(No Model.)

T. M. RICHARDSON.

Thill Coupling.

No. 229,753. Patented July 6, 1880.

Fig. 1.

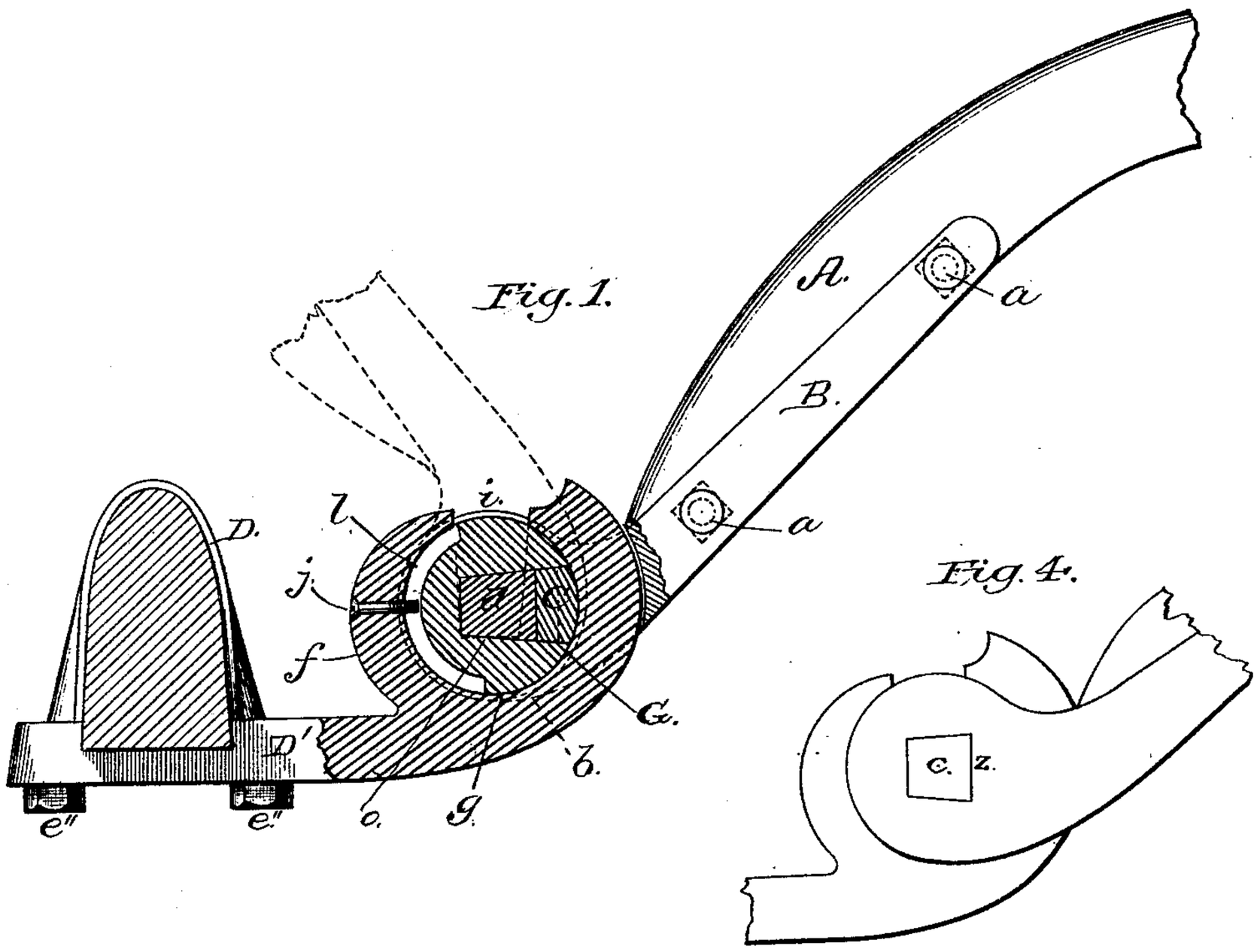


Fig. 4.

