

J. J. SWEENEY & W. W. WETMORE.
Magazine Fire-Arm

No. 223,409.

Patented Jan. 6, 1880.

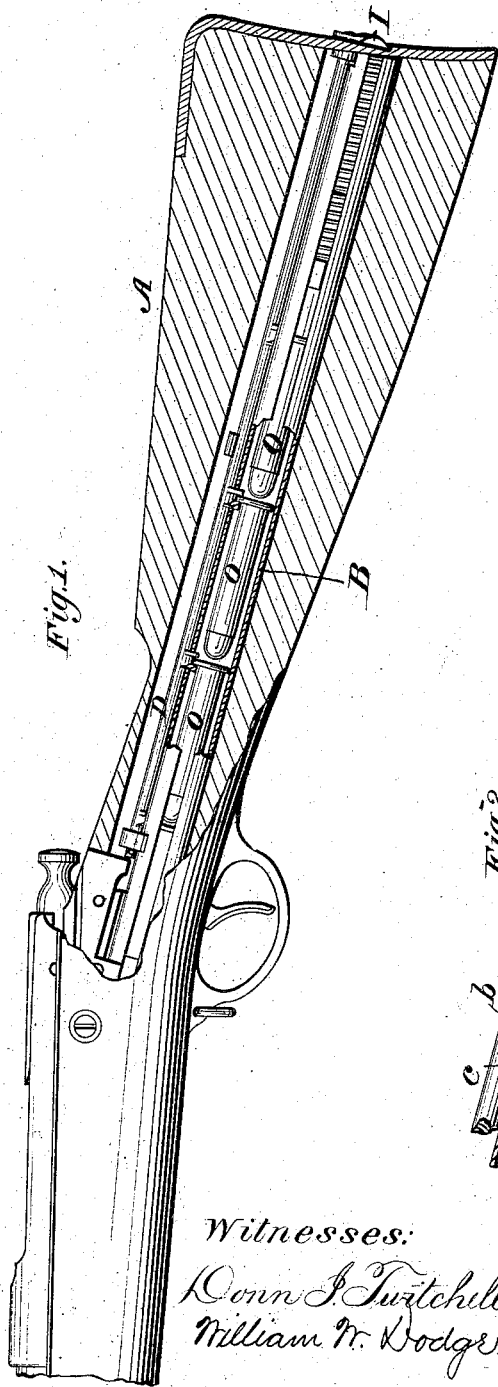


Fig. 1.

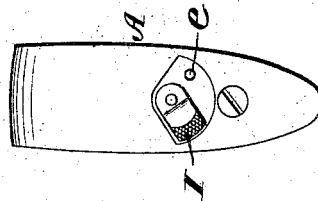


Fig. 2.

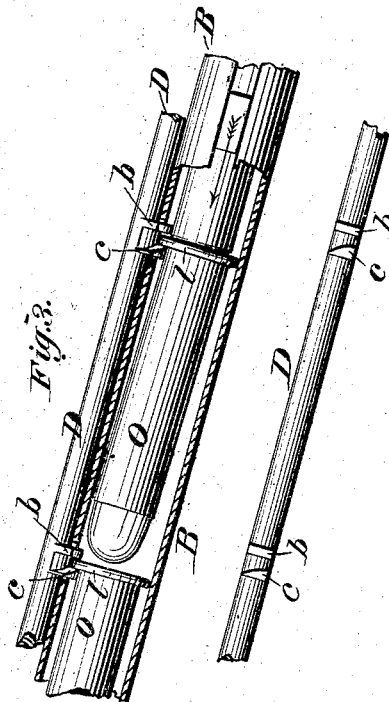


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH J. SWEENEY AND WILLIAM W. WETMORE, OF NEW HAVEN,
CONNECTICUT, ASSIGNORS OF ONE-HALF OF THEIR RIGHT TO THE
WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 223,409, dated January 6, 1880.

Application filed June 25, 1879.

To all whom it may concern :

Be it known that we, JOSEPH J. SWEENEY and WILLIAM W. WETMORE, of New Haven, in the county of New Haven and State of Connecticut, have invented certain Improvements in Magazine Fire-Arms, of which the following is a specification.

Our invention relates to magazine fire-arms; and the invention consists in a peculiarly-constructed device for clamping the cartridges in the magazine, by which they shall first be separated slightly, so as not to touch one another, and then be securely held by their flanges, so as to prevent the possibility of their being moved either forward or backward until released, all as hereinafter more fully described.

Figure 1 is a side elevation, partly in section, of a gun having our improvement applied thereto. Fig. 2 is a face view or elevation of the butt-end of the stock, showing the button for operating and fastening the clamping device; and Fig. 3 is a side elevation, partly in section, of a portion of the magazine and clamping device detached, to more fully illustrate their construction.

