

(No Model.)

R. S. MORROW & D. W. GLENN.
CAR COUPLING.

No. 486,489.

Patented Nov. 22, 1892.

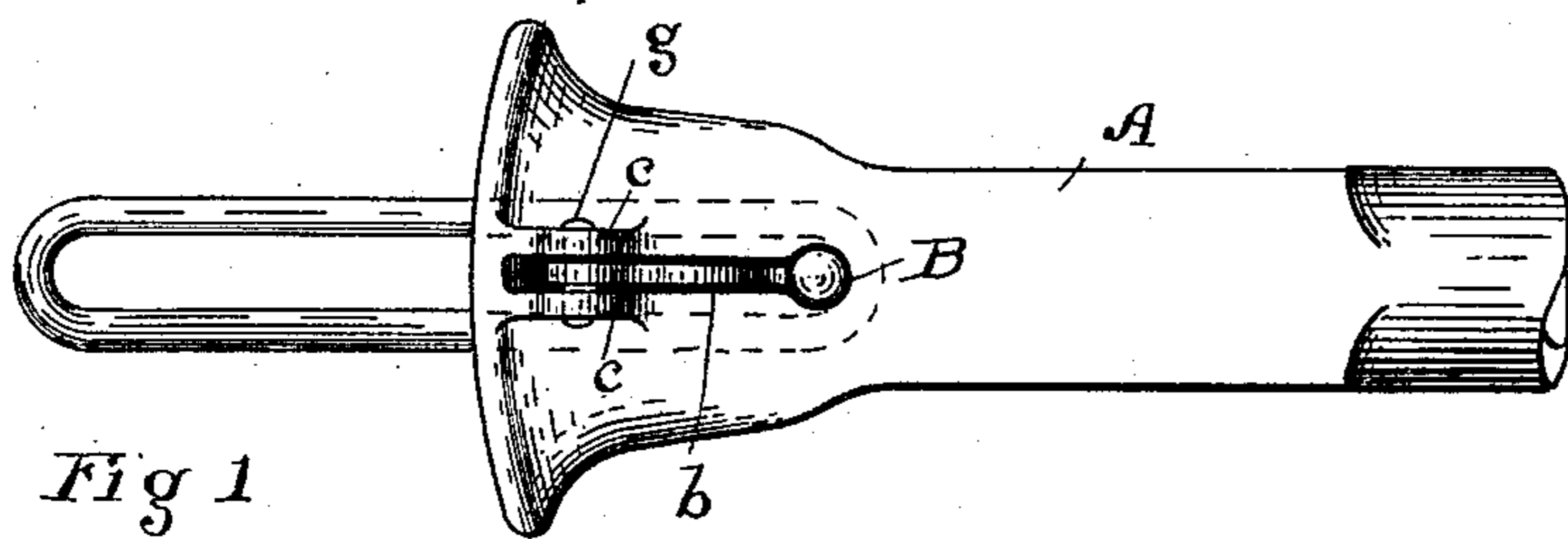


Fig 1

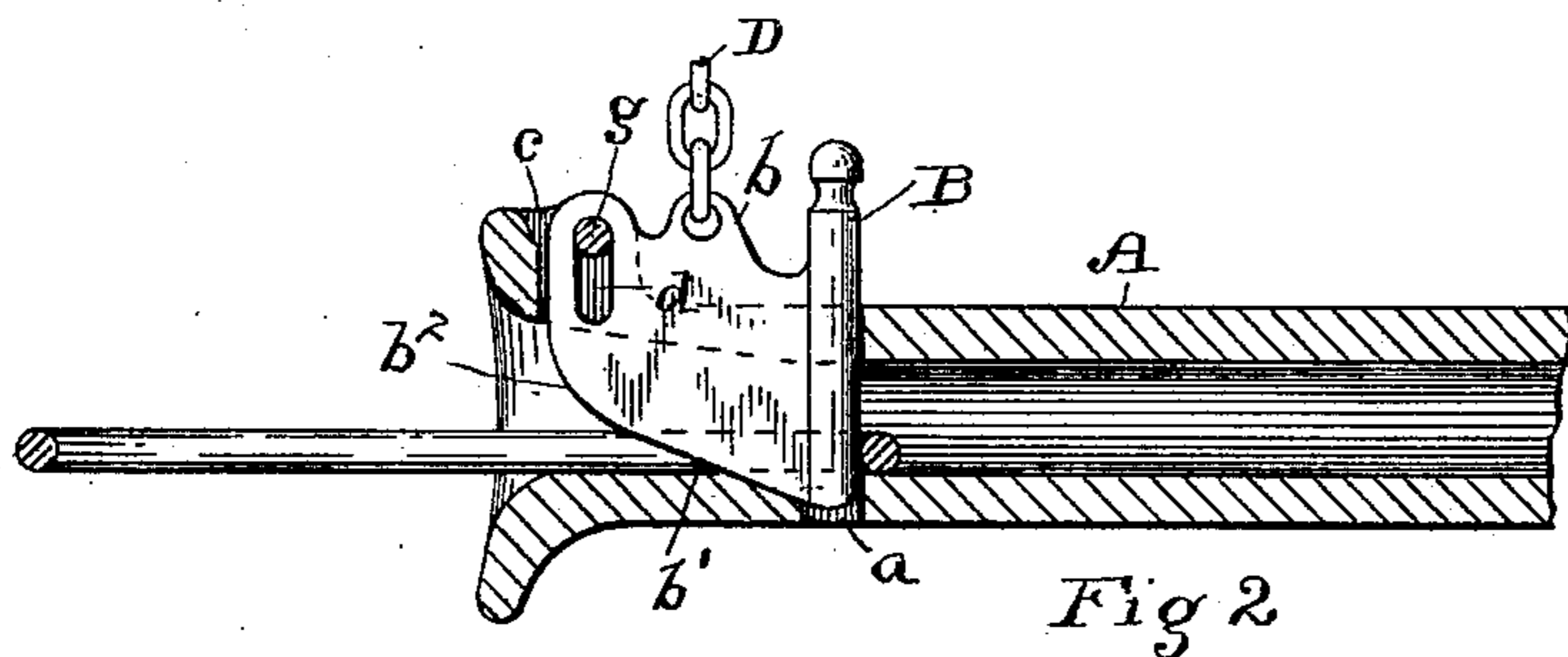


Fig 2

