

No. 621,156.

Patented Mar. 14, 1899.

W. F. SCHUBERT.
THILL COUPLING.

(Application filed Oct. 26, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1

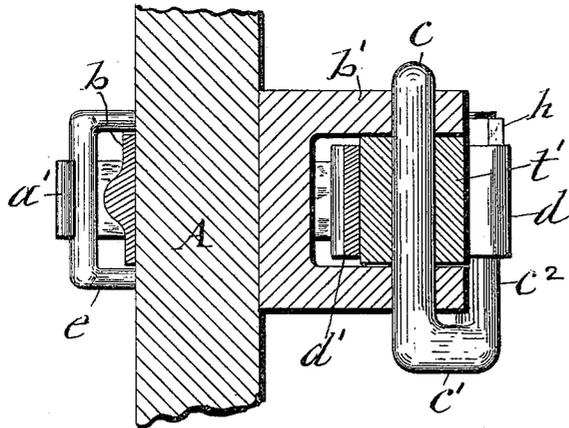
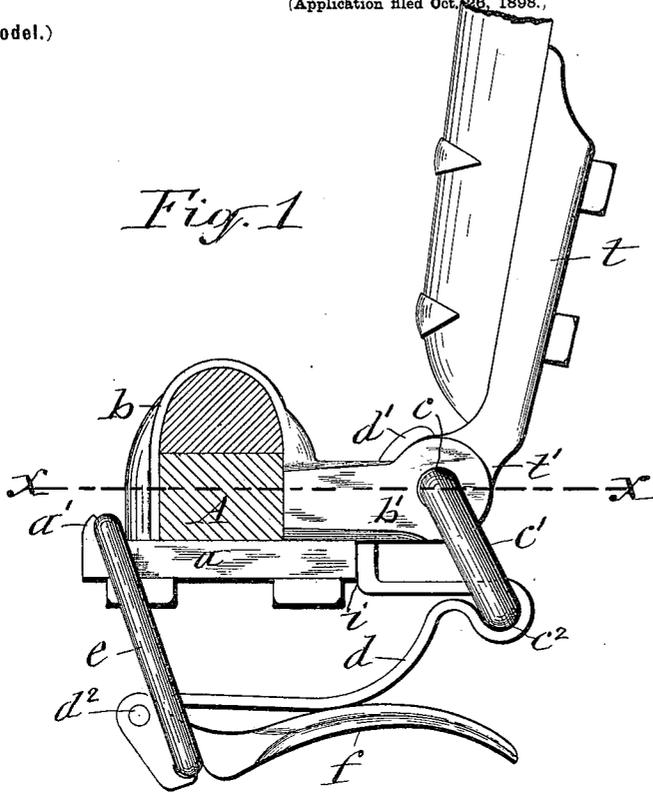


Fig. 2

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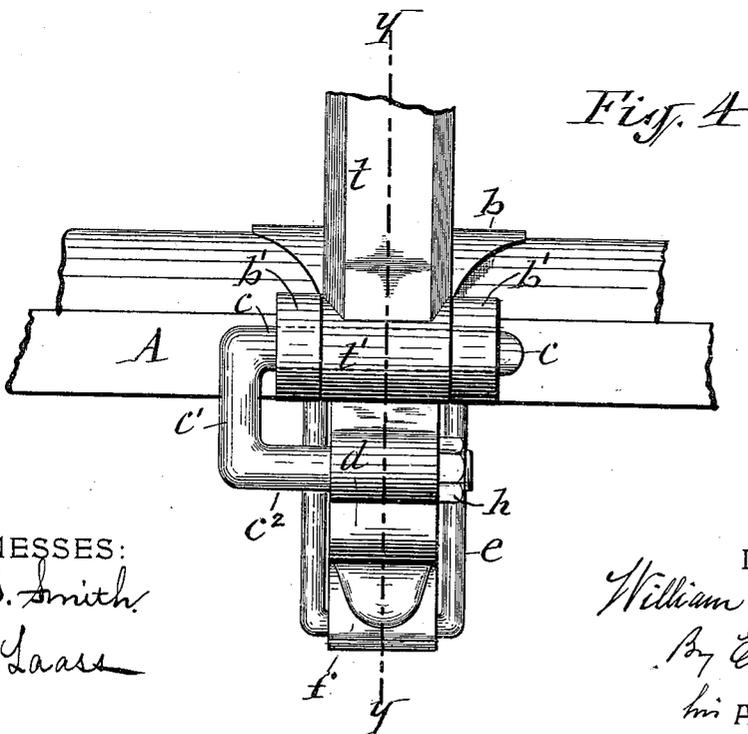
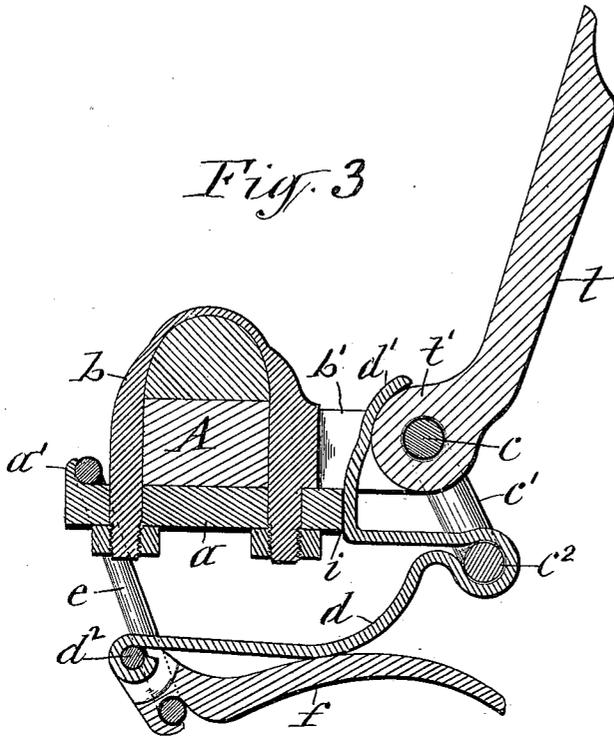
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UNITED STATES PATENT OFFICE.

