

V. ERBACH.  
Car-Coupling.

No. 159,399.

Patented Feb. 2, 1875.

Fig. 1.

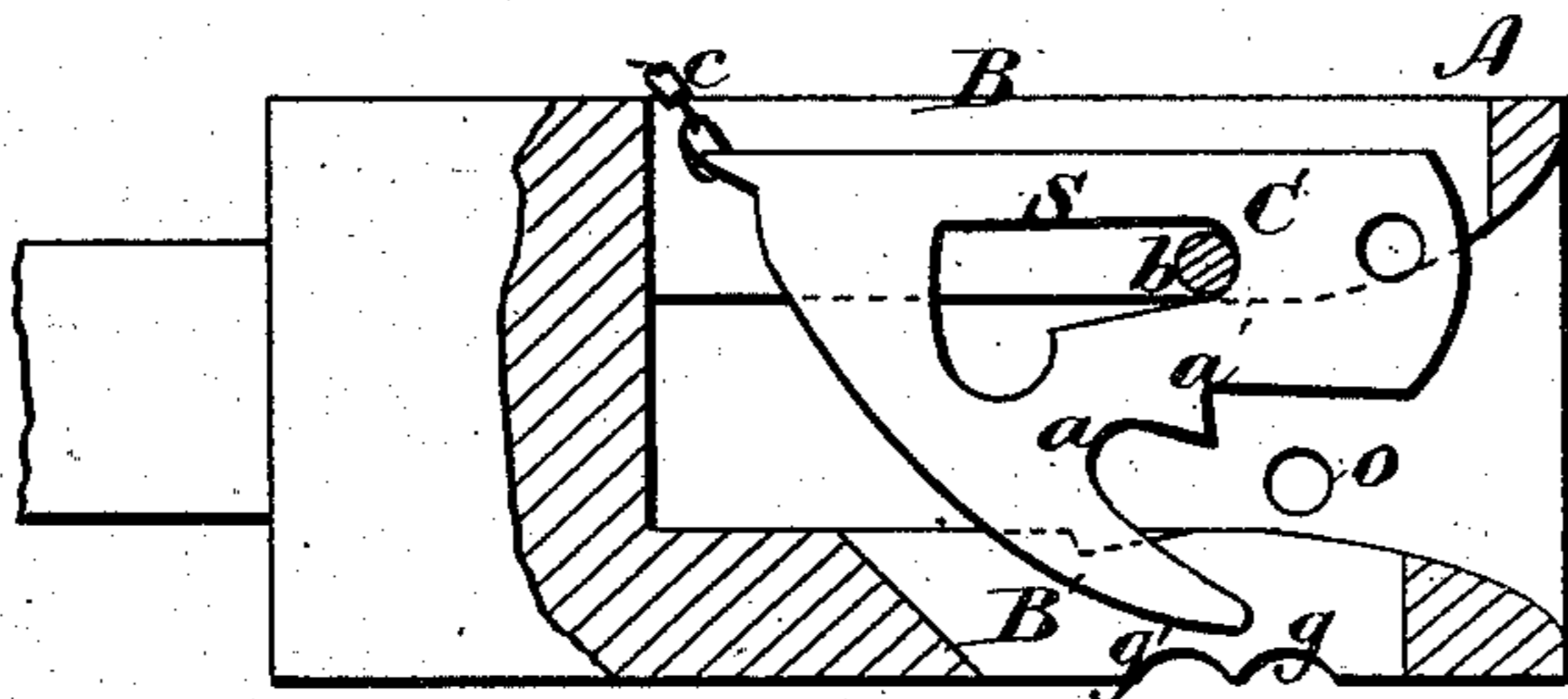


Fig. 2.

