

(No Model.)

T. BLANDIN.

CAR COUPLING.

No. 299,723.

Patented June 3, 1884.

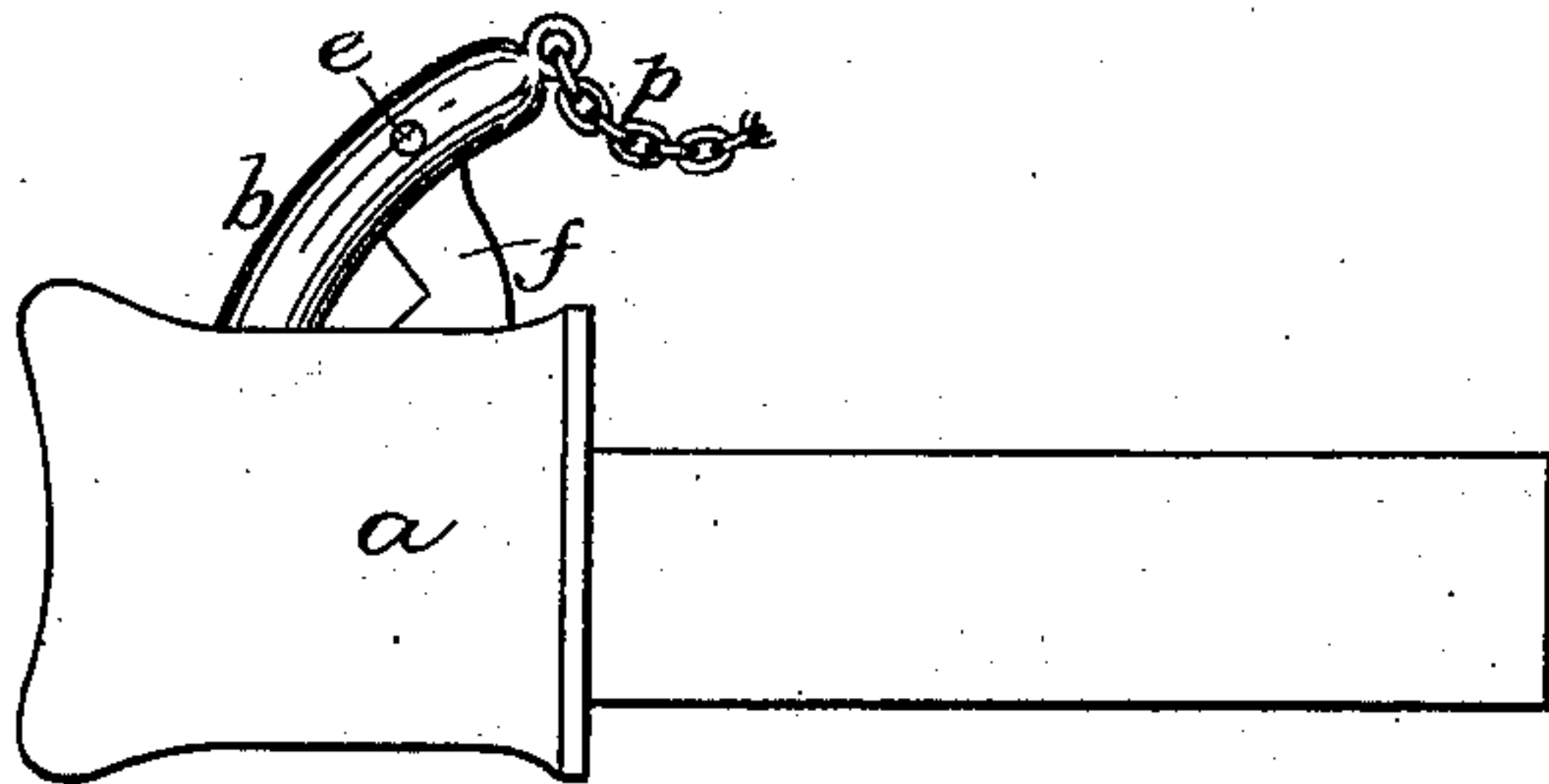


Fig. 1.

