F. F. WHEELER.

THILL-COUPLING.

No. 188,272. Patented March 13, 1877.

Fig 1.

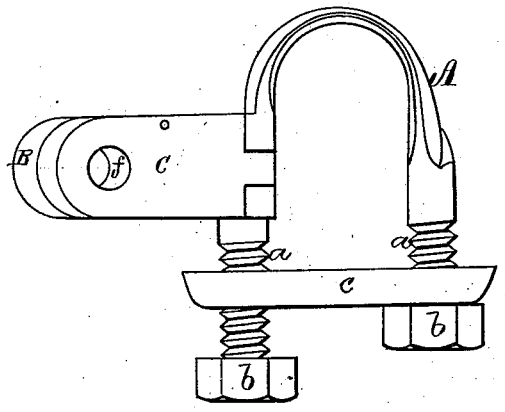


Fig 2.

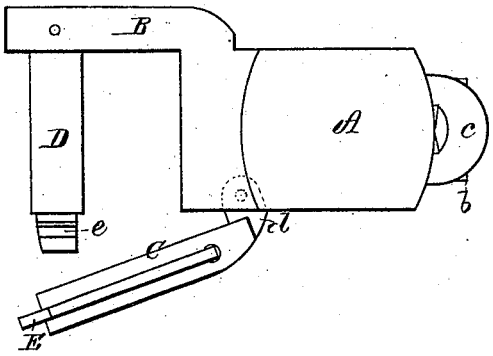


Fig 3.

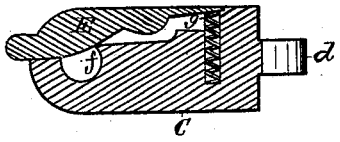


Fig 5.

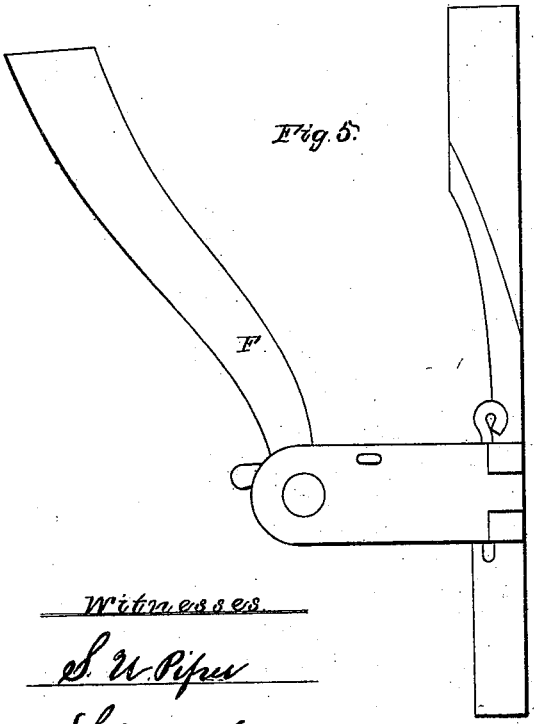
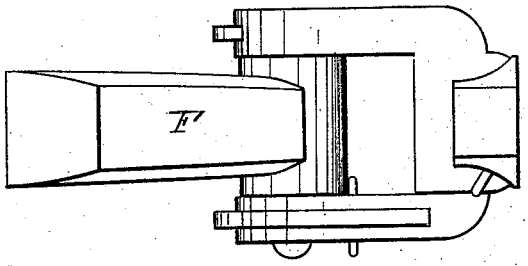


Fig 4.



Witnesses.

S. W. Pipes

L. Miller

Fred. F. Wheeler

by his attorney

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UNITED STATES PATENT OFFICE.

FRED F. WHEELER, OF ASHBY, MASSACHUSETTS.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **188,272**, dated March 13, 1877; application filed December 28, 1876.

To all whom it may concern:

Be it known that I, FRED F. WHEELER, of Ashby, of the county of Middlesex and State of Massachusetts, have invented a new and useful or Improved Carriage-Shaft Attachment or Coupling; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, and Fig. 2 a top view, of the main portion of the attachment in a finished state for use. Fig. 3 is a section taken lengthwise through its movable jaw and the latch thereof. Fig. 4 is a top view, and Fig. 5 a side elevation, of the said attachment as prepared for sale to carriage-makers.

Generally speaking, that part of the attachment, as it has been heretofore customary to make it, which is confined to a carriage-axle, consists of a yoke provided with two jaws, and also with fastening-screws and nuts, and a cross-piece, both of the jaws being stationary and parallel. The shaft-iron or hinge-piece, when coupled to the yoke, extends into the space between the jaws, and is pivoted to them by a screw-bolt going through it and them.

The difficulties attendant on removal of the screw-bolts, or their fixation in place, in order to connect the shafts and axle, or to disconnect them, as occasion may require, are well known to carriage-makers and others. Such bolts are also liable to work loose, or their nuts to become unscrewed, so as to cause loss of the bolts, or accidental disconnection of the shaft and axle.

My improved shaft attachment avoids such evils, and renders it very easy, without any wrench, to separate the shafts from, or to apply them to, the axle, as circumstances may require.

In constructing the said attachment, one of the jaws is hinged to the yoke, and provided with a latch and spring, arranged in a recess in the jaw, and the shaft-joint pin, fastened to the other jaw, has a recess in it to receive the latch. In this way the latch and the pin are engaged. Were the latch a spring fixed to the yoke, and provided with a lip to close down aside of the hinged jaw, lateral pressure of the shaft against the jaw would be liable to strain or break the spring, or detach it from the yoke. My arrangement obviates this by the latch being within and fixed to the jaw, and engaging with a notch in the pin.

In the drawings, A denotes the yoke as provided, in the usual manner, with screws *a a*, nuts *b b*, and a cross-piece, *c*, all being arranged as shown. This yoke is furnished with the two jaws B C, of which B is permanently attached to, or is stationary relatively to, the yoke, and has the joint-pin D fixed to, and projecting from, it, as represented. The fellow jaw C is hinged to the yoke, the hinge being shown at *d*. It also has arranged within it a lever-latch, E, to enter a notch, *e*, made in the pin D.

The jaw C is thus enabled to be swung outward in a manner to admit of the shaft-iron or hinge-piece F being either placed on, or removed from, the bolt or pin D. After having arranged the shaft-iron on the bolt—that is, so that the latter may extend through the former, and be against the stationary jaw—the removable jaw is to be turned up, so as to receive in its eye *f* the bolt D, to which it will be held by the latch E, which is furnished with a spring, *g*, to keep it in place.

From the above it will be seen that with my improved coupling the removal of the shafts from the jaws, and the pins or bolts, does not require a wrench, or any unscrewing of nuts, and, consequently, it becomes a very easy matter, comparatively speaking; also, that the shafts cannot readily become accidentally disconnected from the axle; also, that there is little or no danger of the pins or bolts working loose and becoming lost.

I do not claim a shaft attachment provided with a hinged jaw, and with a spring fastened to the yoke, and provided with a lip to hold such jaw in place.

I claim—

The improved shaft attachment, substantially as described, provided with the stationary guard B and joint-pin D, and the movable or hinged jaw C, and having a notch, *e*, in the joint-pin, and a latch, E, arranged in, and pivoted to, such hinged jaw, so as to engage or operate with such notch, all as set forth.

FRED F. WHEELER.

Witnesses:

R. H. EDDY,

J. R. SNOW.