(No Model.)

W. A. STADELMAN.

THILL COUPLING.

No. 333,973. **Patented** Jan. 5, 1886.

FIG. 1

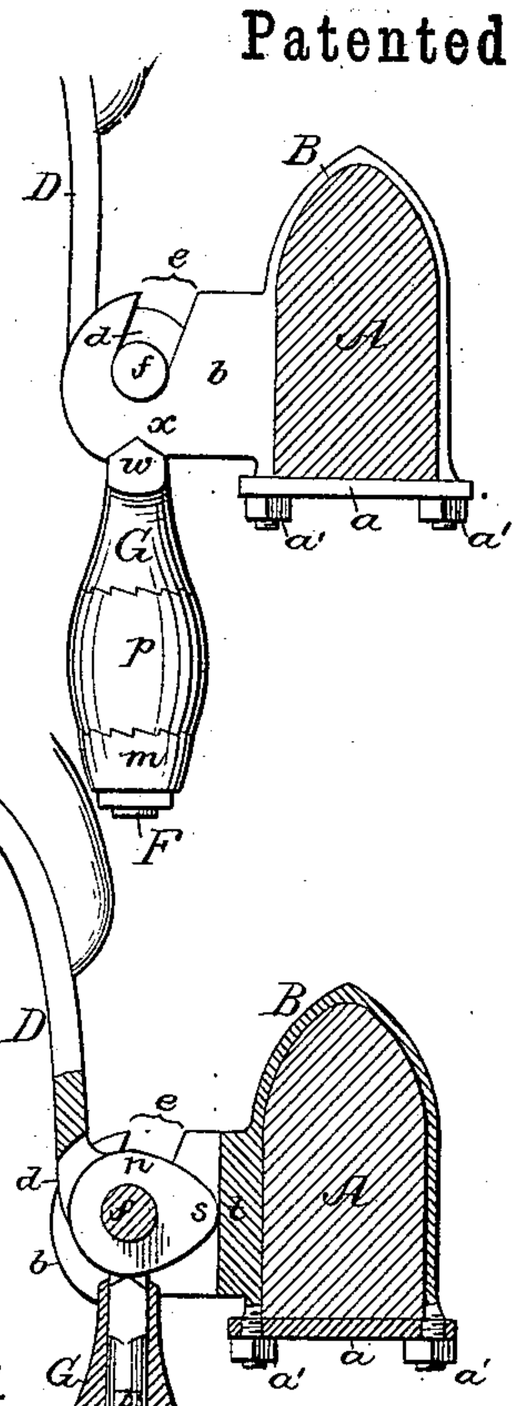


FIG. 2.

FIG. 3.

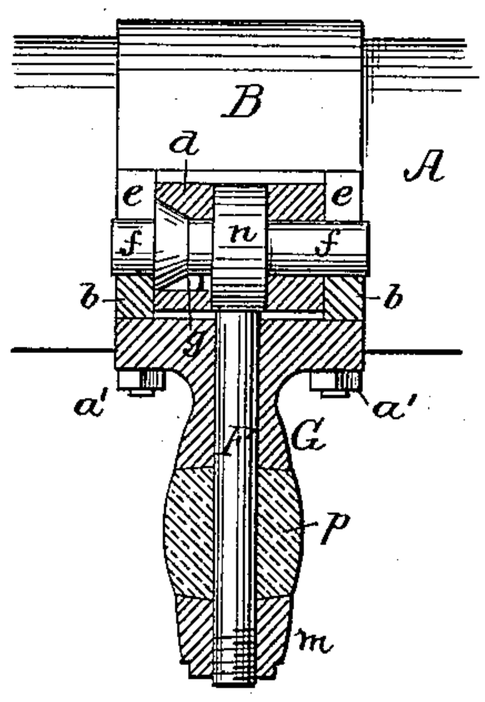


FIG. 4.

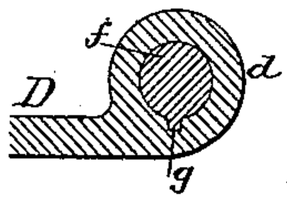


FIG. 5.

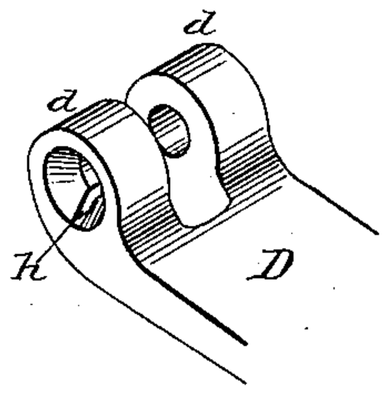


FIG. 6.

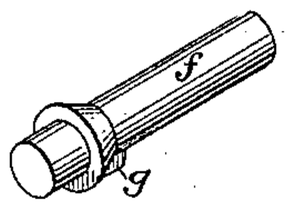


FIG. 7.