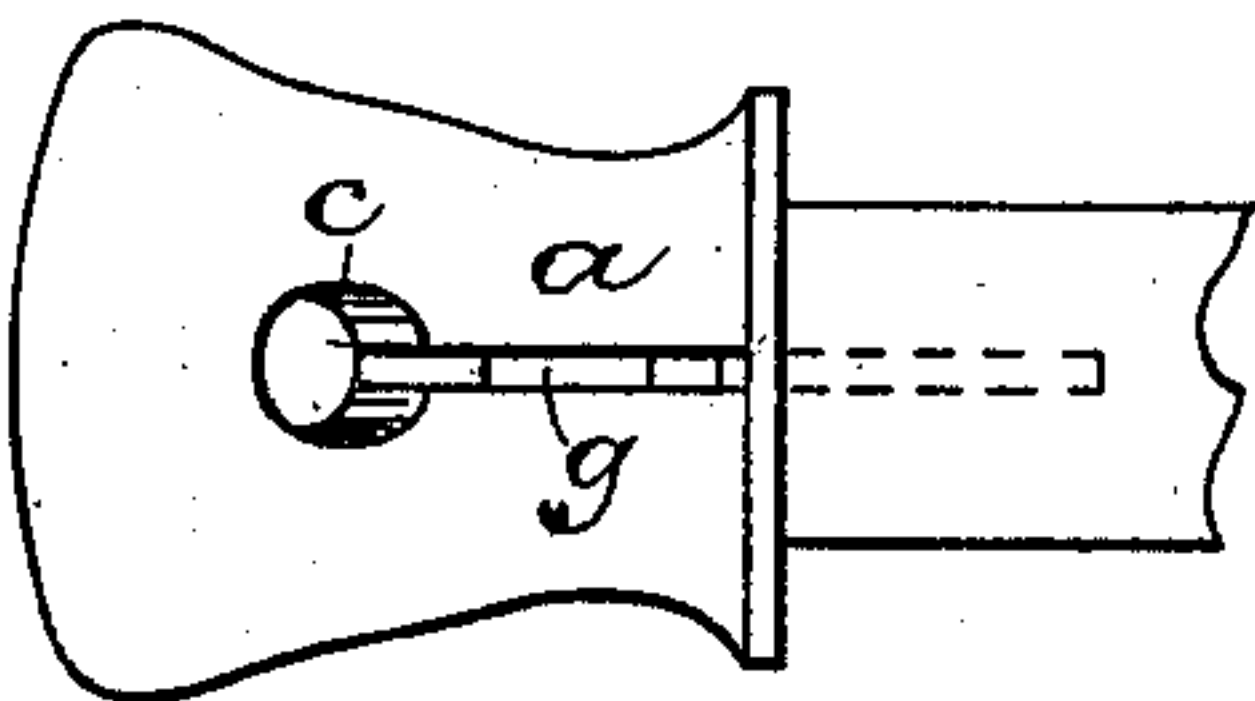


Fig. 2.

