

D. T. ROBINSON.
Thill Coupling.

No. 229,470.

Patented June 29, 1880.

Fig. 1.

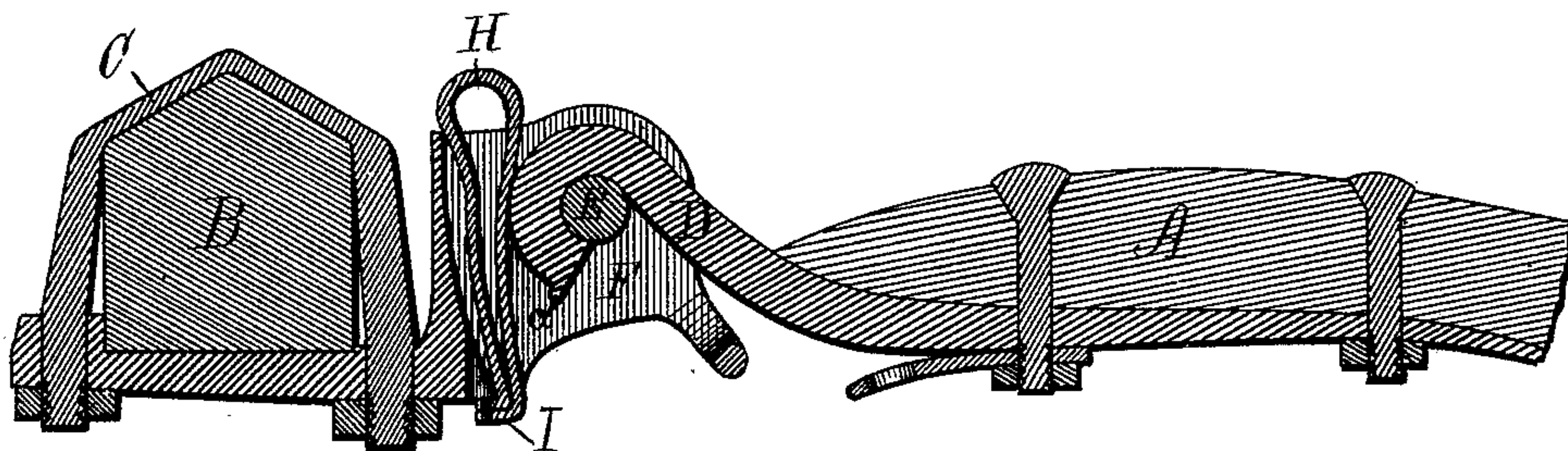
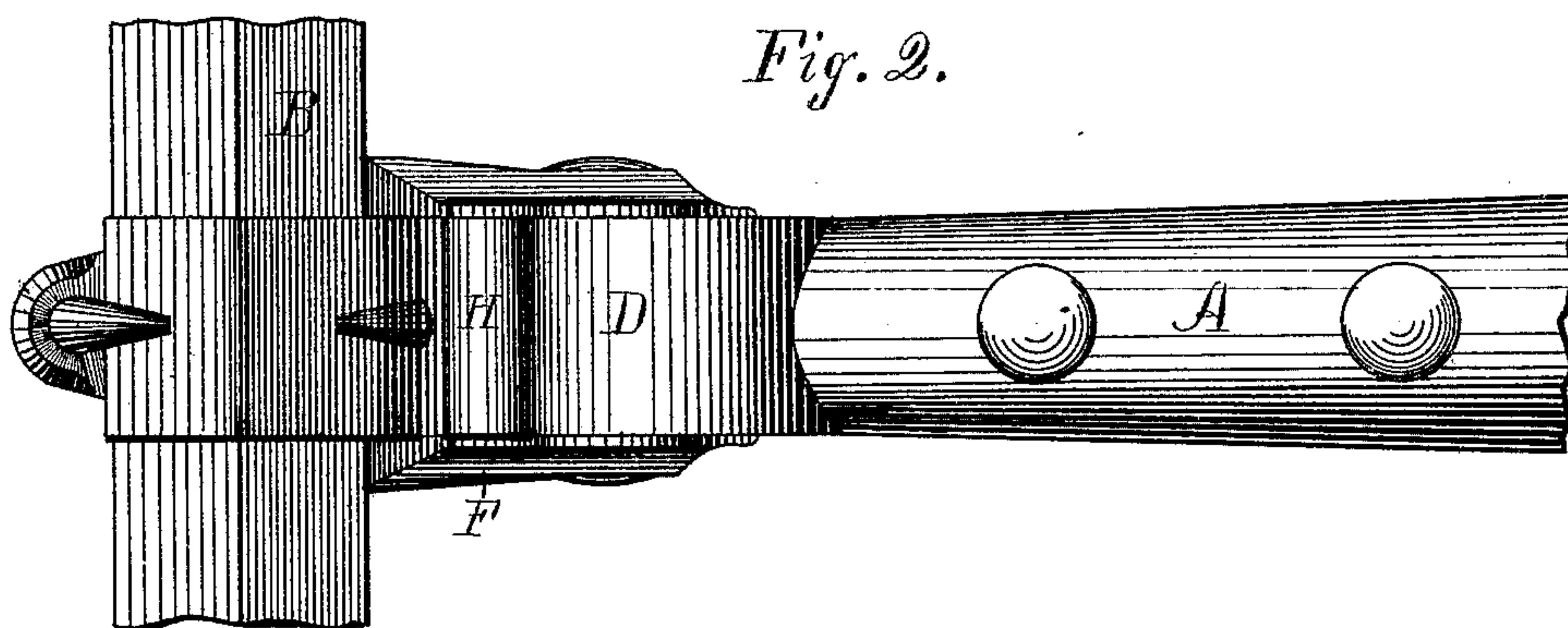


