(No Model.)

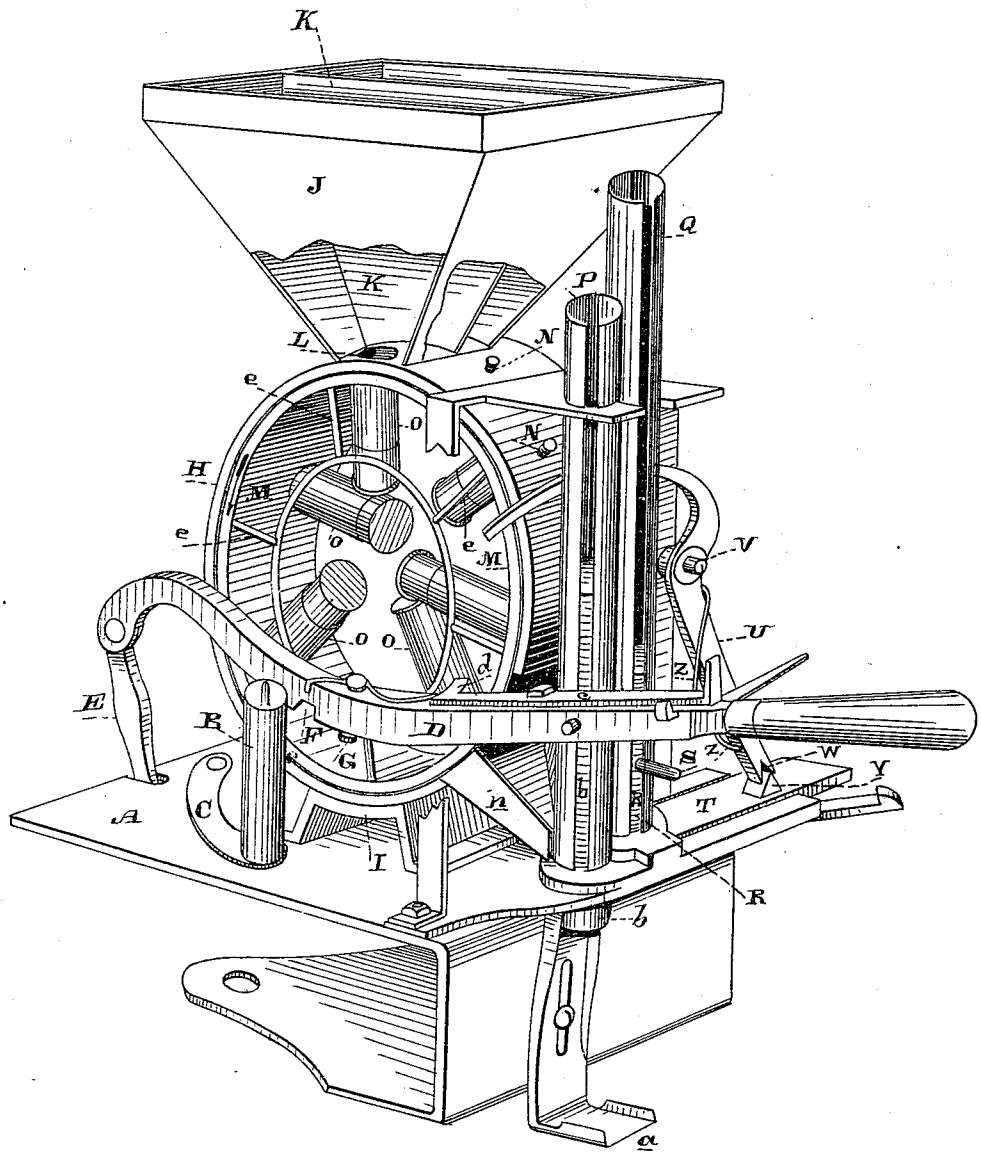
2 Sheets—Sheet 1.

