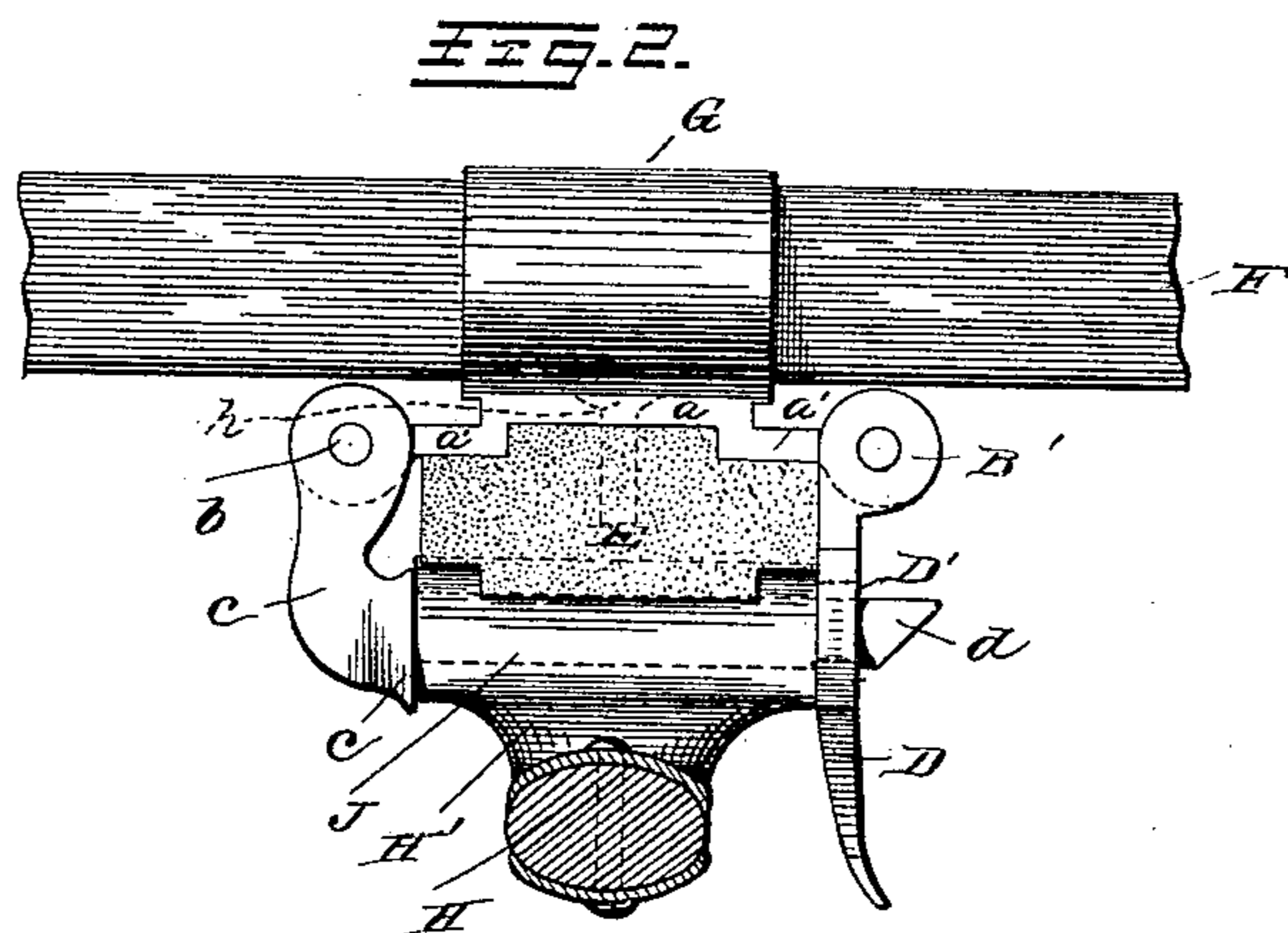
