(No Model.)

A. A. HAZARD.

THILL COUPLING.

No. 438,106. Patented Oct. 7, 1890.

FIG. 1.

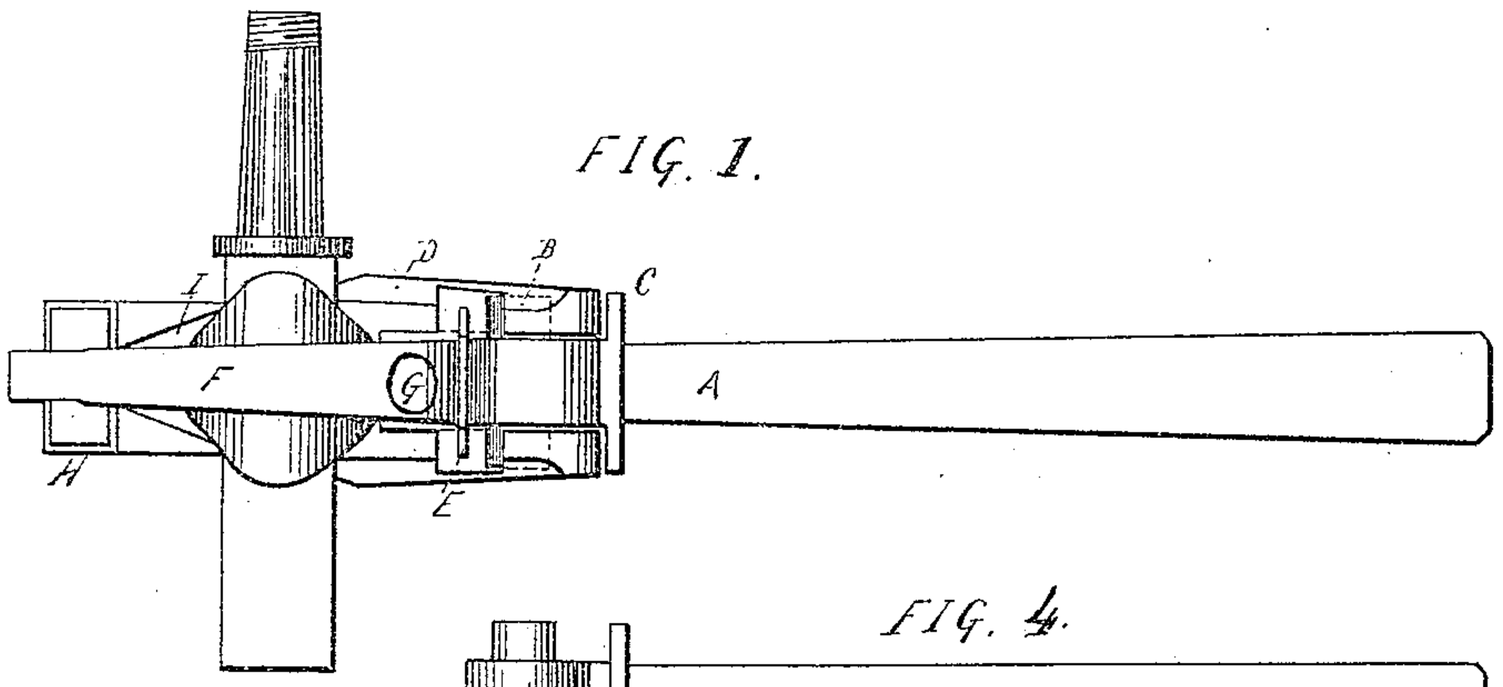

FIG. 4.

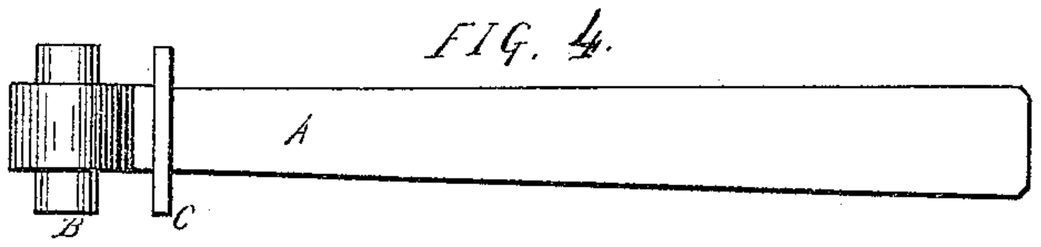

FIG. 2.

