

(No Model.)

2 Sheets—Sheet 1.

H. P. BULLOCK.
CAR COUPLING.

No. 430,171.

Patented June 17, 1890.

Fig. 1.

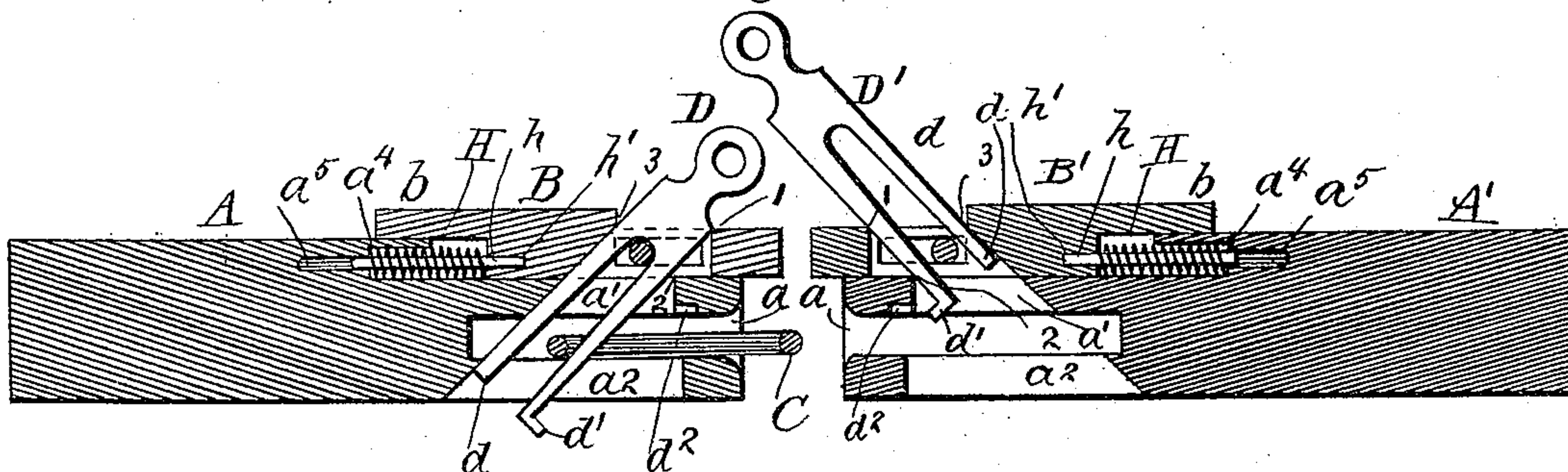


Fig. 2.

