

(No Model.)

J. SHABER.  
CAR COUPLING.

No. 433,309.

Patented July 29, 1890.

FIG. 1.

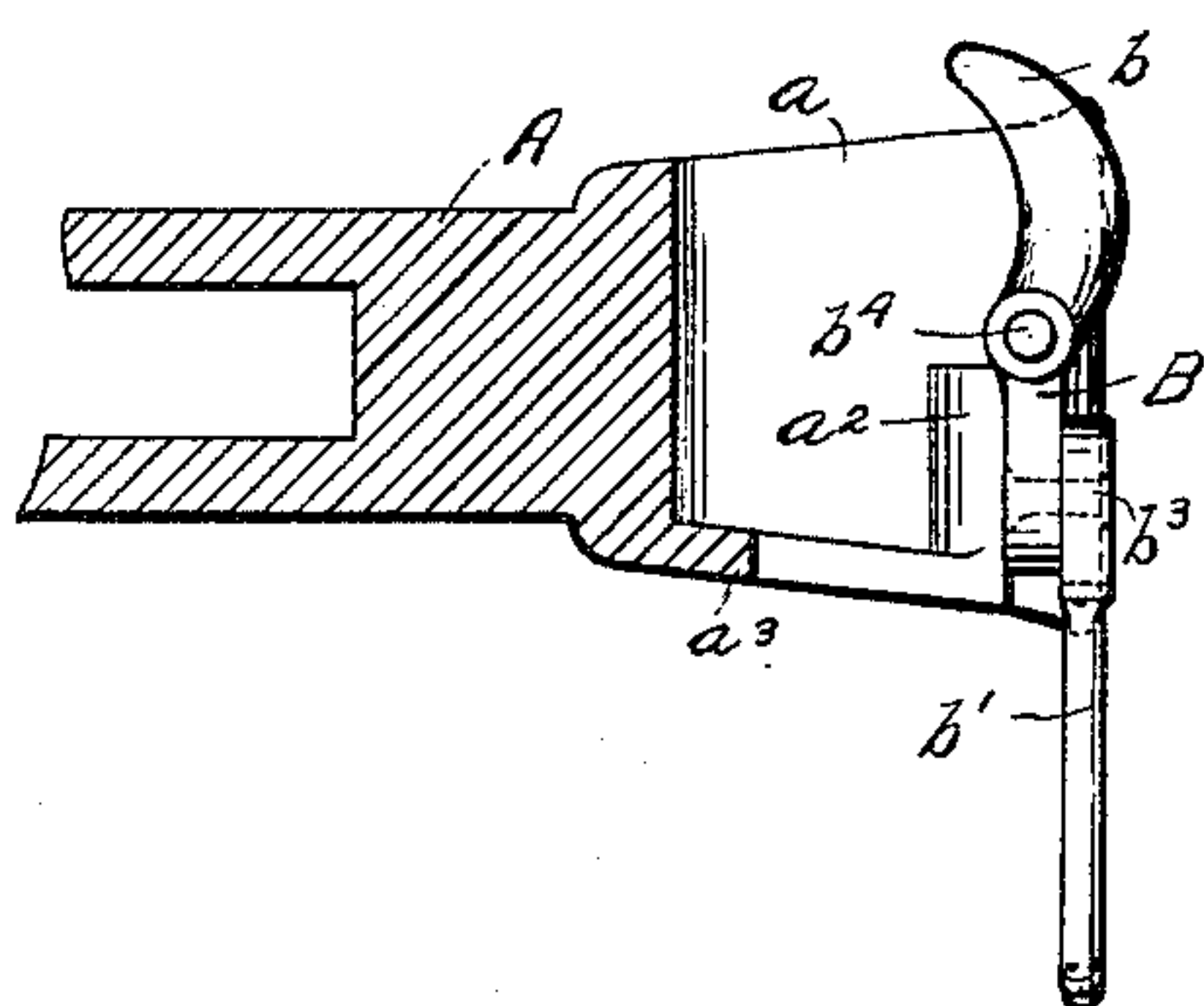


FIG. 2.

