(No Model.) 2 Sheets—Sheet 1.

J. L. MOTT, Jr.

CARTRIDGE LOADING MACHINE.

No. 304,120. Patented Aug. 26, 1884.

Fig. 2.

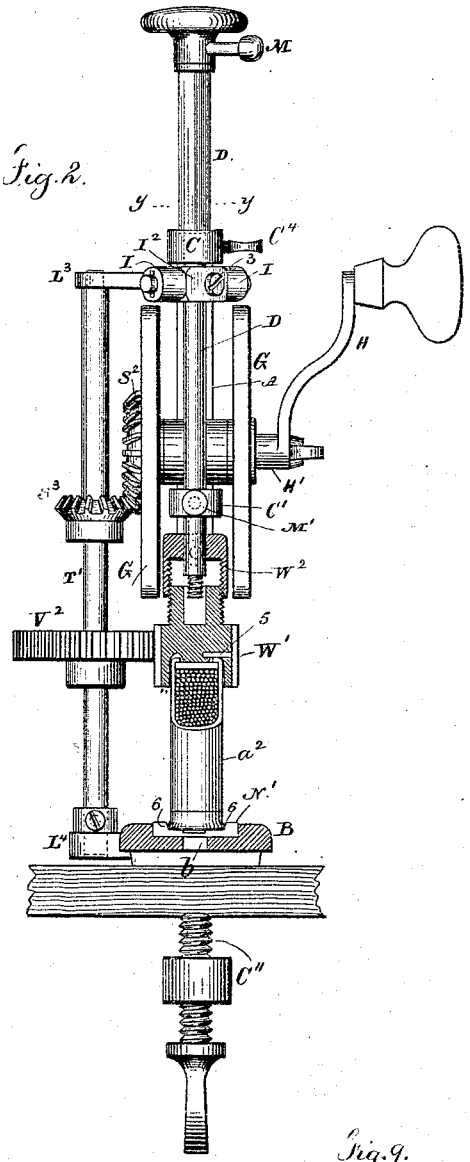


Fig. 1.

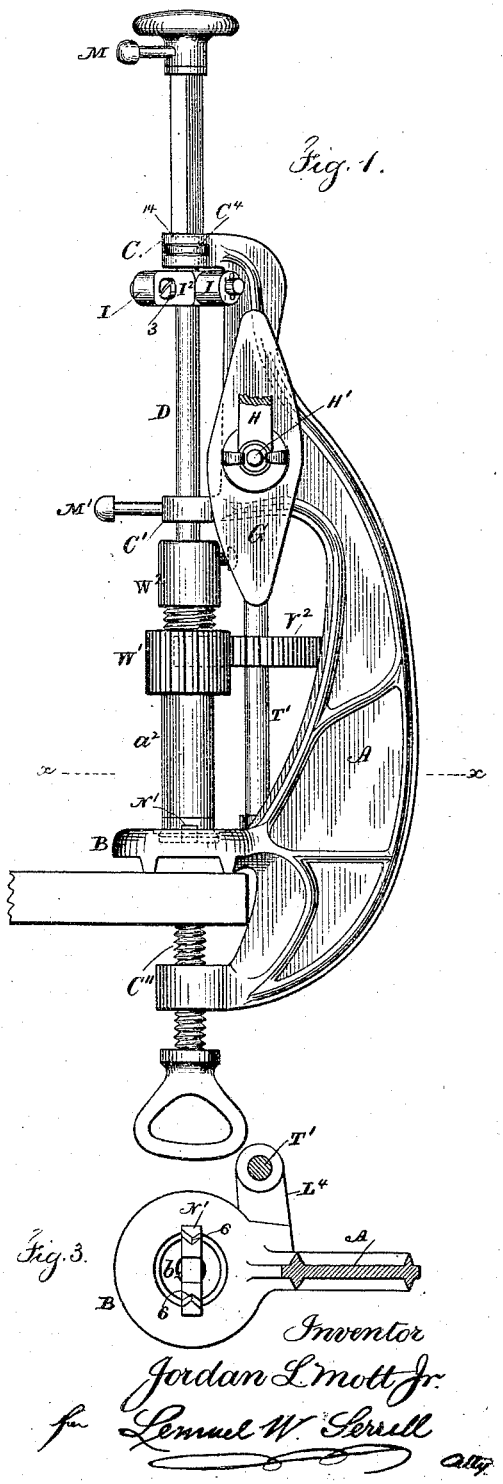


Fig. 8.

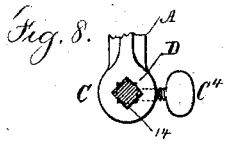


Fig. 9.

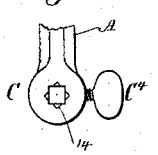


Fig. 3.

Witnesses

Chas. N. Smith

Harold Sprell

Inventor

Jordan L. Mott Jr.

per Samuel W. Sprell

Atty

(No Model.) 2 Sheets—Sheet 2.

J. L. MOTT, Jr.

CARTRIDGE LOADING MACHINE.

No. 304,120. Patented Aug. 26, 1884.

Fig. 5.

