(No Model.)

D. W. SEELY.

THILL COUPLING.

No. 266,649. Patented Oct. 31, 1882.

Fig. 1.

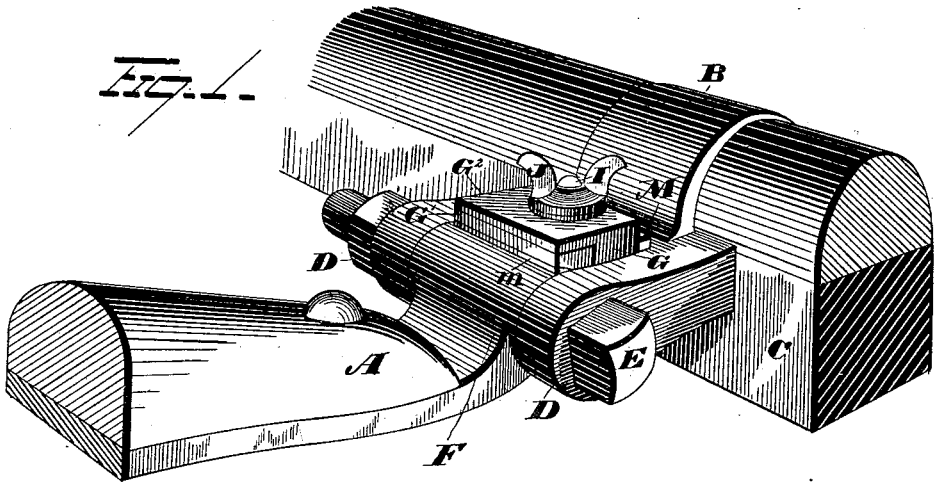


Fig. 3.

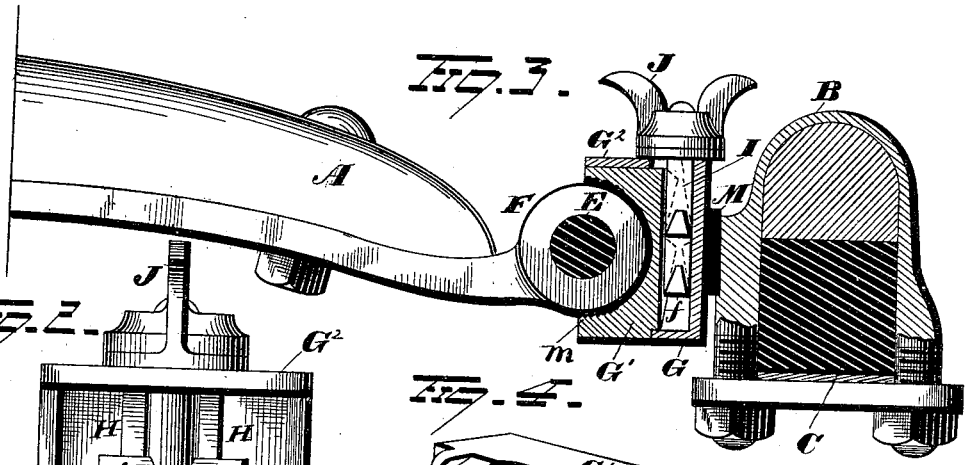


Fig. 2.

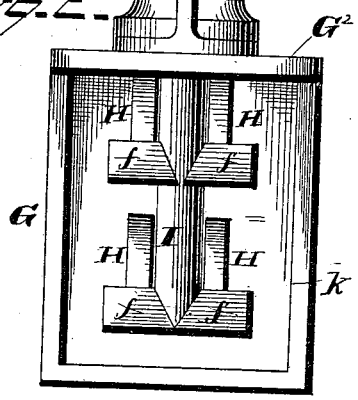
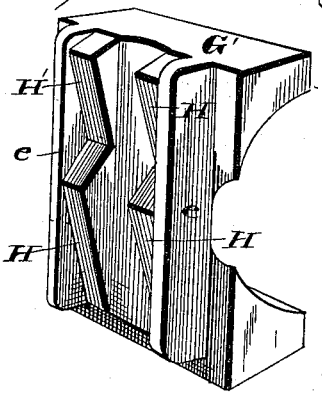


Fig. 4.



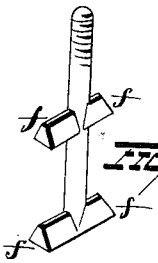


Fig. 5.

WITNESSES

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DAVID W. SEELY, OF TREMONT CITY, OHIO.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 266,649, dated October 31, 1882.

Application filed April 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, DAVID W. SEELY, of Tremont City, in the county of Clarke and State of Ohio, have invented certain new and useful Improvements in Thill-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to an improvement in thill-couplings, the object of the same being to provide a device of comparatively small cost, and one that can be attached to any vehicle and effectually prevent any unnecessary movement between the thill and clip, and consequently prevent any rattling of the parts; and with these ends in view my invention consists in certain details of construction and combinations of parts, as will be more fully explained, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improvement in position. Fig. 2 is a detached view of my device. Fig. 3 is a longitudinal sectional view of the same. Fig. 4 is a perspective view, showing the inclined ridges on the inner faces of the device; and Fig. 5 is a detached view of the double T-bolt.

A represents the thill; B, the clip, and C the fore axle. The clip B is provided with the side arms, D, the outer ends of which are perforated for the passage of the bolt E.

