

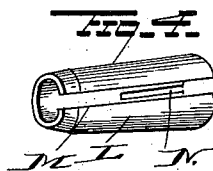
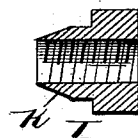
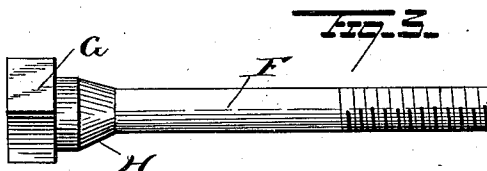
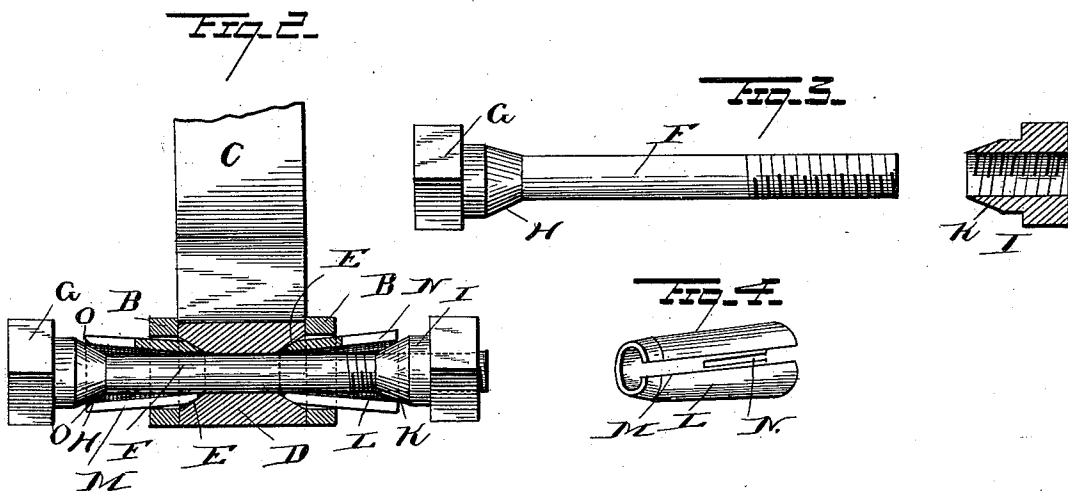
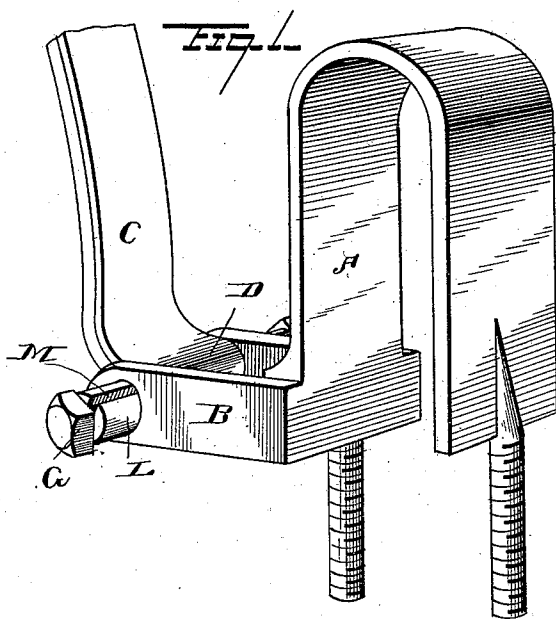
(No Model.)

J. W. FINDLEY.

THILL COUPLING.

No. 358,443.

Patented Mar. 1, 1887.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES W. FINDLEY, OF DALLAS, TEXAS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 358,443, dated March 1, 1887.

Application filed April 22, 1886. Serial No. 199,843. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. FINDLEY, a citizen of the United States of America, residing at Dallas, in the county of Dallas, State of Texas, have invented certain new and useful Improvements in Shaft and Pole Anti-Rattlers, and for springs clasps, and spring-eyes, and for other purposes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in thill-couplings; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of a thill-coupling embodying my improvements. Fig. 2 is a vertical transverse sectional view of the same. Fig. 3 is a detailed elevation of the coupling-bolt and its nut. Fig. 4 is a perspective view of one of the sleeves.

A represents a clip, of the usual or any preferred construction, and is adapted to be attached to the front axle of the vehicle, and is provided with ears B. Transverse openings are made in the front end of these ears.

C represents the draft-iron for the thills, having at its inner end the eye D, which is adapted to fit between the ears of the clip. This eye is provided with a transverse central opening, and at the ends of the said opening are countersunk, flared, or inclined openings E.

F represents the coupling-bolt, which is provided at one end with the head G, and adjacent to the head is an inclined shoulder, H. The stem of the bolt is adapted to fit the opening in the eye of the draft-iron, and the outer end of the stem is screw-threaded.

I represents a nut, which is adapted to be screwed upon the threaded end of the stem, and the said nut is provided on its inner side with an inclined shoulder, K, which is similar to the shoulder H.

L represents a pair of hollow cylindrical sleeves, which are preferably made of steel. The said sleeves are slightly larger at one end than at the other end, and are adapted to be

placed upon the stem of the coupling-bolt and to enter the openings in the ears of the clip. Each of the sleeves L is provided on one side with a longitudinal slit or open slot, M, which extends the entire length of the sleeve, and opposite the said slot is a slot or slit, N, which extends only partially through the sleeve. The latter is thus rendered compressible and expansible, as will be very readily understood. The inner end of each sleeve is beveled or inclined, and thereby adapted to enter the flared openings in the ends of the eye of the draft-iron, and in the outer end of each sleeve is a flared opening or recess, O, which is adapted to receive the inclined shoulders of the coupling-bolt and its nut.

The operation of my invention is as follows: One of the sleeves is first placed upon the coupling-bolt and forced against the inclined shoulder H thereof, the said shoulder fitting in the inclined recess O of the sleeve. The eye of the draft-iron is then inserted between the ears of the clip, and the coupling-bolt is passed through the openings of the said ears and through the transverse opening in the eye of the draft-iron. The remaining sleeve L is then placed on the outer end of the stem of the coupling-bolt, and the nut I is then screwed thereon, causing its inclined shoulder K to enter the inclined recess O in the outer end of the sleeve. This compression of the nut on the bolt, as it is screwed home, forces the inner ends of the sleeves into the inclines E in the eye of the draft-iron, and the inclined shoulders H and K of the coupling-bolt and nut expand the sleeves in the openings in the ears of the clip. The inclined inner ends of the sleeves prevent lateral motion of the draft-iron, and also prevent the latter from working loose on the bolt. The nut I may be tightened from time to time on the coupling-bolt, in order to take up wear.

Having thus described my invention, I claim—

The combination, with the clip having the ears provided with the openings B, of the draft-iron having the eye at its inner end adapted to be inserted between the ears of the clip and having the transverse central opening in the in-

clined recesses E at the ends of the said opening, the coupling-bolt having the inclined shoulder H and the nut provided with the inclined shoulder K, and the sleeves L, having the inclined inner ends adapted to enter the inclined inner ends adapted to enter the inclines E of the draft-iron and provided at their outer ends with the inclined recesses O, adapted to receive the inclined shoulders of the bolt, the said sleeves being compressible and expansible and fitted on the bolt, for the purpose set forth, substantially as described.

JAMES W. FINDLEY.

Witnesses:

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