

(No Model.)

A. GOLDSMITH.

CAR COUPLING.

No. 323,664.

Patented Aug. 4, 1885.

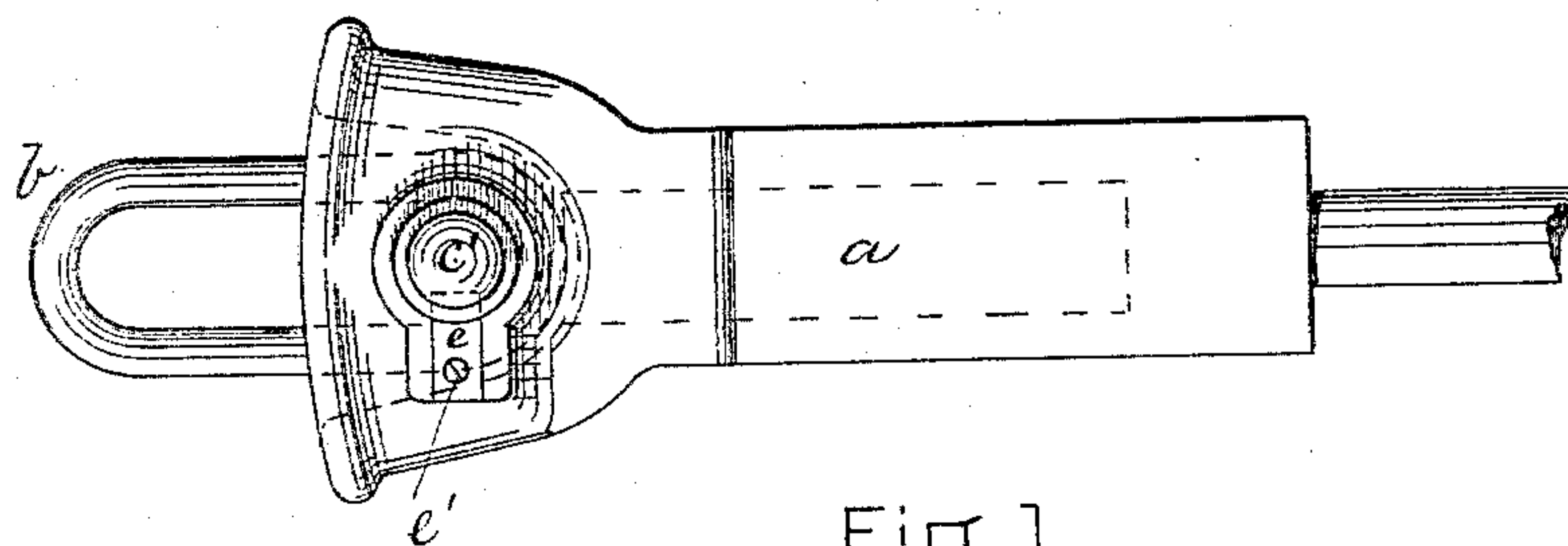


Fig. 1.

