

(No Model.)

J. W. WHARF.

CAR COUPLING.

No. 263,269.

Patented Aug. 22, 1882.

Fig. 1.

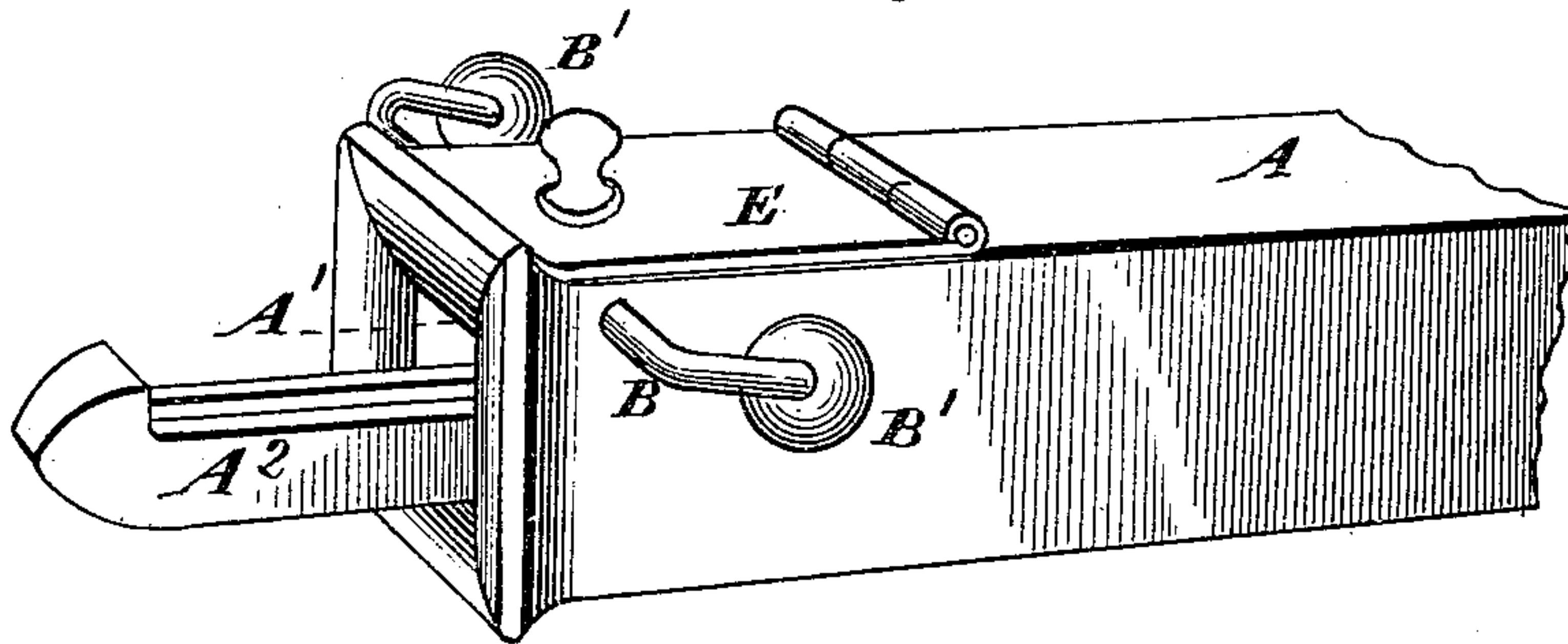


Fig. 2.