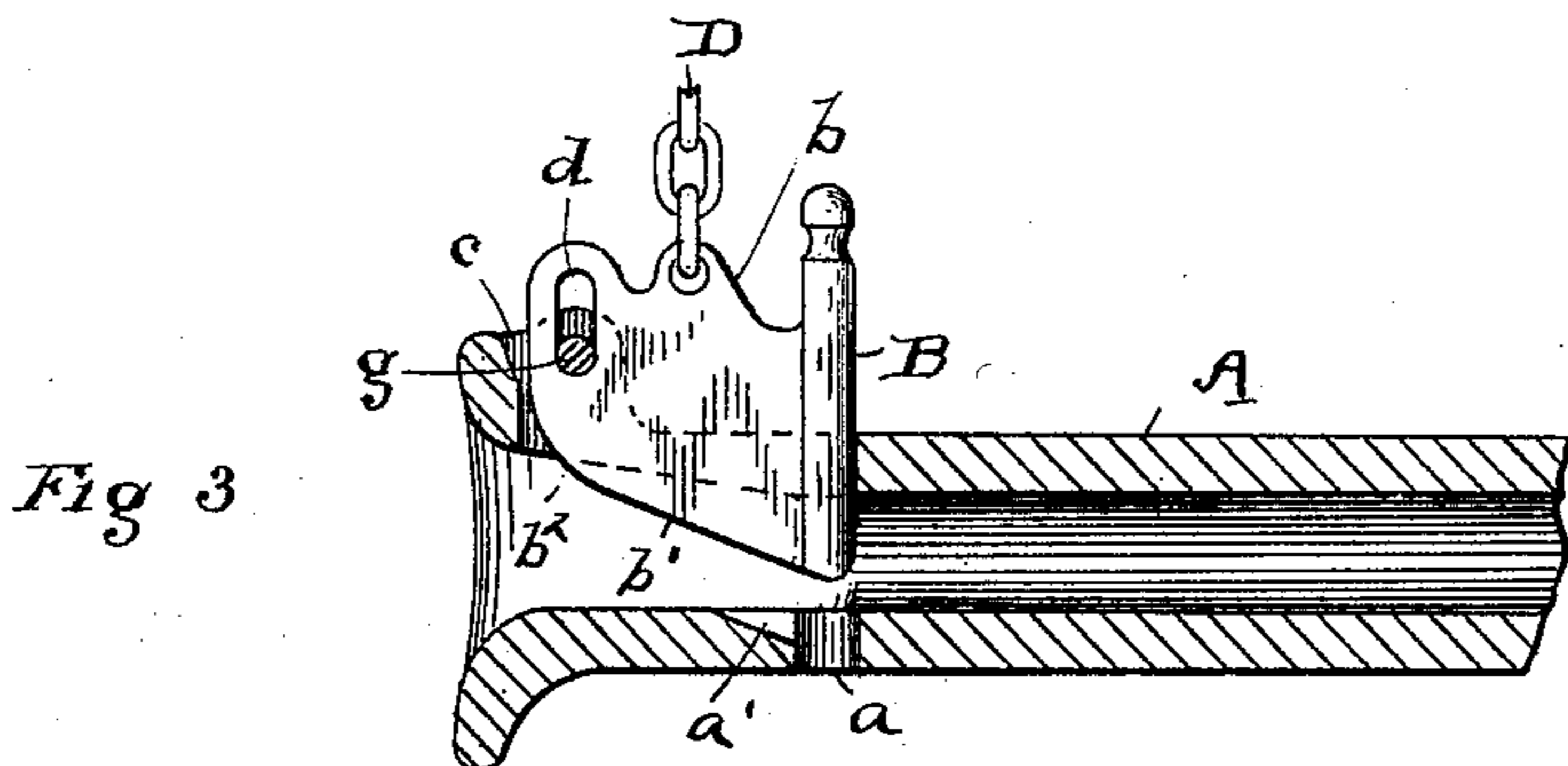


Fig 3

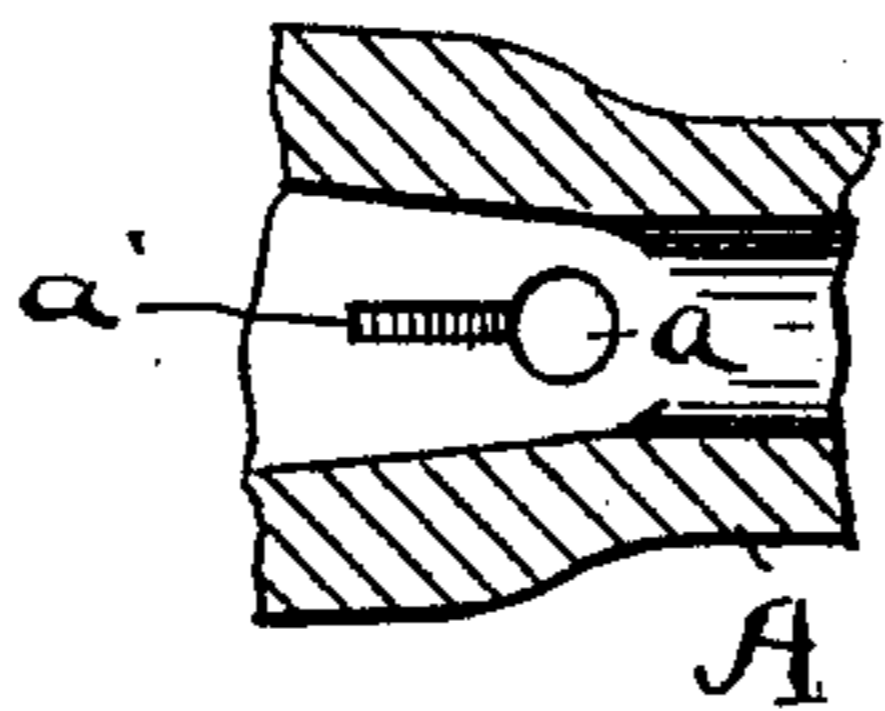


Fig 4

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UNITED STATES PATENT OFFICE.

ROBERT S. MORROW AND DAYTON W. GLENN, OF CLEVELAND, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 486,489, dated November 22, 1892.

Application filed May 28, 1892. Serial No. 434,744. (No model.)

