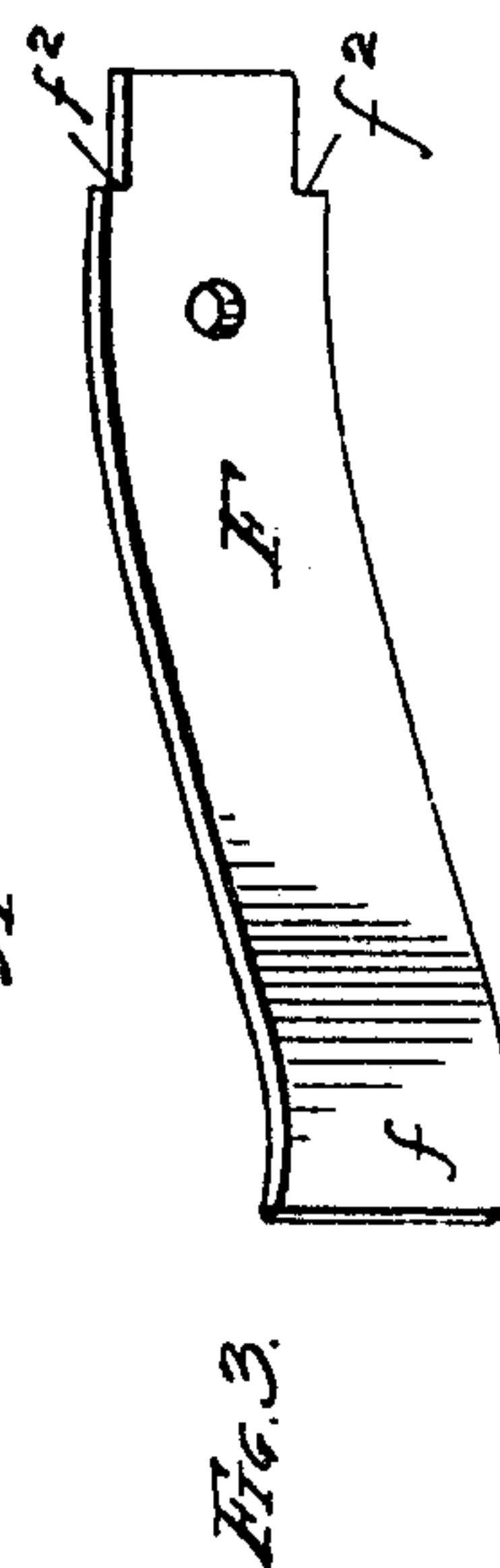
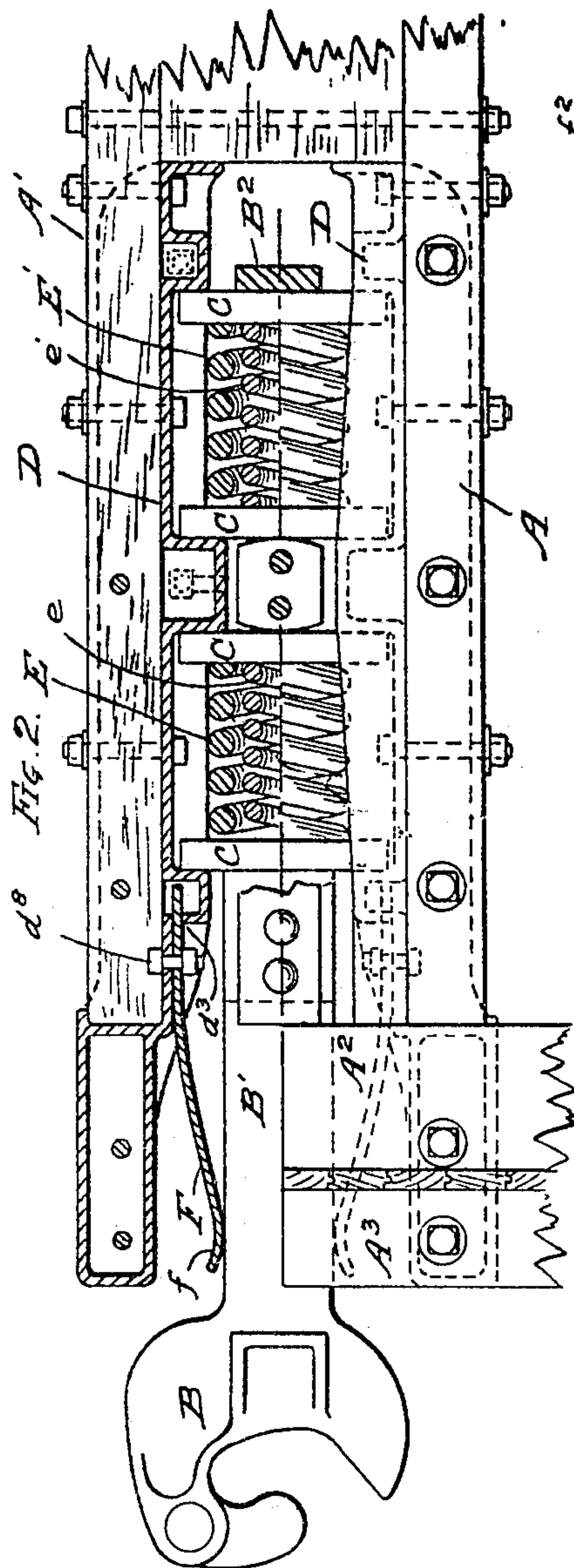
