C. A. KELLER.

WHIP SOCKET.

APPLICATION FILED OCT. 21, 1909.

956,494. Patented Apr. 26, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

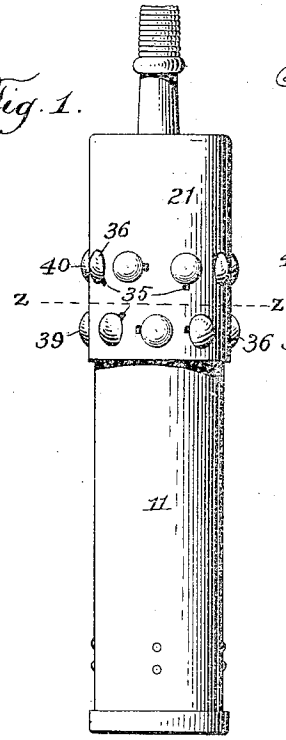


Fig. 2.

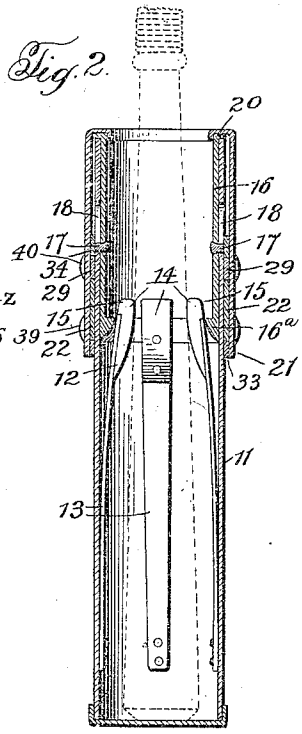


Fig. 3.

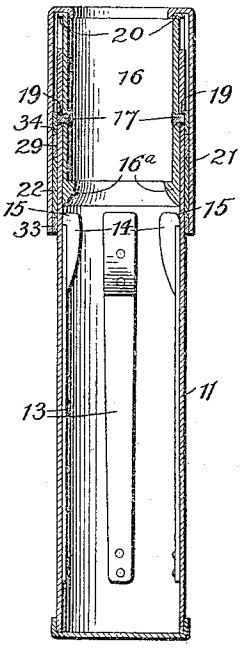


Fig. 4.

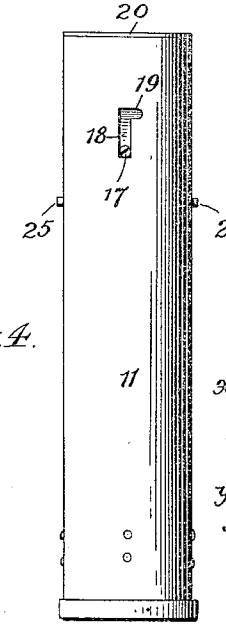


Fig. 5.

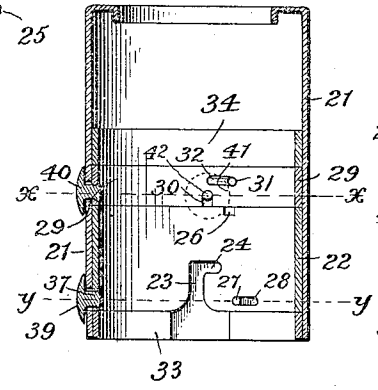
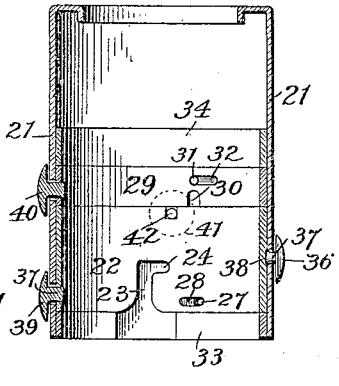


Fig. 6.



Witnesses:

Jas. E. Hutchinson.

Edwin C. Daly.

Inventor.

Charles A. Keller,

By Royal T. Burnham, Attorney.

C. A. KELLER.

WHIP SOCKET.

APPLICATION FILED OCT. 21, 1909.

956,494.

Patented Apr. 26, 1910.

2 SHEETS—SHEET 2.

Fig. 7.

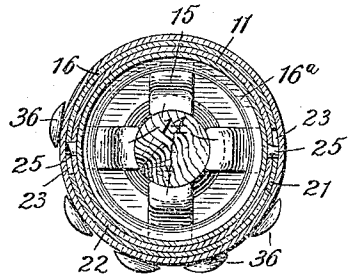


Fig. 8.

