

(No Model.)

J. E. CRYDERMAN.
THILL COUPLING.

No. 585,654.

Patented July 6, 1897.

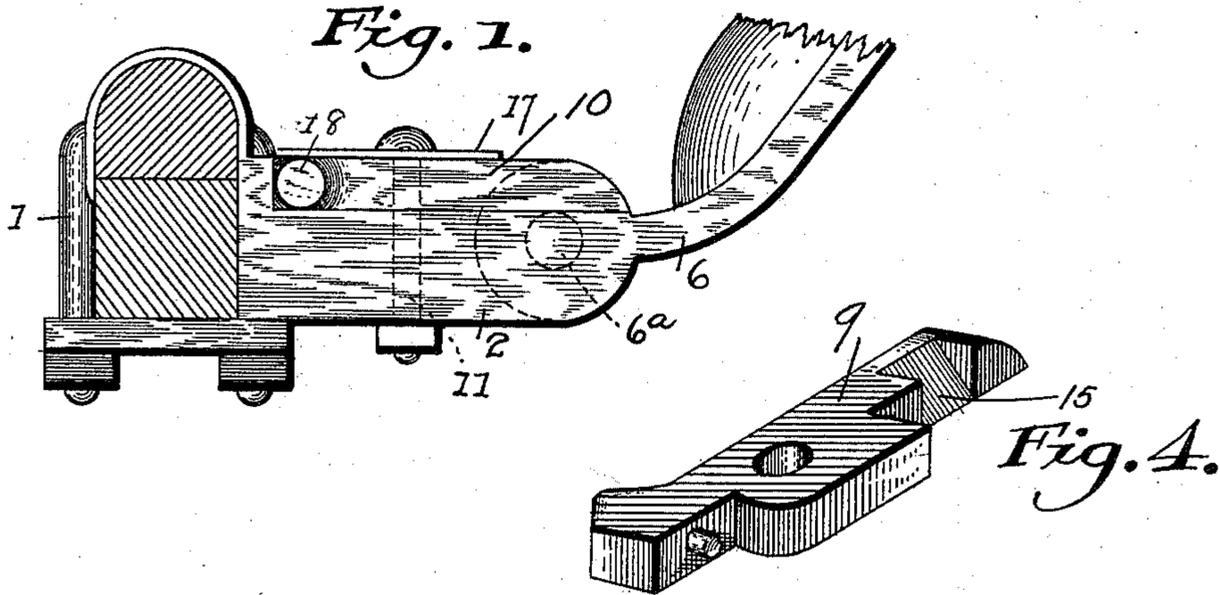


Fig. 2.

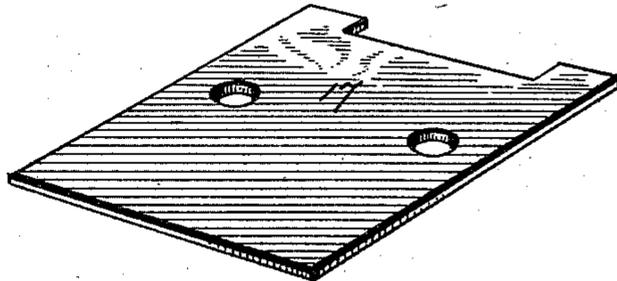
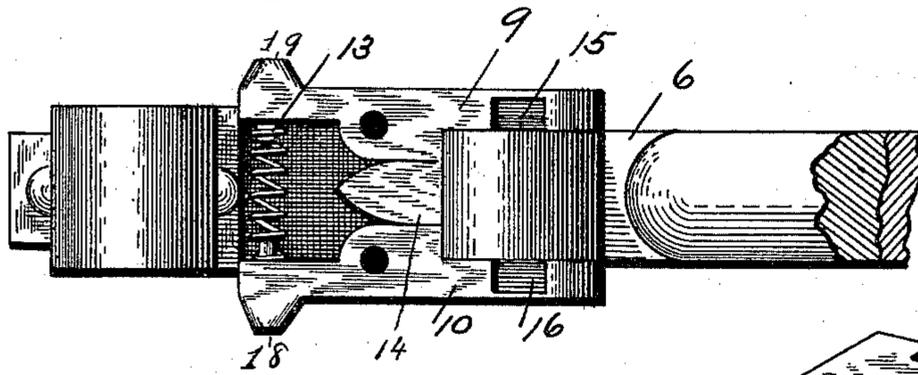


Fig. 3.

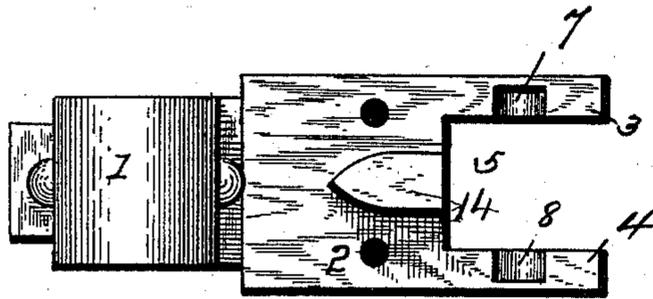
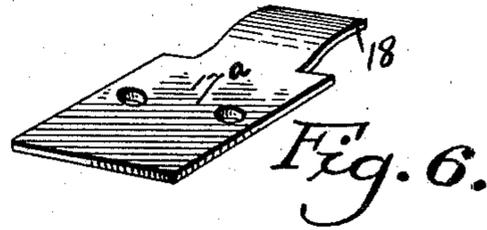


Fig. 5.



