(No Model.)

A. FULTON.

CAR COUPLING.

No. 277,837. Patented May 15, 1883.

Fig. 1.

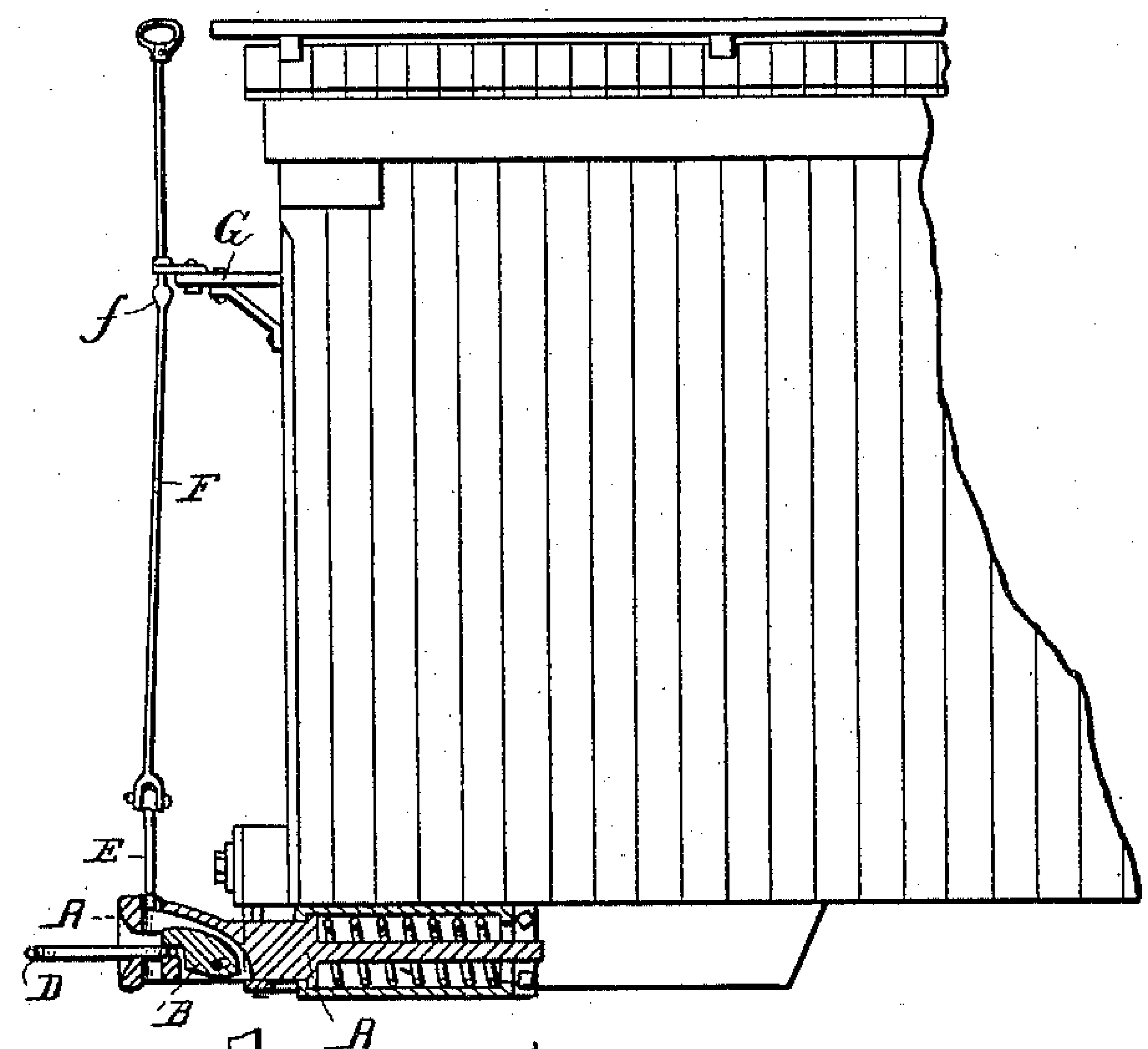


Fig. 2.

