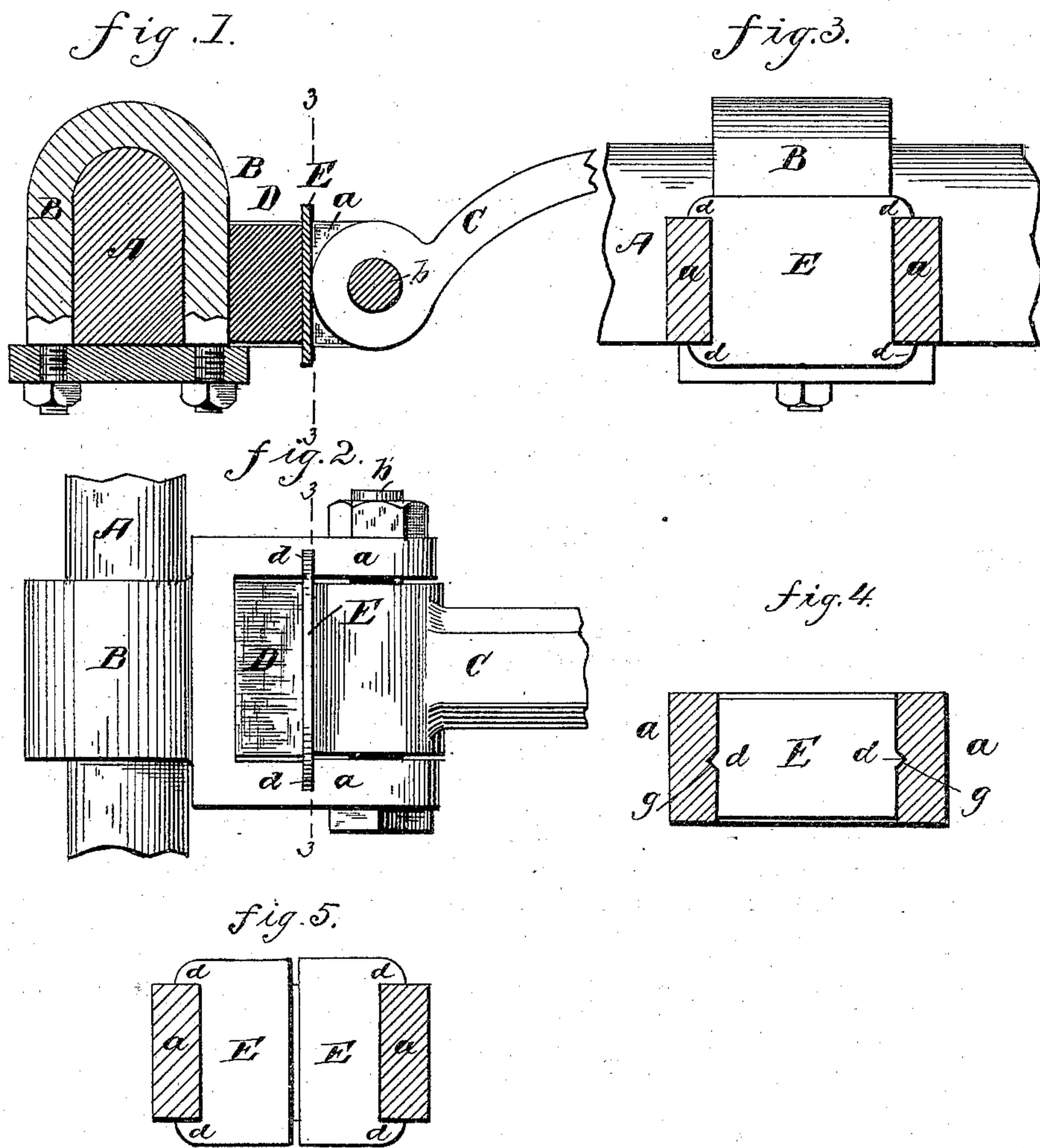


(No Model.)

G. MORSE.
THILL COUPLING.

No. 335,767.

