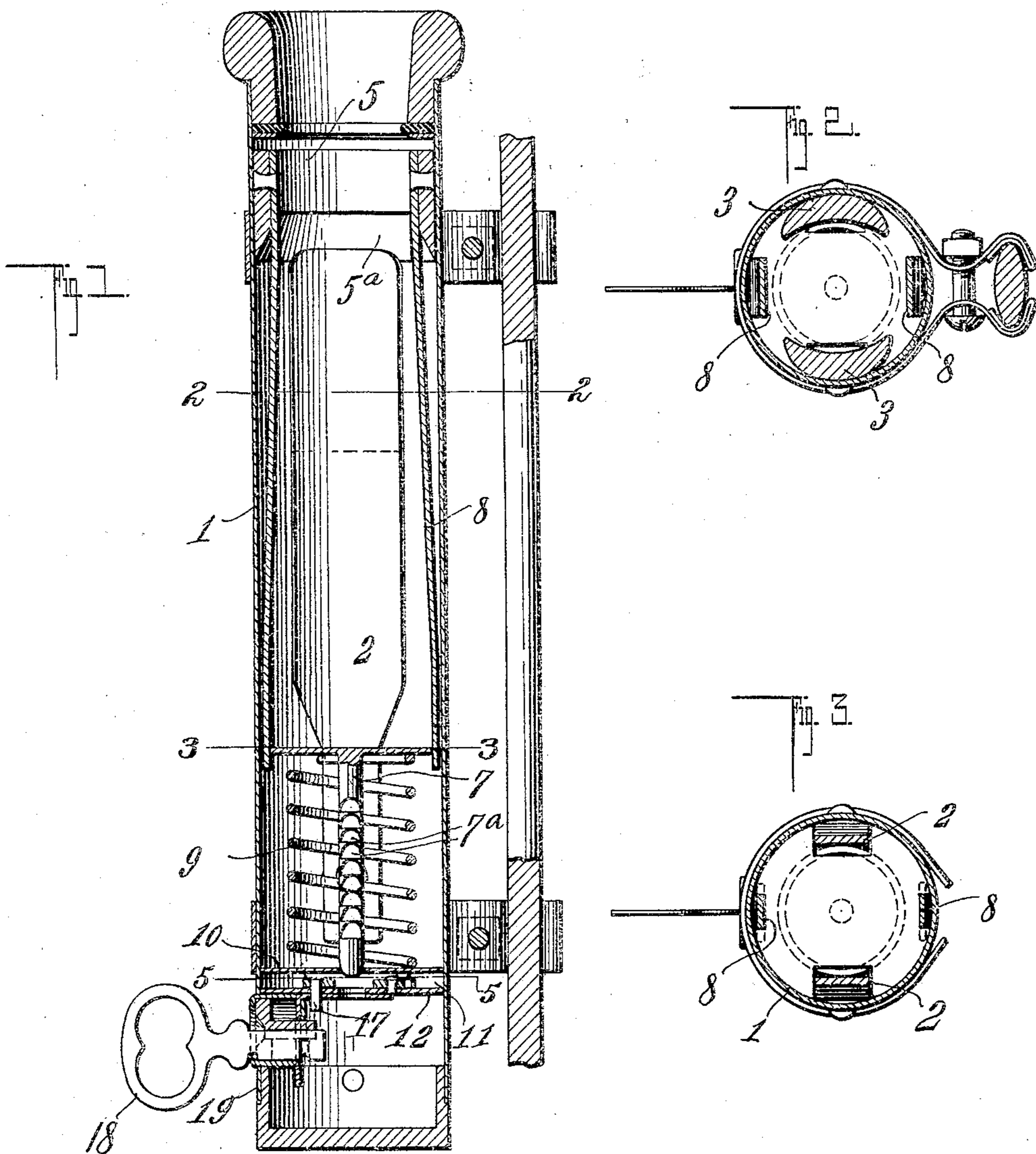


C. H. FREDERICK.
LOCKING WHIP SOCKET.
APPLICATION FILED MAR. 22, 1909.

929,931.

Patented Aug. 3, 1909.
2 SHEETS—SHEET 1.



