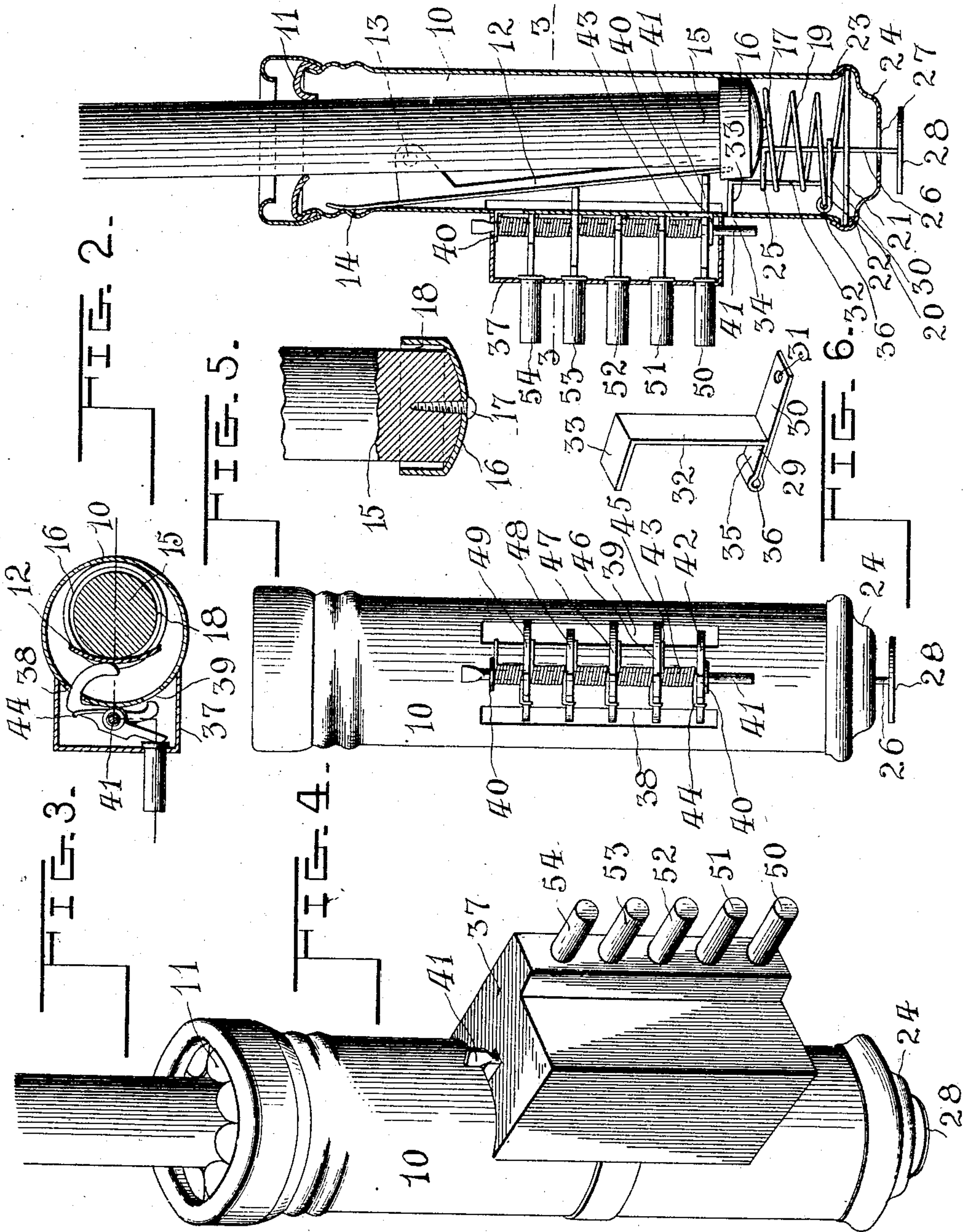


No. 782,718.

PATENTED FEB. 14, 1905.

P. BOIRE.
MEANS FOR LOCKING WHIPS IN WHIP SOCKETS.

APPLICATION FILED MAR. 3, 1904.



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MEANS FOR LOCKING WHIPS IN WHIP-SOCKETS.

SPECIFICATION forming part of Letters Patent No. 782,718, dated February 14, 1905.

Application filed March 3, 1904. Serial No. 196,299.

To all whom it may concern:

Be it known that I, PHILISA BOIRE, a subject of the King of Great Britain, residing at Montreal, county of Hochelaga, Province of Quebec, Canada, have invented certain new and useful Improvements in Means for Locking Whips in Whip-Sockets; and I do hereby declare that the following is 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.