# C. WONACOTT.

## CARTRIDGE LOADING MACHINE.

No. 347,455. Patented Aug. 17, 1886.

*FIG. 1.*




Witnesses,
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J. P. Sousa.

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Chas Wonacott
By Dewey & Co.
Attys

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

2 Sheets—Sheet 2.

# C. WONACOTT.

## CARTRIDGE LOADING MACHINE.

No. 347,455. Patented Aug. 17, 1886.

FIG. 2.

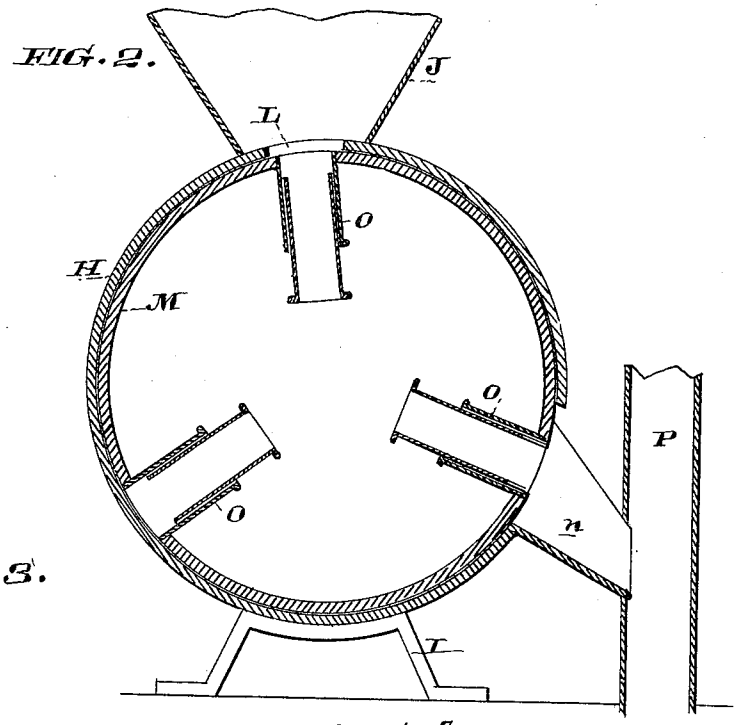



FIG. 3.

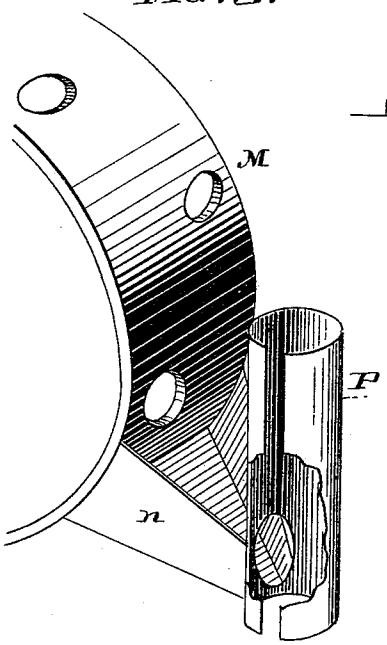



FIG. 4.

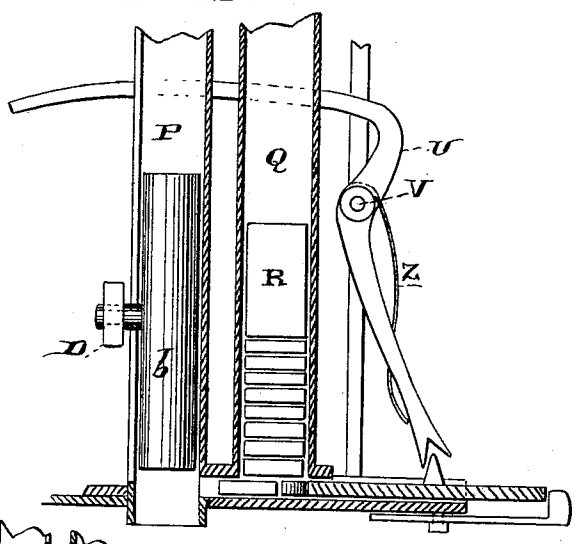
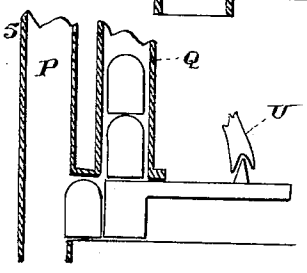



FIG. 5

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# UNITED STATES PATENT OFFICE.