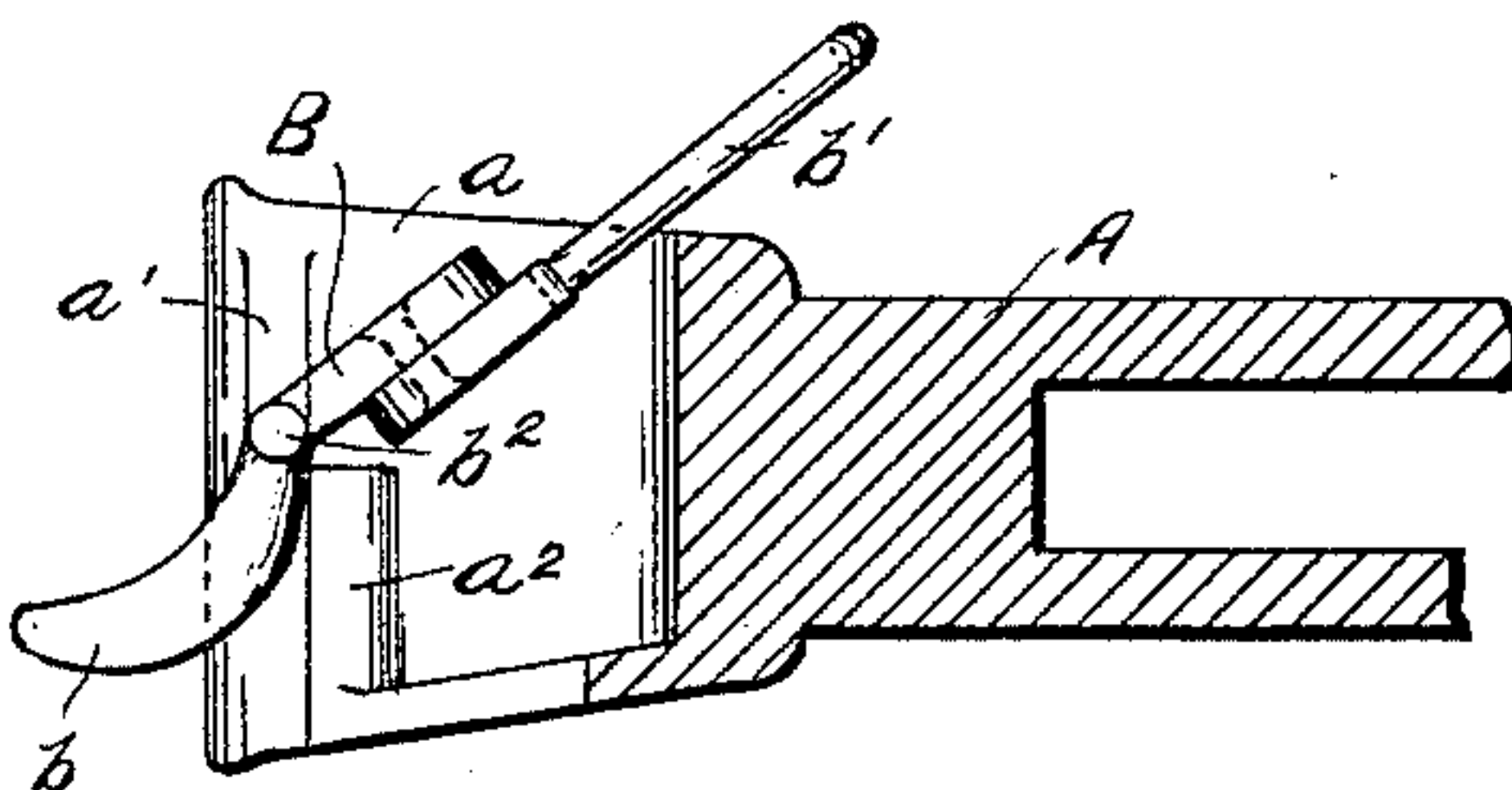


FIG. 3.