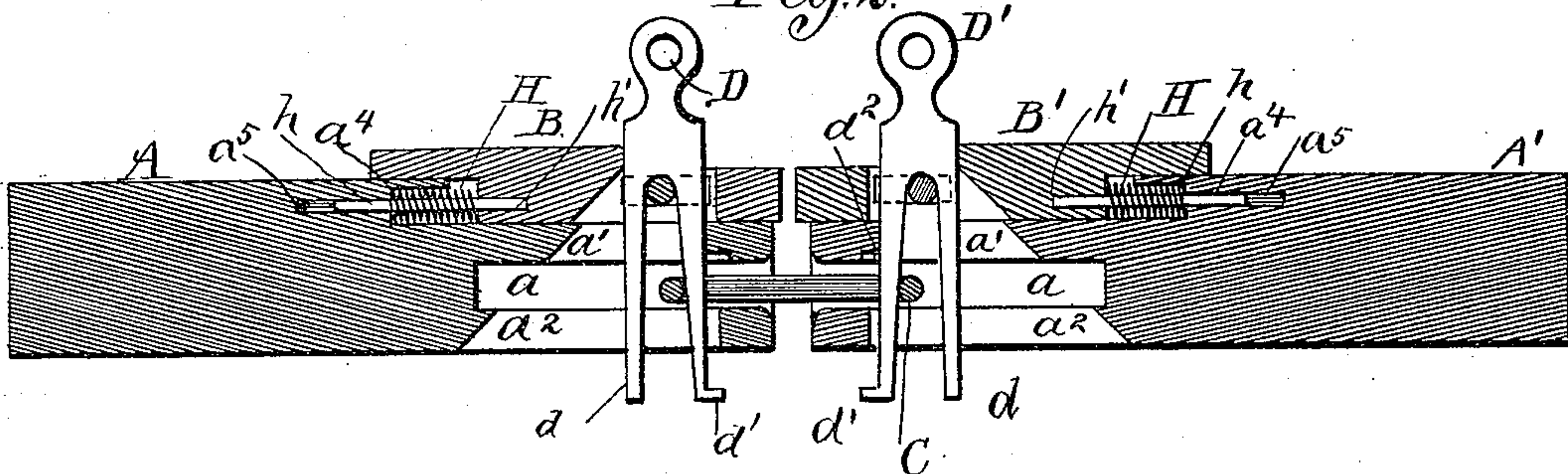


Fig. 5.

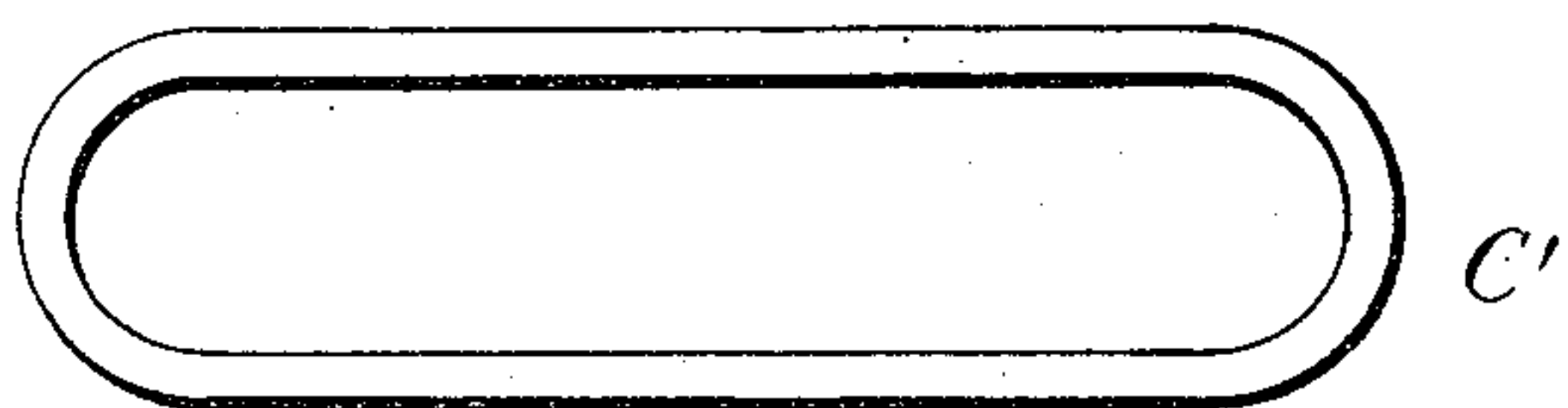
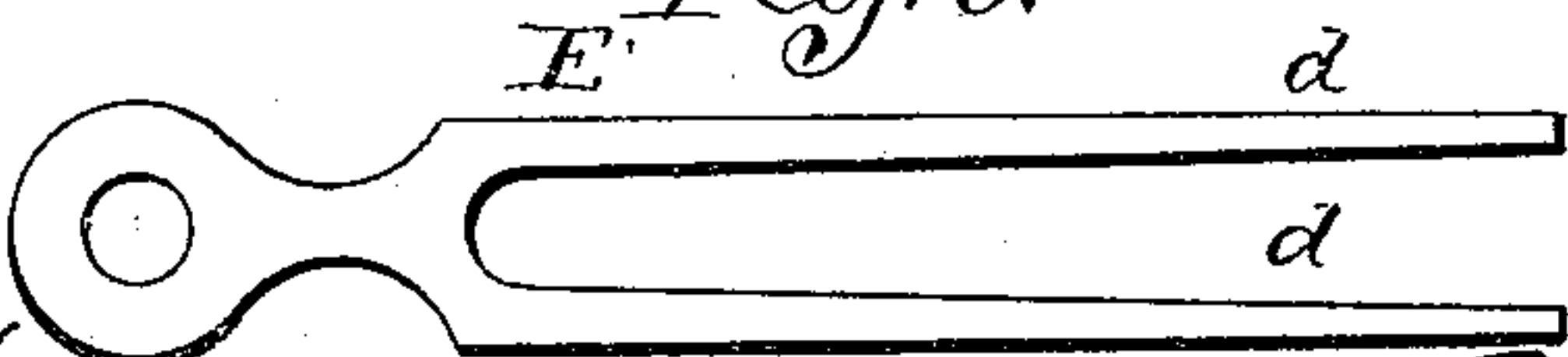


Fig. 6.



