H. K. WATERHOUSE.

Thill-Coupling.

No. 50,189. Patented Sept. 26, 1865.

Fig. 1.

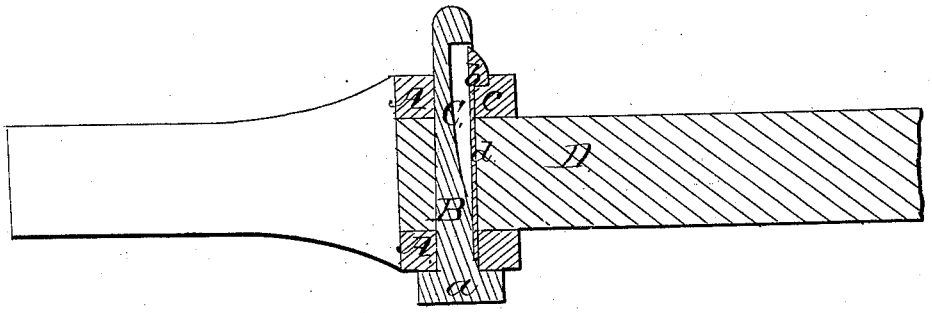
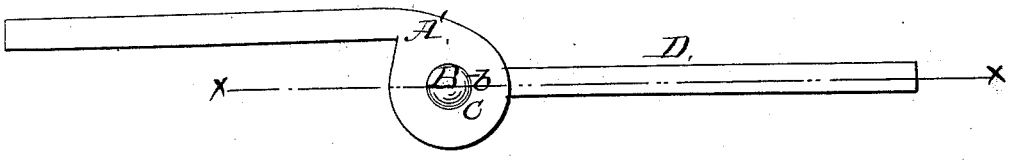


Fig. 2.



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UNITED STATES PATENT OFFICE.

H. K. WATERHOUSE, OF FACTORY POINT, VERMONT.

IMPROVEMENT IN THILL-COUPLINGS.

Specification forming part of Letters Patent No. **50,189**, dated September 26, 1865.

To all whom it may concern:

Be it known that I, H. K. WATERHOUSE, of Factory Point, in the county of Bennington and State of Vermont, have invented a new and Improved Thill-Coupling for Vehicles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a horizontal section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a side view of the same.

Similar letters of reference indicate like parts.

This invention relates to a new and useful improvement in couplings for attaching thills to the axles of wheel-vehicles; and it consists in attaching a spring-catch or fastening to the pin of an ordinary thill-coupling, and having a recess made in one of the two ears between which the thill-iron is fitted, to receive the spring-catch, all being arranged in such a manner that the pin which passes through the eye of the thill-iron and the ears on the axle will be held in position or prevented from casually passing out of place, and also prevented from turning, as hereinafter fully shown and described.

A A′ represent two ears, which are firmly secured to the front axle of the vehicle in the usual or in any other proper manner, and are perforated each with a hole to admit of the coupling-pin B passing through them. This coupling-pin is formed with a head, *a*, at one end, and it has a slot or recess made longitudinally in it to receive a spring, C, the outer end of which is provided with a projection, *b*, beveled at its outer edge, to form a catch or fastening. (See Fig. 1.) The projection *b* is beveled or inclined in a direction toward the pin from the inner end of the former, a square shoulder being left at the inner end.

In the outer side of the ear A′, adjoining its pin-hole, there is made a radial recess, *c*, to receive the inner end of the projection *b* of the spring C, the recess being of such a depth and the projection *b* at such a distance from the head *a* of the coupling-pin that when the projection *b* is in the recess *c* the head *a* will abut snugly against the outer side of the ear A.

D represents the iron, which is attached to the thill as usual. This iron has an eye, *d*, formed at its outer end to fit between the ears A A′, and the pin B passes through the eye *d* of the iron D and secures the thill to the axle. By this arrangement it will be seen that the coupling-pin B is effectually prevented from slipping out from the ears A A′ and eye *d*, and is also prevented from turning in the aforesaid parts.

In order to remove the pin all that is required is simply to press inward the projection *b* with the thumb. In inserting the pin B in the ears A A′ and eye *d* the spring-catch will engage itself if the pin be turned to bring the projection *b* in line with the recess *c*.

This invention is a decided improvement over the ordinary screw-nut, from the fact that the latter will frequently, under the shake and jar of the vehicle, work off and admit of the pin dropping out from the ends and eye, and, as the pin in the latter case is not prevented from turning, there is always more or less wear on the pin after a short use, and a rattling of the latter caused by the wear.

While disclaiming the use of a coupling-pin provided with a spring-catch as new in itself,

I claim as new and desire to secure by Letters Patent—

The spring-catch composed of a spring, C, provided with a beveled projection, *b*, and applied to the coupling-pin B, in connection with the recess *c* in the ear A′, substantially as and for the purpose herein set forth.

H. K. WATERHOUSE.

Witnesses:

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