

C. W. BALDWIN.

Car Coupling.

No. 57,618.

Patented Aug. 28, 1866

Fig:1:

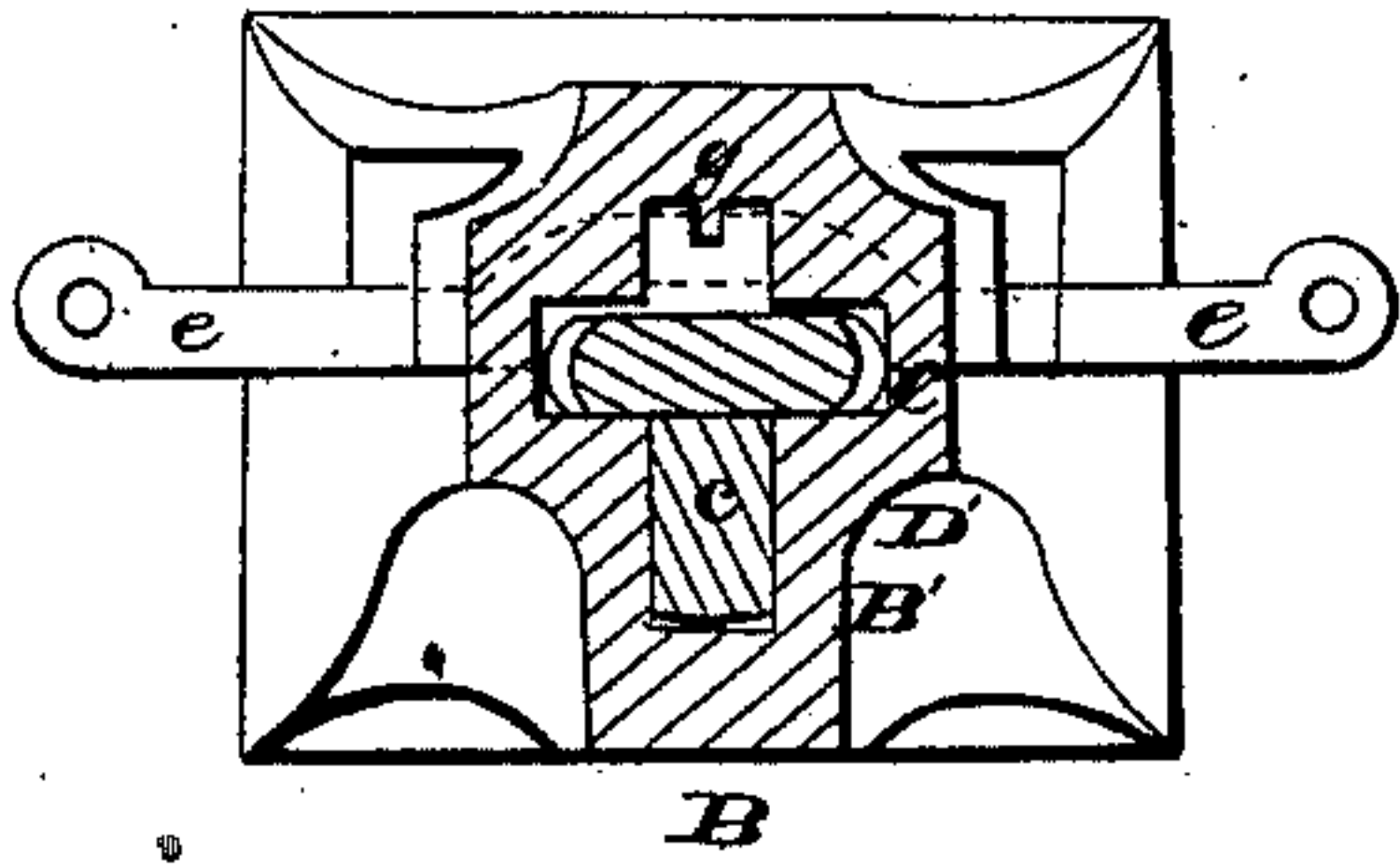


Fig:2:

