped travel on the carriage and for successively tripping the latches upon successive downward movements of the trip carriage, and means for feeding type to the racks from the carriage.

32. In a laundry marking machine, the combination with a type carriage, of a plurality of type racks, yielding means for automatically moving the racks to a set position, latches for holding said racks, a single trip device comprising a pivotally mounted carriage, an apron adapted for stepped travel on the carriage and for successively tripping the latches upon successive downward movements of the trip carriage, a slide for actuating the racks, and a rack bar operable from the trip carriage and adapted for locking engagement with said slide when the trip carriage is lowered.

33. In a laundry marking machine, the combination with a type carriage, of a plurality of type racks, yielding means for automatically moving the racks to a set position, latches for holding said racks, a single trip device comprising a pivotally mounted carriage, an apron adapted for stepped travel on the carriage and for successively tripping the latches upon successive downward movement of the trip carriage, a slide having a backwardly pointed tooth, and a rack bar operable from the trip carriage and having downwardly directed teeth adapted for coöperation with the slide tooth to hold the slide when the trip carriage is actuated.

34. In a laundry marking machine, the combination with a type carriage, of a plurality of type racks, yielding means for automatically moving the racks to a set position, latches for holding said racks, a single trip device comprising a pivotally mounted carriage, an apron adapted for stepped travel on the carriage and for successively tripping the latches upon successive downward movements of the trip carriage, bell crank levers operatively connected with the trip carriage, a rack bar mounted on said levers, and a slide for actuating the type racks and having a tooth adapted for coöperative locking engagement with said rack bar.

35. In a laundry marking machine, the combination with a plurality of type racks, of a type carriage adapted for receiving type from the racks, mechanism for feeding type from the racks to the carriage, a trip device for controlling the type racks, and means for locking the trip device when the carriage is out of receiving position.

36. In a laundry marking machine, the combination with a plurality of type racks, of a type carriage, mechanism for feeding type from the racks to the carriage comprising actuating levers, and a latch for each actuating mechanism, a single releasing mechanism comprising a tongue, means for moving said tongue over the latches by stepped travel, and a key for actuating said tongue.

37. In a laundry marking machine, the combination with a type carriage, a plurality of type racks, individual actuating mechanism for moving each rack into feeding relation to the carriage, each actuating mechanism comprising a latch, and a single trip mechanism comprising a notched pin adapted for revoluble, but not for longitudinal, movement, a second notched pin adapted for both revoluble and longitudinal movement, an apron slidably mounted adjacent the pins, pawls carried by the apron and adapted for engaging the notches in said pins, a tongue on said apron adapted for engaging said latches, a lever connected with the longitudinally movable pin, and a key for actuating said lever.

38. In a laundry marking machine, the combination with a type carriage, a plurality of type racks, individual actuating mechanism for bringing each rack into feeding relation to the carriage, each actuating mechanism comprising a latch, and a single releasing mechanism comprising a notched pin adapted for revoluble, but not for longitudinal, movement, a second notched pin adapted for both revoluble and longitudinal movement, an apron slidably mounted adjacent the pins, pawls carried by the apron and adapted for engaging the notches in said pins, a tongue on said apron adapted for engaging said latches, a spring pressed lever connected with said apron and yieldingly tensioning same toward initial position, a lever connected with the longitudinally movable pin, a key for actuating said lever, and means for rocking said pins to release said pawls.

39. In a laundry marking machine, the combination with a plurality of type racks, individual actuating mechanism for each of said racks, a latch for holding each actuating mechanism in initial position, a single

releasing device comprising a pivotally mounted frame, an apron slidably mounted on the frame, stepping mechanism for said apron, a lever for actuating the stepping mechanism comprising a slotted bar, and a key lever connected with the slotted bar and adapted for first actuating the stepping mechanism and afterward rocking the pivoted frame, for the purpose set forth.