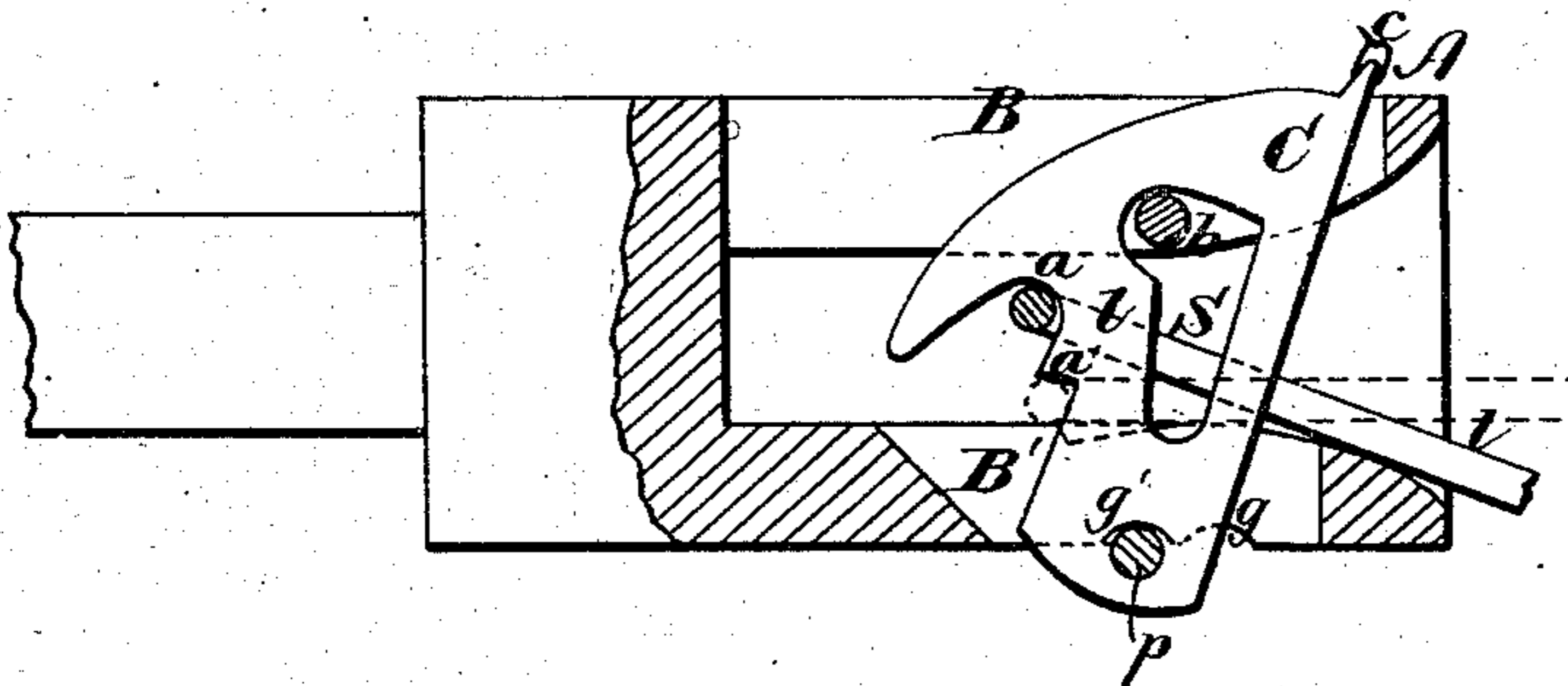


Fig. 4.

