F. G. ARTER.

THILL-COUPLING.

No. 192,404. Patented June 26, 1877.

FIG. I

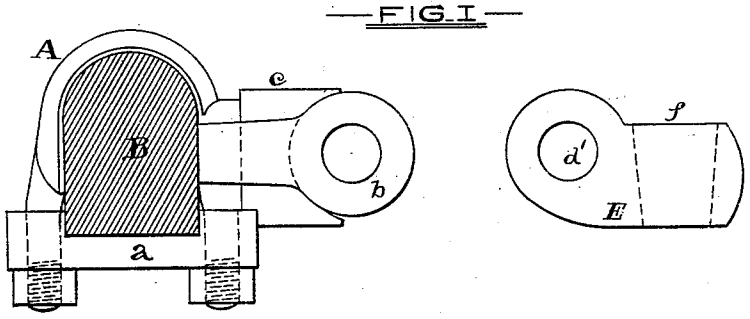


FIG. II

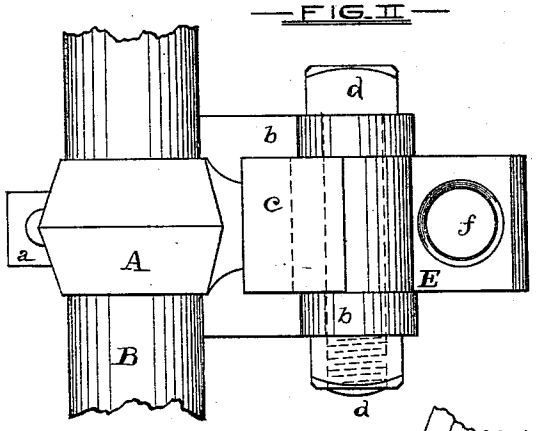
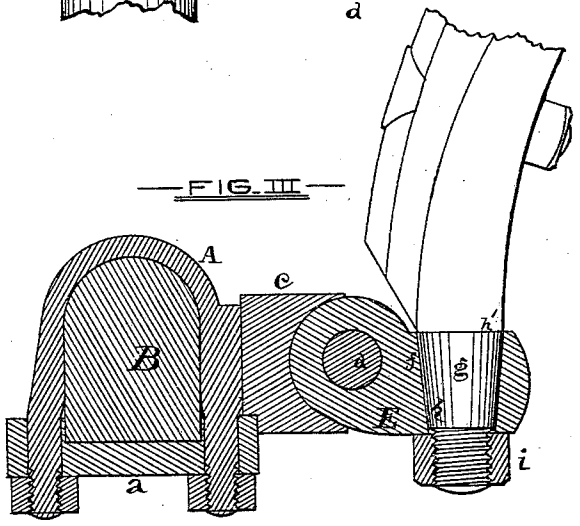


FIG. III



WITNESSES.

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FRANCIS G. ARTER, OF LIMA, OHIO.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **192,404**, dated June 26, 1877; application filed May 24, 1877.

To all whom it may concern:

Be it known that I, FRANCIS G. ARTER, of Lima, in the county of Allen and State of Ohio, have invented a new and useful Improvement in Thill-Couplings, which is fully set forth in the following specification and accompanying drawing.

This invention relates to that class of thill-couplings that have rubber blocks interposed between the eye of the thill-iron and the clip; and the object of the invention is to provide a thill and pole coupling for carriages having rubber blocks to prevent rattling, which will permit of the disconnection or removal of either pole or thill and the easy and quick adjustment of the other without removing the coupling-pin or disturbing the rubber.

Referring to the drawing, Figure 1 is a side view of the parts uncoupled. Fig. 2 is a plan view of same coupled, and Fig. 3 is a vertical section with thill-iron attached.

With the old-style clip commonly used rubber blocks have been found a great annoyance on vehicles where the removal of the thills to attach a pole is of frequent necessity. The rubber, being tightly compressed, springs the coupling parts asunder when the bolt is removed, and the effort to again pass the bolt through the eye of the thill-iron is frequently a wearisome task, owing to the resistance of the rubber. My invention obviates the necessity for uncoupling the eye of the thill-iron to remove the thills, by means hereinafter described.

In the drawing, A represents the clip; B, the axle; *a*, the yoke under the axle, and *b* lugs or ears extending on the front side of the clip. E represents a socket-piece, with an eye, *d'*, through which the coupling-bolt passes in the usual manner, and having a vertical eye or socket, *f*, which tapers downward, and receives the thill or pole iron. When this socket-piece is once in position and the rubber block adjusted in the space *c* the thills or pole may be changed without removing the coupling-bolt or disturbing the rubber.

The end of the thill or pole iron *g* which enters the socket *f* is tapering, as shown at *h*, to correspond with the taper of the socket, to which it is secured by the nut *i*. The tapering socket and corresponding tapering thill-iron are very firmly drawn together by the nut, and as the iron is thickest at the shoulder *h'*, where the greatest strain comes, the strength is not impaired by this mode of connection.

Having described my invention, I claim and desire to secure by Letters Patent—

The interchangeable thill and pole coupling, consisting of the clip A, with ears *b* extending, and coupling-piece E, with eye *d'*, through which the coupling-bolt passes, and vertical tapering socket *f*, and the thill or pole iron, with tapering end *h* to enter the socket, to which it is secured, all arranged as shown and described.

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