

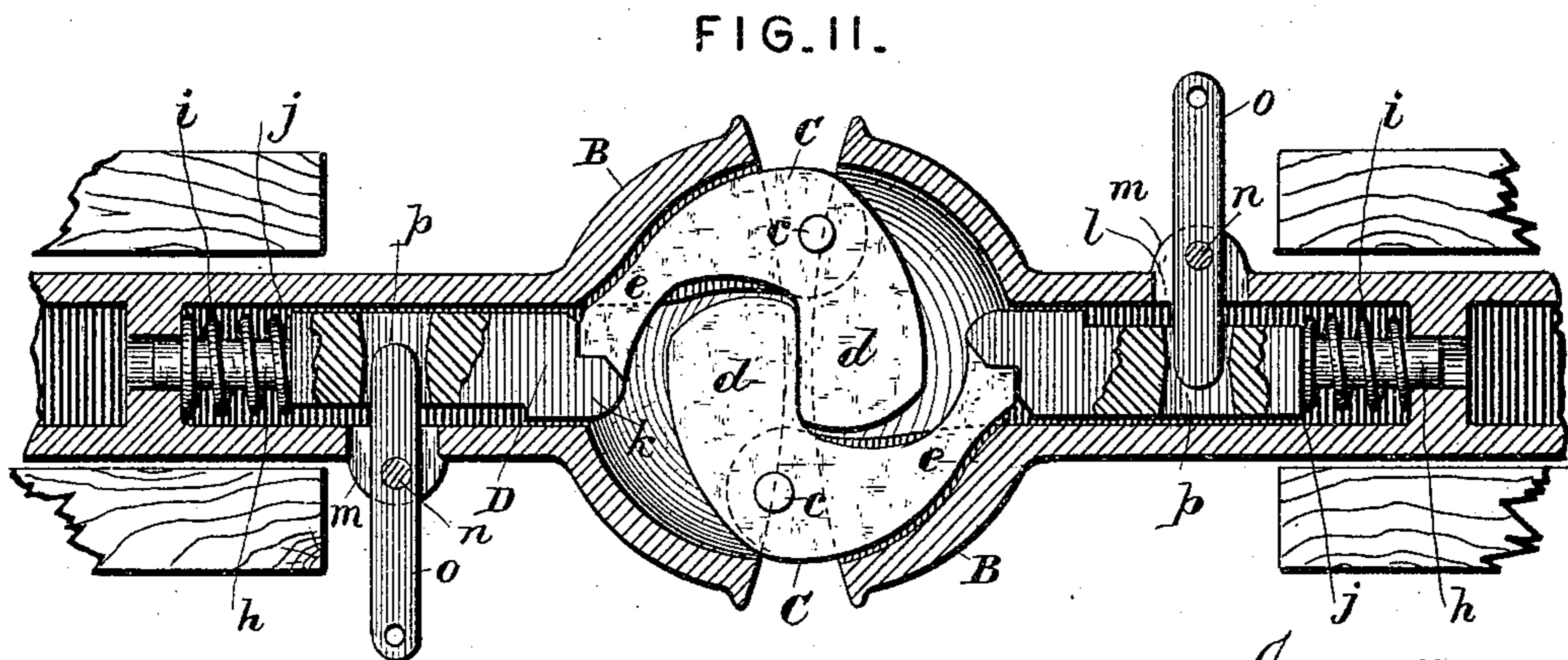
