

(No Model.)

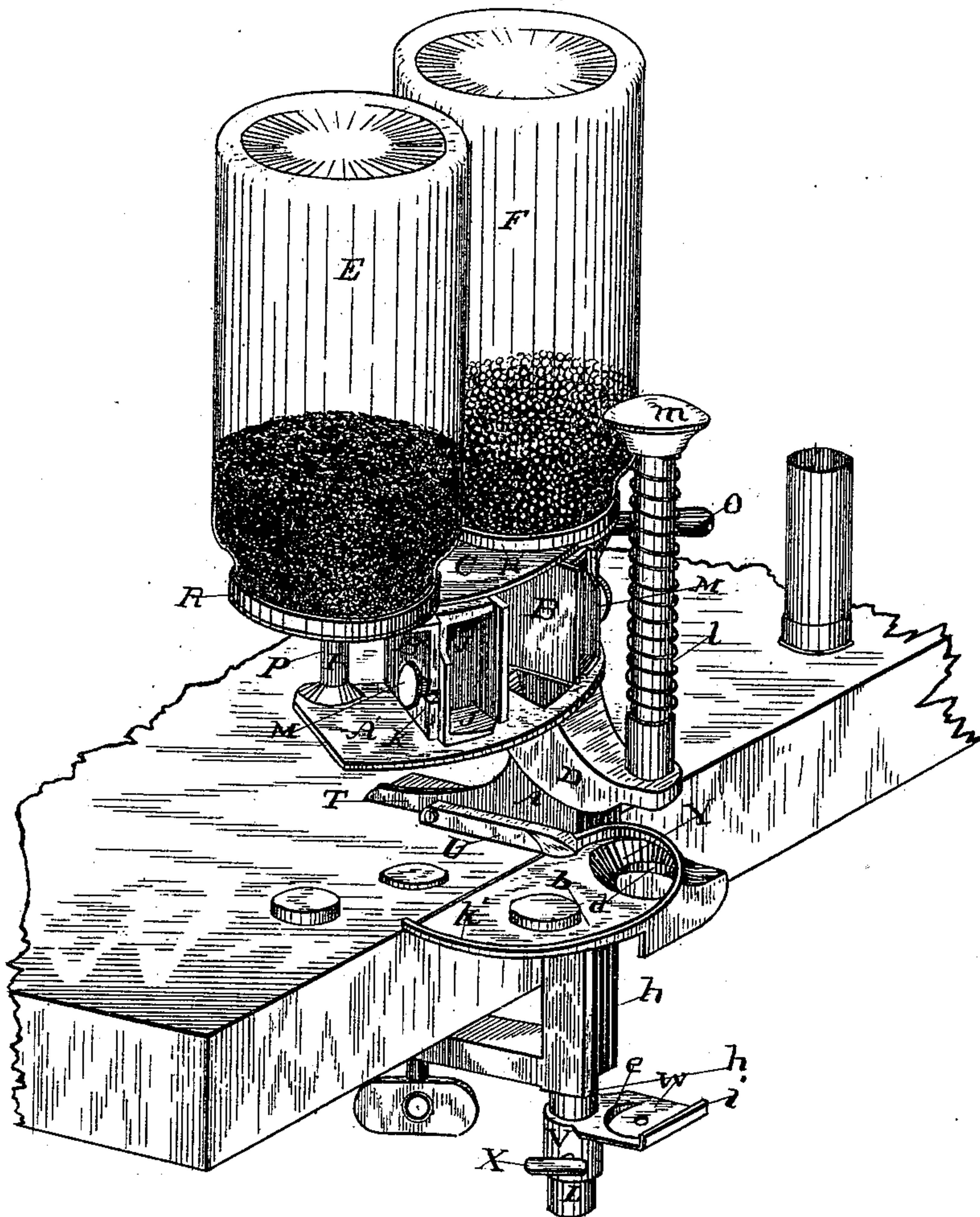
2 Sheets—Sheet 1.

