B. O. NELSON.

WHIP SOCKET.

APPLICATION FILED APR. 16, 1908.

906,549. Patented Dec. 15, 1908.

2 SHEETS—SHEET 1.

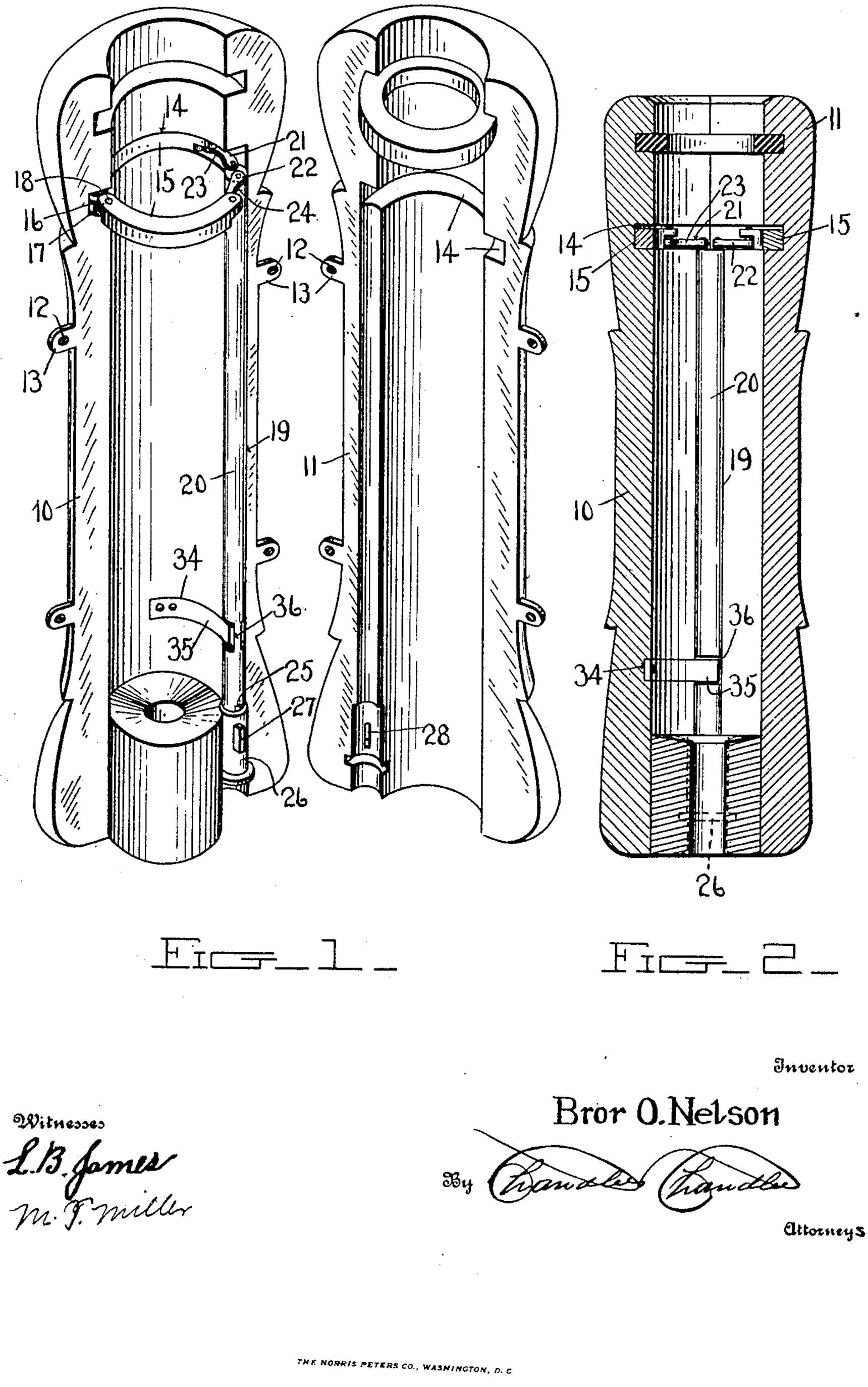

FIG. 1.

FIG. 2.

Witnesses

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2 SHEETS—SHEET 2.

FIG. 3.

