

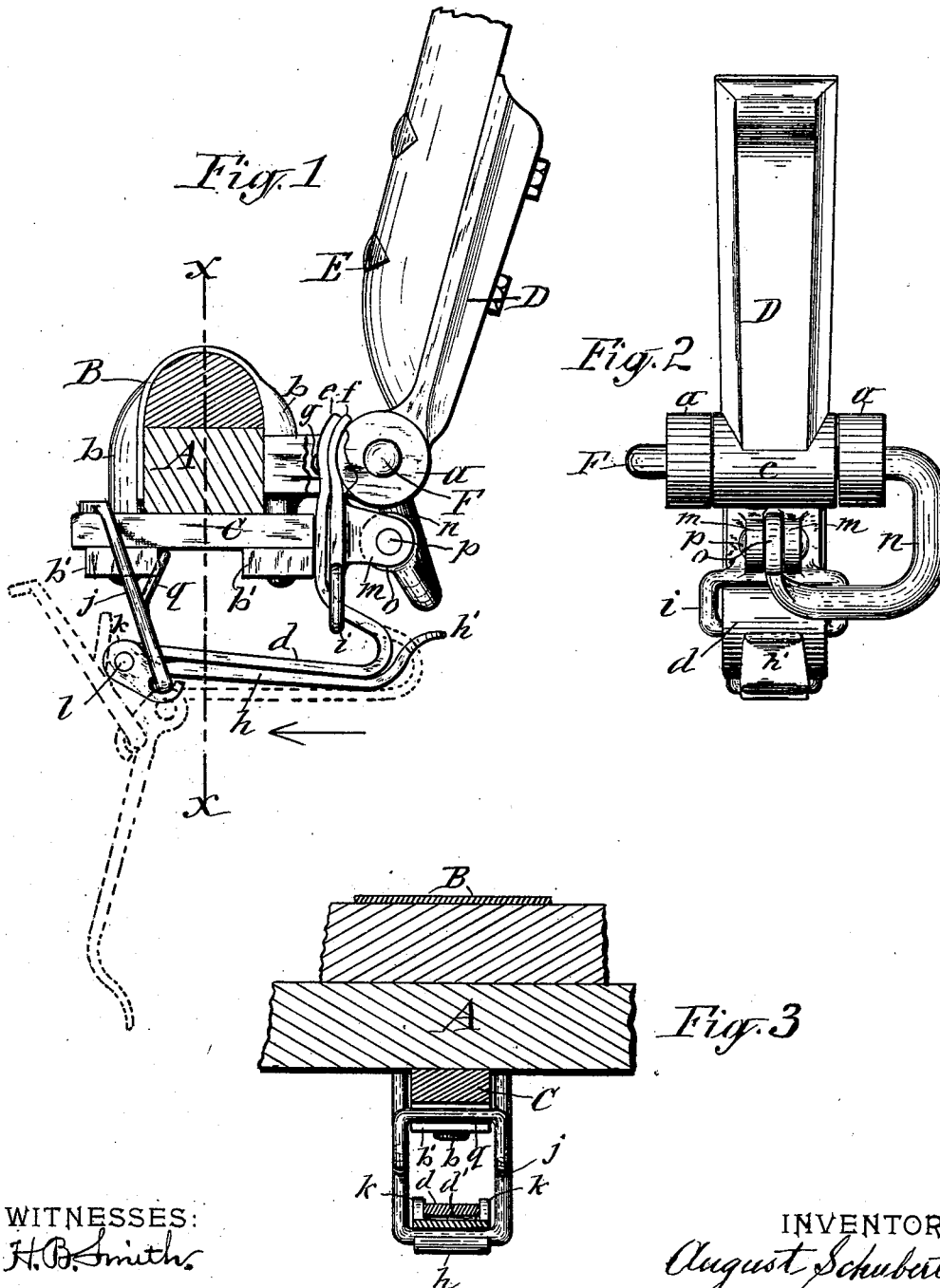
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A. SCHUBERT.
THILL COUPLING.

(Application filed Aug. 28, 1899.)

