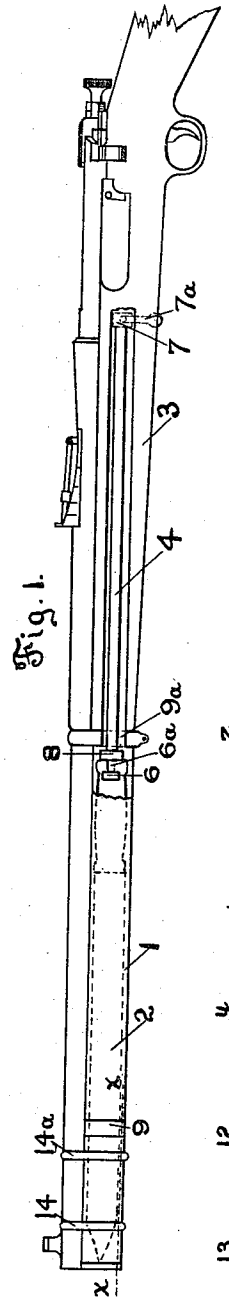
No. 634,466. Patented Oct. 10, 1899.

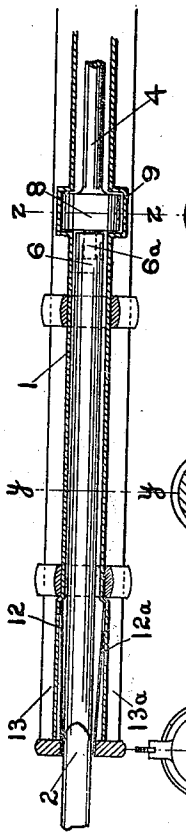
W. C. LAIRD.

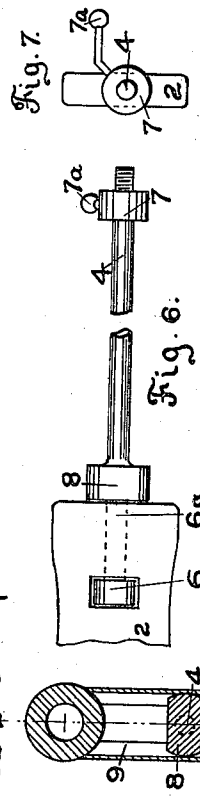
SLIDING BAYONET.

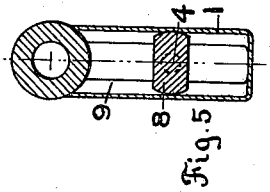
(Application filed Dec. 5, 1898.)

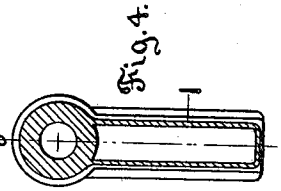
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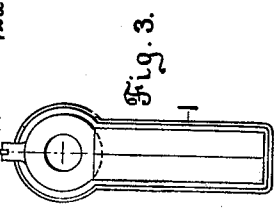


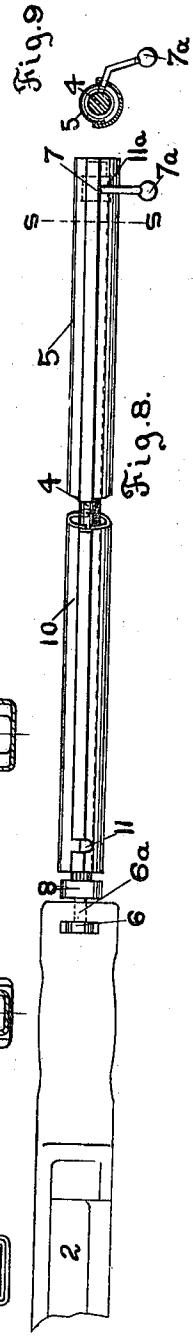












Witnesses
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S. Ray Fralick.

By his Attorney
Geo. B. Willcox.

Inventor
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UNITED STATES PATENT OFFICE.

WILLIAM C. LAIRD, OF BAY CITY, MICHIGAN.

SLIDING BAYONET.

SPECIFICATION forming part of Letters Patent No. 634,466, dated October 10, 1899.

Application filed December 5, 1898. Serial No. 698,321. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. LAIRD, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Sliding Bayonets; 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.

The objects of my invention are, first, to provide a sliding bayonet that can be fixed or unfixed without removing the gun from the firing position; second, to provide a dust-proof sheath or guard to protect the bayonet when not in use; third, to provide a clamping device by which it is rendered impossible for an opponent to detach the bayonet from the gun, and, fourth, to provide a rod for advancing or returning the bayonet and making this rod available also as a cleaner. I accomplish these objects by arranging a sheath beneath the gun-barrel within which the bayonet slides and removably attaching to the end of the bayonet-handle a rod for advancing or returning the bayonet. A dirt-proof cap covers the end of the sheath when the bayonet is not in use, and a slotted tube incases the operating-rod.

The invention will be fully described hereinafter and defined in the claims.