The object of this invention is not only to clamp the cartridges fast in the magazine, but also to separate them, so that they shall not touch each other; and to accomplish these results we construct the parts as follows:

In the drawings, A represents the butt-stock of a magazine fire-arm, B indicating the magazine or tube which holds the cartridges, as is usual in this class of arms. Parallel with this tube or magazine B we place a rod, D, which is journaled at its ends, and, if necessary, provided also with intermediate bearings, to hold it from springing, and so that it may be readily rotated or turned in its bearings. This rod D may be located above or below or at either side of the tube B, as may be found most convenient, it usually being most convenient to arrange it over the tube in this style of arm, as shown in Fig. 1. To its rear end is rigidly secured a button or thumb-piece, I, which, as shown in Figs. 1 and 2, is fitted in a recess in the outer surface of the butt-plate, and by which the rod D can be readily turned one way or the other in its bearings, there being

also a couple of small spring or friction pins, *e*, projecting from the bottom of the recess, so as to engage in corresponding recesses in the under side of the button I, and thus lock it and the rod D in position when turned either to the right or left.

As shown in Figs. 1 and 3, the rod D is provided at intervals with pairs of projections *b*, the pairs being at distances from each other equal to the length of the cartridges to be used. These projections or clamps are made of such a length that when the rod is turned to the proper position they will enter openings in the side of the tube B provided for the purpose, as shown, and project into the tube far enough to clamp the flanges *l* of the cartridges O, as shown in Fig. 3, and thus all the cartridges in the magazine will be securely held against any end movement either forward or backward.

For the purpose of effecting a separation of the cartridges, so as to prevent them from resting against or touching each other, we make the rear face of the front projection, *e*, of each pair beveled, as shown in Fig. 3, the bevel or inclination of each succeeding clamp *e*, from the front to the rear one of the series, being somewhat greater than that of the one immediately in its front, so that when the rod is turned into position to cause the clamps to take hold of the flanges of the cartridges each succeeding clamp *e* from the front end backward will draw its cartridge backward slightly more than the one in front of it, and thus all of the cartridges in the magazine will be separated in the act of clamping them fast in the magazine. This variation in the bevel or inclines of the clamps *e* is shown, as also the separation of the cartridges effected thereby, in Fig. 3.

It will thus be seen that the projections *e*, while serving in conjunction with the projections *b*, act as clamps to hold the cartridges from moving endwise. They also operate as cams, to cam or move the cartridges backward, and they may properly be described as a series of cams of a regularly-increasing size or eccentricity.

In order to produce the best results possible

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the narrowest part of the space between the clamps *b c* should be just equal to the thickness of the flanges *l*, with which they engage, so that when engaged therewith there shall
5 be no looseness or movement of the cartridges fore and aft, and at the same time, by making the rod slightly eccentric, so as to cause it to bear firmly upon the edges of the flanges, and thus press the cartridges tightly against the
10 opposing wall of the magazine, they will also be held against any lateral movement, and thus be held perfectly rigid in the magazine, thereby preventing them from moving or shaking about therein.

15 It is obvious that this improvement may be applied to guns which have their magazines arranged in front of the breech mechanism under the barrel, as well as to those having the magazine in rear, as here shown. In case
20 it is applied to a magazine containing a large number of cartridges it will only be necessary to extend the clamps *b c* farther around the rod in order to obtain the necessarily increased movement of the rearward cartridges, and to
25 give the rod *D* a correspondingly-increased rotation.

It is also obvious that the inclined or cam-faceted projections *c* may be used and made to draw the cartridges apart without using the
30 projections *b*, the periphery of the parts *c* being in that case also made eccentric, so as to bear or wedge against the sides of the cartridges and hold them against end movement; but we prefer to use the two together, as producing
35 more perfect results.

It is further obvious that instead of the

thumb-piece *I*, located at the butt, a lever or other suitable device may be used, and be located at any other point, for operating the clamping-rod *D*, and that, if desired, it may
40 be so arranged as to be thrown into connection with and be operated by a moving member of the breech mechanism.

We are aware that a device for clamping the cartridges in the magazine of a gun has
45 been patented; but we are not aware that such a device has ever been made to hold the cartridges by engaging with the opposite faces of their flanges, nor that any plan has ever before been devised for separating the several
50 cartridges in the magazine; and therefore

What we claim, and desire to secure by Letters Patent of the United States, is—

1. In combination with the magazine of a gun, a rod, *D*, provided with a series of cam-faceted projections, *c*, of increasing pitch from
55 one end to the other of the series, arranged to operate substantially as described, whereby the cartridges in the magazine may be separated from each other, as set forth.
60

2. In combination with the magazine *B*, the rod *D*, provided with the clamping devices *b c*, constructed and arranged to grasp the cartridges on both sides of their flanges, and thus prevent their moving endwise in the magazine, substantially as and for the purpose set forth.
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