Fig. 2.

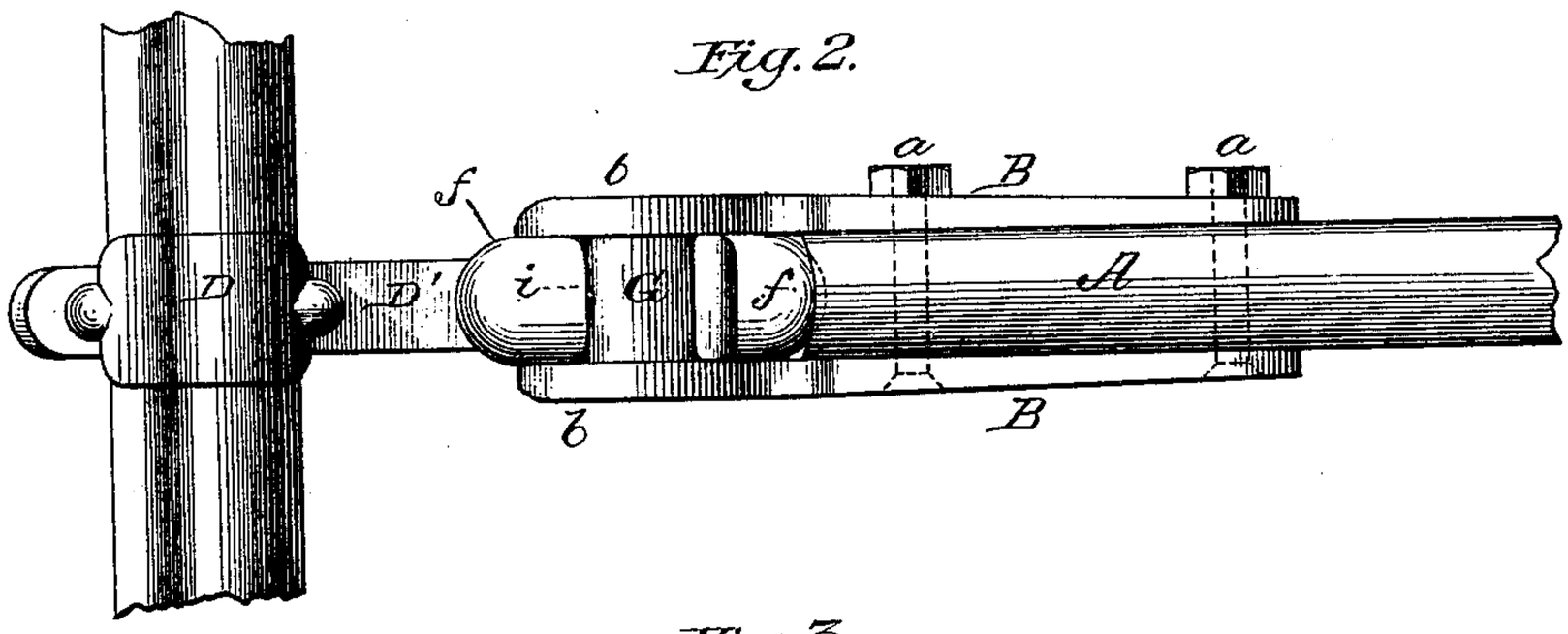
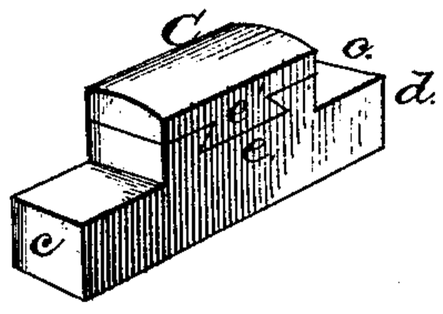


Fig. 3.



WITNESSES:
John A. Ellis,
Frank J. Masi.