CHARLES WONACOTT, OF MURPHY'S, CALIFORNIA.

## CARTRIDGE-LOADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 347,455, dated August 17, 1886.

Application filed March 9, 1886. Serial No. 194,637. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES WONACOTT, of Murphy's, Calaveras county, State of California, have invented an Improvement in Cartridge-Loading Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an apparatus for loading or reloading cartridges.

It consists of a cylindrical charge-carrier with receivers or hoppers from which charges of powder and shot are delivered into the chargers and alternately delivered into the shells, with a means for introducing the wads, and other details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my apparatus. Fig. 2 is a vertical section taken through the rim and one set of chargers. Fig. 3 is a view of part of the rim, chute, and tube. Figs. 4 and 5 are vertical sections of the charging and wad magazine-tubes and the carrying-slide.

A is the platform or table upon which the mechanism is supported, this table being fitted to be secured to a bench, or in convenient position for use. In the present case I have shown a projection which will extend below the edge of the bench, where it may be secured by a holding-screw or other convenient mechanism.

Upon the table A are supported the various portions of the mechanism necessary for the work of reloading.

B is a standard of proper shape and size to allow a cartridge to be placed over it with the closed end upward, this standard having a pin in its upper end, so that the cartridges being pressed downward the pin will force the primer out in the usual manner. This standard is supported by a lever-arm, C, pivoted to the table, so that it may be swung about its horizontal pivot and carry the standard inward beneath the lever D, which is fulcrumed to the inner edge of the table by means of a link, E. This lever has a chamber or socket made upon it corresponding with the position which the standard B will occupy when it is swung beneath the lever. When the lever is pressed downward upon the head of the cartridge, it causes the pin upon the standard to force the primer off, and it is discharged through a slotted opening at the side of the lever, as shown at F.

The recapping of the shell is done by means of a small projection, G, upon the lever, so that the primer being placed in position and the shell set under the lever this projection will seat the primer in the manner usual to such devices.

Upon the table A, at one side of the lever, so as to stand parallel with it, is a cylindrical rim, H, supported upon a suitably-shaped base or standard, I, and upon top of this cylinder is a receiver or hopper, J, having a diaphragm or partition, K, through its center, dividing it into two parts. In one of these parts powder may be placed, and in the other shot. The rim of the cylinder H is of such width that these two compartments open upon its surface, and it has slots L, made so as to correspond with the bottom of these compartments, to allow the powder and shot to pass through at these points. Within this stationary rim or cylinder H is fitted another rim, M, the rim being of the same width as that of the exterior one, and it is held in place, so as to be rotated within the exterior one, either by lugs upon the side, or, preferably, by having a channel or groove formed centrally in it, and set-screws N pass through the exterior rim, so that their points enter the groove and prevent this cylinder from slipping to either side. If it is desired to remove it, however, this can be done by turning the screws back a short distance. This inner cylinder has holes made through the rim corresponding with the position of the slots in the bottom of the shot and powder receivers of the hopper J, and each of these holes has a charger, O, connected with it and extending radially toward the center of the apparatus. These chargers have the usual telescopic gaging arrangement which is employed for ordinary powder-chargers, and these may be used by reason of the radial arrangement of the chargers within the rim M. Whenever one of these chargers arrives in position beneath the opening of its hopper, it is filled with the material within the hopper, and when it passes beyond the slot of the hopper further supply is cut off, the inner rim moving so closely and fitting so well within the outer one that neither powder nor shot can