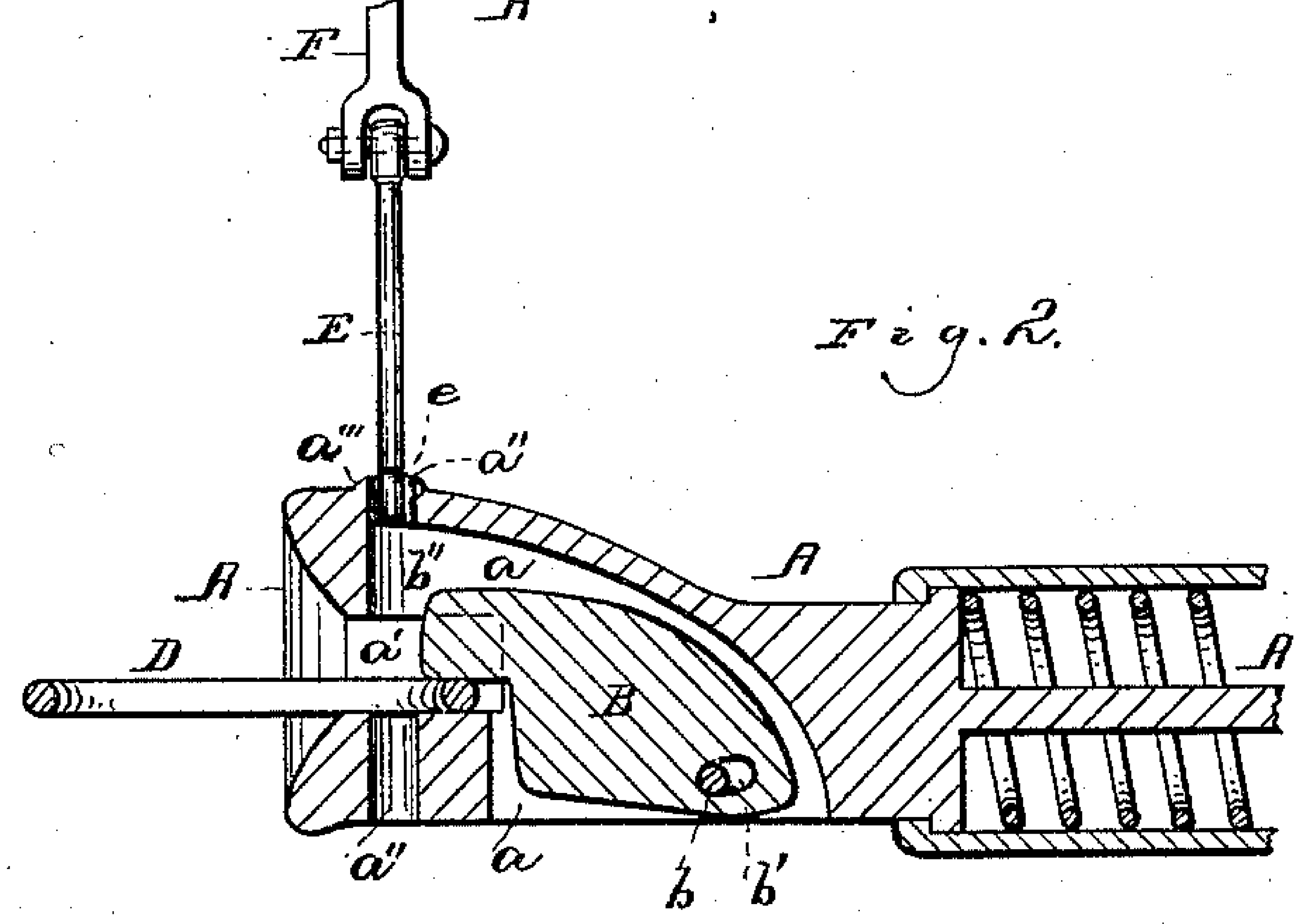


Fig. 3.