Patented Feb. 9, 1886.



George Morse,
Inventor.

Witnesses:
Benj. H. Corliss
Reynolds Stong

UNITED STATES PATENT OFFICE.

GEORGE MORSE, OF GLOUCESTER, ASSIGNOR TO HIMSELF AND CHARLES A. BOYNTON, OF BOSTON, MASSACHUSETTS.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 335,767, dated February 9, 1886.

Application filed December 4, 1884. Serial No. 149,453. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MORSE, of Gloucester, county of Essex, and State of Massachusetts, have invented certain new and useful Improvements in Thill-Couplings, of which the following is a full, clear, and exact description.

This invention relates to that common and well-known class of thill-couplings in which a block or cushion of rubber, &c., is interposed between the forward part of the axle-clip and the rear end of the thill-iron for the purpose of preventing rattling of the thill in its bearings; and it consists in the combination, with an axle-clip and thill-iron and a block or cushion of rubber or gutta-percha in any of their elastic compounds, intermediate thereof, of a plate of metal or of other suitable material immediately between said block and thill-iron, which plate is constructed in relation to the axle-clip, all substantially as hereinafter described.

In the accompanying plate of drawings, Figure 1 is a vertical section of a thill-coupling embodying this invention. Fig. 2 is a plan view of same. Fig. 3 is a transverse vertical section on line 3 3, Fig. 1. Figs. 4 and 5 are views illustrative of modifications.

In the drawings, A represents the axle, having the clip B, which is provided with ear-pieces *a a*, to which is secured, in the usual manner, by a pin or bolt, *b*, the thill-iron or shaft C.

D is a block or cushion of rubber or gutta-percha, in any of their elastic compounds, in position between the forward part of the clip B and the rear part of the thill-iron C. Against the front face of said block or cushion D, and between it and the rear face of the thill-iron, is a plate, E, of metal or any other suitable material, which plate, as particularly shown, and for the purposes of this invention is made with parallel plane sides or surfaces. This plate E has ears or projections *d d d d*, Fig. 3, which, when the plate is in its position in the coupling between the rubber block and the thill-iron, as above stated, overlap the ear-pieces *a a* of the clip, thus preventing the escape of the plate from the coupling, and insuring a longitudinal guiding of the plate or in the direction against and from the reaction of said elastic block.

If desired, in lieu of the ears *d d d d* over-

lapping the edges of the ear-pieces *a a* of the clip, as shown in Figs. 1, 2, and 3, for the retention of the plate in the coupling, the plate may have studs or ears *d d*, engaging with grooves *g g* in the inner sides of the ear-pieces *a a* of the clip, as shown in Fig. 4; or the inner surface of the clip ear-pieces *a a* may be provided with studs or projections to engage with notches in the edges of the metallic plate E, which is in substance the same. In some instances it might be found desirable to make the plate E in sections or in more than one piece, as shown in Fig. 5, as an adjustment of the plate to various widths of couplings can thus be obtained.

It is obvious that with a metallic plate substantially as described interposed between the rubber and the thill or draft iron a more uniform pressure on the rubber block is secured, and the said rubber block or cushion is relieved from all wear by the friction and grinding of the thill-iron against said rubber block, as heretofore, consequently securing a much better action of said block in the coupling and for an indefinite period of time; and in the use of such plate a rectangular block of rubber is preferably used, thus dispensing with the necessity of any concave or rounded surfaces thereof, and is simple, cheap, and effective, and is easily and positively adjusted and retained in the coupling.

While it is preferable to make the plate E of hardened steel, it may be made of other metals or materials than steel.

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

In a thill-coupling, in combination with an axle-clip having ear-pieces *a a*, and a thill-iron swiveled thereto, and a block or cushion of rubber or gutta-percha between them, a metal plate having plane or flat sides or faces between said cushion and the thill-iron, said plate being provided with ear-pieces or projections *d d d d*, adapted to overlap the ear-pieces *a a* of the clip, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

Witnesses: GEORGE MORSE.
BENJ. H. CORLISS, Jr.,
CYRUS STORY.