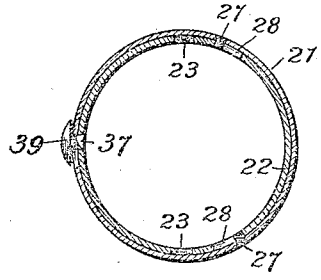
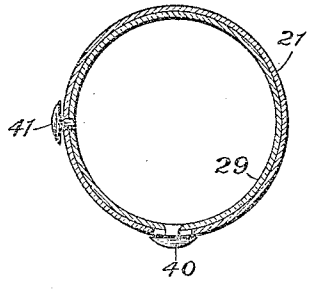


Fig. 9.



Witnesses:

Jas. E. Hutchinson.

Edwin C. Daly

Inventor:

Charles A. Keller,

By Byron E. Burnham, Attorney.

UNITED STATES PATENT OFFICE.

CHARLES A. KELLER, OF ROSEDALE, INDIANA.

WHIP-SOCKET.

956,494. Specification of Letters Patent. **Patented Apr. 26, 1910.**

Application filed October 21, 1909. Serial No. 523,822.

To all whom it may concern:

Be it known that I, CHARLES A. KELLER, a citizen of the United States, residing at Rosedale, in the county of Parke and State of Indiana, have invented certain new and useful Improvements in Whip-Sockets, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention associates with a whip-socket a combination lock arranged to permit the jaws of the socket to be operated to release a whip only by a person who understands the combination, the structure being designed to prevent removal of the whip from the socket during absence of the owner. The parts of the lock are so arranged that the combination may be changed when desired. The whip-socket and its lock are of durable and economical construction, and the arrangement is such as to permit the easy removal of injured parts and the substitution of new ones.

When read in connection with the description herein, the details of construction and arrangement of parts contemplated by the invention will be apparent from the accompanying drawings, forming part hereof, wherein an embodiment of the invention is disclosed, for purposes of illustration.

While the embodiment of the invention shown in the drawings is preferred, as it has given satisfactory and reliable results in practice, it is to be understood that the several instrumentalities of which the invention consists can be variously organized, without departing in the least from the nature and spirit of the invention, and that the invention is not limited to the precise delineation herein expressed.

Like reference-characters refer to corresponding parts in the several views of the drawings, of which—

Figure 1 is an elevation of a whip-socket embodying the invention; Fig. 2 is a longitudinal section thereof, showing the whip-retaining jaws in locked position; Fig. 3 is a similar view, with the jaws in unlocked position; Fig. 4 is a view of the socket-casing, with the outer band removed; Fig. 5 is a longitudinal sectional view of the outer band, with the parts in unlocked position; Fig. 6 is a similar view, with the parts in locked position; Fig. 7 is a sectional view, on the line z—z, Fig. 1; Fig. 8 is a sectional view, on the line y—y, Fig. 5; and Fig. 9 is a sectional view, on the line x—x, Fig. 5.

By referring to the drawings, it will be noted that the whip-socket includes a casing 11, preferably cylindrical in formation. A plurality of whip-retaining dogs 12 are arranged within the casing. Each dog is formed with a shank 13, preferably of spring material, rigidly riveted or otherwise suitably attached at one end to the casing in such manner that the other end will have a tendency to spring back against the casing. It is obvious, however, that the dog-shanks may be made of non-flexible material and pivoted, if desired. The free end of each dog carries a jaw portion 14 beveled on its outer edge, as shown at 15.

An inner sleeve 16 is fitted into one end of casing 11 and is capable of longitudinal and rotative movement therein. It is of sufficient length, when moved longitudinally in one direction, for one of its edges to engage the beveled edges 15 of dog-jaws 14 and for the beveled outer edge of a ring 16^a thereon to envelop and move them inwardly to retain a whip in the socket. When sleeve 16 is moved in the opposite direction, the contact of the dogs with the whip will be loosened, so that the whip may be withdrawn from and inserted in the socket at will.

In order to limit the longitudinal movement of sleeve 16, one or more lugs 17 thereon extend outwardly and project into and are movable in longitudinal slots 18 in the casing. Continuing from the end of each slot 18 toward which the lug moves on releasing movement of the sleeve is a transverse slot 19, so formed that, when sleeve 16 is turned at the end of such movement, lugs 17 will engage therewith and hold the sleeve in released position. Sleeve 16 is formed with a flared outer edge 20, projecting over an end of casing 11.

Devices for locking sleeve 16 in its position to engage and hold the dogs in position to retain a whip in the socket are carried by an outer band 21, which band fits over the portion of casing 11 which contains that sleeve and is attached to the flared edge 20 of the sleeve.

