

C. F. KIDDER.
Thill-Couplings.

No. 140,833.

Patented July 15, 1873.

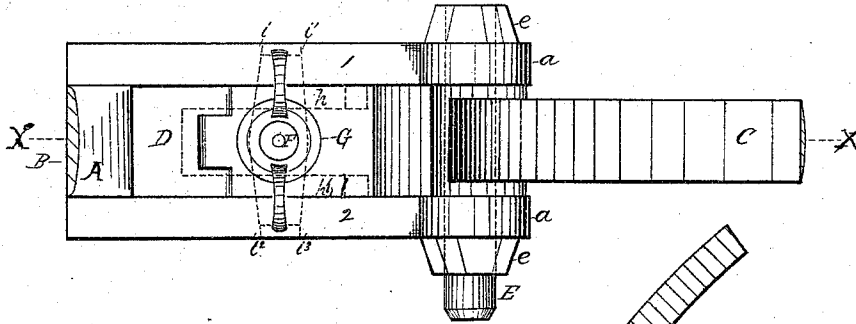


Fig. 1.

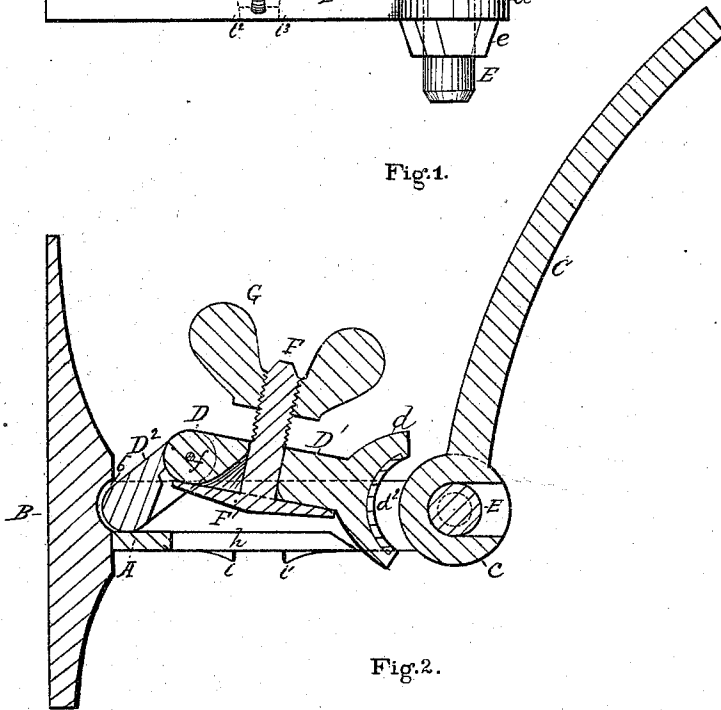


Fig. 2.

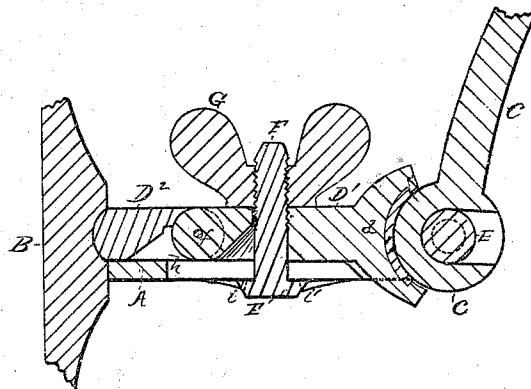


Fig. 3.

WITNESSES

Thos. H. Dodge
E. C. Moore

INVENTOR:

Charles F. Kidder

UNITED STATES PATENT OFFICE

CHARLES F. KIDDER, OF MILLBURY, MASSACHUSETTS.

IMPROVEMENT IN THILL-COUPPLINGS.

Specification forming part of Letters Patent No. **140,833**, dated July 15, 1873; application filed April 21, 1873.