Witnesses

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3

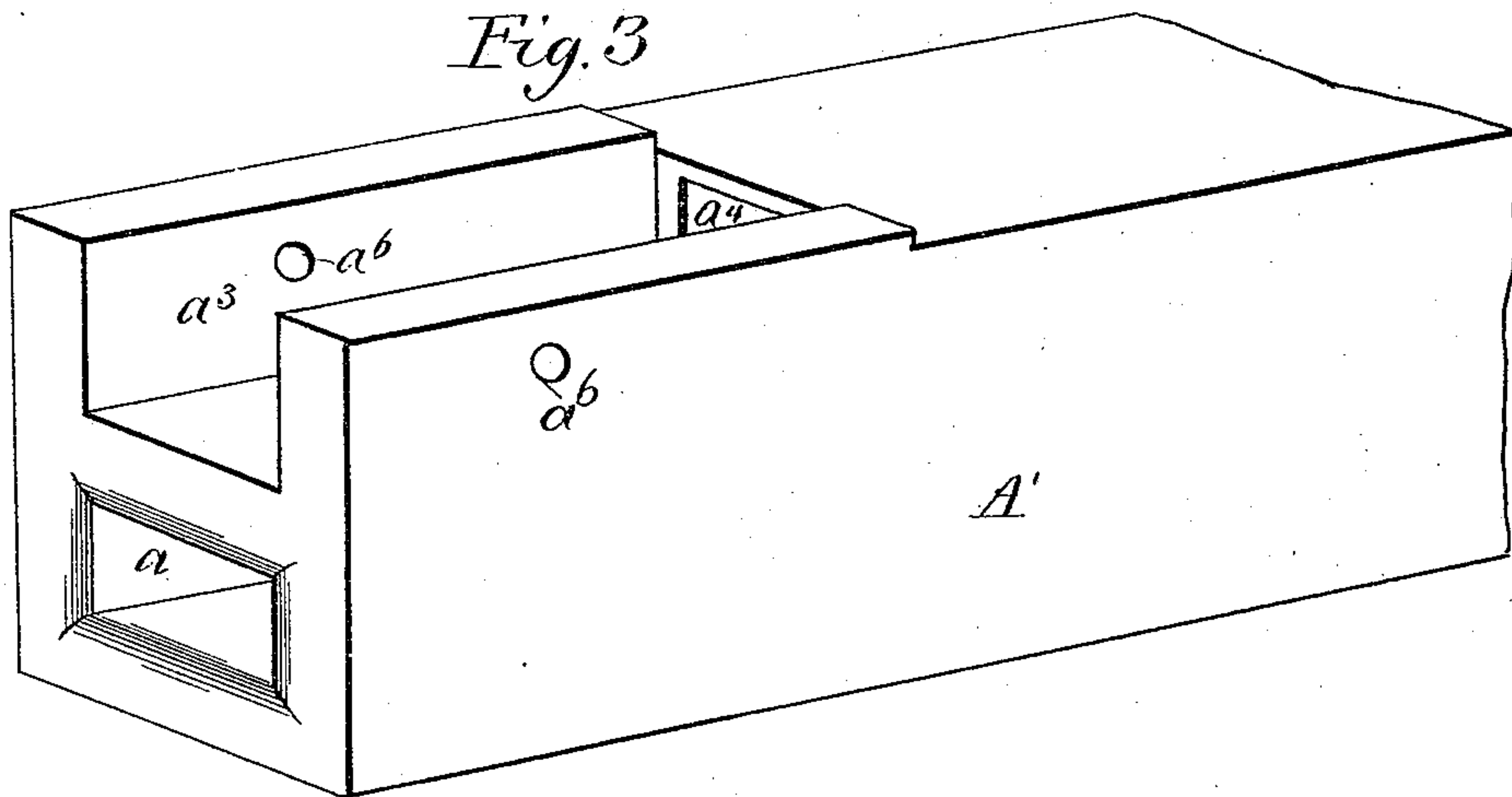


Fig. 4

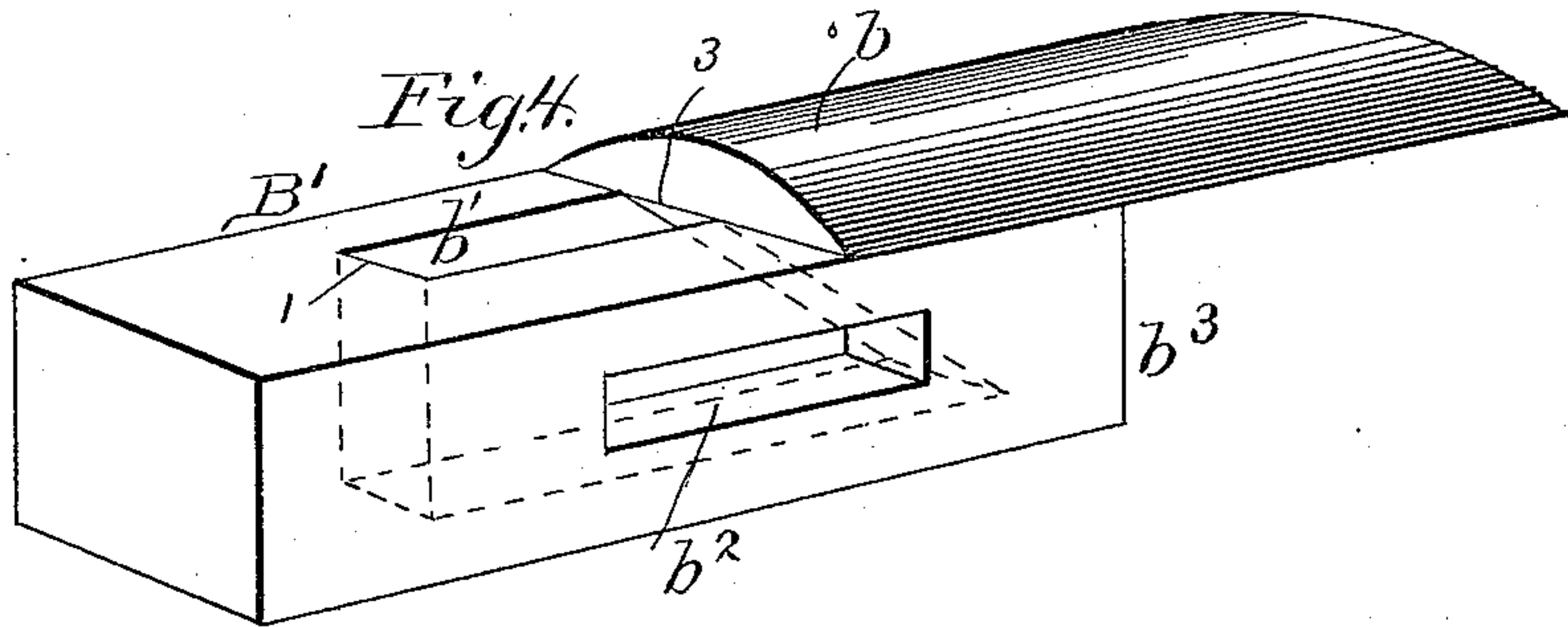


Fig. 7.

