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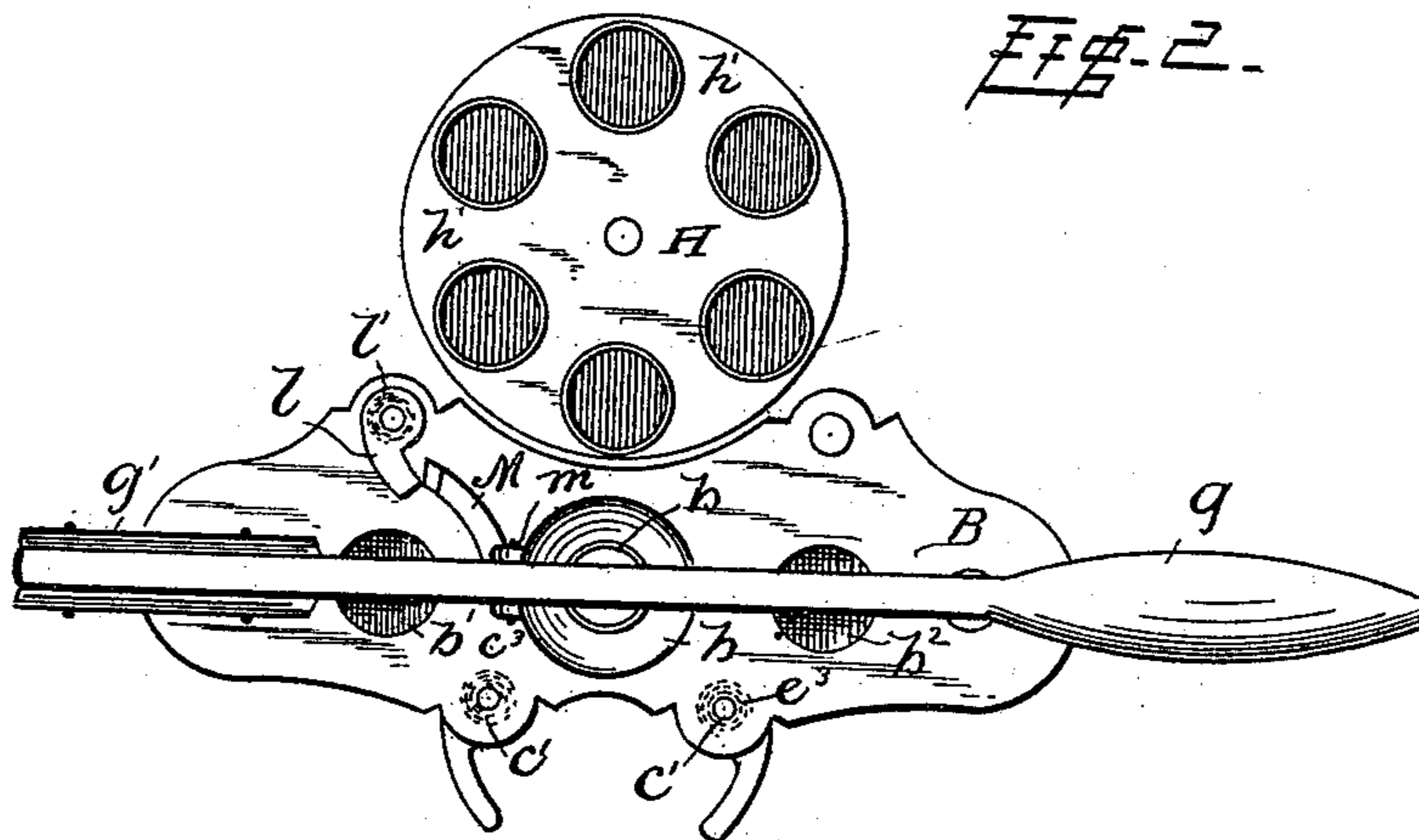