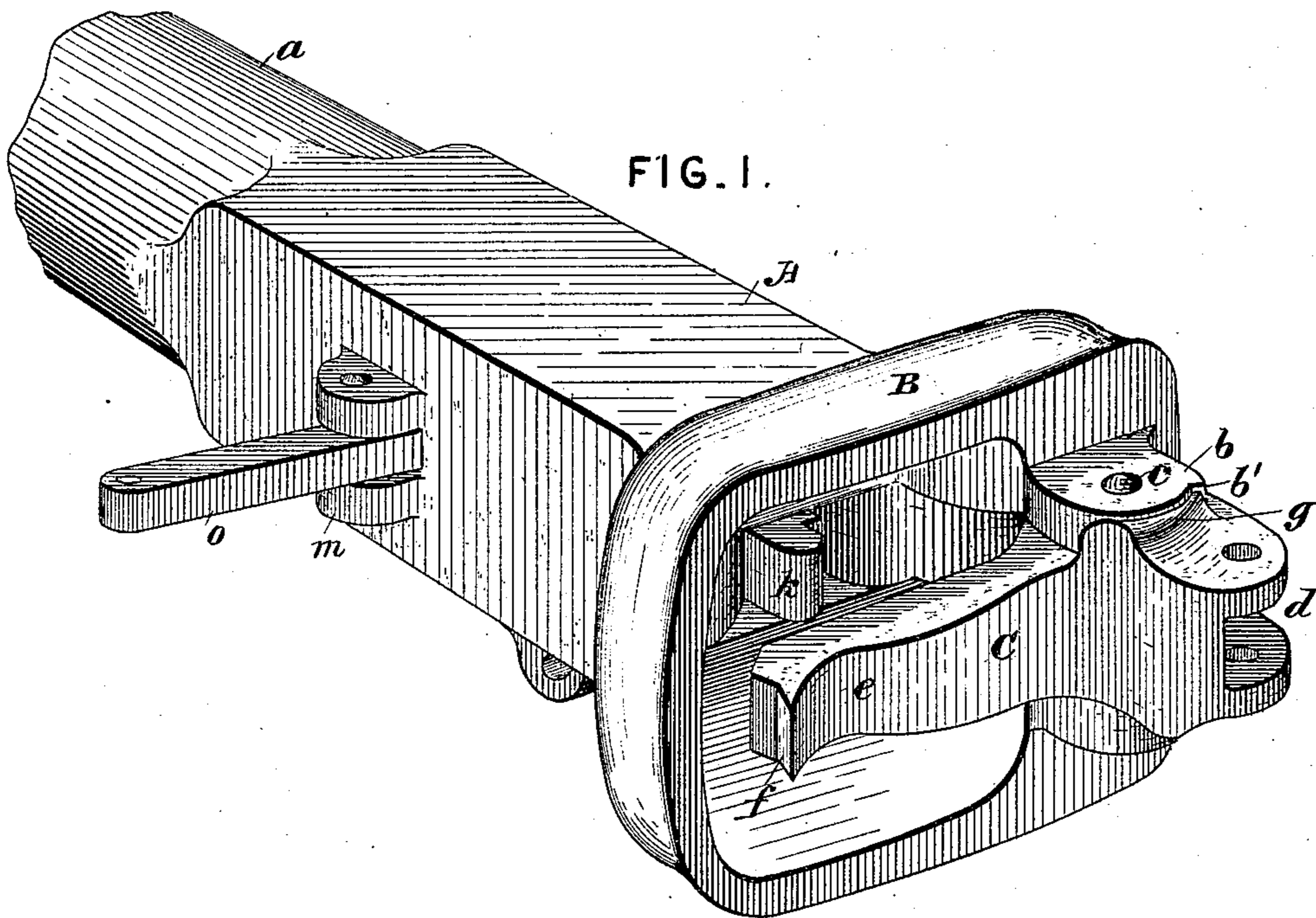
(No Model.)

