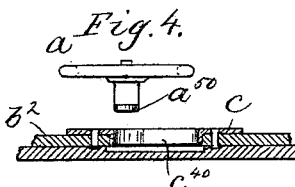
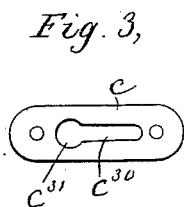
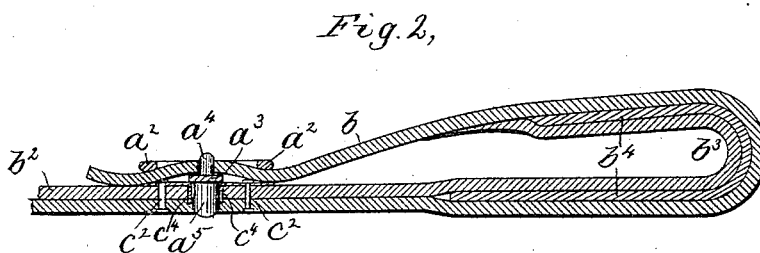
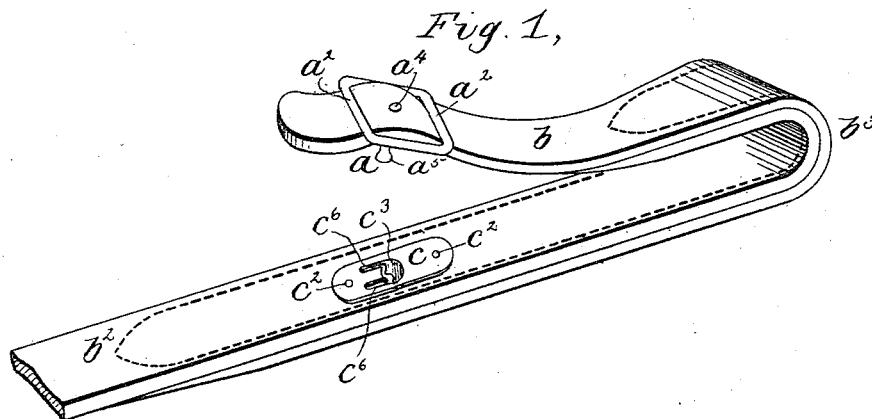


(No Model.)

C. F. HARLOW.
FASTENING FOR REINS.

No. 457,532.

Patented Aug. 11, 1891.



Witnesses,
Jas. J. McAloney,
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Att'y.

UNITED STATES PATENT OFFICE.

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FASTENING FOR REINS.

SPECIFICATION forming part of Letters Patent No. 457,532, dated August 11, 1891.

Application filed November 4, 1889. Serial No. 329,158. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. HARLOW, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Fastenings for Reins, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to a fastening to be used at the end of a rein which is connected with the ring of the bridle-bit, the object being to produce a durable fastening which is more convenient for manipulation than the buckles now commonly used for this purpose. The fastening is composed of two members, one to be connected with the end of the rein which extends back from the bridle-ring and overlies the main portion of the rein extending to the bridle-ring, and the other member of said fastening is connected with the main portion of the rein and constitutes a socket to receive and clasp or fasten a corresponding projection on the other member. In the construction preferably adopted the socket is elastic or resilient and expands slightly to admit the projection or stud of the other member and then contracts around the neck or shank portion of the said stud, so as to hold it in place until forcibly pulled out of the socket when it is desired to unfasten the rein from the bit, although, if desired, other forms of socket might be used.

Figure 1 is a perspective view of the end portion of a rein provided with a fastening embodying this invention, showing the members of the fastening separated or unclapsed; Fig. 2, a longitudinal section showing the members of the fastening clasped together; Fig. 3, a plan view showing a modification of the socket member and fastening, and Fig. 4 a longitudinal section of said socket member and a side elevation of the other member of the fastening constructed to co-operate therewith.

One member *a* of the fastening is connected with the end portion *b* of the rein, which is folded back over the main portion *b*² of the rein at *b*³, so as to pass through the ring of the bit, the said loop or bend being preferably stiffened by a metallic stiffening-plate *b*⁴ (see Fig. 2) in the usual manner.

