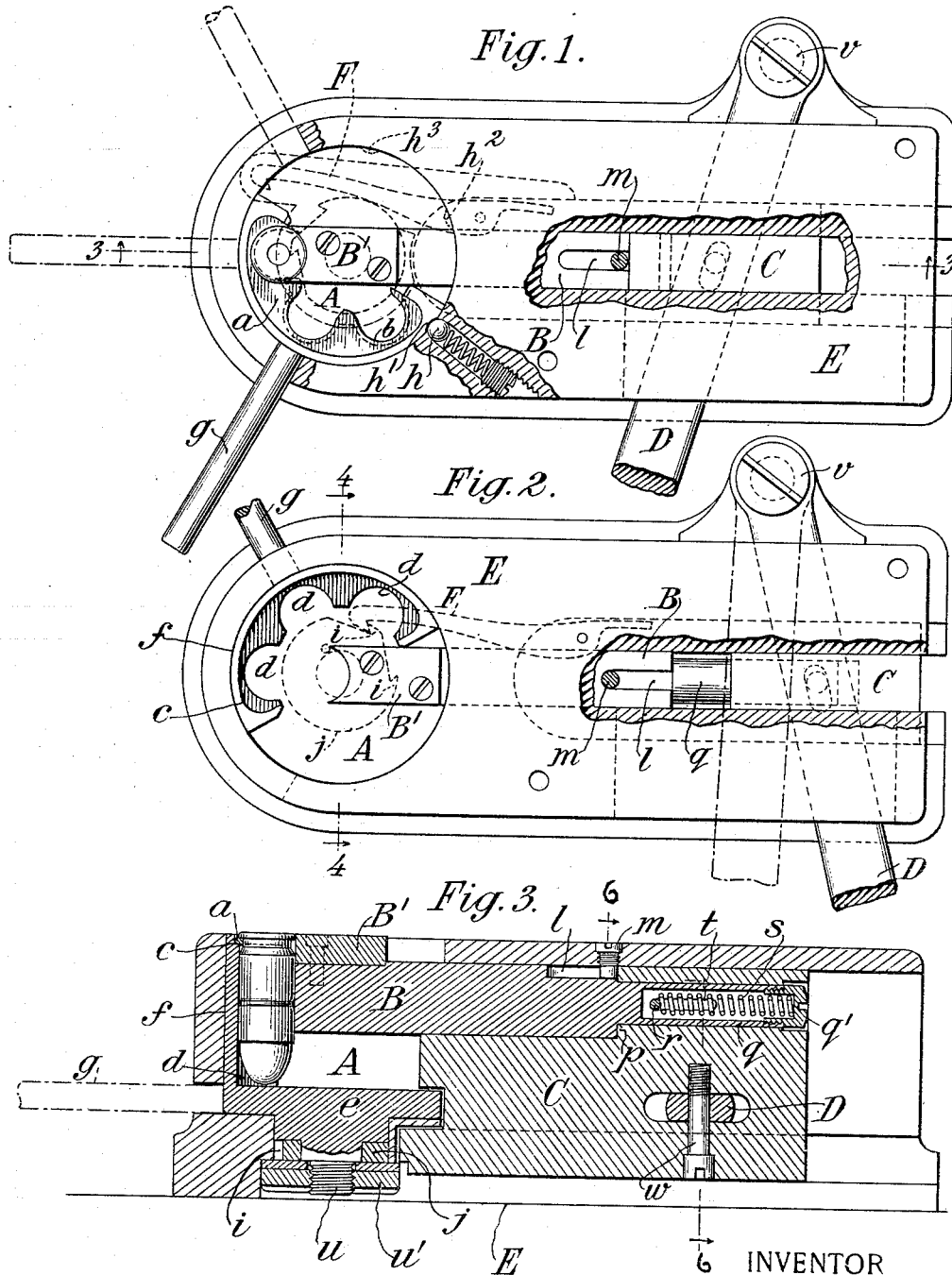


1,267,026.

J. H. WESSON.
CLIP LOADING MACHINE.
APPLICATION FILED MAY 24, 1917.

Patented May 21, 1918.
2 SHEETS—SHEET 1.