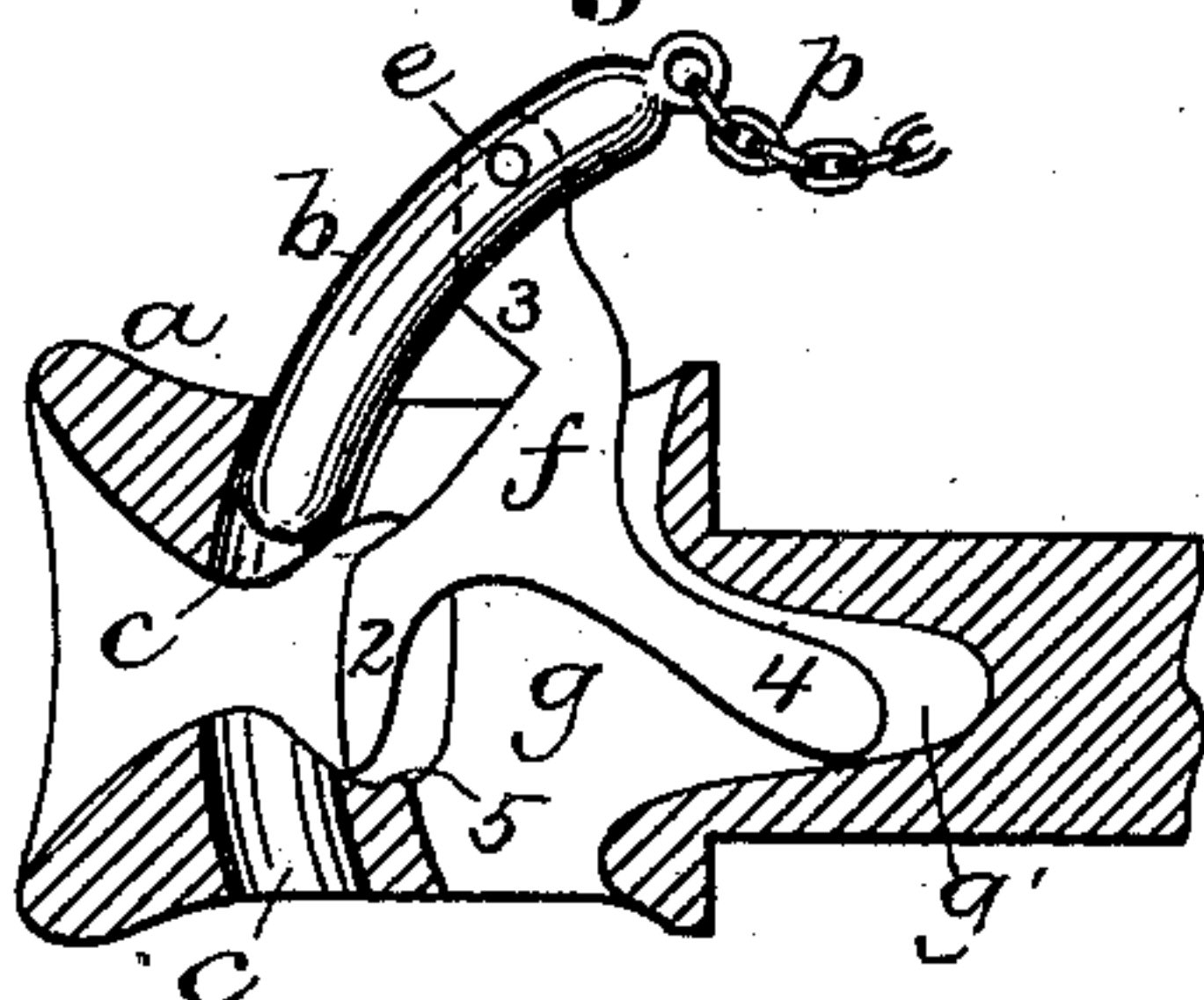


Fig. 3.

