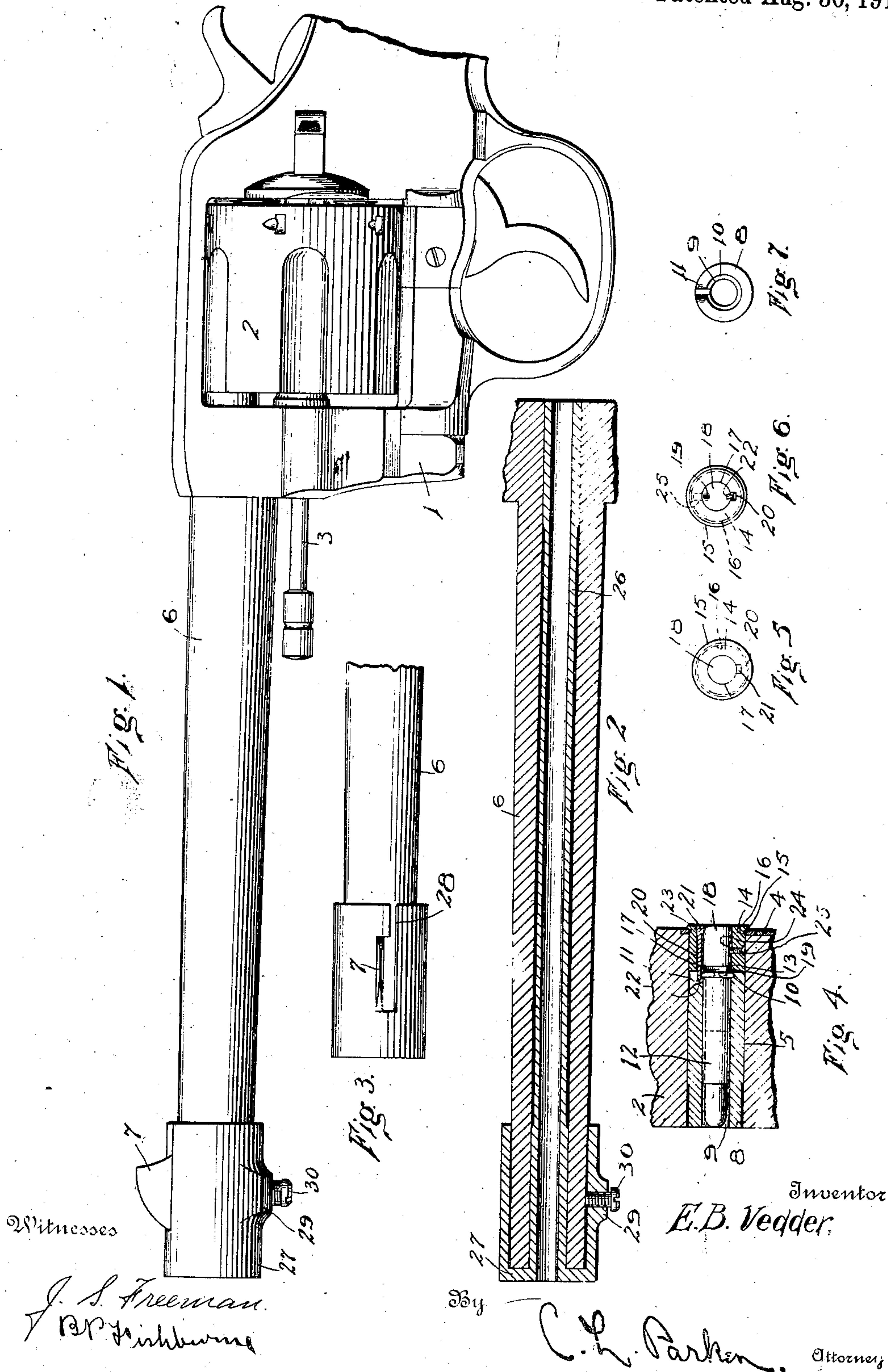


E. B. VEDDER.
SUBCALIBER FOR REVOLVERS.
APPLICATION FILED DEC. 27, 1909.

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UNITED STATES PATENT OFFICE.

EDWARD B. VEDDER, OF FORT STEVENS, OREGON.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD B. VEDDER, citizen of the United States, residing at Fort Stevens, in the county of Clatsop and State of Oregon, have invented certain new and useful Improvements in Subcalibers for Revolvers, of which the following is a specification.

My invention relates to sub-caliber attachments for fire arms, and more particularly to a device of the above character which is adapted to be used in connection with revolvers.

An important object of my invention is to provide sub-caliber attachments capable of being quickly and conveniently applied to any ordinary revolver, which attachments will enable a marksman to use a cartridge of a small caliber in a revolver constructed to carry a cartridge of large caliber, thereby not only economizing in ammunition but reducing the noise of the explosion and enabling a marksman to become familiar with a certain weapon and practice in places which would otherwise not be available.

A further object of my invention is to construct the sub-caliber attachment that the same will not necessitate any alteration to the weapon to which it is applied, and furthermore, to so construct the attachment as to insure accuracy of fire.