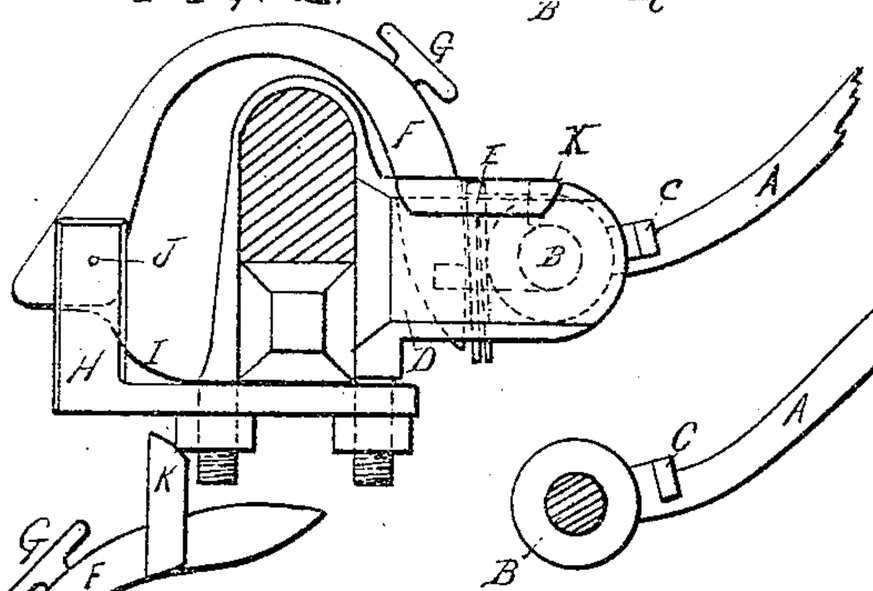

FIG. 5.

FIG. 3.

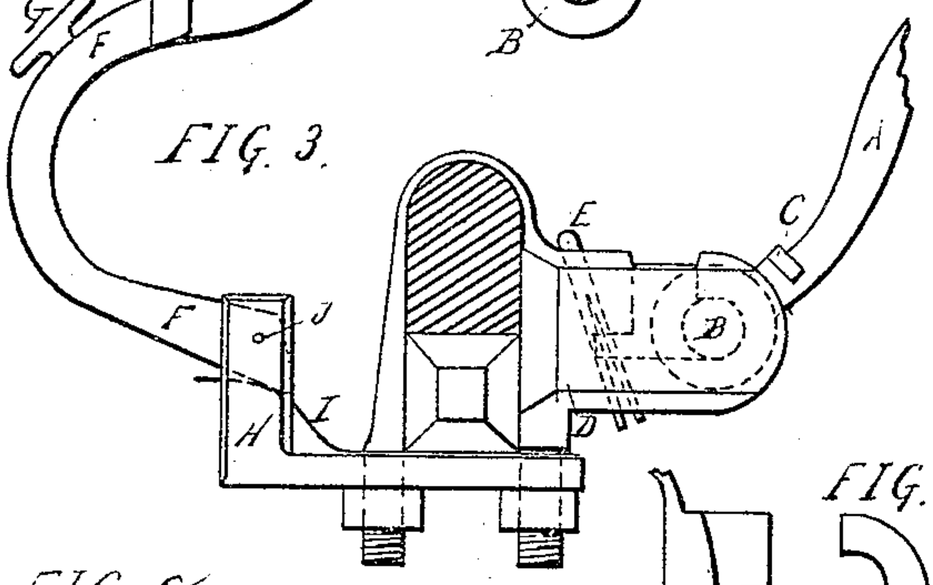

FIG. 6.

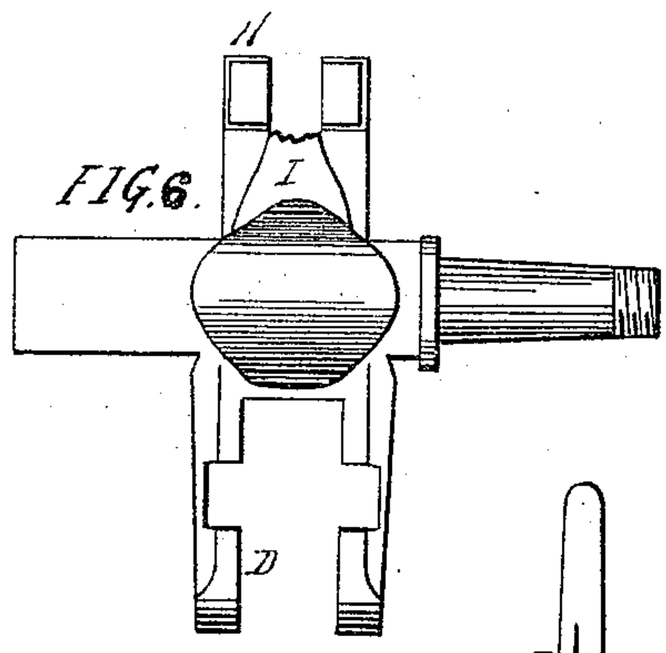

FIG. 7.

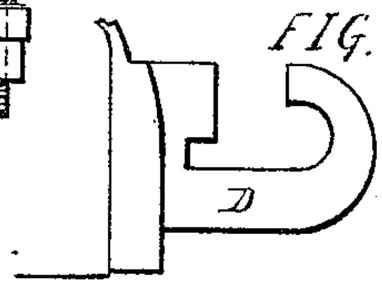

FIG. 8.