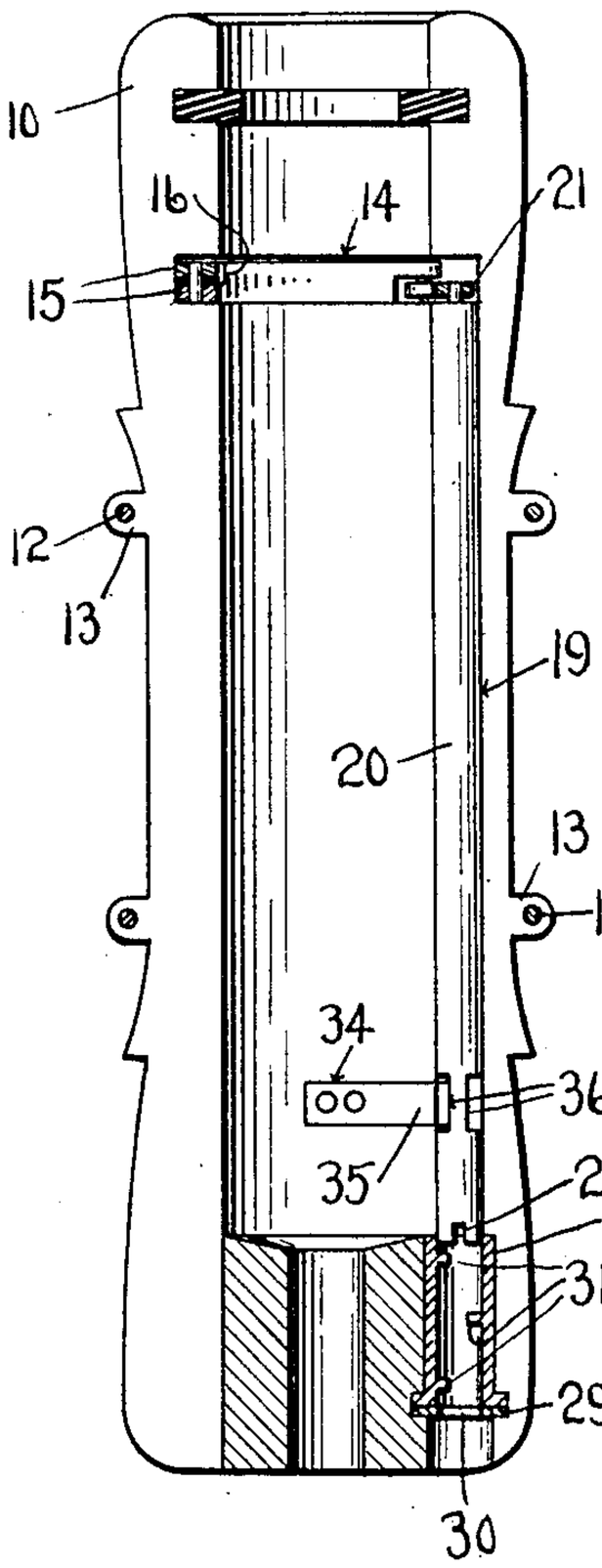


FIG. 4.

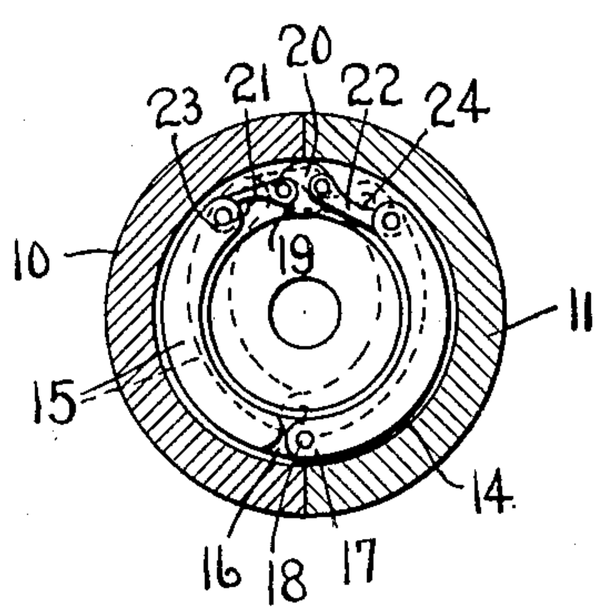


FIG. 5.