A further object of my invention is to provide a sub-caliber attachment for a revolver, so constructed that when the same is applied to the revolver, the rotation of the cylinder of the revolver will not be interfered with, whereby marksmen may practice rapid firing.

My invention consists of the arrangement of parts to be hereinafter described.

In the accompanying drawings, forming a part of the specification, and in which like numerals are employed to designate like parts throughout the same, Figure 1 is a side view of a revolver, a portion thereof being broken away, and the same being equipped with my sub-caliber attachment. Fig. 2 is a vertical longitudinal sectional view through the barrel of the revolver and the attachment connected thereto. Fig. 3 is a fragmentary top plan view of the barrel of the revolver, the same being equipped with my improved sub-caliber device. Fig. 4 is a sectional view through the cylinder of the revolver, and showing parts of my de-

vice in section and arranged within the chamber of the cylinder. Fig. 5 is a plan view of one end of the sub-ejector. Fig. 6 is a plan view of the opposite end of the sub-ejector. Fig. 7 is an end view of the sub-cylinder arranged within the cylinder of the revolver.

In the drawings, I have illustrated my invention as applied to a forty-five caliber Colt revolver. The revolver comprises generally a body frame 1, within which is rotatably mounted a cylinder 2. The cylinder 2 is slidably mounted upon an axial pin 3, which is slidably and rotatably mounted within the frame 1. At one end of the axial pin 3 is arranged a projector provided with a plurality of curved openings, which are arranged to aline with the corresponding ends of the usual chambers which are formed in the cylinder 2. In Fig. 4, a portion of the extractor is illustrated at 4 and one of the chambers of the cylinder 2 is illustrated at 5. The revolver further comprises a barrel 6, provided with the usual sight-point 7, arranged at its free end. As no claim is made to the revolver itself, it is thought that the brief description of the same is sufficient to illustrate the manner in which my improved sub-caliber device is applied thereto.

Within the chamber 5, of the cylinder 2, is arranged a sub-cylinder 8, which is slightly frusto-conical in shape and is provided with a longitudinal cylindrical opening 9. Each of the chambers 5 of the cylinder 2 are slightly frusto-conical in shape and decrease in size toward the barrel of the revolver. By this construction the sub-cylinder 8 may be inserted within the chamber 5 and held therein by frictional engagement. As illustrated in Fig. 4, the far end of the sub-cylinder 8 is arranged flush with the far end of the cylinder 2, and the near end of the sub-cylinder 8 terminates within the chamber 5 at a point considerably removed from the near end of the cylinder 2. As illustrated in Figs. 4 and 7, the near end of the sub-cylinder 8 is provided with a circular recess 10, which surrounds the near end of the cylindrical opening 9 and is larger than said cylindrical opening. The sub-cylinder 8 is further provided at its near end with a cut-out portion 11, which extends from the periphery of the same to a point below the circular recess 10, as clearly

illustrated in Fig. 4. As illustrated in Fig. 4, a cartridge 12 of twenty-two-caliber is arranged within the opening 9 of the sub-cylinder 8, and the flanged end or rim 13, of the cartridge 12 fits within the recess 10 but is too large to enter the opening 9. Within the near end of the opening 9 is arranged a sub-projector comprising a cylindrical body portion 14, having a peripheral flange 15 at its near end, said flange being undercut as at 16. It will be obvious from this construction that the sub-projector 14 is somewhat similar in construction to the shell of an ordinary forty-five caliber cartridge. The extractor 4 is arranged under the flange 15, as illustrated in Fig. 4, and it is obvious that when the extractor 4 is moved away from the cylinder, as is customary in removing empty shells from a Colt revolver, the sub-projector 14 will be accordingly removed from the cylinder 2. The sub-projector 14 is provided with a central longitudinal cylindrical opening 17, within which is longitudinally slidably mounted a cylindrical plunger 18, carrying upon its far end a pointed projection 19. The projection 19 is arranged adjacent the periphery of the plunger in order that the same may fire rim-firing cartridges. It is well known that cartridges of small caliber, such as twenty-two caliber, are generally made to fire at the rim, and I have therefore illustrated the pointed projection 19, arranged to fire rim-firing cartridges, but it is to be understood that I may place the projection 19 at the center of the far end of the plunger, when it is desired to use center-firing cartridges.

The sub-projector 14 is provided with a longitudinal groove 20, which communicates with the cylindrical opening 17, of the sub-projector. Within the groove 20 is arranged a spring sub-extractor 21 upon the far end of which is formed a hook-like member 22, adapted to fit under the rim of the cartridge 12. The near end of the spring 21 is anchored as at 23 in the groove 20, by any suitable means. It is obvious by reference to Fig. 4 that the spring 21 is capable of lateral movement within the groove 20 and is prevented from having longitudinal movement. The far end of the spring 21 is beveled, so that the same may be forced outwardly by the rim of a cartridge when the sub-projector is being inserted within the chamber 5. After the hook-like portion 22 has passed the rim of the cartridge, the same will spring behind the rim, as illustrated in Fig. 4, whereby when the sub-projector is removed from the cylinder 2, said sub-projector will accordingly remove the cartridge 12.