My invention relates to certain new and useful improvements in means for locking whips in whip-sockets; and the primary object in view is the provision of a simple and cheap yet reliable and efficient locking device to prevent stealing of the whip from a vehicle in the absence of the driver, which locking device is constructed to be easily released by a person acquainted with the correct method of operating the same.

The invention has for a further object to provide means adapted to mislead a non-informed person as to the correct key or keys and also to enable the permutation devices to be rendered of no avail by arresting the inward movement of the whip-stock into the socket and to adapt any whip for use in the socket.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of my improved means for locking a whip in a whip-socket. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a transverse section taken on the line 3 3 of Fig. 2. Fig. 4 is a side elevation with the casing of the permutation mechanism removed. Fig. 5 is a detail of the end of the whip-stock with portions in section. Fig. 6 is a perspective detail more particularly hereinafter referred to.

Like numerals of reference indicate like parts throughout the several views in which they appear.

Referring now to the details of the drawings, 10 designates a whip-socket provided near its upper end with the retaining-ring 11, of rubber or the like, the said socket being designed to be affixed in position on the vehicle in the usual manner by clips or bands or other suitable fastenings.

12 is a plate pivotally mounted within the socket by suitable means, as seen at 13, and this plate is designed to be normally pressed— that is, when not otherwise influenced—flat against the inner curved wall of the socket by a spring 14, having a bearing against the inner wall of the socket near its upper end, as seen in Fig. 2. This plate is curved to conform to the curvature of the inner wall of the socket, or practically so, as shown in Fig. 3. This plate is designed to be pushed inward, as indicated in Fig. 2, to lock the whip against withdrawal by the locking pawls or dogs soon to be described. The lower end of the said plate depends within the socket a sufficient length to engage the cap on the inner end of the whip-stock, as seen in Fig. 2, and prevents withdrawal of the whip.

15 designates the end of the whip-stock. It is provided with a collar 16, secured thereto in any suitable manner, as by a screw 17, engaged in the end of the stock, as seen in Fig. 5, the cap being of sufficiently larger diameter than the end of the whip-stock to leave an annular groove or channel 18, as seen clearly in Fig. 5, for a purpose which will soon be made clear. This cap may be fixed, or it may be rotatably mounted on the end of the whip-stock. The inner end of the whip-stock is designed to be normally supported upon and slightly pressed upward by the influence of a spring 19, the construction and arrangement of which is best seen in Fig. 2 and to which figure reference is now made. This spring has its lower convolute enlarged diametrically, as seen at 21 in Fig. 2, and this lower convolute rests in the annular groove 22, formed by the junction of the lower end 23 of the socket with the cap-piece 24, so that the spring may be sprung into place and frictionally held. From the upper convolute of this spring there extends an inwardly-directed portion 25, which has the downwardly-extending arm 26 extending cen-

trally through the spring and passed through an opening 27 in the cap-piece and is provided exteriorly thereof with a head or plate 28 to prevent its too far inward movement.

5 29 is a bar having the lower horizontal member 30, which is provided with the opening 31, through which passes the vertical member 26 of the spring, the vertical member 32 terminating at its upper end in the oppositely-disposed horizontal member 33, which works in
10 an opening 34 in the socket, as seen in Fig. 2, and the doubled portion 35 extending from the vertical member on the side opposite the member 30 and at its outer end formed with the
15 loop or eye 36, in which is received one of the convolutes of the spring 19, as seen at 20. The vertical member 32 is so disposed as to be engaged by the convolutes of the spring, whose tendency is to pull the said vertical
20 member inward toward the center of the socket, as seen in Fig. 2, and crowd the lower end of the stock out of coaxial alinement with the socket, the inner end of the horizontal member 33 engaging the cap-piece or collar
25 16 on the end of the whip-socket, as is seen clearly in Fig. 2. It will thus be seen that under normal conditions the spring 19 forces the whip-stock upward, and the spring in conjunction with the vertical member 32 forces
30 the lower end of the stock to one side of the longitudinal center of the socket, so that the lower end of the plate 12 is engaged in the annular groove 18 between the end of the stock and the cap-piece 16, and the whip can-
35 not be pulled out.

The means for effecting the release of the whip-stock will now be described.