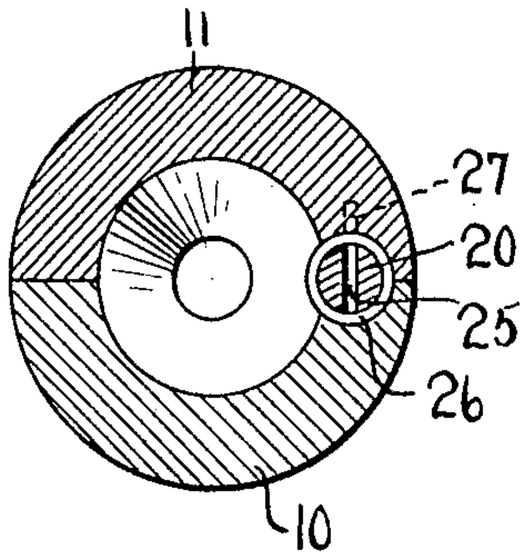
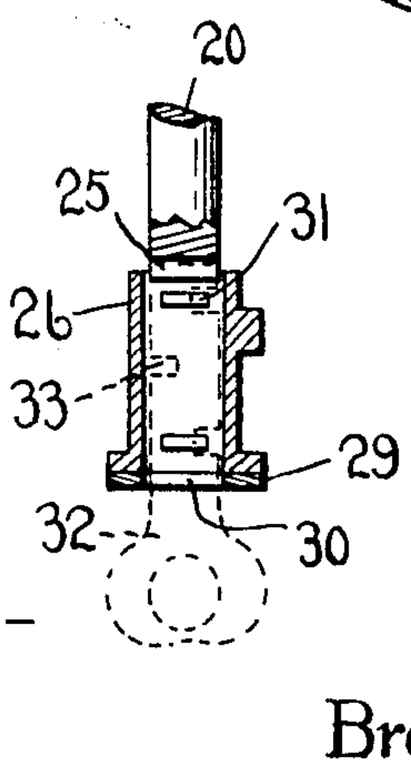


FIG. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

BROR O. NELSON, OF TOLLEY, NORTH DAKOTA.

WHIP-SOCKET.

No. 906,549. Specification of Letters Patent. Patented Dec. 15, 1908.

Application filed April 16, 1908. Serial No. 427,457.

To all whom it may concern:

Be it known that I, BROR O. NELSON, a citizen of the United States, residing at Tolley, in the county of Ward, State of North Dakota, have invented certain new and useful Improvements in Whip-Sockets; 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.

This invention relates to whip sockets and more particularly to that class which are so constructed as to lock the whip against surreptitious removal.

The device embodying my invention may be briefly described as comprising a socket which contains a normally expanded whip handle gripping collar to which is operatively connected a key operated stem which extends vertically within the socket and which is designed to be turned or rotated by engaging a key therewith, the said key being passed upwardly through the lower end of the socket.

There are numerous advantages to be derived from a construction of this character inasmuch as the whip handle gripping collar is seated in a groove formed in the wall of the socket, and consequently cannot be pulled or removed from its seat by pulling upwardly on the whip inserted in the socket and gripped by the collar.

Another advantage to be derived from such a construction lies in the fact that the keys, requiring to be inserted through the lower end of the socket, the keyhole is practically concealed.

In connection with the key operated rod, I provide a key receiving sleeve which is arranged at the lower end of the rod, and which is formed interiorly with wards which, of course, prevent insertion and rotation of any except the proper form of key.

In the accompanying drawings, Figure 1 is a detailed perspective view showing the two sections of the whip socket in juxtaposition. Fig. 2 is a vertical transverse sectional view through the whip socket with the two sections assembled, Fig. 3 is a similar view but taken in a plane at right angles to the plane of Fig. 2, Fig. 4 is a horizontal sectional view in detail, taken in a plane directly above the whip handle gripping collar, and showing the normal position of the collar in full line and its gripping position in dotted lines, Fig. 5 is a similar view but taken in a plane with the key operated stem retaining element, and Fig. 6 is a detail vertical sectional view taken through the lower end of the key operated stem and the warded key receiving sleeve associated therewith, the key being shown in dotted lines.

As shown in the drawings, the said socket embodying my invention, comprises a pair of substantially semi-cylindrical sections which are practically counterpart in construction, one of the sections being indicated by the numeral 10 and the other by the numeral 11. The sections are preferably connected together after the whip handle gripping mechanism has been placed in position therein by means of rivets 12 which are passed through ears 13 formed at the vertical edges of the sections. These two sections 10 and 11 of the whip socket, embodying my invention, are formed each with a semi-annular groove 14 and when the two sections are placed together, these two grooves register and form an annular or continuous groove in which is seated the whip handle gripping collar of the device. Said collar comprises a pair of semi-annular members 15, one of which is bifurcated at one of its ends as at 17 and the other formed with an ear 16 which is received in the bifurcation, there being a pivot pin 18 passed through the furcations and the first mentioned member and the ear of the last mentioned member.