To all whom it may concern:

Be it known that I, CHARLES F. KIDDER, of Millbury, in the county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Carriage-Shaft Shackles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings which form a part of this specification, and in which—

Figure 1 represents a top or plan view of my improved shaft-shackle, the clip and shaft-iron being shown broken off. Fig. 2 represents a longitudinal central section of the same on line X X, Fig. 1, but with the position of the shackle-brace somewhat changed for the purpose of detaching the parts; and Fig. 3 represents a longitudinal central section on line X X, Fig. 1, with clip and shaft-iron broken off still more than in Fig. 2.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it in detail.

In the drawings, the part marked A, Fig. 1, represents the slotted shank of the shackle, the arm-pieces 1 and 2 of which are secured to, or may be a part of, and project from the sides of the clip B of the yoke, which is to be fastened to the axle of the carriage. The arm-pieces 1 and 2 of the shank A have ears *a a'*, which furnish bearings for the shackle-bolt E held in place by nut *e*, and on the shackle-bolt E the slotted eye *c* of the shaft-iron C turns, its eye slotted out to admit of its being the more easily taken off said bolt, or adjusted in connection with the hinged shackle-brace D, which last device is constructed and performs its part as follows: The irregular-shaped pieces D¹ D² are hinged or jointed at point *f*, Figs. 2 and 3. A brace-bolt, F, having a thumb-nut, G, and peculiarly-shaped head-brace, F', is inserted into piece D¹, in the manner shown in the drawings, Figs. 2 and 3. Piece D² is slotted or recessed out on its under side to admit the extremity of the bolt-head brace F' when it is turned and drawn up for detaching the parts. (See Fig. 2.)

To replace and fasten the shackle-brace D, it is only necessary to double it up on its hinge

to the position, as heretofore described, upon the rests *h h'* in the slot of the main shank A; then by pressing the end of piece D² as far back as possible into the groove *b* of clip B, and at the same time pressing the shackle-brace out flat upon said rests *h h'*, the bolt-brace F' may be pushed down and turned to a position at right angles with the shank-arms *a a'*, and securely fastened to them by turning down the thumb-nut G, the bolt-brace being prevented from further turning by lugs or projections *i i¹ i² i³* on the under side of arm-pieces *a a'*.

Shackle-piece D¹ has a curved clasp or head, *d*, grooved out and lined with rubber *d²*, which bears against the eye *c* of shaft-iron C, thereby preventing it from coming off the shackle-bolt E, or rattling, and at the same time allowing a free motion to the pole or shaft.

Those skilled in the art of making carriages, as well as those using carriages, will readily appreciate the practical utility and advantages of my invention.

In case it is desired to change the pole of a carriage for shafts, or vice versa, the holding or shackle bolt E does not have to be taken out, consequently its nut does not have to be removed; and, if desired, the head of the bolt can be headed or hammered down, thus rendering the working off of its nut impossible. Accidents are of frequent occurrence from the working off of the shackle-bolts, and when the bolt has to be removed to take off the shafts or pole of the carriage, these accidents are rendered more frequent. It will also be noticed that the construction is such that the use of wrenches or other tools are not rendered necessary in order to enable a person to change or take off the shafts or pole of a carriage, since the thumb-nut G can be turned down sufficiently firm by the hand alone. Then, again, the rubber piece *d²* can be cut from common flat sheets of rubber, which renders the expense much less than those heretofore used to prevent rattling of carriage-shackles, which had to be molded expressly for such purpose.

It will be understood that the clip B is to be secured to the axle in the ordinary manner.

Having described my improved carriage-shaft or pole-shackle, what I claim therein as

new and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the grooved supporting part A of the shackle, of the hinged shackle-brace D, holding-screw F, and bolt-head brace F', substantially as and for the purposes set forth.

2. The combination of the peculiarly-constructed thumb-bolt F, having head-brace F', with the shackle-brace D and slotted shank

A, having lugs *i i¹ i² i³*, substantially as described, and for the purposes set forth.

3. The combination of the slotted eye *c* of the shaft-iron with the shackle-bolt E and hinged shackle-brace D, substantially as and for the purposes set forth.

CHARLES F. KIDDER.

Witnesses:

THOS. H. DODGE,
E. E. MOORE.