

No. 644,254.

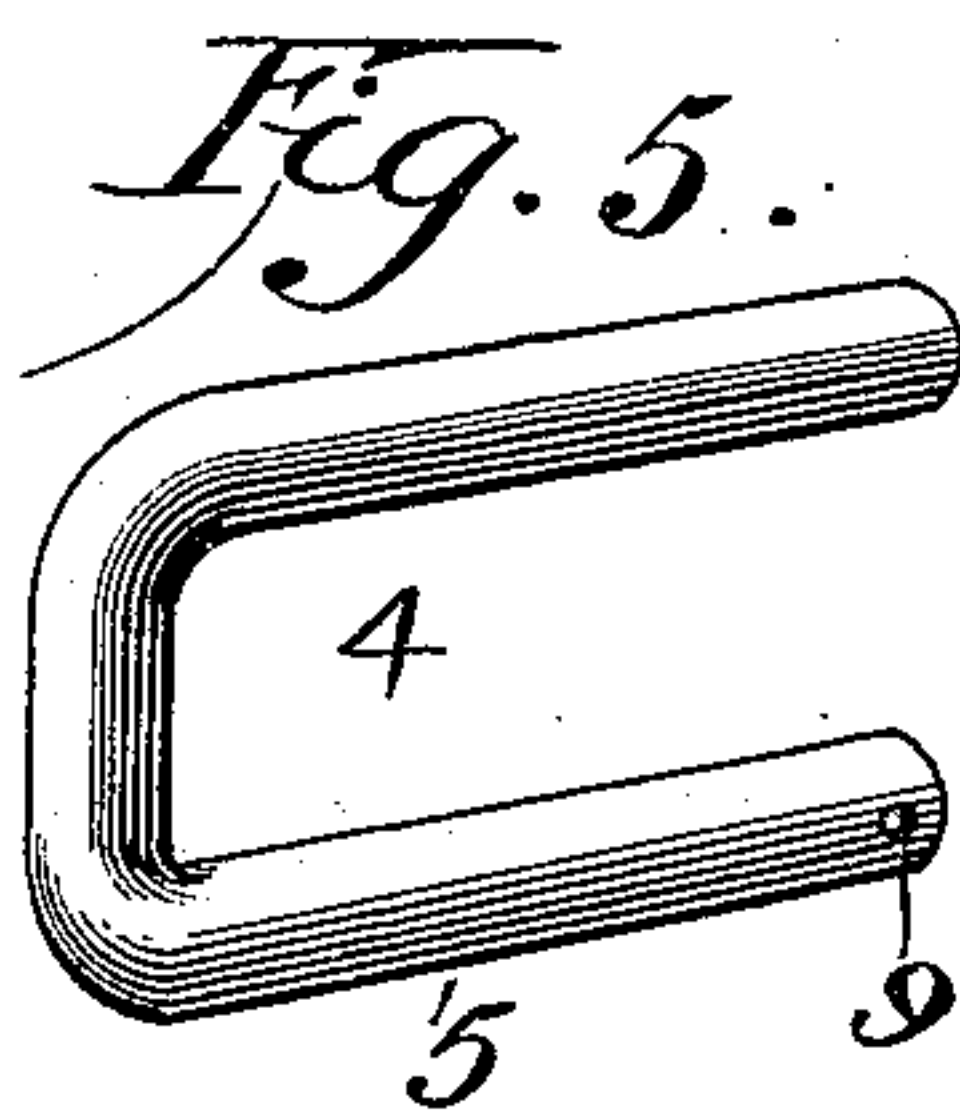