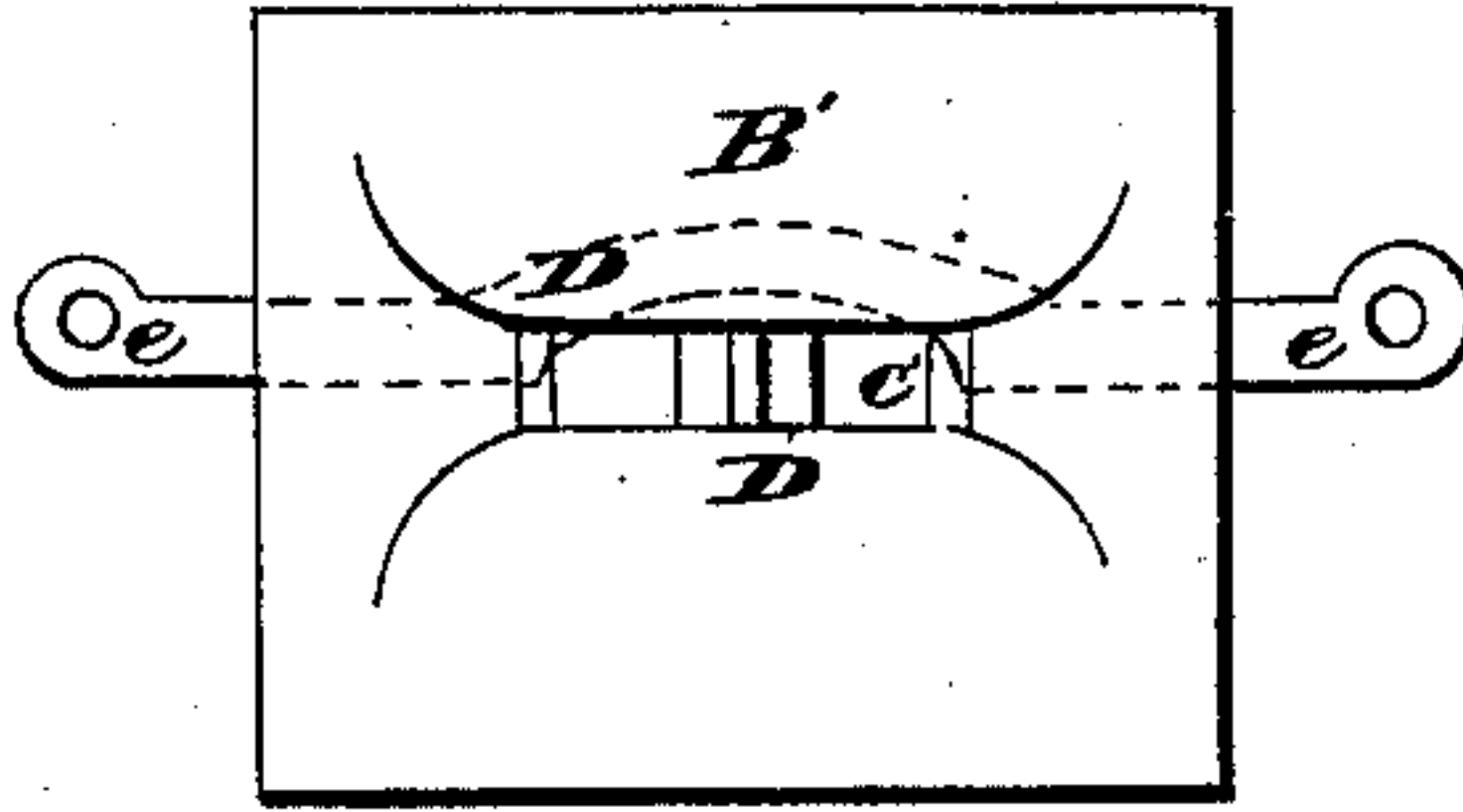


Fig:3:

