(No Model.)

C. M. PICCARD & L. H. CHAPPEL.

THILL COUPLING.

No. 339,207. Patented Apr. 6, 1886.

Fig. 1

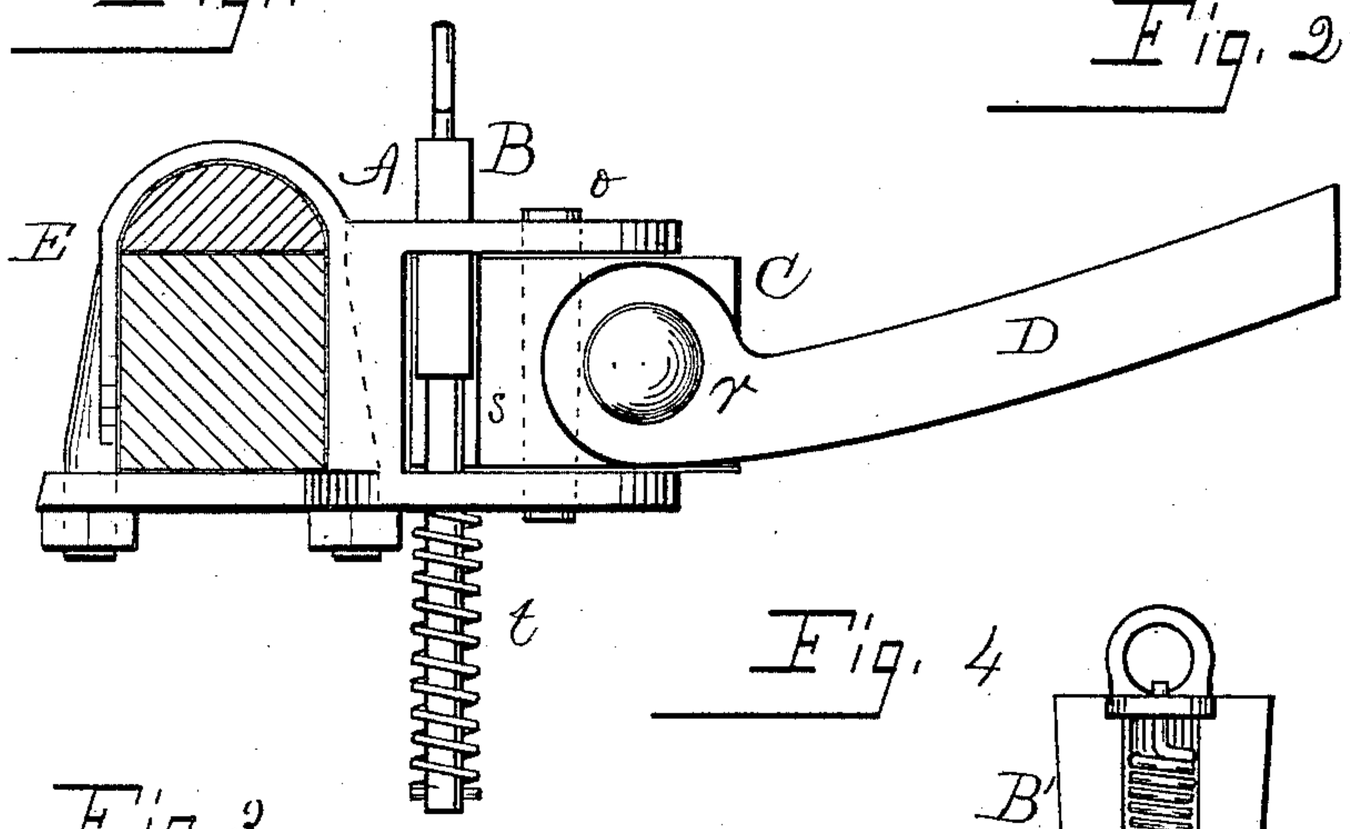


Fig. 2

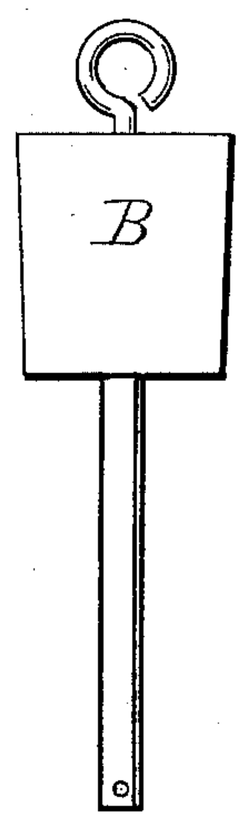


Fig. 4

Fig. 5

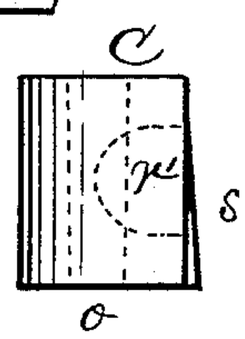
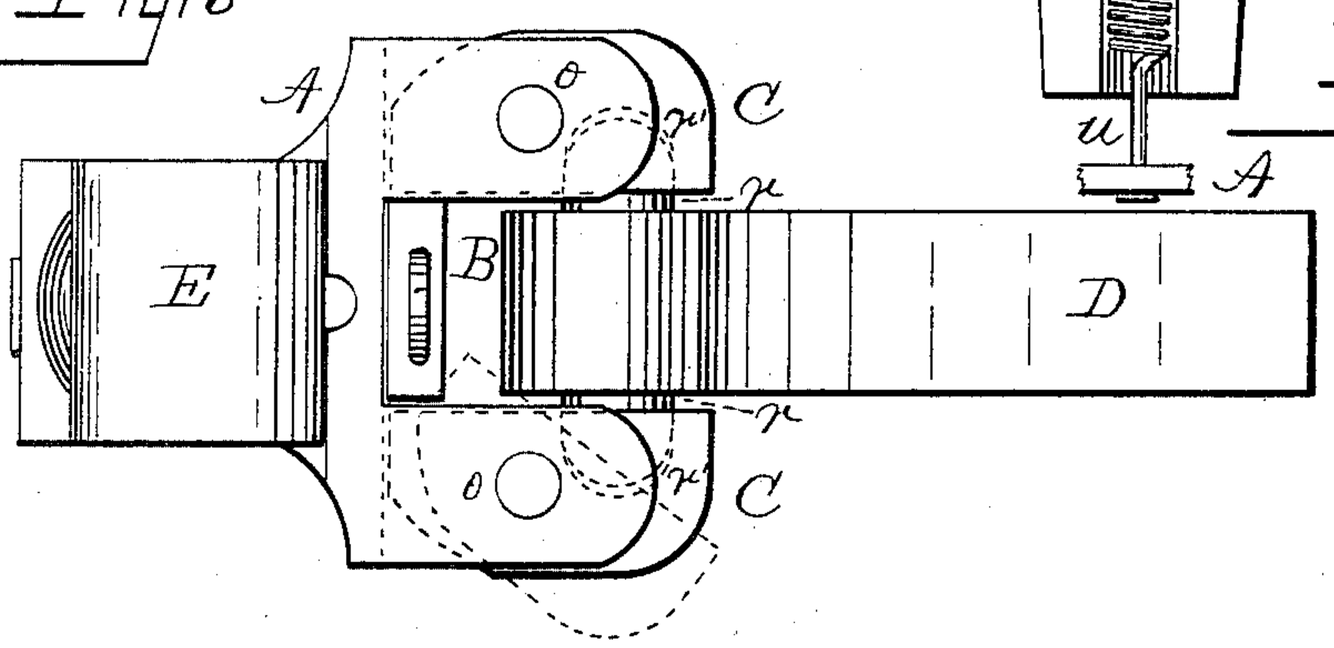


Fig. 3



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UNITED STATES PATENT OFFICE.

CHARLES M. PICCARD AND LESTER H. CHAPPEL, OF DAYTON, OHIO.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 339,207, dated April 6, 1886.

Application filed February 8, 1886. Serial No. 191,130. (No model.)

To all whom it may concern:

Be it known that we, CHARLES M. PICCARD and LESTER H. CHAPPEL, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented a certain new and useful Improvement in Thill-Couplings; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in thill-couplings in which, to the thill-iron, are rounded pivots which enter orifices in arms pivoted to a frame held to the axle of a vehicle by the ordinary clip. The said arms are held in position by a wedge-shaped locking device, which rests against inclines on the rear end of said arms.

The object is to effect the coupling of the shafts or thills to the axle, so that the same may be instantaneously attached and detached. We attain the object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the thill-coupling with the rear arm removed. Fig. 2 is a front view of the key or wedge lock. Fig. 3 is a top view of the thill-coupling. Fig. 4 is a modified form of key. Fig. 5 is a front view of one of the arms.

Like letters designate like parts throughout the several views.

A is a piece of cast malleable iron or steel, the base extending backwardly beyond the axle and forwardly to give support to the arms that engage the thill-iron, and on the top are two ears. These ears, with the base, are perforated for the pins *o o*. The rear portion has two holes for the clip E, with which the same is attached to the front axle of a vehicle. In the back end of the notch between the ears is placed the key B, the stem of which passes through a hole in the base, and between a pin at the lower end and the said base on said stem is placed the spiral spring *t*. The use of this spring is to hold the key against the inclined surfaces of the pivotal arms C. The sides of the key taper from above downward, and these inclining surfaces engage those of the pivotal arms, as shown at *s*, Figs. 1 and 5. To the top is attached an eye, which is used to raise the key, and to which a cord may be attached for the purpose.