escape between the two. The chargers which receive the shot are placed alternately with those which receive the powder. It will be manifest that the number of these chargers will depend upon the diameter of the rims and the size of the apparatus. In the present case I have shown three of each, so that the distance between the powder-chargers and the shot-chargers will be one-sixth the circumference of the rim. At a point near the bottom and to one side of the outer rim is formed a chute, *n*, the sides of which extend up closely to the sides of the rotating charger carrying rim M, so that whenever either of the chargers arrives at the point opposite this chute it will discharge its contents into it. The lower end or mouth of this chute opens into one side of a vertical slotted cylinder, P, beneath which the shell to be reloaded is placed. The shell is supported upon a table or stand, *a*, which is adjustably attached to the front of the table A, so that it may be raised or lowered to suit any length of shell which is to be loaded, and the tube P may also be readily changed for any diameter of shell, so that different sizes of shot-gun-shells or rifle-shells may be loaded by the same apparatus by simply changing the tubes. This tube P also stands close beside the handle of the lever, and it has a plunger, *b*, moving within it. A pin from this plunger extends out through the slotted side of the tube, and it is attached to the handle of the lever D, so that as the lever is raised and lowered this plunger will be moved up and down.

By the side of the cylinder P is a slotted or open-sided tube, Q, within which wads are placed to be used over the powder or shot. This tube being filled with wads, a weight, R, is placed in it, resting upon the wads, and it carries them down as fast as they are needed. This weight has a stem, S, attached to it, and extending out through the open side of the segmental tube, so that by taking hold of this stem or handle the weight may be raised and taken out at any time for the introduction of more wads.

At the bottom of the segmental tube Q is a horizontal channel having a depth equal to the thickness of the wads to be used, this channel opening directly beneath the bottom of the cylinder P, through which the charges of powder and shot pass into the shell. Within this channel a slide, T, is fitted to move, being drawn back so far that when it is retracted the weight R will press the wads down, so that one of them will stand in front of this slide. When the slide is moved forward, it forces the wad into the lower part of the tube P, so that when the plunger is again moved down within this tube it will force the wad down into the cartridge-shell, either on top of the powder or the shot, as may be desired. The slide is operated by a lever, U, which is itself fulcrumed at V upon some portion of the stationary frame. The lower end of this lever is notched or forked, as shown at W, so that it will engage a projecting lug, Y, upon the top of the slide, and thus when the lever is moved backward and forward it carries the slide with it. From the fulcrum-pin the lever is curved, as shown, so that its opposite end extends across above the lever D. When this lever is raised to the proper height, it strikes the transverse arm of the lever U, and thus causes it to actuate the slide T, moving it forward and forcing the wad beneath the tube P, and when the lever D is again moved downward the lever U and the slide are returned to their first position by the action of a spring, Z, pressing upon the lever U.

Upon the top of the lever D is fulcrumed a spring-lever, *c*, one end of which stands near the handle of the lever D, and the other end has a lug or pin, *d*, projecting inwardly, so that its point extends a short distance within the inner rim, M. A series of arms, *e*, are fixed to the side of this inner rim, so that when the lever D is raised the lug *d* will engage one of the arms *e*, and will thus press upon it, causing the inner rim, M, to be rotated. This rotation of the inner rim, M, within the outer rim, H, brings the powder-chargers and the shot-chargers O successively beneath the openings or slots in the containing hoppers or chambers J, and they are carried around, as shown by the arrows, their mouths being kept closed, so that nothing can escape, by reason of the accurate fit of the inner rim within the outer one. When a powder-charger arrives at the point opposite the chute *n*, it stands at a sufficient inclination so that the powder within it will flow down through the chute into the lower part of the tube P below its plunger (which will be raised at the time) and enter the cartridge-shell. By continuing the upward movement of the lever D it will strike the arm of the lever U, and will force the slide T forward, carrying a wad into position in the lower part of the tube P, so that when the lever D is again brought down the plunger *b* will force the wad into the shell upon the powder. The next upward movement of the lever D causes the lug *d* to engage another of the arms *e*, and thus turns the rim M, so as to bring one of the shot-chargers opposite the chute *n*, thus discharging its contents into the shell. The continuation of the movement of the lever D again carries a wad forward, to be introduced into the shell above the shot in the manner above described. The lug *d* upon the spring-lever *c* is beveled upon its lower side, so that when it moves downward it will readily pass the arms *e*, springing back for that purpose, and its top, being straight, will engage them at every upward movement, and as there are as many of these arms as there are chargers each upward movement of the lever D will rotate the rim M sufficiently to bring one of the chargers opposite the chute *n*. If it is desired to introduce more than one wad upon the top of the powder or upon the top of the shot, it may be done by pressing the thumb against the side of the spring-lever *c* at the