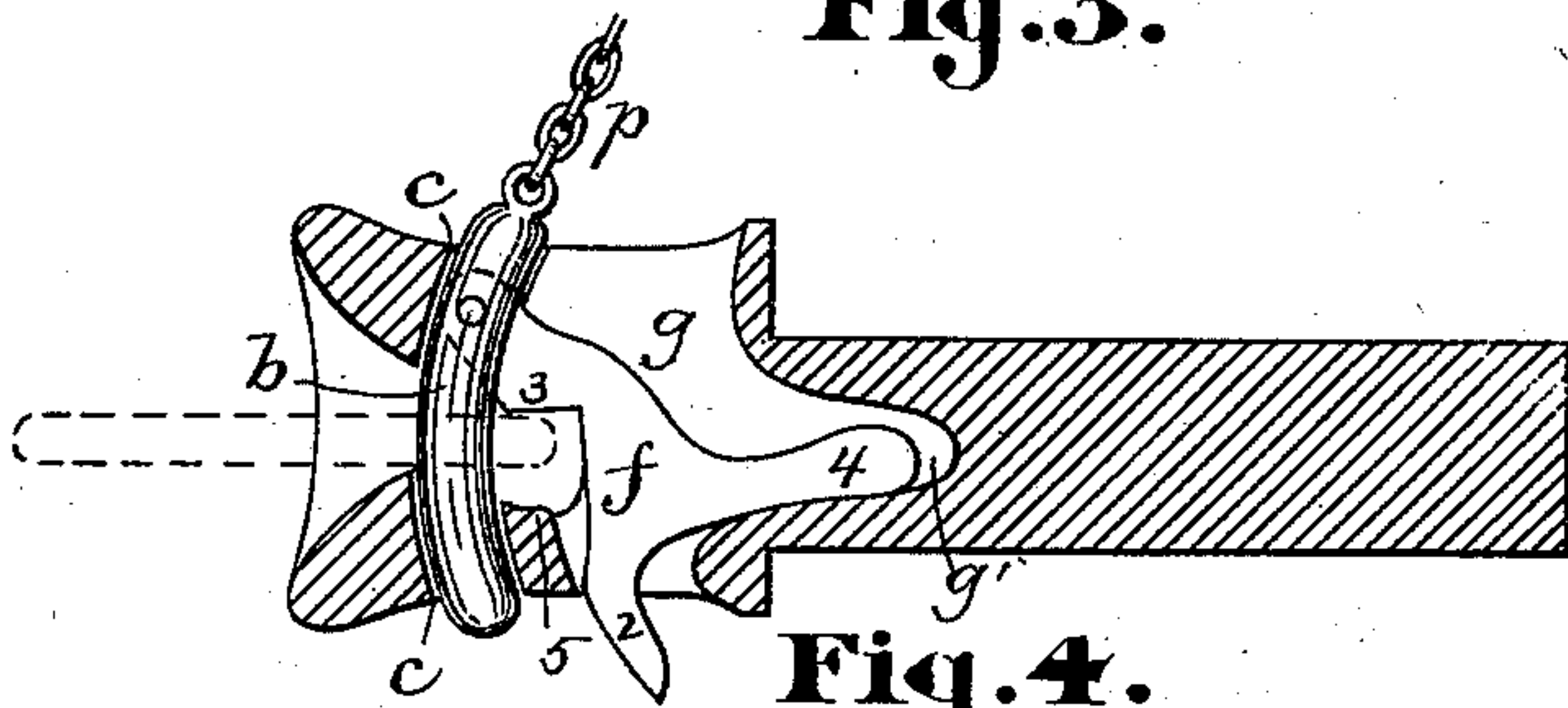


Fig. 4.

