No. 645,872. Patented Mar. 20, 1900.

W. F. SCHUBERT.

THILL COUPLING.

(No Model.) (Application filed Aug. 18, 1899.)

Fig. 1

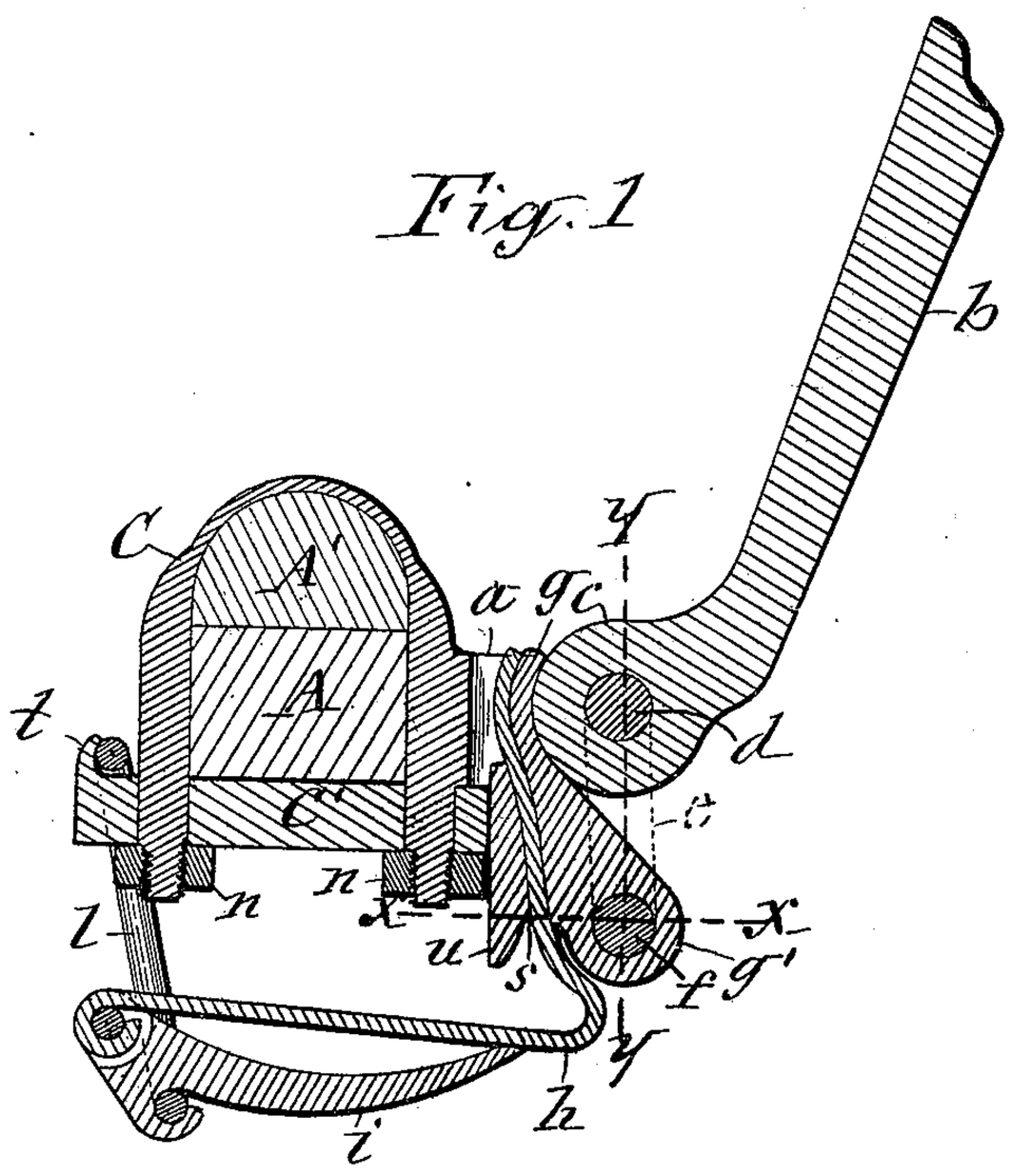


Fig. 4

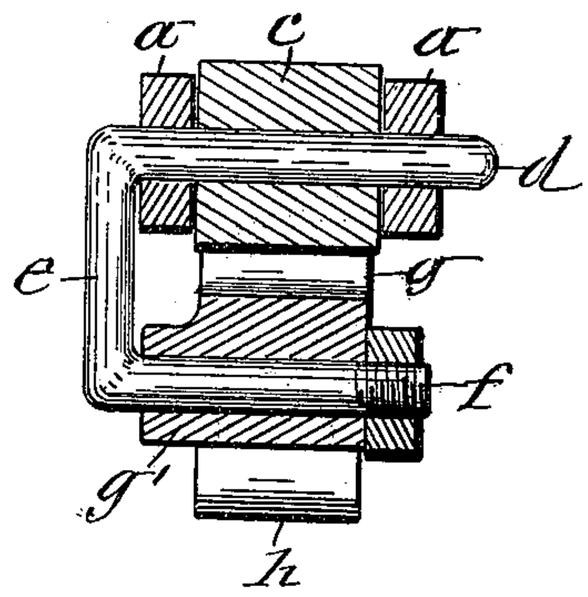


Fig. 2

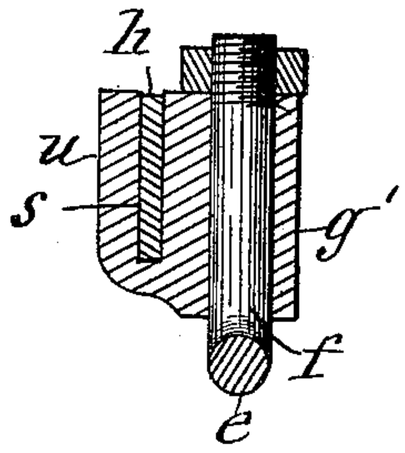
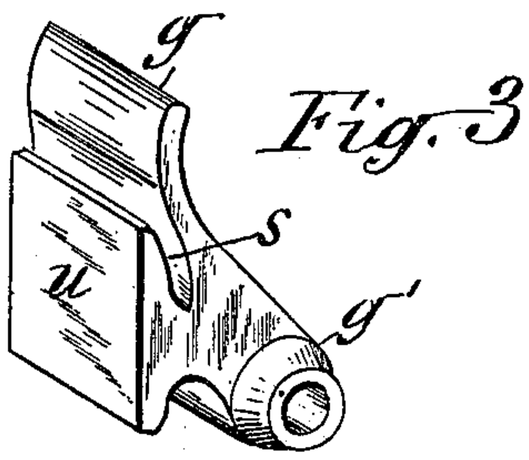


Fig. 3



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UNITED STATES PATENT OFFICE.

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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 645,872, dated March 20, 1900.

Application filed August 18, 1899. Serial No. 727,628. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. SCHUBERT, a citizen of the United States, and a resident of Oneida, in the county of Madison, in the State of New York, have invented new and useful Improvements in Thill-Couplings, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of thill-couplings in which a spring-actuated jaw or tongue is pressed against the shackle-eye of the thill-iron to prevent rattling between said shackle-eye and coupling pin or bolt; and the invention has reference more particularly to the species of thill-couplings shown in my Letters Patent No. 621,156, of March 14, 1899.

The object of my present invention is to securely fasten the actuating-spring of the coupling to the antirattler-jaw by simple and convenient means and at the same time reinforce said spring and protect it from wear and abrasion at its fulcrum; and to that end the invention consists, essentially, in the combination, with the shackle-ears of the axle, shackle-eye of the thill-iron, the coupling-pin formed with a downward extension, and the antirattler-jaw pivoted to said extension, of a shoe formed on the back of said jaw in position to contact with the fulcrum of the jaw and the actuating-spring passing through said shoe and fastened thereby to the jaw; and the invention consists also in novel features of the detail construction of parts of the thill-coupling, as hereinafter described.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of a thill-coupling embodying my improvements. Fig. 2 is a transverse section on line X X in Fig. 1. Fig. 3 is a detached perspective view of the antirattler-jaw and wear-plate, and Fig. 4 is a transverse section on line Y Y.

Similar letters of reference indicate corresponding parts.

a represents one of the pair of shackle-ears which project from the usual clip C, which embraces the axle A and bed-piece A′ and is fastened thereto by the clip-tie C′ and nuts *n n* on the ends of the clip in the usual and well-known manner.

b denotes the thill-iron, formed with the usual shackle-eye *c*, which is inserted between the shackle-ears *a* and connected thereto by the coupling-pin *d* passing through said ears and intervening eye. This pin is formed with an arm *e*, extending laterally from one end thereof and terminating with a bar *f*, which is parallel with the coupling-pin *d*.

