No. 676,371. Patented June 11, 1901.

R. W. SCOTT.

CARTRIDGE CLIP.

(Application filed Dec. 10, 1900.)

(No Model.) 2 Sheets—Sheet 1.

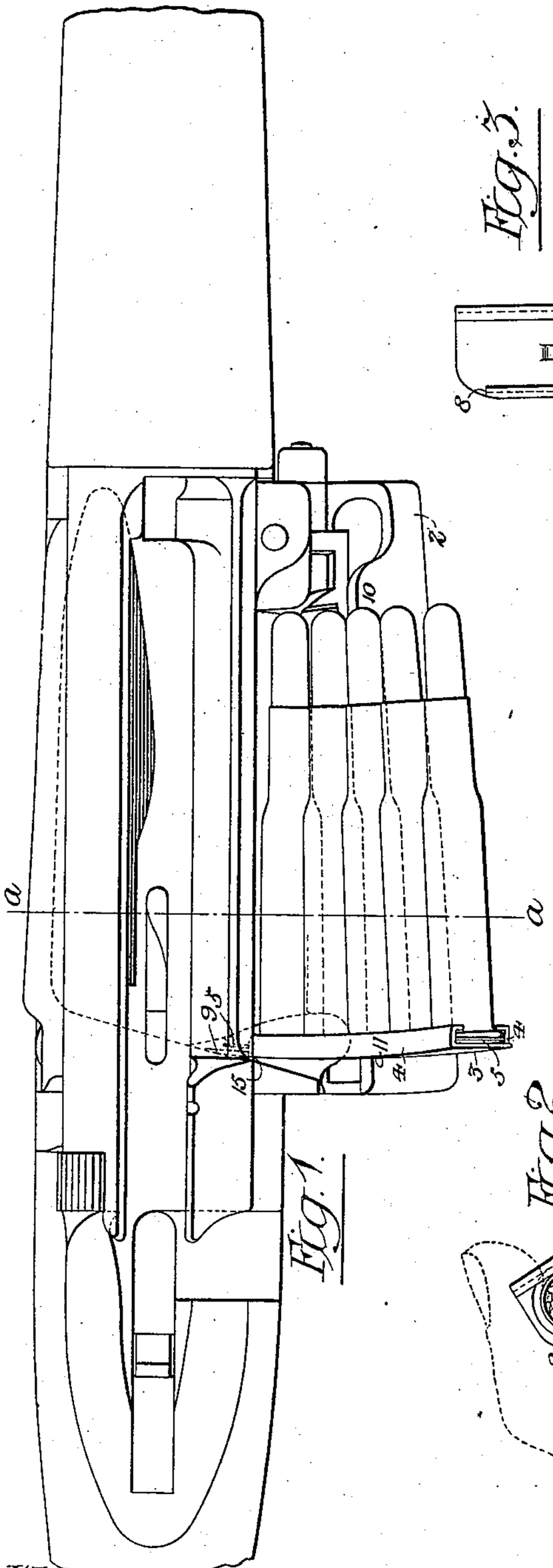

Fig. 1.

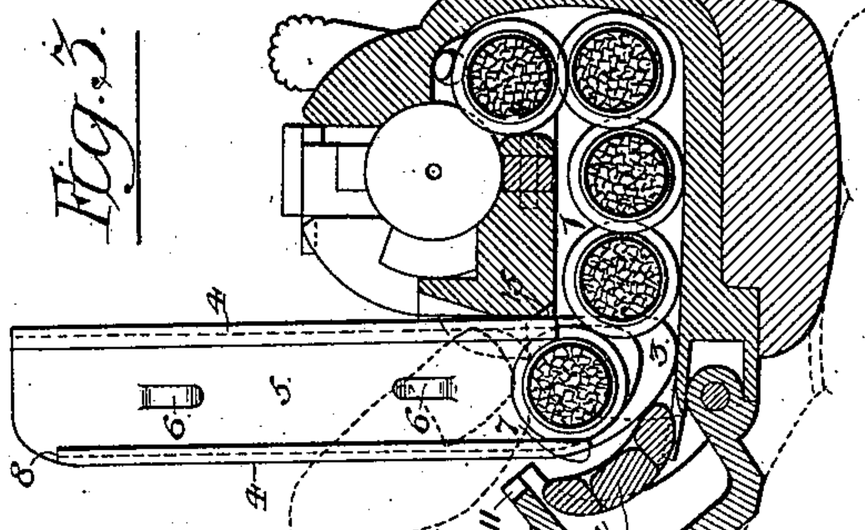

Fig. 3.