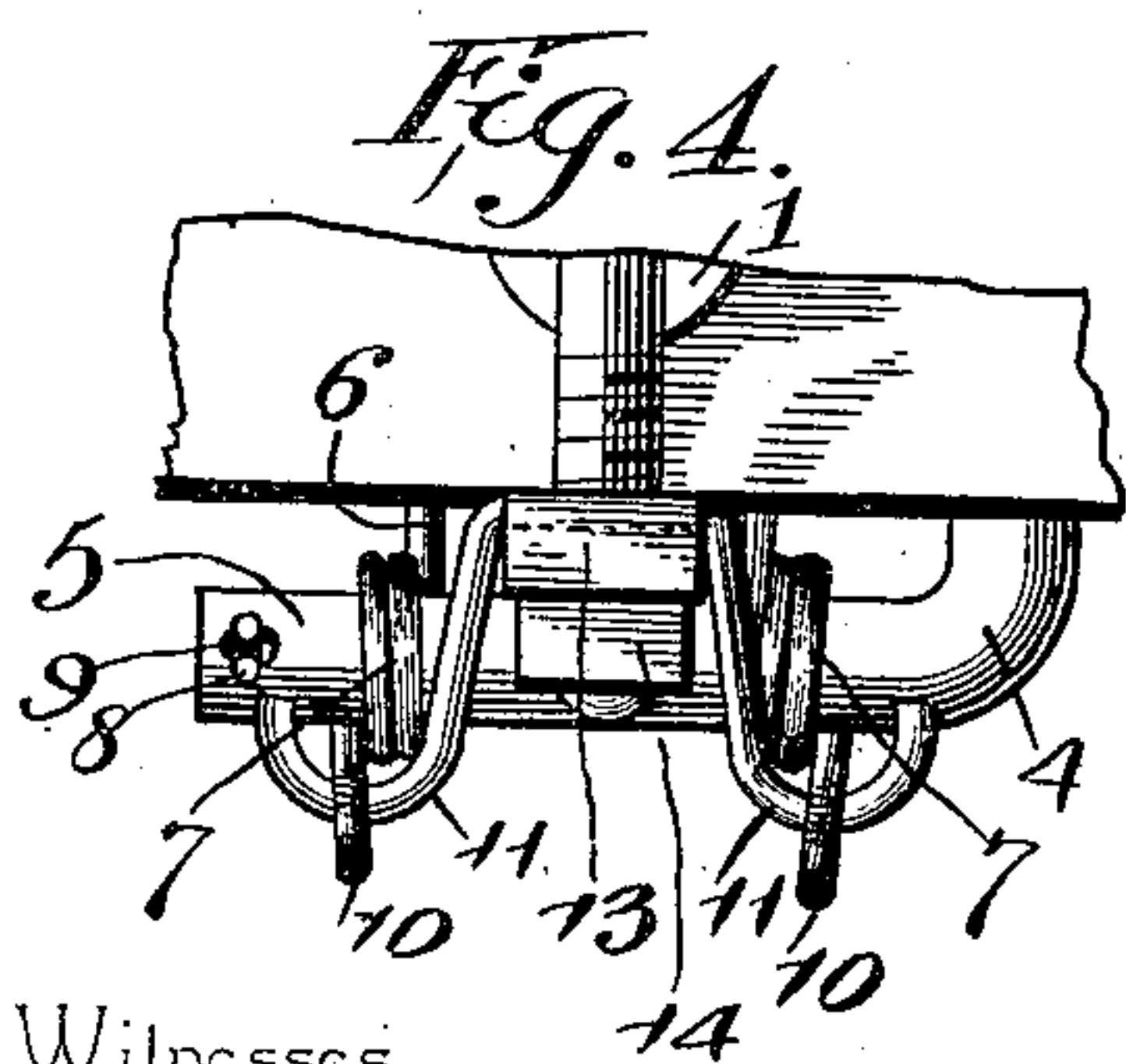
