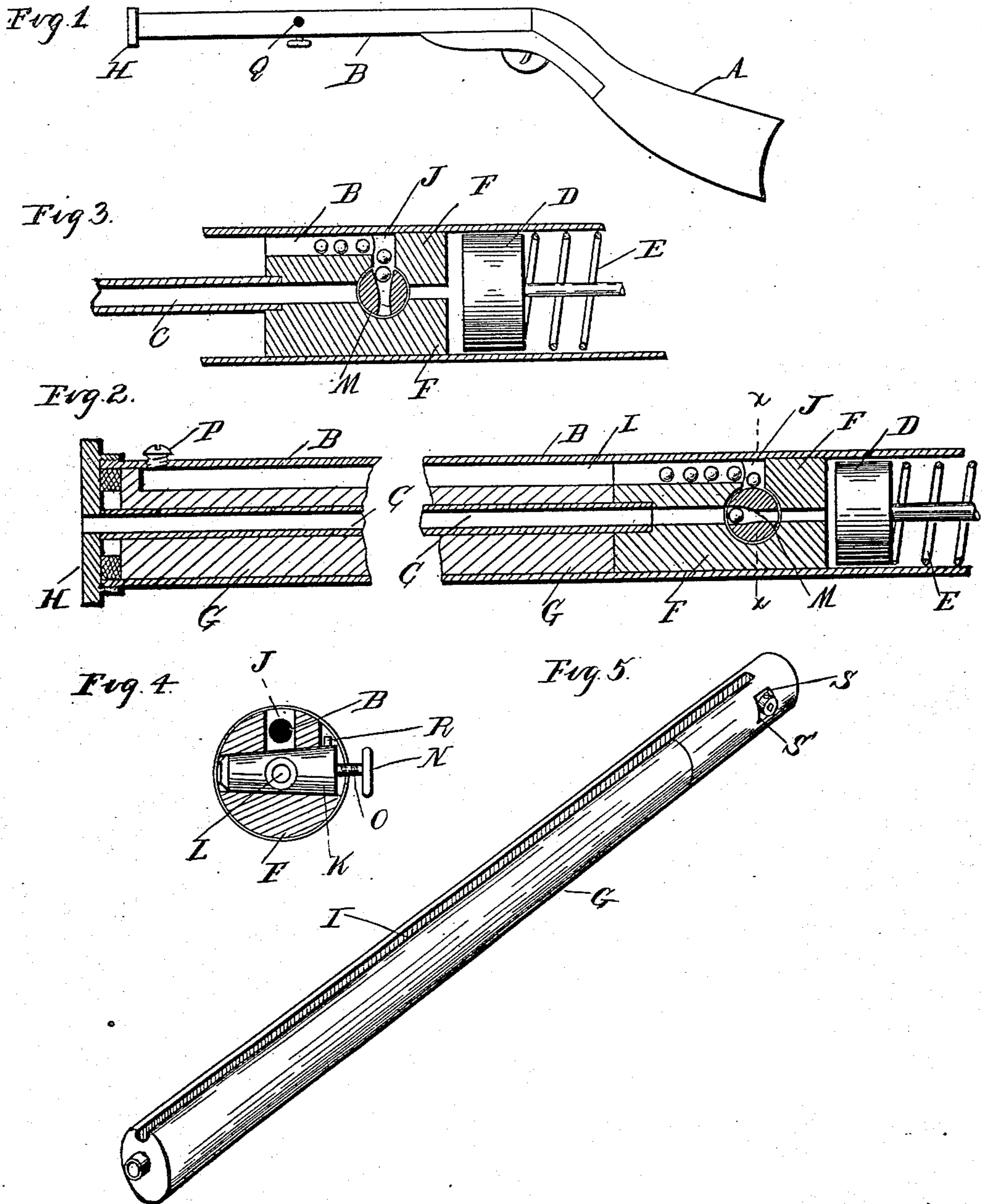


(No Model.)

W. F. MARKHAM.
SPRING AIR GUN.

No. 473,633.

Patented Apr. 26, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM F. MARKHAM, OF PLYMOUTH, MICHIGAN.

SPRING AIR-GUN.

SPECIFICATION forming part of Letters Patent No. 473,633, dated April 26, 1892.

Application filed March 14, 1891. Serial No. 385,138. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. MARKHAM, a citizen of the United States, residing at Plymouth, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Air-Guns, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to new and useful improvements in air-guns; and the invention consists in the peculiar construction of the means employed in feeding the projectile either from the outside of the gun or from a 15 magazine into the true barrel in position to be thrown therefrom by compressed air; and the invention further consists in the peculiar construction, arrangement, and combination of the various parts, all as more fully 20 hereinafter described.

In the drawings, Figure 1 is a side elevation of a gun embodying my invention. Fig. 2 is a vertical longitudinal section through the barrel, showing the projectile in position 25 to be shot in a gun in which the magazine-barrel is used. Fig. 3 is a similar section showing the parts as in the position of feeding the projectile from the magazine to the true barrel. Fig. 4 is a cross-section on line 30 *xx* in Fig. 2. Fig. 5 is a detached perspective view of the plug forming the support for the true barrel and the parts which it supports.

