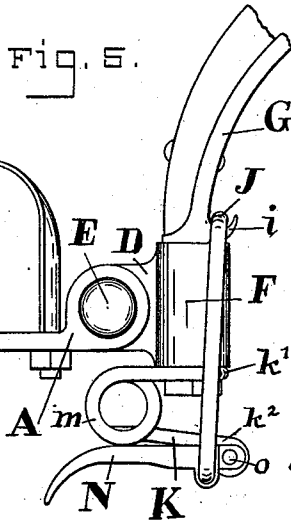
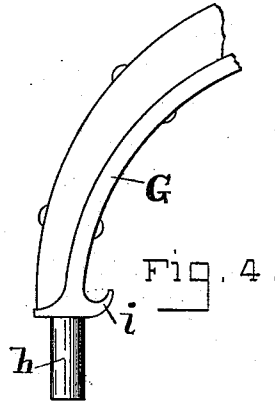
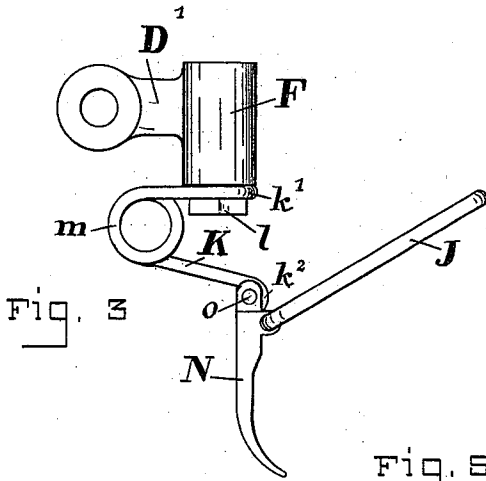
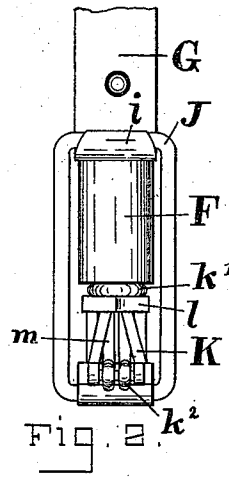
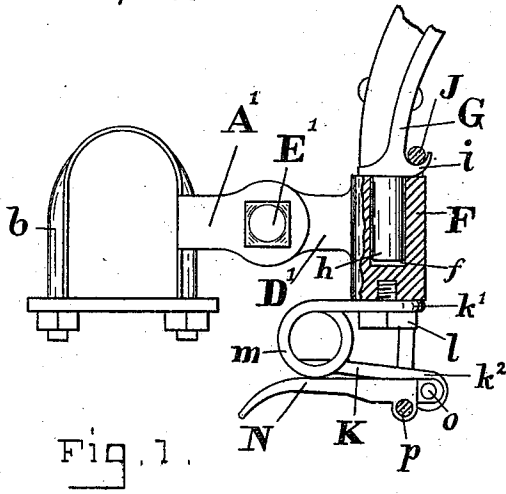


(No Model.)

J. W. HODDINOTT.
THILL COUPLING.

No. 510,175.

Patented Dec. 5, 1893.



WITNESSES:

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JOHN W. HODDINOTT, OF RUXTON, MARYLAND.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 510,175, dated December 5, 1893.

Application filed October 7, 1893. Serial No. 487,411. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HODDINOTT, a citizen of the United States, residing at Ruxton, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

My invention relates to couplings for thills and poles of vehicles, and the object is to provide an efficient and convenient construction for detaching the thills or the pole, as the case may be.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of an axle-clip and ordinary coupling with a broken portion of the thill attached,—the socket part being in section. Fig. 2 is a front elevation or transverse view of the parts shown in Fig. 1. Fig. 3 is a side view of the socket part and showing the position of the spring, lever, and yoke when the thill is detached. Fig. 4 is a side view of the thill iron detached. Fig. 5 is a side view, similar to that of Fig. 1, but showing the style of anti-rattler coupling covered in my United States Patent of July 4, 1893, No. 500,895.