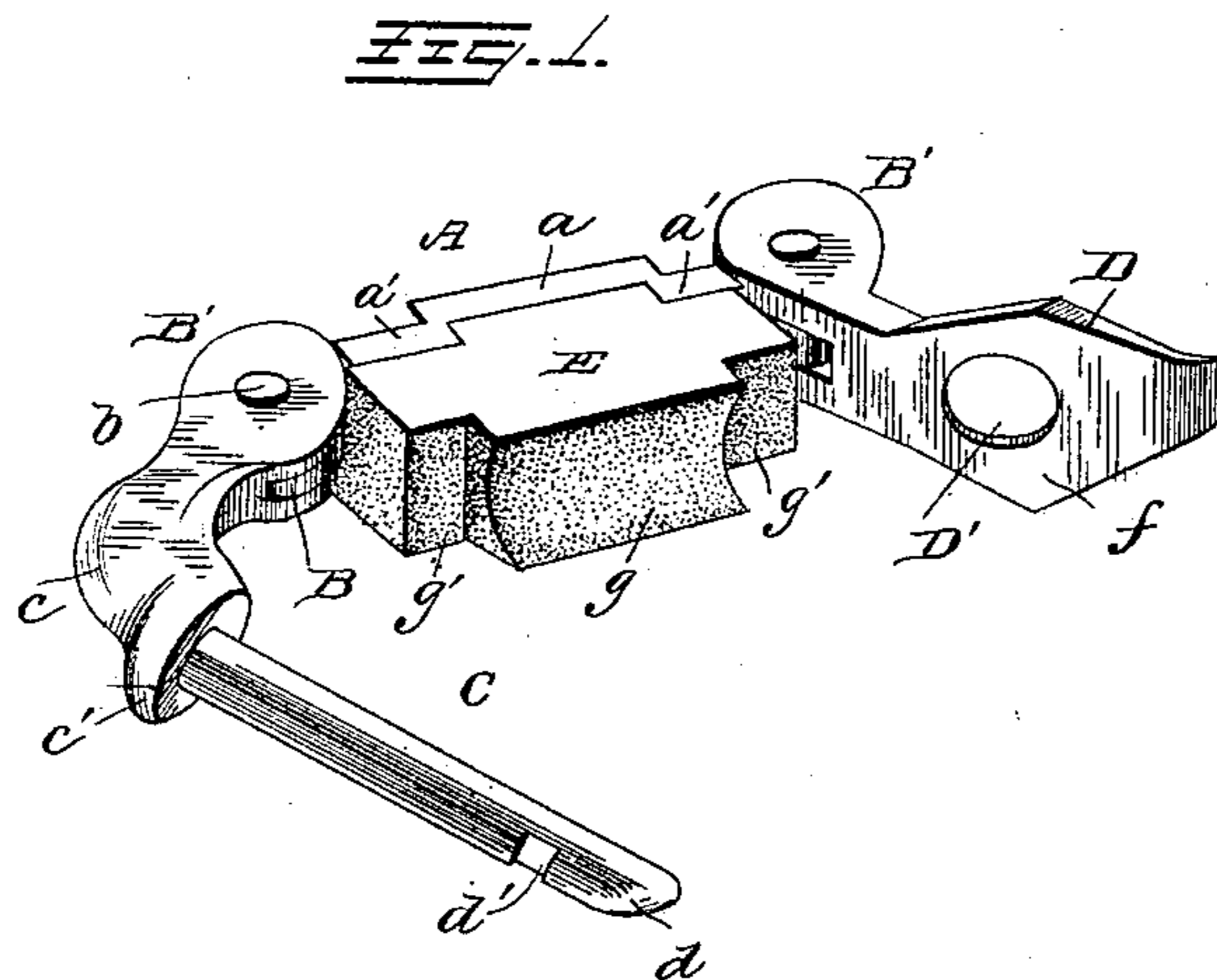