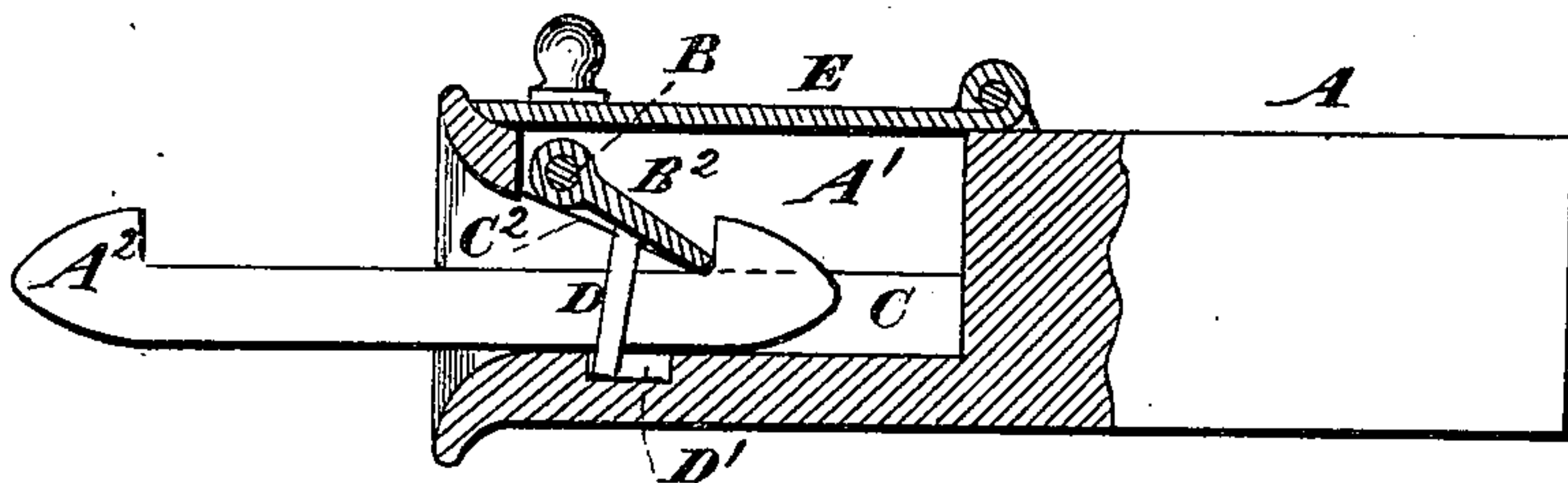
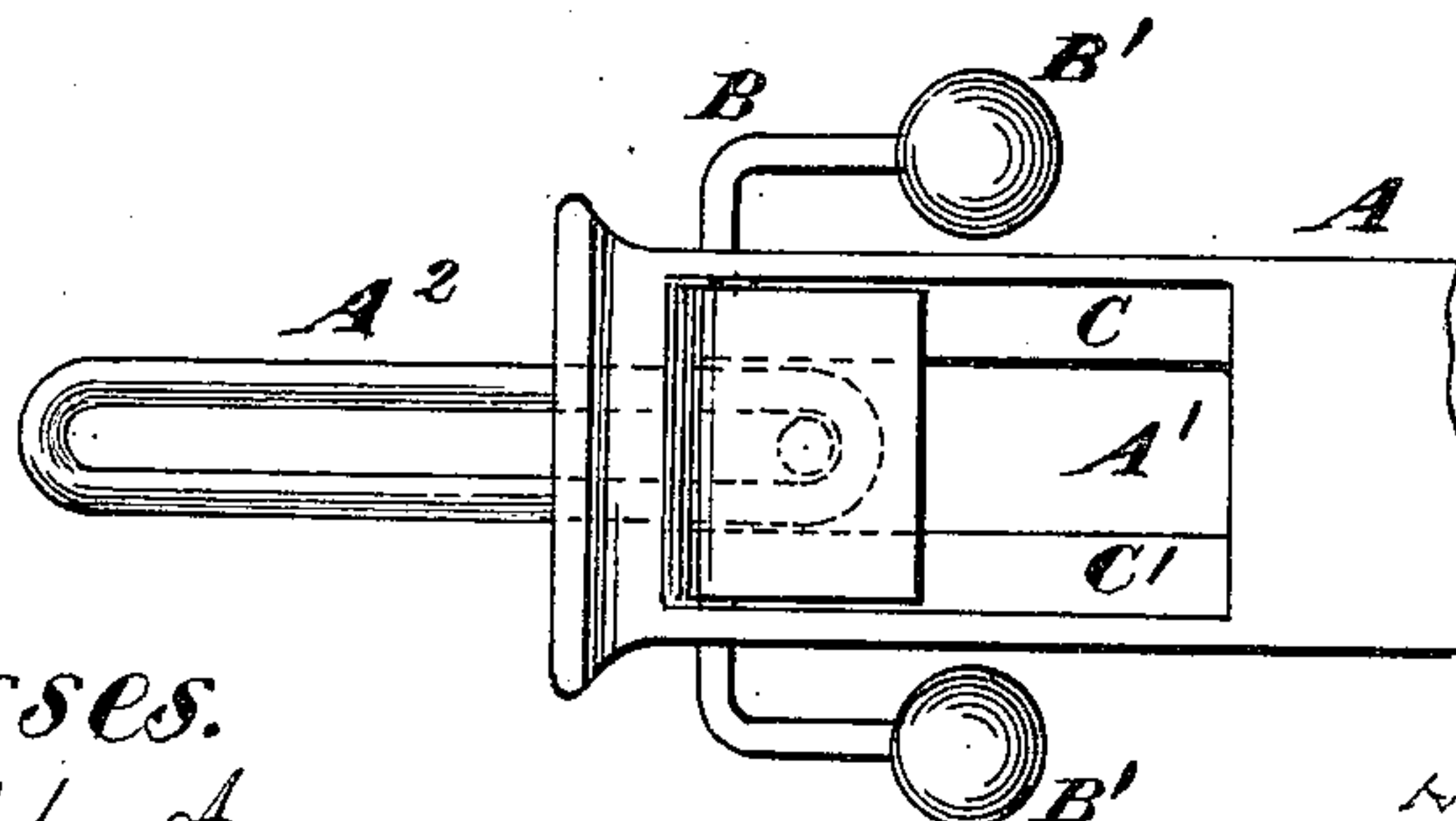


