

No. 631,399

Patented Aug. 22, 1899.

H. B. GILLETTE.
SUPPLEMENTAL BARREL FOR GUNS.

(Application filed Jan. 31, 1898.)

(No Model.)

Fig. 1.

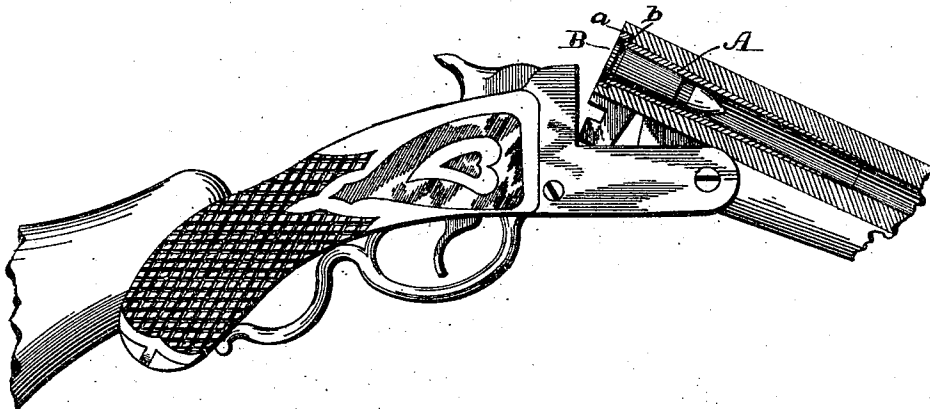


Fig. 2.

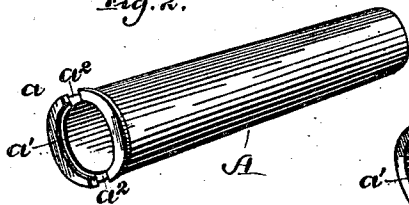


Fig. 3.

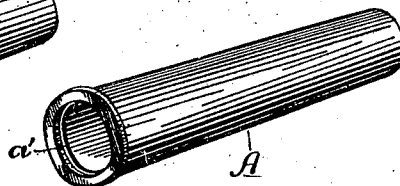


Fig. 6.

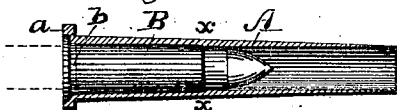


Fig. 4.

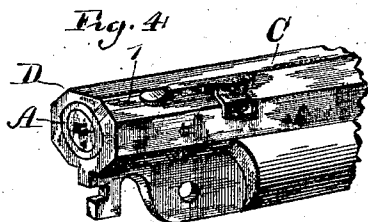


Fig. 5.

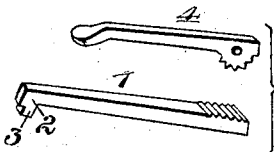
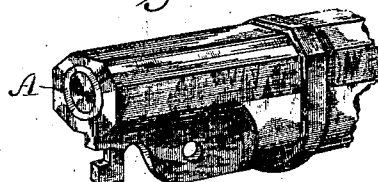


Fig. 7.

Witnesses

Edwin B. M. Tompkins.
Hubert P. Lawson.

Inventor

Hiram B. Gillette.

By

Edison B. Prosser,

Attorney

UNITED STATES PATENT OFFICE.

HIRAM B. GILLETTE. OF ROSEBURG, OREGON.

SUPPLEMENTAL BARREL FOR GUNS.

SPECIFICATION forming part of Letters Patent No. 631,399, dated August 22, 1899.

Application filed January 31, 1898. Serial No. 668,810. (No model.)

To all whom it may concern:

Be it known that I, HIRAM B. GILLETTE, a citizen of the United States, residing at Roseburg, in the county of Douglas and State of Oregon, have invented certain new and useful Improvements in Firearms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in that class of firearms which are technically known as "breech-loading small-arms," and more particularly to the subclass of rifles.

The object of my invention is to provide an attachment for such a weapon whereby it may be quickly and easily converted from a long-range light-charge gun, for example, to a short-range light-charge gun and again readily restored to its original condition and character without requiring the use of special implements separate and detached from the gun. The desirability of such an attachment will be at once apparent, and numerous efforts have been made and devices proposed for accomplishing the object of this invention—that is, manufacturers and users of guns and rifles have long seen the desirability of providing means whereby, for example, a sportsman could readily adapt a gun of large caliber for the reception of small light-charge cartridges.