Witnesses

Philip H. Burch
J. E. Dodge

Inventor

C. H. Frederick

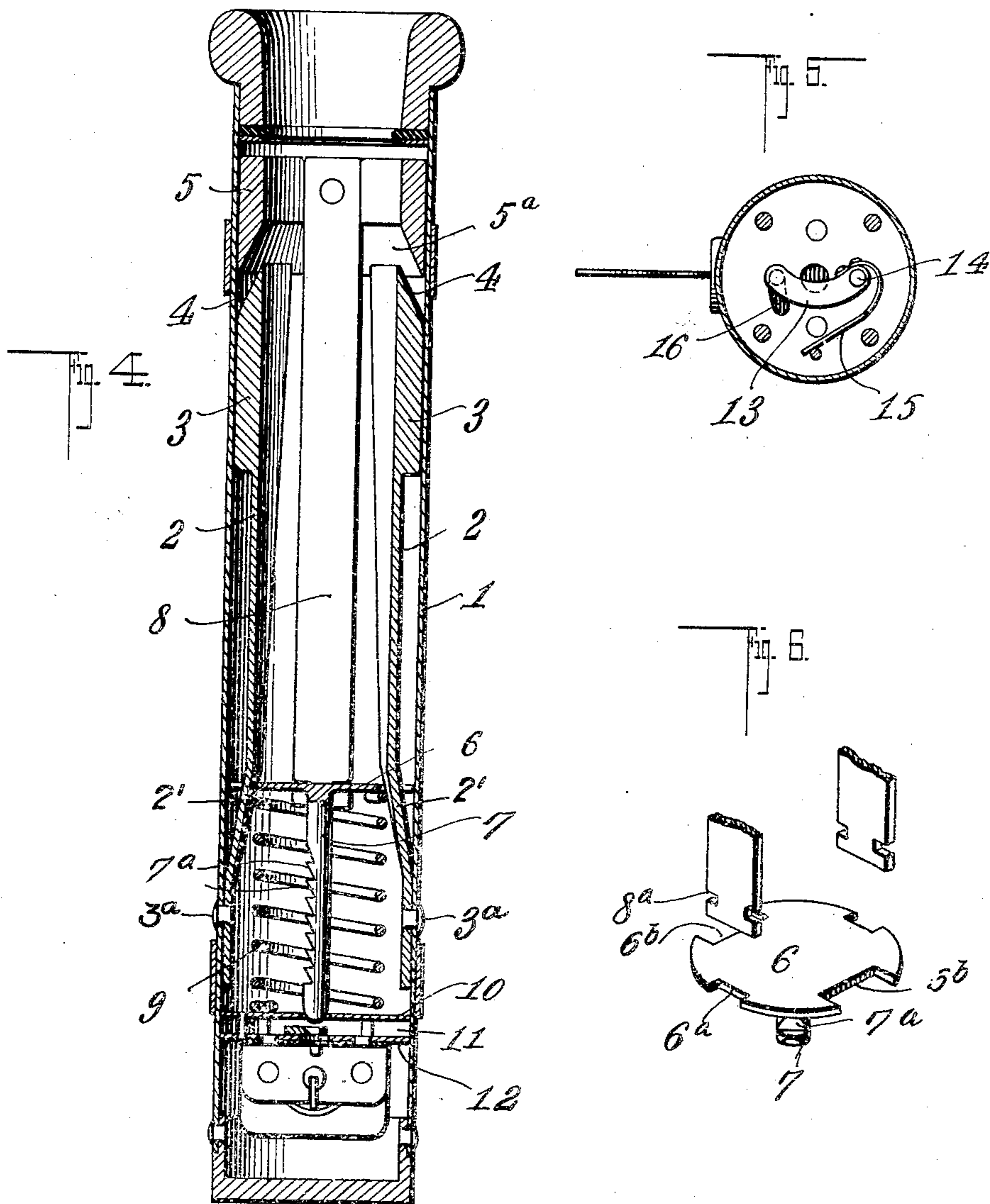
By Deleva Cobb

Attorneys

C. H. FREDERICK.
LOCKING WHIP SOCKET.
APPLICATION FILED MAR. 22, 1909.

929,931.

Patented Aug. 3, 1909.
2 SHEETS—SHEET 2.



Witnesses

Philip H. Burch
H. E. Dodge

Inventor

C. H. Frederick,

By

Beeler Cobb

Attorneys

UNITED STATES PATENT OFFICE.

CHARLES H. FREDERICK, OF SANDUSKY, OHIO.