To all whom it may concern:

Be it known that we, ROBERT S. MORROW and DAYTON W. GLENN, citizens of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Automatic Car-Couplers; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to car-couplers; and the invention consists in a coupler adapted to receive and couple with a link and to couple automatically, all as shown and described, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a plan view of a draw-head and a link held therein. Fig. 2 is a longitudinal section of the parts, as shown in Fig. 1, with the coupling-pin down and the link locked in the head. Fig. 3 is a longitudinal sectional view of the draw-head with the coupling-pin raised and the link removed. This would also be the position of the pin when the pin was forced into position to be locked by the link. Fig. 4 is a longitudinal sectional view of the front lower portion of the draw-head and showing especially the open slot or channel in front of the pin-hole adapted to receive the web or fin of the pin.

A represents a draw-head, which in the main is constructed like the old and well-known draw-head everywhere used, and the invention is in a sense adaptable to draw-heads of this old style, although they were not built especially for this purpose. In this instance we have a slight modification of the old-fashioned head to render the construction suitable for the improved construction and operation of the locking-bolt B. This bolt has a web or fin *b* at its front integral with the bolt and projecting forward therefrom about as shown, so as to serve several purposes—first, to afford an inclined edge *b'*, extending from the lower end of the pin forward and upward and so inclined that when the pin is down in its seat the edge *b'* will be at such inclination within the head that when a link is forced into the head for coupling it will strike against said edge and force the pin up and admit the link behind it. The

incline *b'* actually extends across the interior of the head, so that it will have the effect of lifting the pin at whatever point the coupling-link strikes it; but it is more sharply inclined from the point *b*² about midway the height of the coupler, as it is below this point where the link ordinarily strikes the web. From *b*² to the end of the pin the edge *b'* retreats rapidly and causes the pin to respond promptly and easily to the upward pressure on the web. Then the instant the link passes behind the pin the pin drops down and the link is locked; but, notwithstanding said web, whereby the pin is automatically raised by the link in coupling, we do not permit the web to interfere with the action of the pin after coupling is effected. In other words, we so construct the parts that the pin operates just as it would if no web were used and has a bearing below the link as well as above it. Obviously the web must come even with the point of the pin, as otherwise a shoulder would be formed, which would obstruct the link and stop it from passing behind the pin. Hence the edge *b'* runs down flush with the pin-point and forms a smooth continuous surface therewith. Now in order to give the pin the necessary bearing in the bottom of the draw-head, where most of the strain or pull really comes, we form an open inclined slot *a'* in front of the pin-hole *a* of depth and length to accommodate the web. This leaves a sufficient bearing for the pin at the sides of the slot and enables it to take the pull of the link in the usual way, otherwise the strain would come entirely on the upper part of the link and head, and the effect would be to break the pin off in the head under severe and sudden strains. The said web *b* serves, further, as a guide and stop for the pin, so that it cannot be forced up beyond what is required for coupling and uncoupling the link. To this end we have formed ears *c* on the coupling-head and a slot *d* in the web and pass a suitable pin *g* through ears or slot. A chain *D* is connected with the web between slot *d* and pin *B* proper, by means of which and the usual connections from the side of the car the pin may be raised for uncoupling. The coupling, however, is effected automatically, as before described, and without personal help or attention.

The coupler-head has a longitudinal slot in front of the pin-hole in the top of the head, through which the thin plate-like web is introduced, and the pin *d* is inserted after the parts are assembled.

The slot *a'* may be deeper than here shown, if desired, so that the pin could be dropped lower in the head; but this is not deemed necessary.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a car-coupler, the head A, having a hole *a* for the draw-bolt and a slot in front of the said hole in the upper part of the head for the flange of the bolt and an inclined slot *a'* in the lower part of the head in front of hole

a for the lower portion of the said flange, in combination with the bolt B, having flange or web *b*, with substantially-straight inclined front edge *b'* and curved portion *b²*, slot *d*, and pin *g* for limiting the upward movement of the bolt, the said bolt having a bearing in the lower part of the head to sustain part of the load and the lower part of flange *b'* sunk in slot *a'*, substantially as described.

Witness our hands to the foregoing specification this 23d day of May, 1892.

ROBERT S. MORROW.
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Witnesses:

FRANK H. SCHNELL,
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