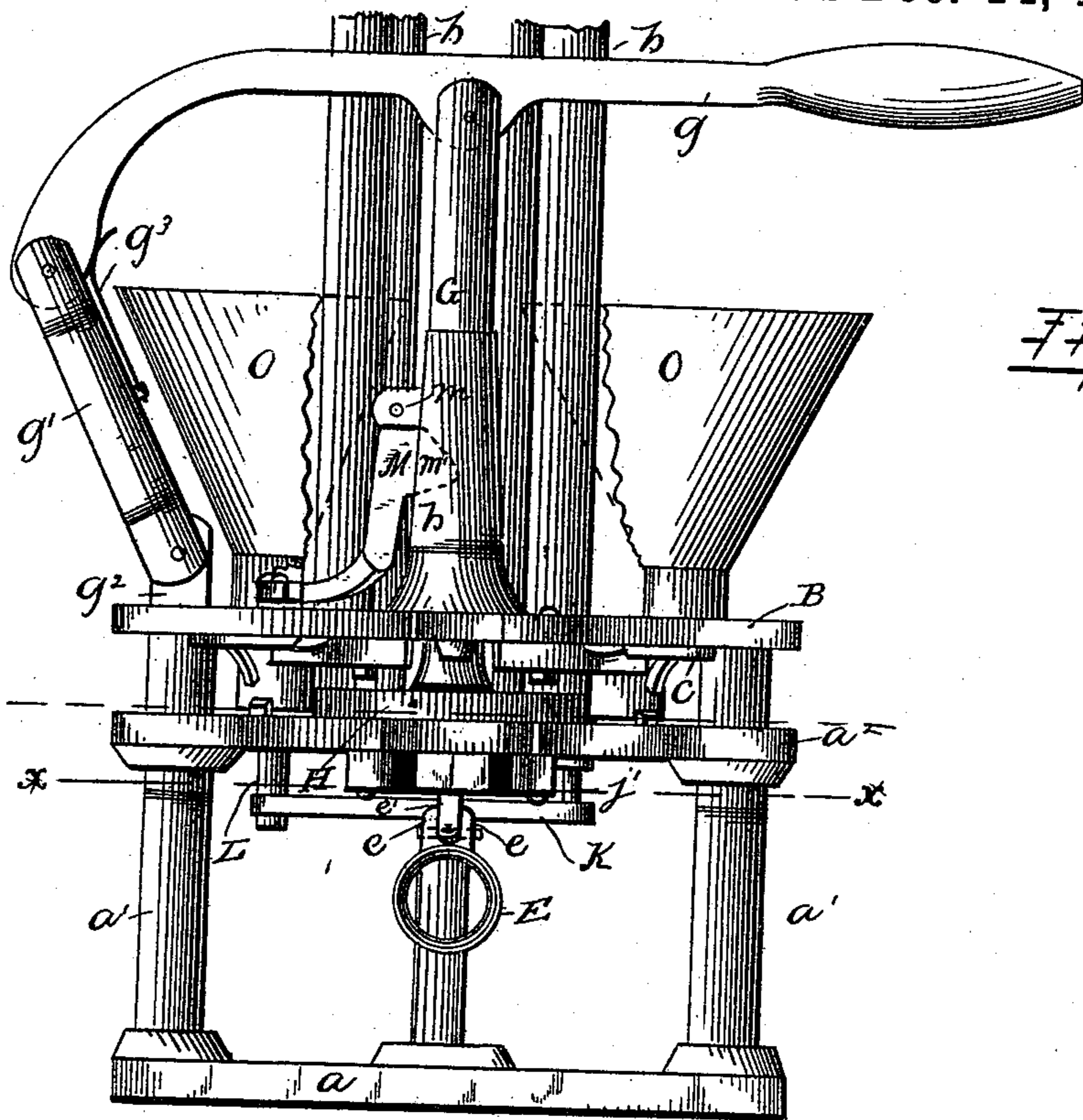
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J. E. STEELE.