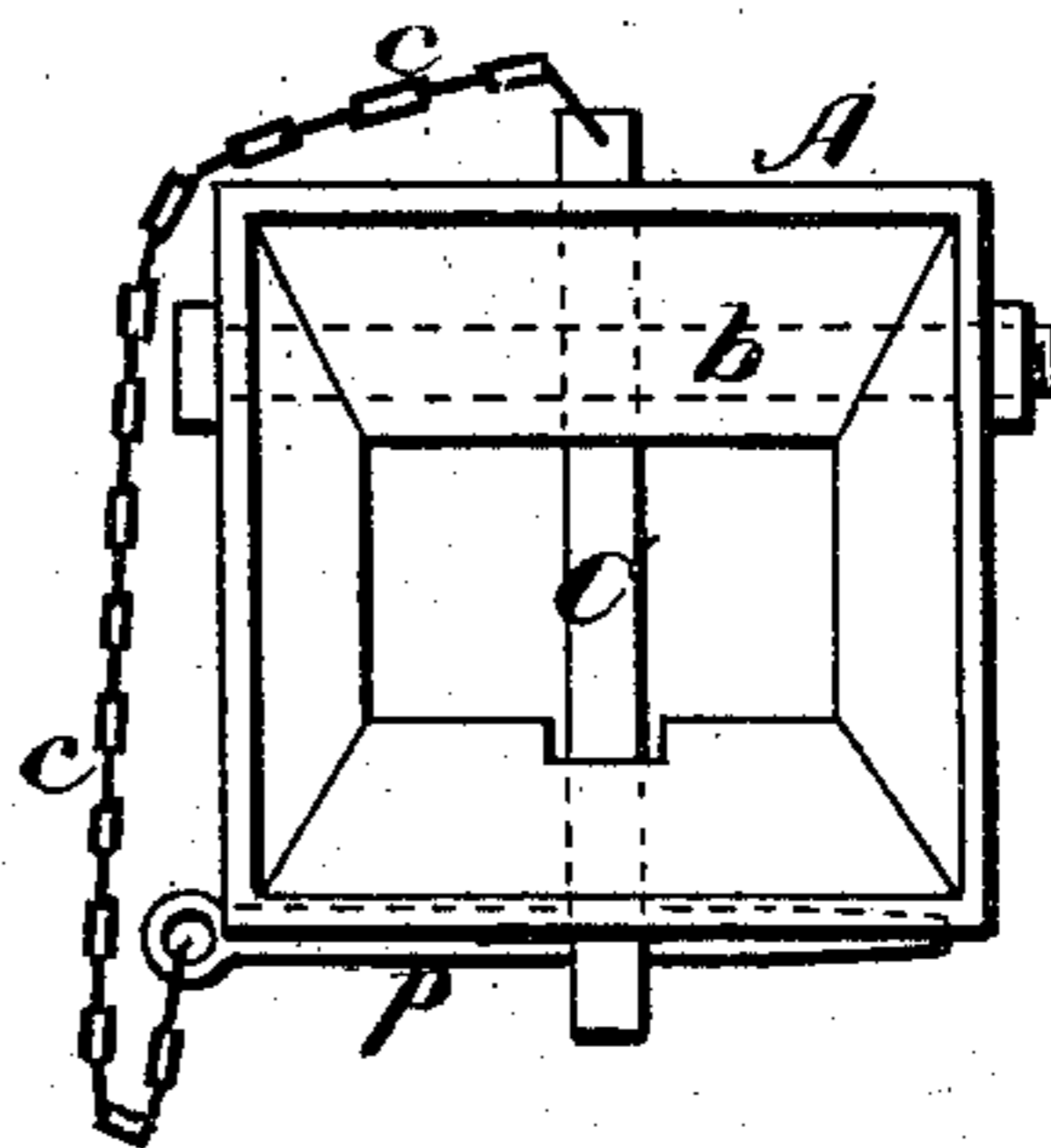
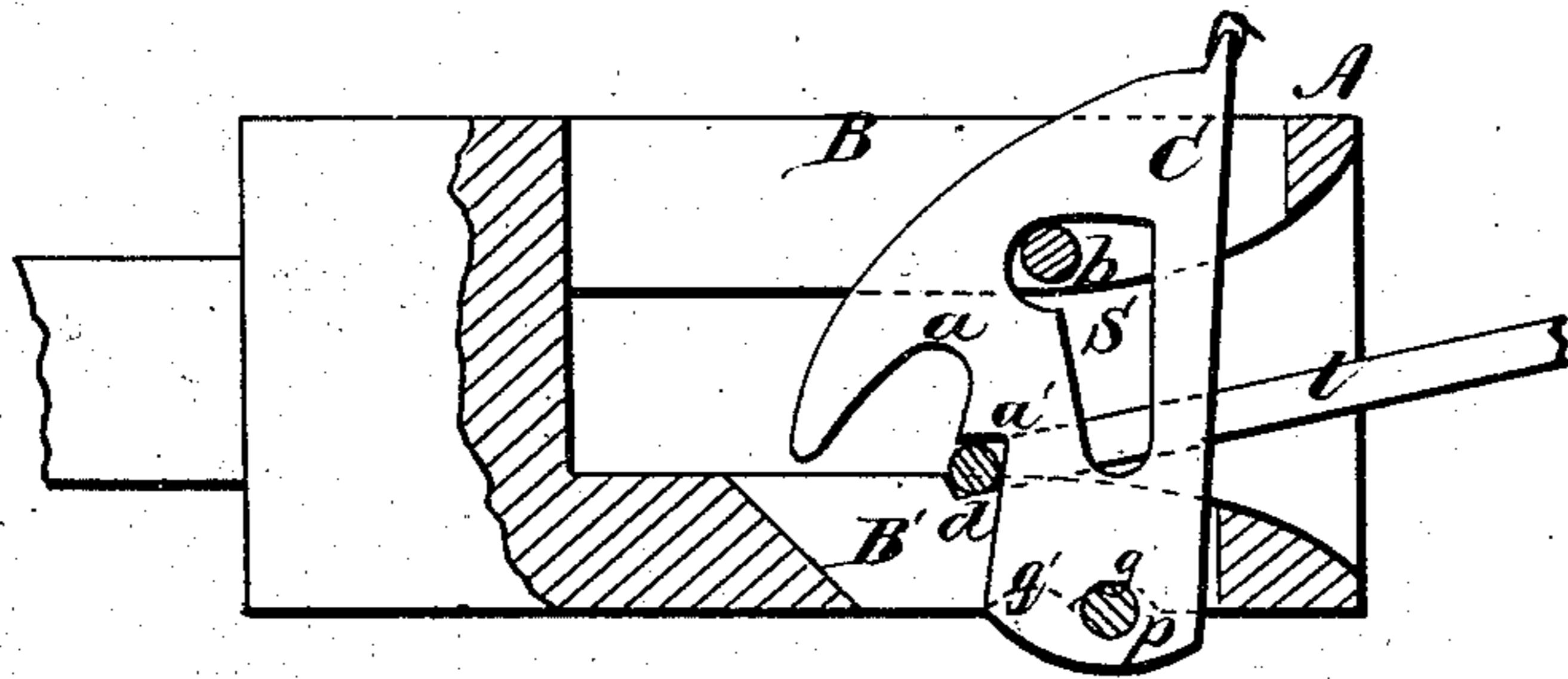