It frequently happens that the charge or cartridge required by the size of the chamber at the breech of the gun-barrel is so heavy and expensive as to render the weapon useless for the purpose for which it is desired to use the same. Thus the charge or cartridge required to be used with a thirty-two to forty caliber rifle, for example, is too heavy and the cost thereof too high to make it suitable for shooting small game or gallery-target practice. Various devices have, as above stated, been proposed for attachment to such a gun as will adapt it to receive and use cartridges or charges much smaller than those normally employed; but to all of these that are known to me certain objections have been incident, to overcome which is the object of my present invention.

The invention consists in the peculiar con-

struction and arrangement of parts that will be hereinafter fully pointed out.

In the accompanying drawings I have illustrated an embodiment of my invention, in which—

Figure 1 is a view, partly in section, of a breech-loading gun having my improvements applied thereto. Fig. 2 is a detail view of the supplemental tube or auxiliary barrel or chamber detached from the gun. Fig. 3 is a similar view of a slightly-modified form. Fig. 4 is a detail perspective view of a portion of the gun-barrel, showing the means for detaching the said auxiliary tube from the gun. Fig. 5 is a similar view showing a modification of the parts shown in Fig. 4. Fig. 6 is a longitudinal sectional view through the auxiliary tube or chamber shown in Fig. 2, a cartridge being represented in position for use therein. Fig. 7 illustrates the members or parts of the auxiliary tube-extracting mechanism.

Like letters and numerals of reference denote corresponding parts in the several views of the drawings, referring to which—

A designates a tube or, as it may be termed, "chamber" which is adapted to be inserted in the cartridge bed or chamber formed at the breech end of the gun-barrel. This cartridge bed or chamber is somewhat larger in diameter than the bore of the barrel to accommodate the shell or casing of the cartridge, the ball of which projects forwardly from the said bed into and is of the same caliber as the barrel.

The embodiment of my invention herein illustrated is particularly adapted for use in guns of that style in which the cartridge is of longitudinally-tapering form, and therefore the bed or chamber provided for its reception at the breech of the barrel increases in diameter from its forward end rearwardly. This gives to the tube A, which is made of such shape and exterior dimensions as to fit snugly in the said cartridge-bed, a frusto-conical form. It is made of any suitable material, and, besides having a body, which, as above explained, is of the length and cross-sectional form of the cartridge-chamber of the gun to which it is to be applied, has at its rear end an annular flange or rim *a*, corre-

sponding in size to and adapted to fit within the seat provided at the breech end of the cartridge-bed for the reception of the rim or flange at the rear end of a cartridge. In this rim *a* are preferably formed notches *a*², through which the ordinary shell-extractor may operate to eject a cartridge from said tube A. If desired, however, these notches may be dispensed with, as shown in Fig. 3, and in that event the cartridge-shell would be retained in the tube A until that was withdrawn from the gun or said shell could be dislodged by means, such as a cleaning-rod, not specially designed for that purpose.

The bore or passage in the tube A is not of uniform size or diameter throughout its length, as is clearly shown in Figs. 1 and 6. At its forward end it is of the same size as the bore of the gun-barrel, the said end of the tube being at that end of the thickness of the walls of the shell or casing of the cartridge commonly used in the gun at the same point, and said bore in the auxiliary tube is of this same size for a considerable portion of its length—namely, from said front end rearwardly to the line *xx* in Fig. 6. From this point to its rear end it is shaped to provide a bed or chamber for the reduced charge or cartridge B. This cartridge, it will be noticed, is similar in form to that ordinarily employed, the only difference between it and the one which would fit the cartridge-bed of the gun being its length, and consequently its width at its rear end. A suitable countersunk seat *a'* is formed at the breech end of the tube A to receive the flange or rim *b* at the end of the cartridge B, so that when the tube A and cartridge B are in position for use the center of the rear end of said cartridge occupies the same position as does the center of the corresponding end of the cartridge specially designed for the gun.

Owing to the peculiar form of the bore or passage in the auxiliary tube and the exterior tapering shape thereof it will be seen that the walls of the said tube increase in thickness from the forward end to the breech end. My invention, as aforesaid, also includes means mounted on the gun whereby the said auxiliary tube or reducing-chamber can be easily withdrawn from the breech of the barrel when the occasion for its use has passed and it is desired to restore the gun to its normal or original condition. In the embodiment of the invention herein illustrated these consist of devices such as are shown in Figs. 4, 5, and 7 of the drawings.