(No Model.)

L. MASON.
THILL COUPLING.

No. 354,160.

Patented Dec. 14, 1886.



Witnesses:
L. G. Sommer Jr
A. H. Craigie

Inventor:
 Lovane Mason,
 per *B. H. Reginald, Atty.*

UNITED STATES PATENT OFFICE.

LOVANE MASON, OF HARTLAND, NEW YORK.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 354,160, dated December 14, 1886.

Application filed October 7, 1886. Serial No. 215,547. (No model.)

To all whom it may concern:

Be it known that I, LOVANE MASON, a citizen of the United States, residing at Hartland, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Thill-Couplings; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a combined thill coupler and bolt.

My invention consists in details of construction described below, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view, the parts being open. Fig. 2 is a plan showing the coupler attached to the thill and axle.

Like letters refer to like parts.

All the parts, except the anti-rattler, are made of suitable metal.

A represents the back piece, which is provided with a depression, *a*, affording a firm seat for the anti-rattler, the back side of which is further supported by the parts *a'* of said back piece. Either end of the back piece is formed into an eye, B, to which the bolt and latch C D are respectively hinged by means of the double eye B', formed on their inner ends, and the pins *b*. The bolt-eye has a strong curved extension, *c*, terminating in a circular shoulder, *c'*, from which the bolt extends in smaller diameter, said bolt having also an inclined end, *d*, and a transverse notch, *d'*. The shoulder *c'* forms a stop or support for the eye of the thill-iron when slipped over the bolt. The latch has an opening, D', for engaging with notch *d'* and a thumb-piece, *f*, for pushing the latch on or off.

It will be noticed that the metal on either side of opening D' has sufficient width to form an ample shoulder to correspond with *c'* when the latch is closed to fasten the bolt and thill-iron.

E is the rubber anti-rattler. Its inner side corresponds with the back piece, A, and thus

cannot move out of place. The front side has a concave extension, *g*, forming with the body of the rubber shoulders *g'*, so that when the rubber portion *g* is compressed by the thill-iron the latter will have a continuous rest, the back-pressure being mainly in the center to press the bolt against the latch in the best manner.

In Fig. 2 I show one way of attaching the thill, the axle, the thill, and thill-iron being broken away.

F is the axle, and G the axle clip or shackle. A screw, *h*, passing through the clip, the back piece, and some distance into the anti-rattler firmly fastens the coupling to the axle. Of course more than one screw or bolt may be used.

H is the thill, and H' the thill-iron terminating in a cylindrical eye, J, through which the bolt C passes.

To put on a thill, it is only necessary to pass the eye J over the bolt when swung back, as in Fig. 1, and then press said eye into the rubber until the latch can be snapped into the notch *d'*. The thill may be released at any time by further pressing the eye J into the rubber and swinging back the latch. By having the bolt hinged to the back piece so as to swing back time and ease is gained in putting the thill on or off and ample room to operate in is afforded.

I am aware that a spring back piece provided with a rigid notched bolt and a hinged latch has been used, and I disclaim such. A spring does not allow the bolt to draw back far enough for convenience, and is likely to break, rendering the whole device useless.

I am also aware that a shouldered bolt and a transversely-swinging hook have been hinged to a depending block, the latter swinging down when the hook is released and not rigidly fastened to the axle-clip, like mine. The bolt-shoulder and hook do not form stops for the eye of the thill-iron, and to use the device a clip of peculiar construction is required. The hook is liable from the jar of the vehicle or an accidental knock to get free and release the coupling, which will not happen when the latch snaps into a notch on the bolt. If the arms on the axle-clip (which form the stops) were dispensed with and the coupling attached

like mine, the transverse hook would form an insufficient shoulder for the eye of the thill-iron and the strain would weaken the joint with the block; besides, said hook, not being properly fastened on the bolt, would surely fall down; and it will also be seen that the bolt-arm would not form a sufficiently large shoulder to be of use if the clip arm were removed. My coupling can be used with any ordinary axle-clip, which is of great advantage.

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

1. The combination, with the back piece rigidly secured to the axle-clip, of the notched bolt having an inclined point and provided with an extension hinged to said piece, forming a wide shoulder at the base of the bolt, and the latch hinged to the back piece to swing longitudinally, and provided with an inclined thumb piece, said latch entirely sur-

rounding the bolt and forming an ample shoulder bearing directly on the eye of the thill-iron, as set forth.

2. The combination, with the axle and its shackle, of the back piece, A, rigidly attached to the latter, and having depression *a*, flat portions *a'*, and eyes B, the hinge-pins *b*, the bolt C, having inclined end *d*, notch *d'*, and the extension *e*, provided with a wide shoulder, *e'*, and double eye B', the anti rattler E, having its innerside corresponding with the back piece and having concave extension *g* and shoulders *g'*, the eye J of the thill-iron, and the latch D, having opening D' surrounding the bolt, thumb-piece *f*, and double eye B', as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

LOVANE MASON.

Witnesses:

FRANK B. VAN NORMICK,
J. C. WATTS.