A modified form of key is shown at B′, Fig. 4. In outline of the upper part it is like the key previously described. It has a concavity on its front face and a projection at the top, to which the spiral spring *w* is attached, the other end of the spring being attached to the base of the block or frame A. The function of the spring is the same as that previously described.

C C are pivotal arms, supported on the pins *o o* between the ears and base. On the inner forward ends of these arms are recesses or bearings *r′*, as indicated by dotted lines, to receive the pivots of the thill-irons, and on the inner rear surface are inclined faces, against which the key has its bearing.

The dotted lines show the position in which the arm is thrown to release the thill-iron. (See Fig. 3, under side.) The thill-iron D has projections *r r* rigidly attached to the same, and which enter cavities *r′ r′* in the pivotal arms. If these pivots are not forged with the thill-iron, and are made separately, then the hole to receive the same in the thill-iron would have to be made other than circular and nicely fitted to prevent wear.

The operation is thus: Raise the key, that the arms may move outward on their pivots, place the thill-iron so that the pivots may enter the cavities of the arms, and release the key, which in descending locks the arms securely in position. By attaching cords to the keys the driver, in case of a runaway, may instantly detach the horse by raising the keys.

Such is the state of the art that we do not claim the thill-iron with fixed pivots in relation to movable arms to receive said pivots.

Having fully described our invention, what we claim, and desire to secure by Letters Patent, is—

The key B′, with inclining edges, and the spring *w*, in combination with the block or frame A, the pivotal arms C C, and the thill-iron D, substantially as set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

CHARLES M. PICCARD.
LESTER H. CHAPPEL.

Witnesses:
B. PICKERING,
C. A. WALTMIRE.