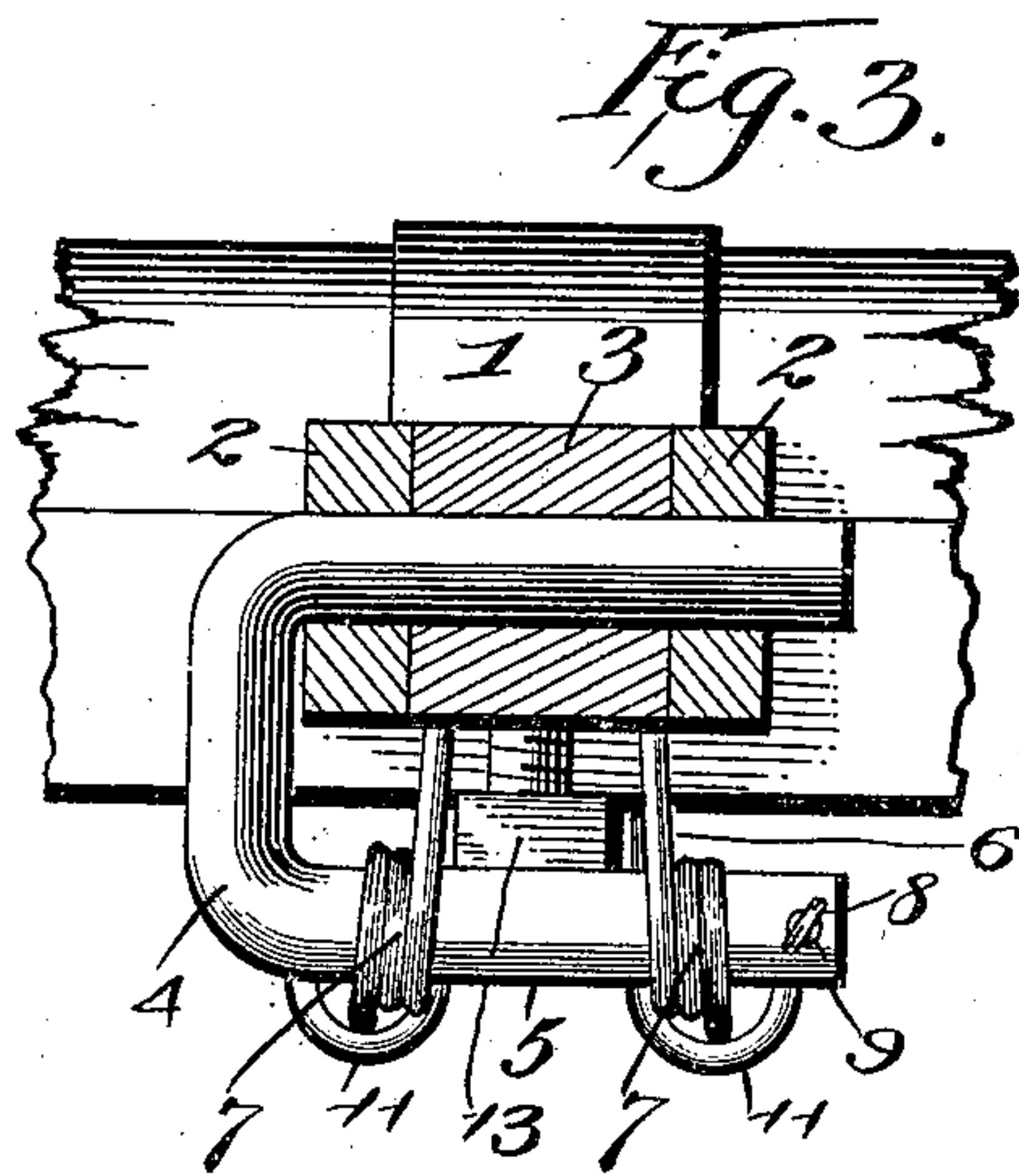