point near the handle, and thus drawing back the lug *d* on its opposite end the latter is prevented from engaging with either of the arms *e*, and the rim M will thus remain stationary; but the continued upward movement of the lever D will again operate the lever-arm U and slide T so as to move another wad forward into the tube P, this wad being forced into the shell, as before described, by the plunger *b*.

When it is desired to load rifle-shells, it is only necessary to substitute a tube at P of the proper diameter for the rifle-shell, and the table *a*, upon which the end of the shell is supported, is adjusted upward by means of the slotted slide and screw, so as to bring the mouth of the shell in the proper relative position with the tube P. The segmental tube Q is also replaced with one of sufficient diameter to receive the bullets, which are placed in it in the same manner as described for the wads. In this case the horizontal channel will be of a depth equal to the length of the bullet, and the slide T will be of a corresponding depth, so that the bullet will be moved forward by it into position to be forced into the shell by the plunger in the tube P. In this case it will be manifest that no shot will be put into the shot-containing hopper, and the chargers connecting with the powder-containing hopper will be adjusted to contain a proper charge for the rifle-shell. By this construction I produce a cheap interchangeable apparatus for loading cartridges of all descriptions without the use of expensive or additional parts or modifications, the operation of loading, either with shot or bullets, being essentially the same and carried on with the same apparatus.

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

1. In a cartridge-loading machine, a stationary cylindrical rim having powder and shot receptacles fixed to its upper part, and holes through said rim corresponding with said receivers, in combination with an inner rim fitted to turn within the outer one, having a central groove or channel around its exterior periphery, and adjustable screws or lugs extending through the outer rim into said channel, so as to guide the inner rim, substantially as herein described.

2. In a cartridge-loading machine, a stationary cylindrical rim having powder and shot receivers fixed to its upper part, holes through said rim corresponding with the receivers, in combination with a second rim fitted to turn within the outer one, a series of telescopic shot and powder measurers or chargers extending inward radially from the inner rim, having the outer ends opening through it, so as to correspond with the openings in the outer-rim receivers, and a mechanism comprising a lever having a projecting lug, whereby the inner rim may be rotated, substantially as herein described.

3. In a cartridge-loading machine, a fixed cylindrical rim having powder and shot receivers attached to its upper part, openings through said rim corresponding with the receivers, and a supplemental rim fitting and rotating within the outer one, having shot and powder chargers fixed radially within it and opening through it, so as to correspond with the openings in the outer rim and the receivers, said powder and shot measurers standing in parallel planes within the rim, and so as to alternate with each other, substantially as herein described.

4. In a cartridge loading machine, a cylindrical stationary rim having shot and powder receivers attached to its upper part, openings through said rim connecting with the receivers, a supplemental rim fitted to turn within the outer rim, having alternately-arranged powder and shot measurers or chargers fixed radially within it, with their mouths opening through the inner rim, so as to alternate with each other and receive powder and shot from the hoppers, and arms or lugs projecting from one side of the inner rim, in combination with a lever fulcrumed to the table or standard, and having a lug which will engage the arms upon the inner rim, so as to rotate it when the lever is moved in one direction, substantially as herein described.

