

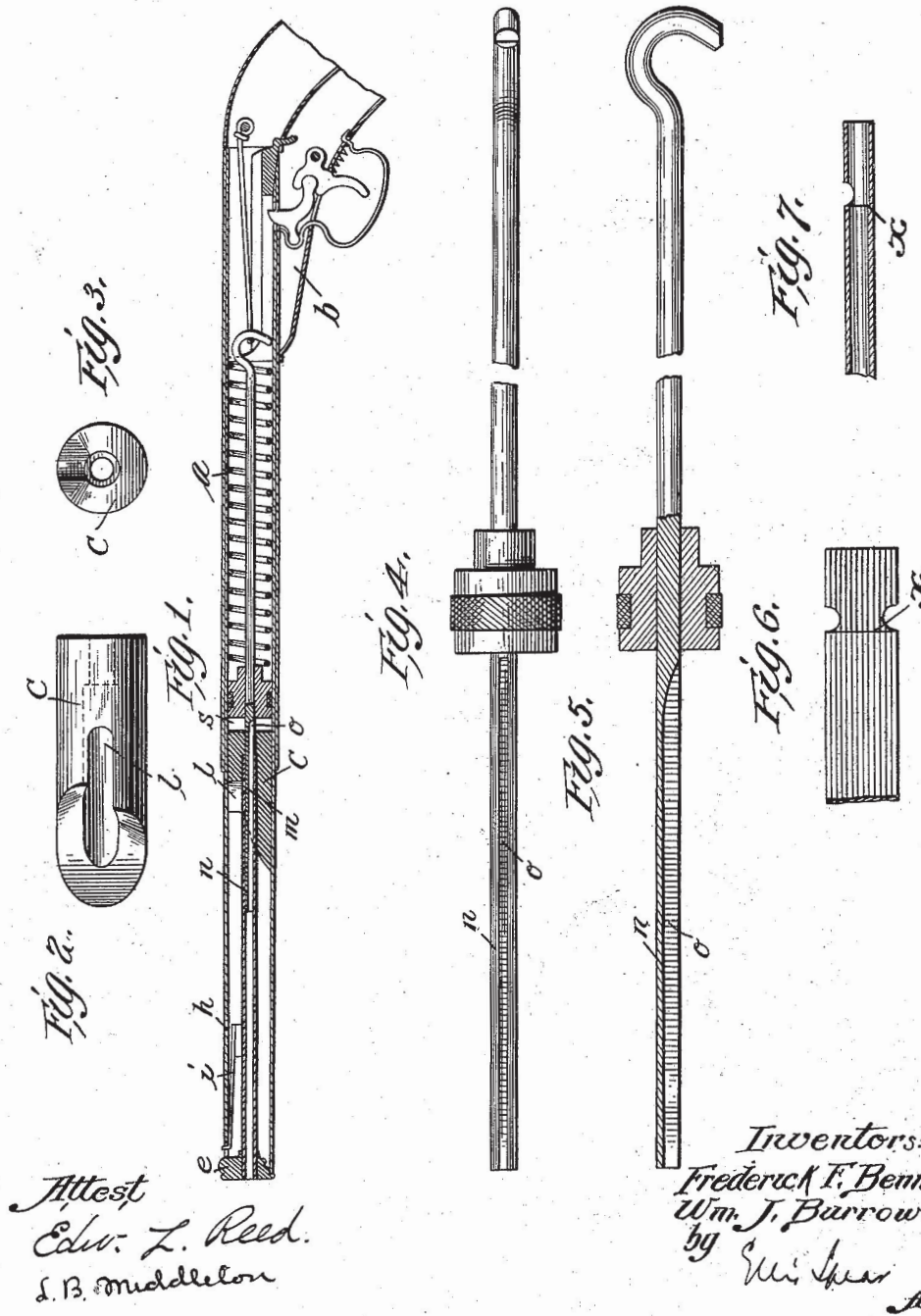
No. 683,431.

Patented Oct. 1, 1901.

F. F. BENNETT & W. J. BURROW.
AIR GUN.

(Application filed Jan. 23, 1901.)

(No Model.)



THE MORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK F. BENNETT AND WILLIAM J. BURROW, OF PLYMOUTH,
MICHIGAN, ASSIGNORS TO THE DAISY MANUFACTURING COMPANY,
OF SAME PLACE.

AIR-GUN.

SPECIFICATION forming part of Letters Patent No. 683,431, dated October 1, 1901.

Application filed January 23, 1901. Serial No. 44,415. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK F. BENNETT and WILLIAM J. BURROW, citizens of the United States, residing at Plymouth, Wayne
5 county, Michigan, have invented certain new and useful Improvements in Air - Guns, of which the following is a specification.

Our invention relates to repeating air-guns of that class in which the true or shooting
10 barrel is inclosed within a larger or false barrel and a magazine is provided within the false barrel to hold the projectiles.

In the type of gun to which the invention particularly relates an air-compression chamber
15 is formed at the rear of the true barrel, in which a spring - pressed plunger works, which is operated substantially as disclosed in Patent No. 408,971, granted to C. J. Hamilton on the 13th day of August, 1889, and assigned to the Daisy Manufacturing Company.