A collar 22 is rotatively arranged on the inside of band 21. It is formed with one or

more slots 23, extending from an edge, and each ending in a slot 24 disposed transversely with respect to the whip-socket. Each slot 23 is capable of being engaged with a lug 25 on casing 11, it being widened at the edge of the collar to facilitate such engagement. A recess 26 is formed in the other edge of collar 22.

In order to limit the rotative movement of collar 22, one or more stops 27 on the band 21 project into a corresponding number of slots 28 in the collar, the slots being of a suitable length to insure the proper position of the collar to bring its slots 23 into engagement with lugs 25 when the band is moved for that purpose. A collar 29, capable of rotative movement, is arranged adjacent to collar 22, and it is formed in its edge next to that collar with a recess 30, which can be made to register with recess 26 by imparting rotative movement to one or both of the collars. One or more stops 31 on band 21 project into slots 32 in collar 29 to limit the rotative movement thereof. Collars 22 and 29 are disposed between and held in place by rings 33 and 34 on the band 21.

A plurality of slots 35 are formed in band 21, these slots being variously disposed, some transversely, some longitudinally, and some obliquely or otherwise, as desired. On the outer surface of the band, over each of these slots, is disposed a button, which term is used herein to designate any suitable element for engagement and operation by a user of the device. Each button has a shank projecting into and movable in its slot.

The buttons designated by 36 have their shanks 37 ended in heads 38 which engage the inner surface of the band and hold the buttons in place.

One of the buttons, designated by 39, has its shank 37 extended through a transversely-disposed slot and attached to collar 22. Another of the buttons, designated by 40, has its shank extended through a transversely-disposed slot also and attached to collar 29. Still another of the buttons, designated by 41, has its shank movable in a longitudinally-arranged slot, and extended from the shank is a lug 42 which is movable into and out of recesses 26 and 30, respectively, of collars 22 and 29.

It will be apparent that, when band 21 and sleeve 16 are in the position for the sleeve to engage the dogs 12, those dogs are held by the latter in contracted position to retain a whip in the socket. In order to hold the parts locked in this position, the lugs 25 having become engaged in the slots 23, collar 22 is given a rotative movement to bring slots 24 into engagement with the lugs, which latter engagement will prevent the longitudinal movement of the band and with it the sleeve to release the dogs. The rotative movement in collar 22 is produced by engagement of the thumb or finger of the operator against button 39 in the proper direction. The recess 26 is so positioned in collar 22 that when that collar is moved to locked position the recess will register with lug 42 of the button 41 and the operator will engage that button and cause the lug to move into that recess to hold collar 22 against rotative movement from its locked position. Lug 42, in its unlocked position, projects into recess 30 of collar 29. When it becomes disengaged from that recess in its movement into recess 26, collar 29 is given rotative movement by pressure of the operator in the proper direction against button 40, and the edge of collar 29 will then keep lug 42 in locked position in recess 26.

The appearance of the exterior of the device gives no indication as to the method of operation to release a whip from the socket. The plurality of buttons, only a small number of which are used actually in unlocking or locking a whip, serve to confuse any person who might surreptitiously endeavor to remove a whip, and only one who knows which buttons to employ can quickly operate the locking mechanism. The whip being locked, the owner desiring to release the dogs so that the whip is ready for use, moves the button connected with collar 29 so as to give that collar a turn to bring its recess 30 opposite to lug 42; then he moves that lug, by pressure on the button with which it is connected, into that recess from recess 26 of collar 22, thereby releasing that collar; then collar 22 is turned, by means of the button with which it is connected, so as to release slots 24 from engagement with lugs 25. In this position band 21 is free to move longitudinally with lugs 25 in engagement with slots 23, and the operator, grasping the band, so moves it and with it the sleeve 16 with which it is connected. The movement of sleeve 16 is limited by engagement of its lugs 17 with the slots 18 of the casing, and, when the lugs have reached the tops of the slots, the band and with it the sleeve is turned to bring them into the transverse slots 19, engagement with which slots holds the parts in released position. In the released position, sleeve 16 is out of contact with the dogs and the whip is free to be withdrawn from and inserted into the socket at will.

The combination of the lock may be changed by disconnecting the buttons connected with collars 22 and 29 and connecting other similarly-movable buttons therewith. In making such a change, stops 27 and 31, in engagement with slots 28 and 32 of the collars, will prevent disarrangement of the proper relative positions of those collars with respect to the lugs 25 and 42.

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

1. A whip-socket comprising a casing, movable dogs in the casing capable of retaining a whip therein, a sleeve in the casing movable with respect to the dogs to control the action thereof, a movable band on the exterior of the casing and connected with the sleeve, and means coöperating with the band whereby the sleeve is locked in retaining position.