40. In a laundry marking machine, the combination with a type carriage, of a plurality of type racks adapted for feeding said carriage, individual actuating mechanism for each of said racks comprising a latch, a single releasing mechanism comprising a tongue adapted for step by step movement over said latches, a lever for actuating the tongue and comprising a rockable body portion having a laterally turned part, a slotted vertical member having a link connection with the laterally turned part, a pin extending through the slot, in said vertical member for guiding and limiting the travel thereof a key lever connected with said vertical member, and a spring yieldingly tensioning the key lever toward initial position.

41. In a laundry marking machine, a type carriage, type racks, setting levers for the type racks, a tripping mechanism comprising an apron, means for stepping the apron to produce coöperation thereof with successive rack levers, means for holding the apron in its various stepped positions, and means for feeding type from the racks to said carriage.

42. In a laundry marking machine, a type carriage, type racks, setting levers for the type racks, a tripping mechanism comprising an apron, means for stepping the apron to produce coöperation thereof with successive rack levers, means for holding the apron in its various stepped positions, and means for automatically returning the apron to initial position, and means for feeding type from the racks to said carriage.

43. In a laundry marking machine, a type carriage, type racks, setting levers for the type racks and a tripping mechanism comprising an apron, means for stepping the apron to produce coöperation thereof with successive rack levers, means for holding the apron in its various stepped positions, mechanism for feeding type from the racks, and means operable from the feeding mechanism for releasing said apron.

44. In a laundry marking machine, a type carriage, type racks, setting levers for the type racks and a tripping mechanism comprising an apron, means for stepping the apron to produce coöperation thereof with successive rack levers, means for holding the apron in its various stepped positions, mechanism for feeding mechanism for releasing said apron, and means for automatically returning said apron to initial position when released from its holding means.

45. In a laundry marking machine, the combination with a suitable casing, of a type carriage, a plurality of type racks located within the casing, means for elevating the racks, latches for said elevating means, a releasing device for said latches comprising notched pins, an apron movable over said latches, means for actuating one of said pins to step the apron, push bars for feeding type from the racks to said carriage, means for lifting said push bars comprising lifting bars and operating levers, levers connecting the operating levers with said lifting bars, a bell crank lever pivoted on a stationary part of the machine and having a leg slotted below the plane of the pivotal mounting, a pin extending through said slot and fixed to one of said lifting bars, and links connecting said lever with the notched pins in the releasing mechanism, for the purpose set forth.

46. In a laundry marking machine, the combination with type racks and a type carriage, of means for feeding type from the racks to the carriage, mechanism for actuating the carriage, and an ejector connected with said mechanism and adapted for movement over and from the carriage according as said mechanism is actuated to lower and raise the carriage.

47. In a laundry marking machine, the combination with a type carriage and type racks, of means for feeding type from the racks to the carriage, mechanism for actuating the carriage, and an ejector connected with said mechanism and having a plate adapted for movement toward and into the carriage and out of and from the carriage accordingly as said mechanism is actuated to lower and raise said carriage.

48. In a laundry marking machine, the combination with a suitable case, of a type carriage movably mounted on said case, type racks located within the case, means for setting said racks, push bars adapted for feeding type from the racks to the carriage, means for actuating the push bars, and an ejector comprising a pivotally mounted lift arm having a notch therein, a pin adapted for guiding said lift arm and forming a bearing for said notch, a spring for rocking said arm on its bearing, and an ejector plate carried by said arm and adapted for projection into said carriage.

49. In a laundry marking machine, the combination with a type carriage, type racks, means for feeding type from the racks to the carriage, selective mechanism for the racks, a feeding device, a pivotally mounted bar, a lifting bar pivoted on said first named bar and having a notch in one edge thereof, a pin for guiding the lifting bar and forming a bearing for the notched

part, a spring for pressing said lift bar against said pin and for rocking said bar on its bearing, and an ejector carried by the lifting bar and adapted for projection into said carriage.

