

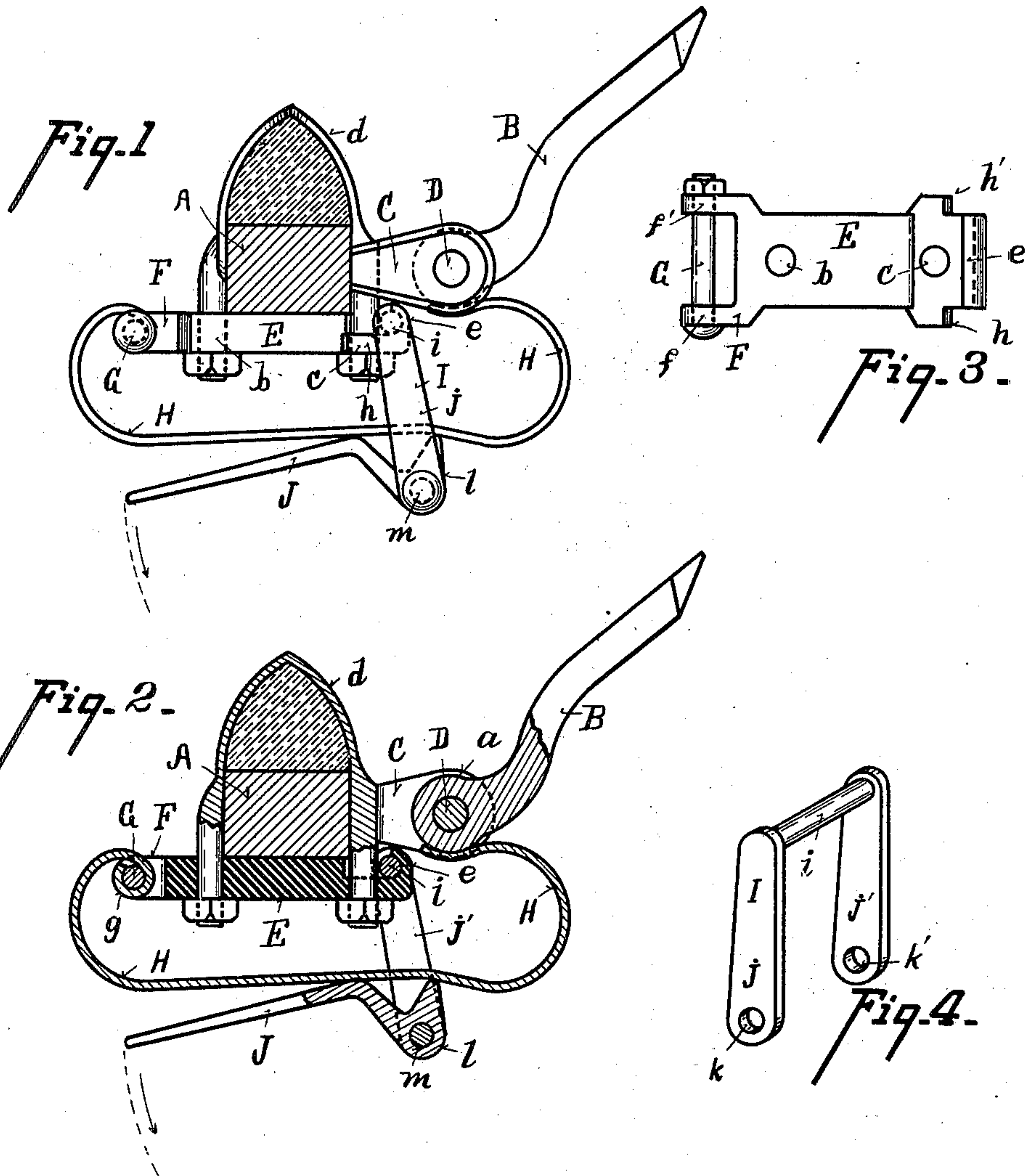
No. 627,248.

Patented June 20, 1899.

C. A. BEHLEN.  
THILL COUPLING.

(Application filed May 10, 1899.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

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## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 627,248, dated June 20, 1899.

Application filed May 10, 1899. Serial No. 716,196. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. BEHLEN, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification.

The object of my invention is to provide an antirattler thill-coupling adapted to be applied to all ordinary thill constructions which can be quickly shifted and which will be cheap, efficient, durable, and readily taken apart and put together.

The features of my invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of my coupling. Fig. 2 is a central vertical section through Fig. 1. Fig. 3 is a plan view of the supporting-plate. Fig. 4 is a perspective view of the link.

