No. 609,958. Patented Aug. 30, 1898.

D. W. CLARK.

THILL COUPLING.

(Application filed Mar. 30, 1898.)

(No Model.)

Fig. 1.

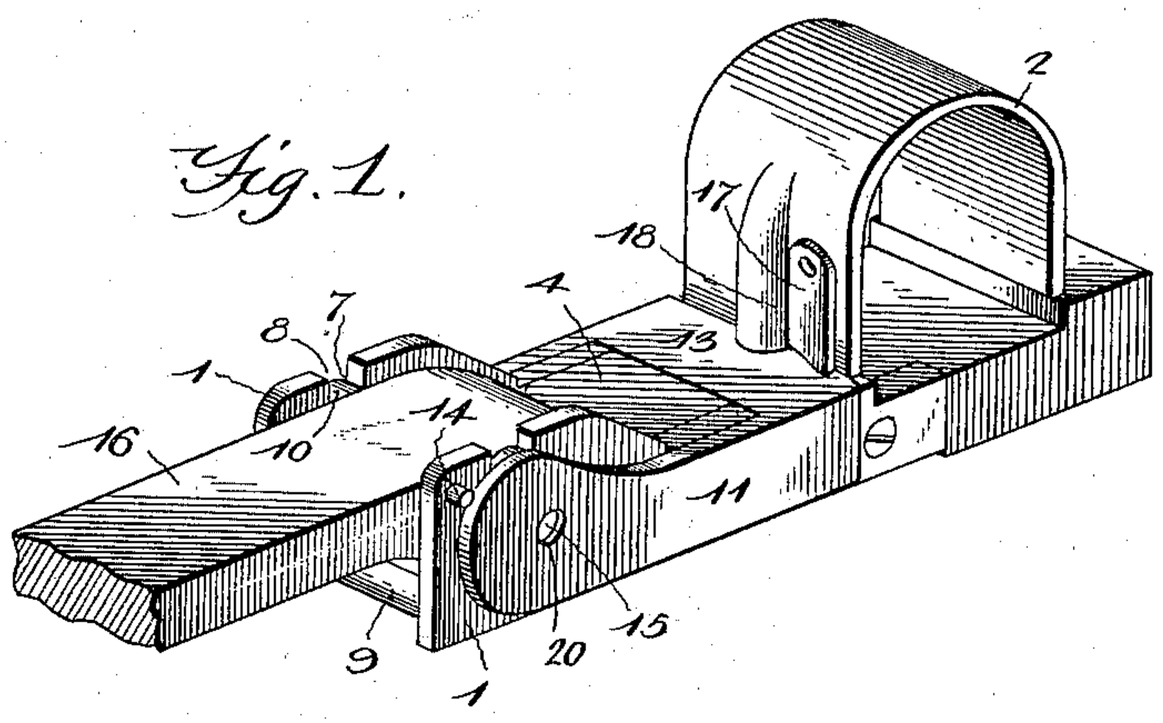


Fig. 6.

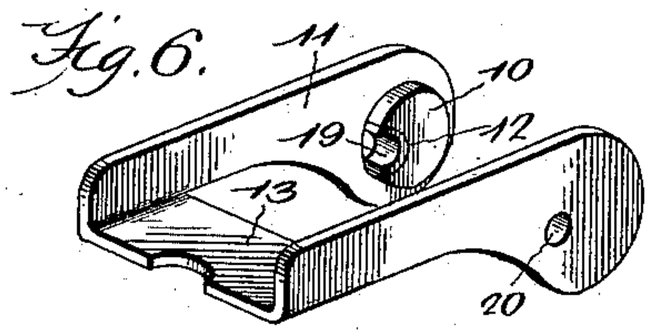


Fig. 3.

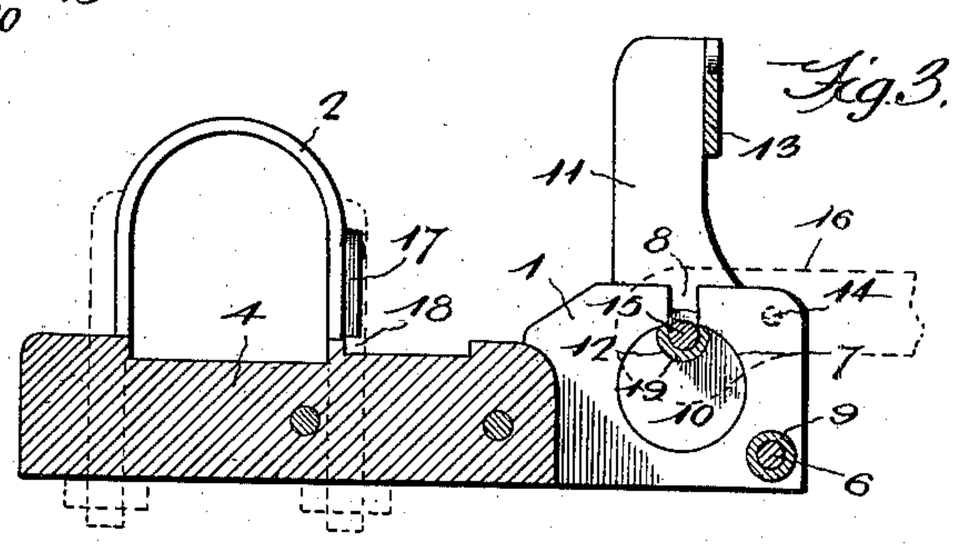


Fig. 2.