The fastening member *a* is composed of a frame having end bars *a*² and a central cross-bar *a*³, (see Fig. 2,) preferably depressed slightly below the end bars and provided on its upper side with a stud or projection *a*⁴ to enter a perforation in the end portion *b* of the rein, as shown, said end portion of the rein passing below the end bars *a*² and above the central cross-bar *a*³, so that the member *a* of the fastening has an appearance similar to that of an ordinary buckle. The said member *a* does not, however, require to be connected with and disconnected from the end of the rein in the operation of fastening and unfastening the same, as is the case with an ordinary buckle, but may be applied once for all to the end of the rein, which is then fastened to and unfastened from the main portion *b*² of the rein by the engagement and disengagement of the two members of the fastening. To provide for such engagement and disengagement, the fastening member *a* is provided at its under side with a projection or stud *a*⁵, that co-operates with the socket member *c* of the fastening, which socket is permanently connected with the main portion *b*² of the rein by rivets or other suitable fastenings *c*².

In the form of fastening which is believed to be the most convenient the stud *a*⁵ is made in the form of a bulb or substantially spherical knob, having a somewhat contracted neck or shank between its largest portion and its junction with the cross-bar *a*³ of said member, as best shown in Fig. 2, and the socket member consists, essentially, of a plate having a circular opening *c*³, around which the metal is preferably drawn down to form a tubular neck or lip, as shown at *c*⁴, Fig. 2. The said opening *c*³ is a trifle smaller than the largest diameter of the bulb or stud *a*⁵ of the other member of the fastening, and in order to provide resiliency or elasticity, so that the bulb can be forcibly passed through the said opening, the plate is provided with slots *c*⁶, so that one side of the socket or opening *c*³ is formed at the end of a tongue of metal which is sufficiently yielding to permit the bulb to be forcibly pressed into or pulled out from the socket, although when the bulb is forced in the resiliency of the metal of the socket-

piece causes the opening in the socket to slightly contact around the neck of the bulb a^5 , as shown in Fig. 2, thus securely holding the two members together until forcibly pulled apart by the operator. The invention is not, however, limited to the specific construction of the socket member of the fastening, and, if desired, the socket member may be made as shown in Figs. 3 and 4, the plate c having a slot c^{30} , which is narrower than the end portion of the projection a^{50} of the other member a^4 of the fastening, but is of sufficient width to receive the shank or neck of said projection, and at the end of the slot c^{30} the plate has an opening c^{31} of sufficient size to permit the end of the projection a^{50} to pass through. The opening c^{31} is at a greater distance from the bend or loop b^3 of the ring (see Fig. 2) than the point at which the stud a^{50} comes when both parts of the rein extend back from the bend b^3 in natural position; but by doubling or bending the main portion of the rein, so as to bring the fastening member c thereon nearer to the bend b^3 , the stud of the member a may be passed through the opening c^{31} , and then by straightening out the rein and bringing it back to natural position the shank of the stud will come within the narrow portion of the slot in the plate c and will be securely held thereby. In making the slot and opening in the plate c the metal is drawn down around the edges of said slot-

opening, making a deep flange, as shown in Fig. 4, so as to afford a sufficient depth to provide a firm hold upon the stud. The flange c^4 , Fig. 2, or c^{40} , Fig. 4, may be of about the depth of one layer of the leather of the rein, which is usually double at the point where the member c of the fastening is applied to it.

I claim—

1. A rein-fastening consisting of the looped frame a , having a cross-bar a^3 , provided on one side with a stud a^4 and at the opposite side with a stud a^5 , having a head or enlargement, and the rein provided with the recessed socket-piece c , adapted to receive the said stud a^5 , as shown and described, as and for the purpose set forth.

2. A rein-fastening consisting of the looped frame a , having a cross-bar a^3 , provided on one side with a stud a^4 and at the opposite side with a stud a^5 , having a head or enlargement, and the rein provided with the spring-sided socket-piece c , adapted to receive the said stud a^5 , as shown and described, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES F. HARLOW.

Witnesses:

JOS. P. LIVERMORE,
M. E. HILL.