LOCKING WHIP-SOCKET.

No. 929,931.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed March 22, 1909. Serial No. 484,902.

To all whom it may concern:

Be it known that I, CHARLES H. FREDERICK, a citizen of the United States, residing at Sandusky, in the county of Erie and State of Ohio, have invented certain new and useful Improvements in Locking Whip-Sockets, of which the following is a specification.

This invention relates to that class of devices commonly known as locking whip sockets, and aims to provide a construction of socket of this type which is extremely simple with regard to the arrangement of parts, and which is conducive to the highest degree of safety in regard to its locking action in co-operation with a whip received therein.

For a full understanding of the invention, reference is to be had to the following detail description, and to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a whip socket embodying the invention and showing a key for operation of the locking mechanism arranged in operative position; Fig. 2 is a horizontal sectional view on the line 2—2 of Fig. 1; Fig. 3 is a horizontal sectional view on the line 3—3 of Fig. 1; Fig. 4 is a vertical sectional view taken about at a right angle to the section shown in Fig. 1, and Fig. 5 is a horizontal sectional view taken on the line 5—5 of Fig. 1, and showing more clearly the locking means coöperating with the locking stem, and Fig. 6 is a detail perspective view showing the pressure plate and the pull rods connected therewith partly broken away, parts separated.

Throughout the following detail description, and on the several figures of the drawings, similar parts are referred to by like reference characters.

Referring to the drawings and specifically describing the peculiar advantageous construction of the invention the numeral 1 denotes the whip socket body and the numeral 2 indicates a pair of clamping members arranged in said body in spaced relation and adapted to engage the butt of a whip at opposite sides in order to prevent displacement thereof. The clamp members 2 are spring devices secured at the lower ends thereof by fastenings 3^a to opposite portions of the whip socket 1, said members being formed at their upper ends with heads 3 provided at the outer upper extremities with bevels or cams 4. The normal tendency of the clamp members 2 is to assume the positions shown in Fig. 4 of the drawings with the outer

faces of the heads 3 in contact with the sides of the socket 1. Arranged above the heads 3 of the spring clamping members 2, and within the socket 1, is a sliding ring 5, the lower inner portion of which is beveled to form a wedging shoulder or annulus 5^a. The ring 5 is adapted for longitudinal movement in the socket 1, in order to cause the wedge annulus or shoulder 5^a to engage with the cam 4 of the members 2 so as to force the heads 3 of the members 2 into locking co-operation with the butt of the whip introduced into the socket.

The actuation of the sliding ring 5 is effected by the following means: In the lower portion of the socket 1 is arranged a pressure plate 6 with which the lower end of the whip introduced into the socket 1 is adapted to engage. Projecting downwardly from the under side of the pressure plate 6 is a locking stem 7 and connected with the pressure plate at opposite peripheral portions thereof are spaced pull rods or draw plates 8. The plates 8 are secured by fastenings to the ring 5 and the lower extremities of said plates are notched as shown in Fig. 6 at 8^a in order to interlock and engage in notches 6^a of the pressure plate 6. Normally, however, the sliding ring 5 is maintained in the position in which it is shown in Fig. 4 by means of a coiled spring 9 disposed beneath the pressure plate 6 and normally tending to force this plate upwardly and hold the ring at the before mentioned adjustment. The spring 9 is interposed between the under side of the pressure plate 6 and the upper plate 10 of the housing for a locking mechanism arranged in the space 11 at the lower portion of the socket 1. The lower plate housing the locking mechanism is indicated at 12 and the said plates 10 and 12 are provided with a central opening through which the locking stem 7 is adapted to move when forced downwardly by means of the whip engaging the pressure plate 6. A catch 13 pivoted at 14 to the upper side of the plate 12 is adapted to be engaged with the locking stem 7 by means of a spring 15 normally tending to effect such engagement. The stem 7 is provided lengthwise thereof with a plurality of teeth 7^a and into direct engagement with which the catch 13 is adapted to be moved.

Extending downwardly from the free end of the catch 13 and passing through a slot 16 in the plate 12 of the locking

mechanism is a nib or projection 17. This projection 17 is adapted to be engaged by a key 18 in the manner shown in Fig. 1 of the drawing so that the catch 13 may be moved in a pivotal manner in order to disengage the same from the locking stem 7 and release the slide ring so as to permit the latter to be moved upwardly by the action of the coiled spring 9.