50. In a laundry marking machine, the combination with type racks, of a slide for setting said racks, push bars for feeding the type from the racks, levers for setting the racks and adapted for operative connection with the push bars, means for lifting said levers, and a push bar adapted for actuation by said levers and for moving said slide.

51. In a laundry marking machine, the combination with type racks, of push bars adapted for feeding type from racks, levers adapted for actuating the push bars, pivotally mounted inclined ears yieldingly tensioned in one direction, a head having studs adapted for upward travel beneath the ears and for downward travel thereover whereby the head is caused to engage the bar actuating levers to move said levers out of operative engagement with the bars, substantially as set forth.

52. In a laundry marking machine, type racks, push bars adapted for feeding type from the racks, levers for actuating the push bars, arms for lifting said levers, pivotally mounted inclined ears yieldingly tensioned away from the push bars, a head pivotally mounted on the lift arms and having studs adapted for upward travel from the ears and downward travel over the outer faces thereof whereby the head is adapted to engage the levers to disconnect same from the lift arms, substantially as set forth.

53. In a laundry marking machine, the combination with type racks, of push bars adapted for feeding type from the racks, levers adapted for actuating said bars, lift arms adapted for actuating said levers, pivotally mounted ears yieldingly tensioned away from the levers and yieldingly inclined downwardly and toward the levers, a head pivotally connected with the lift arms and yieldingly tensioned toward the ears, and studs on said head adapted for upward travel beneath the ears and downward travel thereover, substantially as and for the purpose set forth.

54. In a laundry marking machine, the combination with a type carriage, of a plurality of type racks, a vertically movable push bar for each of said racks, individual actuating mechanism for each of said racks, comprising a bar having a slot in one end, the lower leg of said slotted part being longer than the upper leg thereof, a pin on each push bar projected into the slot of said bars, means for rocking said bar, a latch for said bar, a lever having a rod thereon adapted for projection into the slots of said bars, an angle plate carried by said levers, a spring for tensioning said angle plate away from the levers, a guide bracket also tensioned away from said levers and adapted for receiving the angle plate thereunder, on its upward travel, and for directing said angle plate thereover, on its downward travel, and a lever for lifting said first named lever, for the purpose set forth.

55. In a laundry marking machine, the combination with a type carriage, of a plurality of type racks, a vertically movable push bar for each of said racks, individual actuating mechanism for each of said racks, comprising a bar having a slot in one end, the lower leg of said slotted part being longer than the upper leg thereof, a pin on each push bar projected into the slot of said bars, means for rocking said bar, a latch for said bar, a lever having a rod thereon adapted for projection into the slots of said bars, an angle plate tensioned away from the levers, a spring for tensioning said angle plate away from the levers, a guide bracket also tensioned away from said levers and adapted for receiving the angle plate thereunder, on its upward travel, and for directing said angle bar thereover, on its downward travel, a lever for lifting said first named lever, and a push bar connected with the angle plate and adapted for pushing said slide forwardly when the slide is at the forward limit of its travel.

56. In a laundry marking machine, the combination with type racks and means for actuating same, of type ejecting mechanism, a carriage adapted for receiving type from said racks, and having arms, a block fixed to said arms and provided with stalls, arms longitudinally slidable on the carriage arms, a front plate carried by the slidable arms and adapted for movement toward and from the fixed block, means for actuating said slidable arms, and means for revolving the carriage arms, for the purpose set forth.

57. In a laundry marking machine, a suitable casing, a type carriage, arms pivotally mounted on the casing, a carriage block fixed to said arms, bars slidably mounted on said arms, a clamp plate fixed on said bars and adapted to hold against said block, a cross-bar fixed to said slidable bars, a bracket fixed to said slidable bars and spaced from the cross-bar, a lever arm pivotally mounted on said casing, a cam fixed to said lever arm and adapted for engagement with said cross-bar when the lever arm is moved in one direction, and with the bracket when moved in the opposite direction to close and open said plate, and means for feeding type to said carriage when in its opened position.

