(No Model.) 2 Sheets—Sheet 1.

L. P. DISS.

MAGAZINE FOR FIRE ARMS.

No. 313,856. Patented Mar. 17, 1885.

Fig. 1.

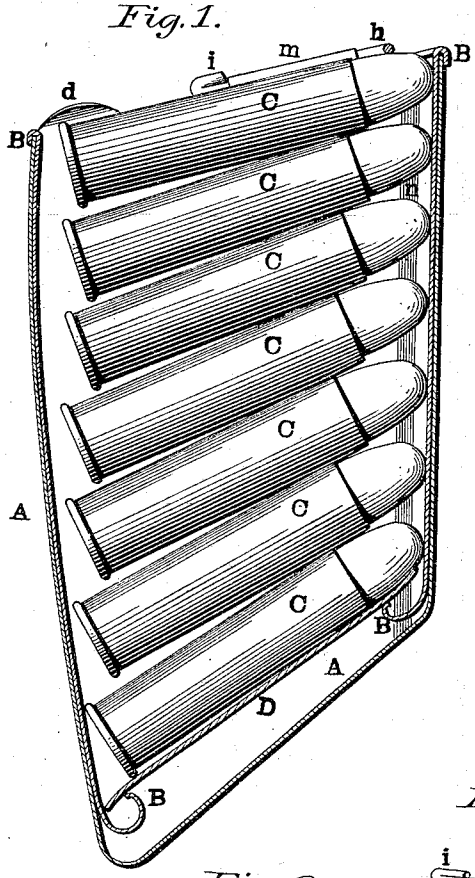


Fig. 7.



Fig. 8.



Fig. 2.

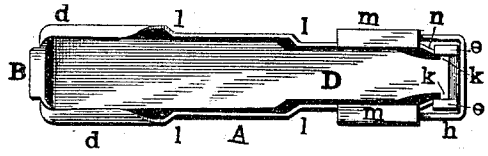
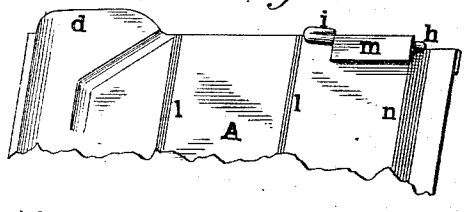


Fig. 3.



Witnesses:

Jas. F. DuHamel

Walter A. Dodge

Inventor;

Louis P. Diss,

by Dodger & Son,

Attys

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

(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

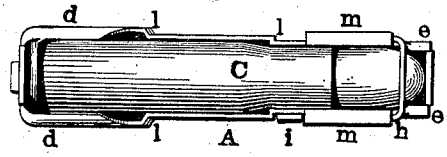


Fig. 5.

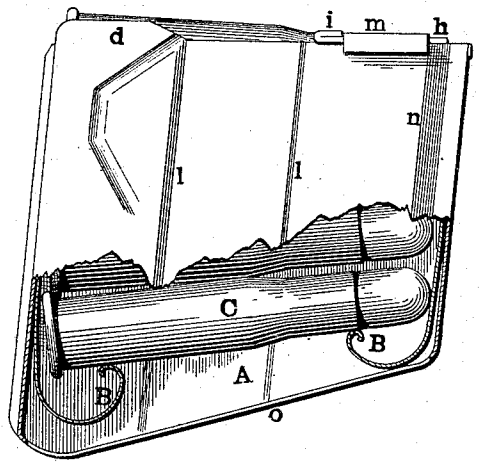
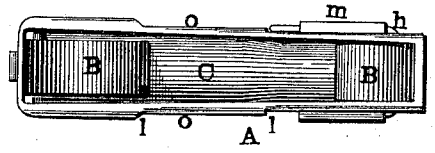


Fig. 6.



Witnesses:

Jas. F. Duhamel.
Walter S. Dodge

Inventor:

Louis P. Diss,
by Dodgerson,
Attys.

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

UNITED STATES PATENT OFFICE.

LOUIS P. DISS, OF ILION, NEW YORK, ASSIGNOR TO E. REMINGTON & SONS, OF SAME PLACE.

MAGAZINE FOR FIRE-ARMS.

SPECIFICATION forming part of Letters Patent No. 313,856, dated March 17, 1885.

Application filed May 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, LOUIS P. DISS, of Ilion, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Magazines for Fire-Arms, of which the following is a specification.

My invention relates to detachable magazines for use in connection with guns operating on the general plan of that described in the patent of James P. Lee, November 4, 1879, No. 221,328; and the invention consists in certain features or improvements, hereinafter fully described.