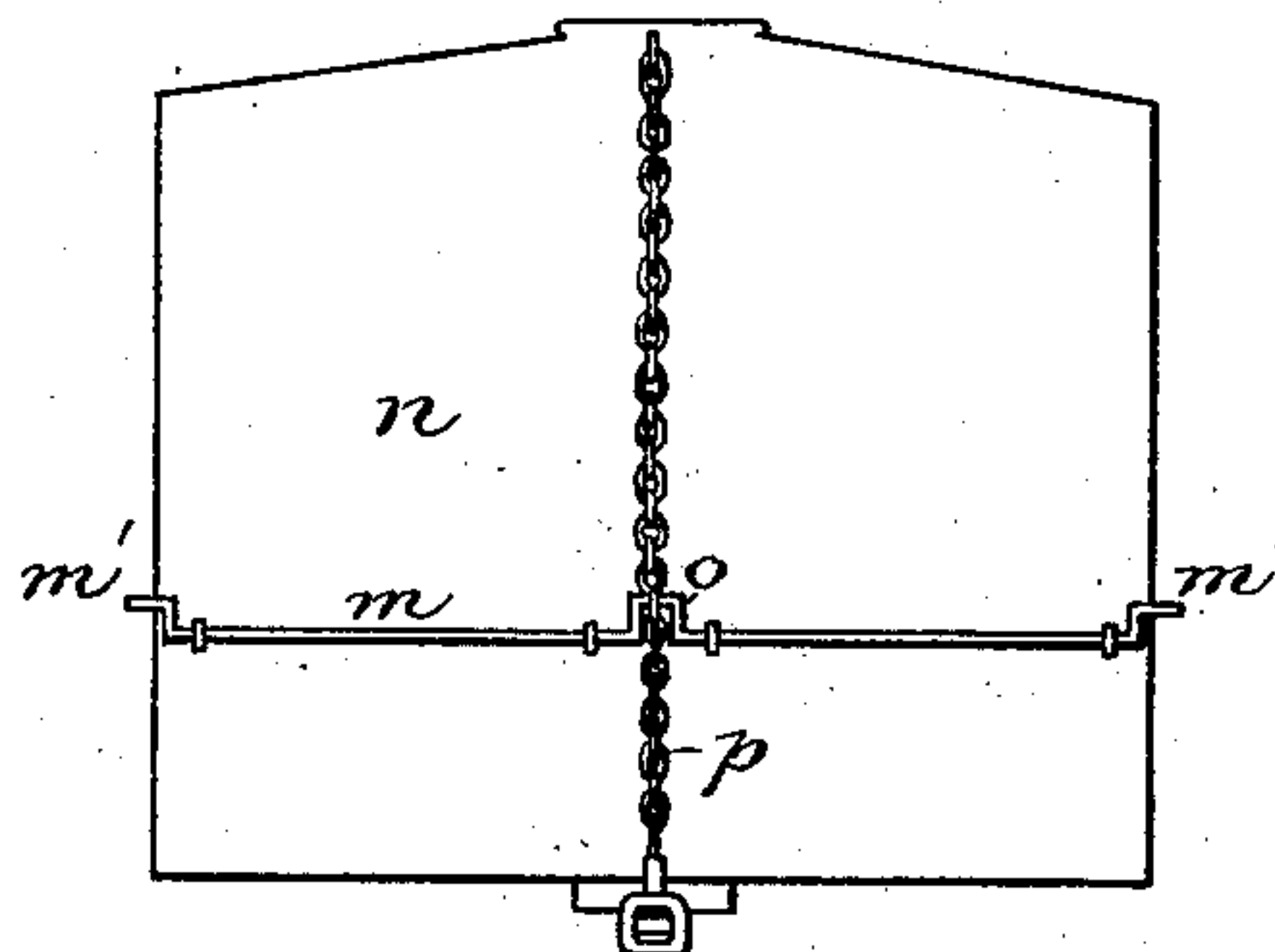


Fig. 5.

Witnesses.

H. Brown;
A. C. N. Kiti

Inventor.

T. Blandin
by Wright & Brown
Attys.

UNITED STATES PATENT OFFICE.

THOMAS BLANDIN, OF BOSTON, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 299,723, dated June 3, 1884.

Application filed March 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BLANDIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Car-Couplings, of which the following is a specification.

This invention consists in an improved form of draw-head for a car-coupling, and in an improved device for application to the draw-head, comprising a coupling-pin and a device adapted, first, to automatically hold the pin in an elevated position ready to drop into the link, and to steady and support the pin laterally when it is elevated; secondly, to be operated by the entrance of the link to release the pin and allow it to drop into the link; thirdly, to strike the link and eject it from the draw-head when the pin is raised; fourthly, to support or counterbalance the link; and, fifthly, to prevent accidental removal or loss of the pin from the draw-head at any time, all of which I will now proceed to describe.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a draw-head provided with my improvement. Fig. 2 represents a top view of the draw-head, the pin being removed. Fig. 3 represents a longitudinal section showing the pin raised. Fig. 4 represents a similar section showing the pin dropped to position to hold the link, and the link counterbalanced by the pin and its holding device. Fig. 5 is an end view of a car, showing the appliances for raising the pin.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents the draw-head, and *b* the coupling-pin. Said pin is formed on an arc of a circle, and the socket *c* in the draw-head, which receives the pin, is formed on a similar arc, as shown in Figs. 3 and 4, the center on which said arc is formed being at about the height of the center of the length of the pin when the latter is in position to hold the link, so that the lower end of the pin projects back of the central part, which bears against the link, and thus prevents the link from working upwardly. The socket *c* extends both above and below the mouth of the draw-head, so that the pin is supported both above and below said mouth. To the upper portion of the pin is pivoted at *e* a weighted dog, *f*,