H. T. HAZARD.
CARTRIDGE LOADING MACHINE.

No. 358,035.

Patented Feb. 22, 1887.

Fig. 1.



Witnesses.

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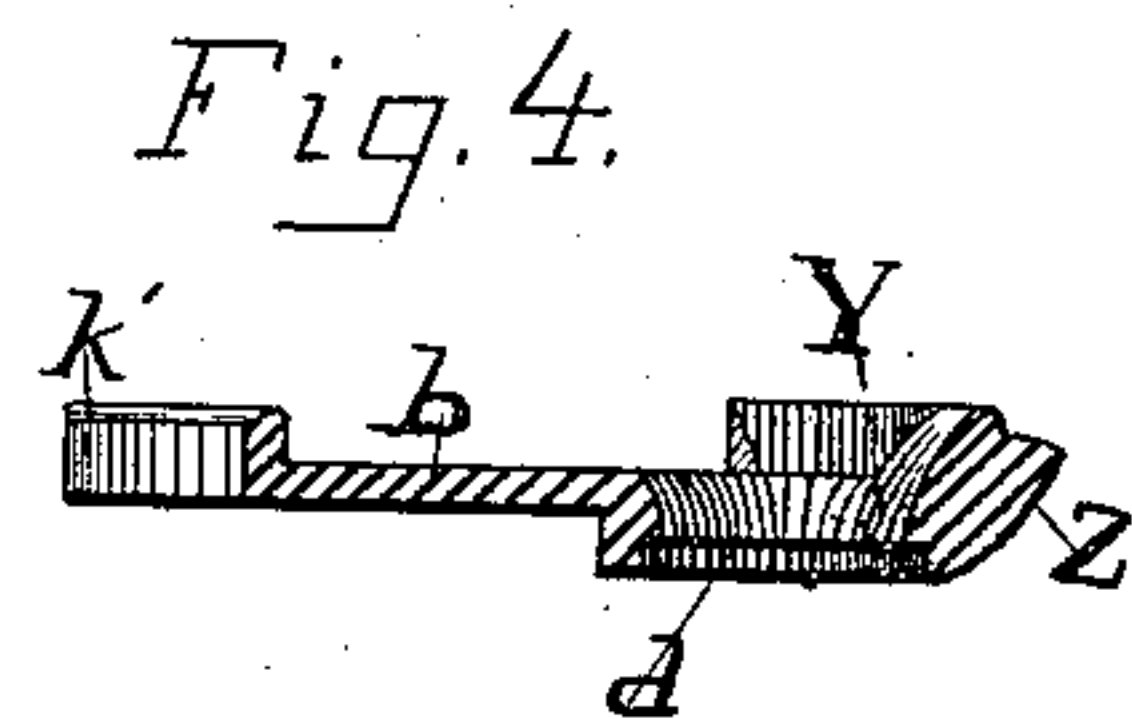
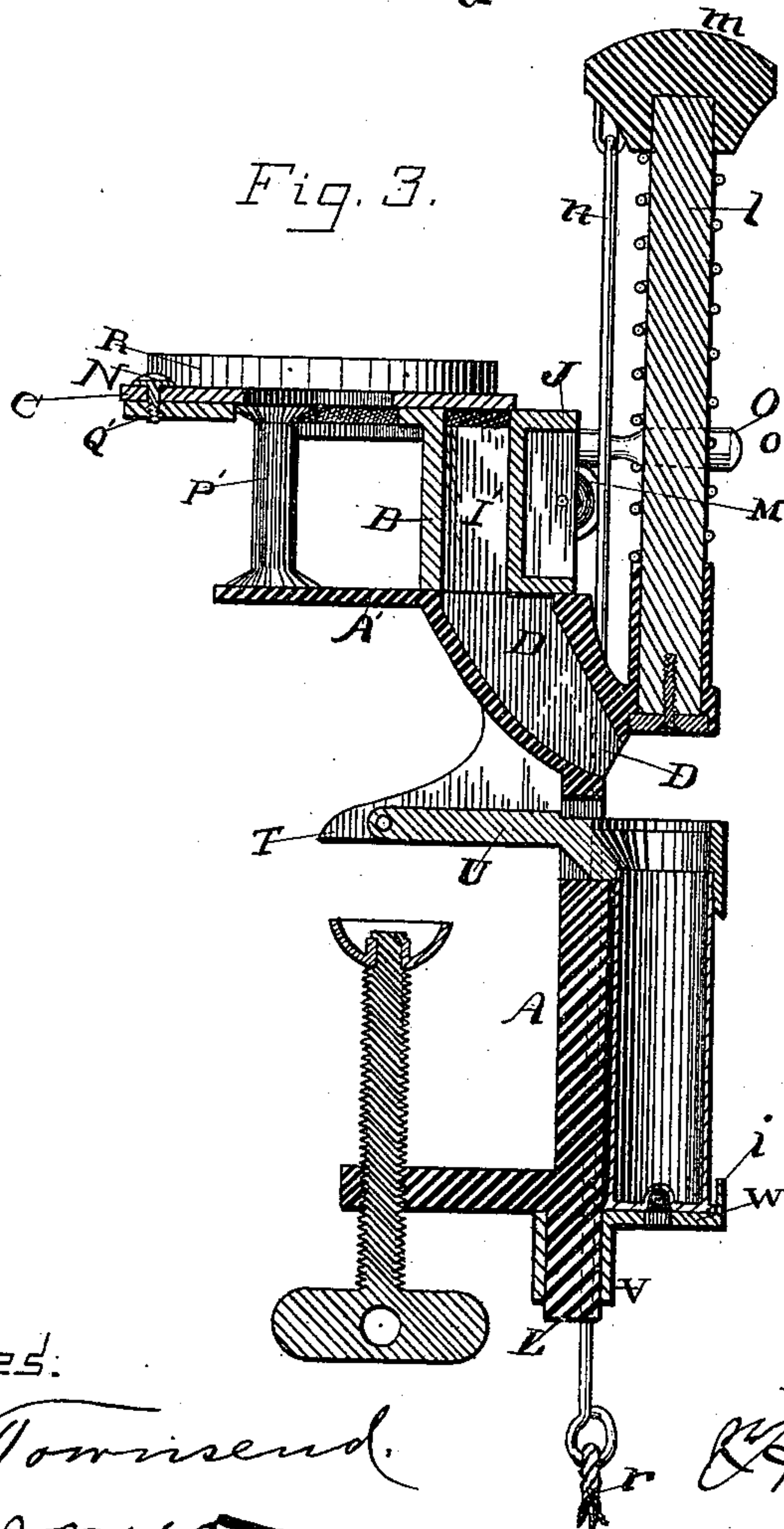