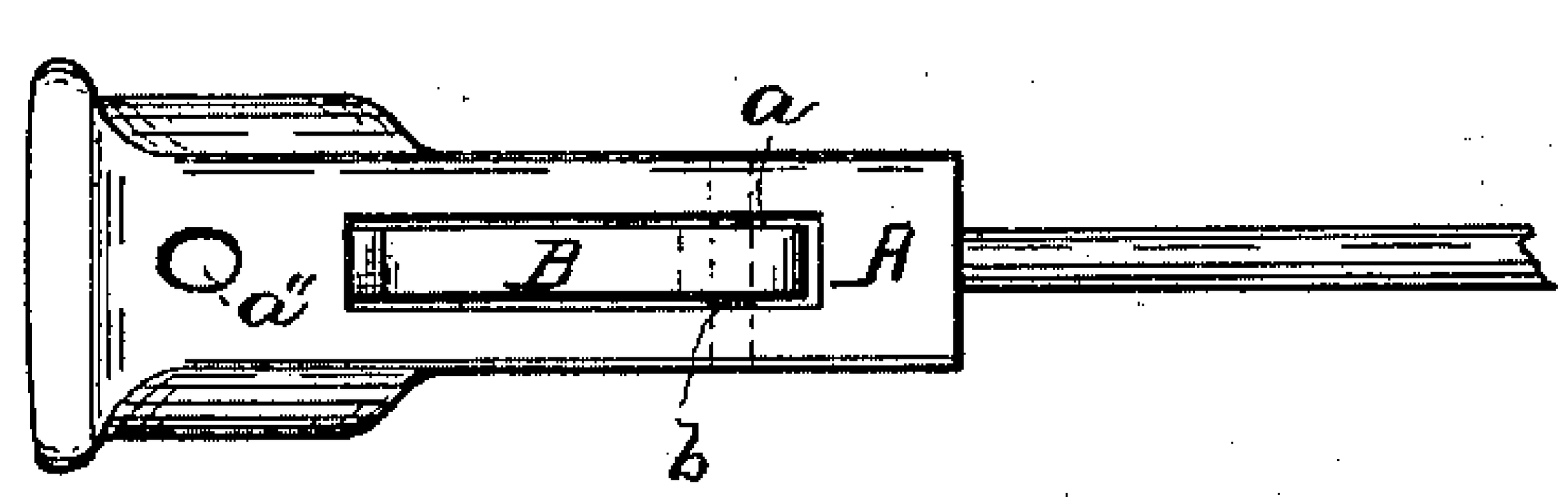


Fig. 4.

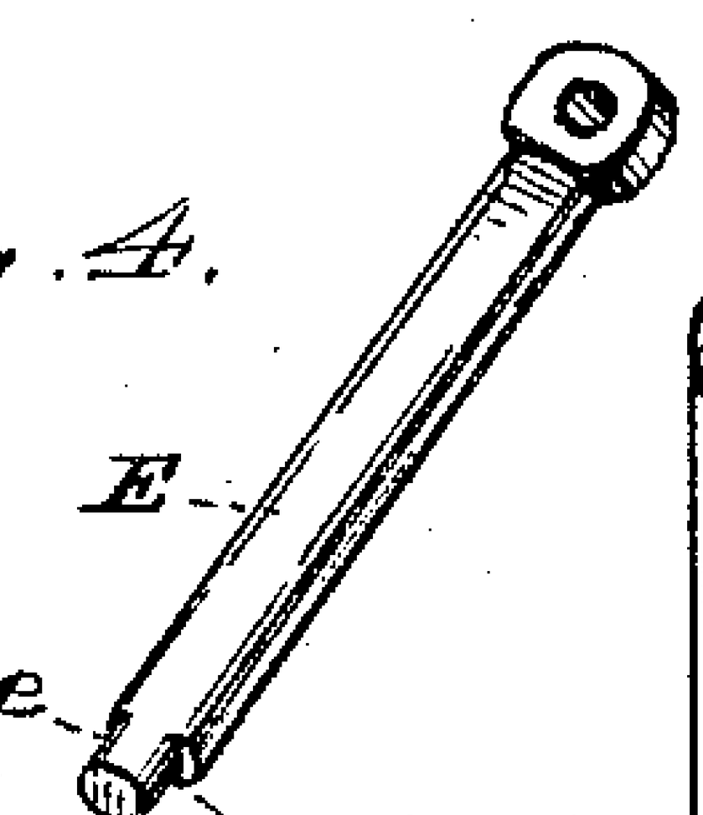


Fig. 6.