Fig. 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **159,399**, dated February 2, 1875; application filed September 8, 1874.

*To all whom it may concern:*

Be it known that I, VALENTIN ERBACH, of Hyde Park, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Car-Coupling; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal section through the draw-head of my improved car-coupling, showing the position the coupling-hook occupies when the cars are uncoupled. Figs. 2 and 3 are similar views, showing the position of the coupling-hook when the cars are coupled, and the position of the link for cars of the same or different heights; and Fig. 4 is an end view of the draw-head and coupling-hook and its securing-pin.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention relates to improvements in car-couplings; and consists in the employment of a curved hook, provided with recesses and hung on a bolt passing through the draw-head, and a peculiarly-formed slot in the hook, the link striking the hook in coupling the cars, and moving it into a vertical position surrounded by the link, the latter, when coupled, resting in one or other of the recesses in the hook, dependent on the height of the cars. A pin passing through a groove in the lower face of the draw-head and a perforation in the hook is employed to secure the latter in place.

In the accompanying drawings, A represents a draw-head, provided with the ordinary flaring mouth, and having slots B B' on its upper and lower faces for the reception of a curved hook, C, provided with a peculiarly-formed slot, s, plainly shown in the drawings, through which passes the headed bolt b, which also passes through the draw-head, and is provided on the end opposite the head with a nut or split key, thus securely attaching the bolt to the draw-head, while at the same time the bolt can readily be removed when desired. a a' are notches or recesses in the hook for the reception of the link, the latter occupying one or other of the said recesses when the cars are coupled, dependent on their

height. c is a chain, attached at one end to the curved hook, and having a pin, p, secured to its opposite end. g g' are grooves in the lower face of the draw-head for the reception of the pin p, to secure the hook in place when the cars are coupled. d is a depression (see Fig. 3) made across the draw-head for the reception of the link when the cars to be coupled are of different heights, and it is necessary that the link should make an upward angle to engage with the hook of the adjacent car. The hook C, when the cars are uncoupled, occupies the position shown in Fig. 1.

When it is desired to couple the cars, the link attached to the hook of the adjacent car is made to enter the flaring mouth of the draw-head A, and, striking the hook C hung on the bolt b, turns the former over an arc of ninety degrees, or to a vertical position, as seen in Figs. 2 and 3. If the cars are of the same height, the link l rests in the recess a' of the hook, the end of the latter projecting beyond the depression d' in the draw-head, and the link occupying a horizontal position, as shown in dotted lines in Fig. 2. The pin p is then inserted in the groove g', on the under face of the draw-head, and the cars are thus securely coupled.

In case the car to which the draw-head A is attached is higher than the adjacent one to which it is to be coupled, the link l then engages with the recess or notch a of the hook, the securing-pin p still occupying its position in the groove g', the link making a downward angle, as shown in full lines, in Fig. 2.

In case the car to which the draw-head A is attached is lower than the adjacent car, the link l is then made to engage with the recess or notch a' in the hook, the end of the link resting also in the depression d' in the lower interior face of the draw-head, and the securing-pin p is inserted in the groove g in the lower face of the draw-head, the link forming an upward angle with the draw-head, as seen in Fig. 3.

The hook may also be retained in position when the cars are coupled by inserting the securing-pin p in the perforation o (see Fig. 1) in the draw-head through the slot S, either above or below the link.

To uncouple the cars, the securing-pin p is

removed, and by means of the chain *c* attached to the hook, the latter is moved in the slots B B' in the draw-head over an arc of ninety degrees, so that it will occupy the position shown in Fig. 1.

It is obvious from this construction that the link and hook will form a coupling whether the cars are of the same or different heights.

I claim as my invention—

The draw-head A, having the slots B B' and grooves *g g'*, in combination with the curved hook C and securing-pin *p*, substantially as and for the purpose set forth.

VALENTIN ERBACH.

Witnesses:

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