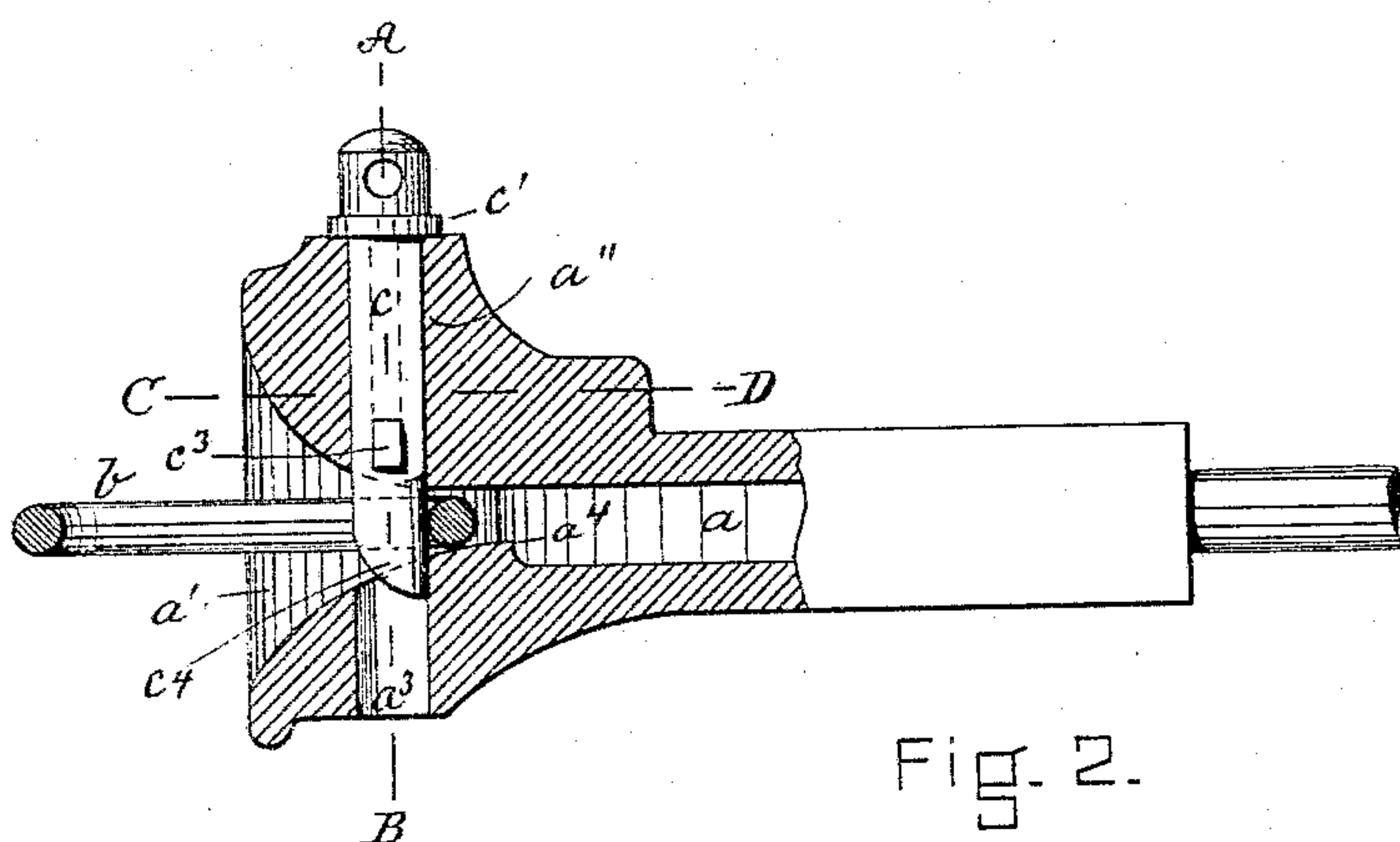


Fig. 2.