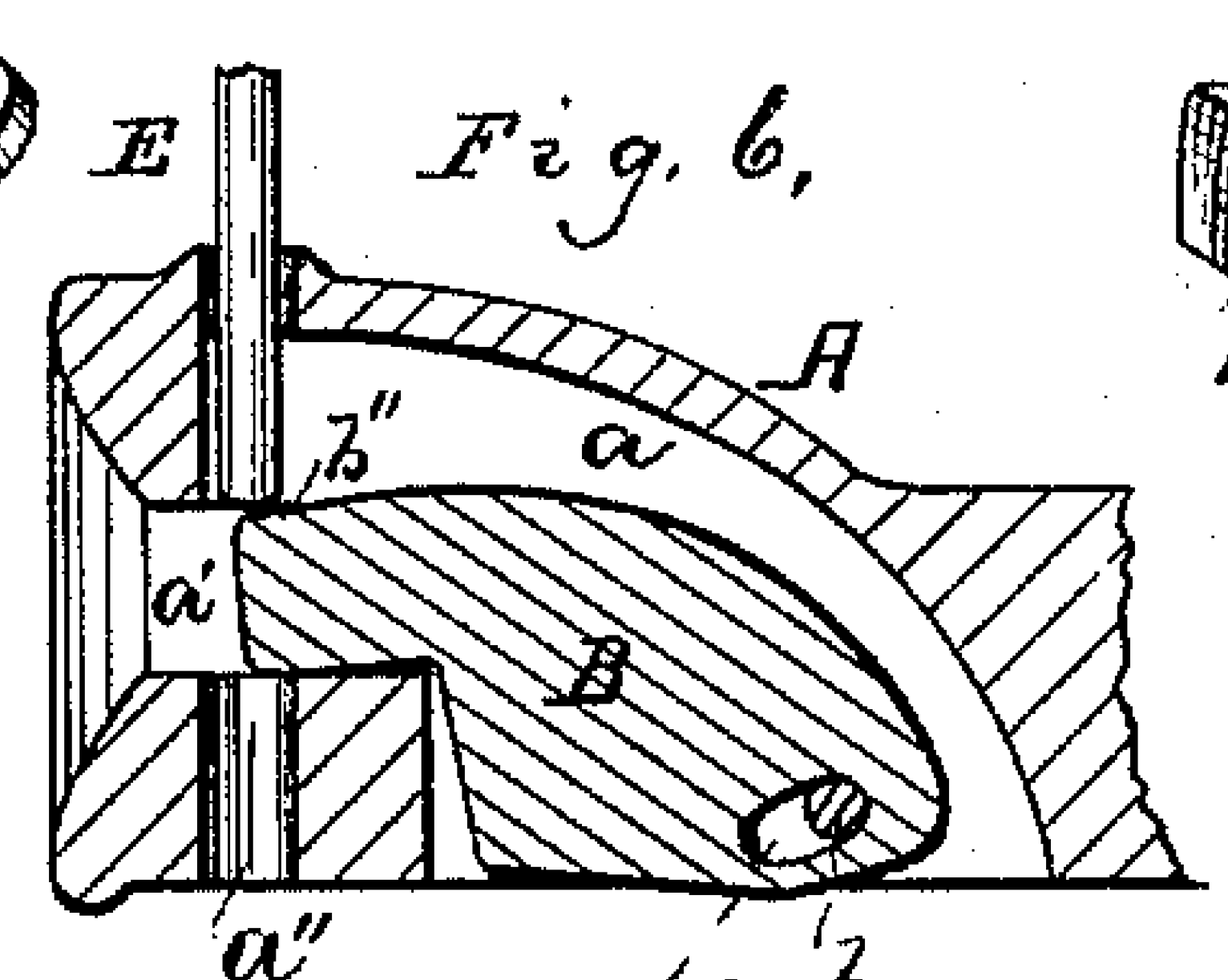