INVENTOR:
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UNITED STATES PATENT OFFICE.

THEODORE M. RICHARDSON, OF STOCKTON, ME., ASSIGNOR OF ONE-HALF OF HIS RIGHT TO LAFAYETTE STAPLES, OF CHELSEA, MASS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 229,753, dated July 6, 1880.

Application filed April 22, 1880. (No model.)

To all whom it may concern:

Be it known that I, THEODORE MANSFIELD RICHARDSON, of Stockton, in the county of Waldo and State of Maine, have invented a new and valuable Improvement 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 this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical longitudinal section of my improved thill-coupling. Fig. 2 is a top view thereof. Fig. 3 is a detail, and Fig. 4 is a side view.

This invention has relation to improvements in thill-couplings.

The object of the invention is, principally, to devise a safe and expeditious means whereby a pair of shafts and a pole may be interchangeably secured to a vehicle.

The nature of the invention consists in certain novel combinations of parts, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a thill, and B the thill-irons, secured thereto in any suitable manner, preferably by means of bolts or rivets *a*.

In the enlarged ends *b* of the irons B are the prismatic perforations *z*, registering with each other, in which are seated the ends *c* of a bar, *d*, of rectangular form in cross-section, having in its face or side adjoining the rear end of the thill a dovetail groove, *e*.

C indicates a metallic bearing, usually of brass, and having a projecting dovetail tenon, *e'*, fitting snugly in the groove aforesaid, and securing the bearing removably to the bar.

D indicates the axle-clip, and D' the tie-plate passed thereon and secured by means of suitable nuts *e''*. This plate extends in front of the axle, and is provided at its front end with an enlargement, *f*, through which is made a circular opening, *g*, and a slot, *i*, leading through the top wall of the enlargement into the opening *g* aforesaid. In this opening is passed sidewise a metallic bearing-disk, G, which has rotary movement therein, limited by means of a pin, *j*, entering a groove, *l*, of the disk, and extending through the rear wall of the enlargement, which groove extends about one-half around the perimeter of said disk, as indicated in Fig. 1. This pin also prevents the disk from leaving the opening of the tie-plate laterally. In this disk is made a deep notch, *o*, of rectangular form, and of a depth sufficient to receive the bar *d* of the thill-iron. This disk may be readily turned until its notch *o* is in line with the slot *i* of the enlargement *f*, when they are continuous with each other. They are of the same width, and readily allow the bar *d* to be passed into the notch *o* of the disk, when, by throwing the thills downward, the disk is rotated in the enlargement until the said notch is out of line with the slot *i* of the enlargement, when the coupling of the thills to the axle will be completed. In this position the bar *d*, with its bearing-plate C, is wholly within the notch *o* of the disk, which hence may be freely rotated in the enlargement aforesaid, and the notch *o* and slot *i*, being out of line with each other, an uncoupling of the thill from the axle casually is impossible.

By swinging the thills upward the said slot and notch are again brought in line, and the said thills detached simply by raising them until the bar *d* is drawn out of the notch and slot.

Thus the thills may be removed very quickly and easily, and the pole substituted therefor with equal ease and dispatch.

The bearing-plate, it is clear, receives the wear of the draft, and is usually of brass. Thus, being softer than the enlargement *f*, which is of iron or steel, it produces but little effect thereon, and, being removable, may be readily replaced when worn out.

What I claim as new, and desire to secure by Letters Patent, is—

The thill-coupling consisting of the parallel thill-irons B, having squared holes *z*, and the tie-plate D', having circularly-recessed enlargement *f*, the notched cylinder G, having the front notch, *o*, and the coupling-bar *d*, having rectangular ends *c*, engaging with the holes *z* of the thill-irons, the face-bearing C, and its dovetail connections *e e'*, as specified.

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

THEODORE MANSFIELD RICHARDSON.

Witnesses:

ELVIN FRENCH STAPLES,

HORACE MARCHIS GRIFFIN.