

No. 702,951.

Patented June 24, 1902.

T. J. HUBBELL.
THILL COUPLING.

(Application filed Apr. 16, 1902.)

(No Model.)

Fig. 1.

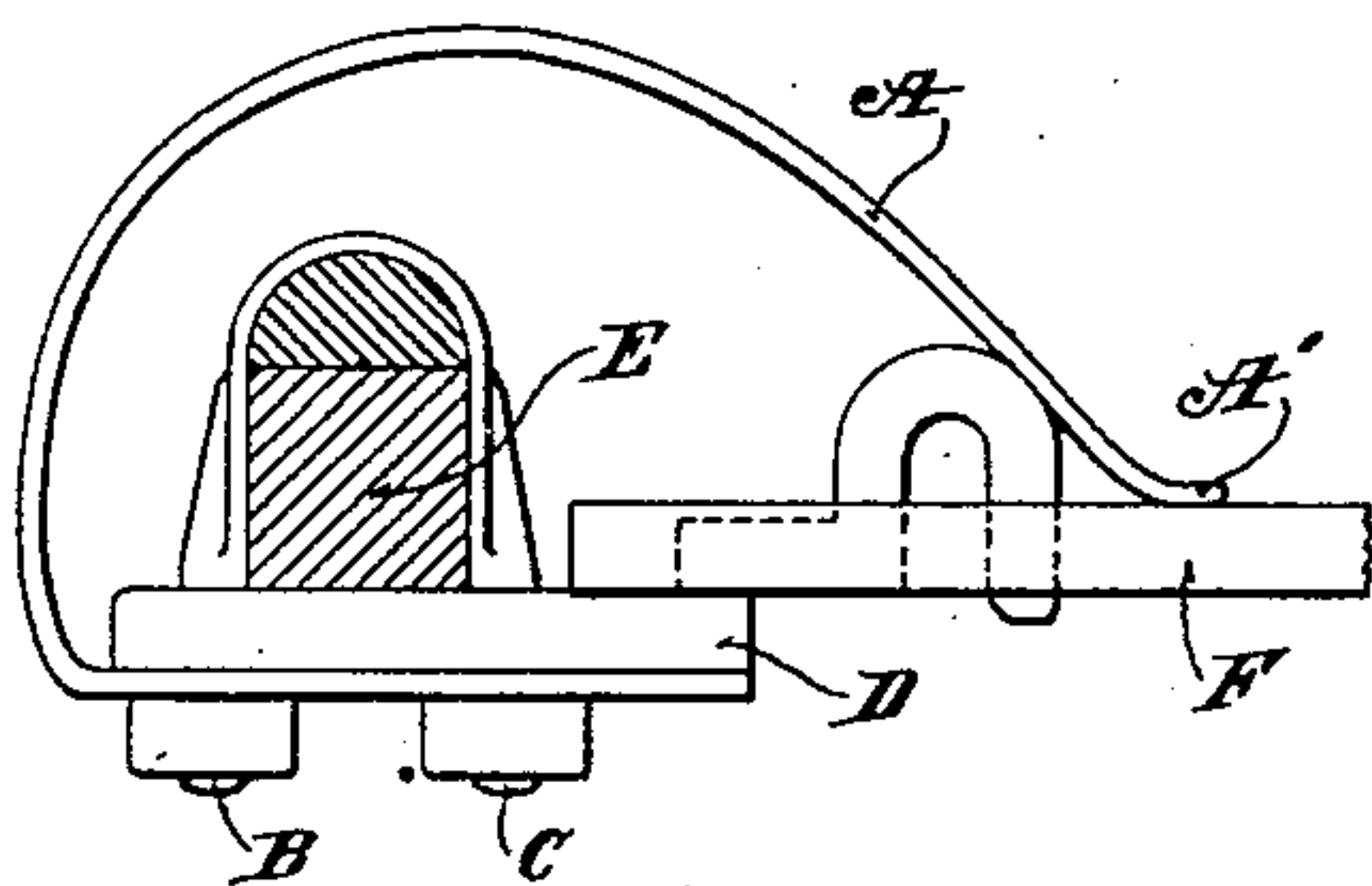


Fig. 2.

