J. M. UNDERWOOD.

Whip-Socket.

No. 221,482. Patented Nov. 11, 1879.

Fig. 1.

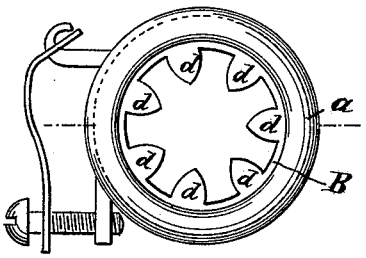


Fig. 2.

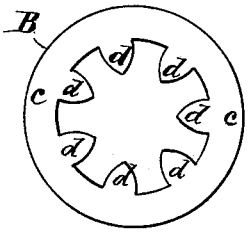
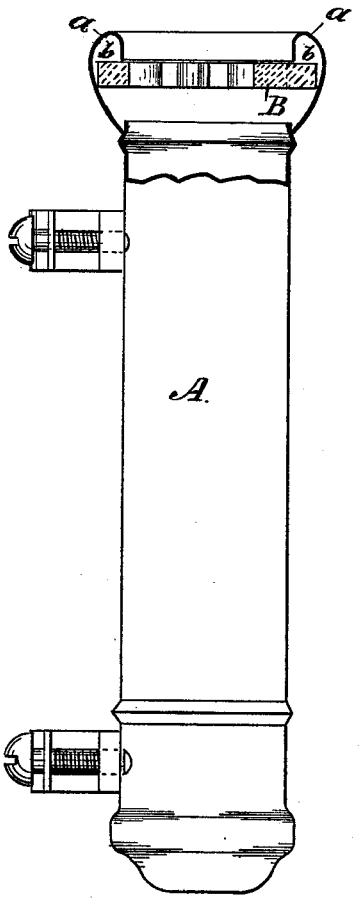


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN M. UNDERWOOD, OF NEWARK, NEW JERSEY, ASSIGNOR TO ANSON SEARLS, OF SAME PLACE.

IMPROVEMENT IN WHIP-SOCKETS.

Specification forming part of Letters Patent No. **221,482**, dated November 11, 1879; application filed October 6, 1879.

To all whom it may concern:

Be it known that I, JOHN M. UNDERWOOD, of the city of Newark, State of New Jersey, have invented a new and useful Improvement in Whip-Sockets, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same.

Figure 1 is the top end view of a whip-socket embodying my invention. Fig. 2 is a face or side view of the rubber ring used in the mouth of the socket to support the whip-stock; and Fig. 3 is a side view of the said whip-socket, with a portion of the upper end in section.

My invention relates to a whip-socket formed of a hollow cylinder, the upper open end of which is provided with a flexible elastic ring, for the purpose of holding the whip-stock upright, and prevent it chafing against the body of the socket.

A is the body of the whip-socket, which may be made of metal or wood in the usual form. The upper open end, *a*, of this socket may be made bell-shaped or enlarged, so as to permit a recess or annular groove, *b*, therein to receive the body of an elastic ring, B. This flexible elastic ring B is composed of india-rubber or some analogous material. The body *c* of this ring is made to fit into the recess *b*, so that it may be retained therein by its own elastic expansive force, the recess being preferably made somewhat wider between the upper and lower sides than the thickness of the ring. The inner edge of this ring is corrugated or provided with projections *d*, formed on and extending from the inner edge of the ring inward toward its center, substantially as shown in Figs. 2 and 3. It is essential that these projections be entirely separated from each other, with spaces between them, so that they will not be pressed into contact with one another by the insertion of the butt of the whip-stock in the socket. Thus formed and arranged, these separated projections, while they act efficiently to support the whip and prevent its contact with the body of the socket, whereby it would be chafed and injured, permit the stock to be easily inserted and removed, and without liability to be thereby pulled or pushed out of its recess—a result which is liable to occur when a ring without separated projections is used.

I am aware that a simple rubber ring without projections has been used, held in an annular recess in the mouth of the socket, the interior of the ring being made small enough to grasp the whip-stock, and such a ring has been held in place in the recess in the socket by its own expansive force, and also by being clamped between the top of the socket and a cap fitted to press upon the ring; but into such rings it is difficult to pass the whip-stock, and they are liable to be pushed or pulled out of their seats by the whip-stock.

I am also aware that an attempt has been made to remedy this difficulty by simply cutting radial slits in the inner edge of the ring without removing any of the rubber, thus leaving the edges of the slits still substantially in contact with each other; but this does not, in fact, cure the difficulty, for when the stock is inserted the edges of the slits are pressed forcibly into contact and adhere together, so that practically no advantage is derived from the slitting. It is essential that the projections should be not merely severed by simply slitting the rubber, but formed separate and perpetually non-contiguous, so that they cannot be pressed into contact with one another by the introduction of the whip-stock.

I am also aware that separate pieces of rubber entirely detached from each other have been used, that have been held in place by being riveted or pinned in or clamped between the top edge of the socket and a cap fitted to the socket and pressed down upon the rubber. These are objectionable, both because expensive and because they are liable to be torn from their fastenings by the whip-stock.

My improvement obviates all these difficulties. It permits the ring to be held in the recess in the socket by its elastic force alone, so that if at all disturbed in its place by the introduction or withdrawal of the whip-stock, it will immediately readjust itself when the stock is removed; and the separated projections, while they are rigid enough to hold the whip

upright and prevent it from wabbling, will yet so easily give way to the pressure of the stock as to allow the stock to be readily inserted and removed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a whip-socket, of the flexible elastic ring B, that may be held in its place in an annular recess in the socket by its own elastic force, and provided on its inner edge with non-contiguous projections *d*, separated so that they cannot be pressed into contact with one another by the insertion of the whip-stock into the ring, as and for the purpose described.

2. The flexible elastic ring B, composed of the body *c*, having on its inner edge the non-contiguous projections *d*, separated so that they cannot be pressed into contact with one another by the insertion of the whip-stock in the ring, as and for the purpose described.

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