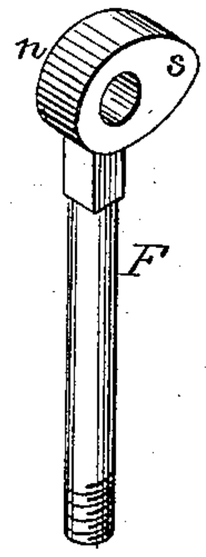
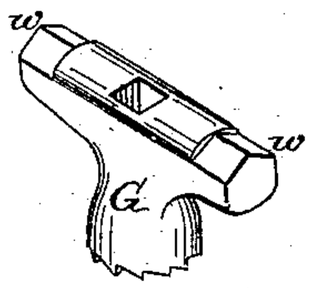


FIG. 8.



Witnesses:
William F. Davis
Henry Bossert.

Inventor:
William A. Stadelman
by his Attorneys
Howson & Sons

UNITED STATES PATENT OFFICE.

WILLIAM A. STADELMAN, OF LOWER MERION, PENNSYLVANIA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 333,973, dated January 5, 1886.

Application filed March 23, 1885. Serial No. 159,770. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. STADELMAN, a citizen of the United States, and a resident of Lower Merion, Montgomery county, Pennsylvania, have invented certain Improvements in Thill-Couplings, of which the following is a specification.

The object of my invention is to so construct a thill-coupling as to prevent rattling of the same when in use, and to permit the ready application of the thill to or its removal from the lugs or ears on the axle-clip.

In the accompanying drawings, Figure 1 is a side view, partly in section, of a thill-coupling constructed in accordance with my invention; Fig. 2, a longitudinal section of the same, partly in elevation; Fig. 3, a transverse section, partly in elevation; and Figs. 4, 5, 6, 7, and 8, detached views of different parts of the coupling.

A represents the axle of a vehicle, and B the usual clip embracing the same and secured thereto by means of cross-bars *a* and nuts *a'*, this clip having in front two projecting ears, *b*, between which fits the eye *d* of the thill-iron D, slots *e* being formed in the ears for the reception of the opposite ends of a pivot-pin, *f*, which is carried by the thill-eye *d*, being adapted to the central opening of said eye and furnished with a key, *g*, adapted to a slot, *h*, in the eye, so that it is prevented from turning independently of said eye. The eye *d* is slotted for the reception of the head *n* of a bolt, F, which is hung to the pin *f*, the bolt carrying a retainer, G, between which and a nut, *m*, at the lower end of the bolt, is interposed a spring, *p*, preferably of rubber or other elastic material, whereby an upward pressure is imparted to the retainer, so as to cause the seating of beveled lugs *w* thereon in notches *x* in the under side of the ears *b* of the axle-clip. The thill is then free to vibrate, the pivot-pin *f* turning in the slots *e*, and being drawn firmly down to the bottom of said slots, so as to prevent rattling, by reason of the downward pressure exerted upon the bolt F by the spring *p*.

The engagement of the lugs *w* with the notches *x* in the ears *b* serves to prevent accidental displacement of the parts from the position shown in Fig. 1, and in order to assist in the performance of this duty, as well as to drive the pin *f* forward and insure the firm bearing of the same on the ears at the front of the slot, the head *n* of the bolt F forms a cam, *s*, which bears upon the front portion, *t*, of the clip B.

When it is desired to release the thill, the lower end of the bolt F is drawn forward with pressure sufficient to remove the lugs *w* from the notches *x*, the thill iron, with its pivot-pin, being lifted out as soon as the retainer is free from control of the ears. The thill can be readily reinserted by a reversal of the operation.

In order to prevent the loosening of the nut *m* at the lower end of the bolt F, said nut has a serrated upper edge, forming a bearing for the spring *p*, and the bearing of the latter upon the retainer G is also serrated.

I claim as my invention—

1. The combination of the axle-clip and its slotted ears, having notches *x*, the thill having a pivot-pin adapted to the slots, the bolt F, hung to said pin, a retainer, G, carried by the bolt and adapted to the notches in the ears, and a spring acting on said retainer, as specified.

2. The combination of the slotted ears, the thill, the pivot pin, the bolt F, hung to said pin, and the retainer, spring, and nut carried by the bolt, said retainer and nut having serrated faces, as set forth.

3. The combination of the axle-clip and its slotted ears, the thill having a pivot-pin adapted to the slots, the bolt hung to the pin and having a cam-head, and a spring-retainer carried by the bolt, as set forth.

4. The combination of the axle-clip and its slotted ears, the thill having a pivot-pin adapted to the slots, and a bolt hung to the pin and carrying a retainer engaging with the ears of the clip, said bolt being free to swing on the pivot-pin, so as to release the retainer from the control of the ears, as set forth.

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

W. A. STADELMAN.

Witnesses:

WILLIAM F. DAVIS,

HARRY SMITH.