The general operation of the device may now be described. It will be apparent that when the operator places the butt of the whip in the socket 1 and forces the same downwardly into proper position, the lower end of the whip will strike the pressure plate 6 and force the latter downwardly carrying the locking stem 7 therewith until the pressure on the whip is released. As the stem 7 moves downwardly through the opening in the plates 10 and 12 the teeth 7^a thereof are engaged by the catch 13 of the locking mechanism and when pressure on the whip is relieved it will be apparent that the part 7 will be locked at its downward adjustment. The downward movement of the plate 6 carries with it the sliding ring 5 and the wedging shoulder 5^a of said ring engaging the cams 4 of the heads 3 will force the heads of the spring clamping members 2 together and into positive engagement with opposite sides of the butt of the whip, thereby effectively locking the latter from unauthorized removal. To unlock the whip it is necessary to introduce the key 18 into a suitable key-opening 19 therefor, and by actuation of the catch 13 disengage the same from the stem 7 and permit upward movement of the pressure plate 6 by the coiled spring 9.

It will be observed that the pressure-plate 6 is also provided with notched portions 6^b and these portions receive therein the lower end portions of the clamping members 2. The portions of the clamping members 2 adjacent to the pressure-plate 6 are inclined and the plate 6 when forced upwardly will cooperate to positively separate the members 2 by riding along the inclined portions which are denoted 2'. In other words, even though the natural spring tension of the members 2 should not be sufficient to separate these members when the ring 5 moves upwardly, they will be positively disengaged from the whip by means of the pressure-plate 6 actuated by the spring 9.

It is to be understood that it is not necessary to lock the whip whenever the same is placed in position in the socket. In the ordinary use of the whip the owner will simply drop the same into the socket 1 in the customary way and without exerting sufficient pressure to force the plate 6 downwardly and lock the whip in place. When, however, the owner leaves the carriage or vehicle and he desires to prevent unauthorized removal of the whip, then the

butt of the whip is forced downwardly in order to effect the locking action hereinbefore specifically described.

Having thus described the invention what is claimed as new, is:

1. In a locking whip socket, the combination of a body, spaced spring clamp members disposed in the body, a pressure-plate movable in said body and adapted to engage the lower portions of the clamp members to positively separate them on upward movement of said pressure-plate, means connected with the pressure plate for forcing the clamp members toward one another into clamping engagement with a whip, locking means for holding the pressure-plate in a depressed position, and spring means for forcing the pressure-plate upwardly when released from the locking means.

2. In a locking whip socket, the combination of a body, spaced spring clamp members disposed therein and having clamping heads at their upper ends, a sliding ring arranged above said clamping members to engage with and force their heads inwardly to clamp a whip, the clamping members being provided at their lower ends with outwardly inclined portions, a pressure-plate in the lower portion of the body and connected with the ring aforesaid to pull said ring downwardly when the plate is depressed, said pressure-plate having portions engaging the inclined portions of the clamp members to positively force said members apart when the pressure-plate moves upwardly, means for locking the pressure-plate in depressed position, and a spring engaging the pressure-plate to normally return the same to its upper limit of movement when released from the locking mechanism.

3. In a locking whip socket, the combination of a socket body, a pair of spaced clamp members arranged in said body and secured at the lower ends thereof thereto, the upper ends of said clamp members having heads formed at the upper outer extremities with cams, a sliding ring arranged above and in spaced relation to the heads of the clamp members and formed at its lower edge with an inner wedging annulus adapted to be forced between the cams of the clamp members and the wall of the locking whip socket, a pressure plate in the lower-portion of the body, opposite spaced draw-plates secured at the upper ends thereof to the sliding ring, and having their lower ends detachably interlocked with the peripheral portion of the pressure plate, a locking stem projecting downwardly from the lower side of the pressure plate, locking mechanism below the pressure plate and consisting of upper and lower housing plates having a central opening through which the locking stem is adapted to pass, a catch between said housing to engage the locking stem, key mech-

anism to disengage the catch from the locking stem after the pressure plate has been forced downwardly thereby, and a coiled spring between the pressure plate and the upper plate of the locking mechanism to normally hold the sliding ring above and in spaced relation to the clamping heads.

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

CHARLES H. FREDERICK.

Witnesses:

JOSIAH HAWK,
FRANK O. WINDIOCH.