Figure 1 is a side elevation of my improved magazine with the side wall removed. Figs. 2 and 4 are top plan views of the same. Figs. 3 and 5 are side elevations with portions broken away. Fig. 6 is a bottom view; and Figs. 7 and 8 are views of the follower and retainer, respectively, shown detached.

It has been customary to make these magazines of a size to hold five, or at most six, cartridges, and when so made the front and rear walls may be made straight and parallel, or nearly so, as represented in Fig. 5; but when it is desired to make the box or magazine deeper, so as to hold, say, eight or more cartridges, I have found by experiment that the friction of the rear portion of the cartridges upon each other and upon the box is such as to prevent the upper cartridge from assuming the proper position, with its front end elevated, to be shoved from the box into the chamber of the gun. To remedy this difficulty and enable the magazine to work equally well with a larger number of cartridges, I construct the box A with its rear wall curved, as shown in Fig. 1. When thus constructed and filled with cartridges C, the latter will be made to assume the positions shown in said figure, in which it will be seen that their rear ends or heads do not bear upon each other, or but slightly so, if at all, and thereby the friction between them is so lessened as to permit the cartridges to move freely, their angle of inclination being gradually changed as they are raised by the springs successively as the one at the top is removed. By this arrangement the instant the front end of the cartridges are released from the hold of the retainer *h* (hereinafter described) they will be raised at their front ends, so that the uppermost cartridge will have its point elevated above the front wall of the box and be in the proper position to be shoved forward into the chamber of the gun by the sliding breech-bolt.

To prevent the possibility of the front end of the cartridges from being depressed lower than their rear ends and assist in their assuming the required position, I make the follower D a little longer than the box, as shown in Fig. 1, so that its front end cannot be depressed below its rear end.

Instead of the zigzag spring heretofore used in this class of magazines, I provide two flat coiled springs, B, (shown in Figs. 1, 5, and 6,) the upper ends of each spring being fastened to the top of the box A, one at the front and the other at the rear, as shown clearly in Fig. 1. These springs, when released from pressure, will each coil up independently, and upon the coils I place the follower D, as shown in Fig. 1. It will follow necessarily that as the cartridges are placed on the follower, and the latter is thus forced down, the springs will be uncoiled until when the box is filled there will remain only a partial coil in each spring below the follower, as shown in Fig. 1. These springs B, thus arranged, will feed the cartridges out perfectly. With this arrangement of springs it is possible also to dispense with the use of the follower entirely, the lower cartridge itself resting directly upon the coiled ends of the springs, as shown in Figs. 5 and 6. In that case the box should be of such a length from front to rear as to cause the cartridges to lie in an inclined position, so that their front ends will emerge from the box first, as is necessary to enable them to be shoved into the chamber of the gun. Although as the springs each act independently upon the cartridges, and as their heads or rear ends are held down by the inwardly-projecting lips *d* at the upper rear corner of the box, the front end of the cartridges will be thrown up in any event as soon as released. I prefer, however, to use a follower, and I construct it, as shown in Fig. 2, with a small projection or ear, *k*, on each side at its front end, and on each inner wall of the box, near its front end, I make a vertical rib, *n*, by indenting the metal externally, as shown in Figs. 2, 3, and 5, these ribs serving as stops

or guides, against the front sides of which the ears *k* of the follower engage, and thus prevent the follower from becoming displaced, however much it may be tipped.

To prevent the follower from being forced out of the box when empty and becoming detached, I form on the box, at its front corners, two horizontal inwardly-projecting lips, *e*, as shown in Figs. 2 and 4, these lips being formed by turning inward on each side a small portion of the metal, there being left, if necessary, a small projection on the edges of the blank when cut out for that purpose.

In order to retain the cartridges in the box until the latter is attached to the gun, I provide a slide, *h*, made of a piece of wire bent essentially in the form of a staple, as shown in Figs. 2 and 4. This retainer is mounted so as to slide longitudinally in two short tubes, *m*, formed by bending over a short projection on the two sides of the box at the top, or by forming the tubes separately and attaching them to walls of the box, as may be preferred. One of the arms of the retainer *h* is made longer than the other, and has a shoulder, *i*, formed on the end, which projects through the tube *m*, as shown in Fig. 3, and which may be readily formed by bending the end of the wire over upon itself, as there shown. This retainer, before it is inserted in the tubes *m*, has its arms sprung, so that the arm having the shoulder on it will be raised at its rear end and cause the shoulder *i* to engage against the upper edge of the tube, and thus lock it fast and prevent it from being accidentally moved in its bearings until said arm is depressed sufficiently to permit the shoulder to enter the tube *m*, the tube on that side being made oval in cross-section, or wide enough vertically to permit the shoulder *i* to enter it and move therein. It will readily be seen that, when this retainer *h* is mounted in its tubular bearings *m* and is shoved back, its front end or cross-bar, which connects its two arms, will rest across the front end of the upper cartridge, as shown in Fig. 4, and will thus retain the cartridges in the box, their rear ends being prevented from rising by the lips *d*, as previously explained, and as shown in Fig. 4.

