(No Model.)

C. E. WALKER & J. G. BROWN.

THILL COUPLING.

No. 580,537. Patented Apr. 13, 1897.

Fig. 1.

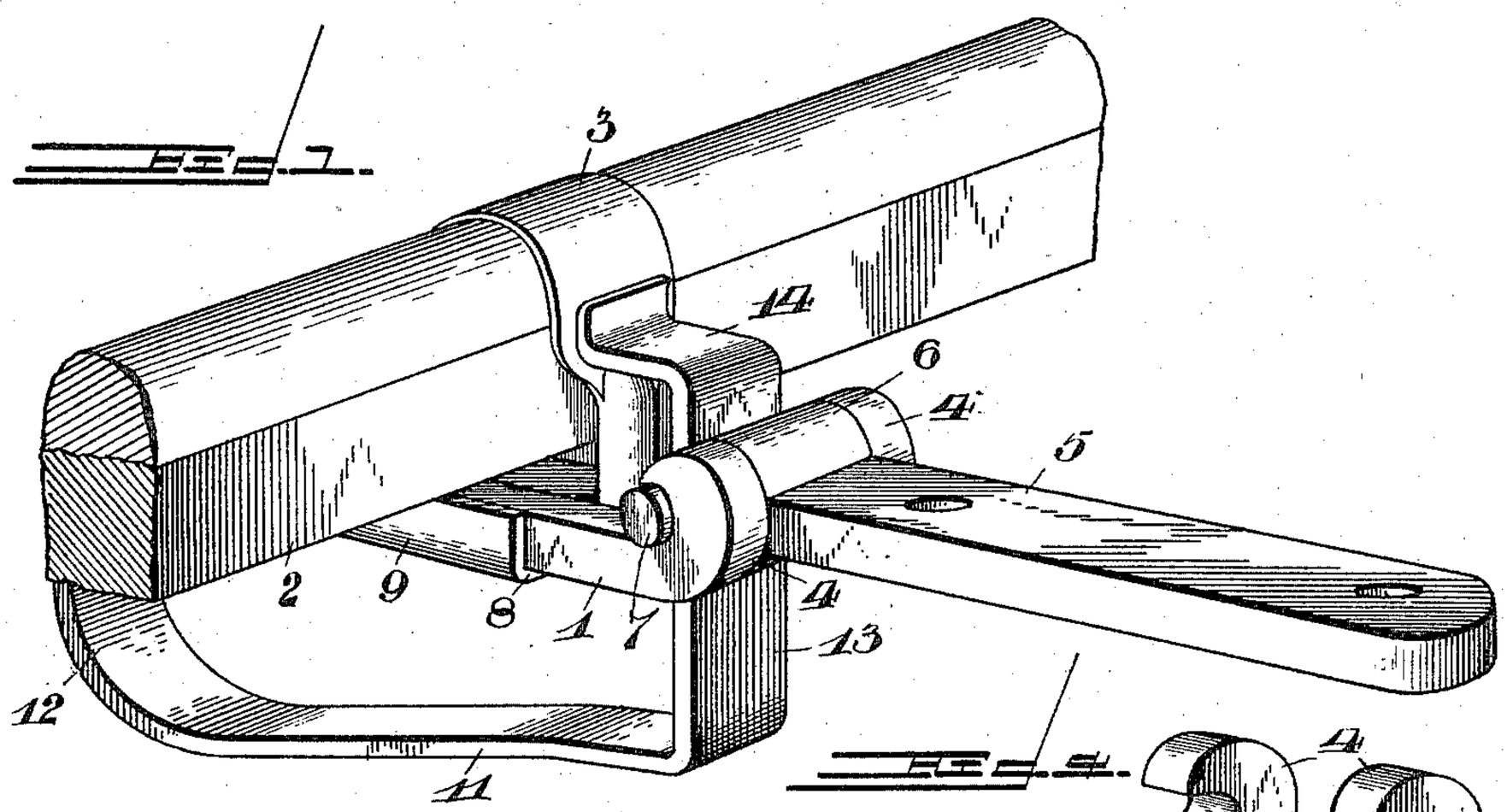


Fig. 4.

