(No Model.)

F. P. MUSSER.

THILL COUPLING.

No. 342,304. Patented May 18, 1886.

Fig. 1.

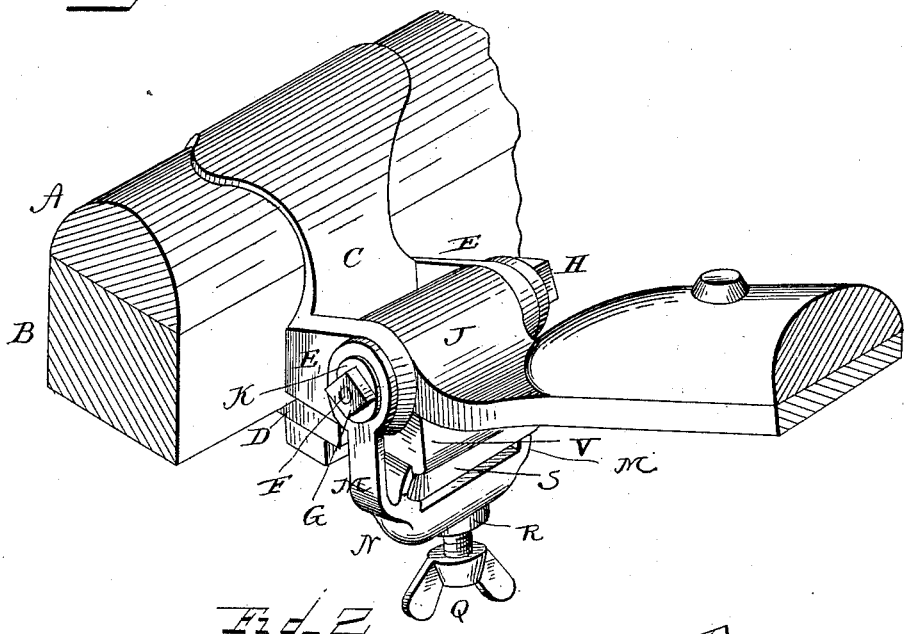


Fig. 2

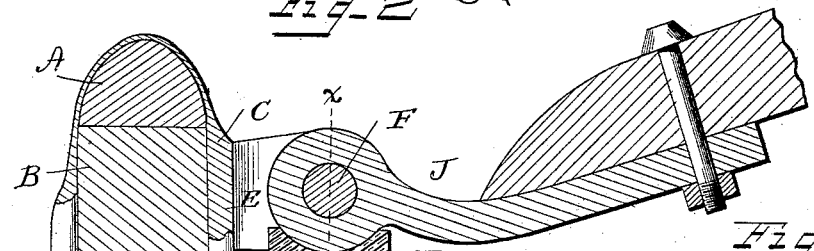


Fig. 3.

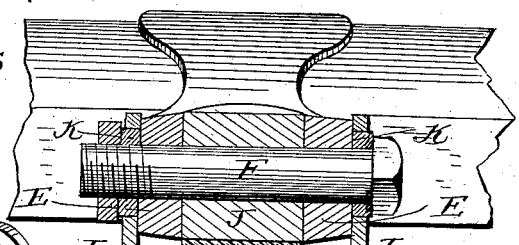
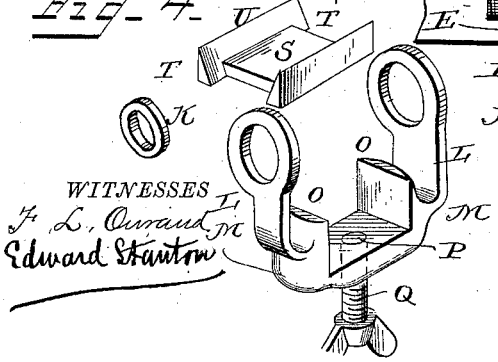


Fig. 4.