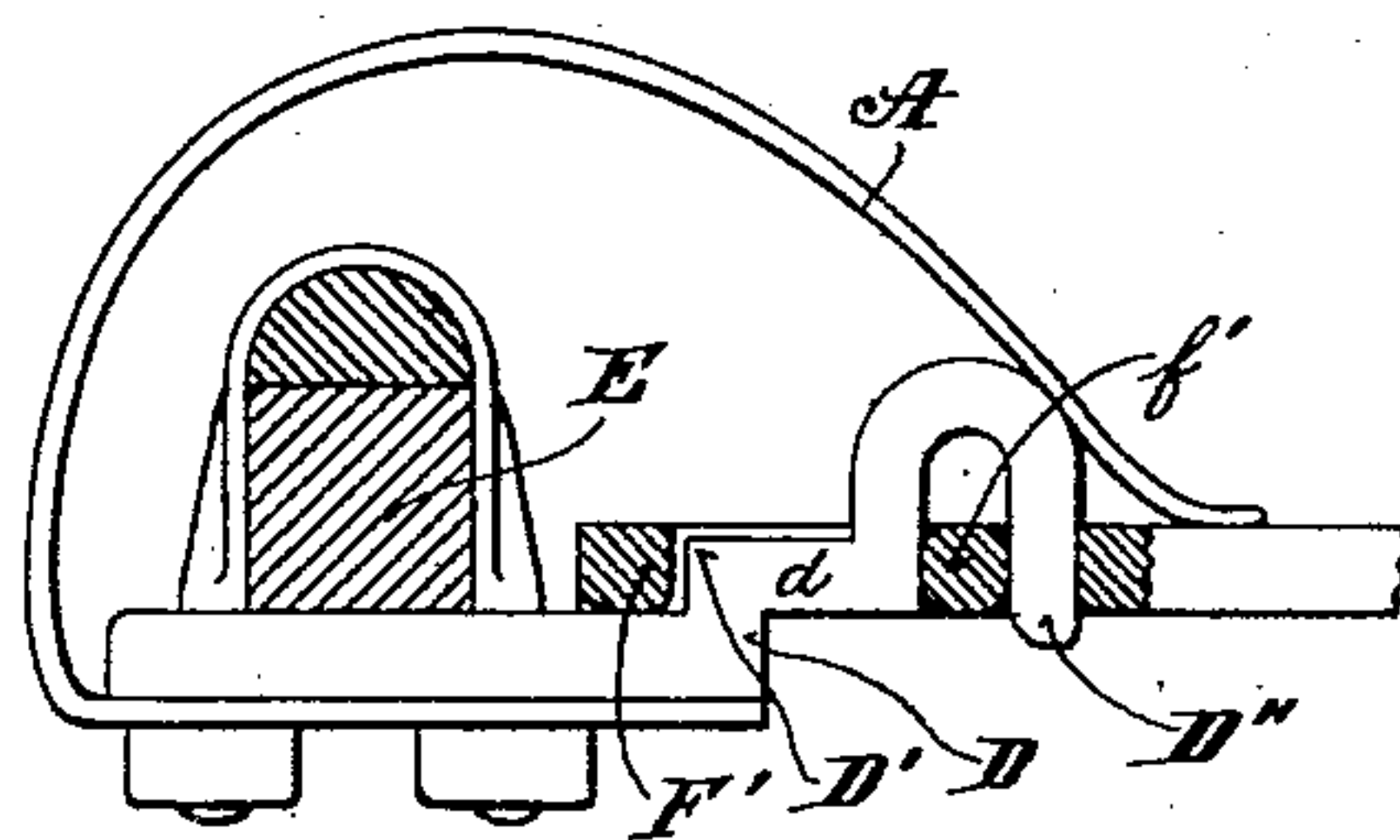