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES W. WHARF, OF OLNEY, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 263,269, dated August 22, 1882.

Application filed May 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. WHARF, a citizen of the United States of America, residing at Olney, in the county of Richland and State of Illinois, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in automatic car-couplers; and the objects of my improvements are to provide such devices and combinations thereof as will cause the force applied for the movements of a car or a train of cars to be partially or wholly applied to the walls of the buffer, thus relieving, to a great extent, the strain upon the coupling-pin. I attain these objects by the devices and combinations thereof illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, showing a buffer having my improvements applied thereto—it showing a hinged and weighted portion for the purpose of providing ready access to the pivoted portion to which the force applied for drawing forward the car is applied—weighted arm and shaft for causing the automatic coupling as the buffers are brought together, and a hooked and slotted link for uniting the cars. Fig. 2 is a horizontal section, showing the parts above enumerated and a coupling-pin with its lower end entering a slot in the lower wall of the buffer for use when the usual form of coupling-link is used; and Fig. 3 is a top or plan view, showing the buffer-head and an ordinary coupling-link.

Similar letters refer to similar parts throughout the several views.

It has been customary heretofore to construct couplings for cars in such a manner that the coupling-pin has been automatically brought into a proper position for uniting the cars when the buffers have been forced together; but in all such cases with which I am acquainted the entire force applied for moving the cars or trains of cars has been thrown upon the pins, as a consequence of which they are bent to such an extent as to prevent the proper working of the device. I propose to remedy this evil and to provide a means of relieving a large portion or all of the strain upon the

pin, if one is used, by such a construction and combination of parts as will transfer the moving force to the walls of the buffer.

In constructing my automatic coupler I use any suitable form of buffer, A, the walls of which may be of cast or wrought iron, adapted to carry the usual or any form of buffing-spring. In the outer end of such buffer there is provided a chamber, A', for the reception of one end of a coupling-link, A², which may be of the form shown in Figs. 1 and 2; or it may be of the form shown in Fig. 3. The side walls of the buffer are provided with holes at the proper points, through which a shaft, B, is passed, the outer ends of which are provided with weights B' B', said shaft being at its outer ends bent to such an angle as to cause it to act as a lever in carrying the link-holding plate into position for uniting the cars.