Referring particularly to Figs. 4 and 7, C designates the gun-barrel, which is shown as being of octagonal form in cross-section. D designates the breech end of such barrel, and the aforesaid auxiliary tube A is shown in position therein. In a longitudinal groove formed in the barrel C and opening through the breech end thereof is arranged an arm or bar 1, which is capable of a limited longitudinal

movement in said groove or way. At its rear end it is provided with a depending lug 2, the lower free end of which is reduced, as at 3. This lug occupies normally a position in front of but in line with the above-described annular rim or flange at the breech end of the tube A, and when said bar or rod 1 is moved rearwardly said lug acts to force the tube A from the cartridge bed or chamber of the gun. Such longitudinal movement of the bar 1 may be accomplished by various means. In the embodiment of the invention illustrated in Figs. 4 and 7 such movement is effected by means of a lever 4, which is fulcrumed on the barrel C and normally lies close against the same throughout its length. On the under side of said lever 4 concentric with its fulcrum are formed a series of teeth, which mesh with a rack-like portion of the bar or arm 1, so that when the longer arm of the lever 4 is raised said bar will be moved toward the breech of the gun and the auxiliary tube A ejected therefrom.

If desired, a ring or band, such as shown in Fig. 5 encircling or surrounding the barrel C, may be employed for moving the ejector-bar 1 instead of the lever 4.

The bore of the auxiliary tube in advance of its cartridge bed or chamber may be either smooth or rifled, as desired. As pointed out, this portion of said tube forms a continuation of the gun-barrel, and therefore, if rifled, the rifling will be made to conform to that of the barrel with which it is to be employed.

The manner of using my improvements will, it is believed, be clearly understood from the foregoing description and the drawings.

It will be noticed that I provide means permanently mounted on the gun for ejecting or removing the auxiliary tube, thus avoiding the necessity for using special tools, such as wrenches, for that purpose or forcing the tube out by means of a rod inserted through the muzzle of the barrel, which proceeding is liable to damage both the auxiliary tube and the rifling of the gun-barrel.

As before stated, my improvements are particularly adapted for use with rifles; but, as will be apparent, many of the features will be of use and can be applied to smooth-bore guns.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a breech-loading firearm, of a tubular receiver adapted to be fitted within the breech end of the gun and support a cartridge smaller than the normal cartridge for the gun; and means permanently mounted on the gun for removing said receiver and permitting the introduction of a normal or regular charge cartridge, substantially as set forth.

2. The combination with a breech-loading firearm, of a tubular receiver adapted to be inserted in the breech of the gun and support a reduced or miniature cartridge, a longitu-

dinally-movable arm mounted on the gun-barrel and adapted to engage with said receiver, and means for moving said arm to cause it to force the said receiver from the
5 gun, substantially as set forth.

3. The combination of a gun or firearm and a short or auxiliary chamber having a notched and countersunk flange or rim on its rear end and a retractor or ejector for the auxiliary
10 chamber comprising a sliding arm with an

angular rear end and a lug thereon, and a lever on the exterior surface of the gun-barrel for operating the sliding arm, substantially as described.

In testimony whereof I affix my signature 13
in presence of two witnesses.

HIRAM B. GILLETTE. [L. S.]

Witnesses:

E. D. STRATFORD,
SIMON CURD.

Correction in Letters Patent No. 631,399.

It is hereby certified that in Letters Patent No. 631,399, granted August 22, 1899, upon the application of Hiram B. Gillette, of Roseburg, Oregon, for an improvement in "Supplemental Barrels for Guns," an error appears in the printed specification requiring correction, as follows: In line 18, page 1, the word "light" should read *large*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 5th day of December, A. D., 1899.

[SEAL.]

WEBSTER DAVIS,
Assistant Secretary of the Interior.

Countersigned:

C. H. DUELL,
Commissioner of Patents.

It is hereby certified that in Letters Patent No. 631,399, granted August 22, 1899, upon the application of Hiram B. Gillette, of Roseburg, Oregon, for an improvement in "Supplemental Barrels for Guns," an error appears in the printed specification requiring correction, as follows: In line 18, page 1, the word "light" should read *large*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 5th day of December, A. D., 1899.

[SEAL.]

WEBSTER DAVIS,
Assistant Secretary of the Interior.

Countersigned:

C. H. DUELL,
Commissioner of Patents.