WITNESSES:
Rene Guine
J. Wallace

INVENTOR
Joseph H. Wesson
By Attorneys,
Draser, Surle & Myers

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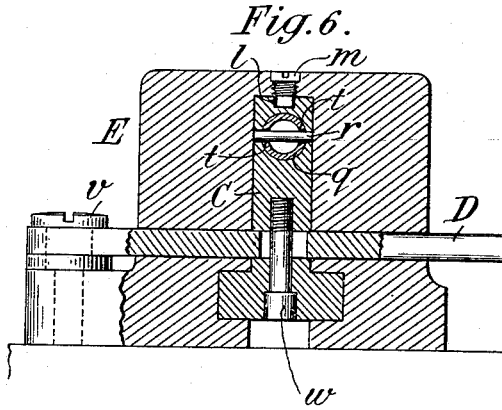
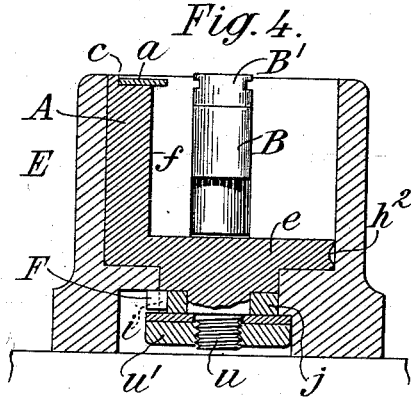


Fig. 5.

Fig. 10.

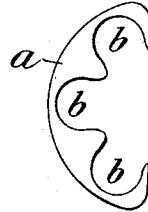
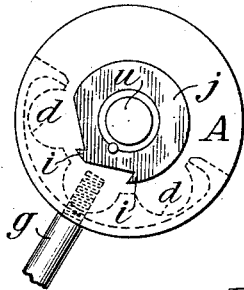


Fig. 7.

Fig. 8.

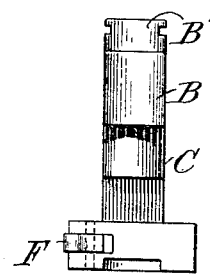
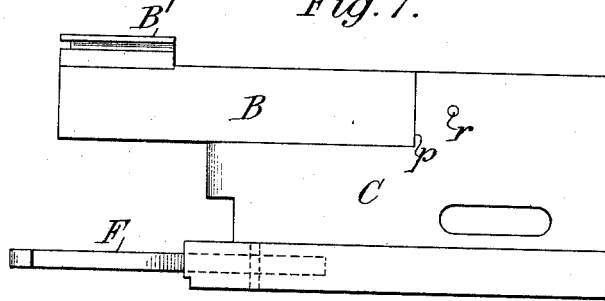


Fig. 9.

WITNESSES:
Russell Quinn
J. Wallace

INVENTOR :
Joseph H. Wesson
By Attorneys,
Draser, Dunk & Myers

UNITED STATES PATENT OFFICE.

JOSEPH H. WESSON, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO SMITH & WESSON,
OF SPRINGFIELD, MASSACHUSETTS, A VOLUNTARY ASSOCIATION.

CLIP-LOADING MACHINE.

1,267,026.

Specification of Letters Patent.

Patented May 21, 1918.

Application filed May 24, 1917. Serial No. 170,583.

To all whom it may concern:

Be it known that I, JOSEPH H. WESSON, a citizen of the United States of America, residing in Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Clip-Loading Machines, of which the following is a specification.

This invention provides a machine for loading cartridges into clips in order to constitute loading packs. The machine is especially designed for loading such clips for revolvers. The particular clip for which the embodiment of the invention herewith illustrated is designed is one for holding three (more or less) cartridges in circular order, being one-half (or other fraction) of the group of cartridges to be loaded into the cylinder of a revolver. Such segmental clips are set forth in my application, filed April 3, 1917, Serial No. 159,388.

Figure 1 of the accompanying drawings is a plan of the loading device, being partly broken away in horizontal section.

Fig. 2 is a plan thereof, showing the parts in a different position and being also partly in horizontal section.

Fig. 3 is a vertical longitudinal section on the line 3—3 in Fig. 1.

Fig. 4 is a transverse section on the line 4—4 in Fig. 2.

Fig. 5 is an under side plan of the oscillating chamber.

Fig. 6 is a transverse section on the line 6—6 in Fig. 3.

Figs. 7 and 8 are side and front views of the reciprocating slides.

Fig. 9 is a plan thereof, partly in horizontal section.

Fig. 10 is a plan of the clip to be loaded.

The drawings illustrate a hand-operated machine for loading three successive cartridges into a clip having three recesses. The invention may, however, be embodied in an automatic machine.

The clip *a* to be loaded is shown in Fig. 10. It consists of a stamping of resilient sheet metal having an annular outer portion with inward projections forming between them three cartridge sockets or recesses *b b*, the mouths or entrances to which are slightly narrower than the body of the

recess so that the cartridges have to be forced in under some slight pressure and when entered are held with sufficient firmness for the purpose.