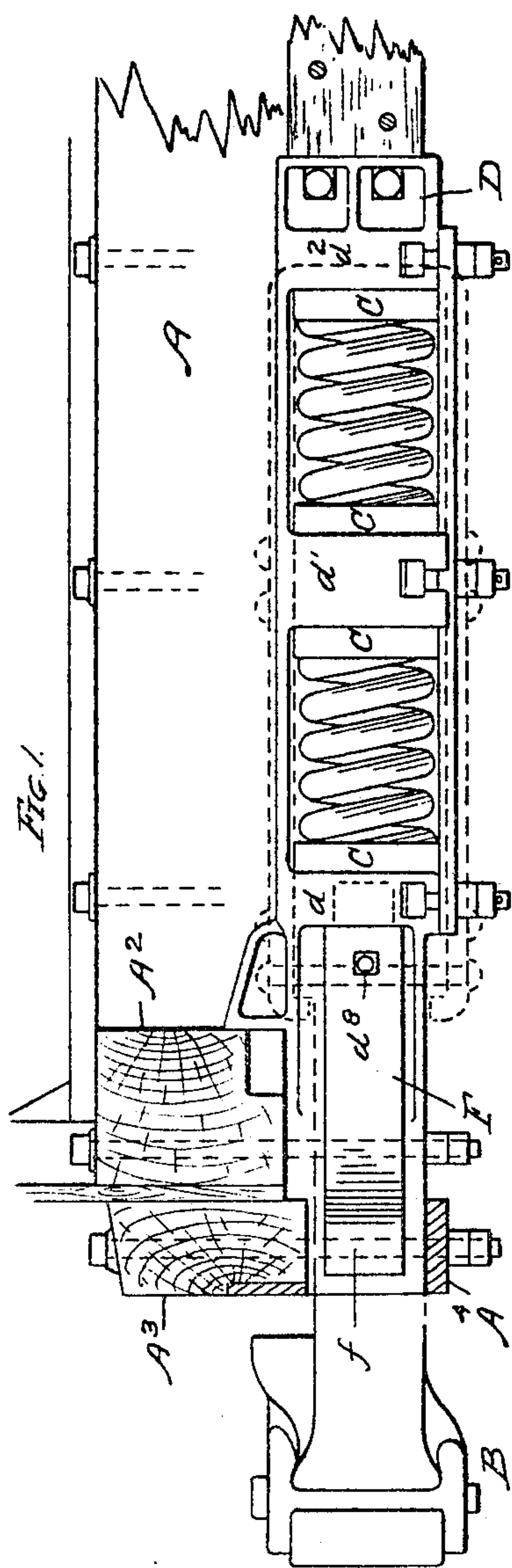