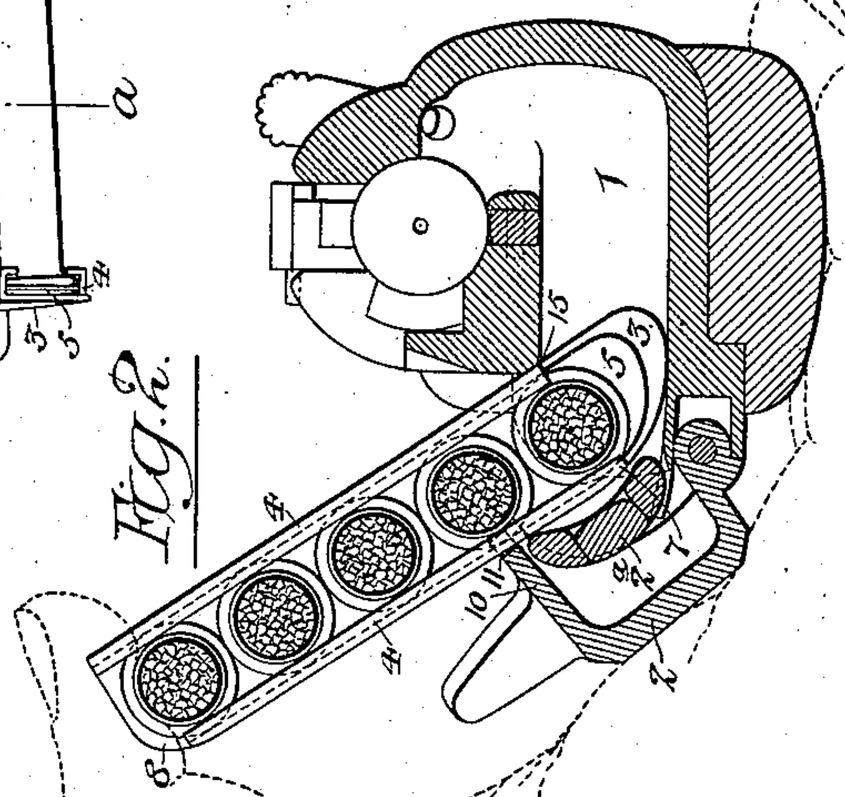

Fig. 2.

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Inventor
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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Fig. 4.

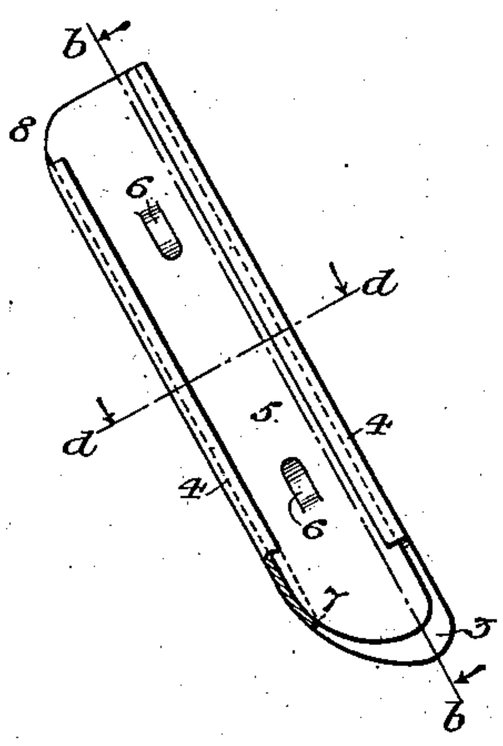


Fig. 5.

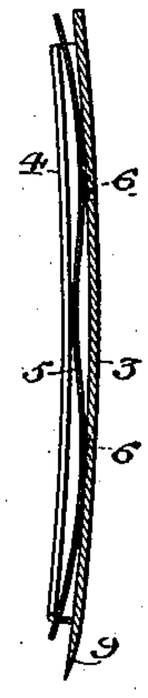


Fig. 8.

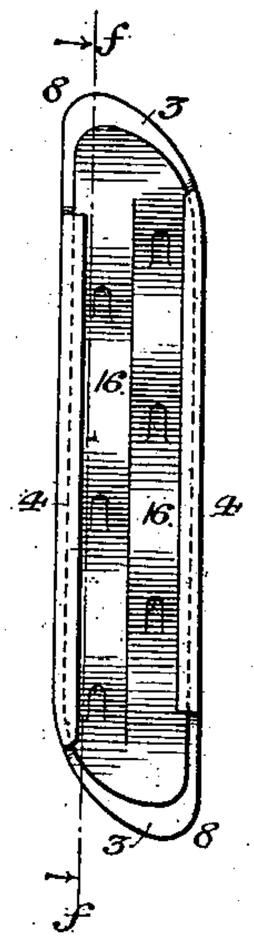


Fig. 6.