The apparatus comprises a rotatable chamber *A* open on top and having a slight recess *c* in its upper part for receiving the clip; beneath this the wall of the chamber has three vertical grooves or sockets at *d d* for admitting and guiding the cartridges as they are put into place in the clip. The chamber *A* as shown has the form of a disk *e* at the bottom with a wall *f* occupying about one-half its circumference, the other half being cut away to admit the entry of a reciprocating plunger or ram *B*. The chamber *A* has a radial handle *g* for turning it to its successive positions.

The plunger *B* is shown as a slide which is mounted upon a slide *C* (see Figs. 7 and 8), the two being connected by a spring connection which permits of a limited extent of movement of the one independently of the other. The slide *C* is engaged and reciprocated by a lever *D* which may be operated by hand or otherwise.

The main moving parts thus described are all carried by a main frame or housing *E* which is formed with a suitable base adapted to be screwed down to a work-bench. It is suitably slotted to admit the movement of the lever *D* and has a pivot screw for the fulcrum of this lever. It forms the slideway for the slides *C* and *B*. It forms also the bearing for the chamber *A* and has an arc-shaped slot for permitting the swinging movement of the arm *g*.

The operation may now be understood. The operator drops a clip *a* into the recess *c* of the chamber. Then bringing the parts to the position shown in Fig. 1, he drops a cartridge down in front of the curved end of the plunger *B* and moves the lever *D* to thrust forward the plunger *B* and thereby push this cartridge into the socket *b* of the clip; and then withdraws the plunger to its original position. Then (by means of the handle *g* or otherwise) he turns the chamber *A* to bring the next socket of the clip into line with the plunger. He then drops another cartridge and repeats these operations. A third repetition results in

fully charging the clip, whereupon he lifts out the cartridge pack and repeats the performance.

At each turn of the chamber it is held in its proper position by a spring catch or latch which is conveniently constructed as a spring-pressed ball *h*, the ball entering partially into three successive sockets in the chamber, one of which is shown at *h'* in Fig. 1 and the two others are indicated in dotted lines at *h²* and *h³*.

It is desirable to relieve the operator of having to turn the cylinder after each stroke of the plunger, and for this purpose an automatic turning or feeding device is provided, which is shown as consisting of a ratchet and pawl, the ratchet being formed as teeth *i* on a hub portion *j* at the bottom of the chamber A; and the pawl being shown as a hooked arm F carried by the slide C and having a tail which receives the pressure of a spring *k* (Fig. 9). At each back stroke of the slide C the pawl F engages one of the ratchet notches *i* and turns the chamber A the requisite distance to bring the next socket of the clip into line with the plunger.

It is desirable that this feeding movement for turning the chamber be performed after the plunger B has moved back to its normal position and while it remains stationary in such position (being the position shown in Fig. 2). To accomplish this the slide C is given a backward movement in excess of that of the plunger B. In the backward movement the plunger B is stopped by the end of a slot *l* therein striking a stop screw *m* (see Fig. 2), whereupon the continued backward movement of the lever D carries the slide C back sufficiently to cause the pawl F to turn the chamber A. This brings the slide C and lever D to the positions shown in Fig. 2. On the next forward stroke the pawl moves forward on the ratchet, the chamber being held by the spring bolt *h*. Presently the slide C encounters the plunger B by the abutment of their shoulders *p* (Fig. 3), and thereafter carries the plunger B forward for the next active stroke. The separation of the plungers B and C is permitted by the spring connection already referred to which is conveniently constructed as shown in Figs. 3 and 6. The plunger B has a tubular extension *q* closed at the rear end by a cap *q'* and inclosing a spring *s* which reacts at its front end against a pin *r* which is seated in the slide C (Figs. 6 and 7) and works in a slot *t* in the tube *q*. The spring thus presses rearwardly on the plunger B and forwardly on the plunger C tending to hold them in their united position which is shown in Fig. 7.

After the three cartridges have been assembled in the clip and either before or after the resulting pack is removed, the op-

erator will manually oscillate the chamber A back to the starting point by means of the arm *g*.

Some unimportant details are shown which may be briefly described. The plunger B has a top piece B' fastened on it in order to extend its working face as high as the base of the cartridge. The chamber A is held against upward displacement by having a screw shank *u* on which is screwed a nut *u'*. The lever D is pivoted on a screw stud *v* and passes through a slot in the base E and in the slide C, being itself slotted and engaging a screw pin *w* which enters its slot and is seated in the slide C. These and other details of construction may, of course, be widely varied according to preference or the precise form of cartridge or clip with which the machine is to be used.

The device thus shown and described affords in the hands of a skilled operator a means of charging clips which increases the rate of production very materially over what is possible by hand loading.

The revolving or oscillating chamber A is best made with its wall *f* of varying thickness so as to form depressions beneath and alined with the clip sockets *b b*, these depressions receiving the cartridges in order to assist in guiding them correctly into place.