J. F. O'CONNOR.
CAR COUPLING CENTERING DEVICE.

APPLICATION FILED APR. 6, 1905.

2 SHEETS—SHEET 1.



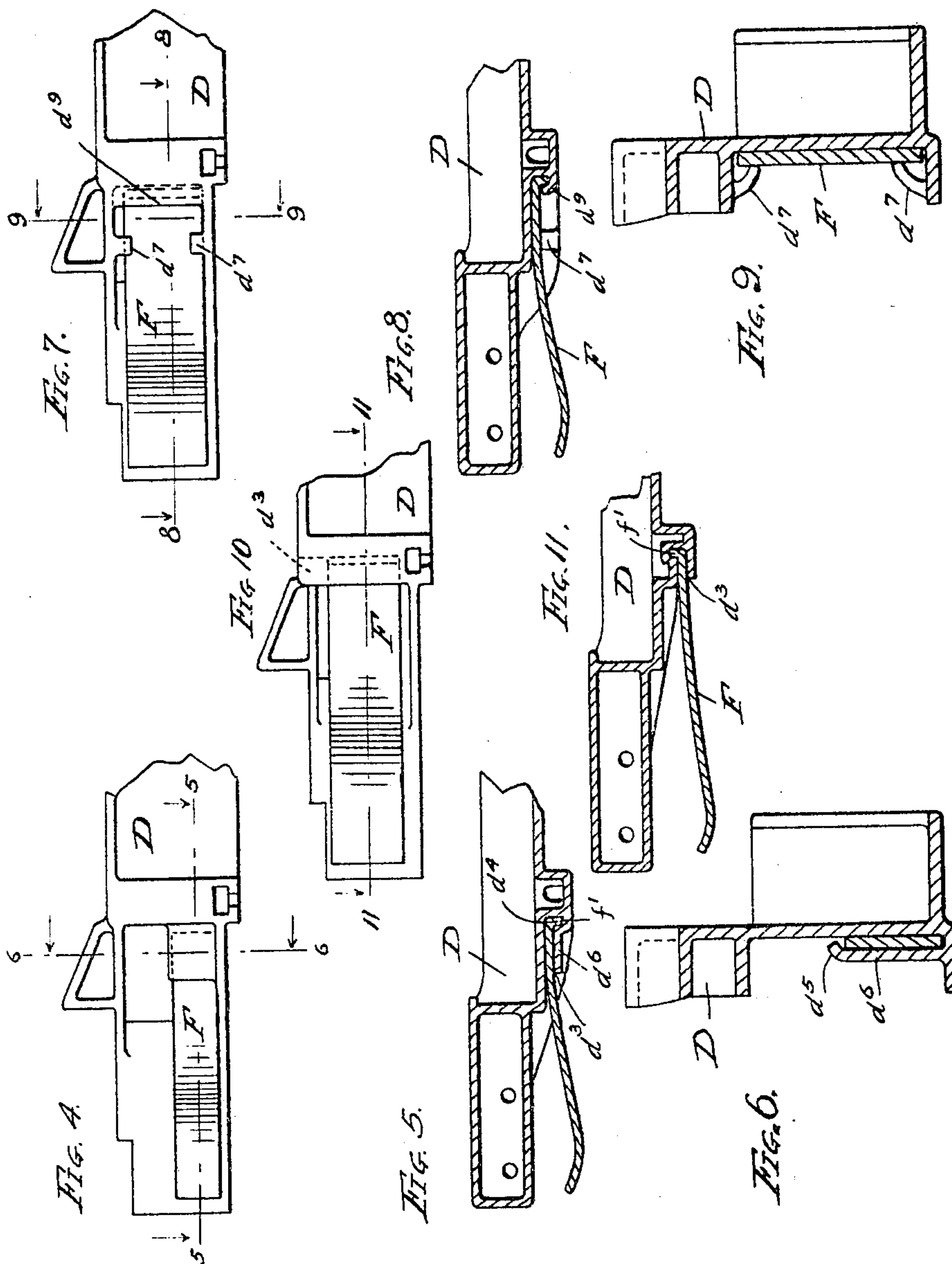
WITNESSES:
F. B. Townsend
Wm. Geiger

INVENTOR.
John F. O'Connor
BY
Munday, Parrott & Adcock
ATTORNEYS

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His ATTORNEYS

UNITED STATES PATENT OFFICE

JOHN F. O'CONNOR, OF CHICAGO, ILLINOIS, ASSIGNOR TO W. H. MINER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CAR-COUPLING-CENTERING DEVICE.

No. 799,082.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed April 6, 1905. Serial No. 254,219.

To all whom it may concern:

Be it known that I, JOHN F. O'CONNOR, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car-Coupler-Centering Devices, of which the following is a specification.

My invention relates to improvements in centering devices for car-couplers, by which the coupler or its draw-bar, while permitted to move or swing laterally from side to side, as required in passing around curves, is automatically restored to its central position.

The object of my invention is to provide a car-coupler-centering device of a simple, efficient, and durable construction and which may be cheaply manufactured and easily applied.

My invention consists in the means I employ to practically accomplish this object or result—that is to say, it consists, in connection with the side plates or stop-castings, of the draw-bar draft-rigging, each provided with a socket or device for attaching thereto a flat draw-bar-centering spring, of a pair of flat draw-bar-centering springs, one fitting on each side of the draw-bar and one secured at one end thereof to each side plate or stop-casting in the socket therein provided for its reception.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described, and specified in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation, partly in vertical section, of a railway-car draw-bar and draft-rigging provided with my centering device. Fig. 2 is a plan view, partly in horizontal section. Fig. 3 is a detail perspective view of one of the centering-springs. Fig. 4 is a detail elevation of one of the end plates or stop-castings, showing the preferred form of my invention. Fig. 5 is a horizontal section on line 5 5 of Fig. 4. Fig. 6 is an enlarged vertical cross-section on line 6 6 of Fig. 4. Fig. 7 is a detail elevation showing a modification. Fig. 8 is a horizontal section on line 8 8 of Fig. 7. Fig. 9 is an enlarged vertical section on line 9 9 of Fig. 7. Fig. 10 is a detail side elevation illustrating another modification, and Fig. 11 is a horizontal section on line 11 11 of Fig. 10.