58. In a laundry marking machine, a suitable casing, carriage arms revolubly mounted on said casing, a type carriage having a body portion fixed on said arms and comprising sliding bars having a clamp-

ing plate fixed thereto and comprising part of the carriage, a spring connecting the carriage arms and said bars and tending to close the plate on the carriage body, spaced devices on said sliding bars for engagement by a cam, a shaft revolubly mounted on said casing, a lever arm fixed on said shaft, and a cam fixed on said shaft and adapted for engaging the spaced members on said sliding bars.

59. In a laundry marking machine, the combination with type racks and means for feeding type from the racks, of a type carriage adapted for receiving type from the racks and having a pivotally mounted frame, and a normally independent actuating arm adapted for first closing the carriage and afterward pivoting the frame, for the purpose set forth.

60. In a laundry marking machine the combination with type racks and means for feeding type from the racks, of a type carriage adapted for receiving type from the racks, having a revolubly mounted frame and an actuating arm adapted for first closing the carriage and afterward pivoting the frame on its initial revoluble movement and returning the frame and opening the carriage on its backward revoluble movement.

61. In a laundry marking machine, the combination with type racks, of a pivotally mounted carriage frame and a carriage mounted on said frame and adapted for receiving type from the racks, means for feeding type from the racks to the carriage, means for actuating the carriage frame, and a buffer adapted for engagement by the carriage as it assumes its receiving position.

62. In a laundry marking machine, the combination with type racks, of a pivotally mounted carriage frame and a carriage mounted on said frame and adapted for receiving type from the racks, means for feeding type from the racks to the carriage, means for actuating the carriage frame, a buffer adapted for engagement by the carriage as it assumes its receiving position comprising levers, a roller carried by the lever and adapted for contact by the carriage, and a spring for yieldingly tensioning the buffer toward operative position.

63. In a laundry marking machine the combination with type racks, of a pivotally mounted carriage frame and a carriage mounted on said frame and adapted for receiving type from the racks, means for feeding type from the racks to the carriage, means for actuating the carriage frame, a buffer adapted for engagement by the carriage as it assumes its receiving position comprising levers, a roller carried by the lever and adapted for contact by the carriage, a spring for yieldingly tensioning the buffer toward operative position, and a stationary pin for limiting the projection of the buffer.

64. In a laundry marking machine, a suitable casing, a shaft revolubly mounted on said casing, carriage arms fixed on said shaft, a carriage carried by said arms, sliding bars carried by the arms and provided with a plate adapted for closing against the body of the carriage and having spaced members for engagement by a cam, an operating lever pivotally mounted adjacent the pivotal mounting of the carriage arms and provided with rack teeth, a toothed member fixed on said arm shaft and adapted for engagement with the rack teeth on said lever arm, and a cam fixed to the lever arm and adapted for engaging said spaced members, for the purpose set forth.

65. In a laundry marking machine, the combination with type racks and means for feeding type from the racks, journal blocks having arcuatile grooves, a carriage frame pivotally mounted on said block and having a carriage adapted for receiving type from the racks, bars slidable in the carriage frame, a clamp on said bars adapted for movement toward and from the carriage body, means for actuating the bars to close said clamp, and pins on said bars adapted for travel through the arcuatile grooves in said journal blocks to hold the clamp in closed position.

66. In a laundry marking machine, the combination with type racks and means for feeding type from the racks, of a pivotally mounted carriage frame having a carriage adapted for receiving said type, an inking mechanism mounted on the carriage frame, and means for actuating said inking mechanism to cause same to contact type in said carriage during the travel of the carriage frame.

67. In a laundry marking machine, the combination with type racks and means for feeding type from the racks, of a pivotally mounted carriage frame having a type carriage mounted thereon, a stationary rack adjacent the frame, a rack member pivotally mounted on the carriage and adapted for engaging the stationary rack, an arm pivotally connected with the frame rack and having an inking device mounted thereon, and means for guiding said arm.