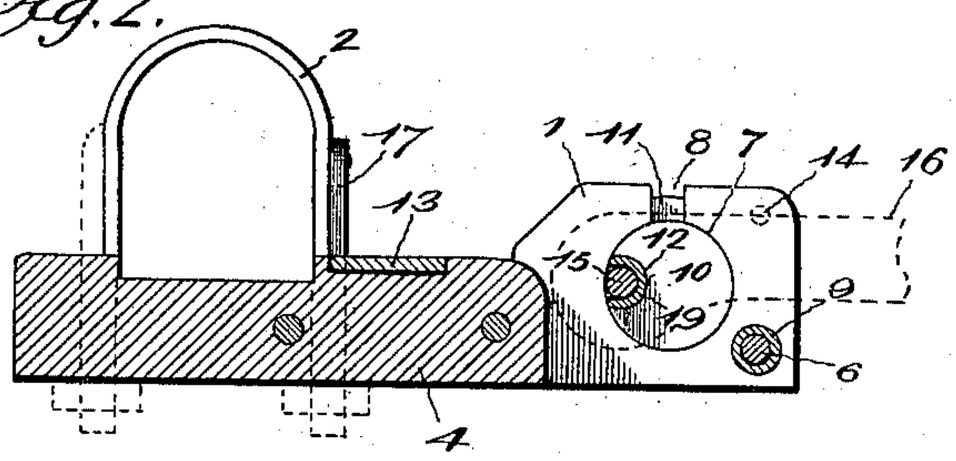


Fig. 4.

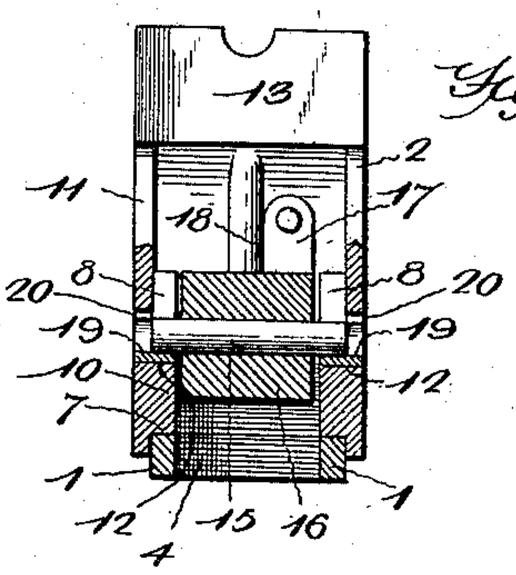
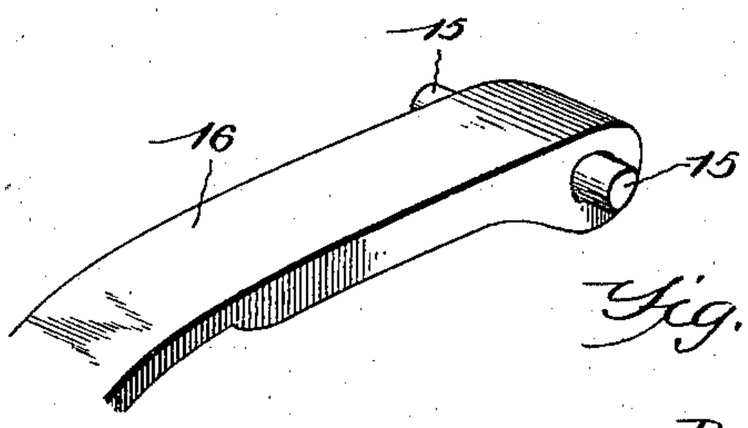


Fig. 5.



Witnesses
J. Faulkenberwell,
T. J. Riley

Daniel W. Clark, Inventor.
By his Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

DANIEL W. CLARK, OF TIONESTA, PENNSYLVANIA.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 609,958, dated August 30, 1898.

Application filed March 30, 1898. Serial No. 675,782. (No model.)

To all whom it may concern:

Be it known that I, DANIEL W. CLARK, a citizen of the United States, residing at Tionesta, in the county of Forest and State of Pennsylvania, 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 simple and inexpensive one which will form an efficient antirattler and which will enable a pair of thills or a pole to be readily attached to and uncoupled from a vehicle.

