J. JACOBY.
Thill-Coupling.

No. 211,406. Patented Jan. 14, 1879.

Fig. 1.

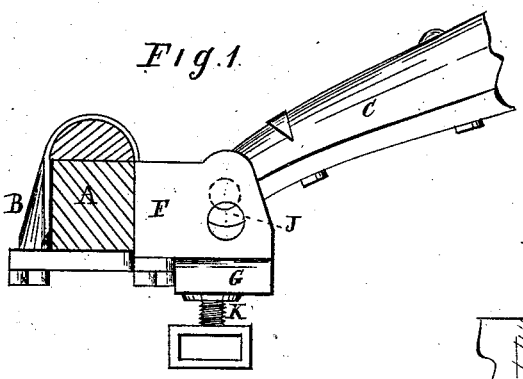

Fig. 2.

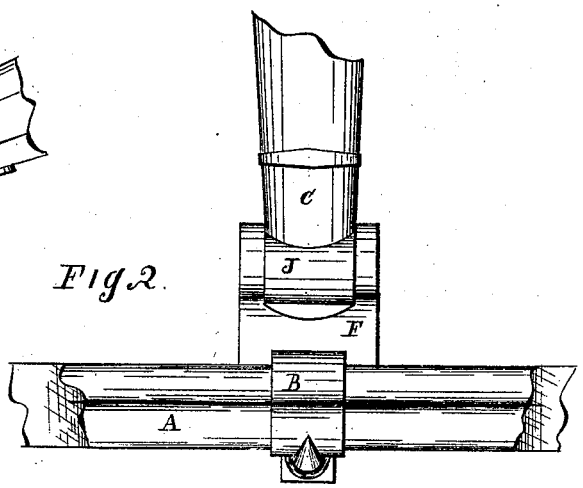

Fig. 3.

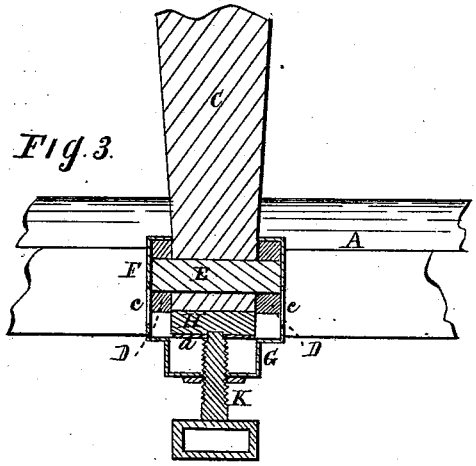

Fig. 4.

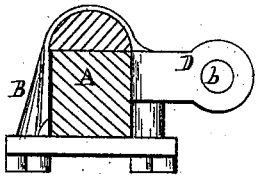

Fig. 5.

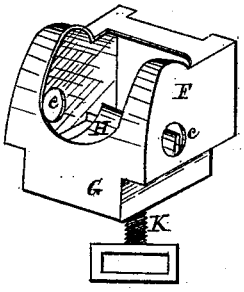

Fig. 6

Fig. 7.

Witnesses.
C. Goupitel
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UNITED STATES PATENT OFFICE.

JOSIAH JACOBY, OF LODI, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO J. H. WARREN, OF SAME PLACE.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **211,406**, dated January 14, 1879; application filed September 12, 1878.

To all whom it may concern:

Be it known that I, JOSIAH JACOBY, of Lodi, in the county of Medina and State of Ohio, have invented a certain new and Improved Thill-Coupling; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings, making a part of the same.

Figure 1 is a side view of the coupling. Fig. 2 is a top view. Fig. 3 is a sectional view The rest of the figures are detached sections.

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

This invention relates to that class of thill-couplings where the coupling pin or bolt is held by a removable cap or casing to prevent it from working out of its bearings, as will be more fully hereinafter described, and set forth in the claim.

In the drawings, A represents the axle of a carriage, to which is secured the clip B, Fig. 4. Said clip is similar to those in ordinary use, and attached to the axle substantially in the same way.

C is a section of the vehicle end of a shaft or thill, fitting in the ears D of the clip, and held therein by a pin or bolt, E, Fig. 3, a detached view of which is shown in Fig. 7. It will be observed that said pin has neither head nor nut whereby to prevent it from working out of its place. It is, however, retained in place by a shell, F, Fig. 1. A detached view of the shell is shown in Fig. 5. The shape and construction of said shell are such as to fit closely and conformably to the ears D, inclosing them and also the front part of the clip, as seen in Figs. 1 and 2. At the bottom of the shell is formed a recess or chamber, G, to receive an elastic packing or cushion, H, Fig. 3. A detached view of said packing is shown in Fig. 1, in which it will be seen that the upper side thereof is of a concave form, adapted to fit the end or eye J, Fig. 2, of the thill.

Through the bottom of the chamber is inserted a screw, K, the inner end of which engages the packing H, against which it is forced, for a purpose presently to be shown. To prevent the end of the screw from cutting and wearing into the packing, a metal plate, *a*, is interposed between the screw and packing, as seen in Fig. 3.

The practical operation of the above-described thill-coupling is as follows: In order to attach the thill to the carriage, the shell is first placed over the ears of the clip, as shown in Figs. 1 and 2. The screw K is now so far turned down as to permit the packing H to occupy the chamber G. The eye or end of the thill is then inserted between the ears of the clip, and therein secured by the coupling-pin E. To enable the pin to be inserted in the ears of the clip, (the holes in which at this time are covered, or partially so, by the shell, and through which shell the pin must be passed,) the shell is to be pushed up until the holes *c* in the sides thereof come in open relation to the holes in the ears of the clip. The coupling-pin can now be pushed in through the shell, thereby coupling the thill in the clip.

It will be seen in Fig. 3 that the length of the coupling-pin is about the width of the inside of the shell. To prevent said pin from coming out the shell slips down, so that the blank above the holes in the shell covers the ends of the pin, as shown in Fig. 3.

It will be obvious that the pin thus covered by the shell cannot come out, but must remain therein so long as the shell continues in place. The shell, when pushed up, will naturally drop down by its own weight, covering the ends of the pin, which is secured thus by the screw K, which, on being screwed up, forces the packing against the end of the thill, thereby tightening the shell about the clip, and at the same time preventing the end of the thill from rattling therein by pressing the end of the thill upon the pin.

The shell not only prevents the coupling-pin from coming out, but it also protects the coupling from dust, dirt, &c., so that there is less frictional wearing of the parts than if they were not covered.

The shell can be readily adapted to the or-

dinary thill-coupling, no other change being required than to substitute for the bolt and nut of such coupling the short pin herein described.

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

The combination of the shell F, provided with registering-holes *c c*, the clip B, with its ears D D, the pin E, and thill C, substantially as and for the purpose described.

JOSIAH JACOBY.

Witnesses:
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