CARTRIDGE LOADING MACHINE.

No. 354,264.

Patented Dec. 14, 1886.



WITNESSES

Phil. Masi.
B. Fugitt.

INVENTOR

John E. Steele
By Anderson & Smith
his Attorneys

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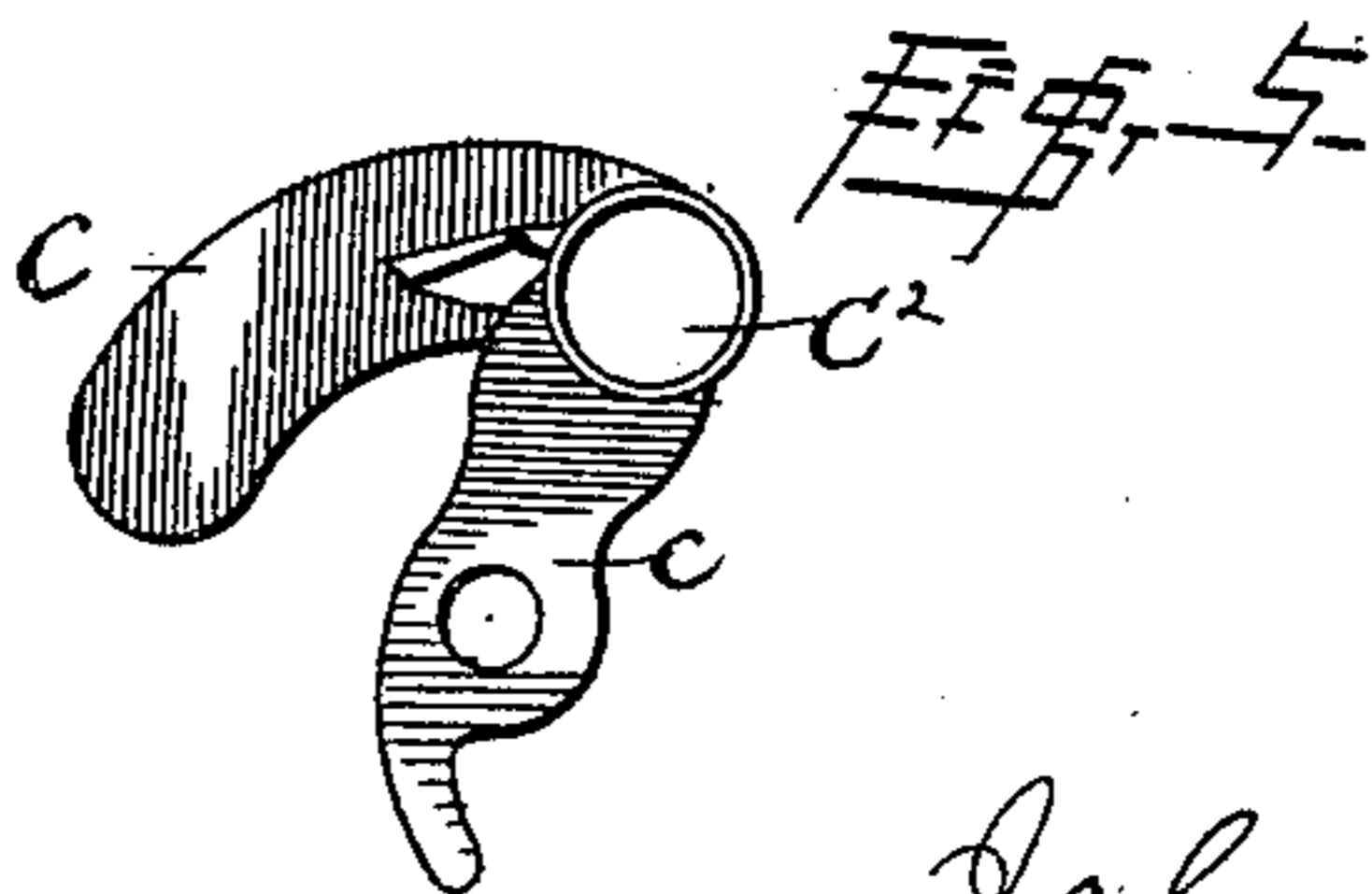
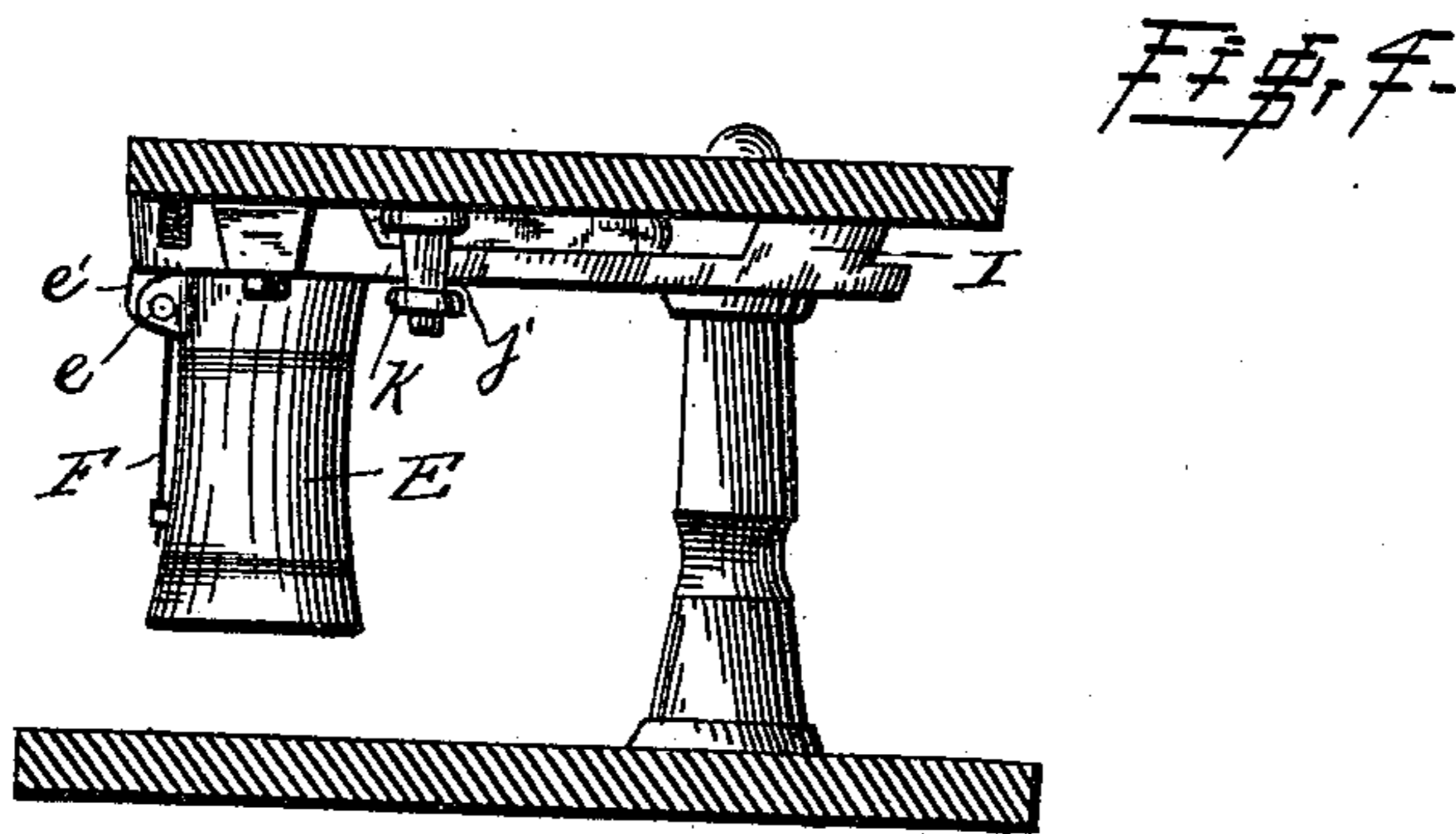
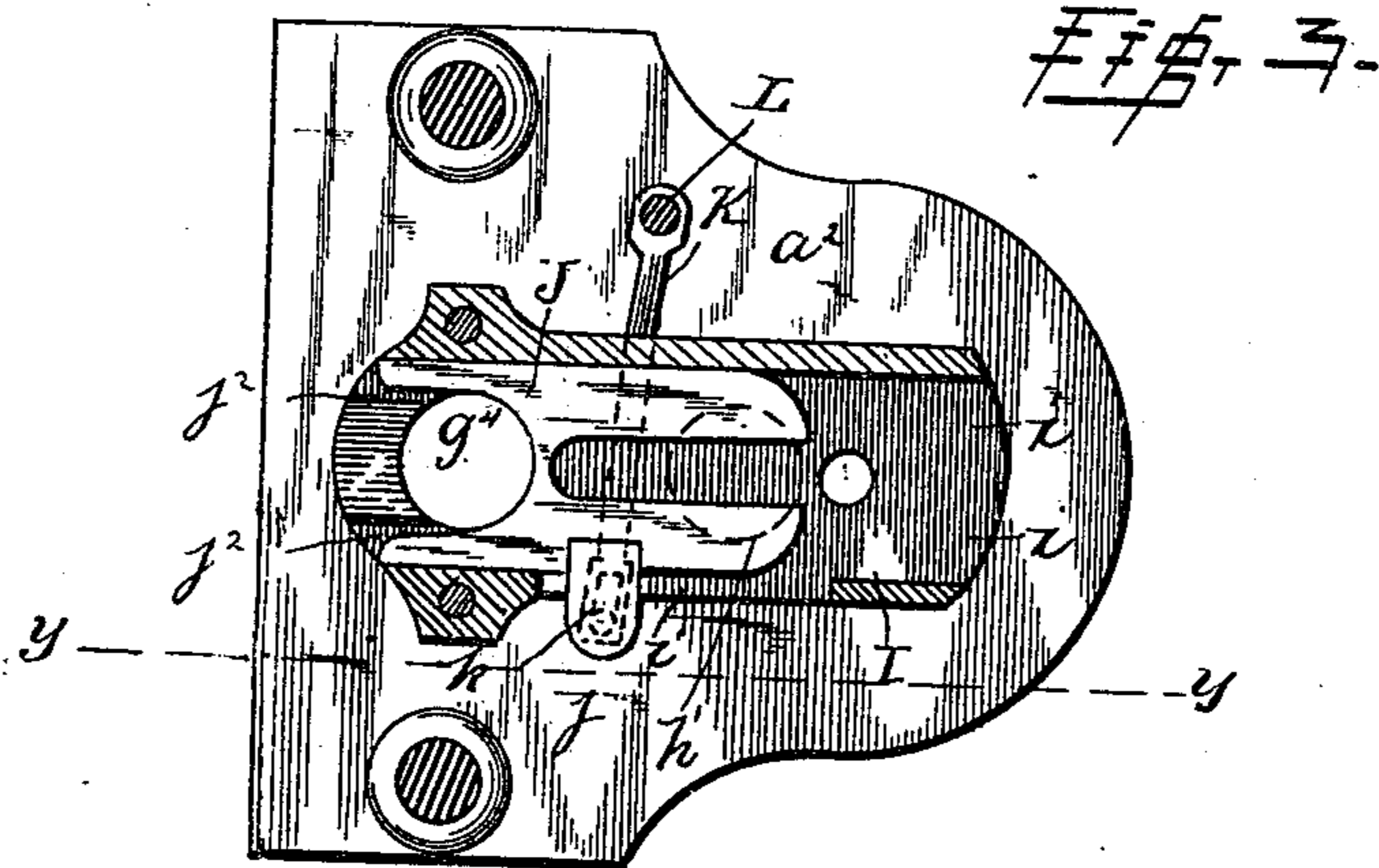
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Philet Masi.
B. Fugitt.