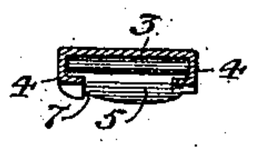


Fig. 9.

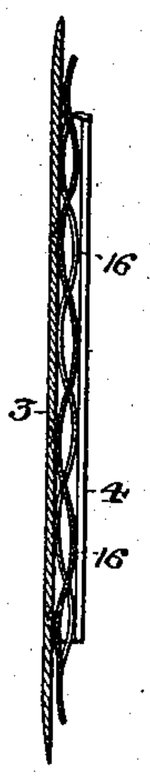
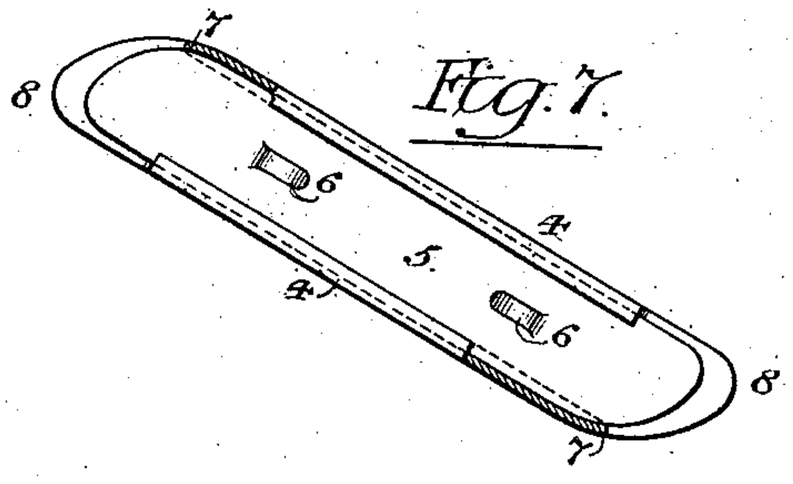


Fig. 7.



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by his Attorneys:-

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UNITED STATES PATENT OFFICE.

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CARTRIDGE-CLIP.

SPECIFICATION forming part of Letters Patent No. 676,371, dated June 11, 1901.

Application filed December 10, 1900. Serial No. 39,387. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. SCOTT, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Cartridge-Clips for Magazine-Rifles, of which the following is a specification.

The object of my invention is to provide a simple, convenient, and effective form of clip or charger whereby a number of cartridges constituting the magazine charge for a modern rifle can be conveniently carried and introduced rapidly and with accuracy into a magazine having a side opening—such, for instance, as that of the United States magazine-rifle, caliber .30″, and others of the same class. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of sufficient of a magazine-rifle to illustrate the manner of loading the magazine with cartridges contained in a clip in accordance with my invention, the side gate being open and the clip of cartridges adjusted into position to permit the cartridges to be pushed from the clip into the magazine. Fig. 2 is a view, partly in elevation and partly in transverse section on the line *a a*, Fig. 1, looking rearwardly or toward the stock of the gun. Fig. 3 is a similar view showing the cartridges being pushed from the clip into the magazine. Fig. 4 is a face view of the clip, partly in section. Fig. 5 is a section on the line *b b*, Fig. 4. Fig. 6 is a section on the line *d d*, Fig. 4. Fig. 7 is a view of a reversible clip, embodying my invention. Fig. 8 is a face view of a clip with special form of spring in accordance with my invention; and Fig. 9 is a section on the line *f f*, Fig. 8.

In rifles of the United States magazine .30″-caliber type the magazine 1 is below the channel in which works the longitudinal bolt, whereby the cartridge is pushed into the breech end of the barrel and the empty shell is extracted therefrom, such magazine opening at the right-hand side of the action, at which point there is a swinging gate 2 for closing said open end of the magazine, this gate having a spring-follower 2^a for feeding the cartridges across the platform formed by the bottom of the magazine, so as to bring them successively into range of the longitudinally-reciprocating breech-bolt. So far as I am aware no effective clip has heretofore been devised for carrying the five cartridges constituting the magazine-charge for a rifle of this class, although such a clip is highly desirable because the use of a clip permits the entire series of cartridges to be pushed into the magazine-chamber at one operation, and thereby provides for the loading of the magazine more quickly than when the cartridges have to be introduced one by one. My invention has therefore been designed with the view of providing a clip whereby the side-opening magazine of a gun of this class can almost instantly receive its charge of cartridges and be closed, so as to retain the same.