The section 10 of the whip socket is formed with a groove 19 which extends vertically at one side of the said member and in which is rotatively received a stem 20, the upper end of which terminates substantially in a plane with the lower side of the groove 14. A link 21 is pivoted to one of the members 15 of the whip handle gripping collar and to the upper end of the stem 20, and a similar link 22 is pivoted also to the upper end of the said stem and to the corresponding end of the other member 15 of the said collar, the link 21 being concaved in one side edge as at 23 and the link 22 being concaved in its opposite side edge as at 24, for a purpose to be presently explained. The lower end of the stem 20 terminates at a point above the lower end of the section 10 and is formed with a groove 25 into which is to be inserted the extremity of a key and the said lower end of the stem is received in the upper end of a sleeve 26 which is formed exteriorly with a lug 27 which seats in a recess 28 formed in the body of the

said section 11 and serves to prevent rotation of the said sleeve 26, the sleeve, however, being provided at its lower end with a rotatable head 29 which is formed with a key slot 30 through which the key for rotating the stem 20 is to be inserted, the sleeve being formed interiorly with a plurality of wards 31 which obviate manipulation of the stem 20 by means of any but the proper form of key. The key heretofore mentioned is indicated by the numeral 32 and is formed with a plurality of notches 33 in its edges, the said notches being designed to coöperate with the wards 31 so that when the key has been inserted to such degree as to bring its extremity into engagement in the groove 25 in the lower end of the stem 20, the notches will register with the wards and rotation of the key will be permitted.

Upon rotation of the stem 20, it will be understood that the point of pivotal connection of the links 21 and 22 with the upper end of the stem 20 will move in the arcs of circles but in opposite directions so as to draw together the ends of the sections 15 of the whip handle gripping collar to which the said links are attached, that end of each link which is pivoted to the upper end of the stem 20 being received in the concavity 23 or 24 of the other link. In order to unlock the device or in other words to expand the whip handle gripping collar, it is only necessary to rotate the key in a reverse direction upon which movement the ends of the members 15 of the whip handle gripping collar will be spread and the collar expanded. In connection with the stem 20 there is provided means for holding it at either limit of its turning movement, and consequently for holding the whip handle gripping collar expanded or contracted, and such means will now be described.

Secure at one of its ends in a suitable countersink 34 formed in the inner surface of the section 10 of the whip socket is a leaf spring 35 and the free end of this spring bears against one of two flattened portions 36 which are formed in the stem 20 adjacent to the lower end thereof, these flattened portions being located at opposite sides of the stem so that when the stem is rotated to either limit of its movement, the spring 35 will engage with its free end against one or the other of the said flattened portions 36, and will yieldably hold the stem against rotation, it, however, being rotatable by inserting the key into the groove 25.

From the foregoing description of my invention it will be seen that I have provided a whip socket of that class which are designed to lock a whip inserted therein in which a contractible whip handle gripping collar is arranged within the socket, and a key operated stem which has operative connection with the collar so that when rotated in one direction or the other, the collar will be expanded or contracted so as to release the whip handle received in the said socket proper. The spring 35 has sufficient strength, or in other words bears with sufficient force against the flattened portion 36 of the stem 20 to prevent its accidental rotation, but the spring is not sufficiently strong to prevent the stem being readily rotated by means of the key which I have provided and have illustrated.

What is claimed is:—

1. A device of the class described comprising a socket, a normally expanded collar within the socket, a key rotated stem arranged within the socket and operatively connected with the collar to contract the same when turned in one direction, said stem being flattened at one point, and a spring arranged within the socket to bear against the said flattened portion of the stem when the stem is rotated to contract the collar, and said spring serving by such engagement with the stem to hold the stem against return rotation.

2. A device of the class described comprising a socket, an annular groove formed in the wall of the socket, a normally expanded whip handle collar seated in the groove, the said socket being formed also with a groove which extends longitudinally thereof, and a key rotated stem arranged within the last mentioned groove and operatively connected with the collar to contract the same when turned in one direction.

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

BROR O. NELSON.

Witnesses:
WM. SCHMIDT,
O. N. LINDBLOM.