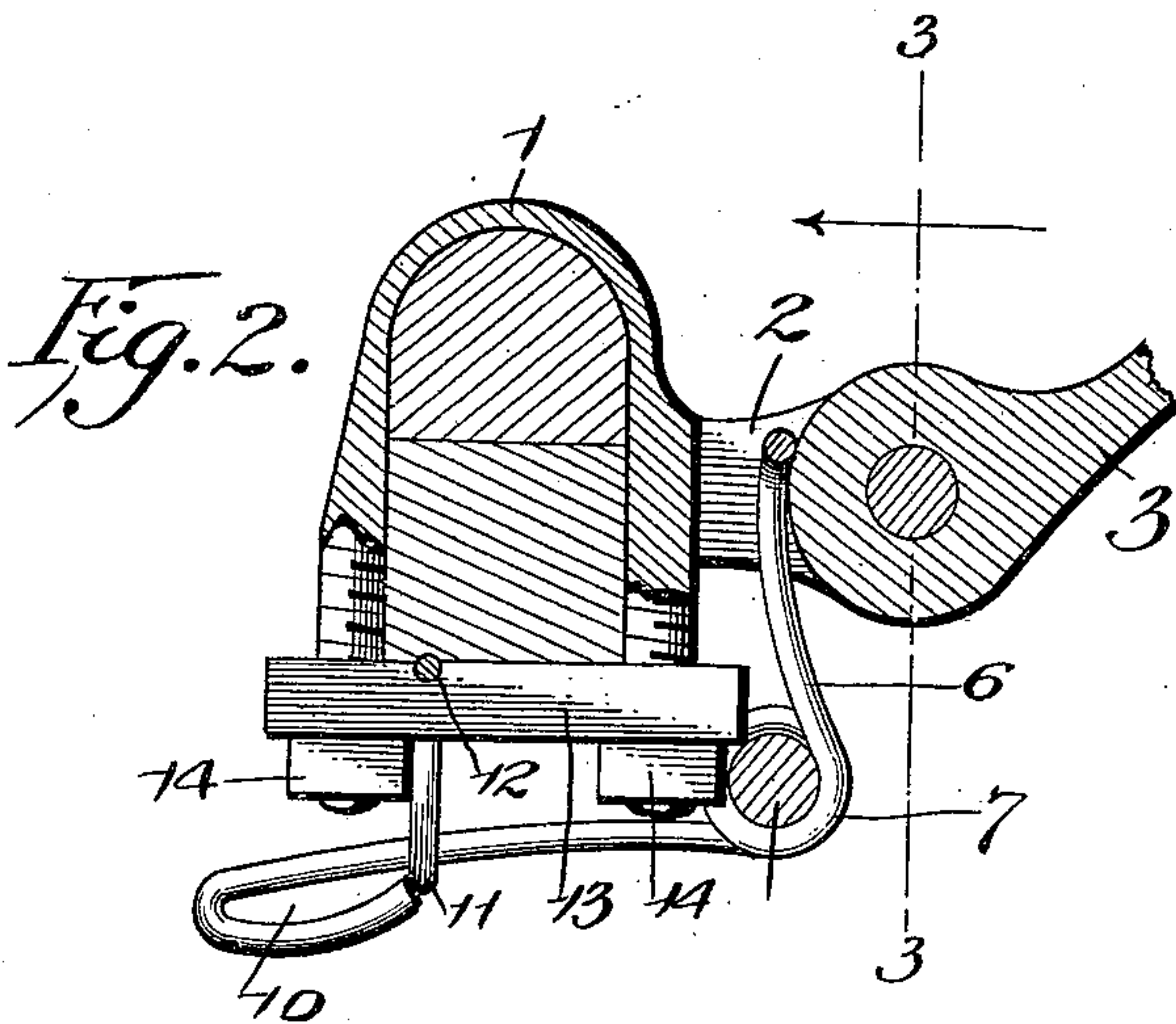