To automatically release the cartridges as the box is shoved into position in the gun, the latter is to be provided with a projection on one side of the opening, into which the box is inserted, said projection having an incline on the face next to the rear end of the retainer *h*, so that as the box is shoved in the arm, with the shoulder on it, will first be sprung downward far enough to enable the shoulder *i* to enter the tube, and then will be pushed forward by the incline until its cross-bar comes flush with the front wall of the box, as shown in Fig. 2, when, of course, the cartridges will be free to rise at their front end. The gun may also be provided with other and different means for releasing and moving the retainer, and which, being a part of the gun, need not be further described in this connection.

In order to adapt the box to what are termed "necked-down" cartridges, or cartridges which are reduced in diameter at their front portion, and which consequently have one or more shoulders formed in their cases, I make the side walls of the box with one or more offsets, *l*, as shown in Figs. 2, 3, 4, and 5. This form of box is also adapted to cartridges which are tapered from end to end, the cartridges on their sides bearing against the inwardly-projecting shoulders of the offsets. In either case the cartridges will be held so as to rest against the walls on each side, each cartridge resting directly over those below it, and will thus be prevented from working to one side and tending to jam or wedge fast in the box, and thereby creating additional friction for the springs to overcome, as is the case when the box is made wider than the diameter of the cartridges, as has usually been done, these boxes having generally been made with an inwardly-projecting flange along each side at the top. As of course the space between the inner edges of these flanges had to be wide enough to permit the cartridge to pass out, the space within the box below the flanges was as much greater as the width of the two flanges combined.

In my improved box I dispense with flanges along the sides at the top, which have heretofore been generally used, retaining only the lips *d* at the rear, and adding the lips *e* at the front, which latter are entirely out of the way of the cartridges.

Another improvement is constructing the box without any bottom, as shown clearly in Fig. 6, thus using less metal and rendering the construction of the box both simpler and cheaper, as there is no seam to be closed along the bottom, and also reducing its weight somewhat. In order to stiffen the sides and prevent them from being pressed inward at the bottom, I turn a flange, *o*, along each side, which projects inward, as shown in Fig. 6.

By examining Fig. 1 it will be seen that the box is not only much deeper at the rear than at the front, but also that it gradually decreases in length from front to rear all the way from the top to the bottom, and that the deeper the box is the more its bottom wall is inclined, it being shown much more inclined in Fig. 1, which represents a deep box, than in Fig. 5, which represents one of the ordinary size. These smaller boxes—such as shown in Fig. 5—may also have their rear walls curved the same as in Fig. 1; but as they are designed to hold a less number of cartridges it is not absolutely essential.

Having thus fully described my improvements, what I claim is—

1. A cartridge box or magazine, A, provided with the coiled springs B B, secured to the box at its opposite ends, for the purpose of feeding the cartridges out sidewise, substantially as described.

2. The cartridge box or magazine A, provided with the internal vertical ribs, *n*, in combination with a follower, D, provided with lat-

erally-projecting ears *k*, arranged in front of said ribs, whereby the follower is prevented from sliding backward when its rear end is depressed, as set forth.

3. In combination, the box A, provided with the inwardly-projecting lips *e* at its front end, and the follower D, having its front end arranged to engage under said lips when elevated, for the purpose of preventing the follower from being forced out of the box.

4. In combination with the box A, the retainer *h*, mounted in the longitudinal tubes or eyes *m*, and provided with the locking-shoulder *i*, said device being constructed and arranged to operate substantially as shown and described.

5. A cartridge box or magazine, A, having its top and bottom both left open, and having the bottom edges of its side walls turned inward to form flanges *o*, substantially as shown and described.

6. In combination with a cartridge-box substantially such as shown, a spring-sustained follower, D, of slightly greater length than the interior space of the box on a horizontal line from its front to its rear wall, the forward end of said follower being elevated above its rear end when inserted, whereby the front end of the follower and the cartridges are prevented from being depressed below their rear ends, as set forth.

LOUIS P. DISS.

Witnesses:
G. O. RASBACH,
FRED H. BENNETT.