

(No Model.)

E. H. SHINE.  
Thill Coupling.

No. 230,076.

Patented July 13, 1880.

Fig. 1.

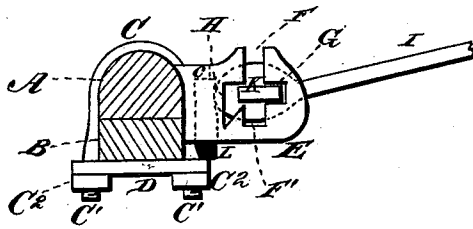


Fig. 2.

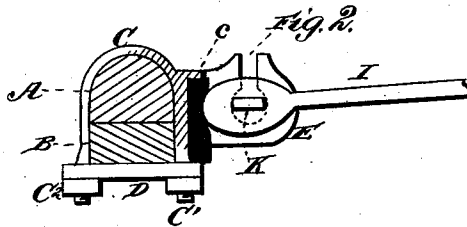
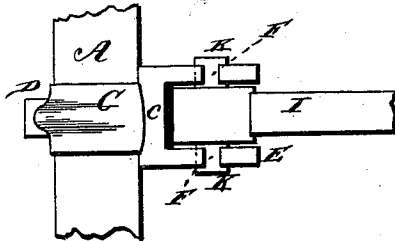


Fig. 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ELWOOD H. SHINE, OF WAYNESBURG, OHIO.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 230,076, dated July 13, 1880.

Application filed May 20, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, ELWOOD H. SHINE, of Waynesburg, in the county of Stark and State of Ohio, have invented certain new and useful  
5 Improvements in Thill-Couplings; 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  
10 this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my thill-coupling. Fig. 2 is a sectional view of the same, and Fig. 3 is  
15 a plan view.

The nature of my present invention relates to thill-couplings; and it consists in the features of construction and combination hereinafter fully described, and particularly pointed  
20 out in the claim.

In the annexed drawings, A designates the axle-stock, and B the axle-iron.

C is the clip encircling in part the axle-stock (or wooden part of the axle) and also the  
25 axle-iron B.

D designates a metal plate arranged against the under side of the axle-iron, and it is held in place by bolts C', which are formed with the clip and passed through the plate D. Nuts  
30 C<sup>2</sup> are arranged upon the screw-threaded ends of said bolts, and are tightened up against the plate D.

The clip-ears E are cast with the clip, and each ear is formed with the vertical slots F F', the horizontal slot G, and the slot H, the lower  
35 wall of which is inclined, as shown.

I designates the shaft-iron, the rear end of which is enlarged and made oval, so that when the shaft-iron is connected by tenons K the  
40 said oval part will bear against a rubber spring, which prevents all rattling of the several parts.

The tenons K project laterally from the oval-shaped end of the shaft-iron, and the rubber spring-block L is held in place between  
45 the plate D and a flange, c, formed upon the clip between its ears.

In coupling the shaft-iron of the shaft the tenons are passed down the slots F after the shafts have been raised vertically, so that the tenons will pass into the enlarged slot H, which  
50 admits of the tenons being turned and brought forward into the horizontal slot G.

When the vehicle is not in use the shafts will be pushed back and then raised, so that the arms or tenons of the oval portion of the  
55 shaft-irons may be turned and let down into the slots F', whereby the shafts will be held up, it being observed that said tenons are rectangular in cross-section, and that the slots F, F', and G correspond to such shape.  
60

A thill-iron having pins at its rear end projecting from each side thereof has been combined with a clip the ears of which have grooves in their inner faces leading from their  
65 upper sides to circular openings near their lower sides, so that the coupling could be effected by raising the iron to a vertical position and passing the projecting pins through the grooves to the openings, after which the iron could be turned to a horizontal or other  
70 approximate position, to prevent an accidental uncoupling, as shown in Patent No. 71,078; but in that case the shafts could not be retained in an elevated position, and there was no means provided to prevent rattling.  
75

What I claim is—

The combination of the shaft-iron having an oval-shaped rear end formed with laterally-projecting tenons with the clip provided with ears having slots F, F', G, and H, and the  
80 elastic pad or block held between a plate, B, and a flange formed on the clip between its ears, substantially as specified.

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

ELWOOD H. SHINE.

Witnesses:

WILLIAM RAEDEL,  
WILLIAM N. KLATZ.