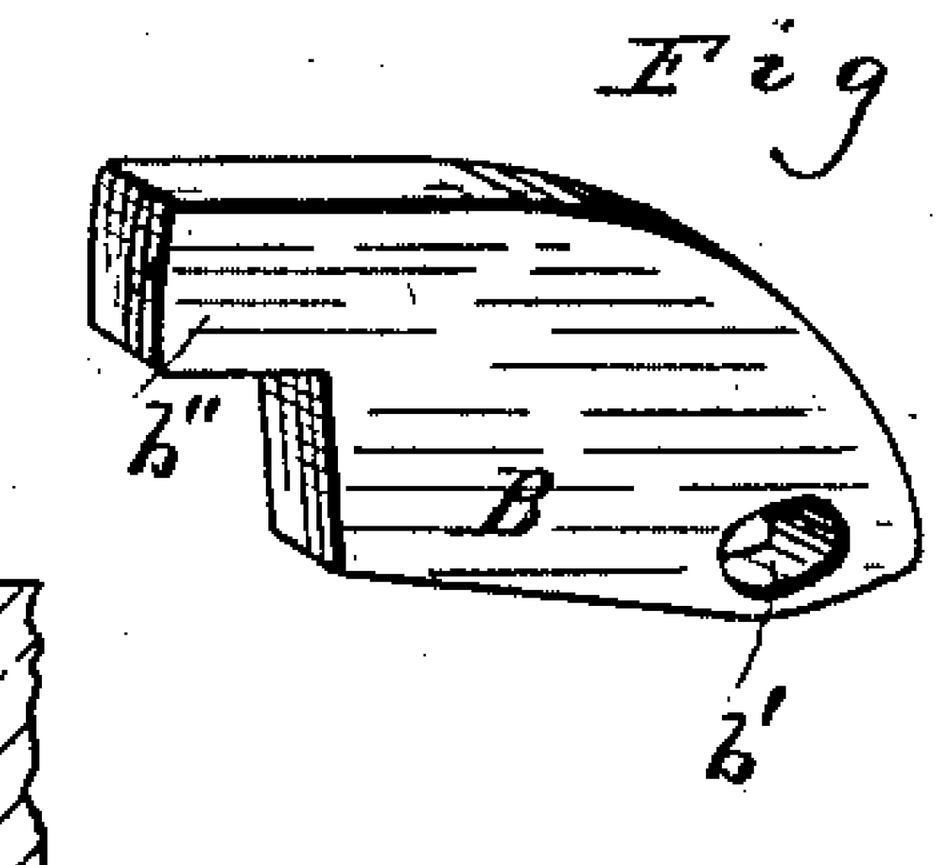