68. In a laundry marking machine, a suitable casing, carriage arms revolubly mounted on said casing, means for actuating said arms, a cam revolubly mounted on said carriage arms, an inking arm connected with the cam, means on the carriage arms for guiding the inking arm, laterally projecting pins on said cam, and a rack member on the casing adapted for engaging said pins to operate the cam and extend the inking arms, for the purpose set forth.

69. In a laundry marking machine, a rev-

oluble carriage arm, a shaft carried by said arm, a cam revolubly mounted on said shaft and having laterally projected pins thereon, a pawl pivotally mounted on said cam and bearing against one of said pins, a rack member carried by the casing and adapted for engaging the end of said pawl and said pins, a slotted arm pivotally connected with said cam, a bar on said carriage arms projecting through the slot in said inking arm, and a pad carried by the inking arm and adapted for movement against the front of the type carriage while the latter is in revolution, substantially as set forth.

70. In a laundry marking machine, a suitable casing, a shaft revolubly mounted on said casing, a carriage frame fixed on said shaft, a carriage mounted on said frame, a rack member mounted on said casing, a cam revolubly mounted in said frame, a slotted bar carried by said cam, means on the carriage frame for guiding said bar, a pad carried by said bar, and pins projecting laterally from said cam and adapted for actuation by the rack member to move said pad upwardly and against the front of the carriage during the revolution of the carriage, substantially as set forth.

71. In a laundry marking machine, the combination with type racks and means for feeding type from the racks, of a type carriage frame, a pivotally mounted arm adapted for actuating said frame, and plungers adapted for receiving thrust of said arm and for partially returning said arm, substantially as set forth.

72. In a laundry marking machine, the combination with type racks and means for feeding type from said racks, of a pivotally mounted carriage frame, a cam pivotally mounted within the carriage frame and having rack teeth thereon, a stationary rack adapted for engagement with said teeth to revolve the cam in one direction, a second series of rack teeth on said cam and a stationary rack adapted for engagement with the second series to move the cam in the opposite direction, and an inking pad connected with said cam.

73. In a laundry marking machine, the combination with type racks and means for feeding type from said racks, of a pivotally mounted carriage frame, oppositely arranged stationary racks adjacent the frame, a double rack pivotally mounted within the frame and adapted for successive engagement with the oppositely arranged stationary racks, and an inking device operably connected with said revoluble racks.

74. In a laundry marking machine, the combination with type racks and means for feeding type from the racks, of oppositely directed stationary rack members, a double rack member eccentrically mounted in said carriage frame and adapted for successive engagement with the stationary rack members, a spring for actuating said double rack member at one limit of its travel to move the said member out of the path of engagement with the stationary rack members when the carriage frame is returned, and an inking device connected with said double rack member.

75. In a laundry marking machine, the combination with type racks and means for feeding type from the racks, of a pivotally mounted type carriage frame, positively arranged stationary racks adjacent the frame, a pivotally mounted cam member carried by the carriage frame and having rack teeth adapted for engagement with the oppositely arranged stationary rack members whereby the cam is moved first in one direction and then in the opposite direction during travel of the carriage frame in one direction, and a spring whereby the rack cam is moved to cause the cam racks to miss the stationary racks on return travel of the carriage, for the purpose set forth.

76. The combination with a type carriage adapted for travel to and from a setting position, of means for feeding type to the carriage, a buffer located adjacent the feeding position, means for yieldingly tensioning the buffer toward active position, and means for positively withdrawing the buffer from active position.

77. The combination with a type carriage adapted for travel to and from a setting position, of means for feeding type to the carriage, a buffer located adjacent the feeding position, means for yieldingly tensioning the buffer toward active position, and means operable by reverse movement of the type feeding means, for moving the buffer against its yielding tension.

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

CHARLES A. BUNKER.

Witnesses:
ARTHUR W. CAPS,
LETA E. COATS.