2 Sheets—Sheet 1.

F. BALDT.  
CAR COUPLING.

No. 316,323.

Patented Apr. 21, 1885.



Attest.  
Geo. T. Smallwood,  
Jas. K. McCathran.

Inventor  
Frederick Baldt.  
By Raine & Sons,  
attys.

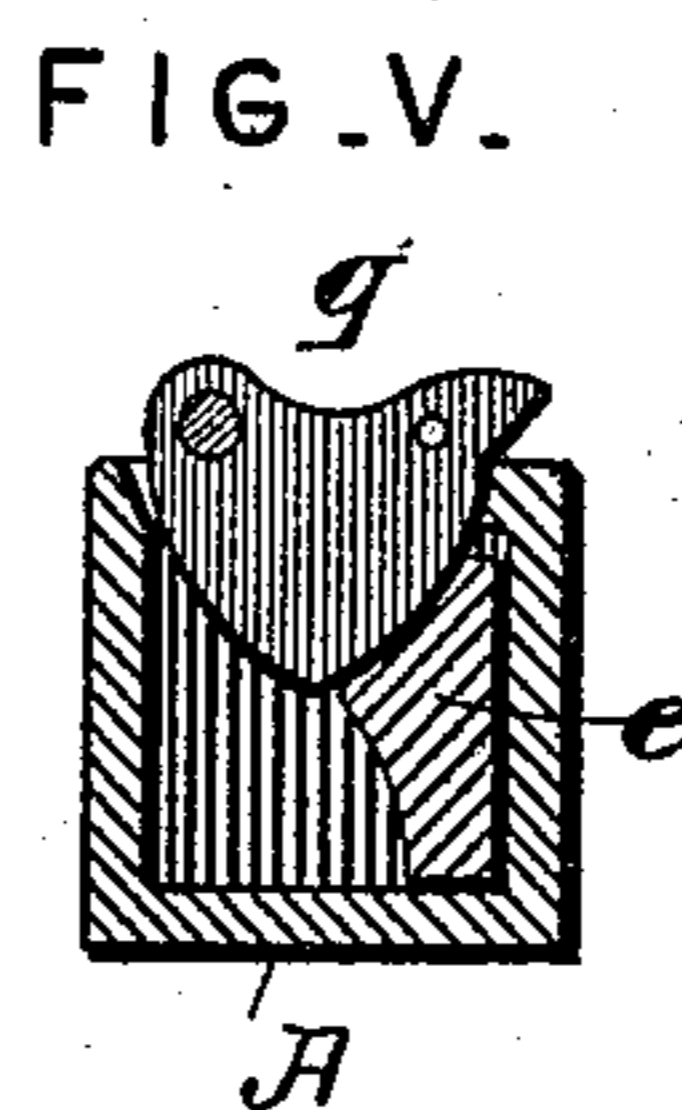
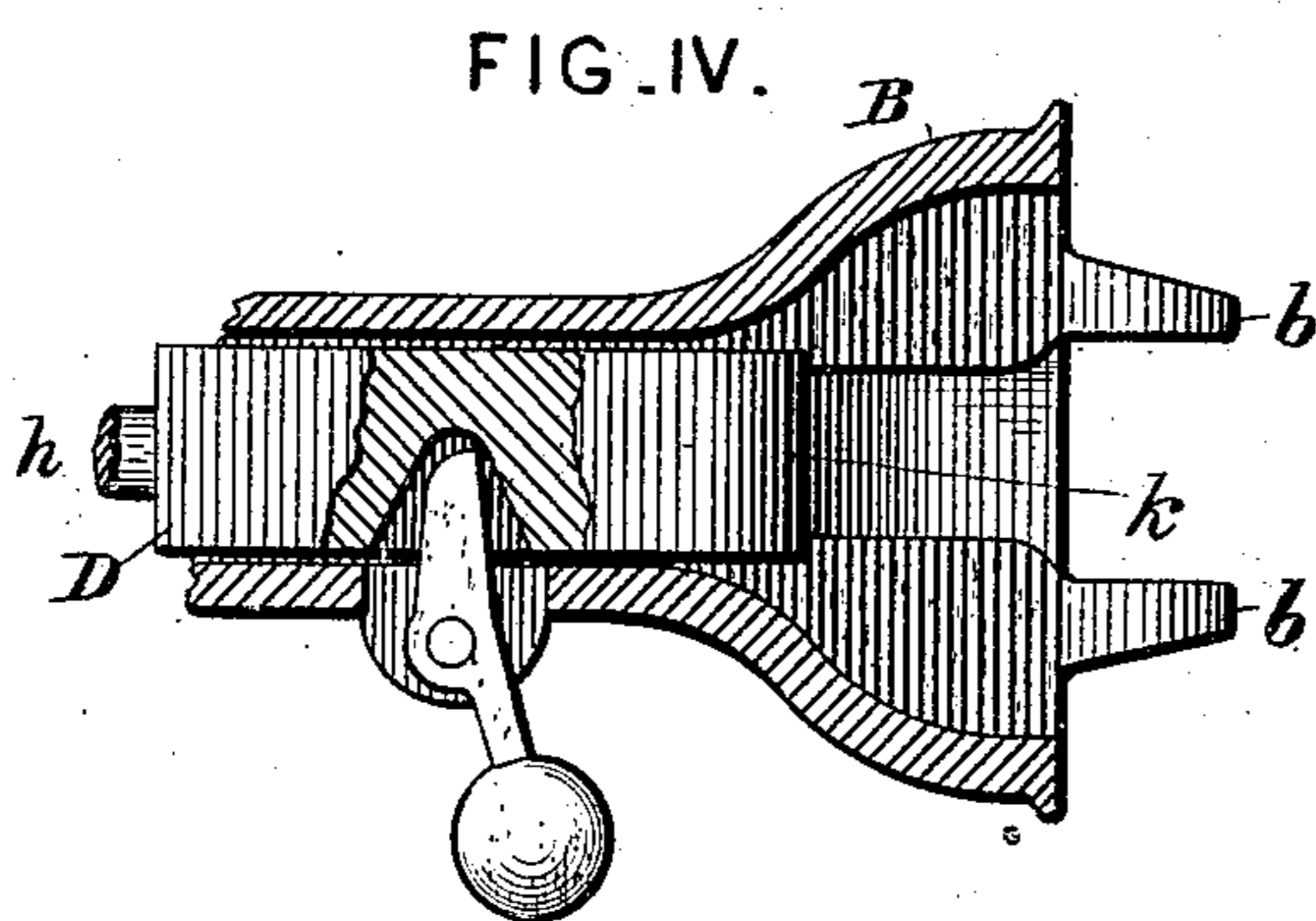
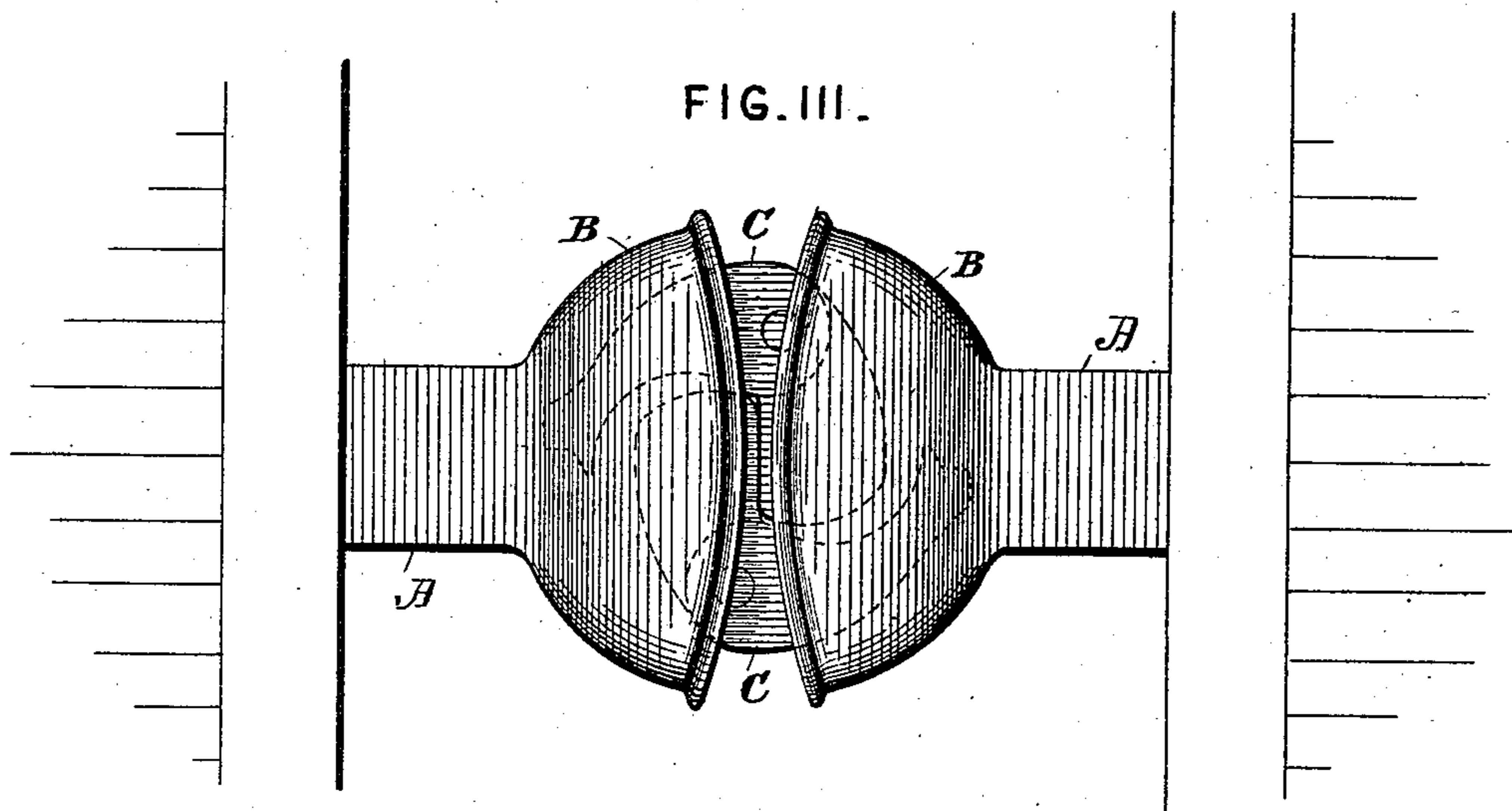
(No Model.)

