J. HOWARTH.

Thill-Coupling.

No. 52,170. Patented Jan. 23, 1866.

Fig. 1.

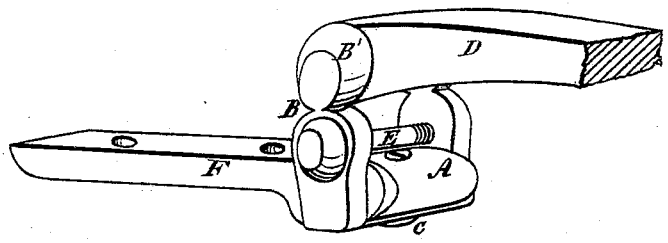


Fig. 2.

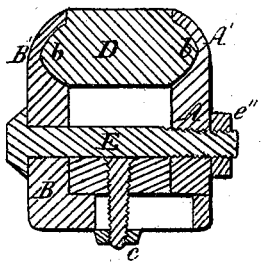


Fig. 3.

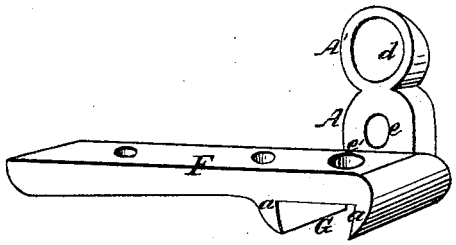
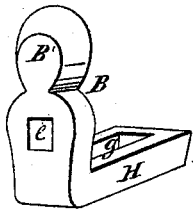


Fig. 4.



Witnesses:

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A. W. McClelland

Inventor:

James Howarth

UNITED STATES PATENT OFFICE.

JAMES HOWARTH, OF MONROEVILLE, OHIO.

IMPROVEMENT IN COUPLINGS FOR CARRIAGE-THILLS.

Specification forming part of Letters Patent No. **52,170**, dated January 23, 1866.

To all whom it may concern:

Be it known that I, JAMES HOWARTH, of Monroeville, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Couplings for Buggy-Shafts; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the coupling. Fig. 2 is a sectional view. Figs. 3 and 4 represent the coupling-plates detached from each other.

Like letters of reference refer to like parts in the views.

My improvement relates to a coupling for buggy-shafts, as hereinafter described.

Fig. 1 represents the coupling, that consists of plates A and B, so formed that when secured together the connecting-bar D is held between them, forming the coupling-joint, that will be described as follows:

A′ and B′ are heads or ears formed on the side extending upward from each of the plates, that are concave or rounded out on the inside, as shown at *d* in Figs. 2 and 3, in which center-points *b* on the sides of the bar D fit, as shown in Fig. 2, forming the joint. The concaved heads are securely held on the center-points by a bolt, E, that is put through holes *e* below in the sides, with a nut, *e″*, screwed on the end.

The coupling-plates A and B are represented detached from each other in Figs. 3 and 4, showing their form and construction. The plate or section A of the coupling is cast in one with the part or arm F, that is designed to extend under the axletree, to which it is secured by a clip in the usual way. The front part of this arm, at G, is formed into a clutch, as represented, that fits onto the part H of the plate B. The projections or sides *a* of the clutch are dovetailed, to which is fitted the part H of the plate B, so that as it is put in from one end it fits closely against the sides of the clutch, and is held more securely than if the sides were not thus dovetailed. *g* is a slot in the plate B, by means of which the plates can be moved up and secured nearer together, as may be required when the joint becomes loose.

When the coupling-plates A and B are put together, the part H being placed in the slot *g*, as before stated, and the bar D between the heads A′ B′, the plates are secured together vertically by a screw, *h*, put through a hole, *e′*, in the plate A, that extends down through the slot *g*, with a nut, *c′*, on the end, as seen in Fig. 2. The plates are screwed together transversely by the bolt E.

This coupling has many advantages over the one in ordinary use. When the joint becomes loose by the centers wearing away in the socket the plates can be adjusted together very readily so as to tighten them upon the centers, preventing the joint from becoming loose and shackling, as is the case in the ordinary coupling. This makes also a very secure coupling by being fastened by two screws, for should either of the screws get loose or work out in any way the other would still hold it, thus rendering it very safe and secure.

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

1. The plates A and B and clutch G, in combination with the bolts E *h*, when arranged as and for the purpose substantially as set forth.

2. In combination with the above-described construction, the heads A B, concaved, and the bar-points *b b*, all arranged as shown, for the purpose specified.

JAMES HOWARTH.

Witnesses:

D'ARCY PORTER,

D. W. GAGE.