WILLIAM F. SCHUBERT, OF ONEIDA, NEW YORK.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 621,156, dated March 14, 1899.

Application filed October 26, 1898. Serial No. 694,596. (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 an improvement in an antirattling thill-coupling.

The main object of this invention is to produce a coupling which can be readily and easily manipulated, whereby the thills can be quickly attached to and detached from the shackle-ears; and, furthermore, the object of the invention is to provide the coupling with simple and effectual means to prevent rattling of the thill in its attachment; and, still further, the object is to provide a thill-coupling which shall be simple, strong, and durable in construction, efficient in its operation, and at the same time inexpensive in its manufacture; and the object is also to provide a coupling device which can be used in connection with the usual and well-known shackle-ears and thill-iron now commonly in use, thus obviating the necessity of providing a special construction of said parts; and to that end the invention consists in the improved construction of the component parts of the thill-coupling hereinafter described.

In the annexed drawings, Figure 1 is a side view of my improved antirattling thill-coupling. Fig. 2 is a longitudinal section on line XX in Fig. 1. Fig. 3 is a vertical transverse section on line YY in Fig. 4, and Fig. 4 is a front view of the same.

Referring to the drawings, A represents the front axle of the vehicle.

b denotes the clip, secured to the axle by means of the usual bar a and nuts on the ends of the clip. Said clip is provided with shackle-ears b' b' for the attachment of the thill.

t represents the thill-iron, formed with the usual coupling-eye t', which is inserted between the shackle-ears and secured thereto by means of the coupling-pin c. Said pin is formed with a limb c' and with a bar c², extending from said limb and parallel to the pin.

d is a spring-arm formed at one end into a

loop by which it pivotally embraces the aforesaid bar c², which bar is screw-threaded on its free end portion and provided with a nut h to retain the pin in connection with the spring-arm.

f denotes a lever which is fulcrumed on a link e, which link, when in coupling position, is hung from a hook a', formed on the rear end of the clip-bar a. Said lever is pivotally connected near its fulcrum to the spring-arm d, preferably by means of a pin d² passing through a bifurcation formed on the lever and through a loop formed at the rear end of said spring-arm, which loop is inserted in said bifurcation.

d' represents a tongue formed integral with the spring-arm d and extending from the loop which embraces the bar c². Said tongue enters between the shackle-ears b b and bears with its upper portion on the back of the coupling-eye t' of the thill-iron t, and is formed with a shoulder i, by which it bears on the front end of the clip-bar a.

The operation of the thill-coupling is as follows: The coupling-pin c being inserted in the shackle-ears b b and coupling-eye t', the link is placed in engagement with the hook a' on the clip-bar a. Then by pushing up the lever f the spring-arm d is caused to turn on the bar c² of the coupling-pin, whereby the tongue d' is forced upward and wedged between the clip-bar and coupling-eye of the thill-iron t, and thus the thill-iron is effectually prevented from rattling in its attachment and the coupling-pin firmly held in its locking position. To detach the thill from the vehicle, the lever f is pushed down and the link removed from the hook a'. Then by swinging the bar c² of the coupling-pin c forward and upward the tongue d' is withdrawn from between the shackle-ears, whereby the pin c can be removed from the shackle-ears and coupling-eye.

It will be observed in the attachment of the thill that in pushing up the lever f and by reason of the tongue d' bearing against the thill-iron t the loop formed at the forward end of the spring-arm d is caused to firmly grip the bar c², whereby the coupling-pin c will be retained in the shackle-ears b b and coupling-eye t' of the thill-iron should the nut h become lost off from the bar c².

I do not wish to be limited to the specific means shown and described for attaching the spring-arm to the coupling-pin, inasmuch as said arm may be otherwise pivotally connected to the pin; nor do I wish to be limited to the tongue being formed integral with the spring-arm, as the same may be formed separate from the arm and provided with suitable attaching devices. Neither do I limit myself to the attachment of the lever to the spring-arm or its fulcrum, as the same are subject of many modifications without departing from the spirit of my invention.

What I claim is—

15 In combination with the axle-clip formed with shackle-ears, the clip-bar, and thill-iron, a coupling-pin having a bar formed integral therewith and parallel thereto, a spring-arm

formed with a loop pivotally embracing said bar, a tongue formed integral with the spring-arm and extending from said loop, and entering between the shackle-ears, a link hung from a hook formed on the rear end of the clip-bar, a lever fulcrumed on the lower end of said link and bifurcated near its fulcrum, and a loop formed at the opposite end of said spring-arm and secured in said bifurcation by means of a pivot-pin, said lever serving to actuate the spring-arm whereby said tongue is wedged between the clip-bar and thill-iron as set forth.

WILLIAM F. SCHUBERT. [L. S.]

Witnesses:

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WILLIAM F. SNOW.