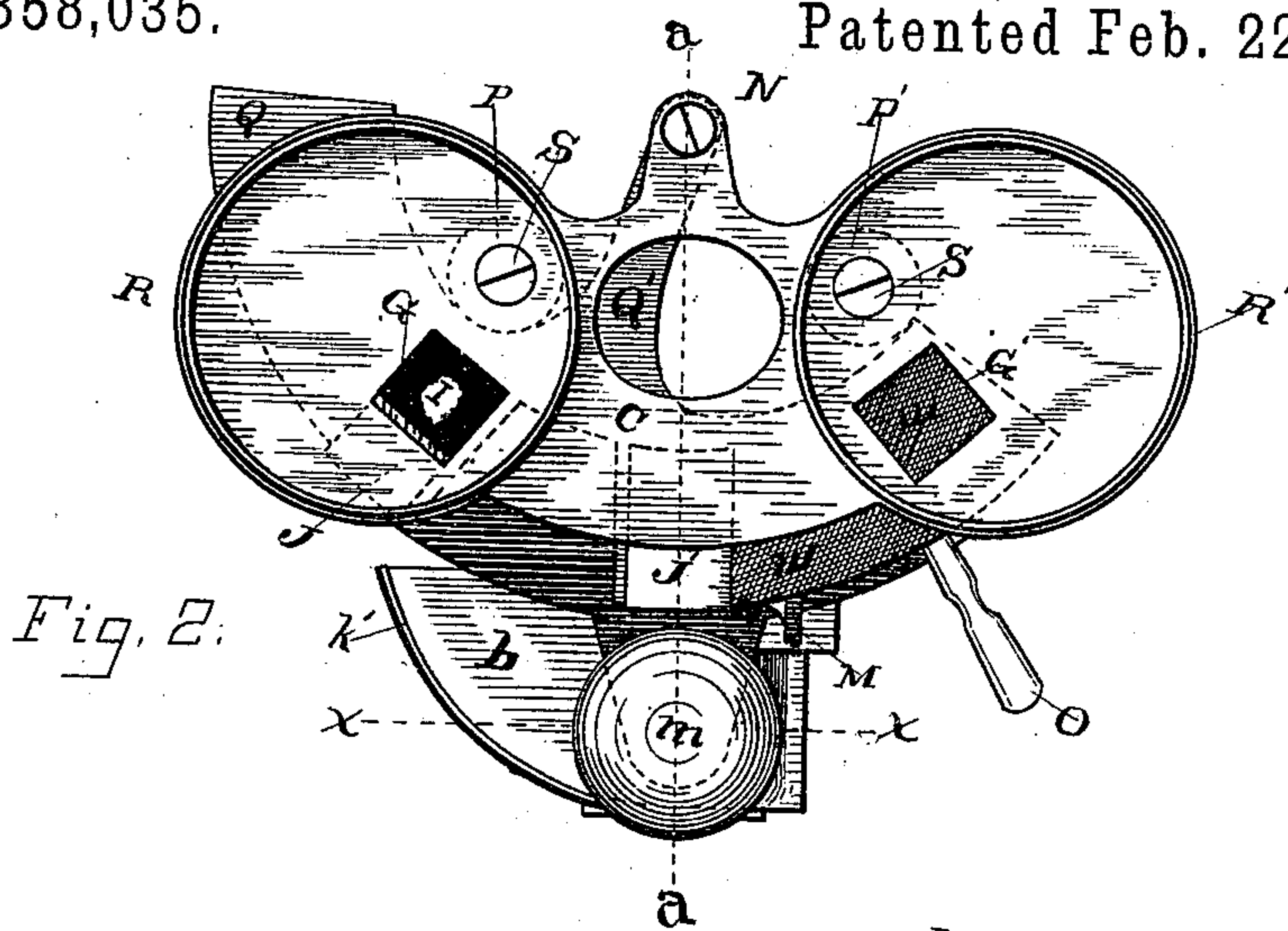
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Witnesses:

Jas. R. Townsend.
R. W. Brown

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UNITED STATES PATENT OFFICE.

HENRY T. HAZARD, OF LOS ANGELES, CALIFORNIA.

CARTRIDGE-LOADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 358,035, dated February 22, 1887.

Application filed June 1, 1886. Serial No. 203,726. (No model.)

To all whom it may concern:

Be it known that I, HENRY THOMAS HAZARD, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles, State of California, have invented a new and useful Improvement in Cartridge-Loaders, of which the following is a specification.

My invention relates to implements which load cartridge-shells with powder, shot, and wads.

The object of my invention is to construct a loader of small size, with as few parts as possible, by means of which the cartridges may be loaded with accurately-gaged charges of powder, shot, and wads. Various machines have hitherto been devised for this purpose, some of which embody features employed by me, among which may be mentioned those described in Letters Patent to Belcher, No. 305,136, dated September 16, 1884, and No. 337,117, March 2, 1886, and patents to Strand and Gilbury, No. 321,257, June 30, 1885, and Carr, No. 229,523, July 6, 1880.

My invention consists, principally, in the peculiar construction and arrangement of parts, whereby a special convenience of operation is secured.

It also consists in the peculiar mechanism for holding the shells in position while being loaded; also, in the form and position of the device for guiding the wads into position; also, in the peculiar construction of the shot and powder measuring devices; also, in the device for adapting the machine for cartridges of different lengths.

In the accompanying drawings, Figure 1 is a perspective view of my loader clamped to a table, with shell and wads ready for loading. Fig. 2 is a plan view of the loader with the magazine-cans removed. Fig. 3 is a vertical cross-section of the same on line *a a*. Fig. 4 is a cross-section of the wad-platform and hopper on line *x x*, Fig. 2.

A is the frame, which clamps upon the table. B is the charge-carrier. C is the magazine-plate. D is the charge-chute. E is the powder-magazine; and F is the shot-magazine, which consists of ordinary glass cans screwed into the rims R R' on the magazine-plate.

Holes G and G' connect the respective magazines with the charge-carrier B.

The charge-carrier is provided with two

chargers, I I', each of which is provided with the gage J or J', held in position by the friction-screw M, which slides in the slot K. These gages have broad faces at the upper and lower ends, where they come into contact with the plates C and A', and the face of the upper end is graduated, as shown in Fig. 2, to indicate the size of the charge. A handle, O, is attached to the charge-carrier upon the right-hand or shot side, by which the carrier can be moved to and fro.

The magazine-plate is secured to the frame by the screws S S, which screw into the posts P P', which are attached to the frame, and the charge-carrier plate Q is pivoted to the magazine-plate C by the pivot N, which passes through the end of the arm Q', so that the carrier can be moved to and fro in the arc of a circle.

The upper end of the chute D is situated directly beneath a point midway between the holes G G', and the distance between the chargers is equal to half the distance between the holes G G', so that when one charger is beneath the opening into one of the magazines the other charger will be directly over the open end of the charge-chute.

The charge-carrier fits closely between the parallel faces of the magazine-plate C and the platform A' of the frame. The posts P and P' form stops against which the arm Q' strikes to stop the charge-carrier at the proper place to receive and drop the charges.

The gage-slides J are graduated upon the top, as shown in Fig. 2, to indicate the size of the charges, and by moving the slides back and forth the charge may be increased or diminished at will.

Upon one side of the upper jaw, T, of the clamp is pivoted the arm U of the combined hopper, shell-clamp, and wad-platform. A round bar, L, extends downward from below the clamp to receive the bearing of the shell-supporting platform W, which is secured thereto by a thumb-screw, X, and may be raised or lowered thereon.

The hopper Y is situated beneath the open mouth of the chute D, and in the under side of the hopper a seat, *d*, is reamed out to receive the open end of a shell, and the right-hand side of the under face of the wad-plate *b*, within which the hopper is mounted, is

beveled, as at Z, so that when the operator attempts to place a shell, upon the platform beneath the hopper, the shell, striking against the beveled portion of the plate, will elevate the plate, thus allowing the shell to be pushed between the plate *b* and the shell-platform W. There is a raised step, *e*, upon the platform W, and a side stop, *h*, upon the frame, and a barrier, *i*, upon the shell-platform, which, in connection with the seat *d* in the bottom of the hopper, will stop the shell at the proper place and hold it in position to be loaded.

The wad-platform *b* is so mounted that its top is level with the top of the table, so that wads may be pushed from the table onto the platform and into the hopper without lifting or handling them. A barrier, *k*, extends around the edge of the platform to assist in guiding the wad to the hopper.

Immediately above the hopper is mounted the spring-elevated rammer *l*, which is provided with a hand-knob, *m*, on top, and also with a wire, *n*, Fig. 2, which is secured to the knob and drops down therefrom and has a cord, *r*, attached to the lower end, which may be looped to allow the rammer to be operated by the foot. If desired, this may be dispensed with and the rammer operated by the hand alone in the ordinary way, as shown in Fig. 1.