which extends backwardly from the link into a slot, *g*, in the draw-head, and is provided with a toe, 2, a shoulder, 3, and a rearwardly-projecting offset or weight, 4, as shown in Figs. 2 and 3. When the pin *b* is raised, as shown in Fig. 3, the dog *f* swings forward by gravitation until its toe 2 bears on a shoulder, 5, formed in the interior of the draw-head behind the pin-socket, and is arrested in said position by the contact of the offset 4 with the bottom of a recess, *g'*, into which said offset projects. The dog is thus supported at two points by the draw-head and holds the pin in an elevated position. The toe 2 is held in such position that the link *l*, as it enters the draw-head, will strike said toe and push it back from the shoulder 5. The pin, being then unsupported, drops into its socket, and thus passes through the link. The backward inclination of the raised pin, which is due to the curved form of the pin and its socket, would cause the pin to bind against the walls of the socket, and thus prevent it from readily dropping, were it not for the fact that the offset of the dog bears against the bottom of the recess *g'* at a point at or near the center of the circle of which the pin is an arc, so that the dog turns on said point as on a pivot, thus guiding the pin easily in its curved forward and downward movement. When the pin has entered the link sufficiently, the shoulder 3 of the dog strikes the inner end of the link, the weight of the pin and dog being thus imposed on the link and caused to counterbalance the latter, so that it will stand out horizontally from the draw-head without support at its other end. The dog *f* fits somewhat closely in the slot *g*, so that it has little or no lateral play; hence the pin, when elevated, is supported laterally as well as vertically by the dog. When the pin is raised, the forward swinging movement of the dog causes it to eject the link from the draw-head in case the link is free at its outer end.

As a means for raising the pin, I prefer to employ a horizontal rod, *m*, journaled in staples or bearings on the end of the car *n*, and provided with a crank, *o*, and a chain, *p*, connecting the pin with said crank, said chain being preferably extended to the top of the car. The rod *n* is turned to raise or lower the crank by means of handles *m'* at the ends of

the rod, and when the crank is raised it draws the chain backwardly and upwardly in a direction approximating that in which the pin moves, as shown in Fig. 4. It is obvious, however, that any other suitable means may be employed for the same purpose.

The pin may be held in a raised position by the chain, so that it will not drop when the dog *f* is pushed back by a link when it is not desirable to couple.

The pin and dog may be lifted together from the draw-head; but the form of the dog and of the slot in which it is contained prevents the pin and dog from being removed accidentally.

I claim—

1. In a car-coupling, the combination of a draw-head having a curved coupling-pin socket, a shoulder behind the socket, and a slot extending backwardly from the socket, combined with a curved pin adapted to enter said socket, and a weighted dog pivoted to the upper end of said pin and projecting backwardly from the pin into the slot, said dog being adapted to engage with the shoulder and support the pin in a raised position, and to be displaced by the link, so as to release the pin, as set forth.

2. The combination of a draw-head having a curved socket, a shoulder behind the socket, and a slot extending backwardly from the socket,

combined with a curved coupling-pin, and an automatic supporting device or dog pivoted to the pin and projecting backwardly into the slot of the draw-head, said dog being adapted to automatically hold the pin and support it laterally in a raised position, to be displaced by the link, and to guide the curved pin in its forward and downward movement, as set forth.

3. The combination, with a socketed and slotted draw-head, of a pin adapted to enter the socket, and a dog pivoted to said pin adapted to enter the slot, as set forth.

4. The combination, with a socketed and slotted draw-head, of a pin adapted to enter the socket, and a dog pivoted to said pin and adapted to enter the slot, and provided with a shoulder, 3, adapted to bear on the link, as set forth.

5. The combination, with the draw-head having the curved socket *c*, shoulder 5, and recessed slot *g*, of the curved pin *b* and the dog *f*, pivoted to said pin, and provided with the toe 2, shoulder 3, and offset 4, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 26th day of March, 1884.

THOMAS BLANDIN.

Witnesses:

C. F. BROWN,
A. L. WHITE.