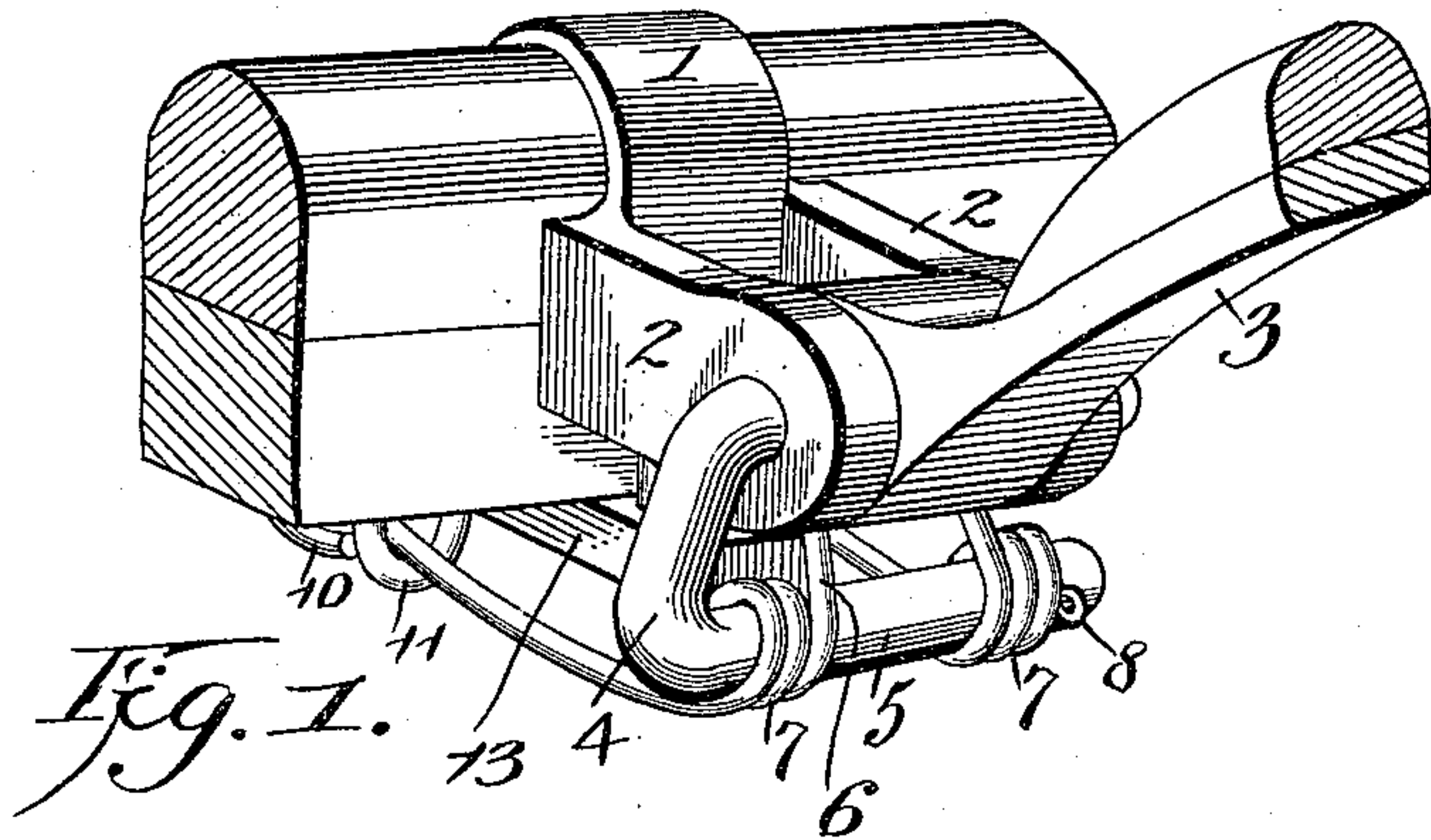
Patented Feb. 27, 1900.

