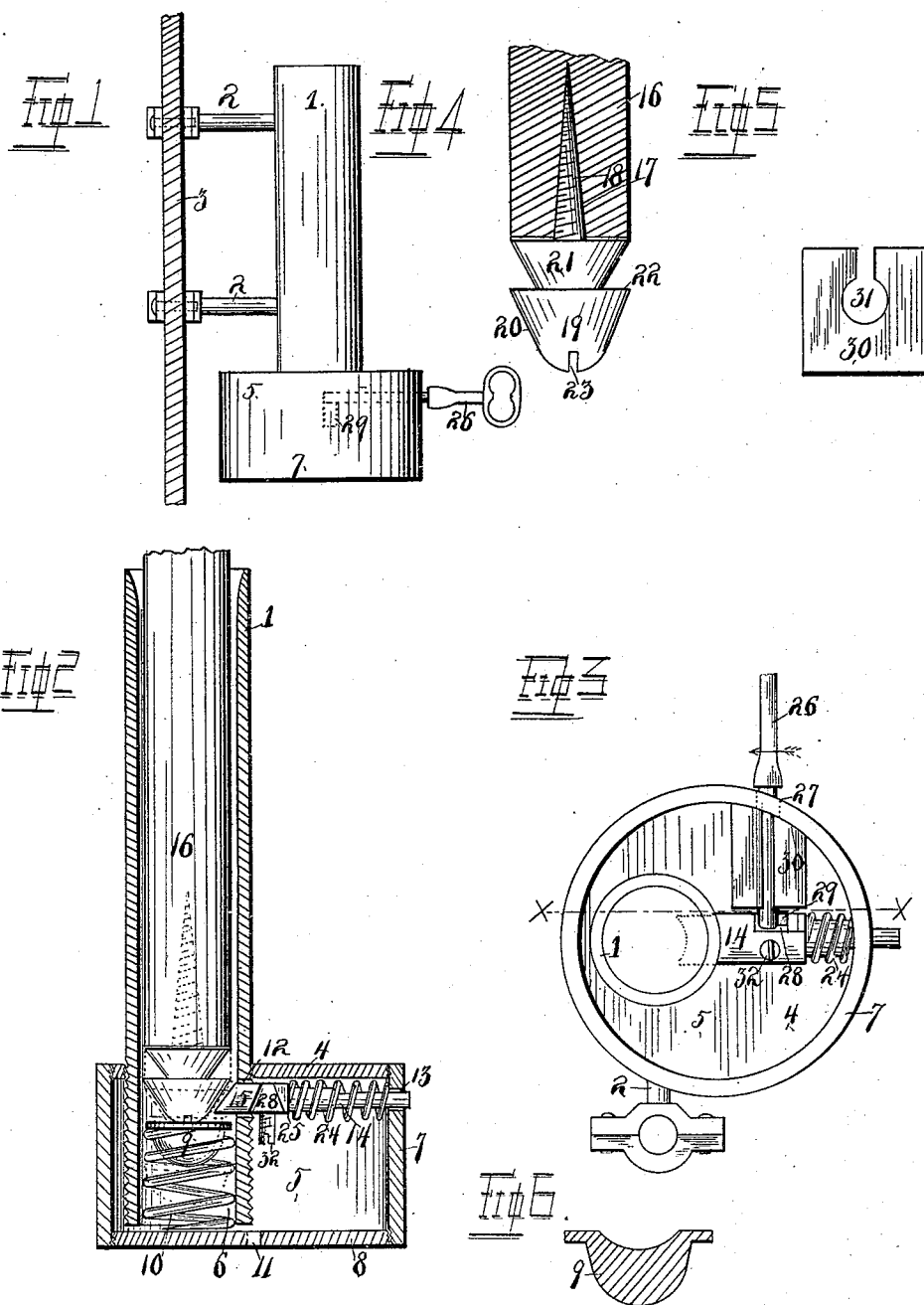


(No Model.)

H. J. SAXTON.
COMBINED WHIP LOCK AND SOCKET.

No. 471,652.

Patented Mar. 29, 1892.



WITNESSES

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UNITED STATES PATENT OFFICE.