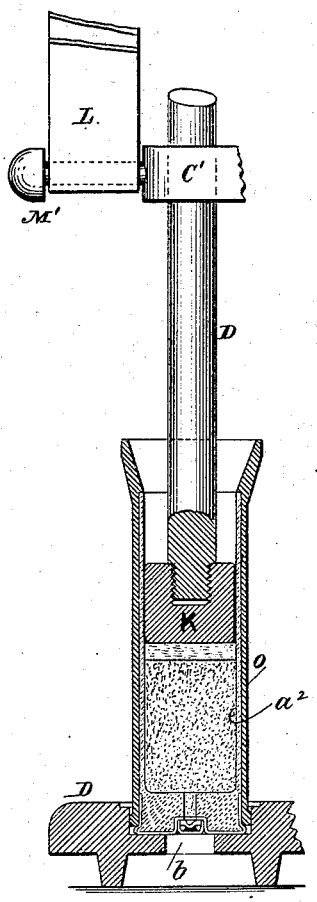


Fig. 4.

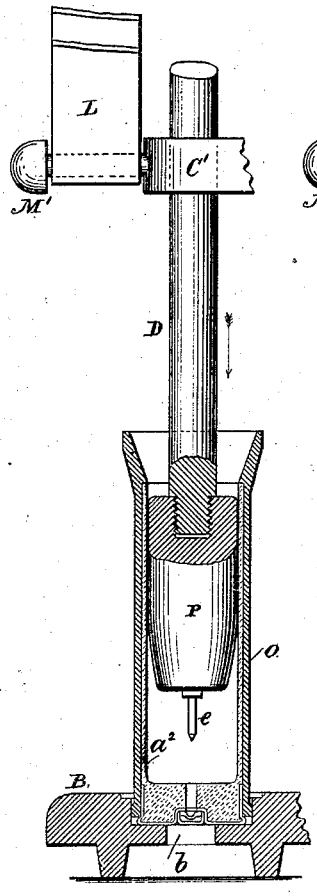


Fig. 7.

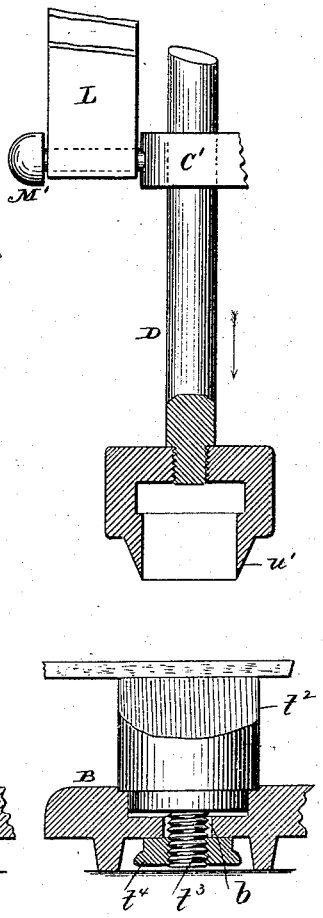
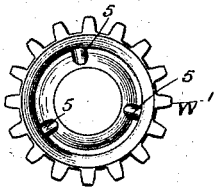


Fig. 6.



Witnesses

Chas. H. Smith

Harold Serrell

Inventor

Jordan L. Mott Jr.

by Samuel W. Serrell

atty

UNITED STATES PATENT OFFICE.

JORDAN L. MOTT, JR., OF NEW YORK, N. Y.

CARTRIDGE-LOADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 304,120, dated August 26, 1884.

Application filed March 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, JORDAN L. MOTT, JR., of the city and State of New York, have invented an Improvement in Cartridge-Loading Machines, of which the following is a specification.

The present is a modification of and improvement upon the machine patented by me August 28, 1883, No. 283,804; and it relates to the changeable devices for adapting the machine to the removal of spent primers from the cartridge-cases and the insertion of new primers, the ramming of the powder, and the closing in of the end of the cartridge-case.

In the drawings, Figure 1 is a side view. Fig. 2 is a front view, partly in section. Fig. 3 is a sectional plan below the line *x x*. Fig. 4 is a section, in about full size, of the cap-extractor. Fig. 5 is a similar view of the loader. Fig. 6 is an inverted plan of the crimper for closing the cartridge. Fig. 7 is a section of the wad-cutter, and Fig. 8 is a section at *y y*, Fig. 2. Fig. 9 is a plan of the guide C.

The standard A is provided with a base-plate, B, and a clamping-screw, C″, by which the machine may be attached to a table or other support. Upon the standard A there are the guides C′ C, for the vertical sliding rod D, the upper part of which is polygonal, so as to be guided in the part *c* as it is moved up and down; but this polygonal part may be drawn above the guide C and partially turned, so that the rod D will be held in an elevated position. The lower part of the rod D is round. Upon this rod D there is a stock, I^2, having a hole for the rod D to pass through, and a screw, 3, for clamping the stock. Arms or studs project laterally from this stock, and carry the rollers I. There are a shaft, H′, crank H, and cams G, similar to those in my aforesaid patent, for acting upon the rollers I and raising the rod D and the implement attached thereto, and when the cams clear the rollers the spring L, that is connected with the studs M M′, causes the rod D and implement to descend with a blow.