35 A is the stock, B the false barrel, C the true barrel, D the air-compressing piston, and E the spring, of an air-gun, these parts being of ordinary and known construction.

Any means may be employed for compressing the spring E and withdrawing the piston 40 D, which compresses the air against the abutment F to shoot the projectile from the gun. I have not shown any particular means for this purpose, as many devices for this purpose are well known.

45 The abutment F, I preferably secure to the plug or filling G, which carries the true barrel and extends to the muzzle of the false barrel, where it is secured in position by means of a ring or cap H, apertured centrally 50 to register with the aperture in the true barrel. This construction and the means of detaching the true barrel and the filling or

plug I have made the subject-matter of a concurrently-pending application, Serial No. 375,155, filed December 18, 1890. In this plug 55 or filling I form a groove I, which, in connection with the false barrel, forms a magazine, which may be extended to the rear end of the plug, where by means of a cross-passage J it connects with the true barrel at the breech 60 thereof.

At the point of intersection of the magazine-barrel and true barrel I arrange a plug K, having the aperture L therethrough to allow of the passage through the plug of the 65 compressed air and having a seat M, preferably conical, as shown in Fig. 2. The only object in making the plug tapering is to take up the wear in use; but I believe in ordinary constructions this will not be required. 70

N is a wheel or lever secured by means of the stem O to the plug and by means of which it may be rotated.

P is a cap for the feeding-aperture at the forward end of the magazine-barrel, which I 75 have shown formed of an ordinary screw engaged in the screw-threaded aperture; but any other construction desired may be used.

A projectile or a number of projectiles being placed in the magazine-barrel, the gun 80 being held in such position that they will run to the breech of the magazine, it is evident if the plug be turned so that the aperture will register with the connecting-passage J, as shown in Fig. 2, one of the projectiles will 85 fall into said aperture and be secured in the seat M in the plug, being wedged therein if the seat is made tapering, as shown. Now by turning the plug a quarter of a turn, so that the aperture registers with the true bar- 90 rel, the projectile being in the line of the barrel, if the compressed air enters in the rear of the projectile it will be shot out of the true barrel. The plug being turned in the aperture in line with the true barrel, the im- 95 perforate portion of the plug will tightly close the passage-way between the magazine and true barrel and prevent the escape of any of the compressed air, which has been the main obstacle to the success of previous 100 constructions in feeding devices for such air-guns.

While I have shown and preferably use my feeding device in connection with a gun

having a magazine-chamber, it is not necessary that it should be used in such connection, for it is evident that if the aperture is made from the outside of the false barrel at the breech, as shown in Fig. 1 at Q, a projectile may be fed into the plug from the outside, and that then the plug may be turned with the aperture in line with the true barrel in the same manner as in the case that it is fed from the magazine. Should anything lodge in the true barrel or the plug which could not be dislodged, I intend to make the stem O and wheel N detachable, as well as the plug F and filling G, so that by taking off the cap H the whole may be removed to dislodge the obstacle.

In order that the plug may be turned accurately to register alternately with the passage J and the true barrel C, I provide a pin R on the side of the plug, which engages with suitable shoulders or stops S S'.

I preferably make the abutment F of metal, so that the plug will have a metallic bearing. It is evident, however, that I may make the abutment F and the filling G of wood and have the plug work in the wood, or else make a metallic lining therefor.

What I claim as my invention is—

1. In an air-gun, the combination, with the false barrel, the filling therefor, and the true barrel within the filling, of a detachable abutment in the rear of the filling and within the false barrel, a magazine formed in the filling and abutment and communicating with the true barrel, a turning-plug within the abutment, having a transverse aperture therein registering, respectively, with the bore of the true barrel and the communicating passage

from the magazine, a lateral pin on the end of the plug within the false barrel, a shoulder with which said pin engages, and a removable turning-stem on the end of the plug extending through the false barrel, substantially as described.

2. In a spring air-gun, the combination, with the false barrel, the true barrel, and a magazine communicating with the true barrel, of a turning-plug extending transversely across and arranged within the false barrel and having a transverse tapered aperture therein registering with the bore of the true barrel and the communicating passage, respectively, a lateral pin on the plug, a shoulder with which said pin engages, and a turning-stem secured in the plug and extending through the false barrel, substantially as described.

3. In an air-gun, the combination, with the false barrel and true barrel, of a filling for the false barrel, a detachable abutment on the filling in the false barrel, having a transverse aperture therein, a magazine having communication with the aperture, and a transverse turning-plug in the aperture in the abutment and within the false barrel, formed with a transverse tapering aperture therein registering, respectively, with the bore of the true barrel and the communicating passage from the magazine, substantially as described.

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

WILLIAM F. MARKHAM.

Witnesses:

M. B. O'DOHERTY,
P. M. HULBERT.