(No Model.)



WITNESSES:
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AUGUST SCHUBERT, OF ONEIDA, NEW YORK.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 646,649, dated April 3, 1900.

Application filed August 28, 1899. Serial No. 728,686. (No model.)

To all whom it may concern:

Be it known that I, AUGUST SCHUBERT, a citizen of the United States of America, 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.

The object of the invention is to provide a simple and efficient coupling device which can be applied to a vehicle equipped with the old and well-known shackle-ears secured to the axle and the thill-iron provided with a shackle-eye.

Furthermore, the object is to provide a device which can be easily and conveniently manipulated to effect the attachment and detachment of the thills or pole and to produce a construction which shall be strong and durable, free from rattling, safe from accidental uncoupling, and at the same time inexpensive in its manufacture.

To that end the invention consists in the novel construction and combination of the component parts of the improved thill-coupling, as hereinafter fully described, and set forth in the claims.

In the annexed drawings, Figure 1 is a side view of the thill-coupling. Fig. 2 is a front view of the same, and Fig. 3 is a vertical transverse section on line X X in Fig. 1.

Referring to the drawings, A represents the front axle of the vehicle, and B the usual clip formed with the shackle-ears *a a*, which clip is secured to the axle by means of the bar C on the under side of said axle, clip-bolts *b b*, and nuts *b' b'* in the well-known manner.

D denotes the thill-iron, which is secured to the thill E in the usual way and is provided with the shackle-eye *c*.

d is a flat spring which is disposed in substantially a horizontal position and is formed at its forward end portion with an upwardly-extending antirattling tongue *e*, entering between the aforesaid shackle-ears *a a*. Said tongue is fulcrumed at its lower portion on the front end of the clip-bar C, whereby its upper portion is forced toward the shackle-eye or thill-iron. The tongue *e* is provided on its front with a wear-plate *f*, preferably

secured to the tongue by means of a rivet *g*, which plate is in contact with the back of the shackle-eye *c* and is made to bear firmly thereon when the rear end of the spring is drawn upward by reason of the tongue being fulcrumed on the front of the clip-bar C, and thus rattling of the coupling-pin hereinafter described and the parts connected thereby is effectually prevented.

The spring *d* is actuated by means of a lever *h*, fulcrumed on the lower end of a bail *j*, hung from the rear end of the clip-bar C, which lever is pivotally connected to the rear end of the spring by means of a bifurcation *k*, formed on the lever and receiving an eye *d'*, formed on the spring, through which bifurcation an eye passes a pin *l*. The lever *h* is contiguous to the under side of the entire flat portion of the spring and terminates at its front end with an upwardly and forwardly bent lip *h'*, which serves as a thumb-piece by which to operate said lever. By this arrangement of the lever the same is free from liability of coming in contact with anything which would tend to throw the lever out of its coupling position, thus affording safety to the coupling.

The aforesaid wear-plate *f* is formed on its front with two ears *m m* and on its lower end with a downwardly-extending loop *i*, which embraces the spring *d* and forms a fulcrum therefor. Said loop also serves to reinforce the attachment of the wear-plate to the tongue *e*, wherein it relieves the rivet *g*, connecting said parts from strain, which rivet might otherwise become broken, and, furthermore, the loop prevents the tongue or spring from breaking at the rivet.

F denotes the coupling-pin, which passes through the aforesaid shackle-ears *a a* and shackle-eye *c* in the usual manner, which pin is formed with a downwardly and inwardly extending arm *n*, terminating with a rearwardly-projecting eye *o*, which is pivoted between the aforesaid ears *m m* on the wear-plate by means of a pin *p*.

On the front of the aforesaid bail *j* is formed a guard *q*, which engages the front of a projection on the under side of the clip-bar, which projection preferably consists of the rear clip-nut *b'*. Said guard consists of a cross-bar extending between the intermediate portions of

the two parallel arms of the bail and prevents the upper end of the bail from becoming accidentally disengaged from the clip-bar C.