2. A whip-socket comprising a casing, movable dogs capable of retaining a whip in the casing, a sleeve in the casing and a band on the exterior of the casing, one of which has a laterally-extending outer edge connected with the other, the band being movable to control the action of the dogs with respect to the whip, and means coöperating with the band whereby the sleeve is locked in retaining position.

3. In a whip-socket comprising a casing having a lug thereon, the combination, with whip-retaining dogs and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, and a rotative collar having a slot capable of being turned into engagement with said lug whereby said band is held in locked position.

4. In a whip-socket comprising a casing having a lug thereon, the combination, with whip-retaining dogs and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, a rotative collar having a slot capable of being turned into engagement with said lug whereby said band is held in locked position, and means to lock said collar.

5. In a whip-socket comprising a casing having a lug thereon, the combination, with whip-retaining dogs and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, a rotative collar having a slot capable of being turned into engagement with said lug whereby said band is held in locked position, and a movable lug coöperable with said collar to hold the latter in locked position.

6. In a whip-socket comprising a casing having a lug thereon, the combination, with whip-retaining dogs and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, a rotative collar having a slot capable of being turned into engagement with said lug whereby said band is held in locked position, a movable lug coöperable with said collar to hold the latter in locked position, and means whereby said movable lug is held in locked position.

7. In a whip-socket comprising a casing having a lug thereon, the combination, with whip-retaining dogs and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, a rotative collar having a slot capable of being turned into engagement with said lug whereby said band is held in locked position, a movable lug coöperable with said collar to hold the latter in locked position, and another rotative collar coöperable at will with said movable lug to hold the same in locked position and to permit its release therefrom.

8. In a whip-socket comprising a casing having a lug thereon, the combination, with whip-retaining dogs and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, and a rotative collar coöperating with said lug to maintain said band in locked position.

9. In a whip-socket comprising a casing having a lug thereon, the combination, with whip-retaining dogs and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, a rotative collar coöperating with said lug to maintain said band in locked position, a movable lug coöperable with said collar to hold the latter in locked position, and another rotative collar coöperable at will with said movable lug to hold the same in locked position and to permit its release therefrom.

10. In a whip-socket comprising a casing having a lug thereon, the combination, with a whip-retaining dog and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, a rotative collar coöperating with said lug to maintain said band in locked position and having a recess therein, and means coöperable with said recess to lock said collar.

11. In a whip-socket comprising a casing having a lug thereon, the combination, with a whip-retaining dog and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, a rotative collar coöperating with said lug to maintain said band in locked position and having a recess therein, a movable lug coöperable with said recess to hold said collar in locked position, and another collar coöperable with said movable lug to hold the latter locked in said recess.

12. In a whip-socket comprising a casing having a lug thereon, the combination, with a whip-retaining dog and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, a rotative collar coöperating with said lug to maintain

said band in locked position and having a recess therein, another rotative collar having a recess capable of registering with said other recess upon movement of one of the collars, and a lug movable from one of said recesses to the other when in registering position and incapable of such movement when out of registering position.

13. A whip-socket comprising a casing having a longitudinal slot with a transverse slot extending therefrom, a whip-retaining dog carried by said casing, a sleeve within the casing coöperable with said dog to control the action thereof, a lug on said sleeve movable in said slots, a band outside of said casing connected with said sleeve, and means coöperable with said band whereby the sleeve is held in locked position with respect to the dog, the parts being arranged, when the locking means is unlocked, to permit the band and sleeve to be moved to release the dog from whip-retaining position and to be turned at the end of the movement to bring the lug into the transverse slot to hold the parts in released position.

14. In a whip-socket, the combination of a casing and a movable sleeve therein, one having a longitudinal slot with a transverse slot extending therefrom and the other having a lug movable in said slots, a whip-retaining dog with which said sleeve is cooperable to control the action of the dog, a band outside of said casing and connected with said sleeve, and locking means coöperating with said band whereby said sleeve is held in position to lock said dog, the parts being so arranged that, when the locking means is unlocked, the sleeve is permitted to be moved to release the dog from whip-retaining position and to be turned at the end of the movement to bring the lug into the transverse slot to hold the parts in released position.

15. In a whip-socket comprising a casing having a lug thereon, the combination, with a whip-retaining dog and means whereby the action thereof is controlled, of mechanism to lock said controlling means comprising a band connected therewith, a rotative collar coöperating with said lug to maintain said band in locked position, a movable lug cooperable with said collar to hold the latter in locked position, another rotative collar coöperable at will with said movable lug to hold the same in locked position and to permit its release therefrom, and a plurality of movable buttons on the outer surface of said band part only of which are connected to operate said collars and movable lug.

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

CHARLES A. KELLER.

Witnesses:
JAMES D. BULLOCK,
WALLACE PENCE.