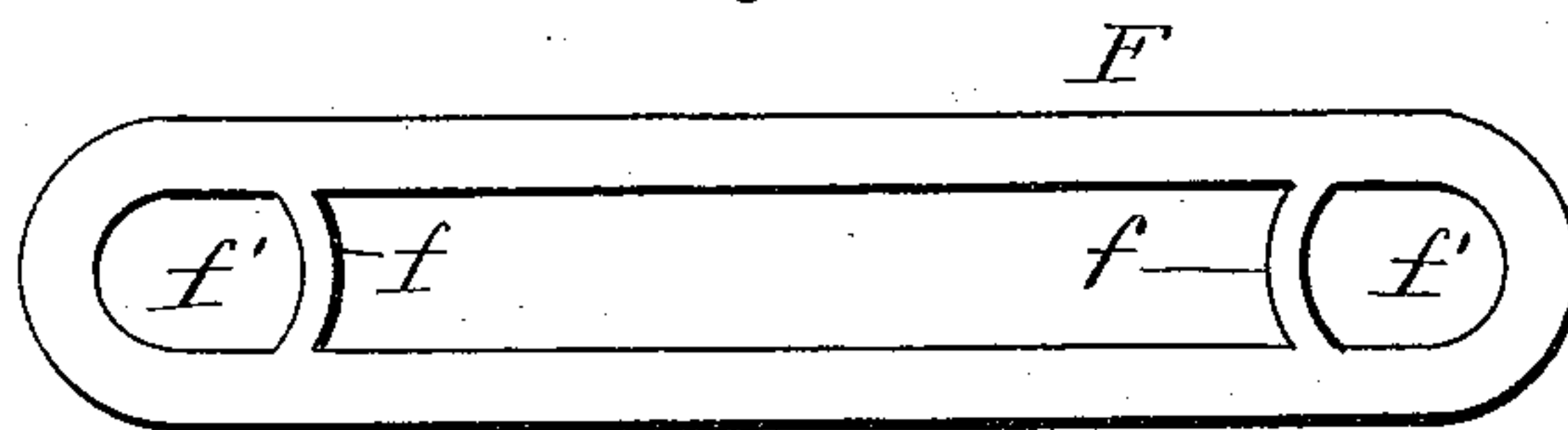


Fig. 8.

Witnesses
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UNITED STATES PATENT OFFICE.

HENRY PURNELL BULLOCK, OF JONESBOROUGH, TEXAS, ASSIGNOR OF
ONE-HALF TO EVANDER A. BAILEY, ALFRED B. ROBERTS, AND RUFUS
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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 430,171, dated June 17, 1890.

Application filed November 13, 1889. Serial No. 330,113. (No model.)

To all whom it may concern:

Be it known that I, HENRY PURNELL BULLOCK, a citizen of the United States, residing at Jonesborough, in the county of Coryell and State of Texas, have invented certain new and useful Improvements in Automatic Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention has relation to car-couplers; and it consists in the novel construction and arrangement of its parts.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of the bulk-heads approaching each other with the link and pin set ready to automatically couple them when the bumpers meet. Fig. 2 is a longitudinal sectional view of the bulk-heads coupled. Figs. 3, 4, 5, 6, 7, and 8 are detail views.

My invention is described as follows: A and A' are the bulk-heads, which have the usual throats a , the upper perpendicular slots a' , and the lower perpendicular slots a'' , and in the front end and upper part of said bulk-heads are vertical longitudinal slots a^3 , at the rear ends of which are vertical openings a^4 continuing into smaller openings a^5 . Fitting into said vertical openings a^3 are bumpers B and B', on the top and rear ends of which are secured covers b , the rear ends of which extend back and ride on the top of the bulk-heads and serve to cover the slots a^3 when the bumpers are pushed forward. Said bumpers are provided with vertical slots b' and horizontal slots b'' , and said bumpers are secured in place by pins, which pass through perforations a^6 in said bulk-heads and through said horizontal slots.

C is a sectional view of an ordinary car-coupling link, and C' is a view of an entire car-coupling link.

D and D' are views of the car-coupling pins, which are provided with legs d , the front ones having feet d' .

E is a view of the same thing having like legs without the feet.

F is a car-coupling link provided with divisions f . There may be two or more of said divisions.

G is the figure of an ordinary straight car-coupling pin.

H are coil-springs which rest in the openings a^4 in the bulk-heads, the rear ends of which are abutted against the rear ends of said openings and the front ends against the rear ends b^3 , Fig. 4, of the bumpers B and B'. Pins h are put through said springs, their ends entering openings a^5 in the bulk-heads and openings h' in the bumpers.

Fig. 1 shows the bulk-head A having the link C drawn back into its throat, the pin D straddling the rear end of said link. The bumper B is pressed forward by the coil-spring H, the coupling-pin D being held head forward and legs slanting backward by means of impingement between the front shoulder 1 of the bumper, the front shoulder 2 of the slot a' of the bulk-head, and the rear shoulder 3 of the bumper B, while the bulk-head A' holds the lower part of the legs of the pin D' head forward by means of impingement, similar to the one just above described. The said legs are held high enough up so that the throat is clear, that the coupling-link may enter without obstruction. When the draw-heads approach each other, the bumpers meet and are driven backward and the pins D and D' are thrown into an upright position, and the rear leg of the pin D throws the link C forward into the throat of the bulk-head A', and the impingements above described no longer existing the pin D' falls astride the other end of the link C, which is long enough that when tension is brought on the train of cars the two bumpers B and B' separate a little, thus giving that free link-movement so necessary in train-motion.

