A. PROSEUS.
Thill-Coupling.

No. 208,762. Patented Oct. 8, 1878.

Fig. 1.

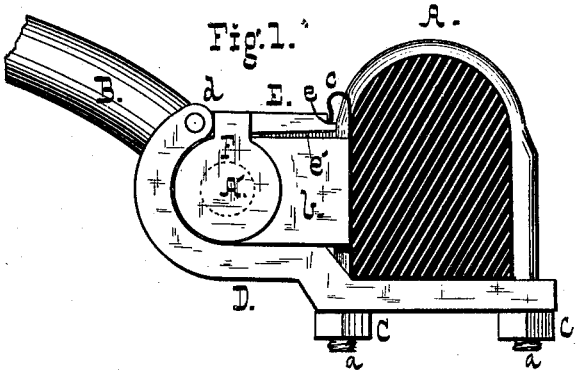
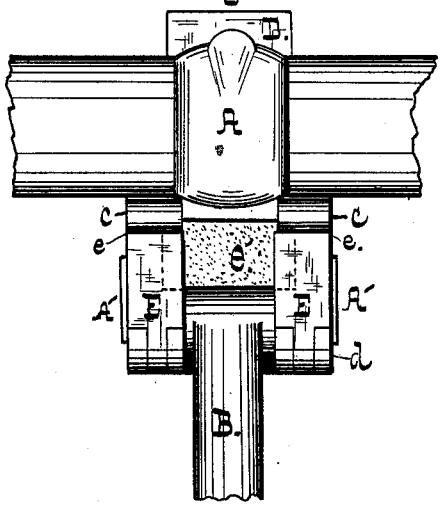


Fig. 2.



Witnesses
W. A. Bertram.
Dr. L. H. Barclay.

Inventor
Alfred Proseus.
by R. H. Williams.
Attorney.

UNITED STATES PATENT OFFICE.

ALFRED PROSEUS, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **208,762**, dated October 8, 1878; application filed September 21, 1878.

To all whom it may concern:

Be it known that I, ALFRED PROSEUS, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Thill-Couplings; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, and Fig. 2 a plan view, of the device.

This invention relates to that class of devices in use for attaching the shafts of vehicles to the axles; and it consists in certain means for facilitating the removal of the shafts, and for preventing the detachment of the same in case the parts of the device break upon which the strain is primarily brought.

In its most primitive form (which it may be remarked is the one almost universally employed) a thill-coupling consists of a staple-shaped bar adapted to fit over the axle, the ends being threaded, passed through a plate, and secured by means of nuts.

On the forward side of the bar is a pair of perforated ears, between which the shaft end fits, and is fastened by an ordinary screw-bolt and nut. A safety-strap is usually employed to guard against danger in case of breakage. Aside from its unsightly appearance, the strap is not efficient for the purpose named, being liable to rot, besides necessitating labor in casting it loose when it is desired to detach the shafts.

The accompanying drawings illustrate a coupling which furnishes perfect security even in case the ears or bolt or both break, besides affording greatly-increased facility for removing or attaching the shafts, and answering every requisite in point of compactness, symmetry, and durability.

In the drawings, A is the ordinary axle-clip, having perforated ears *b b* and threaded ends *a a*. B is the shaft end, which is also of the ordinary construction, extended laterally at the part which comes between the ears *b b*.

In lieu of the ordinary bottom plate, I make use of a plate, D, bifurcated in front, and extending up and partly around the ears *b*, the parts thus formed being of such distance apart as to fit nearly against the shaft-shank on either side, and hence being somewhat closer together than the ears *b*.

Instead of a threaded bolt, a simple pin, F, is used, equal in length to the width of the coupling.

In the rear of the shaft end is the usual rubber *e'*, to prevent rattling.

To the ends of the piece D are hinged, at *d*, the arms E E, terminating in a catch projection, *e*, for the springs *c c*, as shown. These springs are preferably secured between the plate D and axle, being clamped in place as the nuts C are screwed home.

To the arms E are attached cover-pieces A' on either side, which retain the pin F in place.

The operation of the device is as follows: In order to couple a shaft, the arms E E are thrown back and the rubber *e'* and pin F are removed. The shaft end being inserted between the ears *b*, the rubber is laid in place behind it, and the arms E are pressed down thereupon until the springs *c c* catch in the ends of the arms.

To remove the shafts, the springs *c* are pressed back. The resiliency of the rubber then causes the arms E to fly back, and the rubber *e'*, pin F, and shaft end are lifted out in the order named.

It will be seen that should the ears *b* or pin F or both break, the shaft end is still retained by the piece D, whose bifurcated end embraces the shaft-head.

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

1. In combination with the ordinary axle-clip, having perforated ears *b*, the bottom plate, D, extended up in front thereof, and embracing the shaft end, as set forth.

2. In combination with the clip A and springs *c*, the bifurcated plate D and arms E, as set forth.

3. In combination with the clip A, the bifurcated plate D, arms E, having side pieces, A', and the pin F, as described.

4. In combination with the clip A and rubber *e'*, the bifurcated plate D, having arms E arranged to press upon the rubber, as described.

5. In combination with the clip A, the bifurcated plate D, arms E, having side pieces, A', pin F, and rubber *e'*, the combination being and operating as set forth.

Witness my hand this 17th day of May, 1878.

ALFRED PROSEUS.

Witnesses:
R. D. WILLIAMS,
G. H. WILLIAMS.