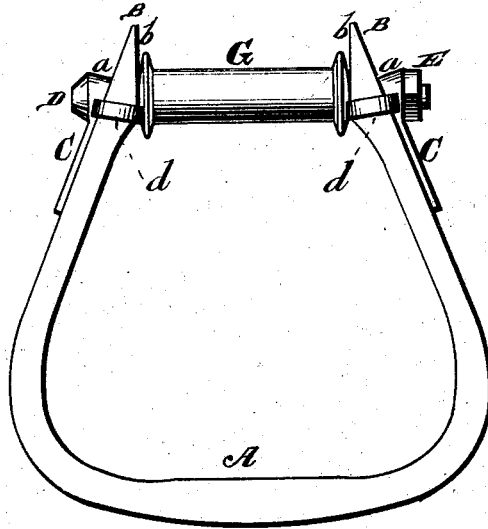


H. H. KNIGHT  
Stirrup.

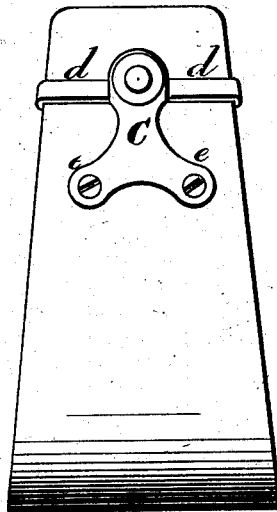
No. 198,630.

Patented Dec. 25, 1877.

*Fig. 1.*



*Fig. 2.*



WITNESSES

*Robert G. Smith*  
*James J. Shuckey*

INVENTOR.

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

HENRY H. KNIGHT, OF SANDUSKY, OHIO..

## IMPROVEMENT IN STIRRUPS.

Specification forming part of Letters Patent No. **198,630**, dated December 25, 1877; application filed December 1, 1877.

*To all whom it may concern:*

Be it known that I, HENRY H. KNIGHT, of Sandusky, in the county of Erie and State of Ohio, have invented a new and valuable Improvement in Stirrups; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a front view of my stirrup, and Fig. 2 side view thereof.

My invention relates to improvements upon the stirrups for which Letters Patent Nos. 186,853 and 189,363 have been granted to me; and it consists in the construction of the ends of the stirrup, and also in providing the bolt-plates with beveled heads, all as hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents the stirrup, made of wood, bent in the usual form. The ends B B of the stirrup at the top are usually curved outward, so as to make the inner and outer walls of the ends parallel with each other. This has been found objectionable on account of the increased cost of so bending the wood, and also from the fact that this bending at the ends makes the wood liable to split.

I construct the stirrup of very heavy wood, and the ends B B are allowed to run on an inclined plane, substantially as shown, without bending; but their inner sides are beveled, as shown at *b b*, so as to form parallel walls

on the inside for a certain distance. By this construction I do away with the angular bending of the ends.

C C are the bolt-plates, constructed with a center head, *a*, one or more downwardly-extending wings, *e e*, and side arms *d d*, which latter are bent around and grasp the edges of the wood. This is the same construction, substantially, as in my former patents above referred to; but on account of the change of construction in the ends of the stirrup the heads *a a* of the bolt-plates are made beveled. This is of great importance, so as to bring or form square surfaces for the head of the bolt D and for the nut E on its end.

Upon the bolt D, between the walls *b b*, is placed a flanged revolving roller, G, or a stationary wooden block, as desired.

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

1. A wooden stirrup, A, having its ends B B inclined and beveled on their inner sides to form parallel walls *b b*, as set forth.

2. In combination with the inclined ends B B of a wooden stirrup, the bolt-plates C C, constructed as described, and having their heads *a a* beveled, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HENRY H. KNIGHT.

Witnesses:

J. E. MATHEWS,  
HENRY HENKELMAN.