When it is desired to detach the thill or pole from the vehicle, the lever *h* is swung downward and rearward to relieve the spring *l* of its tension, and at the same time the bail *j* is swung rearward, whereby the guard *q* is automatically drawn out of engagement with the aforesaid clip-nut *b'* to permit the bail to be removed from the clip-bar C, as shown by dotted lines in Fig. 1 of the drawings. Then by swinging the spring forward and downward the tongue *e* is withdrawn from between the aforesaid shackle-ears *a a*, which allows the coupling-pin F to be removed.

It will readily be seen that the thills or pole can be easily and quickly attached to the vehicle when desired.

What I claim as my invention is—

1. In a thill-coupling, the combination with the axle-clip formed with shackle-ears and the thill-iron provided with a shackle-eye, of a spring formed with an antirattling tongue entering between said ears, a wear-plate secured to the front of the tongue and formed with a downwardly-extending loop embracing said spring and forming a fulcrum for said spring, a pair of ears formed on the front of the wear-plate, the coupling-pin formed with a downwardly and inwardly extending arm terminating rearwardly with an eye pivotally connected to the latter ears, and a suitably-fulcrumed lever connected to said spring substantially as described.

2. In a thill-coupling, the combination with the axle-clip formed with shackle-ears and the thill-iron provided with a shackle-eye, of a spring formed with an antirattling tongue entering between said ears, a wear-plate secured to the front of the tongue and formed with a downwardly-extending loop on its lower end embracing said spring and forming a fulcrum therefor, a pair of ears formed on the front of the wear-plate, the coupling-pin formed with a downwardly and inwardly extending arm terminating rearwardly with an eye pivoted between the latter ears, a bail hung from the axle, a lever fulcrumed on said bail and connected to the aforesaid spring substantially as described.

3. In a thill-coupling, the combination with the axle-clip formed with shackle-ears, the clip-bar, and the thill-iron provided with a shackle-eye, of a spring formed with an antirattling tongue entering between said ears, a wear-plate secured to the front of the tongue and formed at its lower end with a downwardly-extending loop embracing said spring

and forming a fulcrum therefor, a pair of ears formed on the front of said wear-plate, the coupling-pin formed with a downwardly and inwardly extending arm terminating rearwardly with an eye pivotally connected to the latter ears, a bail hung from the aforesaid clip-bar and formed with a guard engaging a projection on the under side of said clip-bar to prevent accidental disengagement of said bail from the bar, and a lever fulcrumed on the lower end of the bail and pivotally connected to the aforesaid spring substantially as described.

4. The combination with the axle, axle-clip formed with shackle-ears, clip-bar, shackle-eye, and coupling-pin, of a spring formed with an antirattling tongue entering between said ears and provided with a wear-plate bearing on the back of the shackle-eye, a bail hung from the clip-bar and formed with a guard engaging a projection on the under side of the clip-bar to prevent accidental disengagement of said bail from the bar, and a lever fulcrumed on said bail and pivotally connected to the aforesaid spring and serving to automatically draw the guard out of engagement with the aforesaid projection to permit the removal of the bail from the clip-bar as set forth.

5. The combination with the axle, axle-clip formed with shackle-ears, clip-bar, shackle-eye, and coupling-pin, of a spring formed with an antirattling tongue entering between said ears, a wear-plate secured to the front of the tongue by a rivet and formed at its lower end with a downwardly-extending loop embracing the spring and forming a fulcrum therefor, said loop also serving to relieve the aforesaid rivet from strain, a bail hung from the clip-bar and formed with a guard on its front engaging one of the clip-nuts to prevent accidental disengagement of the bail from the clip-bar, and a lever fulcrumed on the lower end of said bail and formed with a bifurcation on its fulcrumed end in which is pivoted the aforesaid spring substantially as described.

6. The combination with the shackle-ears, shackle-eye, and coupling-pin, of a suitably-supported spring formed with an antirattling tongue entering between said ears, a wear-plate riveted to the front of said tongue and formed at its lower end with a downwardly-extending loop embracing the aforesaid spring for the purpose set forth.

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Witnesses:

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