Upon the horizontal portion of the shaft B, and between the side walls of the buffer, there is placed a coupling plate or dog, B², which is firmly secured thereto in such a manner that upon the entrance of a coupling-link it will come in contact with its under inclined surface and raise it up to such an extent as to allow the end of the link to pass in beyond its inner edge, when the weights B' will return it to the position shown in Fig. 2, in which position it will effectually prevent the link from being withdrawn from the buffer.

I prefer to narrow the chamber A' at its lower portion by placing therein ledges or projections C C', as shown in Figs. 2 and 3, leaving between said ledges or projections sufficient room for the link to work in, when the cars to be coupled together stand at angles to each other, without binding upon said ledges or projections. The ledges or projections C C' at their outer ends have an upward inclination, as shown at C² in Fig. 2, the object being to provide a resting-place for the plate or dog B², in order that as the force required for the forward movement of the car or cars is applied to its lower edge said ledges or projections shall have a large amount thereof applied to them, by which means the shaft or pin, when one is used, is relieved from such force, which will be transferred to the walls of the buffer.

The form of coupling-link which I prefer to use is substantially such as is shown in Figs. 1

and 2, it consisting of two bars of metal united at their ends, as shown in Fig. 1, such ends being beveled in such a manner as to cause the bevel to raise the plate or dog B² when they are inserted into the buffer-head, the projections or hooks preventing the withdrawal therefrom until said plate or dog is raised up by applying force to the weights B'.

It will be seen that in Fig. 2 there is shown a pin, D, the lower end of which passes into a slot, D', formed in the lower wall of the buffer, it being so arranged that when the under surface of the plate or dog B² rests upon the inclined surface C² of the ledge or projections C C' its lower end will come in contact with the forward end of the slot D', and so transfer a large proportion of the force exerted to move forward the car to the walls of the buffer.

The pin above described is designed for use when a link of the form shown in Fig. 3 is used, and may be dispensed with when the other form is used; or, if preferred, the solid portion of the latter may extend inward to such an extent as to cause them to bear upon the pin at the same time that the lower edge of the plate or dog comes in contact with the projection or hook formed upon the upper surface of the link, under which arrangement the force exerted in moving the trains will be divided between the sides and lower walls of the buffer.

As a means of obtaining ready access to the plate or dog, and for allowing its lower edge to be raised above the upper surface of the buffer, there is combined with said buffer a hinged and weighted portion, E, which, when said plate or dog has been raised up for or by the insertion of the coupling-link, aids materially in returning it to the proper position for retaining the link by pressing upon its lower edge when raised.

I wish it understood that I do not limit my combination claims to any particular form of coupling link, but claim the right to use any form that will perform the functions above described.

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

1. A buffer or draw-bar for use on railroad-cars, having a portion of its upper wall hinged and weighted for the purpose of allowing the inner edge of the coupling-plate to rise above the upper surface of the buffer or bar when the cars are being coupled and aid in returning the plate to its locking or coupling position, substantially as set forth.

2. A car-buffer or draw-bar provided with a central contracted chamber in its lower plate or wall for the coupling-link to act in, and with beveled ledges or projections upon its side walls, against which the coupling plate or dog rests when the car is being drawn forward, whereby the force applied is applied to the side walls of the buffer, substantially as and for the purpose set forth.

3. The combination of a car-buffer or draw-bar having upon its interior surface inclined ledges, a coupling plate or dog resting thereon, and a shaft carrying weights, substantially as and for the purpose set forth.

4. The combination of the swinging portion E of the buffer or draw-bar and the swinging coupling plate or dog B², substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES W. WHARF.

Witnesses:

JAMES E. WHARF,
R. W. BABBITT.