Reference may be had to the accompanying drawings, forming a part of the specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a portion of a gun, showing my invention attached, parts being broken away for clearness. Fig. 2 is a horizontal sectional view of the sheath near the muzzle of the gun, showing the bayonet advanced, the section being taken on the line *x x* of Fig. 1. Fig. 3 is an end view of the muzzle. Fig. 4 is a cross-section on the line *y y* of Fig. 2. Fig. 5 is a cross-section on the line *z z* of Fig. 2. Fig. 6 is a detail in side elevation of the bayonet-handle and the shifting-rod. Fig. 7 is an end view of Fig. 6. Fig. 8 is a detail of part of the bayonet and shifting-rod with the rod-guard in position. Fig. 9 is a cross-section on the line *s s* of Fig. 8.

As is clearly shown in the drawings, the invention consists of a sheath 1, preferably rectangular in cross-section, placed beneath the barrel of the gun and extending from the muzzle to near the middle band. The sheath is of suitable size and shape to allow a bayonet 2 of the "knife" or other suitable form to slide longitudinally therein. The wooden rest 3 of the gun is bored or recessed longitudinally to receive the operating or transversing rod 4 and its longitudinally-divided casing 5. This casing is not shown in Fig. 1 of the drawings for the sake of clearness.

The handle of the bayonet 2 is provided with a lateral T-slot to receive the enlarged head 6 and stem 6^a of the rod 4, by which means the rod may move the bayonet longitudinally within the sheath 1. The other end of rod 4 is provided with a collar 7 and a lever 7^a, by which the rod and bayonet may be operated. A longitudinal slot (not shown) in the wood rest 3 permits the necessary longitudinal movement of the lever 7^a.

Having described the means for advancing the bayonet from and returning it to its sheath, I call attention to the means for locking the bayonet in either its advanced or returned position.

Fixed to the rod 4 and preferably made integral with it is a cam 8, arranged to receive the thrust of the bayonet. As is plainly shown in Fig. 5, this cam is of approximately rectangular cross-section and so arranged that in its vertical position it may slide within the sheath 1, and when turned horizontally its extremities engage recesses 9 or 9^a, provided in the sides of the sheath 1 at points corresponding to the advanced and returned positions of the cam 8 as it moves with the bayonet. The cam thus locked forms a thrust-block, which transfers the force of the bayonet thrust to the sheath 1 and relieves the rod 4 of all strain. Rotation of the lever 7^a turns the rod 4 and revolves the cam 8.

In order to prevent access of water or dust to the rod 4 through the longitudinal slot in the rest 3, rod 4 is surrounded by a split tube or sheath 10, inclosed within the bore of the rest 3. The construction of the tube 10 is shown in Figs. 8 and 9. It is preferably made of two semicylinders arranged concentrically in such a manner as to allow one part to revolve within the other and thus form a concentrically-sliding cover. When the top is

slightly revolved by raising the lever 7^a, the opening thus formed in one side of the tube 10 permits the longitudinal movement of the stem of the lever 7^a in advancing or returning the bayonet. To permit the sliding cover to entirely close when the lever 7^a is in its extreme positions, openings 11 and 11^a are provided in the lower half of the tube 10 into which the stem of the lever may drop. If desired, a spring of spiral or other suitable form may be attached to the cover of the tube 10 in such a manner as to automatically close the opening when the lever drops into the slots.

An important feature of my invention is the means for automatically opening or closing the end of the sheath 1 when the bayonet is advanced or withdrawn. This means is plainly shown in Fig. 2, in which 12 is a flat spring attached at one end to the inside of the sheath 1, the outer end of the spring being attached to and forming a support for a plate 13, adapted to open and close one-half of the sheath 1. A similar spring 12^a and corresponding plate 13^a are provided to open and close the other half of the sheath. As the bayonet-point advances it forces apart the springs 12 and 12^a and the plates 13 and 13^a, allowing the bayonet-blade to pass through. Similarly the plates 13 and 13^a are brought together when the bayonet is returned to the sheath, thus tightly closing the end of the sheath and effectually preventing dust or dirt from entering the sheath. In order to strengthen the sheath near its end and to furnish a rigid support for the bayonet-handle when the bayonet is in its fixed position, I provide two bands 14 and 14^a, encircling both the barrel and the sheath.

It is seen that by this means I produce a sliding bayonet that is at once simple, compact, and readily fixed or unfixed without removing the gun from the firing position. By making the bayonet and rod in two separate parts, as described, they may be easily separated and the bayonet used as a knife, while the rod 4 may be combined with a similar rod and used as a cleaner. This second rod may be carried in a recess in the rest 3, as in ordinary guns.

The precise method of attaching the metal sheath 1 to the gun-barrel is not essential to the spirit of my invention, although I prefer to fasten it by brazing the top edges of the sheath to the barrel and further securing the sheath by the bands 14 14^a and the middle band of the gun, as is shown in Fig. 1.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a sliding bayonet the combination with a gun of a sheath arranged below the barrel of the gun, a bayonet longitudinally movable within said sheath, a rod removably attached to the handle of said bayonet and adapted to operate the bayonet, a cam upon said rod for receiving the thrust of the bayonet, a recess in the walls of said sheath adapted to engage with the cam, substantially as and for the purpose described.

2. In combination with a sliding bayonet, an operating-rod removably attached to the handle of said bayonet, a sheath surrounding said rod, a lever for rotating the rod, a cam fixed to said rod and adapted to rotate by the movement of said lever, and a bayonet-sheath having recesses adapted to engage the projecting portion of said cam and to lock the bayonet in position, substantially as described.

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

WILLIAM C. LAIRD.

Witnesses:
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J. W. MCMATH.