The feature of improvement in this part of my invention relates to the stock I^2, that carries the rollers I, and is adjustable vertically upon the rod D. When this is raised, the cams will not lift the rod as far and the blow will be less, and the reverse when the stock is lowered upon the rod for increasing the blow of the implement.

I provide a cap-extractor, P, with a punch, *e*, at the lower end, and with a hole and female screw at the upper end, so that it can be screwed directly to the lower end of the rod D, and used for forcing out a spent cap when the cartridge-case a^2 is placed in the recess in the bed B with the cap over the opening *b* in such bed.

The cartridge is placed within the filling-tube *o*, while the cap is being applied, as heretofore, and such tube and cartridge are supported by the bed, as seen in Fig. 5, while the powder is being rammed by the movable head K upon the rod D. It is to be understood that by adjusting the stock I^2 upon the rod D the force of the blow in ramming the powder will be regulated.

There is a bevel-pinion, S^2, upon the shaft H′, gearing into a pinion, S^3, upon the shaft T′, that is supported at top and bottom in the bracket-bearings L^3 L^4, and upon this shaft T′ there is a wheel, V^2.

The crimper is made as a pinion, W′, having a lower recessed end, that is of a size to receive the upper end of the cartridge-case a^2, and there are nubs or burnishers 5 5 5 in the inside of this recess, that act upon the cartridge-case at the end, to press it inwardly or crimp it over and around the end wad to hold the same into the cartridge. This pinion W′ is adapted to gear with the wheel V^2, and to receive motion therefrom, and the cylindrical portion of the rod D supports this pinion while it is being pressed upon the end of the cartridge-case, and revolved to crimp the cartridge-case.

Upon reference to Fig. 2, it will be seen that the stock W^2 is screwed upon the shank of the pinion W′, and that this stock W^2 is clamped to the rod D and may remain stationary, the lower end of the square part of D passing into the square recess (shown at 14 in the section, Fig. 8, and plan, Fig. 9) at the upper surface of the bracket *c*, and the screw C^4 can be used to clamp and hold this rod D. If the pinion W′ is now revolved, so as to unscrew it, in the stock W^2, the crimper will descend and press upon the end of the cartridge and crimp or close the end thereof. The reverse movement

will screw the pinion up out of the way, so as to remove one cartridge and insert another.

In order to support the cartridge and prevent the case turning while the end is being crimped, I employ the bridge-piece N′, that rests at its ends in recesses in the bed B; and it is provided with inclined holding-edges at 6 6, with which the periphery of the metallic cartridge-head comes into contact as pressure is applied to the upper end, and these holders act like knives to catch the edge of the case and prevent the same turning while the crimper is operated. This bridge-piece N′ is lifted out of the recessed bed when the cartridge is being decapped, capped, filled, or rammed.

The cutting-block t^2 is provided with a screw, t^3, at its lower side, passing through a hole in the bed B, and a nut, t^4, clamps the same to place. The wad-cutter u' is provided with a bridge that screws upon the lower end of the rod D. By this device pasteboard wads can be cut out by one or more blows given by the rod D and its actuating mechanism.

It is to be understood that when the machine is in use for crimping the cartridge-case the india-rubber springs L should be removed from the studs M M′.

I claim as my invention—

1. The combination, with the standard A, rod D, crank H, shaft, and cams, of the stock I^2, through which the rod D passes, the rollers carried by such stock, and the clamping-screw for attaching the same to the rod D, substantially as set forth.

2. The combination, with the standard A, of the rod D, passing through guides in the standard, the shaft H′, the bevel-gears S^2 upon the same, the shaft T′, wheel V^2, and pinion S^3 upon such shaft T′, the pinion W′, supported by the rod D and gearing into the wheel V^2, and a burnisher, 5, within the recess in such pinion W′, substantially as set forth.

3. The combination, with the standard A and rod D, passing through guides upon the standard, of a cartridge-crimper, W′, formed as a pinion with teeth around it, and recessed in its lower face, and having burnishers 5, and a hole in its upper surface for the reception of the lower end of the rod D, by which it is guided and pressed while being revolved, substantially as set forth.

4. The combination, with the crimper W′ and its screw-shank, of the stock W^2, screwed upon the same, the rod D, and means for holding the stock stationary, and the wheel V^2, for revolving the crimper W′, for the purposes and substantially as set forth.

5. The combination, with the cartridge-crimper W′ and means for revolving the same, of the standard A, rod D, to guide the crimper, the base B, recessed, and the bridge N′, introduced into such recesses, and provided with the holding-edges for the cartridge-case, substantially as specified.

6. The combination, with the standard A and rod D, of the recessed base B, the cutting-block t^2, the screw passing through the base for attaching the same, and the wad-cutter having a screw-bridge for connecting the same to the rod D, substantially as specified.

Signed by me this 15th day of March, A. D. 1884.

JORDAN L. MOTT, JR.

Witnesses:
GEO. C. GOELLER,
E. CLINTON SMITH.