G. M. DUNLAP.

Thill-Couplings.

No. 145,635. Patented Dec. 16, 1873.

Fig 1

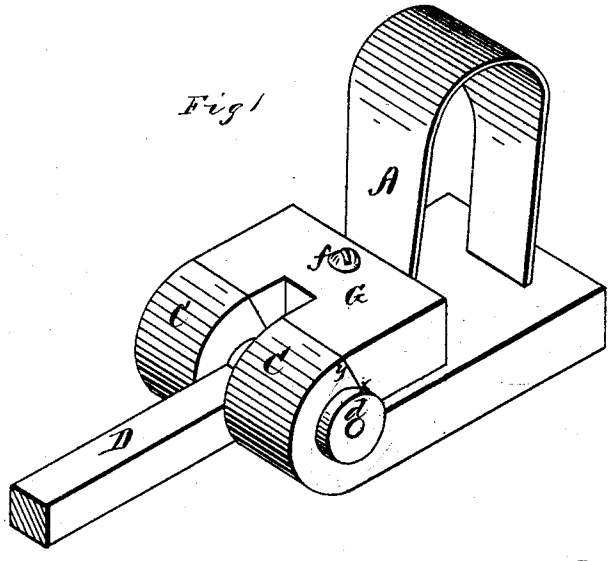


Fig 2

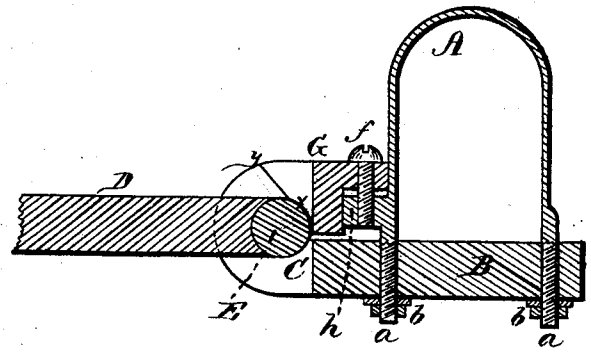
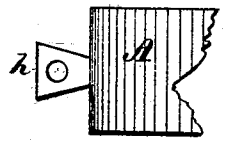


Fig 3



WITNESSES.

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UNITED STATES PATENT OFFICE.

GEORGE M. DUNLAP, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **145,635**, dated December 16, 1873; application filed August 23, 1873.

To all whom it may concern:

Be it known that I, GEORGE M. DUNLAP, of Springfield, in the county of Clarke and in the State of Ohio, have invented certain new and useful Improvements in Thill-Coupling; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a thill-coupling, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view, and Fig. 2 a longitudinal vertical section, of my thill-coupling. Fig. 3 is a plan view of a part of the axle-clip.

A represents the axle-clip, which goes over the top and two sides of the axle. The ends of the clip form screw-bolts *a a*, which are passed down through a shackle-plate, B, and nuts *b b* screwed on them to secure the whole firmly to the axle. The front end of the plate B is slotted longitudinally in the center, and curved upward and backward, forming a forked hook, C, the end of said hook being beveled or inclined from *x* to *y*, as shown. D represents the thill-iron, provided with a head, E, extending toward both sides at right angles. At each end of the head E is a surrounding projecting flange, *d*. The head E is inserted in the forked hook C, the thill-iron D extending through the slot in the same, and the flanges *d d* fitting close against the outer sides of the hook. G represents a block, of such size as to fit between the clip A and the ends of the forked hook C. The front side of this block is beveled or inclined to correspond with the incline *x y* of the end of the hook, and it has a groove in the center, corresponding with the slot in the hook. The rear side of the block is vertical, to fit against the clip A; and in this side of the block, from the under side upward, is a groove for the entrance of a projection, *h*, which is formed upon the front side of the clip. This projection, with the corresponding groove in the block D, may be dovetailed, if desired. The block D is held in place by a screw, *f*, which passes down through the block and screws into the projection *h*, so that the block will be held firmly between the clip A and the beveled ends of the forked hook C.

The front end of the block G, fitting closely against the end of the hook C, holds the head E of the thill-iron sufficiently tight to prevent it from rattling, and as the joint becomes worn by usage, the block G may be tightened by simply screwing down the screw *f*.

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

The combination of the axle-clip A with projection *h*, plate B, forked hook C with beveled end *x y*, thill-iron D with flanged head E, adjustable block G, and screw *f*, all constructed substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of August, 1873.

GEORGE M. DUNLAP.

Witnesses:

EDW. P. FORBES,

JAMES DUNLAP.