

H. J. ILES.  
Thill-Coupling.

No. 200,832.

Patented March 5, 1878.

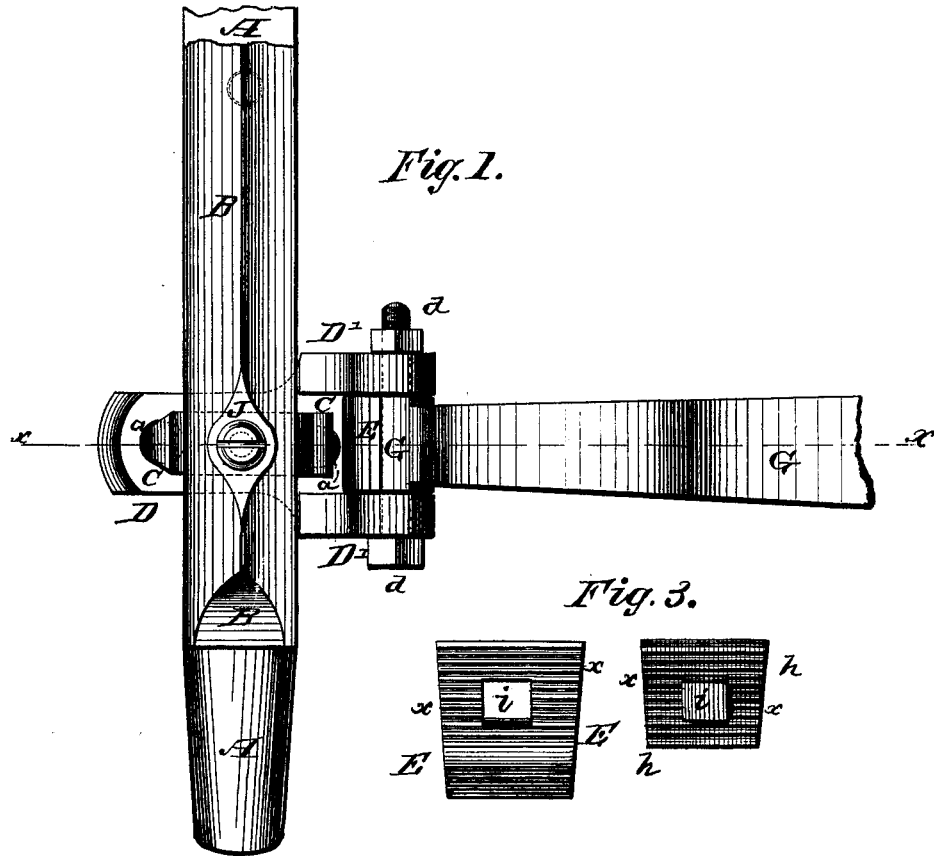


Fig. 1.

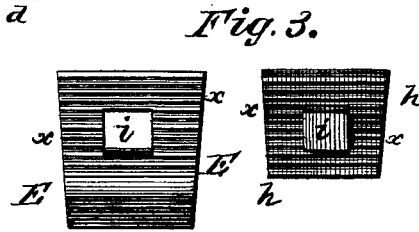


Fig. 3.

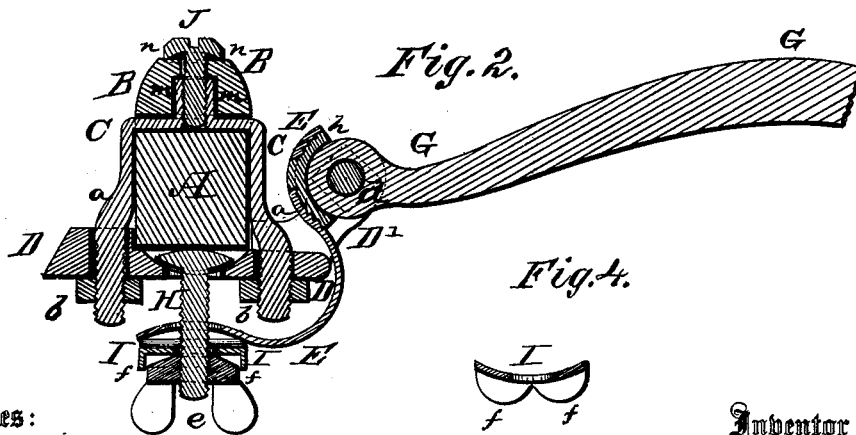


Fig. 2.

Fig. 4.



Witnesses:

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# UNITED STATES PATENT OFFICE.

HENRY J. ILES, OF BIRMINGHAM, CONNECTICUT, ASSIGNOR TO HIMSELF  
AND DICKERMAN M. BASSETT, OF SAME PLACE.

## IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. 200,832, dated March 5, 1878; application filed  
August 14, 1877.

To all whom it may concern:

Be it known that I, HENRY J. ILES, of Birmingham, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in certain improvements upon the thill-coupling for which Letters Patent No. 181,848 were granted to me, September 5, 1876, as will be hereinafter more fully set forth.

In the annexed drawings, to which reference is made, and which fully illustrate my invention—

Figure 1 is plan view. Fig. 2 is a central vertical section on line *x x*, Fig. 1. Figs. 3 and 4 are details.

A represents the axle, on which the bed-piece B is placed. C is the clip passed over the axle and formed with the bolts *a a*, which pass through the bottom plate D, and fastened by nuts *b b*. The bottom plate D is formed at its front end with forwardly-projecting ears D' D', between which the thill-iron G is pivoted by means of a bolt, *d*. E is the spring, having its front end curved upward between the ears D' D', and bearing against the eye of the thill-iron.

Through the center of the bottom plate D of the clip is passed a swing-bolt, H, the head of which rocks in a recess in the top of said plate. This bolt passes through the rear end of the spring E, and a nut, *e*, screwed on the end of said bolt, to regulate the tension of the spring on the thill-iron.

Between the nut *e* and spring E is placed a concavo-convex slide or washer, I, which has flanges *f f* at its ends to fit the nut, and thereby prevent the jarring off of the nut. On the front end of the spring E is fastened a piece of leather, *h*, to prevent the metal of

the spring from coming in contact with the thill-iron. A portion of this leather piece is pressed through a slot in the end of the spring, as shown at *i*, to prevent the leather from working out while in use. On the same end of the spring are formed transverse teeth, ribs, or corrugations *x*, to bite into the leather, and form an additional security against the leather working out.

The clip C passes around the axle, under the wooden bed-piece B, as shown, and on the top of the clip is formed a tubular projection, *m*, having interior screw-threads. This projection enters a recess in the bottom of the bed-piece B, and a screw, J, is passed down through the bed-piece B, and screwed into the projection *m*, thereby holding the clip-yoke on the axle, and also keeping the wood-work in its proper place. The screw J is formed with a cup-head, which lets the outer edge *n* cut into the wood, and prevents splitting.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the bottom plate D of the thill-coupling, of the swing-bolt H, spring E, and nut *e*, substantially as and for the purposes herein set forth.

2. The flanged slide or washer I, in combination with the bolt H, spring E, and nut *e*, for the purposes herein set forth.

3. The combination of the leather *f* and the spring E, provided with the teeth *x* and slot *i*, the leather being pressed into said teeth and through the slot, for the purposes herein set forth.

4. The combination, with the axle A and bed-piece B, of the clip C, having tubular projection *m* with interior screw-threads, and the screw J, having cup-head, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HENRY JAMES ILES.

Witnesses:

JOHN W. STORRS,  
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