One of the perforations above referred to is provided with female screw-threads, with which the screw-threads on the outer end of the bolt E engage, and secures the said bolt in position without the aid of a nut. The head of the thill-iron F on the inner end of the shaft is horizontally perforated, and is adapted to be secured between the side arms of the clip B by the bolt E.

My device for preventing rattling of the parts is situated between the head of the thill-iron F and the front face of the clip B, and consists of the parts G and G′. The part G consists of a rectangular box, having an open front face and an elongated or extended top piece, G^2. The box is also provided between its sides and ends with four inclined ridges, H, placed in pairs one above the other, with sufficient space between them for the shank of the double T-bolt I to rest when the parts are in their contracted position. The ridges are all inclined in the same angle and run in the same direction, so that when the four arms of the bolt I are caused to move up these inclined planes they will move all portions of the part G′ alike and evenly.

The part G′ of the device is provided with an outer curved face, against which the curved head of the thill-iron F rests, and is provided on its inner or rear face with two side flanges, *e*, adapted to bear against the sides of the box G and hold the portion G′ against lateral or longitudinal displacement. This portion G′ is also provided inside the side flanges, *e*, with four inclined ridges, H′, placed in pairs and situated one above the other. These ridges H′ are separated sufficiently to allow the ridges H on the portion G to rest between them. The ridges H on the portion G of the device incline upward and inward from the lower end of the device, and the ridges on the part G′ also incline upward and inward, so that when the two parts are placed together and the bolt I moved upward the arms thereof travel between the two opposite inclined planes and cause the parts G G′ to separate and occupy all the space between the thill and clip.

I is the double T-bolt, provided with the side arms, *f*, and the screw-threaded shank *g*. These arms *f* are wedge-shaped, and are of length sufficient to enable the inclined ridges H H′ to bear thereon, and are so situated to move up the four inclined planes regularly and evenly. The screw-threaded end thereof projects through the end G, and is adapted to receive the thumb-nut J, by means of which the parts are expanded.

When the parts are in their contracted positions the edges *k* of the part G′ rest against the sides *e* of the part G, and the arms of the bolt I rest at the bottom of the inclines. When the thumb-nut J is turned to the right it draws the bolt I and arms thereof upward between the inclined ridges H H′, and consequently separates the parts G G′, to which they are rigidly secured, and causes them to bear against the front face of the clip and the head of the thill-iron and prevent any unnecessary movement which would cause rattling.

Between the rear face of the device and the front face of the clip I place a strip of rubber or any suitable elastic packing, M, which will

take the stiffness from the device and allow the parts to automatically take up any slight wear or space caused by changing the relative position of the shaft to the axle. This packing M also serves to prevent the parts from separating if the thumb nut J should become accidentally lost or displaced.

The peculiar construction of the arms of the double T-bolt and the inclination and position of the ridges H and H′ enable the parts to automatically contract as the thumb-nut on the double T-bolt is loosened.

To prevent the thumb-nut from accidental displacement, I have serrated the upper face of the device and the contact-face of the nut, which effectually prevents the same from turning.

The front or concave face of the device is provided with serrations *m*, adapted to secure a rubber, leather, or other suitable packing therein between the device and the head of the thill-iron, which will enable the thill to be moved up or down without any rattling.

To prevent mud, sand, &c., from congregating on the thumb-nut and entering the interior of the device, a suitable cap is placed over the device, which effectually protects the same. Instead of providing this T-bolt with the four arms, as described, more or less can be used and answer all the necessary purposes.

It is evident that slight changes in the construction of the different parts might be resorted to without departing from the spirit of my invention, and hence I would have it understood that I do not limit myself to the exact construction of parts shown and described, but consider myself at liberty to make such changes as fairly fall within the spirit and scope of my invention.

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

1. In a thill-coupling, the combination, with the clip and thill, of an expanding device consisting of two separable sections, a bolt provided with laterally-projecting arms, and a thumb-nut operating to force said sections apart, substantially as set forth.

2. In a thill-coupling, the combination, with the clip and thill, of an expanding device consisting of two separable sections provided with suitable packing, and a bolt provided with beveled arms and a thumb-nut, substantially as set forth.

3. In a thill coupling, the combination, with the clip and thill, of a two-part device placed between said thill and clip, one of the said parts being provided with four inclined ridges placed as shown, and the other part with four inclined ridges, also placed as shown, a T-bolt, the arms of which are adapted to rest between the inclines on the two parts of the device, and a thumb-nut for moving the arms of the T-bolt between the said inclined ridges, substantially as and for the purpose set forth.

4. In a thill-coupling, the combination, with the clip and thill, of a two-part device adapted to be placed between the said thill and clip, one of the said parts being provided on its outer face with a suitable elastic packing and on its inner face with four inclined ridges placed substantially as shown, the other part of which is also provided with an elastic packing on its outer face and four inclined ridges on its inner face, the latter being situated substantially as shown, a double T-bolt, the arms of which are adapted to rest between the inclined ridges of the two parts, and a thumb-nut for moving the said arm between the said inclined ridges, all of the above parts being constructed and adapted to operate substantially as set forth.

5. The combination, with the parts G G′, of the bolt I and thumb-nut J, all of the above parts being constructed and adapted to operate substantially as and for the purpose hereinbefore described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

DAVID W. SEELY.

Witnesses:
CHARLES W. PENETON,
WILLIAM A. PENCE.