INVENTOR
John E. Steele
By *Anderson Smith*
his Attorneys

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3 Sheets—Sheet 3.

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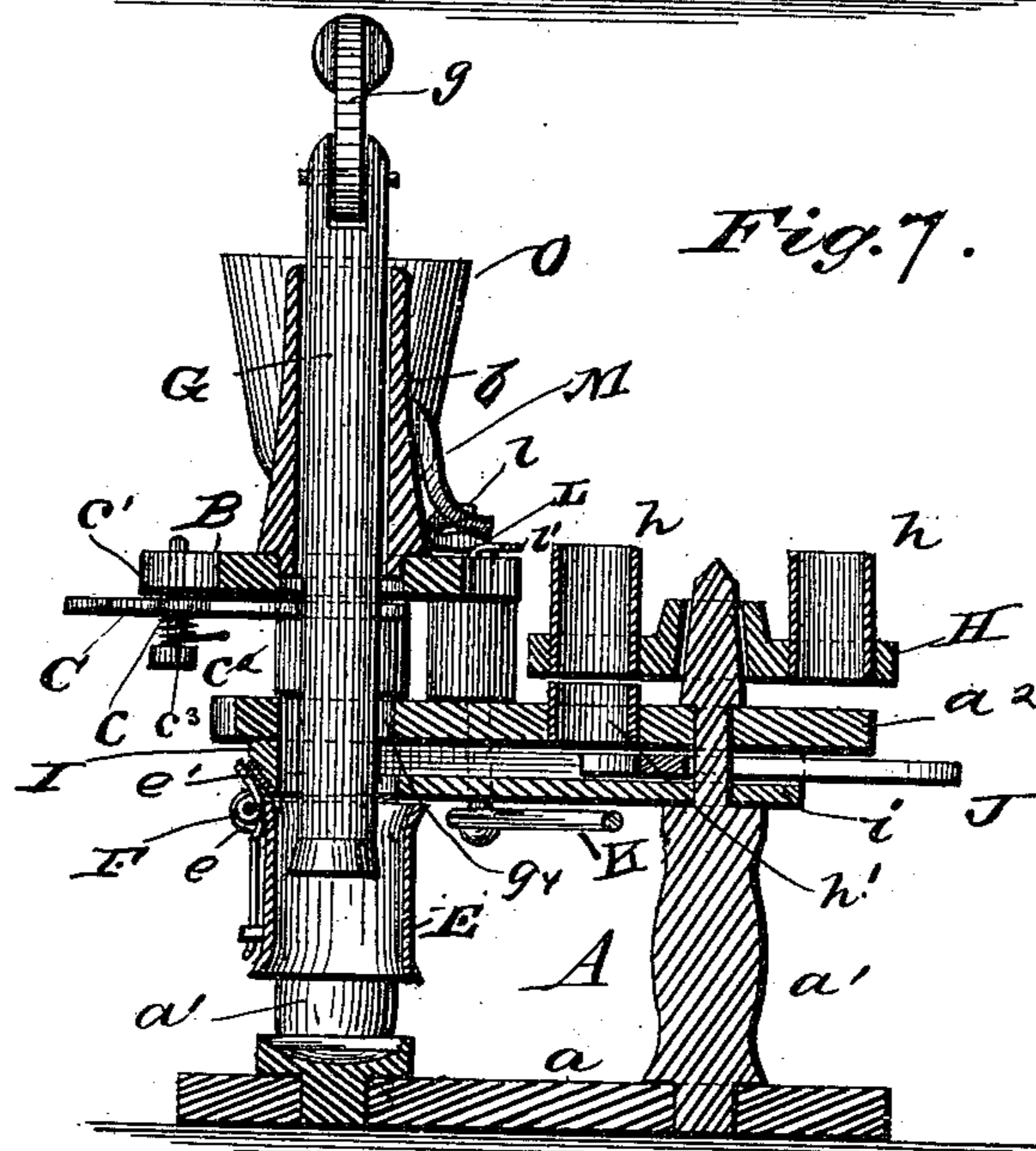
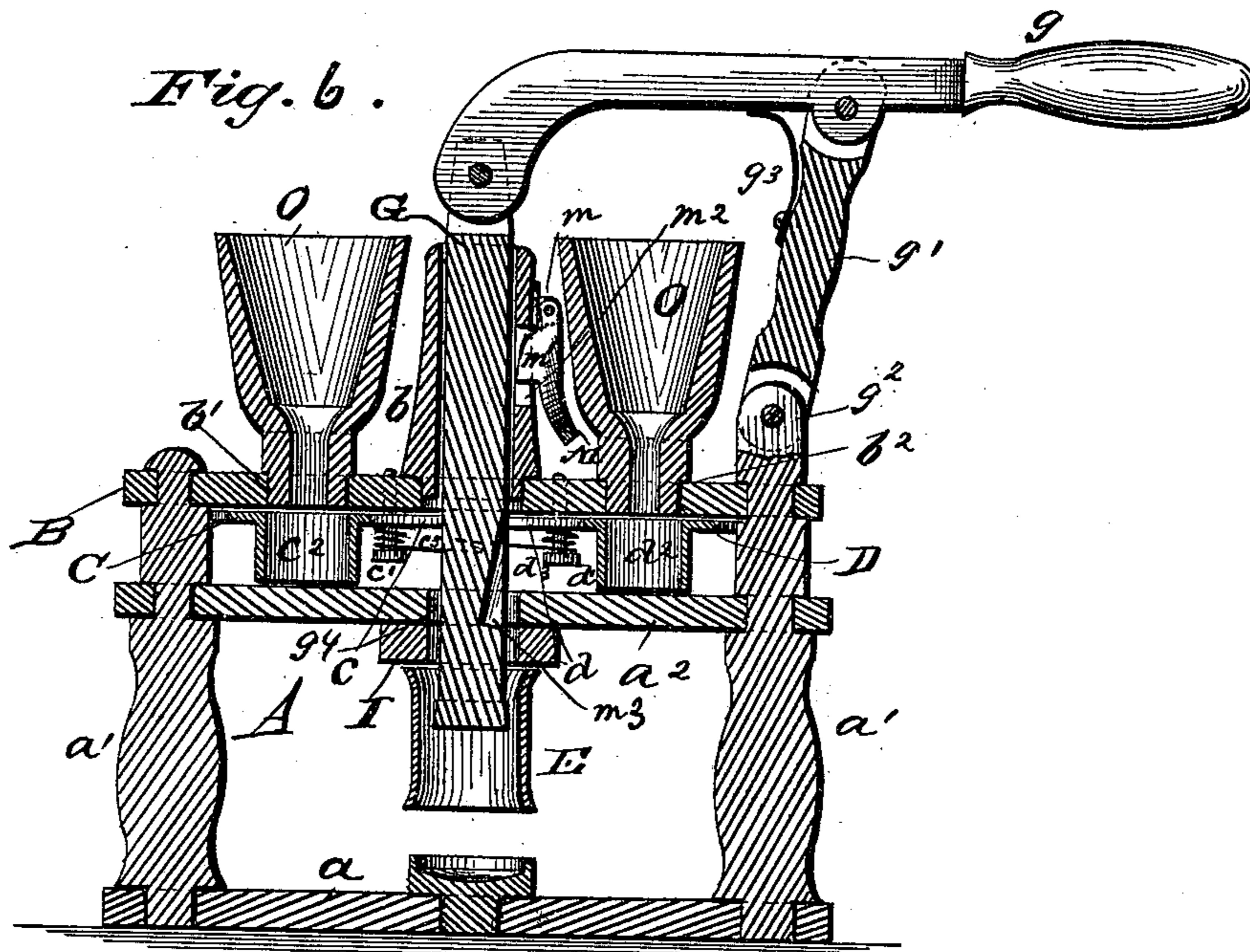
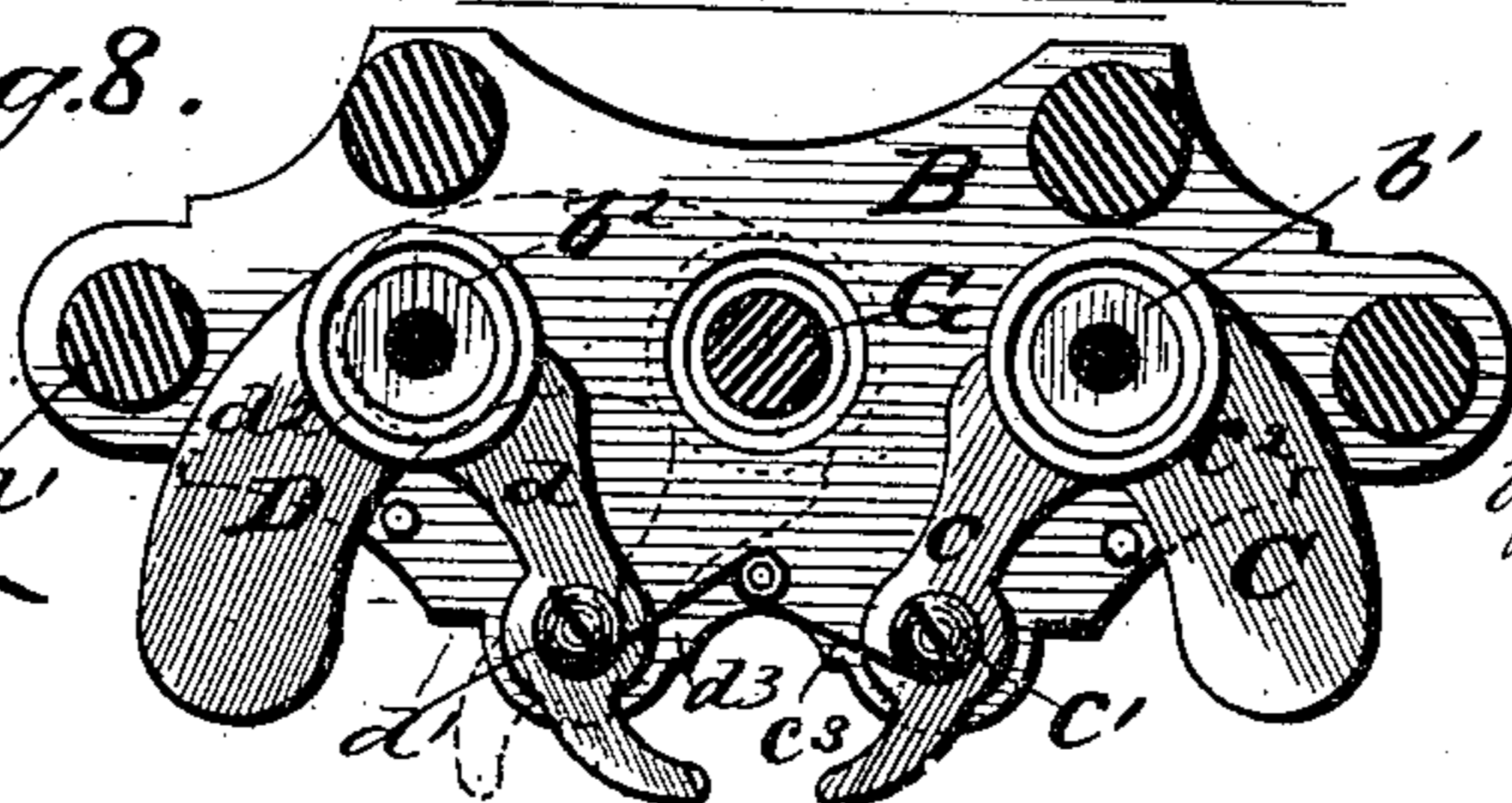