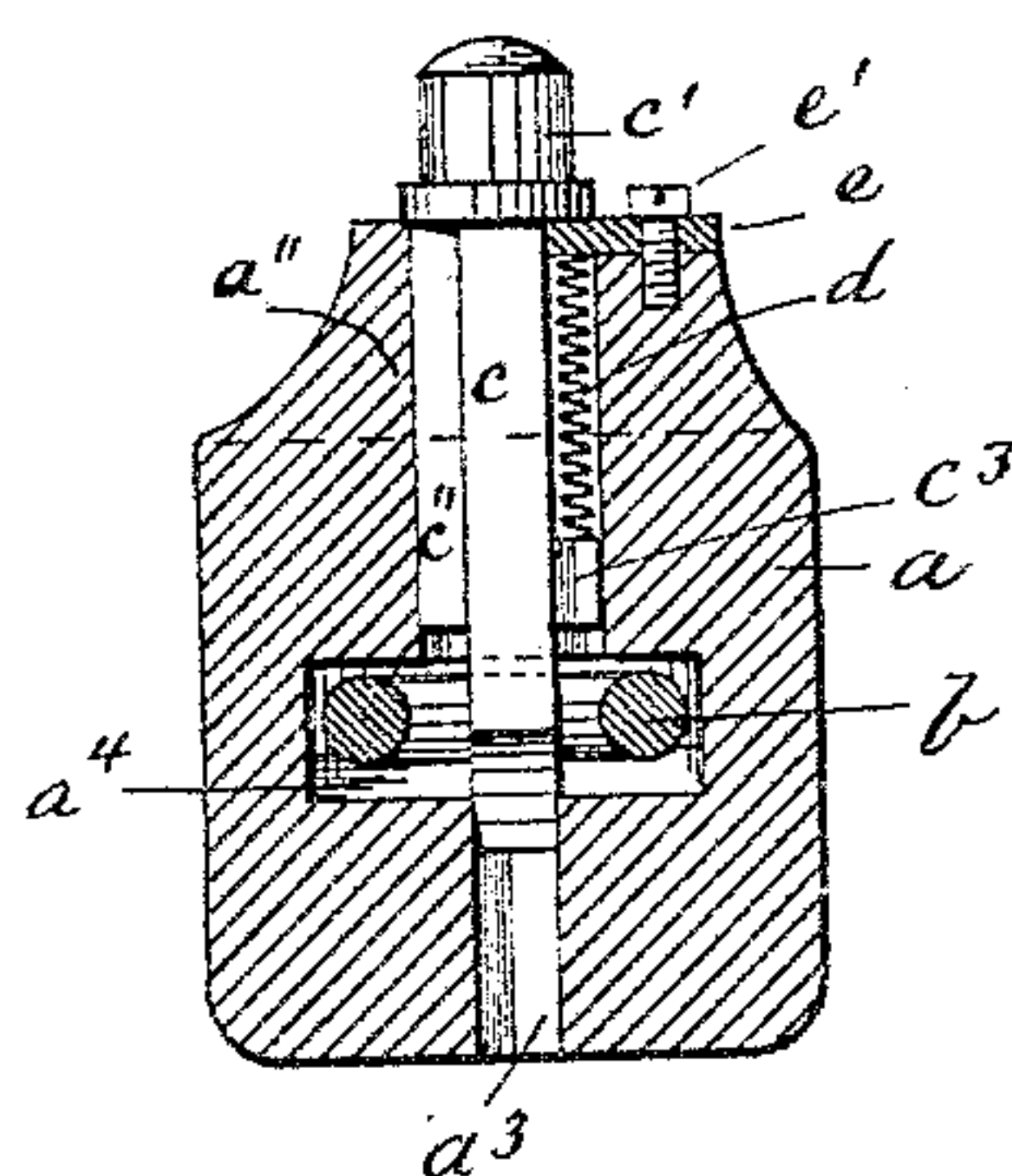


Fig. 3.