The feet d' of the coupling-pins are intended to catch in the recesses d^2 of the bulk-heads when they are drawn entirely up to their ends, so that they may not come out and be lost.

The coupler may be set at any time by putting the link in one bulk-head and the legs

of the coupling astride the end of the same, as shown in A, Fig. 1, and the other pin drawn up, as shown in A', same figure.

It will be seen that by this construction the front end of the link C does not protrude beyond the end of the bumper to be bent or broken, but is held back in the throat, where it is completely protected, and that it does not protrude to hang down and run under the approaching draw-head, but remains in its place until the bumpers meet, and then it is thrown immediately into the throat of the next draw-head, and it just goes far enough, so that when the pin D' drops it straddles that end of the link.

By the same construction of draw-heads and bumpers as above described I may successfully use a single pin—such as G, Fig. 8—by using in connection therewith a link F, Fig. 7, in which case the pins would drop in the openings f' of said link. The coupling-pins may be set by hand; but I purpose to use levers or other known means extending to the sides and top of the cars, so that they may be operated without the operator being in the slightest danger.

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

1. The combination of the bulk-heads A and A', provided with suitable throats to receive a coupling-link, and with vertical slots near their front ends for coupling-pins to work in, and upper slots to receive the rear ends of the bumpers B and B', and at the rear of said bumpers an opening to receive coil-springs, coil-springs H set in said slots to press said bumpers forward, bumpers B and B', provided with perpendicular slots for the coupling-pins to work in, and horizontal slots to pin the same into the upper slot just mentioned, said bumpers adapted to hold said coupling-pins between the shoulders 1, 2, and 3, above described, coupling-pins D and D', adapted to work in vertical slots, and a suitable coupling-link adapted to work in the throats of said bulk-heads and to be engaged by said coupling-pins, all substantially as shown and described, and for the purposes set forth.

2. The combination of the bulk-heads A and A', provided with suitable throats to receive a coupling-link and with vertical slots a' and

a^2 to receive suitable coupling-pins, and slots a^3 for bumpers to work in, and openings a^4 for the reception of suitable coil-springs H, bumpers B and B', provided with the slots b' and b^2 and operated by the coil-springs H, coupling-pins D and D', adapted to be held between the points 1, 2, and 3, above described, and to fall through said slots b' , a' , and a^2 when released from said impingements, and a coupling-link C to work in the throats of said draw-heads and be caught by said coupling-pins, all substantially as shown and described, and for the purposes set forth.

3. The combination of the bulk-heads A and A', provided with the throats a , upper horizontal slots a' , and lower horizontal slots a^2 , and longitudinal slots a^3 , continuing into smaller openings a^4 , bumpers B and B', provided with the covers b , vertical slots b' , and horizontal slots b^2 , coil-springs H, fitting in the openings a^4 , coupling-pins D and D', working in the slots b' , a' , and a^2 and adapted to be held between the shoulders 1, 2, and 3, above described, and link C, working in the throats of said bumpers and each end adapted to be caught between the legs of the said coupling-pins, substantially as shown and described, and for the purposes set forth.

4. The combination of the bulk-heads A and A', provided with the throats a , slots a' and a^2 , and slots a^3 , continuing into smaller openings a^4 and still smaller openings a^5 , bumpers B and B', provided with the covers b , vertical slots b' , and horizontal slots b^2 , coil-springs H, fitting into the openings a^4 , pins h , passing through said coil-springs and into openings a^5 and h' , coupling-pins D and D', having the legs d and feet d' and working in the slots b' of the bumpers and slots a' and a^2 of the draw-heads and adapted to be held against the shoulders 1, 2, and 3, above described, and links C, working in the throats of said bumpers, each end adapted to be caught between the legs d of the said coupling-pins, substantially as shown and described, and for the purposes set forth.

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

HENRY PURNELL BULLOCK.

Witnesses:

J. B. WALLIS,
A. H. OVERTON.