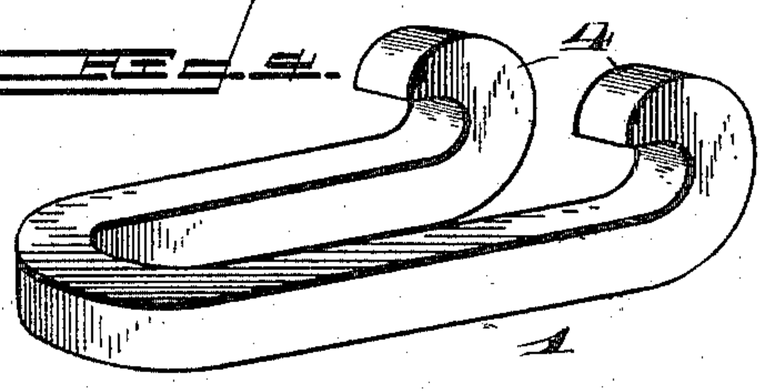


Fig. 2.

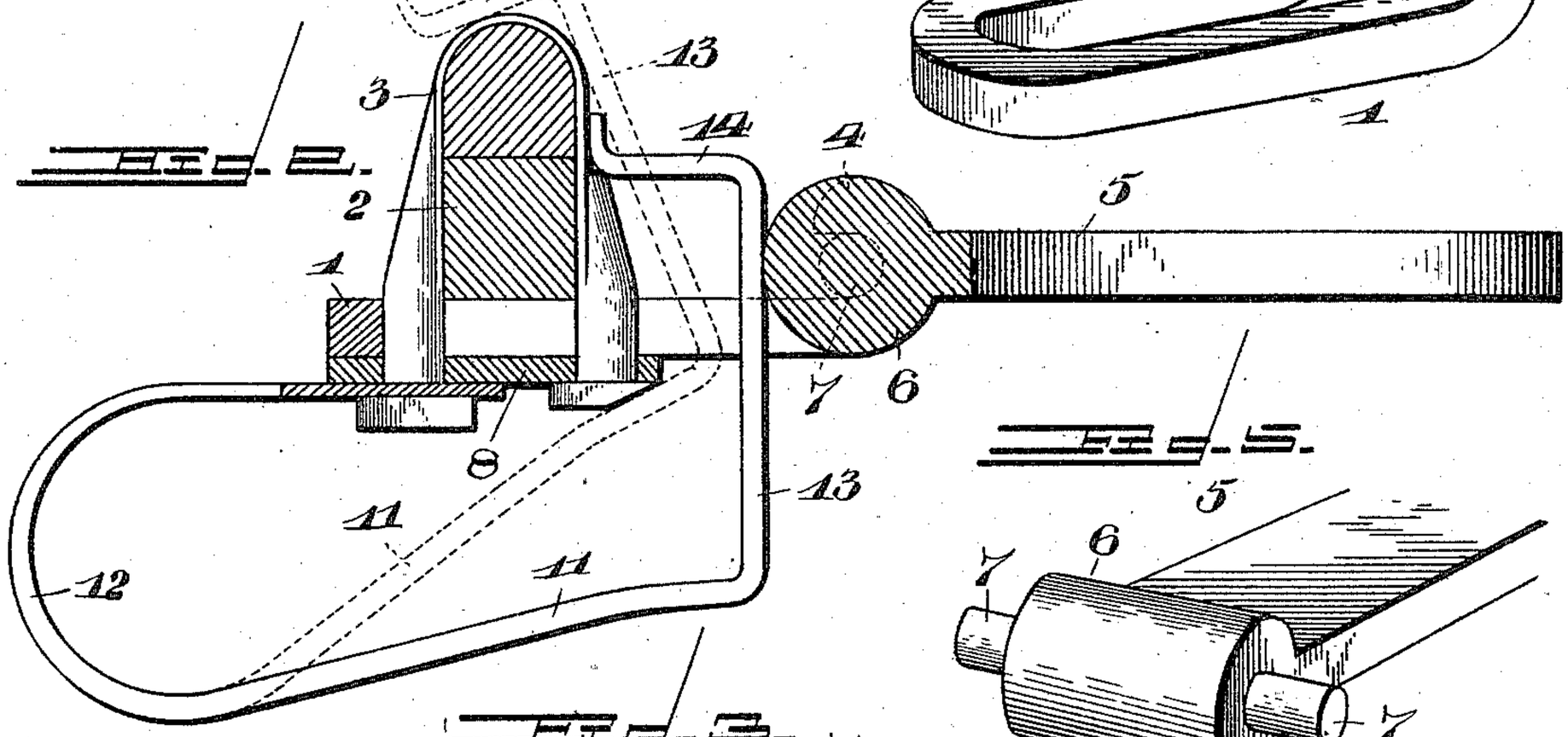
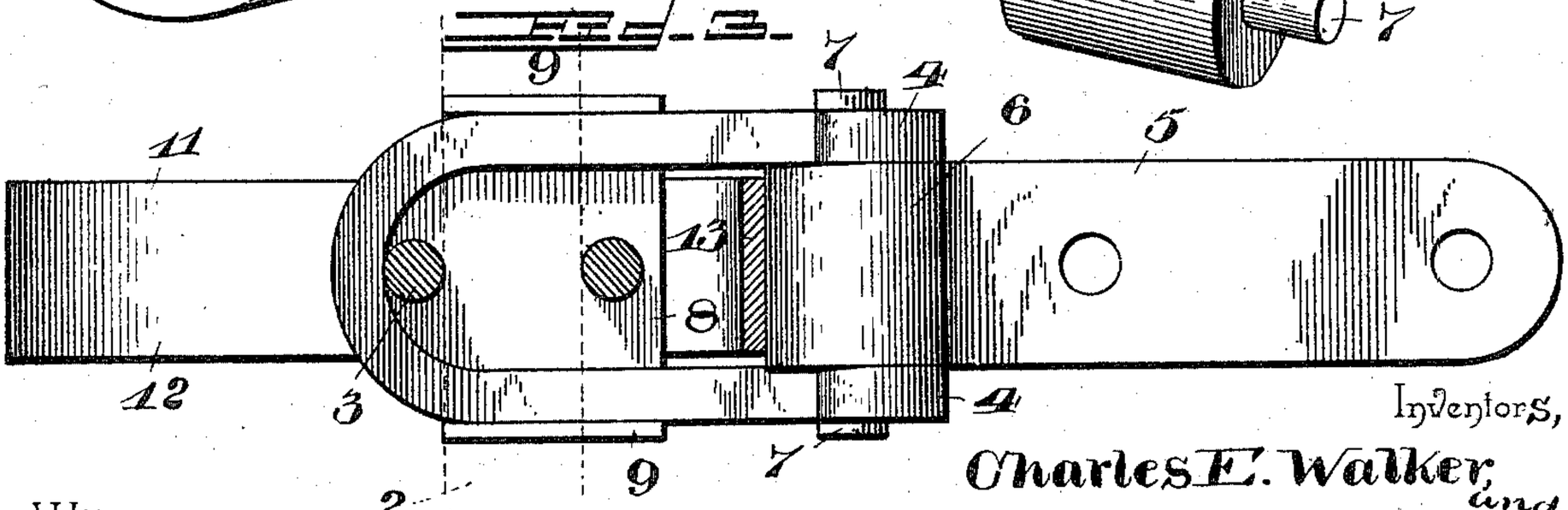