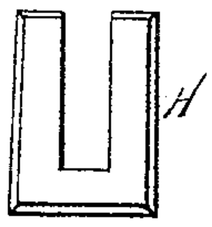

FIG. 9.

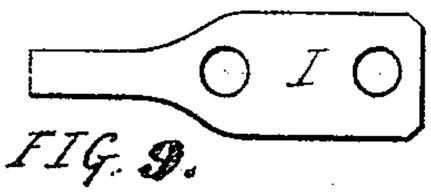

FIG. 10.

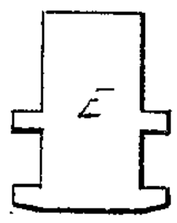

FIG. 11.

Witnesses:

D. A. Caldwell

John. W. Caldwell.

Inventor.

A. A. Hazard

UNITED STATES PATENT OFFICE.

AUGUSTUS A. HAZARD, OF COUNCIL BLUFFS, IOWA, ASSIGNOR TO M. D. HAZARD, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 438,106, dated October 7, 1890.

Application filed August 2, 1889. Serial No. 319,593. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS A. HAZARD, a citizen of the United States, residing at Council Bluffs, Pottawattamie county, Iowa, have invented a new and useful Improvement in Carriage-Shaft Clips, of which the following is a specification.

The object of my invention is to provide a shaft-clip for buggies or other vehicles by means whereof the shaft may be taken off of or put onto a buggy or other vehicle without removing any nuts or bolts from the wheel.

In using a clip made in accordance with my invention no washer is required between the end of the shaft and clip to prevent rattling. A suitable safety-guard prevents the shaft from being thrown out of the clip-jaws in case the locking-lever be pulled out.

In the drawings, Figure 1 is a plan view of a portion of the shaft and axle, provided with my improved clip; Fig. 2, a vertical elevation thereof; Fig. 3, a similar elevation with the locking-lever thrown back; Fig. 4, a plan view of the shaft-iron; Fig. 5, a side elevation thereof; Fig. 6, a plan view of the clip-jaws; Fig. 7, an inside view of one set of jaws; Fig. 8, an end view of the lower clip-plate; Fig. 9, a plan view of the spring I; Fig. 10, a plan view of the spring-plate, and Fig. 11 a side elevation thereof.

A is the shaft-iron fitting into the clip-jaws and provided with a pin B and a safety-guard C, as shown more particularly in Figs. 4 and 5.

D are the clip-jaws slotted, as shown, to receive the pin B on the shaft-iron.

E is a spring plate or washer placed, as shown, between the clip-jaws behind the shaft-iron.

F is a locking-lever pivoted in supports H and adapted to swing back and forth over the axle. Its forward end is wedge-shaped and enters between the clip-jaws, passing back of the spring-plate E. It is preferably provided with a thumb-catch G, by means whereof it is moved back and forth. H is the lower clip-plate passing under the axle-tree and supporting the locking-lever. I is a spring between this plate and the lever, which acts to hold the latter either forward or back, and J is a pin upon which the lever F swings.

The clip-jaws are bolted onto the axle by means of a suitable strap and bolts, as shown, the jaws being on the forward side of the axle. In order to hook on the shafts the shaft-irons are placed in the clip-jaws and tilted up nearly perpendicular to allow the pin to enter the slot in the jaws. The shafts are then lowered and are forced forward by the engagement of the guard C with the front end of the jaws. The spring-plate E, which is supported in place by means of suitable shoulders engaging with the jaws, is then pushed forward against the end of the shaft-iron and the lever F is swung over and its wedge shaped end forced in behind the spring-plate, locking the shafts in place.

To take the shafts off, the operation is reversed, the locking-lever is thrown back, the shafts raised and pushed backward and lifted out of the jaws.

I claim—

1. In a thill-coupling, a locking-lever F, with thumb-catch G, said bar actuating by spring I and operating over the axle-tree, the end being wedge-shaped for purposes of entering between the ears D D and behind plate E, so as to automatically take up the wear and tear, substantially as described.

2. The combination of a shaft-iron A, provided with pin B, slotted jaws D, engaging with such pin, a spring-plate E, and a pivoted lock-lever F, adapted to engage with such spring-plate and lock the parts in place, substantially as described.

3. In a carriage-shaft clip, the combination of a spring-plate E, preventing rattling, and a pivoted lock-lever F, provided with a tapering point and engaging with such spring-plate, substantially as described.

4. The combination of the shaft-iron A, having pin B, slotted jaws D, engaging with such pin, a spring-plate E, operating against the inner end of the shaft-iron and locking-lever F, and a spring I, substantially as described.

AUGUSTUS A. HAZARD.

Witnesses.
DALL RISELEY
J. J. JONES.