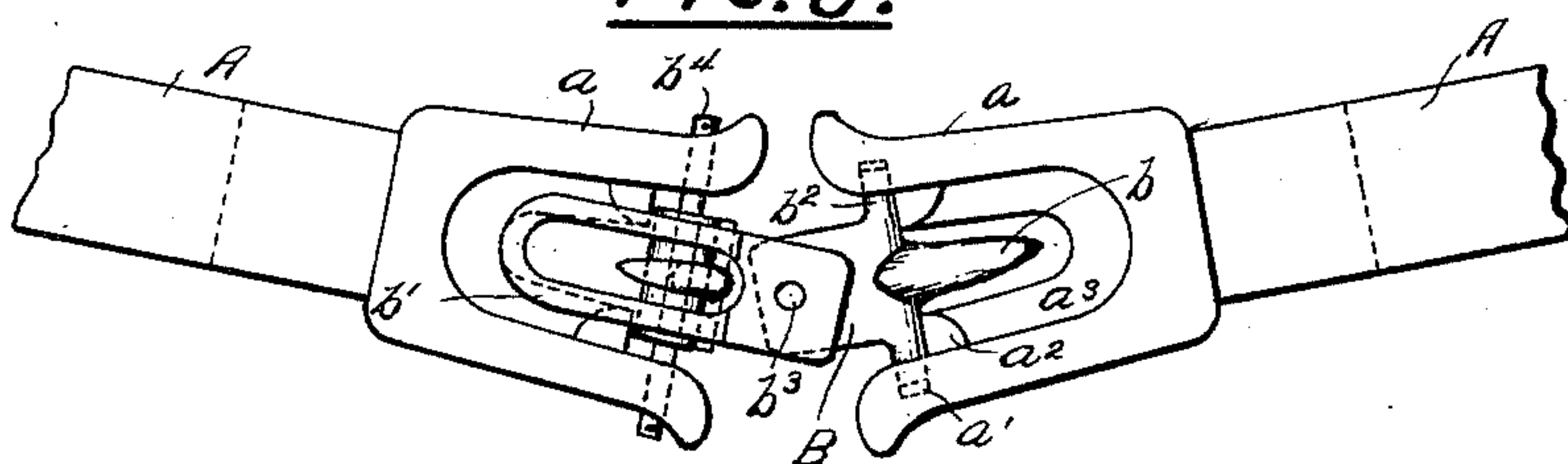


FIG. 4.