Fig. 5.

Fig. 3.



Witnesses
H. F. Doyle.
T. J. Riley

Inventors,
Charles E. Walker, and
John G. Brown,
By their Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

CHARLES E. WALKER AND JOHN G. BROWN, OF JERSEYVILLE, ILLINOIS; SAID WALKER ASSIGNOR OF HIS RIGHT AND SAID BROWN ASSIGNOR OF ONE-HALF OF HIS RIGHT TO SYLVANUS L. HILL AND J. C. REINTGES, OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 580,537, dated April 13, 1897.

Application filed May 22, 1896. Serial No. 592,669. (No model.)

To all whom it may concern:

Be it known that we, CHARLES E. WALKER and JOHN G. BROWN, citizens of the United States, residing at Jerseyville, in the county of Jersey 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 couplings for thills and poles.

The object of the present invention is to provide a simple and inexpensive coupling which will enable poles and thills to be readily connected to and detached from a vehicle and which will form an effective antirattler.

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 of the same, the spring being shown raised in dotted lines to permit the removal of the thill. Fig. 3 is a plan view, partly in section. Fig. 4 is a detail perspective view of the yoke which forms the coupling-eyes. Fig. 5 is a detail perspective view of the coupling-iron, which is connected with the thill of a pole.

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

1 designates a substantially U-shaped yoke, secured to the lower face of the axle 2 by a clip 3, extending forward from the former to form arms and having the terminals thereof curved upward and rearward to provide open eyes or hooks 4 for the reception of a pivot of a coupling-iron 5, which is designed to be connected with a pole of a thill. The coupling-iron is provided with a head 6, and its pivot is preferably formed integral with it and extends laterally from opposite sides of the head, forming journals or trunnions 7, the head being located between the arms, with its ends fitting snugly against the inner faces thereof.

The sides of the yoke receive the axle-clip, as clearly illustrated in Fig. 3 of the accompanying drawings, and the axle-clip is provided with a clip-plate 8, extending across the bottom of the yoke and provided with upwardly-extending longitudinally-disposed side flanges 9, embracing the outer faces of the sides of the yoke. The clip-plate is secured to the axle-clip in the usual manner by means of a pair of nuts arranged on the ends of the clip.

The coupling-iron is held in the open eyes or bearings of the yoke by a spring 11, secured at its rear end to the lower face of the axle-clip by the rear nut thereof and constructed of a single piece of resilient material.

The springs consist of a rearwardly-extending loop 12, which is curved at the back, and a substantially rectangular front portion 13, extending upward between the sides of the yoke, engaging the head of the coupling-iron and having a rearwardly-extending arm 14, bearing against the front side of the axle-clip. The substantially vertically-disposed part of the rectangular front portion 13 bears firmly against the head of the coupling-iron to prevent any rattling of the parts, and the terminal of the rearwardly and horizontally disposed arm 14 is bent upward to increase its bearing-surface. The upwardly or angularly bent terminal of the arm 14 presses against the axle, and when it is desired to remove the coupling-iron the spring is lifted and caused to spring over the top of the axle, as illustrated in dotted lines of Fig. 2 of the accompanying drawings, whereby it is maintained in that position to enable a pair of thills or a pole to be rapidly applied to or removed from a vehicle. When the upper arm of the spring is moved forward off the axle, it springs downward into operative position.

It will be seen that the thill-coupling is simple and comparatively inexpensive in construction, that it forms an effective antirattler, and that it will enable a pair of thills or a pole to be rapidly and conveniently connected with or detached from a vehicle.

Changes in the form, proportion, and minor details of construction may be resorted to

without departing from the principle or sacrificing any of the advantages of this invention.

What we claim is—

1. In a thill-coupling, the combination of an axle, arms extending therefrom, a coupling-iron removably mounted in the arms, and an antirattler-spring mounted on the axle, extending upward between the same and the coupling-iron and bearing against the latter, said spring having a rearwardly-extending horizontal arm normally bearing against the front of the axle to hold the spring firmly against the coupling-iron, said rearwardly-extending arm being arranged, when the spring is swung upward, to engage the top of the axle automatically, whereby the spring is held out of engagement with the coupling-iron to enable the same to be readily removed and replaced, substantially as described.

2. In a thill-coupling, the combination of an axle-clip, arms extending therefrom and provided with open bearings, a coupling-iron arranged in the bearings, and an antirattler-spring secured to the axle-clip and consisting of a rearwardly-extending loop and an upwardly-extending portion arranged between the arms, engaging the coupling-iron and having a rearwardly-extending arm bearing against the axle-clip and adapted to be sprung over the top of the axle-clip to maintain the spring in a retracted position and enable the coupling-iron to be readily removed and replaced, substantially as described.

3. A coupling for poles and thills, comprising a substantially U-shaped yoke adapted to extend in advance of an axle and having the terminals of its sides provided with open bearings, an axle-clip extending between the sides of the yoke and provided with a clip-plate arranged on the lower face of the same, the coupling-iron arranged between the sides of the yoke and provided with a pivot fitting in the bearings thereof, and an antirattler-spring connected at its rear end to the axle-clip and consisting of a rearwardly-extending loop, and an upwardly-extending substantially rectangular portion located in advance of the loop, arranged between the sides of the yoke and provided at its top with a rearwardly-extending arm bearing against the axle-clip, substantially as and for the purpose described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CHARLES E. WALKER.
JOHN G. BROWN.

Witnesses:
GEO. BROWN,
LLOYD HUTCHINSON.