37 is a casing which is arranged to inclose the permutation mechanism, and this casing
40 is affixed to the outer wall of the socket in any suitable manner, preferably so that it may be removed when it is desired to obtain access to the inclosed parts. The socket is provided with two longitudinal slots 38 and
45 39, which are covered by the casing when the latter is in place, it being shown as removed from Fig. 4 to better illustrate the parts of the permutation mechanism. From the socket between the slots 38 and 39 project the ears
50 or lugs 40, which furnish support for the vertical pivot-rod 41, the ends of which project through the top and bottom of the casing, and its upper end is flattened or otherwise formed to receive suitable means for
55 turning it when desired. On this pivot-rod are mounted a plurality of dogs or pawls. At the lower end is the dog 42, loosely mounted on the rod to easily turn when desired, and a spring 43 is coiled about the rod, with one end
60 bent, as at 44, to extend over the tailpiece of the dog and its other end engaged, as shown at 45, with the outer wall of the socket. Each of the other dogs 46, 47, 48, and 49 is similar in nature and each provided with a
65 spring similarly arranged. Some of the dogs,

however, are very different in their operation, being reversed—that is, with their tailpieces extending in the direction opposite to those of the other dogs. This special disposition of the dogs is essential to the successful
70 operation of the device. Such disposition is clearly seen in Fig. 4, where it will be seen that the bottom dog and the one next to the top have their tailpieces extended in one and
75 the same direction, while the others extend in the opposite direction, the object of which will hereinafter appear. The dogs 42 and 48 are so disposed that they extend inward through the slot 38 in the socket and press
80 upon the plate 12, so as to force the same inward, as seen in Fig. 2. The other pawls or dogs are so disposed that they do not project into either of the slots 38 or 39. It will thus be evident that to unlock the whip and permit
85 of its being removed from the socket the dogs 42 and 48 are the ones that must be operated to force them away from the plate, so that they will no longer prevent its being forced outward against the wall of the socket. Were these dogs so actuated even then the
90 whip could not be removed, because the lower end of the plate 12 is engaged in the recess 18 between the whip-stock and the cap-piece of collar 16. Being thus held, the plate cannot spring back out of the way until the whip-stock
95 is forced inward. When this is done, the spring 19 is compressed and the vertical member 32 yields, its horizontal member 33 working in the opening 34 in the wall of the socket, and then the plate 12 is forced outward out of the
100 way of the collar 16 and the whip may be pulled out. The dogs are actuated by push-pins 50, 51, 52, 53, and 54. These are slidably mounted in the wall of the casing 37, as shown, and are
105 disposed some opposite the acting end of the pawls and some against the tailpieces, it being understood that all the push-pins are arranged in the same plane; but, as above described, the dogs are arranged some with their tailpieces
110 extending in one direction and others in the opposite direction. It is thus evident that if only the right push-pins are pushed in the proper dogs will be operated to allow of the proper unlocking movement of the plate 12; but if the others, or any one of them, are pushed
115 in they will, though unexpectedly, throw one or more of the dogs through the other slot and against the plate 12, and thus hold it against movement; but even should the person attempting to remove the whip from the socket
120 happen to push in the proper push-pins he could not remove the whip without first pushing in on the latter until the inner end moved past the lower end of the plate 12, which would never occur to him. Thus it will be
125 seen that I have provided a simple and efficient whip-locking device which cannot be operated to permit of the removal of the whip unless one is familiar with the mode of operation.

Changes within the scope of the appended 130

claims may be made in the form and proportion of some of the parts while their essential features are retained, and hence the spirit of the invention not departed from. I therefore
5 do not desire to be limited to the precise form or to the details of construction or the arrangement of parts as shown, reserving the right to make such changes, variations, and modifications as come properly within the scope of
10 the protection prayed.

What is claimed as new is—

1. The combination with a whip-socket, of a locking element arranged therein for engagement with a whip-stock, and a permutation
15 mechanism normally confining the locking element, and means preventing movement of said element until the whip-stock has been given an inward movement.

2. The combination with a whip-socket, of a
20 locking element arranged therein, permutation mechanism for holding said locking element against unlocking movement, and a spring within the socket cooperating with said locking element to prevent withdrawal of the whip
25 from the socket.

3. The combination with a whip-socket, of a spring-actuated locking-plate therein, permutation

mechanism, means on the whip-stock for cooperation with said plate, and a spring
30 in the socket for forcing the whip-stock outward and causing engagement of said plate and means.

4. The combination with a whip-socket, of a spring-actuated locking element therein normally in position to interlock with a whip-
35 stock, permutation mechanism for engagement with said locking member, and means for forcing said element outward and to one side of the longitudinal center of the socket.

5. The combination with a whip-socket, of a
40 locking element therein, dogs mounted for engagement with said locking element, means for actuating said dogs, a whip-stock a collar thereon for cooperation with said locking element, and a spring within the socket for co-
45 operation with the said collar and operative to unlock the locking element by inward movement of the whip-stock.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

PHILISA BOIRE.

Witnesses:

T. MYNARD,
M. McALEER.