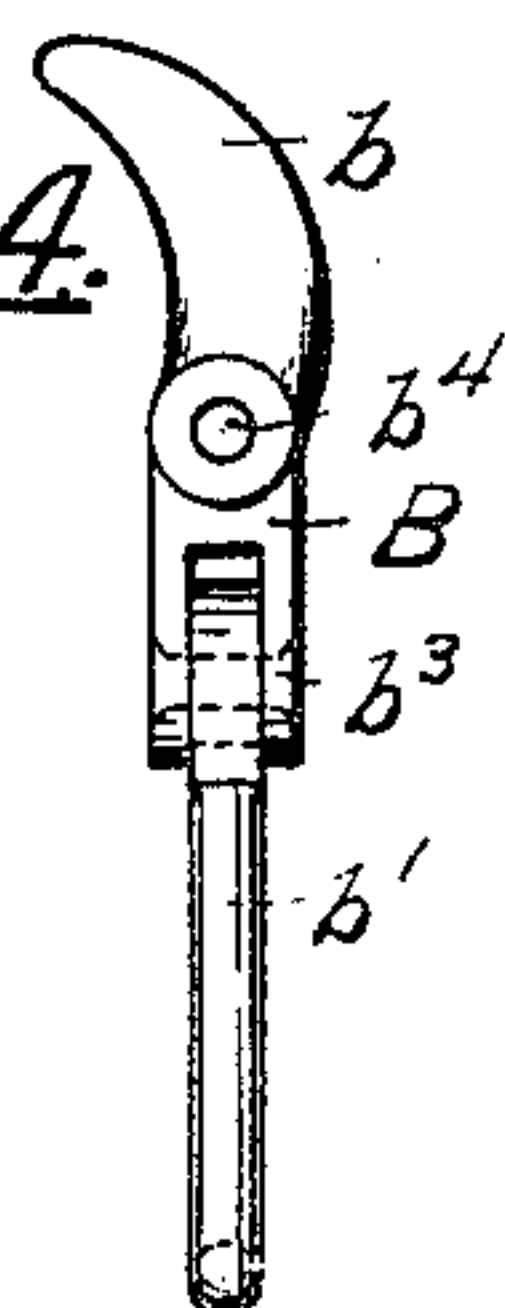


FIG. 5.