In the drawings, A A represent the center

sills, A' A' the draft-timbers, and A² the front or cross sill, of a car-frame, A³ the buffer-block, and A⁴ the carry-iron.

B is the coupler; B', the draw-bar; B², the draw-bar strap or yoke; C C C C, the followers.

E e E' e' are tandem-arranged springs, and D the side plates or stop-castings of the draft-rigging, furnished with stops d d' d^2 for the followers to abut against. Each of the side plates or stop-castings D is furnished with a socket d^3 to receive a flat draw-bar-centering spring F, which is preferably curved at its front end f to bear against the upright face of the draw-bar. The two flat centering-springs F F thus fit and bear against the draw-bar, one on each side thereof, and tend to hold the same normally in its central position, while permitting the draw-bar to move or swing laterally when the train passes around curves.

In the preferred construction, as illustrated in Figs. 4, 5, and 6, the spring F is furnished at its rear end with a flange f' , which fits in the angle-recess d^4 of the socket d^3 , and the spring F is rigidly secured in this socket by turning or hammering down a flange d^5 at the upper edge of the flange or wall d^6 of the socket d^3 . By this construction the centering-spring F is rigidly secured at its rear end to the side plate or stop-casting D without the use of bolts, as the integral flange f' on the spring prevents the spring from being slipped out longitudinally, and the integral flange d^5 on the socket-wall d^6 prevents the spring from being removed upward. In the preferred construction the flange or wall d^6 of the spring-socket is extended in the direction of the length of the side plate or stop-casting sufficiently to give the requisite grip or bearing upon the rear end of the spring. If desired, however, the socket wall or flange d^6 may be made shorter longitudinally and a clamp-bolt d^8 inserted through the spring and the upright wall of the side plate or stop-casting D, as illustrated in Figs. 1, 2, and 3. In this construction the spring F is readily removable, as its rear end may be readily inserted endwise into the socket d^3 of the side casting D. In the construction illustrated in Figs. 1, 2, and 3 the spring F is preferably provided with notches f^2 at its rear end, which enter the socket d^3 of the side plate or stop-casting D. In the construction illus-

trated in Figs. 1, 2, and 3 the socket d^3 is formed in the front stop d of the side plate or stop-casting.

In the modification Figs. 7, 8, and 9 the socket-wall d^6 is made short longitudinally and supplemental spring bearing-lugs d^7 are provided on the side plate or stop-casting D and adapted to be bent or clutched against the spring F near the upper and lower edges thereof to clamp the same against the side plate or stop-casting D after the spring has been inserted. In this construction the spring F may be inserted endwise into the socket and the flange or wall d^9 of the socket d^3 may be hammered or turned down over the flange f' of the spring.

In the modification illustrated in Figs. 10 and 11 the construction is similar to that illustrated in Figs. 4, 5, and 6, with the exception that the flange f' at the rear end of the spring F is turned in the opposite direction and the spring-socket extended through to the top of the casting, and the spring is then inserted from the top and driven down into place.

I claim—

1. In a car-coupler draw-bar-centering device, the combination with a draw-bar, of side plates or stop-castings furnished each with an integral socket to receive the rear end of a draw-bar-centering spring, and a pair of flat draw-bar-centering springs fitting and secured at their rear ends in the sockets of said side plates or stop-castings, said flat centering-springs having each an angle-flange at its rear end, and said spring receiving sockets on the

side plates or stop-castings, having recesses to receive said angle-flanges of the springs, substantially as specified.

2. In a car-coupler draw-bar-centering device, the combination with a draw-bar, of side plates or stop-castings furnished each with an integral socket to receive the rear end of a draw-bar-centering spring, and a pair of flat draw-bar-centering springs fitting and secured at their rear ends in the sockets of said side plates or stop-castings, said flat centering-springs having each an angle-flange at its rear end, said spring receiving sockets on the side plates or stop-castings having recesses to receive said angle-flanges of the springs, and the outer walls of said sockets on the side plates or stop-castings having flanges or shoulders turned thereon to hold the springs in place, substantially as specified.

3. In a car-coupler draw-bar-centering device, the combination with a draw-bar, of side plates or stop-castings furnished each with an integral socket to receive the rear end of a draw-bar-centering spring, and a pair of flat draw-bar-centering springs fitting and secured at their rear ends in the sockets of said side plates or stop-castings, the outer wall of said sockets on said side plates or stop-castings having flanges turned thereon to secure said centering-springs in place, substantially as specified.

JOHN F. O'CONNOR.

Witnesses:

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