2 Sheets—Sheet 2.

F. BALDT.  
CAR COUPLING.

No. 316,323.

Patented Apr. 21, 1885.



Attest.  
Geo. P. Smallwood,  
Jas. K. McEachran.

Inventor:  
Frederick Baldt.  
By, *Paine & Lord*  
attys.

# UNITED STATES PATENT OFFICE.

FREDERICK BALDT, OF CHESTER, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 316,323, dated April 21, 1885.

Application filed March 12, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK BALDT, a citizen of the United States, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings; and I do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to car-couplings; and it consists in the improvements hereinafter set forth, whereby a coupling is provided that will readily engage another coupling of any of the forms of couplings provided with a hook-link.

The invention further consists in providing a coupling having a hook-link with a bell-mouth, wherein the engaging hooks are protected from disengagement from each other, but a joint lateral movement of both is permitted.

The invention further consists in so constructing the front horizontal edge faces of the bell-mouth that the edge faces of a similarly-constructed coupling can have a bearing against such edge face and laterally oscillate thereagainst.

In the accompanying drawings, forming part of this specification, Figure I is a perspective view of a car-coupling embodying my improvements. Fig. II is a central vertical section through two of my improved couplings in an engaging position. Fig. III is a plan of the couplings represented in Fig. II, and Figs. IV and V are modifications of the hook-locking mechanism.

A refers to the draw-head proper, provided with the usual shank portion, *a*, and with a flaring or bell-mouth portion, B, as seen most clearly in Fig. I. The said bell-mouth portion B is provided at one side with a projection, which is centrally cut away to present two ears, *b*, one above the other, and vertically perforated for the passage of a vertical pivot-bolt, *c*, which serves to pivotally support a dog, C, which is of the angular form shown most clearly in Fig. II. The said dog, which constitutes

the hook-link for the coupling, consists of the enlarged head portion *d* and an extension, *e*, which is curved, as indicated, and has its extremity *f* recessed or notched, as illustrated. The enlarged head portion *d* is provided on its upper side with a lug or stop, I, designed to strike against the shoulder *b'* on the edge or face of the upper ear, *b*, to limit the backward swing of the pivot-hook.