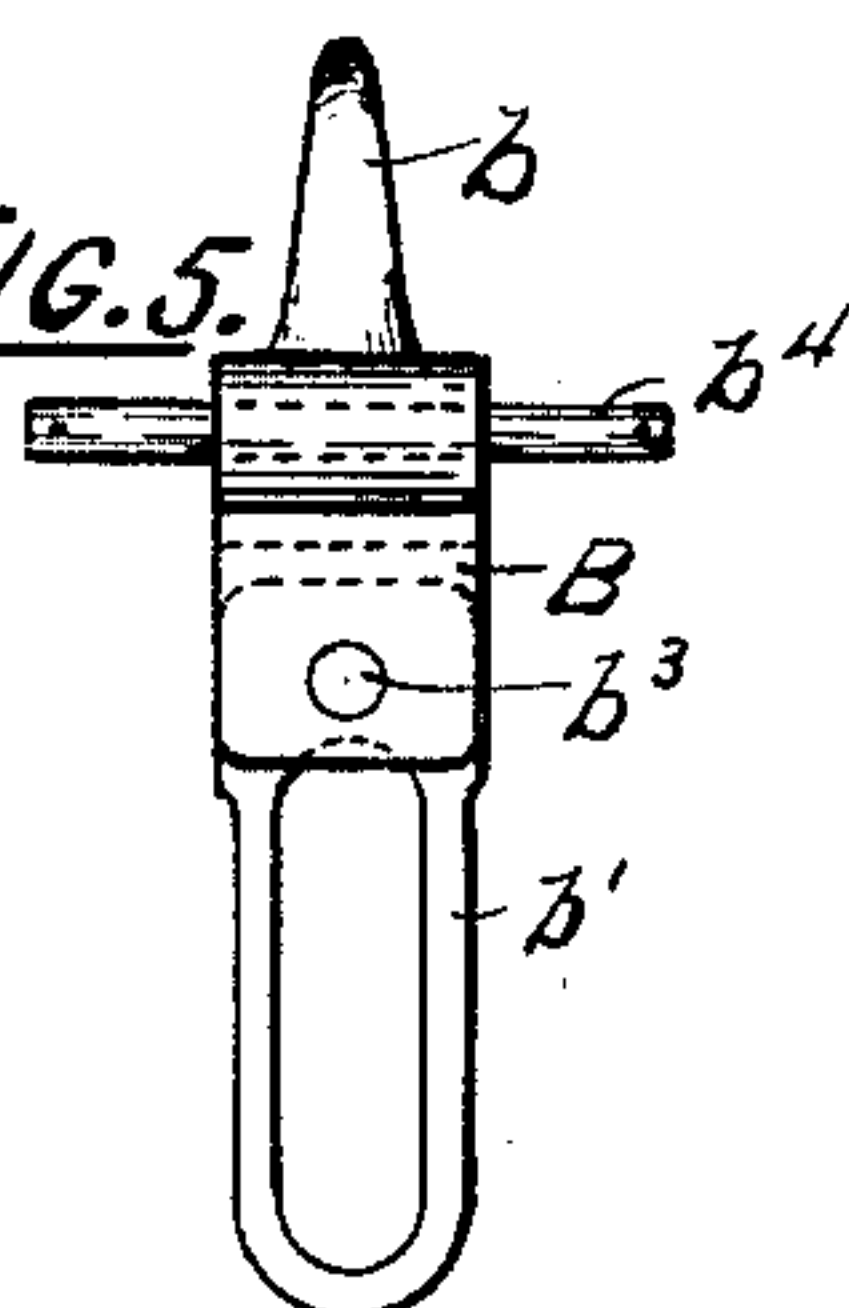
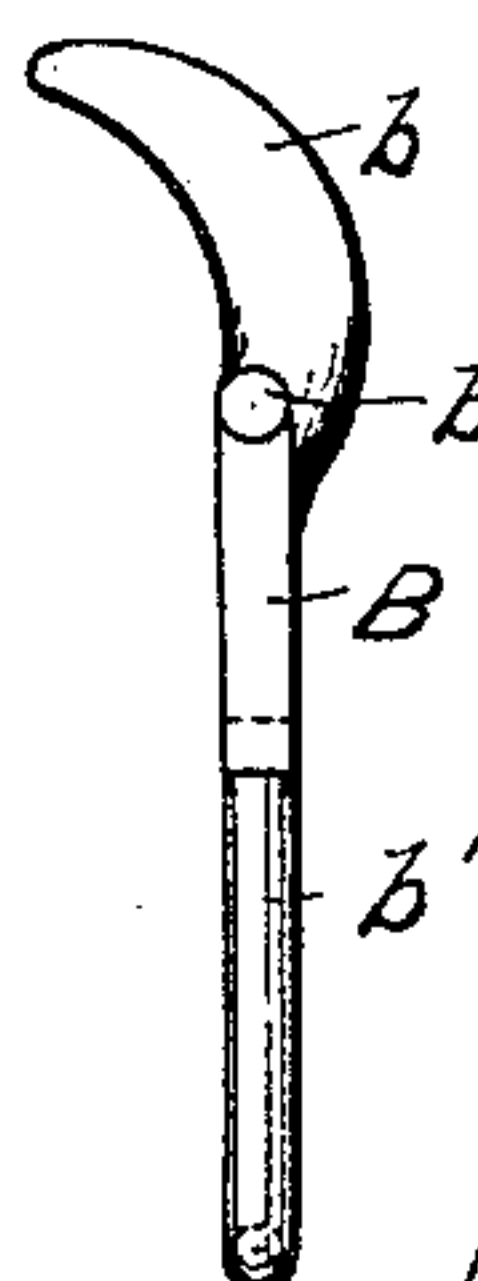