HARRY J. SAXTON, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE SAXTON COMBINED WHIP LOCK AND SOCKET COMPANY, OF SAME PLACE.

COMBINED WHIP LOCK AND SOCKET.

SPECIFICATION forming part of Letters Patent No. 471,652, dated March 29, 1892.

Application filed September 1, 1891. Serial No. 404,414. (No model.)

To all whom it may concern:

Be it known that I, HARRY J. SAXTON, of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in a Combined Whip Lock and Socket, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved locking whip-socket; and it consists in the novel arrangement and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of my invention applied to a dash-board. Fig. 2 is a sectional elevation of the improved combined whip lock and socket, the section being taken on line *xx* of Fig. 3. Fig. 3 is an inverted plan view with bottom plate removed. Fig. 4 is a broken sectional elevation of a device located on the butt of the whip. Fig. 5 is an end view of a key-guide, enlarged, used in carrying out the invention. Fig. 6 is a detail view of a whip-ejecting plunger, it being shown in transverse vertical section.

1 indicates the whip-socket, which may be made of any suitable material. It has the usual open upper end, which in this instance is shown flared for reception of the whip and provided with the clamping-bracket 2, projecting from one side, for attaching the device to the dash 3, (see Fig. 1;) or in some cases I may do away with these clamping-brackets and set the bottom of the device directly upon the bottom of the buggy or other vehicle or otherwise attach it thereto, as should be clear.

The lower end of the whip-socket 1 is screw-threaded on its outer surface and screwed within a threaded opening formed in the top plate 4 of the lock-chamber, so that its projecting lower end will pass a sufficient distance below said top plate to form a chamber 6, in which the whip-ejecting plunger is located, as will appear farther on. Said lock-chamber 5 may be of any suitable shape, although I show it here in the form of a cylinder.

7 indicates the outer shell of the lock-chamber, which is here shown in the form of a cylinder having its opposite ends threaded internally. Fitting in the upper end of this shell (removably, it may be) is the top plate 4, which has its periphery threaded to correspond with the thread of said shell, and removably fitting in the opposite end of said shell is the bottom plate 8, it being suitably threaded or otherwise constructed for the purpose.

Located within the chamber 6 in the lower end of whip-socket 1 is the whip-ejecting plunger 9 and its spring 10. This plunger is supported in position upon the upper end of the spring 10, so as to be slid up and down during the operation of placing and holding the whip and ejecting the same, and the bottom (or lower) end of said spring is supported by resting upon the bottom plate 8 of the lock-chamber, so that when said plate is removed both the plunger and spring will drop out and may be repaired or otherwise manipulated. A hole 11 in the bottom plate serves to permit egress of water or rubbish which might otherwise accumulate in the lock-chamber or the chamber containing the plunger.

Mounted in the upper portion of the lock-chamber in suitable bearings 12 and 13, so that it shall lie transversely of said chamber, is a spring-actuated locking-bolt 14, which has an inclined head 15 normally projecting into the path of the butt of the whip.

The butt of the whip is so conformed that when it is pushed down within the whip-socket to the limit of its downward movement it will be held against withdrawal by the head 15 of the bolt 14.

16 indicates the butt of the whip, having a central bore 17, within which is screwed or otherwise firmly fixed the shank 18 of a conical locking-knob 19. This knob is provided with two conical or inclined surfaces 20 and 21, the surface 21 being located above the surface 20, thereby forming a shoulder 22, with which the head of the bolt engages to prevent withdrawal of the whip from the socket, as stated hereinafter. In order that the knob 19 may be screwed within the bore of the butt of the whip, it is provided

with a transverse slot 23 for engagement of a screw-driver, or it may be otherwise constructed, so as to be readily placed in such position. Mounted on the bolt 14 is a spiral spring 24, one end of which normally bears against the inner surface of the shell 7, and the opposite end bears against a shoulder 25 on said bolt, whereby the head of the bolt is urged and normally held in the path of the knob 19 when the said knob is inserted within said whip-socket. (See Fig. 2 and 3.)