The charger-plate Q is sufficiently long to extend beyond the opening G in the magazines, so that the openings are closed thereby at all times except when the charges are beneath the openings. The top of the plate upon the shot side is covered with a sheet of rubber, *w*, which by its elasticity prevents the shot from clogging, which might thus prevent the machine from working.

The operation of the machine is as follows:
Powder and shot are placed in the magazines E and F, which may be ordinary glass fruit-jars. The loader is then turned upside down and the jars screwed into their respective rims or seats R and R'. The loader is then turned right side up and clamped to the table, as shown in Fig. 1, care being taken to have the charge-carrier pushed to the left, as shown in Fig. 2, so that a charge of powder will be deposited in the powder-charger. The shells are placed upon the table at the right of the machine and the wads at the left. A shell is then placed upon the platform W, beneath the hopper, with the right hand, and the handle O is then moved to the right, thus moving the powder-charger into position above the chute D, through which the powder falls into the shell. The operator then pushes a wad from the table onto the wad-shelf and into the hopper with the left hand. A blow upon the rammer is then given with the right hand, which seats the wad. The carrier is then moved to the left, carrying a charge of shot to the chute, through which it falls into the shell. Another wad is then pushed into the hopper and the rammer again forced down, and the shell is loaded. The loaded shell is then removed by

the left hand of the operator or another shell is pushed onto the platform beneath the hopper, thus forcing out the loaded shell, after which the operation is repeated, as described.

It will be readily seen that the position and arrangement of parts are such that but few unnecessary movements need be made by the hands in loading the shell.

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

1. In a cartridge-loader substantially such as described, the combination of the following elements, as set forth: the magazine-plate C, provided with the holes G G', extending up into the magazines, the pivotally-mounted charge-carrier B, having the arm Q' and provided with the two chargers I I', situated at a distance apart equal to half the distance between the holes G G' in the magazine-plates, the platform A', situated beneath the charge-carrier and provided with the chute D, extending downward therefrom and located beneath a point in the path of the chargers midway between the holes G G', the gage-slides J J', provided with broad faces at the top and bottom thereof and movably adjusted to slide back and forth in the chargers between the magazine-plate C and the platform A', stops, substantially such as the posts P P', situated upon opposite sides of the arm Q', as set forth, and the handle O, mounted upon the charge-carrier.

2. In a cartridge-loader substantially such as described, the combination of the charge-carrier provided with the charger I and the horizontal slot K, and the gage-slide J, having broad faces at the upper and lower ends and provided with the friction-screw M, for the purpose set forth.

3. In a cartridge-loader substantially such as described, the device for holding the shell in position while being loaded, consisting, as set forth, of a fixed platform, W, and a shell-clamp pivotally attached to the frame by one end and provided at the other end upon the under side of the clamp, immediately above the platform W, with an annular seat, *d*, of proper size to receive the open end of the shell, and also provided with an opening there-through and a hopper within and above such annular seat, as set forth.

4. In a cartridge-loader substantially such as described, a wad-platform pivoted to the frame of the loader and fixedly attached to the loading-hopper, and forming with the top of the table a plane and continuous surface extending to the mouth of the hopper.

5. In a cartridge-loader substantially such as described, the combination of the frame of the loader provided with the stop *h* projecting therefrom, a shell-clamp pivotally mounted upon the frame above the stop *h* and provided upon its under side with an annular shell-receiving seat, *d*, and a shell-sustaining platform secured to the frame of the loader below the

clamp and the stop *h* and provided upon its upper side with the curved elevation or stop *e* and the barrier *i*, as set forth.

5 6. In a cartridge-loader substantially such as described, the combination of the frame of the loader, a shell-platform rigidly mounted thereon, and a shell-clamp pivotally mounted on such frame above such platform and provided upon the under side with an annular

seat for the open end of the shell, and a beveled surface, *Z*, extending from the annular seat to the side of the clamp, as and for the purpose set forth.

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Witnesses:

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EDITH MOORE.