The present invention is confined more particularly to the arrangement of the magazine, the means for feeding the projectiles from the
20 same to the true barrel, and to the construction of the plunger. It also includes, however, the details of construction, as will be hereinafter described, and particularly pointed out in the claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal sectional view of the barrel and a portion of the stock of a gun embodying our invention. Fig. 2 is a detail plan view of the feeding-plug. Fig. 3
35 is a front elevation of the same. Fig. 4 is an elevation of the plunger. Fig. 5 is a sectional view of the same. Figs. 6 and 7 are detail views.

As before premised, the structure of the air-compression mechanism of the gun follows the
40 general lines disclosed in Patent No. 408,971. The open-ended tube *a*, which is pivotally secured to the stock by means of the combined fore-arm and the trigger-guard *b*, forms both the air-compression chamber and the false
45 barrel, the division-wall between the two being formed by a plug *c*, having an axial bore the front portion of which receives the rear end of the true or shooting barrel. The forward
50 end of the latter is provided with a cap

e, fitted snugly into the end of the false barrel, so as to close the same. The entire chamber formed around the true barrel between plug *c* and cap *e* is utilized as a projectile-magazine. To fill the same, an opening *h* is
55 provided in the top of the false barrel, near the end thereof, which is normally closed by the rear end of spring *i*, the free end of which serves as a retaining-catch to hold the true barrel in place. The gun, it will be understood, is adapted to shoot darts, which must
60 be loaded in the rear end of the true barrel, which necessitates its being made removable. The spring *i* is therefore provided, primarily, to hold this barrel in place against accidental
65 displacement, and we utilize the same, as before mentioned, for the secondary purpose of closing opening *h*.

To feed the projectiles from the magazine to the bore of the shooting-barrel, the plug *c*
70 has the front end thereof beveled to form a guide, which leads to a radial slot *l* of the width of one projectile. Directly beneath the rear end of this slot an opening *m*, extending
75 through the true barrel, is adapted to aline to permit the projectile to drop into the bore of the same. A shoulder is provided in the bore of the plug *c*, against which the rear end of the true barrel abuts when in place, and the opening *m* is arranged in such relation to
80 said end that said parts will aline when the true barrel is pressed against said shoulder. By holding the end of the gun up the projectiles in the magazine will run up the beveled
85 end of the plug into the radial slot therein, and the leading projectile, if the opening *m* is unobstructed, will drop into the true barrel. This opening, however, is normally closed by
90 an extension *n* of the plunger-rod. This rod is connected at its rear end to mechanism which will retract the same when the gun is broken at the breech against the pressure of the spiral spring, which bears at its forward
95 end on the plunger-head. In guns of this class as usually constructed the plunger-rod terminates within this head; but in the improved gun herein presented this rod is extended through the head into the true barrel. The extension is of such a length that when
100 the plunger is retracted to its full extent this

extension will uncover hole *m*; but it will not pass entirely out of the true barrel. The extension serves, therefore, to hold the true barrel in accurate alinement at all times, and it further serves to open and close hole *m*. The extension of the rod is utilized to perform the further function of providing a conduit through which the compressed air for expelling the projectile may pass. To effect this, a channel or slot is cut in the under side of the extension, said channel extending from the plunger-head throughout the entire length thereof. The plunger-head when forced forward is checked before it quite reaches plug *c* to provide an air-chamber *s* between the two, into which the channel *o* opens. The compressed air forced therein is confined in its passage between the walls of said channel and the adjacent wall of the true barrel, which fits the extension snugly, and discharges at the end of said extension against which the projectile rests.

To prevent the shot from running out of the end of the true barrel after having dropped through opening *m* therein from the magazine and for retaining the same until pushed forward by the plunger-rod extension, an annular shoulder *x* is provided around the inner periphery of the true barrel at the front edge of the slot-opening *m*, this being formed by filing down the face of the metal which forms the tube before it is bent into tubular form.

We claim—

1. In combination in an air-gun having a false barrel and a removable true barrel, a

magazine, an opening in the false barrel leading thereto, a spring-catch for holding the true barrel in place, said spring-catch being arranged to close said opening, means for feeding projectiles from the magazine to the true barrel and means for expelling said projectiles.

2. In combination, an air-gun having a false barrel, a true barrel and a magazine arranged between said false and true barrels, said false barrel having an opening therethrough to said magazine, means for feeding projectiles from the magazine to the true barrel, expelling means and a spring carried by the true barrel extending across said opening to obstruct the same, substantially as described.

3. In an air-gun having a plug which supports in axial position the true barrel within the false barrel, a plunger-rod extension carried by the plunger having an air-passage, said extension being arranged to remain with its end in the rear of the said plug when the plunger is retracted and to follow the projectile when the gun is discharged, and a rabbet around the periphery of the true barrel forming a shot-receiving space of larger diameter than the true barrel, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

FREDERICK F. BENNETT.

WILLIAM J. BURROW.

Witnesses:

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E. C. HOUGH.