5. In a cartridge-loading machine, a fixed cylindrical rim having powder and shot receivers attached to its upper part, with openings through said rim corresponding with the receivers, a supplemental rim fitting and rotating in the stationary one, having a series of telescopic alternately-placed powder and shot measurers or chargers extending radially within it, and a lever for rotating said rim, in combination with a chute or passage projecting outwardly from the fixed rim, into which both powder and shot measurers discharge when their mouths arrive opposite to it, a vertical tube at one side of the table into which the chute opens, and an adjustable stand or support upon which the cartridge-shell may be placed beneath said tube, substantially as herein described.

6. The fixed and rotary rims with the powder and shot receivers, and the measurers or chargers, and the common chute and tubular conveyer, through which the powder and shot may be alternately discharged into a shell supported beneath the tube, in combination with a plunger working within said tube, a lug or pin projecting through a slot in the side of the tube, and a lever fulcrumed so as to be moved vertically by the side of the tube, and connecting with the pin from the plunger, substantially as herein described.

7. The stationary and rotary rims with the powder and shot receivers and chargers, mechanism for rotating the inner rim, a common discharge-chute for the powder and shot, and the vertical tube with its plunger standing in line with the cartridge-shell, in combination with the wad-carrying tube standing by the side of and parallel with the charging-tube, and a spring or weight by which the wads are forced downwardly within it, a horizontal

channel extending beneath this tube and opening into the side of the charging-tube, and a slide or plunger reciprocating within said channel, so as to carry the wads from the wad-tube into the charging-tube, substantially as herein described.

8. The wad-tube standing vertically beside the charging-tube, having a channel extending beneath it and opening into the charging-tube, and the slide or plunger reciprocating within said channel, and operated by a spring return-lever fulcrumed to the apparatus, as shown, in combination with a vertically-moving lever by which the plunger is operated in the charging-tube, and the lever which operates the wad-carrying slide is also moved, substantially as herein described.

9. The fixed and rotary rims with the powder and shot receivers and chargers, the discharge-chute, vertical loading and wad tubes, with the horizontally-moving slide by which wads are carried into the charging-tube, and the lever operating said slide, in combination with a vertically-moving lever having a spring-arm fulcrumed to it, with a lug which engages the arms of the moving rim, said lug having a mechanism by which it may be retracted, so that the rim will not be moved when it is desired to introduce more than one wad into the shell, substantially as herein described.

10. A vertical slotted tube standing in line with the cartridge-shell, which is supported upon a stand or table in line beneath it, and a plunger moving in said tube and connected with the vertically-moving lever by a pin projecting through the slot in its side, in combination with a second segmental or slotted tube standing by the side of and parallel with the first-mentioned tube, and a weight fitted within said tube and having a stem projecting through the slot in its side, substantially as herein described.

11. The fixed and rotary rims and powder and shot receivers and chargers, a chute, and the vertical loading and wad tubes standing side by side, with the operating mechanism, in combination with a vertically-moving lever connected with the plunger of the loading-tube, and the wad-carrying slide beneath the wad-tube, said lever having a retractile lug, by means of which the inner rim, which carries the chargers, may be rotated or left stationary at will, substantially as herein described.

12. The fixed and rotary rims with the powder and shot receivers and chargers, the loading-tube, and the intermediate conveying-chute, the wad-tube, with its carrying slide or plunger, and operating mechanism mounted upon a table or stand, together with a vertical cylinder upon which a cartridge may be placed for uncapping, said cylinder being fixed to a spring arm or lever fulcrumed to the table, so that a cartridge may be moved beneath the operating-lever or swung back therefrom, substantially as herein described.

In witness whereof I have hereunto set my hand.

CHARLES WONACOTT.

Witnesses:
R. W. SWYERS,
GEORGE BATTEN.