Referring to Figs. 1 to 4, the usual clip, *b*, is to take about the axle of the vehicle; arms, *A'*, project from this clip and have a bolt-hole for the bolt, *E'*; an ordinary head, *D'*, is between the two arms and the said bolt confines it.

The parts thus far described are the usual parts of ordinary construction.

An extension, *F*, is attached to the head, *D'*, and has a socket, *f*, to receive the end, *h*, of the shaft-iron, *G*; the end, *h*, has no screw thread and is not fastened as heretofore by a nut. The socket, *f*, enters from the top side down but extends only part way through the extension, and my present invention particularly relates to means for retaining the end, *h*, of the shaft-iron in the socket, and which at the same time will allow it to be readily and quickly detached. I provide the shaft-iron, *G*, (or the pole-iron, whichever it may be,) on its front with a hook, *i*, forged integral with the iron, and the free end of a yoke, *J*, engages this hook and by drawing downward confines the end, *h*, of the iron in the socket, *f*. A spring, *K*, is secured at one end, *k'*, by

a screw, *l*, which enters upward into the under side of the extension, *F*. This spring has a coil, *m*, and then projects forward and to its free end, *k''*, a lever, *N*, is jointed by a pivot, *o*. The tendency of the spring is for its two ends, *k'*, *k''*, to separate or spread apart, and it serves to keep a tension or down-pull on the yoke, *J*. The yoke, *J*, already mentioned, has one end also jointed at, *p*, to the lever, *N*, in such manner that the spring holds the lever in a horizontal position, as in Fig. 1, when the free end of the yoke, *J*, is engaged with the hook, *i*, on the shaft-iron. The two joints or pivots on the lever, *N*,—to wit: the spring-pivot, *o*, and the yoke-joint, *p*,—enable the lever to act as a cam-lever for tightening the yoke on the thill-iron hook, *i*. When the lever is pressed down from the position it has in Fig. 1, the yoke-joint, *p*, acts as a pivot, and the first effect is to press upward the free end, *k''*, of the spring and the lever turns on the pivot, *p*; as soon as the relative positions of the two pivots, *o*, *p*, as in Fig. 1, are sufficiently changed, the tension of the spring on the yoke, *J*, ceases, and said yoke being loose on the shaft-iron hook, *i*, may easily be thrown off, whereupon the spring, lever, and yoke will take the position shown in Fig. 3.

It will thus be seen the parts last mentioned act directly on the shaft-iron and serve to retain the end, *h*, of the shaft-iron in the socket, *f*, and that by simply turning the cam-lever, *N*, the yoke, *J*, will take hold of, or release from, the hook, *i*, on the shaft-iron.

The device is not intended as an anti-rattler, but as a quick-acting detacher, to permit changing from a shaft to a pole and vice versa.

Fig. 5 differs from Fig. 1 only in that instead of an ordinary coupling, it represents my patent anti-rattler coupling of July 4, 1893, No. 500,895. The arms, *A*, special anti-rattler head, *D*, and bolt, *E*, are same as in my said patent; the other parts are same as in Fig. 1.

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

1. In a thill coupling, the combination of a socket jointed to the axle-clip; a shaft or pole-iron having its end entered downward in said socket and provided with a hook; and a yoke engaging said hook and retaining the shaft or pole-iron.

2. In a thill coupling, the combination of an axle-clip having two arms; a head secured to said arms by a bolt and provided with an extension having a socket; a shaft or pole-iron
5 having an end in said socket and provided with a hook; a yoke which engages the said hook, and a spring which keeps a tension on the said yoke.

3. In a thill-coupling, the combination of a
10 socket jointed to the axle-clip; a shaft or pole-iron having its end entered downward in said

socket and provided with a hook; a yoke engaging said hook; a spring which keeps a tension on the said yoke; and a lever co-acting with the yoke and spring to tighten the yoke
15 on the said hook.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN W. HODDINOTT.

Witnesses:

CHARLES B. MANN, Jr.

C. C. HINES.