A represents the axle, B the thill-iron, and C the coupling-head, provided with the usual yoke C' for receiving the thill-iron. D represents the bolt through said head and through the eye *a* of the thill-iron, said parts being of ordinary construction. The yoke *d* of the coupling-head straddling the axle is secured to a supporting-plate E under the axle by nuts threaded upon the limbs of the yoke *d*, which pass through holes *b' c'* in the plate E. This yoke has its forward end upturned, forming a hook *e*, the mouth of the hook opening inwardly. The rear end of the plate is provided with the yoke F, having eyes *ff'* for the reception of bolt G.

H represents a spring attached to the rear end of the plate E, preferably being pivotally secured thereto by bolt G, passing through eyes *ff'* of yoke F and an eye *g* in said spring. The forward end of the spring is upturned and shaped to form a yielding bearing against the thill-iron in the coupling-head. The forward end of plate E is provided with stop-lugs *h h'*.

I represents a link having a cross-piece *i* and limbs *j j'*. The link is slipped over the upturned end of plate E before it is attached to the coupling-head and slipped forward, the piece *i* passing through the open side of hook *e*, which forms a partial bearing for the link.

The limbs *j j'* of the link are provided with eyes *k k'* and project below the spring H.

J represents a cam-lever having an eye in its cam portion *l*. Through this eye and through the eyes *k k'* is passed a bolt *m*, the cam *l* being so arranged that when the lever is down the spring H is not engaged, but when the lever is swung inward against the spring the cam exerts an upward pressure on the spring, forcing its upper end rigidly against the thill-iron.

The hinged attachment of the spring to the rear of the plate E is preferred, for the reason that the spring is subjected to greater strain and wear where a rigid attachment is used and is much more liable to breakage, and it can be easily removed altogether, and, again, for the purpose of attaching the link it can be swung out by simply taking out bolt *m* of link I, so the link can be readily taken out of and inserted into hook *e*. It will be seen that when the link is in this bearing-hook and the coupling-head attached to plate E one of the limbs of the yoke *d* abuts the open portion of the hook, completing the bearing for the link member *i* and holding it in place.

The stop-lugs *h h* engage the limbs of the link I as they are moved backward by the pressure of the cam-lever on the spring during the locking operation, so that after the cam has brought the limbs of the link against the stops the spring alone is moved by the further engagement of the cam and forced upward against the thill-iron. By this construction employing three bolts D, G, and *m* the coupler can be quickly and conveniently shifted, and the parts can be readily attached and detached, and single parts can be easily replaced if worn out or broken.

Having described my invention, I claim—

1. In a thill-coupling, the combination of a coupling-head, bolt and thill-iron, a plate detachably connected to said head, a spring pivotally connected to one end of said plate, a link pivotally connected to the other end of said plate, the spring passing through the link and bearing against the thill-journal, a cam-lever pivoted within said link below the spring adapted to engage therewith, and a stop-lug formed on said plate in rear of the



link and adapted to engage the same in its backward movement, substantially as specified.

2. In a thill-coupling, the combination of a coupling-head, thill-iron and bolt, a plate detachably connected thereto, one end of said plate having an upturned hook end, a link having its bearing in said hook, a stop-lug formed on said plate in rear of said hook, a spring pivotally connected to the other end of said plate passing through said link and bearing against the thill-journal, and a cam-lever pivoted in the link under said spring substantially as specified.

3. In a thill-coupling, the combination of a coupling-head straddling the axle, a thill-iron and bolt, a plate detachably secured to said head under the axle, an inturned hook, formed on one end of said plate the open side abutting the coupling-head, a link having its bearings in said hook and held in place by the abutting sections of the coupling-head, a spring pivoted to the other end of said plate passing through said link and bearing against the thill-journal, a cam-lever pivoted within the link under the spring and adapted to engage therewith, and a stop formed on the plate behind the hook end adapted to arrest the pivotal movement of said link to the rear, substantially as specified.

4. In a thill-coupling, the combination of a

coupling-head, a thill-iron, a detachable bolt securing the iron within the head, a plate detachably secured to said head, a spring, a bolt securing one end of said spring to one end of said plate, a bolt-bearing formed on the other end of said plate, a link pivotally mounted in said bearing, the spring passing through the link and engaging the thill-journal, a cam-lever, a bolt securing said lever in said link below the spring, substantially as specified.

5. In a thill-coupling, the combination of a coupling-head, a thill-iron, a detachable bolt securing the iron within the head, a plate detachably secured to said head, a spring, a bolt securing one end of said spring to one end of said plate, an upturned hook-bearing formed in said plate with open section abutting coupling-head, a bolt-bearing formed on the other end of said plate, a link pivotally mounted in said bearing, the spring passing through the link and engaging the thill-journal, a cam-lever, a bolt securing said lever in said link below the spring, substantially as specified.

In testimony whereof I have hereunto set my hand.

CHARLES A. BEHLEN.

Witnesses:

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