The invention consists in the construction and novel combination and arrangement of parts, as 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, the hinged frame being locked in a horizontal position. Fig. 3 is a similar view, the hinged frame being raised. Fig. 4 is a transverse sectional view, the parts being arranged as shown in Fig. 2. Fig. 5 is a detail perspective view of the thill-iron. Fig. 6 is a similar view of the hinged frame.

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

1 designates a pair of parallel arms or ears extending forward from an axle-clip 2 and connected with the same by any suitable means, preferably a block or piece 4; but the arms or ears 1 may be formed integral with the axle-clip, if desired. The arms or ears, which are connected at their bottoms by a transverse pin 6, are provided with circular openings 7 and have entrance-slots 8 communicating with the openings, and a spacing-sleeve 9 is disposed on the transverse pin 6 and interposed between the arms or ears 1. The circular openings of the arms or ears 1 receive annular lugs or disks 10, formed integral with the sides of a substantially rectangular frame 11 and provided with bearing-recesses 12, which register with the entrance-slots 8 when the frame 11 is in substantially a vertical position, as illustrated in Fig. 3 of the accompanying drawings.

The rectangular frame 11, which has its sides arranged on the exterior of the arms or ears 1, is hinged to the same by the annular lugs or disks being arranged within the circular openings of the arms or ears 1. The sides of the frame 11 are connected at their rear ends by a transverse bar or piece 13, and the forward or upward swing of the same is limited by stops 14, consisting of projections or lugs extending from the outer faces of the arms or ears and preferably formed integral with the latter. When the sides of the frame 11 are swung upward and forward sufficiently to bring them into contact with the stops 14, the bearing-recesses are in register with the entrance-slots of the arms or ears.

The bearing-recesses of the annular lugs or disks receive the terminals of a transverse pivot 15, which projects beyond the sides of a thill-iron 16 to form journals, and the pivot 15 is preferably constructed separate from the thill-iron and is adapted to be secured into the eye of an ordinary thill-iron in order that the thill-coupling may be applied to a vehicle without necessitating any other change in the thills. The journals formed by the pivot 15 may of course be constructed integral with a thill-iron, if desired. When the hinged frame is in a horizontal position, the bearing-recesses are carried downward and rearward away from the entrance-slots of the arms or ears 1 to confine the thill-iron between the same, and the said frame is locked in this position by a pivoted latch 17, mounted on the axle-clip adjacent to the bolt portion 18, which forms an abutment for the latch. The latch is pivoted at its upper end, as clearly shown in Fig. 1 of the drawings, and it has sufficient frictional contact with the axle-clip to keep it from rattling. The bearing-recesses are provided with open washers 19, constructed of leather, rubber, Babbitt metal, or other suitable material and adapted to cushion the journals and form an antirattler.

The invention has the following advantages: The thill-coupling, which is simple and comparatively inexpensive in construction, is adapted to be readily applied to any ordinary vehicle, and while it is capable of en-

abling a pair of thills or a pole to be readily coupled to and uncoupled from a vehicle the poles and thills are securely retained in the perforated arms or ears when the device is locked.

The device operates as an efficient antirattler, and the sides of the hinged frame are provided with perforations 20, which register with the bearing-recesses of the annular disks or lugs, whereby, in the event of the breakage of the pivot 15, the same may be driven out of the thill-iron and an ordinary pivot-bolt can be employed.

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

What I claim is—

1. In a device of the class described, the combination of an axle-clip, a pair of forwardly-extending ears having circular openings and provided with entrance-recesses, a swinging frame arranged on the exterior of the perforated ears and provided with annular lugs or disks fitting in the circular openings of the ears and provided with bearing-recesses adapted to receive the pivot of a thill-iron, and a locking device mounted on the axle-clip and engaging the frame, substantially as described.

2. In a device of the class described, the combination of an axle-clip, a pair of forwardly-extending ears having openings and provided with entrance-slots, a substantially rectangular frame having sides arranged on the exterior of the arms or ears, annular lugs or disks arranged at the inner faces of the sides of the frame, fitting in the openings of the ears and provided with bearing-recesses, a pivoted latch mounted on the axle-clip and engaging the frame, and a stop mounted on one of the ears in advance of the frame, substantially as described.

3. In a device of the class described, the combination of a pair of perforated ears having openings and provided with entrance-slots, a swinging frame provided with annular lugs or disks having bearing-recesses, said frame being provided with perforations registering with the recesses, and a thill-iron having a removable pivot fitting in the bearing-recesses, substantially as described.

4. In a device of the class described, the combination of the perforated ears having openings and entrance-slots, a frame having annular lugs or disks provided with bearing-recesses, open washers arranged in the bearing-recesses and forming cushions, and a thill-iron having a pivot arranged in the bearing-recesses and supported by the washers, substantially as described.

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

DANIEL W. CLARK.

Witnesses:
GEO. W. SAWYER,
CHARLES BOVARD.