C. E. WALLIN.

STIRRUP.

No. 193,467. Patented July 24, 1877.

Fig. 1.

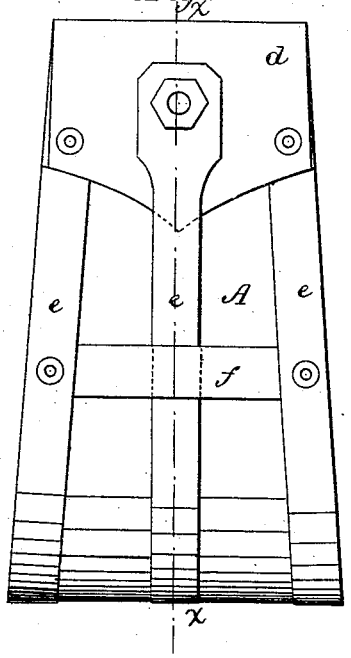


Fig. 2.

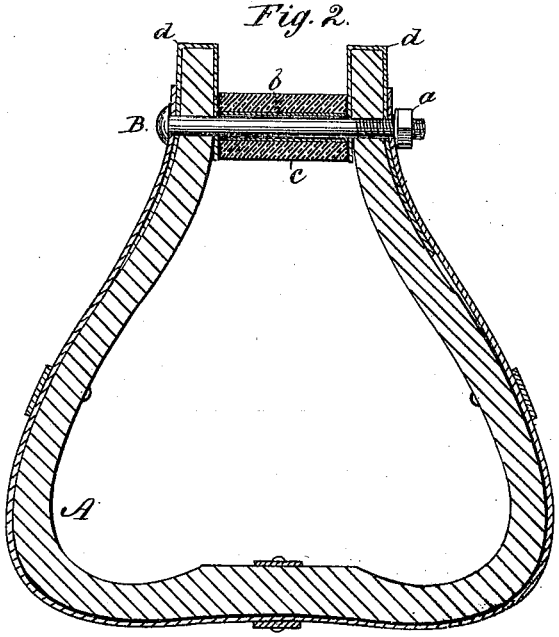


Fig. 3.

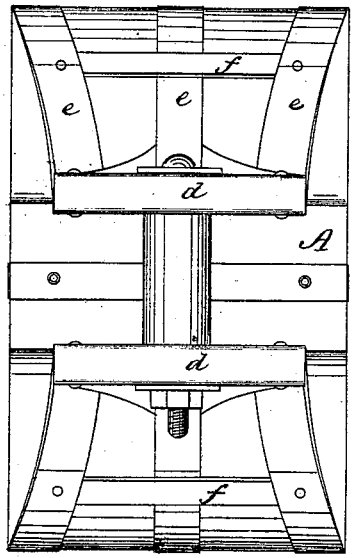
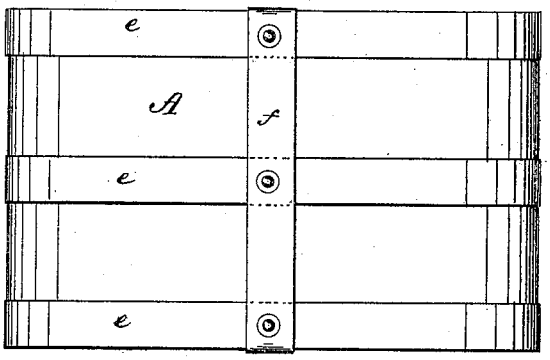


Fig. 4.



WITNESSES:

W. W. Hollingsworth

Edw. W. Byrn

INVENTOR:

Charles E. Wallin

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES E. WALLIN, OF SALT LAKE CITY, UTAH TERRITORY.

IMPROVEMENT IN STIRRUPS.

Specification forming part of Letters Patent No. **193,467**, dated July 24, 1877; application filed June 28, 1877.

To all whom it may concern:

Be it known that I, CHARLES E. WALLIN, of Salt Lake City and county, Utah Territory, have invented a new and Improved Stirrup; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side view of the stirrup; Fig. 2, a vertical central section through line *x x* of Fig. 1; Fig. 3, a plan view; Fig. 4, an underneath or inverted plan view.

My invention relates to certain improvements in wooden stirrups, designed to prevent the noise and chafing produced by the stirrup-strap, to provide a degree of elasticity for the rider's foot, and to strengthen and reenforce the stirrup against splitting.

The improvements consist, first, in interposing between the upper ends of the stirrup a metal and a rubber roller, both of which encompass the pivot-bolt to form a bearing for the strap; and, secondly, in re-enforcing the body of the stirrup by means of metallic straps or bands, as hereinafter more fully described.

In the drawing, A represents the wooden stirrup, and B the pivot-bolt, which latter connects the upper ends of the stirrup, and is secured by a nut, *a*, upon its threaded end. About this bolt, and between the upper ends of the stirrup, is arranged a loose metallic sleeve or roller, *b*, and immediately encompassing this metal roller is a second roller, *c*, of rubber. This rubber roller serves as a bearing-surface to the stirrup-strap, and secures in this connection important advantages, in that it makes the connection between the stirrup and the stirrup-strap slightly elastic, to relieve sudden pressures or breaking strains, and to render the stirrup easier to the foot of the rider. It also serves to prevent the chafing and creaking of the stirrup-strap, and thus diminishes both the wear and noise, while the metal roller upon the inside receives the wear of the pivot-bolt, and thus protects the rubber.

In constructing and applying the rubber rollers they may be made entirely of rubber, or of canvas covered with rubber; and in forming them they may be molded or cut from sections of rubber tubing.

In strengthening and re-enforcing the stirrup to prevent splitting, the upper ends of the stirrup are covered with metal caps *d d*, which are made from a single flat piece, applied to the inner faces first, then bent around the side edges, and afterward bent over the top edges and down upon the outside, where it is fastened by rivets. In connection with these caps I also employ bands or straps *e*, which may be let into the wood flush with its outer surface, if desired, which bands extend all the way around the outside of the stirrup. These bands are secured by rivets and transverse bands *f* at the sides and bottom of the stirrup; and at their ends are secured the outer bands by the caps *d*, while the ends of the central band are secured by the pivot-bolt, thus making a neat, strong, and durable wooden stirrup, exhibiting little or no tendency to split.

Having thus described my invention, what I claim as new is—

1. The combination, with the stirrup A and the pivot-bolt B, of the encompassing metal roller *b* and the outer rubber roller *c*, substantially as and for the purpose described.

2. The combination of the wooden stirrup A, the pivot-bolt B, the end caps *d*, formed from a flat piece of metal, as described, the continuous bands *e*, and the transverse bands *f*, substantially as described, and for the purpose set forth.

CHARLES E. WALLIN.

Witnesses:

W. W. GEE,

JOHN B. DILLER.