Witnesses:-

A. B. Appleman
J. W. Chadwick

Inventor:
James E. Cryderman

By J. Appleman
Att'y.

UNITED STATES PATENT OFFICE.

JAMES E. CRYDERMAN, OF TROY, WISCONSIN, ASSIGNOR OF TWO-THIRDS TO BARNEY ALGUIRE, OF SAME PLACE, AND CURTIS JOHNSON, OF RIVER FALLS, WISCONSIN.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 585,654, dated July 6, 1897.

Application filed April 10, 1897. Serial No. 631,519. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. CRYDERMAN, a citizen of the United States of America, residing at Troy, in the county of St. Croix and State of Wisconsin, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to thill-couplings, the object being to produce a coupling to which the shaft or pole may be applied and removed in a ready and convenient manner.

A further object of the invention is to provide means whereby disengagement of the parts is positively prevented, thus insuring a safe and efficient combination.

In accomplishing the result mentioned I provide a device which will prove strong and durable, as well as comparatively inexpensive.

With the above and other objects in view the invention consists in the novel details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth, and pointed out in the claims.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification, wherein like characters of reference denote corresponding parts in the several views, in which—

Figure 1 is a view in elevation of a thill-iron applied to a clip attached to a section of an axle, also showing a portion of the shaft. Fig. 2 is a plan view with the plate removed. Fig. 3 is a similar view with the jaws removed. Fig. 4 is a view in perspective, showing the jaw enlarged. Fig. 5 is a similar view of the plate; and Fig. 6 is a similar view of the plate, slightly modified.

In the drawings, 1 represents the clip, which is adapted to be secured to the axle in any suitable manner, and formed with or secured to the clip is the base-plate 2, having ears 3 and 4 formed thereon at its forward end. These ears are so arranged as to leave an intervening space 5, in which the thill-iron is adapted to fit. Formed on opposite

sides of thill-iron 6 are the pivotal pins 6^a, which are adapted to fit in the half bearings or sockets 7 8, formed in the ears 3 4, and in order to prevent the thill from slipping from these sockets I provide the jaws 9 10, pivoted to the base-plate by the bolts 11. These jaws extend forward over the ears and complete the upper portion of the bearing, thereby making it impossible for the thill to escape therefrom. Placed between the rear ends of the jaws is a coil-spring 13, which is adapted to press said ends outward, consequently forcing the opposite ends inward, and in order that the inward movement of these jaws may be limited I form a lug 14 on the plate between them and around its rear end, so that the spreading of the jaws is in no way interfered with.

To facilitate the assembling of the parts, slots 15 and 16, having slanting walls, are cut in the outer ends and on the inside of the jaws directly above the bearings. Secured over the rear portion of the parts is a plate 17, covering the space left between the jaws and protecting the spring and interior from dust.

To assemble the parts, the pivotal pins of the thill-iron are placed in the slots and by a downward push the jaws are spread by reason of the slanting walls acting after the manner of cams and the pins fall into the bearings, the jaws then returning to place. To disengage the parts, all that is necessary is to press upon the projections 18 19, formed on the rear end of the jaws, thus spreading said jaws, when the thill may be lifted out of the bearing.

If desired, a spring may be secured to the clip, leading downward and upward, the outer end thereof fitting against the rear end of the thill-iron, thus causing the pins to be held firmly in the bearings to prevent rattling.

The advantages gained by a thill-coupling of this construction are, first, the parts may be assembled and disengaged by one having little or no experience in such matters; second, the parts are simple in construction, so that they may be easily renewed when worn or broken; third, they are substantially dust-

proof, and, fourth, they can be manufactured in large quantities at but a slight advance over the cost of the ordinary form.

It will be observed from the above that slight details of construction may be varied, such as the proportion and position of the elements, and slight additions and omissions may be made, such as the one described of adding the spring to prevent rattling, and yet the spirit of my invention will not be departed from. For instance, the plate 17^a may be provided with a spring-tongue 18 to engage and press the thill-iron to prevent rattling. When this plate is used, the thill-iron is forced under the tongue, or, if necessary, the plate may be removed for the purpose of inserting the thill-iron.

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

1. In a thill-coupling, a base-plate, ears projecting outward therefrom, said ears having half-bearings formed on their inner sides, spring-pressed jaws pivoted to said plate and

extending forward completing the upper portion of said bearings, said jaws having slots formed therein with slanting bottom walls directly above the bearings, and a thill-iron having pivotal pins to fit in said bearings, substantially as described.

2. In a thill-coupling, a base-plate, ears projecting forward therefrom, said ears having half-bearings formed on their inner sides, jaws pivoted to said plate and extending forward completing the upper portion of said bearings, said jaws having slots with slanting bottom walls formed directly above the bearings, a lug formed on the plate between the jaws, a spring pressing the rear part of said jaws outward, and a plate having a tongue covering the space left between the jaws, substantially as described.

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

JAMES E. CRYDERMAN.

Witnesses:

N. P. HAUGEN,
JOHN D. O'KEEFFE.