While I have referred to the revolving member as a chamber, it will be understood that its function is essentially that of a holder for the clip and for the cartridges which are successively pushed into place in the clip, and that its form and arrangement and mounting may be widely varied without departing from the essential features of the invention.

My invention is to be distinguished from machines for introducing cartridges into cartridge belts, in which the cartridges are pushed endwise into successive pockets in the belt, the latter being fed forward from one pocket to the next after each cartridge is introduced. It is also to be distinguished from those clip-loading machines which assemble a group of cartridges in line side by side and then unite them by means of a metal clip which is substantially straight and has side flanges which embrace the cartridge rims between them; such clips, which are designed for magazine rifles, in which the cartridges are fed up through the breach of the rifle from a magazine beneath, are located to the rear of the cartridge bases and hold the cartridges in a straight row, whereas the clips which my invention is designed for loading are of flat metal plate in curved or arc-shaped form, having radially directed sockets for the cartridges (opening either inwardly or outwardly), and holding the cartridges separated and in circular order by engaging their necks in a plane forward of the cartridge bases.

I claim as my invention:—

1. A clip loader comprising an oscillatable holder for the clip and means for pushing successive cartridges by a sidewise movement into the sockets of the clip. 5
2. A clip loader comprising a holder adapted to receive and hold a flat resilient clip having radially-opening sockets, and means cooperating therewith for successively pushing cartridges into the open sides of the sockets of the clip so held. 10
3. A clip loader comprising an oscillatable holder for the clip and reciprocating means for pushing successive cartridges by a sidewise movement into the sockets of the clip. 15
4. A clip loader comprising an oscillatable holder for an arc-shaped clip having radially-opening sockets, means for intermittently turning it, and a reciprocating plunger for pushing successive cartridges by a sidewise movement into the sockets of the clip. 20
5. A clip loader comprising an oscillatable holder for the clip adapted to receive and hold a flat resilient clip having radially-opening sockets, a reciprocating plunger, and means for alternately turning the holder and advancing and retracting the plunger. 25
6. A clip loader comprising means for holding an arc-shaped clip having radially-opening sockets, and means for pushing successive cartridges into the sockets of the clip, the one means reciprocating relatively to the other to so introduce the cartridges, and the respective means being operated during the successive pushing strokes in different radial directions relatively to the clip, corresponding to the angular radial arrangement of the sockets of the clip. 30
7. A clip holder comprising means for holding an arc-shaped clip having internally opening sockets, and means cooperating therewith for pushing successive cartridges from a position approximating the center of the arc of the clip in an outward radial direction into the successive sockets of the clip. 35
8. A clip loader comprising an oscillatable holder having a recess for admitting a clip, and reciprocating means for pushing successive cartridges by a sidewise movement into the sockets of the clip. 40
9. A clip loader comprising an oscillatable holder for the clip and a reciprocating plunger for pushing successive cartridges into the sockets of the clip, combined with a base having a socket in which said holder may turn, and a slideway for guiding said plunger. 45
10. A clip loader comprising an oscillatable holder for the clip, a reciprocating plunger, receiving a cartridge in position perpendicular to the movement of the plunger, and intermediary means whereby the reciprocating movements of the plunger are communicated to intermittently turn the holder. 50
11. A clip loader comprising a holder adapted to receive a flat resilient clip having radially-opening sockets, and means for pushing successive cartridges into the sockets of the clip comprising a plunger and means for reciprocating it, with an interposed pawl and ratchet device for intermittently turning the holder during the retractile strokes of the plunger. 55
12. A clip loader comprising an oscillatable holder for the clip, a reciprocating plunger, and a slide for moving said plunger, said slide having a movement independent of the plunger, and means between said slide and holder for turning the latter during said independent movements of the slide. 60
13. A clip loader comprising an oscillatable holder, a reciprocating plunger, a slide having a spring connection with the plunger and adapted to execute a retractile movement beyond that of the plunger, means for intermittently turning the holder during such retractile movement, and means for reciprocating the slide. 65
14. A clip loader comprising means for holding a flat resilient clip having laterally-opening sockets, and means for pushing cartridges sidewise into the sockets of the clip through the open sides of said sockets. 70
15. A clip loader comprising a holder for a flat resilient clip having lateral sockets, the holder having a recess for receiving the clip and means for assembling cartridges in said sockets by a sidewise movement in the plane of the clip by successively pushing the cartridges through the open sides of the sockets. 75
16. A clip loader comprising a holder for a flat resilient clip having lateral sockets with contracted entrances, and means for assembling cartridges in said sockets adapted to force them sidewise into said sockets through their contracted entrances. 80

In witness whereof, I have hereunto signed my name. 85

JOSEPH H. WESSON. 90