W. H. MAKUTCHAN.

THILL COUPLING.

(Application filed July 14, 1899.)

(No Model.)



Witnesses

A. Roy Appleman  
J. J. Riley

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# UNITED STATES PATENT OFFICE.

WILLIAM H. MAKUTCHAN, OF PRINCETON, ILLINOIS, ASSIGNOR OF ONE-HALF TO HOWARD EDWARD MAKUTCHAN, OF SAME PLACE.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 644,254, dated February 27, 1900.

Application filed July 14, 1899. Serial No. 723,787. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. MAKUTCHAN, a citizen of the United States, residing at Princeton, in the county of Bureau and State of Illinois, have invented a new and useful Thill-Coupling, of which the following is a specification.

The invention relates to improvements in thill-couplings.

The object of the present invention is to improve the construction of thill-couplings and to provide a combined thill-coupling and anti-rattler which will be simple and comparatively inexpensive in construction and which will enable a pair of thills or a pole to be quickly and easily connected with and detached from a vehicle.

A further object of the invention is to provide a device of this character in which the spring which prevents the parts from rattling will also operate to retain the coupling-bolt in place.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a thill-coupling constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a transverse sectional view on line 3-3 of Fig. 2. Fig. 4 is a rear elevation. Fig. 5 is a detail perspective view of the U-shaped coupling-bolt.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an axle-clip provided at its front with a pair of forwardly-extending perforated ears 2, receiving a thill-iron 3 between them in the usual manner, and the said thill-iron is detachably coupled to the axle-clip by means of a substantially U-shaped coupling bolt or pin 4. The coupling bolt or pin 4 has its upper side arranged in the registering apertures of the ears and the thill-iron, and its lower side 5 is located beneath the said ears and is disposed transversely of the thill-coupling, as clearly illustrated in Figs. 1 and 2 of the accompanying

drawings. The lower side of the U-shaped coupling piece or bolt supports a spring 6, which performs the double function of preventing the parts from rattling and securing the coupling-pieces in the apertures of the ears and the thill-iron. The spring 6, which is composed of two sides connected at its front or upper end, is provided at opposite sides, between its ends, with spring-coils 7, which are arranged upon the lower arm of the coupling-piece, being secured thereon by a key 8, which passes through a perforation 9. The spring is constructed of a single piece of resilient wire or other suitable material, and its front portion or arm engages the back of the thill-iron and is arranged between the perforated ears and is capable of preventing the parts from rattling. The rear portions of the sides of the spring extend beneath the axle and are bent upon themselves to form loops 10, and they are supported in the position illustrated in Fig. 2 of the accompanying drawings by a pair of hooks 11, depending from the thill-coupling at the back thereof. The hooks are preferably formed by bending the terminals of a piece of stout wire or other suitable material, and the central portion of this hanger is arranged in a groove 12 of the plate of the axle-clip. The plate 13 of the axle-clip is secured to the lower face of the axle by means of nuts 14, which are arranged in the usual manner, as clearly illustrated in Fig. 2 of the accompanying drawings. When it is desired to uncouple a pole or a pair of thills, the rear arms or portions of the sides of the spring are disengaged from the supporting-hooks of the hanger, which operation relieves the spring of strain and frees the thill or coupling iron. The U-shaped coupling-piece may then be readily withdrawn from the apertures of the perforated ears and the coupling-irons 3, and it is unnecessary to remove the spring from the lower arm of the U-shaped coupling-piece.

It will be seen that the combined thill-coupling and anti-rattler is exceedingly simple and inexpensive in construction and that the improvements are adapted to be readily applied to any ordinary thill-coupling without necessitating alteration in the construction thereof, the U-shaped coupling-piece and the



spring being capable of being readily substituted for an ordinary coupling-bolt. The spring performs a double function of preventing the parts from rattling and of locking the

5 U-shaped coupling-piece in the apertures of the perforated ears and the thill or coupling iron. The rear portions of the sides of the spring are detachably interlocked with the rear hanger, and they may be readily disengaged therefrom when it is desired to un-

10 couple a pole or a pair of thills, and they will permit the same to be readily connected to a vehicle. Should one of the sides or arms of the spring become accidentally disengaged

15 from the hanger, the other will be sufficient to prevent the coupling-piece from becoming accidentally disengaged from the perforated ears and the coupling or thill iron.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

25 1. In a device of the class described, the combination with an axle and an axle-clip, of a substantially U-shaped coupling-piece having one of its sides arranged in the bearings of the axle-clip and adapted to connect a

30 coupling-iron with the same, the other side of the coupling-piece being located below the said bearings, a substantially U-shaped spring fulcrumed between the ends of its sides

on the lower portion of the U-shaped coupling-piece and having its front end bearing 35 against the coupling-iron to form an antirattler, and a transverse hanger interposed between the clip-plate and the axle and rigidly secured in position by the axle-clip, said hanger being provided with depending hooks 40 detachably receiving the rear ends of the sides of the spring, substantially as and for the purpose described.

2. In a device of the class described, the combination with an axle, and an axle-clip 45 provided in the upper face of its clip-plate with a transverse groove, of a hanger arranged in the groove and rigidly secured to the axle by the said clip, a substantially U-shaped coupling-piece having one side arranged in 50 the bearings of the axle-clip and adapted to connect a coupling-iron to the same, and a spring fulcrumed between its ends on the lower portion of the U-shaped coupling-piece and having its front end bearing against the 55 coupling-iron, said spring being composed of two sides having their rear ends detachably engaging the hooks of the rigid hanger, substantially as described.

In testimony that I claim the foregoing as 60 my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. MAKUTCHAN.

Witnesses:

SAM S. EVANS,  
F. W. STEWART.