Fig. 8.

WITNESSES

Philemasi
Benj. Fugitt



INVENTOR

J. E. Steele,

by Anderson Smith
Attorneys

UNITED STATES PATENT OFFICE.

JOHN E. STEELE, OF MONTGOMERY COUNTY, NORTH CAROLINA.

CARTRIDGE-LOADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 354,264, dated December 14, 1886.

Application filed February 17, 1886. Serial No. 192,168. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. STEELE, a citizen of the United States, residing in the county of Montgomery and State of North Carolina, have invented certain new and useful Improvements in Cartridge-Loaders; 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 or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a side view of my improved machine with parts broken away. Fig. 2 is a plan view. Fig. 3 is a sectional view taken on the plane indicated by the dotted lines X X of Fig. 1. Fig. 4 is a sectional view taken on lines Y Y of Fig. 3. Fig. 5 is a detail view. Fig. 6 is a vertical central sectional view. Fig. 7 is also a vertical sectional view taken in a plane at a right angle to Fig. 6. Fig. 8 is an inverted plan and sectional view of the plate B and its attachments.

This invention relates to improvements in machines for filling cartridges, more especially adapted to fill that class of cartridges used in shotguns, and in which wad or wads form a part; and it consists in the construction and novel arrangement of parts, hereinafter described, and pointed out in the claims appended.

Referring to the accompanying drawings by letter, A designates the frame of the machine, consisting of the base-plate a , the pillars or supports a' , and the upper horizontal plate, a^2 , as shown. The two pillars a' , situated at the front end of the machine, extend through the plate a^2 and support the horizontal plate B, the plate being secured to their upper ends.

b is a hollow vertical standard rising centrally from the plate B, and serving a purpose hereinafter explained.

b' b^2 are circular openings through the plate B, situated at equal distances on each side of the standard b , as shown.

C is a plate made on the arc of a circle, and having an arm, c , pivoted on the under surface of the plate B at a point, c' , which corresponds with the center of the arc on which the

plate C is made. The arm c has an extension outward from its pivot-point, by means of which extension the curved plate C can be turned.

c^2 is a cylindrical shell or charger depending from the plate C and open at both ends. The charger c^2 is so situated that when the plate C is turned outward to the full extent of its travel it will stand immediately below the openings b' in the plate B.

The upper surface of the plate C is recessed around its pivot-point to accommodate a coiled spring, c^3 , one end of which is secured to the plate B and the other to the plate C. The function of the spring c^3 is to move the plate C outward after it has been turned inward by the hand on the extension of the arm c .

D is a plate, in all respects similar to the plate C, but situated on the opposite side of the standard b , at an equal distance therefrom.

d is the arm of the plate D, having an extension outward from its pivot-point d' .

d^2 is the charger of the plate D, and d^3 is the coiled spring in the recess around the pivot-point of said plate. The said parts are identical in construction and action with the corresponding parts connected to the plate C.

c^2 is the charger preferably used for inserting the powder in the shell, and d^2 for inserting the shot therein; but, if desired, c^2 may be used for the shot and d^2 for the powder. The said chargers are preferably made detachable from their respective plates, so that charges of different diameters and adapted to fill shells of different caliber may be attached thereto.

E is the cartridge-holder, preferably funnel-shaped at its lower end, so that the cartridge-shell can be inserted therein and removed therefrom, in which the shell is placed to be filled. The said cartridge-holder has on one side, near its top, the parallel lugs or ears $e e$, between which passes the lug e' , depending from the lower surface of a block, I, secured to the lower surface of the plate a^2 , and hereinafter described. The lugs e' and e are properly perforated and connected by a pin in said perforation, so as to form a hinge-joint, as shown.

F is a spring having its lower end secured by a screw or otherwise to the surface of the

cartridge-holder E, near the lower end of the same. The upper end of the spring F impinges against the edge of the lug e' , so that when the cartridge-holder is turned on its hinge-joint the spring by pressure on the lug e' holds the cylinder vertically.

G is a vertical plunger reciprocating in the hollow standard b , and g is a lever-handle, upon which the bifurcated upper end of the said plunger is pivoted, and by which the latter is actuated.

g' is a link-rod having its upper bifurcated end pivoted to the end of the arm of the lever g opposite that which carries the handle, and its lower bifurcated end pivoted to a lug, g^2 , rising from the plate B above the end of one of the pillars a' .

g^3 is a spring having its lower end secured to the link-rod and its upper end bearing against the lower edge of the lower handle, so as to raise the plunger after it has been depressed by the lever-handle.

g^4 is an opening running through the plate a^2 and block I, immediately above the upper end of the cartridge-holder E. The plunger G passes through the said opening and into the cartridge-holder when the lever-handle is depressed.

H is a disk pivoted through its center upon the rear portion of the plate a^2 , and having arranged on its upper surface, near its edge, the equidistant cylindrical hollow wad-holders h , all equally distant from the center of the disk. The said wad-holders open through the disk, and each in turn passes vertically above a circular opening, h' , in the plate a^2 to the rear of the plunger-opening g^4 , when the disk is rotated.

I is the block from which the lug e' depends. The said block runs from front to rear on the undersurface of the plate a^2 , and has at its front end the directing groove or way i for a traveler, hereinafter described. To the rear of its front portion the block I is hollow, and has a slot or cut-away portion, i' , on one side.

J is the traveler, reciprocating in the interior of the block I. The said traveler is I-shaped, having two front legs, which lie one on each side of an upward extension from the rear pillar, a' , between the block I and the plate a^2 , and are guided thereby.

j is a lug standing from the edge of the traveler through the slot i' , and provided with a depending pin, j' .