The clip consists of a plate 3 of sheet metal having at each edge L-shaped flanges 4, forming guides for the heads of the cartridges, said clip containing a spring-plate 5 for bearing upon said heads and exerting such pressure thereupon as to prevent their accidental release from the clip. This spring may be retained in place in the clip in any desired manner, the preferable method of accomplishing this result being to strike up from the metal of the spring tongues 6, which project into openings in the plate 3 and serve to lock the spring longitudinally to the latter. One of the flanges of the clip is shorter than the other, so as to permit the heads of the cartridge to emerge from the clip on that side only, and the outer wall of the opposite flange is slightly curved—as, for instance, at 7—in order to impart to the cartridges their initial direction of movement as they are being discharged from the clip.

The bottom of the trough-like structure constituting the clip projects beyond the flanges and is rounded or beveled, so that the clip can readily assume different angles in respect to the bottom of the magazine 1 of the gun. Hence when the row of cartridges is forced from the clip by pressure exerted upon the outer cartridge of the row the cartridges will pass from the clip between the bottom of the magazine and the end of the

short flange by a free and unobstructed movement, even when the clip is held in a vertical position, or nearly so, as in Fig. 3, when the last cartridge is leaving the same.

The essential feature of my improved clip is the extension of the bottom of the trough-like structure beyond the end of the short flange to an extent equal to the width of the cartridge-head, so that the heads of the cartridges can pass freely between the end of said short flange and the bottom of the magazine, the pressure required to strip the cartridges from the clip being sustained by the end of the clip itself and not by the cartridges, whether the clip is held in a position at right angles to the bottom of the magazine or at a flatter angle, as when the clip is first inserted.

That portion of the bottom of the clip which constitutes the upper outer corner when the clip is inserted into position on the gun is rounded, as shown at 8, so as to permit the thumb to pass down outside of said clip without risk of injury by contact with a sharp corner.

If desired, the clip may be made reversible—that is to say, it may have the short flange and extended bottom of the trough at each end, as shown, for instance, in Fig. 7—so that the cartridge may be delivered from either end of the clip and the latter may be used either end up.

In magazine-rifles of the class noted, which are now in use, the magazine is so contracted in longitudinal dimensions that there is just enough space for the cartridges to enter it. Hence I find it desirable to slightly bend or bevel the projecting portion of the trough-like clip—as shown, for instance, at 9 in Fig. 5—in order that the same may conform to the angle of the rear wall of the magazine, as shown in Fig. 1, and thus permit the support of the clip in such position that the cartridges can readily pass therefrom into the magazine.

To insure the proper feeding of the cartridges into the magazine, it is necessary that the clip shall be held with comparative rigidity in the direction of the length of the gun, and for this reason I form in the flange 10, with which the swinging gate 2 is provided, a notch 11, into which the edge of the clip can be entered and which serves not only to hold the clip at a proper angle in respect to the magazine, but also to prevent the bullet held in the neck of the cartridge from coming into contact with the platform or floor of the magazine, as would be the case if the charged clip was not prevented by the restraining influence of the guide-notch in the gate from tilting forwardly and downwardly. Obviously if the bullet end of the cartridge should rest on the platform before the head of the cartridge had passed out of the clip part of the pressure required for stripping the cartridges from the clip would be sustained by the bullet end of the lowermost cartridge, and this would result in locking the rim of the cartridge under the flanges of the clip, and thus prevent the free delivery of the cartridges from the clip and into the magazine.

It will be noted that in the use of my improved clip the cartridges are introduced into the magazine by pressure and not as in ordinary practice by their own gravity, for when the latter method is adopted there is danger, in the case of rim-cartridges, of the rim of the leading cartridge overlapping the rim of the next following cartridge. Hence when the edge of the bolt contacts with the rim of the leading cartridge when about to carry it forward and into the chamber of the gun the pressure is really exerted upon both the leading cartridge and the following cartridge which its rim overlaps, and as the cartridge not directly engaged by the bolt is still below the exit-aperture of the magazine a jam results, and under the pressure applied the rims of one or both cartridges may be torn away, making subsequent extraction uncertain, or the projectile of the cartridge which is below the exit-aperture of the magazine may be forced back upon the explosive charge of the cartridge, so as to compress the latter and cause excessive generation of pressure when it is fired. The probability of such overlapping of the cartridge-rims is much greater where cartridges are used which are shorter over all than the service or standard cartridge. For instance, if multishot-cartridges of the character set forth in my application for patent filed November 18, 1899, Serial No. 737,510, are fed by gravity into the magazine it is difficult to prevent improper overlapping of their rimmed heads, because of their play in the magazine in the direction of their length. When, however, such cartridges are fed from my improved clip by pressure, their heads contact with the inclined or angled rear wall of the magazine as soon as they pass out of the clip, and the rim of each cartridge naturally assumes such position as to underlap the rim of the cartridge which follows it.