g represents the antirattler-jaw which is employed to press onto the back of the shackle-eye *c*, so as to maintain the same in constant contact with the coupling-pin *d*.

h represents the actuating-spring by means of which the antirattler-jaw *g* receives the aforesaid pressure. Said spring extends rearward under the axle and has connected to its rear end a lever *i*, which is fulcrumed on a link *l*, suspended from a suitable support on the clip-bar C′, preferably from the rear of said clip-bar, which is provided with a shoulder *t* back of the link to prevent the latter from accidentally slipping off from the clip-bar.

The antirattler-jaw *g* is formed with a sleeve *g′*, which extends across the jaw and embraces the parallel bar *f* and is thus pivoted directly to said bar.

The spring *h* is fastened to the jaw *g* by means of a shoe *s*, formed on said jaw and receiving the spring through it and securely gripping the spring by compression of the shoe, thus fastening the spring to the jaw without the use of rivets, which in perforating the spring tend to weaken the same.

The shoe *s* is formed on the back of the antirattler-jaw *g* by a plate *u*, extending across the spring and formed integral with the said jaw at one side thereof, the remaining portion of said plate being free to allow it to be compressed toward the jaw, so as to firmly grip the spring in the shoe, as aforesaid.

The plate *u*, while stiffening the portion of the spring bearing on the jaw *g*, at the same time serves as a wear-plate which is disposed to contact with the clip-bar C′, on which the jaw *g* is fulcrumed. The interposition of the said wear-plate between the spring and aforesaid fulcrum protects the spring from wear and abrasion, which the spring would be sub-

jected to if allowed to contact with the clip tie or fulcrum.

What I claim as my invention is—

1. In combination with the shackle-ears of the axle, shackle-eye of the thill-iron, the coupling-pin formed with a downward extension, and the antirattler-jaw pivoted to said extension, a shoe formed on said jaw, and the actuating-spring passing through said shoe and fastened thereby to the jaw as set forth.

2. In combination with the shackle-ears of the axle, shackle-eye of the thill-iron, the coupling-pin formed with a downward extension, and the antirattler-jaw pivoted to said extension, a shoe formed on the back of said jaw in position to contact with the fulcrum of the jaw, and the actuating-spring passing through said shoe and fastened thereby to the jaw as set forth.

3. In combination with the shackle-ears of the axle, shackle-eye of the thill-iron, the coupling-pin formed with a downward extension and the antirattler-jaw pivoted to said extension, a shoe formed of a ductile-metal wear-plate disposed at the rear of the jaw and attached thereto at one side thereof and the actuating-spring passing through said shoe and fastened therein by compression of the wear-plate toward the jaw as set forth.

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