Fig. 5.



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UNITED STATES PATENT OFFICE.

ALFRED FULTON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-THIRD TO PETER PETERSON, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 277,837, dated May 15, 1883.

Application filed August 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALFRED FULTON, of Chicago, Illinois, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

The accompanying drawings illustrate the invention. Figure 1 is a portion of a side view of a box-car with the improved coupling attached. Fig. 2 is an enlarged longitudinal vertical section of a bumper containing the invention. Fig. 3 is a bottom view of the same. Fig. 4 is a perspective view of the coupling-pin. Fig. 5 is a perspective view of the link-and-pin holder detached. Fig. 6 is a section showing the bumper without the link, and the coupling-pin set for automatic coupling.

The bumper A is of the usual construction for link and pin, except that it is provided with a vertical recess or slot, *a*, which traverses the rear part of the usual horizontal opening, *a'*, made for the link to enter the bumper, and extends part way across the pin-hole *a''* for the coupling-pin. In this recess the link-and-pin holder B is secured on a bolt, *b*, which passes through an oblong hole, *b'*, in the lower edge and near the rear end of the link-and-pin holder. The upper forward end is provided with a projecting part, *b''*, which extends into that part of the vertical recess which traverses the link-opening and coupling-pin hole. The holder works on the bolt *b*, and this projection rests on the bottom or under side of the opening *a'* when the link D is out, and extends upward to the top of said opening, and forward, so as to partially close the pin-hole *a''* and prevent the coupling-pin E from passing down. In form and position in the bumper it is essential that the holder shall be about one-third longer horizontally than it is vertically, and that the hole *b'* be in the lower rear part, considerably below the level of the lower part of the projection, so that the holder shall have first a sliding back and then a tilting movement from its extreme forward position upon bolt *b*.

The operation is as follows: When the parts are in the position shown in Fig. 6, the link strikes the end of the projection and slides the holder directly back until the bolt is brought to the forward end of the oblong opening *b'*. At this point the coupling-pin falls down onto the end of the link, and the further action of the link tilts the holder, so as to raise the forward end sufficiently to allow the link to pass under the projection. The weight of the forward end alone, being thus rested on the top of the link at the inner end, holds the link up level, and the coupling-pin drops down through the link and completes the coupling. The weight of the forward end resting on the link assists in sliding the holder forward when the link is being withdrawn in uncoupling, and when it is withdrawn the forward end drops or tilts down to the forward position, ready for another operation.

In coupling cars provided with this coupling the attendant puts the link and coupling-pin into one of the bumpers in the position shown in Fig. 2, and then sets all the other opposite coupling-pins in the position shown in Fig. 6 on all the cars desired to be coupled. When this is done the engineer can push all the cars slowly together without stopping, and they will all be automatically coupled without the attendant's going between them while in motion. The projection, when down, should let the coupling-pin far enough down into its hole to prevent its being knocked or jarred out by accident, and as a further protection against this the coupling-pin hole may pass through a boss, *a'''*, formed on the top of the bumper, to thicken the top shell and extend the hole upward, if need be.

In using this coupling with flat cars the coupling-pin is attached to the bumper by a chain in the usual way, and the ordinary link and coupling-pin may be used; but I make the coupling-pin and its hole oval in cross-section and provide the point of the coupling-pin with shoulders *e e*, so that the pin may be turned across the oval hole and set in on the shoulders, as seen in Fig. 2, when desired, so that it will not couple when the cars come together. The shoulders *e* should be made sufficiently beveling to prevent catching in the pin-hole at the bottom of the link-opening in coupling. On box-cars I attach a light rod or wire, F, to the top of the coupling-pin, and extend the rod to the top of the car, where it is provided with a loop or handle for raising the pin to uncouple the cars from the top. The rod F passes through a hole in a bracket or brace,

G, on the end of the car, and has a shoulder or knob, *f*, sufficiently below the bracket to allow the coupling-pin to have the shoulders lifted out of the oblong hole, so that the pin may be turned one-quarter way round and rested on the shoulders, or be set so as to couple when the cars come together, as desired. This does not interfere with the cars being uncoupled or set for coupling by an attendant on the ground, but merely enables the brakeman on the top of the car to operate the same when convenient.

The ordinary round coupling-pin may be used with the rod F and arranged to be drawn clear out of the hole when not set for coupling.

The holder B is made of metal, and its weight is just enough to hold the link in an elevated position, ready for entering the opposite bumper, when resting upon one end of the link, as seen in Fig. 2.

A′ is the ordinary bumper-spring.

What I claim is—

As an improvement in car-couplings, the bumper provided with a vertical longitudinal slot or recess traversing the link-opening, in which slot a link-and-pin holder, as B, of about one-third greater length than height, and having a projection, as *b″*, reaching from the bottom to the top of the link-opening, is supported in a horizontal position in front by having said projection rested on the bottom of the link-opening, and in the rear by a bolt passed through an oblong hole in the rear part and at a point considerably below the plane of the bottom of the link-opening, all arranged to operate in both respects substantially as specified.

ALFRED FULTON.

Witnesses:
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