Besides forming the notch 11 in the flange of the swinging gate to constitute a guide and retainer for the outer edge of the clip I prefer also to form a notch or guide 15 in the upper lip of the mouth of the magazine, this notch receiving the upper edge of the clip, and thus providing for the rigid longitudinal retention of both edges.

When the swinging gate has been opened, as shown in Fig. 1, and the clip, with its charge of cartridges, has been entered in the guide-notches, the cartridges can be instantly forced from the clip into the magazine by the pressure of the thumb on the outermost cartridge of the row, as in Fig. 2, and as this pressure is continued the thumb swings down in front of the clip and the latter is gradually raised until when the last cartridge is passing into the magazine the clip will be substantially

vertical, as shown in Fig. 3, whereupon a rearward movement of the thumb ejects the empty clip, while at the same time the raising movement of the hand closes the gate and brings the firearm into condition to deliver the magazine charge.

It should be understood that when the "heads" of the cartridges are referred to, such term is meant to include either cartridges having projecting rims or so-called "rimless" cartridges, in which the head has an annular groove for the reception of the extractor, as either the rimmed or the rimless heads will operate properly in connection with my improved clip. The term "trough-shaped," moreover, as used in the specification does not necessarily mean a trough with closed bottom, as simple cross-bars or other equivalent constructions may be employed to retain the guide-flanges of the clip in their proper relative positions.

In order to insure a more uniformly distributed pressure of the spring 5 upon the heads of the cartridges, I prefer in some cases to slit the spring centrally throughout the greater portion of its length, as shown in Fig. 8, and to bend the two spring members 16 thus formed so that their corrugations will alternate, as shown in Fig. 9. Hence the head of each cartridge in the clip is subjected to the pressure of one or other or both of these spring members.

I do not herein claim the construction of the rifle and its gate with notches for retaining the clip in proper position in respect to the magazine, as this invention forms the subject of a separate application filed by me on the 30th day of January, 1901, Serial No. 45,355.

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

1. A cartridge-clip having flanges for engaging the heads of the cartridges, leaving the bodies free for exertion of pressure thereon, said clip having a bottom projecting beyond the flange on the delivery side of the clip to an extent equal to the width of the cartridge-head, whereby, when the said bottom rests upon the floor of a side-opening magazine, the heads of the cartridges can pass between said floor and the end of said flange on the delivery side of the clip.

2. A flanged cartridge-clip having the bottom extending beyond the flange on the delivery side of the clip to such extent that when said extended portion rests upon the floor of the magazine the heads of the cartridges can pass between said floor and the end of the flange, the outer flange of the clip extending downwardly beyond the flange on the delivery side.

3. A flanged cartridge-clip having the bottom extending beyond the flange on the delivery side of the clip to such extent that when said extended portion rests upon the floor of the magazine the heads of the cartridges can pass between said floor and the end of the flange, the outer flange of the clip extending downwardly beyond the flange on the delivery side, and having its lower portion inclined toward the center of the clip whereby the cartridges are given their initial direction of movement in delivery.

4. A flanged cartridge-clip having a bottom projecting beyond the flange on the delivery side of the clip to an extent equal to the width of the cartridge-head, so that the heads of the cartridges can pass between the flange on the delivery side of the clip and the floor of a side-opening magazine, when said bottom rests on the floor of the magazine, said extended bottom being bent or beveled to conform to the inclined rear wall of the magazine.

5. A flanged cartridge-clip having a bottom projecting beyond the flange on the delivery side of the clip to an extent equal to the width of the cartridge-head, so that the heads of the cartridges can pass between the flange on the delivery side of the clip and the floor of a side-opening magazine, when said bottom rests on the floor of the magazine, said extended bottom being rounded or beveled to permit change of angle of the clip with respect to the floor of the magazine.

6. A flanged cartridge-clip having a rounded upper outer corner and a bottom extending beyond the flange on the delivery side of the clip to an extent equal to the width of the cartridge-head, so that when said extended portion rests upon the floor of the magazine, the heads of the cartridges can pass between said floor and the end of the flange.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT W. SCOTT.

Witnesses:

F. E. BECHTOLD,

JOS. H. KLEIN.