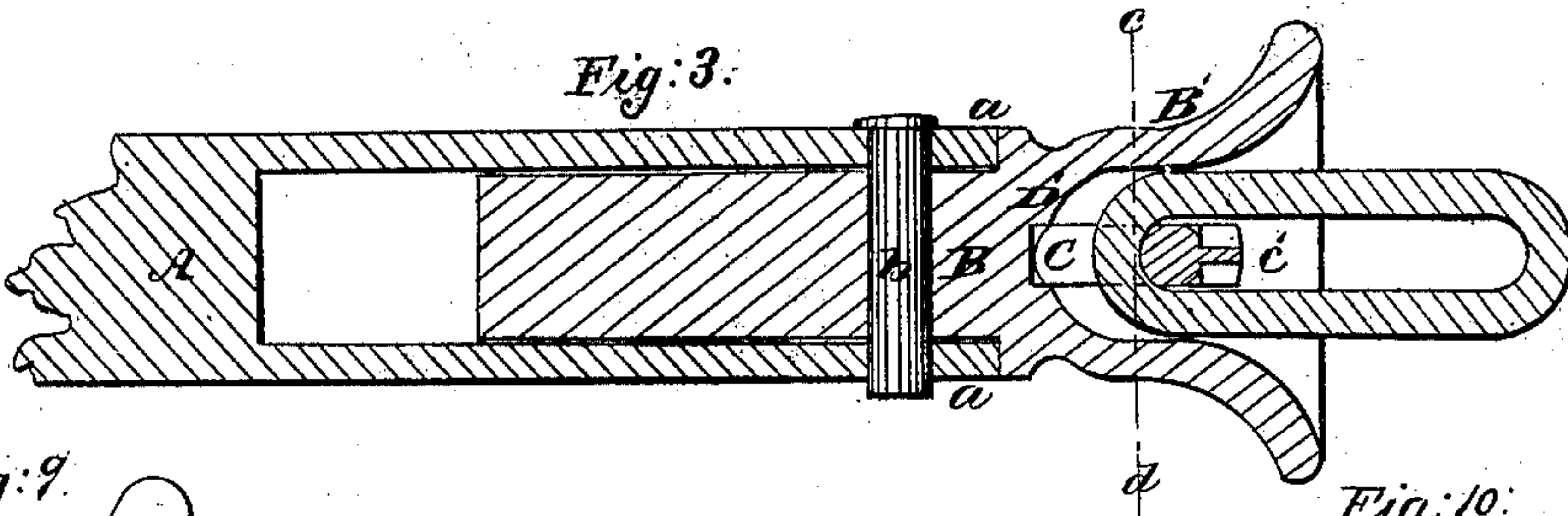


Fig:9:

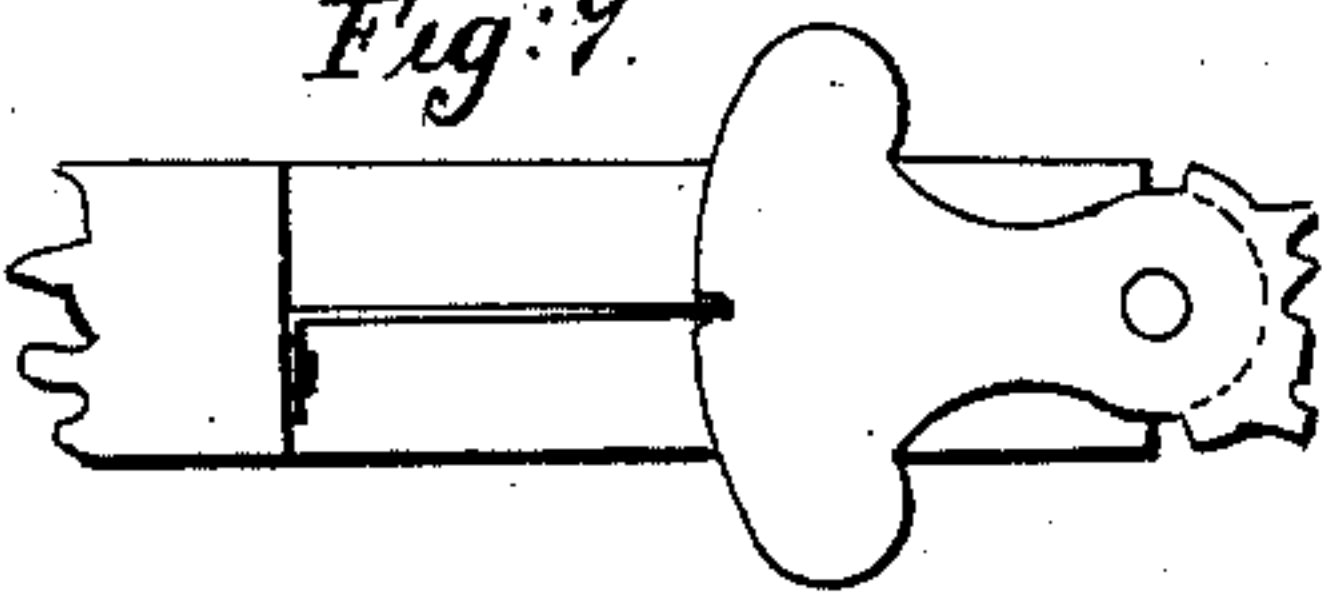


Fig:10:

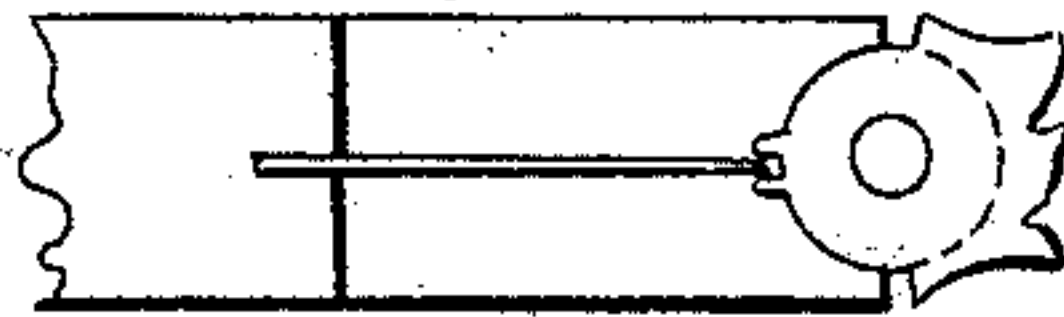


Fig:4:

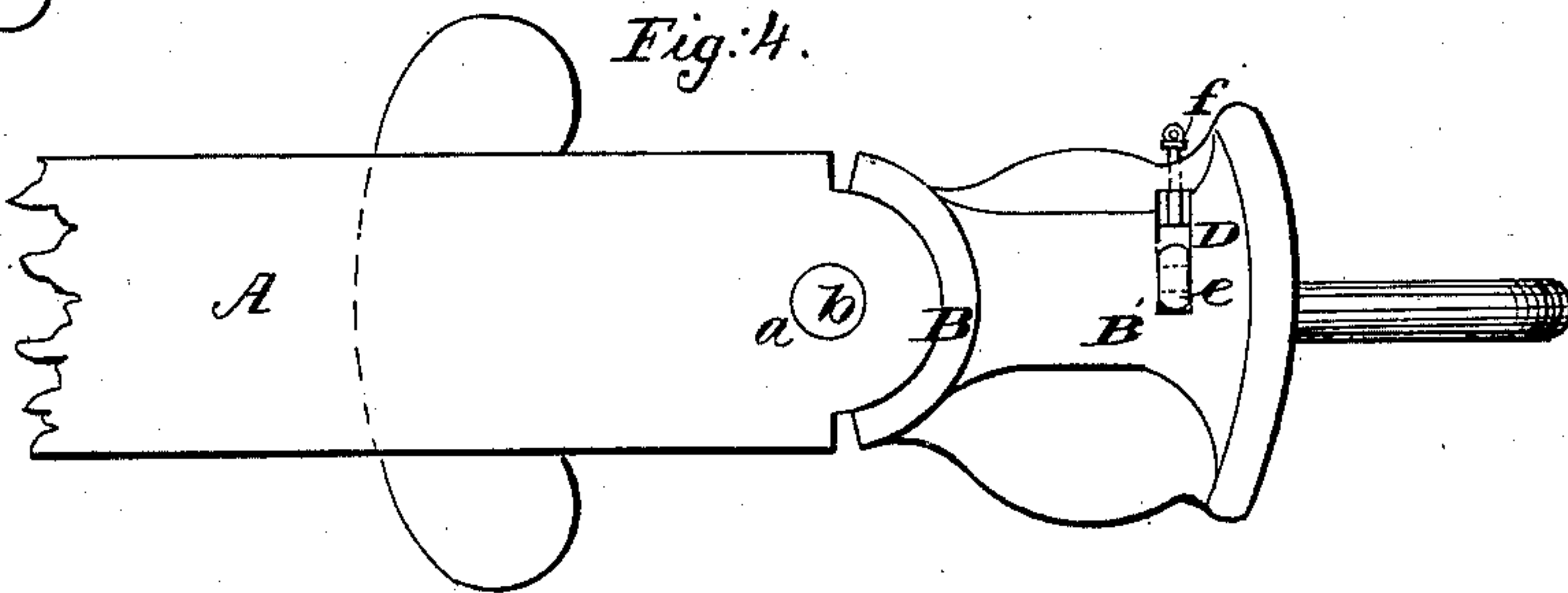


Fig:5:

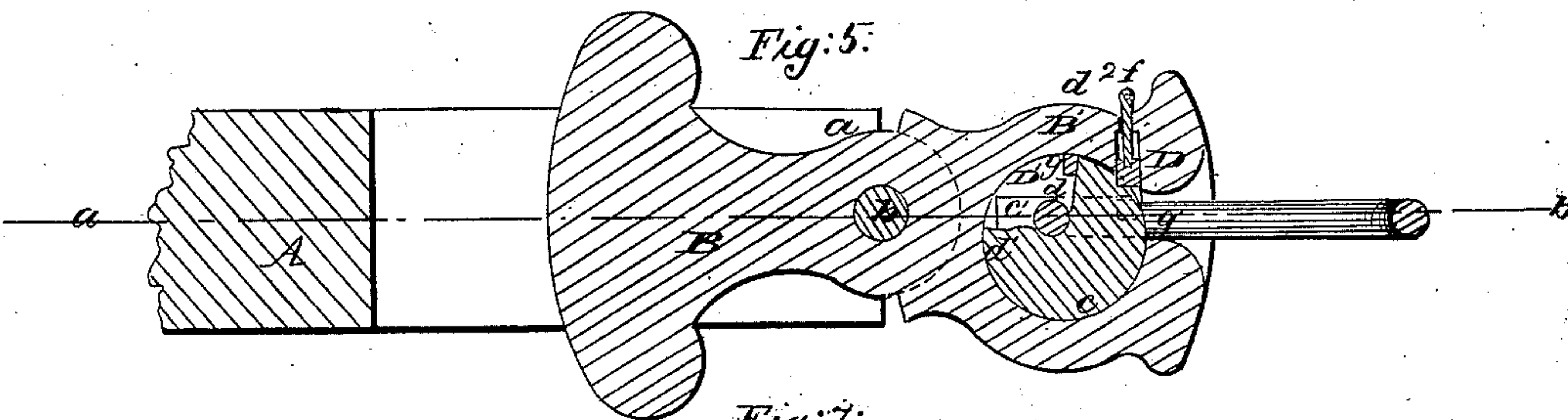
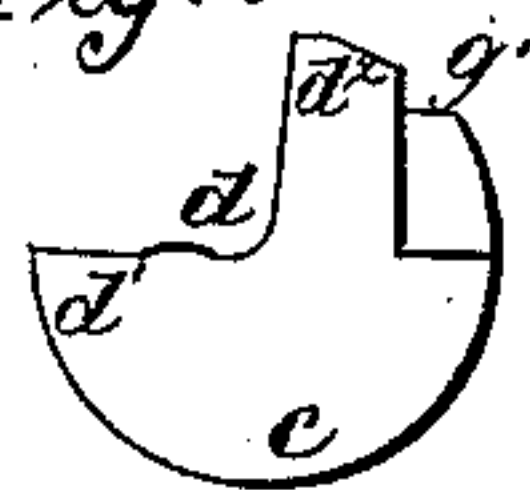


Fig:7:



Fig:8:



Witnesses;

Fig:6:



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C. W. BALDWIN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF,
W. D. RICHARDS, AND W. E. RUSSELL.

IMPROVED CAR-COUPLING.

Specification forming part of Letters Patent No. 57,618, dated August 28, 1866.

To all whom it may concern:

Be it known that I, CYRUS W. BALDWIN, of Boston, county of Suffolk, and State of Massachusetts, have invented a new and useful Car-Coupling; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical and transverse section, and Fig. 2 a front end view, of my invention. Fig. 3 is a horizontal section, Fig. 4 a side view, and Fig. 5 a vertical and longitudinal section, of the said invention. Fig. 6 is a side view, Fig. 7 an edge view, and Fig. 8 a top view, of the revolving block, to be hereinafter described.

In railway practice heretofore much annoyance and inconvenience, as well as danger to human life, has been experienced in coupling together the different cars of a train, from the fact that the brakeman or employé has been obliged to go between the cars for the purpose of adjusting and directing the coupling-link, in order that it shall enter the link-chamber of the approaching bumper, this being necessary for the reason that the bumpers of different cars are of varying heights. To remedy this trouble various plans have been adopted, the one now universally employed being a bent or crooked link which shall adapt itself to the varying heights.

