B. P. MORRISON.

THILL-COUPLING.

No. 188,933. Patented March 27, 1877.

Fig. 1.

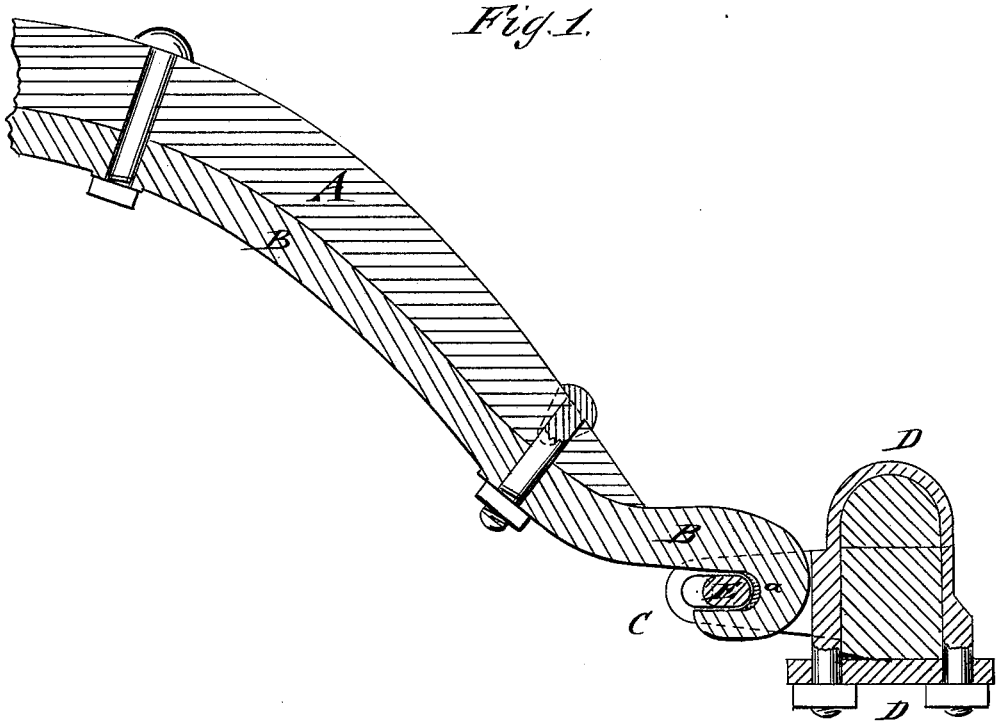
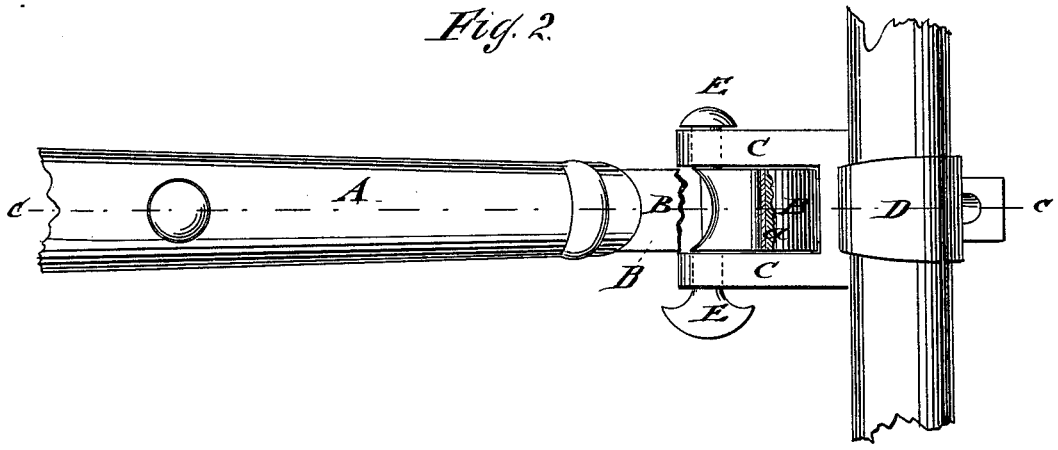


Fig. 2.



WITNESSES:

E. Wolff.

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INVENTOR:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

BENJAMIN P. MORRISON, OF ABINGDON, VIRGINIA.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **188,933**, dated March 27, 1877; application filed September 2, 1876.

To all whom it may concern:

Be it known that I, BENJAMIN P. MORRISON, of Abingdon, Washington county, State of Virginia, have invented a new and Improved Thill-Coupling, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section on line *c c;* Figs. 1 and 2 a top view, with part broken out of my improved thill-coupling.

Similar letters of reference indicate corresponding parts.

The invention has reference to an improved thill-coupling that retains the shafts in strong and safe manner on the axle without a detachable bolt, avoids rattling, and allows the ready taking off and replacing of the shafts or poles when the vehicle is placed in the carriage-house.

The invention consists of a hook-shaped shaft-head, that is locked to a cross-bolt, with central flat eccentric part swinging in the ears of the axle-clip and entering the recess of its shaft-head.

In the drawing, A represents the shaft or pole; B, the iron shaft-head, with hook-shaped end, which is fitted between the lugs or ears C of a clip, D, bolted to the axle; a cross-bolt, E, with head at one end, thumb-piece at the other end, and a flanged or flat eccentric portion at the middle part between the ears, swinging readily in the bearings or perforations of the ears.

The hook-shaped end of the shaft-head is first introduced into the ears of the clip while the front end of shaft is resting on the ground, and the flange of cross-bolt hanging down. The shaft is then raised as nearly as possible to the perpendicular, so that the shaft-head may pass down between ears far enough for the flange of bolt to be swung into the opening or recess in shaft-head. The shaft is then lifted in upward direction until the bottom or rear part of recess is brought in contact with flange of bolt, when the shaft may be swung down to the ground.

A thin strip of leather, *a*, is interposed between the flange of bolt and shaft-head to form a tight fitting of the parts, and prevent rattling. The shaft cannot become detached when in use, has no nuts to work off or bolts to be taken off in attaching and detaching, and forms a simple and effective device for quickly taking off and applying the shafts or poles.

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

The combination of the hook B, with the clip-bolt E, having the flat portion, and pivoted eccentrically in the ears C, as shown and described.

BENJAMIN PIERCE MORRISON.

Witnesses:

GEO. V. LITCHFIELD,

P. C. LANDRUM.