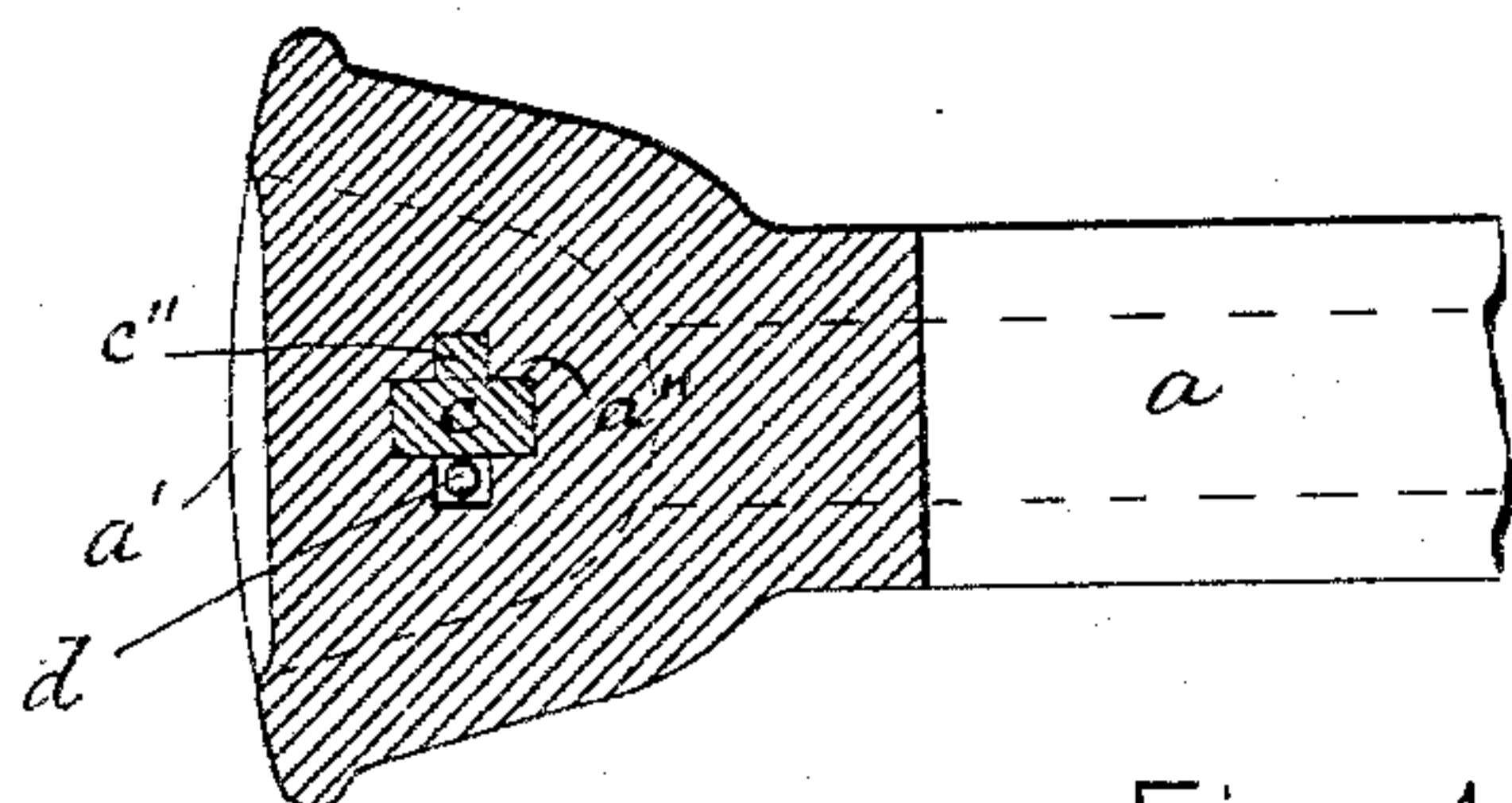


Fig. 4.

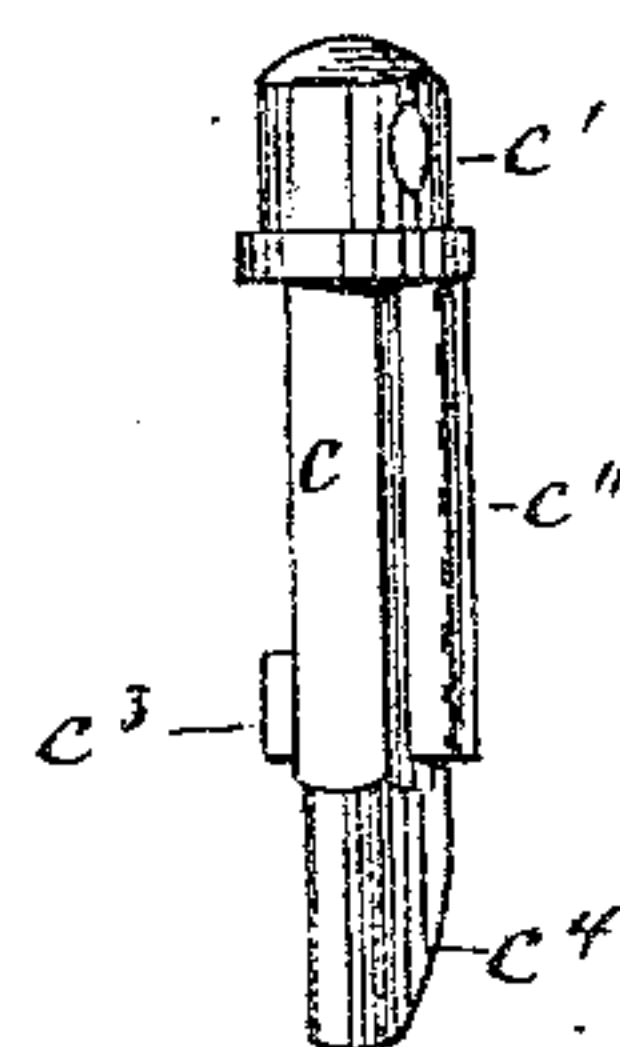


Fig. 5.

WITNESSES.

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UNITED STATES PATENT OFFICE.

ALBERT GOLDSMITH, OF SALEM, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 323,664, dated August 4, 1885.

Application filed June 11, 1885. (No model.)

To all whom it may concern:

Be it known that I, ALBERT GOLDSMITH, a citizen of the United States, residing at Salem, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the same are fully described in the following specification, and illustrated in the accompanying drawings.

10 This invention relates to improvements in car-couplings; and it has for its object to couple and uncouple railway-cars without the need of the operator going between the cars for this purpose, and thus preventing accidents so
15 common in using the ordinary car-coupling device.