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FRANK P. MUSSER, OF BEAVER FALLS, PENNSYLVANIA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 342,304, dated May 18, 1886.

Application filed March 15, 1886. Serial No. 195,189. (No model.)

To all whom it may concern:

Be it known that I, FRANK P. MUSSER, a citizen of the United States, and a resident of Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Anti-Rattling Attachments for Thill-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, 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, which form a part of this specification, and in which—

Figure 1 is a perspective view of a thill-coupling provided with my improved anti-rattling device. Fig. 2 is a sectional view taken through the coupling-bolt. Fig. 3 is a sectional view on line *x x*, Fig. 2, and Fig. 4 is a view of the attachment removed from the coupling.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to devices for preventing rattling of the parts of a thill or pole coupling; and it consists in the improved construction and combination of parts of an attachment which may be attached to a coupling of the usual construction, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the wooden portion of the axle. B is the iron axle. C is the clip, having the shackle D upon its lower screw-threaded and nutted ends, and having the perforated lips E E upon its forward portion, and F is the bolt, having the nut G at one end and the head H at the other end, and passing through the perforated eyes and through the eye of the thill-iron J. All these parts are of the usual construction, and need no further description, being found in the thill-couplings most generally in use.

Two washers, K K, are secured upon the ends of the coupling-bolt, being clamped against the outer sides of the eyes of the clip by the head and nut of the bolt, and eyes L L, slightly thinner than the washers, fit and turn upon these washers, being formed upon the upper ends of two arms, M M, projecting from a block, N. The inner side of this block is formed at its ends near the upwardly-extending arms with upwardly-projecting guide-lips O O, and has at its center a screw-threaded perforation, P, through which passes the upper end of a thumb-screw, Q, having a jam-nut, R, upon it outside of the block. A block or plate, S, fits and slides between the guide-lips, having lugs T projecting from its corners and bearing against the edges of the lips, and the upper side of this block or plate is formed with a concave either (cylindrical or polygonal) recess, U, while the upper end of the thumb-screw bears against its under side. A block, V, of rubber or similar yielding material fits with its correspondingly-shaped under side into the recess in the sliding block, and with its upper concave cylindrical side against the under side of the thill-eye, being forced against the same by the thumb-screw and sliding block. It will now be seen that when the sliding block is forced upward by the thumb-screw clamping the yielding block toward the thill-eye, the thill-eye will be forced against the bolt from below, so as to be prevented from rattling upon the same, and the elastic or yielding block will force it against the bolt in such a yielding manner that it will not bind too hard against the bolt, and at the same time be forced against it with sufficient force to prevent it from rattling.

The bolt will turn in the eyes of the clip, and will be drawn downward at its ends by the eyed arms of the perforated block, while the sliding block and the yielding block force the thill-eye upward against the bolt, so that no rattling can take place when the blocks are screwed sufficiently tightly upward.

The recess in the upper face of the plate will retain the yielding block, and the jam-nut upon the screw will prevent the screw from working loose in its perforation.

The entire frame will rock with the thill-iron, the eyed ends of the frame rocking and swinging upon the washers upon the ends of the coupling-bolt.

The washers upon the ends of the coupling-bolt being thicker than the eyes at the upper ends of the arms of the frame, the nut upon the bolt may be tightened, so as to retain the bolt rigid within the eyes of the clip without interfering with the free movement of the eyes upon

the washers, which eyes will not be touched either by the nut or by the head of the bolt.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination of a common thill-coupling consisting of lug-bearing clip, thill-iron, bolt and nut, a U-shaped piece or yoke formed with eye ends and vertical guides, a block of elastic substance, a plate having flanges on two opposite sides and lugs on its corners, and washer-bushings fitting between the bolt-head, the lugs, and the nut, respectively, and within the eyes of said yoke, substantially as shown and described.

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

FRANK P. MUSSER.

Witnesses:

JOHN F. MILLER,

DAVID L. CALHOON.