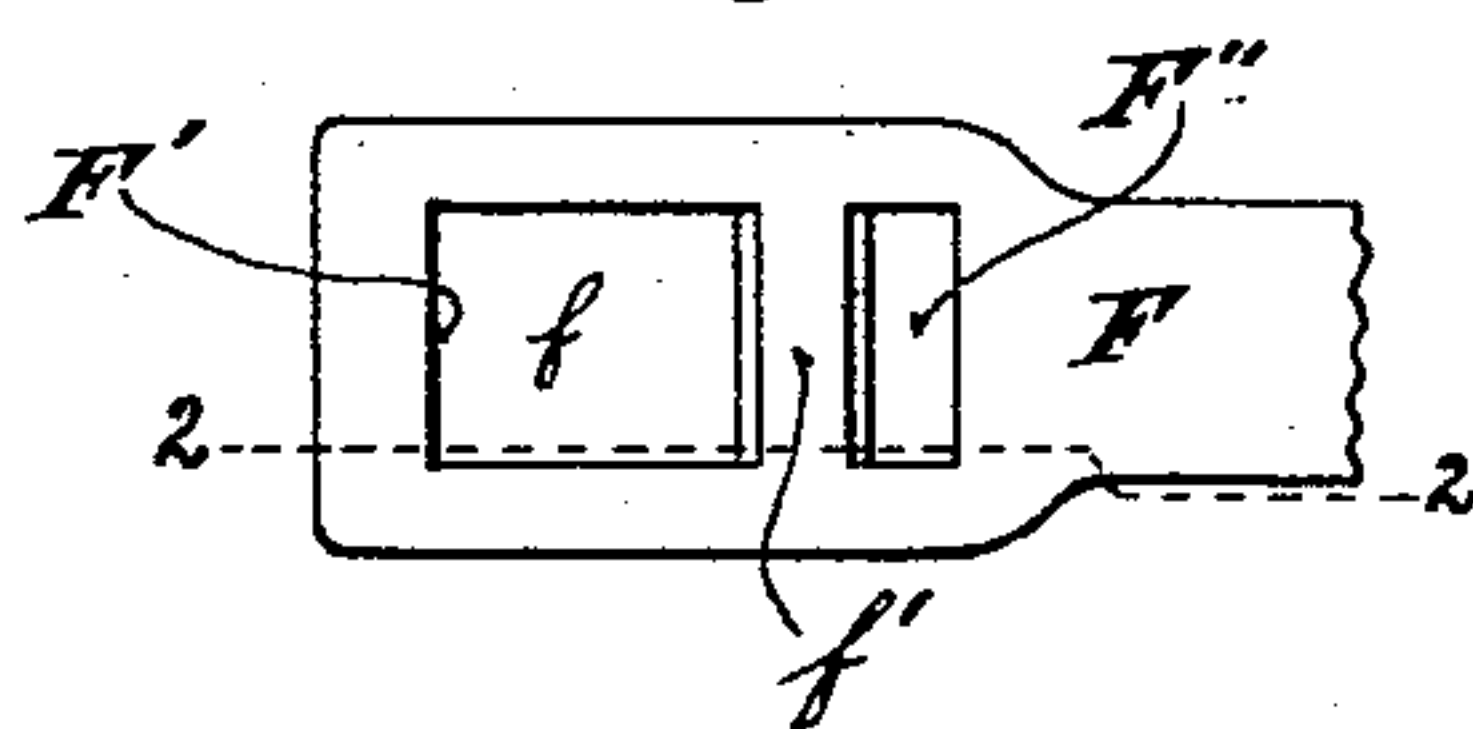