FIG. 6.



Witnesses

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*W. B. Klein*

*Jacob Shaber*  
Inventor

By *His* Attorney

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# UNITED STATES PATENT OFFICE.

JACOB SHAABER, OF READING, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 433,309, dated July 29, 1890.

Application filed December 26, 1889. Serial No. 334,933. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB SHAABER, a citizen of the United States, residing at Reading, in the county of Berks, State of Pennsylvania, have invented certain Improvements in Car-Couplings, of which the following is a specification.

This invention relates more particularly to improvements in car-couplings whereby the operation of coupling and uncoupling may be rendered more safe and easy without involving a complicated construction, necessarily apt to get out of order and consequently to fail to operate.

The essential feature of the invention is the coupling-link employed which has a hook or pin extension at one end, and is pivoted intermediately to the draw-head, so as to permit the positions of the link and hook to be readily reversed, adjoining cars which it is desired to couple being arranged with the link of one car opposite the pin of the other.

The construction and operation are fully described hereinafter in connection with the accompanying drawings, and the invention is particularly pointed out in the claims.

Figures 1 and 2 are longitudinal sections of adjoining draw-heads, showing the combined coupling link and hook of each arranged to couple automatically. Fig. 3 is a top view of the same, showing the two heads coupled on a curve. Figs. 4 and 5 show in detail a combined link and hook, substantially the same as shown in Figs. 1 and 3. Fig. 6 shows a modified form of combined link and hook.

The draw-heads A are represented as jaw-shaped, and with a flange  $a^3$  projecting inwardly from the jaws  $a$ , and shoulders or stops  $a^2$  near the front of the head, the purpose of which will be hereinafter explained. The coupling-link  $b'$  is pivoted at  $b^3$  to the portion B of the hook  $b$ , and the combined hook and link are pivoted between the jaws  $a$  of the draw-head slightly forward of the stops  $a^2$ . In Fig. 1 they are carried upon a pin  $b^4$ , which passes transversely through the jaws  $a$  of the draw-head, while in Fig. 2 they are carried upon trunnions  $b^2$ , forming part of the hook or link, which trunnions en-

ter bearings  $a'$ , recessed in the inner surface of the jaws  $a$ .

In Figs. 4 and 5 the portion B of the hook is represented as jaw-shaped and inclosing the end of the link  $b'$ , instead of the latter being merely pivoted in contact with one face of the portion B, as indicated in Figs. 1 and 2. In either case the link  $b'$  has a swinging motion upon the pivot independent of the swinging motion of the combined hook and link upon the pin  $b^4$  or trunnions  $b^2$ , the two motions, however, being in planes at right angles to each other.

In Fig. 6 the hook and link are represented as formed in one solid piece, which construction, though inferior to that already described, can perhaps be used satisfactorily where no short curves are encountered.

The operation will be readily understood. When two cars approach each other to be coupled, they are set, as represented in Figs. 1 and 2, with the hook of one draw-head opposite the link of the other. Preferably the link should be uppermost on the lower car, if of different heights, though this is not essential. The point of the pendent hook, as shown in Fig. 2, projects beyond the draw-head and comes in contact with the intermediate portion of the combined hook and link of the adjoining draw-head, Fig. 1. The latter being in contact with the stops  $a^2$  cannot swing away, and the link of the first draw-head is consequently thrown forward automatically, and engages the opposite hook of the adjoining car, thus positively coupling them. In Fig. 3 they are shown coupled with the coupling-link turned upon its pivot  $b^3$  to suit the curve of the track. It is evident that the coupling will readily adjust itself to any curve or to varying heights of cars, and also that cars may be coupled upon curves. They may be readily uncoupled by pressing down the horizontal hook, Fig. 3, thus lifting the link, this being done by hand, or, if preferred, by any suitable mechanism operated by a handle at the side of the car.

I do not limit myself to the exact construction herein set forth, as it may be varied without departing from the spirit of my invention.



What I claim is—

1. In a car-coupling, the combination, with the jaw-shaped draw-head having shoulders or stops, as  $a^2$ , of a coupling-link having a hook-extension at one end and pivoted inter-  
5 mediately to said head, said stops being arranged to limit the swinging motion of said link, substantially as and for the purpose set forth.
- 10 2. In a car-coupling, the combination, with the draw-head, of a combined coupling link and hook pivoted intermediately to said head, substantially as described, the said link hav-  
15 ing an independent pivotal movement in a plane at right angles to that of the combined link and hook, substantially as set forth.

3. In a car-coupling, the combination, with the jaw-shaped draw-head having shoulders or stops, as  $a^2$ , of a combined coupling link and hook pivoted intermediately to said head 20 and having a flat portion between said hook and link arranged to bear against said stops when the link is in the pendent position and to come in contact with the pendent hook of the draw-head of an adjoining car, all sub- 25  
stantially as and for the purpose set forth.

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

JACOB SHAABER.

Witnesses:

W. G. STEWART,

WILLIAM QUIMLY.