The plunger 18 is provided upon its periphery with a longitudinally disposed groove 24, within which is arranged the

inner end of a screw 25, tapped through the body portion of the sub-projector 14, whereby the longitudinal movement of the plunger 18 is limited.

In connection with the parts of my device so far described, I employ a sub-barrel 26, which is cylindrical and adapted to fit snugly within the barrel 6 of the revolver. The far end of the barrel 26 is provided with a cylindrical cap 27, provided upon one side thereof with a bayonet slot 28 for the reception of the sight 7, of the revolver. The cap 27 is arranged upon the far end of the barrel 6, and is illustrated in Fig. 3 the bayonet slot is adapted to prevent the longitudinal displacement of the cap 27 and its barrel 26. Upon the lower side of the cap 27 is formed a boss 29, through which extends a screw 30, adapted to engage the barrel 6, and clamp the cap 27 against rotation. The near end of the sub-barrel 26 is arranged flush with the near end of the barrel 6, as clearly illustrated in Fig. 2.

It is to be understood that a sub-cylinder and sub-projector similar to those above described, are to be arranged in each of the chambers of the cylinder 2 of the revolver.

It is obvious by the construction hereinabove described, that the employment of my device does not effect the rotation of the cylinder 2, whereby said cylinder may be loaded with a plurality of small caliber cartridges. The operation of the Colt revolver is unaffected by the employment of my device upon the same, and it is deemed unnecessary to describe the operation of the revolver. I wish it understood, however, that I have used a Colt revolver in connection with my device for the sake of illustration only, and that I do not restrict myself to the use of my device upon this revolver alone, for the same may be applied just as well to the ordinary revolver.

Having fully described my invention, what I claim is:—

1. In a device of the character described, the combination with the barrel and cylinder of a revolver, of a sub-cylinder fixedly secured within a chamber of said cylinder, said sub-cylinder being adapted to removably hold a cartridge, and a separate sub-barrel arranged within said barrel.

2. In a device of the character described, the combination with the barrel and cylinder of a revolver, of a sub-cylinder fixedly secured within a chamber of said cylinder, said sub-cylinder being adapted to removably hold a cartridge, a separate sub-barrel arranged within said barrel, and means for holding said sub-barrel in its proper position.

3. The combination with the barrel and cylinder of a revolver, of a sub-barrel arranged within said barrel, an independent sub-cylinder arranged within a chamber of

said cylinder, and means for removing a cartridge from said sub-cylinder without removing said sub-cylinder from said chamber.

4. The combination with the barrel and cylinder of a revolver, of a sub-cylinder fixedly secured within a chamber of said cylinder, means for withdrawing a cartridge from said sub-cylinder, and a separate sub-barrel arranged within the said barrel.

5. The combination with the barrel and cylinder of a revolver, of a sub-barrel arranged within said barrel, an independent sub-cylinder arranged within a chamber of said cylinder and adapted to removably hold a cartridge.

6. The combination with the barrel and cylinder of a revolver, of a cylindrical sub-barrel adapted to fit snugly within said barrel, said sub-barrel being provided at one end thereof with a cap provided with a bayonet slot and clamping screw, a frusto-conical sub-cylinder adapted to fit within a chamber of said cylinder, a sub-projector arranged within said chamber and comprising a cylindrical body portion provided with a flanged end, said sub-projector being provided with a spring sub-extractor having a hook-like extremity, said cylindrical body portion of said sub-projector being provided with a longitudinal opening, a plunger arranged within said opening and provided with a pointed projection, and said sub-cylinder being provided at its near end with a circular recess and a cut-away portion leading thereto, substantially as described.

7. The combination with the barrel and cylinder of a revolver, of a sub-barrel ar-

anged within said barrel, a sub-cylinder arranged within a chamber of said cylinder, and a device arranged within said chamber for removing a cartridge from said sub-cylinder.

8. The combination with the barrel and cylinder of a revolver, of a sub-barrel arranged within said barrel, a sub-cylinder arranged within a chamber of said cylinder, a removable sub-projector arranged within the said chamber, and means carried by said sub-projector for withdrawing a cartridge from said sub-cylinder.

9. The combination with the barrel and cylinder of a revolver, of a sub-barrel arranged within said barrel, a sub-cylinder arranged within a chamber of said cylinder, a removable sub-projector arranged within said chamber, a plunger carried by said sub-projector, and a sub-extractor carried by said sub-projector for removing a cartridge from within said sub-cylinder.

10. The combination with the barrel and cylinder of a revolver, of a sub-barrel arranged within said barrel, a sub-cylinder arranged within a chamber of said cylinder, for holding a cartridge of insufficient size to fit said chamber, said sub-cylinder being capable of being rotated with said cylinder, and said sub-cylinder forming no part of the cartridge arranged within the same.

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

EDWARD B. VEDDER.

Witnesses:

FRED C. BIDWELL,
WM. B. YOUNG.