The shank *a* is longitudinally recessed, so as to contain an elongated bolt, D, provided at its rear end with a cylindrical extension, *h*, partly playing in a recess therefor in the rear portion of the shank, and embraced by a coiled expanding spring, *i*, which has its respective ends bearing against the rear vertical face of the bolt-recess in said shank and against the shouldered portion *j* presented by the rear vertical face of the bolt proper. The front portion of the said bolt D projects a short distance beyond the bolt-recess into the bell-mouth of the coupling, and has its said front portion or extremity shouldered to engage with the rear end of the dog-extension *e* and hold said dog in the position represented in Figs. II and III of the drawings. As seen in said figures, the front portion of the bolt D consists of a projecting lug, *k*, having an inclined face, the remaining portion of the bolt presenting a front bearing-face at right angles with the lug *k*.

The shank *a* is provided with a slot, *l*, at each side of which depends an ear, *m*, which is perforated to afford a bearing for a pin, *n*, on which is hung a lever, *o*, the inner portion of which extends into an opening, *p*, therefor in the bolt D.

The bell-mouth of each coupling is of such interior dimensions as to permit the dog to have a limited movement on its pivot *c*. When another hook-link enters the bell-mouth it strikes the extension *e* of the dog, and, forcing the same back, causes the extremity thereof to strike the inclined face of the bolt-lug *k*, pushing the latter and the bolt D back until the projecting portion of said dog-extension passes the end of the bolt and is locked by the depressed face of the bolt D, the lug *k* having been forced into the depressed portion on the end of the extension *e*.

It will be obvious that as the extension *e* is forced back into engagement with the bolt D

the enlarged head *d* is moving centrally into position in the bell-mouth, so that the hook portion proper of the dog is located transversely across the interior of said bell-mouth, in order that said hook portion can engage and retain the hook of the other coupling, as shown most clearly in Figs. II and III.

It will be observed that the bell-mouth as illustrated, while of such interior dimension as to freely permit the automatic coupling operation previously described, still snugly incases both of the engaged hooks, to preclude possibility of their becoming disengaged, and it also prevents the hooks from breakage. When, however, it is desired to effect such disengagement, the lever *o* is moved on its pivot to rearwardly throw or move the bolt *D*, so as to release the extension *e* from the front end thereof. The dog can then be moved on its pivot to bring the said extension *e* into a position within the bell-mouth, to insure its being struck by the other coupling-hook in the succeeding operation. The lug *g* on the dog, by contact with the shoulder *b'*, limits the outward movement of the extension within the bell-mouth, so that said extension can under no circumstances move outwardly too far to admit of its being struck by the other hook.

As before generally referred to, the front horizontal faces or edges of the bell-mouth are curved, as represented in the plan Fig. III, so as to permit the similarly-constructed bell-mouth of another draw-head to oscillate or move laterally relative thereto, and when the said curved edge faces contact a bearing is secured that will still enable such lateral movement.

In Fig. IV the coupling is represented in a modified form, wherein a weighted lever is adopted instead of the spring for projecting the bolt previously described. By employing

such weighted lever, the bolt *D* can yield to engage the dog, but will be automatically restored to its first position by the gravity of the weighted lever instead of by the spring, as before described.

In Fig. V a modified form of arrangement of locking mechanism is shown, wherein a vertical cam, *q*, is mounted on a horizontal pivot, so that when the end *e* of the dog is swung in horizontally it lifts the cam until it completes its movement, when the cam drops down in front of the extension *e* and locks it against the side of the draw-head.

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

1. The combination, in a car-coupling, of a bell-mouth, a hook pivoted therein, and having an extension, and a locking device for engaging with said extension when the same is forced back, substantially as set forth.

2. The combination, in a car-coupling, of a draw-head having an interior recess adapted to snugly contain two engaged hooks, a dog pivoted in said recess, the upper and lower front faces of said bell-mouth being curved, substantially as set forth.

3. The combination, in a car-coupling, of a draw-head provided with a bell-mouth, ears projecting from one side of said bell-mouth, a dog pivoted between said ears, and having an extension, *e*, together with a stop to limit the backward movement of the dog, and a locking device, substantially as set forth.

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

FREDK. BALDT.

Witnesses:

A. H. WHEATON,  
J. M. ALLEN.