26 indicates a key having a solid barrel and a plain web that is devoid of notches, which key is adapted to be inserted in a key-hole 27, cut (or formed) in the casing 7 for the purpose of withdrawing the bolt 14 and releasing the whip at the pleasure of the operator. The bolt 14 has a notch 28 formed in one side thereof, which is adapted to be engaged by the web 29 of the key 26 to withdraw said bolt.

30 indicates a key-guide having a keyway 31 formed therein and extending from the key-hole 27 in the shell inwardly to a point adjacent the notch 28 in the bolt. Said key-guide is fixed to the under side of the top plate 4, so that its keyway will lie at right angles to the bolt. (See Fig. 3.)

32 indicates a stop-pin or a stop of any suitable kind, which is adapted to contact with the exterior surface of the wall of the plunger-socket and limit the movement of the bolt when same is urged toward said chamber by the spring 24 and which stop-pin is affixed to the under side of said bolt for such purpose.

The operation is as follows: The whip is shown resting loosely within the whip-socket in Fig. 2, with the knob 19 in contact with the upper surface of the plunger 9. In such position the whip may of course be withdrawn for use, as it is not locked; but if it is desired to lock the whip within the whip-socket it is only necessary to press it downwardly with sufficient force (which should be considerably more than that imposed by the whip only) to compress the spring 10, which, being done, the whip and knob carried thereby will pass downwardly to the position indicated in Fig. 2 by dotted lines. The inclined surface 20 will engage with the inclined head 15 of the bolt, thereby retracting said bolt and permitting the shoulder 22 to pass below said head, whereupon the said bolt will be shot outwardly by the power of its spring 24, and the inclined head 15 will then engage with the shoulder 22 and prevent withdrawal of the whip from the whip-pocket in case such action should be undertaken. To retract the bolt, which can be done by use of the key 26 and not otherwise, without disfiguring the device or picking the lock, the key is inserted in the key-hole 27, pushed inwardly until its further inward movement is arrested by contact with the bolt, and then it is turned (see Fig. 3) the direction indicated by the arrow, thereby

in bringing its web 29 into contact with the notch 28 in the bolt, which will retract said bolt, compressing the spring 24. The several parts are shown thus in Fig. 3. After the bolt has thus been retracted the power of the spring 10 will cause the plunger 9 to be violently thrown upward, which will automatically eject the whip. When the whip is again inserted, its butt-end will rest loosely upon the plunger and may be withdrawn for use at a moment's notice, as it is not locked while so resting. It will be observed that each of these steps may be performed with one hand—that is, the whip may be inserted, and locked, the key inserted, turned, and removed, and the whip thrown upward clear of the bolt and removed from the socket, all with one hand of the operator.

What I claim is—

1. In a whip-socket, a bolt constructed substantially as described to lock a whip in a whip-socket by engagement with a locking knob or projection on the whip and a spring-ejecting plunger located in the lower end of the socket for throwing the whip upward when the bolt is withdrawn, substantially as set forth.

2. In a whip-socket, a sliding spring-bolt 14, having an inclined head 15, which latter normally projects into the path of the whip and is constructed to engage and lock a whip having a locking-knob, as 19, thereon, a plunger 9, located below the bolt, and a spring 10, arranged below said plunger, for throwing the same upward when said bolt is withdrawn, substantially as set forth.

3. In a whip-socket, a sliding spring-bolt 14, having a head 15 normally projecting into the path of the whip, in combination with a whip 16, carrying the locking-knob 19 on its butt-end, said knob provided with two inclined surfaces 20 and 21, the surface 21 being located above the surface 20, thereby forming a shoulder 22 for engagement with said head 15 of said bolt, substantially as set forth.

4. A combined whip lock and socket comprising a whip-socket 1, a lock-chamber 5, in which the lower end of said whip-socket is inserted and projects a sufficient distance below the top plate of said lock-chamber to form an additional separate chamber 6, a plunger 9, located in said chamber 6, a spring 10 for urging said plunger upwardly, an automatically-shooting bolt located in bearings transversely of said chamber 5, said bolt adapted to lock a whip in the whip-socket, and manual means for retracting said bolt when it is desired to release the whip, substantially as set forth.

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

HARRY J. SAXTON.

Witnesses:

ED. E. LONGAN,
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