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE

DANIEL T. ROBINSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND GEORGE W. WILKINSON, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 229,470, dated June 29, 1880.

Application filed September 17, 1879.

To all whom it may concern:

Be it known that I, DANIEL T. ROBINSON, of Boston, county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

The nature of this invention consists in the peculiar construction of parts, as hereinafter described—that is, in a hook secured to the rear end of the thill and adapted to straddle and be forced forward partially beneath the pivot of the clip, and retained in this position by a yoke-spring which exerts its stress between the hook and the body of the clip and is independent of or removable from such clip and hook, the spring having a lip upon its lower end to engage or extend below the said clip, and bearing at top and bottom only against the front face of the clip, which is concave for this purpose, and the whole operating as hereinafter stated.

The drawings accompanying this specification represent, in Figure 1, a central and longitudinal section, and in Fig. 2 a plan, of a thill-coupling embodying my invention.

In such drawings, the rear end of a thill or shaft is shown at A, the forward axle of a wheeled vehicle at B, and the usual clip, which encircles the axle and constitutes the means of securing the thill to the latter, at C, such parts being constructed as heretofore.

In carrying my invention into practice, I secure to the rear end of each thill a hook, D, such hook being secured to the thill in any suitable manner, and projecting downward in such manner as to hook over and engage a horizontal pivot, E, which is secured within the lug F, that receives the hook, the pivot serving to connect the thill to the lug and permit of the necessary movement of such thill.

The lug F is confined to the under side of the axle B by means of the prongs of the clip C, which pass through such lug and are provided with nuts, which screw up against its under side.

To prevent escape of the thill from engagement with the pivot I employ a spring, (shown at H in the drawings,) such spring being composed of a flat band of steel doubled at the middle, with its lower ends abutting and

bent together at a right angle to form a lip, I, which overlaps the bottom of the rear part of the lug, as shown in Fig. 1 of the drawings.

The spring H is crowded between the rear side of the hook D and the adjacent part of the lug, and exerts its stress to force the hook against and in connection with the pivot E and prevent accidental disengagement of the two. The spring also serves to prevent rattling between the thill and lug.

To remove the thill from the axle it is only necessary to pry the lip away from the shoulder of the lug and lift the spring out of its resting-place, when the hook D may be readily disengaged from the pivot.

To apply the thill the hook is placed about the pivot, and the spring crowded down between such hook and the face of the lug until the lips of the spring pass over the shoulder of the lug.

It will be seen that the rear portion of the lug is sufficiently deep to provide a bearing for the top and bottom of the spring and above and below the pivot of the thill, and that the face of the lug is concave to permit of the requisite play of said spring.

It will also be seen that the space between the spring and top of the lug is greater than at bottom, in order that the spring shall wedge tightly into place. If the hook were permitted too large a movement or rotation upon its pivot in a downward direction it might escape from engagement with the pivot notwithstanding the spring. To prevent this I form upon the rear lower corner of the hook a lip, a, which will abut against the spring should an attempt be made to lower the thill to too great an extent, and prevent further movement in this direction between the hook and pivot. It will thus be seen that the spring serves to prevent disengagement of the hook and lug and to obviate rattling between the two, while, by removing said spring, the two may be readily disengaged.

I claim—

1. In thill-couplings, a hook secured to the rear end of the thill and adapted to straddle and be forced forward partially beneath the pivot of the clip, and retained in this position by a yoke-spring which exerts its stress be-

tween the hook and the body of the clip and is independent of or removable from such clip, the spring having a lip upon its lower end to engage or extend below the said clip, and bearing at top and bottom only against the front face of the clip, and the whole operating substantially as explained.

2. The spring, as removable from the clip,

and fashioned into a yoke form from a band of metal, and bearing a lip upon one end to engage the clip, substantially as explained.

DANIEL T. ROBINSON.

Witnesses:

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