Fig. 3.



WITNESSES

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THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 702,951, dated June 24, 1902.

Application filed April 16, 1902. Serial No. 103,207. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. HUBBELL, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Thill-Couplings, of which the following is a specification.

The object of my invention is to provide a coupling for thills which is simple in construction, reliable and efficient in its operation, by means of which the thill can be readily attached to and detached from the axle without the use of screws, bolts, or wrenches, and will at all times prevent any rattling, as is usual in couplings of this character, and will never permit the thills to work loose or become accidentally detached from the axle. I accomplish this object by means of the device herein described, and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved coupling in place on the axle of a wagon, the axle being shown in section and the shaft-iron partly broken away, being in place and attached thereto. Fig. 2 is a like view, a portion of the shaft-iron being cut away on the line 2 2 of Fig. 3. Fig. 3 is a plan of the coupling end of the shaft-iron adapted for attachment to my coupling.

In the drawings, A is the antirattler-spring, secured to the axle by the bolts B and C of usual construction on the clip which secures the coupling D to the axle E. In its normal position the projecting end A' of the spring will bear down on the thill-iron F and keep it spring-pressed against the coupling D. This coupling is secured to the axle in like manner and at the same time as the spring. It is provided with an upwardly-projecting shoulder D', adapted to engage the edge F' on the shaft-iron, and also a hook D'', adapted to enter an opening F'' in the shaft-iron, the opening f adapted to receive and engage that portion d of the shaft-iron. The corners on the shaft-iron which engage the coupling are rounded, as shown, to permit a free pivotal movement of the shafts in the coupling. It will be manifest that as the thills are elevated and depressed the cross-bar f' will move up and down in the hook D'', but will not pass out of this opening by any of the ordinary movements of the thills.

When it is desired to detach the thills from the axle, the thills are depressed until the shoulder F' on the shaft-iron has passed above the hook D'' and the cross-bar f' has dropped below the end of the hook, when the shafts may be readily pulled out, the cross-bar f' passing over the hook, raising the spring in so doing. To reattach the thills, the shoulder is again passed under the spring and the cross-bar f' raised up into place in the hook D''.

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

1. A thill-coupling, comprising a main body portion adapted to be removably secured to the axle, the said portion projecting forwardly and being provided with a shoulder and a hook the hump of the hook disposed upwardly and the end thereof projecting downwardly; a shaft-iron for attachment provided with openings for the reception of that portion of the coupling having a shoulder and another opening adapted to receive the downwardly-projecting end of the hook; a spring secured to the axle the free end thereof adapted to engage the top of the shaft-iron and hold the same spring-pressed against shaft-iron substantially as herein shown and described.

2. A thill-coupling, comprising a spring secured to the axle, the free end projecting over the shaft-iron and adapted to bear against the same and to hold the same down and in engagement with the coupling, in combination with a coupling secured to the axle and provided with a shoulder and a hook to enter openings in and engage the end of the shaft-iron; a shaft-iron having openings to receive the shoulder and the hook on the coupling substantially as shown and described.

3. A coupling for thills to detachably secure the thills to the axle without the use of bolts or screws or wrenches, comprising an antirattler-spring bolted to the axle and with the same bolts which secure the coupling to the axle, projecting upwardly therefrom over the axle and terminating in an end adapted to bear against the shaft-iron, and hold it spring-pressed against the coupling; a coupling detachably secured to the axle, the coupling having a shoulder and a hook of the configuration shown, the said shoulder and hook

adapted to detachably engage the shaft-iron; a shaft-iron of the configuration shown, being provided with openings to engage the shoulder and hook on the coupling.

- 5 4. In a thill-coupling the combination of the antirattler-spring A, secured to the axle the free end A' thereof adapted to bear against the shaft-iron and hold the same spring-pressed against the shaft-iron, the coupling
10 D detachably secured to the axle E and projecting forwardly therefrom, the coupling being provided with a shoulder portion *d* adapted to enter an opening in the shaft-iron and

a hook D'' adapted to enter another opening in the shaft-iron; a shaft-iron F provided 15 with openings *f* and F'' for the reception respectively of the shoulder portion *d* and the hook D'' of the coupling D substantially as shown and described.

In witness that I claim the foregoing I have 20 hereunto subscribed my name this 10th day of April, 1902.

THOMAS J. HUBBELL.

Witnesses:

HENRY T. HAZARD,
G. E. HARPHAM.