The object of my present invention is to produce a self-acting coupling which shall accommodate itself or be easily adjusted with respect to the varying heights of the next adjacent or approaching bumper, and which shall avoid the necessity of the employé going between the cars, and thus save the loss of human life, which is now of frequent occurrence.

Other advantages incident to my invention will be hereinafter described.

In the drawings before referred to, A denotes the draw-bar, having its forward end slotted or formed with two ears, *a a*, to receive between them an oscillating balanced lever, B, the two being hinged together and connected by a fulcrum-pin, *b*, which passes horizontally through them, as seen in the drawings.

The front portion, B', of the lever B forms the bumper, and has a horizontal link-chamber, C', opening in front by a flaring mouth.

Leading out of this link-chamber, and crossing it at right angles, is a vertical chamber or recess, D', containing a revolving block, C, having a quadrant, or thereabout, cut from it, thus forming a space, *d*, and two shoulders, *d' d''*, the space *d* sufficing for the reception of one end of the coupling-link, which enters it and circumscribes the portion *d''* of the block C when the coupling is locked.

A transverse passage is further made in the bumper, as shown in the drawings, for the reception of a locking-bar, D, having two lateral extensions or handles, *e e*, for operating it, and, furthermore, having an eye, *f*, extending upward from it and through a hole in the top of the bumper, the purpose of this locking-bar being to drop down into a notch, *g'*, cut in the periphery of the block C and prevent it from being revolved within its chamber.

The extremes of movement of the block C are stopped by means of a stud, *g*, situated in the upper part of the chamber D', as seen in Fig. 5 of the drawings, against which the projections alternately abut.

Previous to operating the above-described invention the bumpers of the two approaching cars are to be placed as nearly on a level as the eye of the employé can judge, experience enabling him to determine this with great accuracy, and the link will probably enter the approaching bumper without further attendance.

In operating the coupling we will suppose the link to be detached from and approaching the bumper. As it enters the link-chamber it will strike against the side *d'* of the space *d* of the revolving block C and revolve it ninety degrees, which will force the portion *d''* into the link, and at the same time the locking-bar will drop into the notch of the block C and lock the link within the bumper.

To unlock the coupling it is only necessary to raise the locking-bar, as it will readily be seen that any draft upon the link will revolve the block C and cause it to drop below and out of the link and allow it to be withdrawn.

The bar D may be raised by tilting either of the handles or by raising them both, or by means of a chain attached to the eye *f* and carried to the top of the car or to any convenient position.

The advantages of my invention are, first,

by being able to adjust the heights of the two bumpers the employé is not required to go between the cars while they are either approaching each other to be coupled together, or for the purpose of uncoupling them, as the handles of the locking-bar may be of such a length as to enable him to reach them from the outside of the car; second, the draft upon the two bumpers is always in a straight line between their fulcrum-pins, thus rendering it more uniform and even, requiring less power, and doing away with the necessity of a crooked link. The strain upon the link is consequently always a longitudinal one, which prevents the possibility of its being broken, and a very short link can be employed. For use upon passenger-cars this alignment of the two bumpers is an important feature, as much of the concussion and jarring of the cars consequent upon the varying heights of the bumpers is obviated.

Another advantage of my invention, and quite an important item in the expenses of a railroad corporation, is that there is no pin to lose, as it is well known that with the ordinary coupling large numbers of them are annually lost and stolen.

A further advantage consists in the fact that when any repairs are necessary they can be very easily made, as all the operative parts are in a small compass and at the extreme forward end of the draw-bar. By merely removing the pin they can be easily detached from the draw-bar. I have contemplated applying a spring to the draw-bar, the free end of which is to be inserted in a notch made in the rear end of the lever, as seen in Figs. 9 and 10. This spring will serve to keep the lever in a horizontal position, but at the same time allow it to be oscillated, as occasion may require.

I claim—

1. The employment of the balanced lever B, when made and applied substantially in manner and to operate as before described.

2. In combination with the said lever B, the revolving block C and locking-bar D, essentially as set forth and explained.

3. The peculiar construction of the block C as made with the recess d , shoulders d' d^2 , and notch g' , all as described.

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Witnesses:

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