K is an arm provided at each end with a longitudinal slot, k , into which the pin j' extends, and having the other end secured below the plate a^2 to the lower end of a vertical shaft, L, which is journaled in the plates a^2 and B.

l is a pawl-shaped extension from the upper end of the shaft L above the plate B, and l' is a spring secured to said plate and arranged to turn the end of said extension inward.

M is a bar, having its upper end pivoted between the lugs m on the side of the hollow standard b , and its portion so bent that

its lower end impinges upon the inner edge of the extension l , as shown.

m' is a wedge-shaped extension having a curved inner edge, as shown. The said extension passes through a longitudinal slot, m^2 , in the standard b , and enters a correspondingly-shaped recess, m^3 , in the plunger, so that as the latter descends the wedge-shaped extension rides out of the recess and moves the bar M outward. This action turns the end of the extension l outward, partially rotating the shaft L, and by means of the arm K, pin j' , and lug j moving the traveler J inward.

The wads may be allowed to descend from their holders by gravity, passing through the opening h' into a similar opening in the central portion of the traveler; but it is preferable to force them down by a coiled spring acting against the follower n , placed upon the wads, and a cap secured to the top of the holders.

The method of operation is as follows: The powder being in the hopper O, of ordinary construction, situated above the opening b' , and the shot in the similar hopper, O, above the opening b^2 , the plate C is moved inward by the described means, carrying the powder in the charger c^2 to the plunger-opening g^4 . The powder that was retained in the charger by the plate a^2 then falls through said opening into the cartridge-shell X, inserted into the cartridge-holder F. The plunger is then depressed, as described, the traveler, with its contained wad, moved thereby over the opening g^4 , and the wad forced down on the powder by the continued descent of the plunger. The shot is inserted in the shell in a similar manner, a second wad forced down thereon, the cartridge-holder E turned, and the filled cartridge removed.

If desired, the wad-filling mechanism may be omitted and the charges modified to fill the shell with powder and ball.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cartridge-filler, the combination of the cartridge-holder swinging on the main frame beneath the same, the pivoted charger-carrying plate at one side of the cartridge-holder, and adapted to be brought into line by a spring that returns them to a position at one side of the said cartridge-holder, the charger secured to said plates receiving the filling material from the hopper on the main frame, the plunger entering the cartridge-holder, and mechanism, substantially as described, whereby the plunger is reciprocated, as set forth.

2. In a cartridge-filler, the combination of the reciprocating plunger, means, substantially as described, whereby the same is actuated, the plates carrying the shot and the powder chargers pivoted beneath the horizontal plate B, the springs to return the charger-plates after

the same have been moved inward, and the cartridge-holder pivoted to and swinging from the main frame in line with the movement of the reciprocating plunger, substantially as specified.

3. In a cartridge-filler, the combination of the reciprocating plunger, the pivoted spring-controlled charger-bearing plates, the spring-controlled chargers secured to their respective plates, the cartridge-holder provided with the lugs *e*, hinged to the lug *e'* on the block I, beneath the opening therein, and the spring F, secured to the cartridge-holder and adapted to bear against the lug *e'* and retain the cartridge-holder, substantially as specified.

4. In a cartridge-filler, the combination of the pivoted charger-bearing plates, the chargers secured thereto, the cartridge-holder swinging on the main frame, the reciprocating plunger, the wad-holders secured to the rotating disk H, which is centrally pivoted to the rear portion of the plate *a*, the reciprocating traveler receiving the wads from the wad-holders, and mechanism, substantially as described, whereby the traveler is reciprocated by the motion of the plunger, substantially as specified.

5. In a cartridge-filler, the combination, with the reciprocating plunger provided with the recess *m*³, and moving in the standard *b*, provided with the slot *m*², and powder and shot filling mechanism, constructed substantially as described, of the bar M, provided with the lug or extension *m'*, and pivoted to the side of the standard *b*, the shaft L, provided with the extension *l*, controlled by the spring *l'*, the slotted arm K, the traveler J, provided with the lug

j and pin *j'*, the hollow block I, having the guideways *i i*, the disk H, pivoted on the main frame, and the wad-holders *h h*, secured to said disk, substantially as specified.

6. The combination of the swinging cartridge-holder E, the pivoted charger-bearing plates C D, the chargers secured to said plates, respectively, the plunger moving in the hollow standard *b*, the link-rod *g'* on the plate B, connecting the plunger to the lug *g*², and the spring *g*³, secured to said link-rod to elevate the plunger after the same has been depressed, substantially as specified.

7. In a cartridge-filler, the combination of the main frame, horizontal plate B, and standard *b*, with the plates C and D, pivoted to and beneath the plate B, the chargers *c* and *d*, secured to the said plates, the plunger E, having the lateral recess *m*³, means, substantially as described, for actuating the plunger, the bar M, having the lug *m*, passing through the slot in the standard *b*, the vertical shaft L, having the extension *l* at its lower end controlled by the spring *l'*, secured to the plate B, the slotted lever K, the traveler J, having the lug *j* and pin *j'*, the hollow block I, having guideways *i i*, the disk H, pivoted on the main frame, and the wad-holders *h h*, secured to said disk, all constructed and arranged substantially as specified.

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

JOHN E. STEELE.

Witnesses:

THEO. MUNGEN,
PHILIP C. MASI.