My invention is carried out as follows, reference being had to the accompanying drawings, where Figure 1 represents a plan view of
20 the improved car-coupler. Fig. 2 represents a central longitudinal section of the same. Fig. 3 represents a vertical cross-section on the line A B, shown in Fig. 2, and Fig. 4 represents a horizontal section on the line C D, also shown
25 in Fig. 2. Fig. 5 represents a rear perspective view of the coupling-pin.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

30 In the drawings, *a* represents the hollow draw-bar head having the flaring or inclined mouth *a'*, as shown, for the entrance of the link *b*, which latter is of the usual kind employed for coupling cars. Through the upper
35 portion of the draw-head *a* is made a vertical perforation, *a''*, of even size throughout its length, such perforation extending from the top of the said draw-head to its hollow flaring mouth, as shown in Figs. 2 and 3, and in
40 it is located the coupling-pin *c* in such a manner that it may be moved freely up and down in said perforation *a''*.

c' is a head or collar in the upper end of coupling-pin *c*, which prevents the latter from
45 dropping down farther than to its proper locking position. (Shown in Figs. 2 and 3.)

The form of the pin *c* is preferably made of a rectangular cross-section, as shown in Fig. 4, with a longitudinal side rib, *c''*, on one side
50 of it (shown in Figs. 3, 4, and 5) that is guided in the vertical slot or perforation in the draw-

head *a*, such side rib serving to impart additional strength and resistance against a lateral strain, and it also serves as a guide-rib to guide the pin properly in the corresponding perforation in the draw-head.

Opposite to the guide rib *c''* on the pin *c* is a rib or projection, *c'*, serving as a lower rest for the spring *d*, located in the vertical perforation *a''*, which spring in its upper end rests
60 against the under side of the cover or plate *e*, (shown in Figs. 1 and 3,) which cover is held in place by means of screw *e'* or equivalent means. The object of spring *d* is to automatically force the pin *c* down to its normal
65 locking position (shown in Figs. 2 and 3) as soon as the forward end of the link *b* has passed by and raised the lower end of pin *c*, and also to hold the pin down in such locked position and to prevent it from jumping up by
70 the motion of the cars, and thereby preventing accidental uncoupling. The lower end, *c'*, of the pin *c* is made curved, cam-shaped, or inclined from front to rear, as shown in Fig. 2, so as to cause the coupling-pin to rise when
75 the forward end of link *b* comes in contact with such curved portion of the pin until the forward end of the link has passed by the rear side of the pin *c*, when the latter is instantly forced downward to its locking position (shown in Figs. 2 and 3) by the influence
80 of spring *d* and the gravity of itself.

There is shown a perforation, *a'*, in the lower portion of draw-head *a* directly below pin *c*; but such perforation serves no purpose as a
85 guide for the pin *c*, and it is made mainly for the purpose of permitting any sand or grit that may accumulate within the draw-head to drop down through such perforation, and thus permit the pin *c* to work freely.

Back of the perforation *a'*, and extending to the rear some distance behind the pin *c*, is an inclined bed, *a'*, (shown in Fig. 2,) on which the forward end of link *b* is guided with an
95 upward motion as it enters the draw-head, so as to cause the coupling-pin *c* to be raised with greater ease.

By having the pin *c* guided only in the upper wall of the draw-head no rest is needed against the front cam-shaped portion of it, and
100 consequently such curved or cam-shaped surface is prevented from injury or displacement.

incidental to the strain on link *b* if the pin was guided in the lower wall also of the draw-head.

In my invention I have a solid pin, *c*, without any perforations from the head of it to its lower curved end. The said pin is made to move vertically in a perforation of even size throughout its length, such guide-perforation passing through the upper wall only of the draw-head. By making the pin solid its strength is increased, so that I am enabled to dispense with a guide or rest for it in the lower wall of the draw-head, and thus prevent the cam-face on the lower part of the pin from injury.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent, and claim—

1. In a car-coupling, the vertically-movable solid coupling-pin *c*, located in a perforation,

a'', of even size throughout its length in the upper wall of the draw-head *a*, and having a cam-shaped or curved lower end, as described, in combination with side projections *c'*, spring *d*, and cover *e*, as and for the purpose set forth.

2. The draw-head *a*, with its flaring mouth *a'*, and vertical perforation *a''* of even size throughout its length, combined with the solid pin *c*, having curved or cam-shaped lower end, strengthening rib or guide-rib *c''*, projection *c'*, and spring *d*, all arranged and combined, substantially as described.

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

ALBERT GOLDSMITH.

Witnesses:

ALBAN ANDRÉN,
LUCY W. TORREY.