

(No Model.)

D. SCHOFIELD.
CAR COUPLING.

No. 435,192.

Patented Aug. 26, 1890.

FIG. 1.

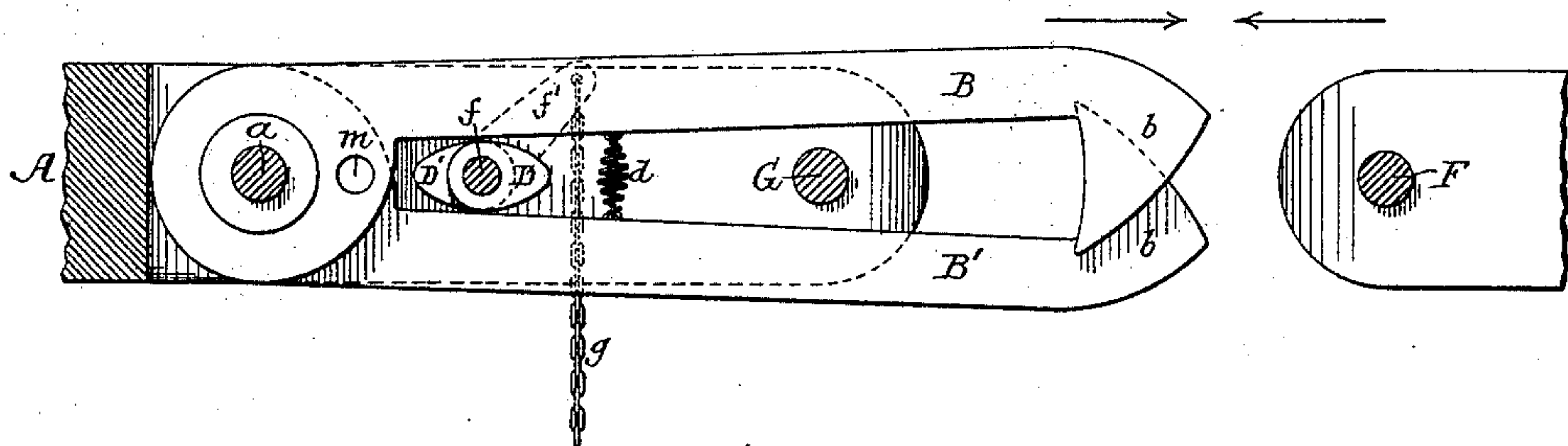


FIG. 2.

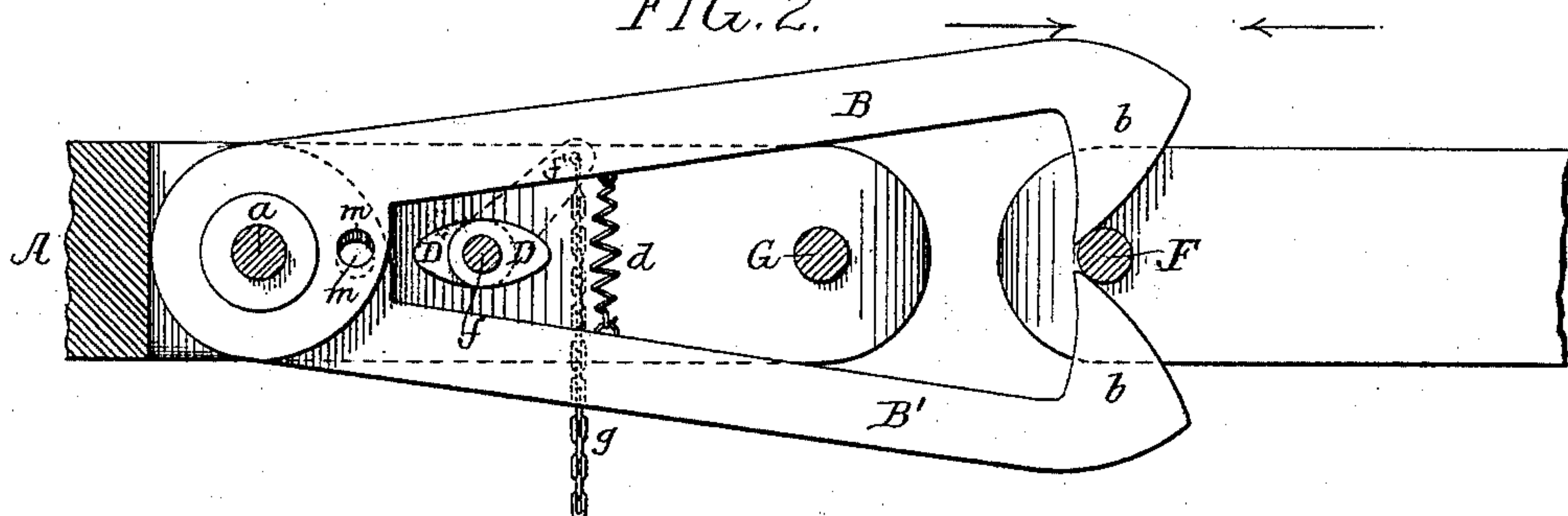


FIG. 3.

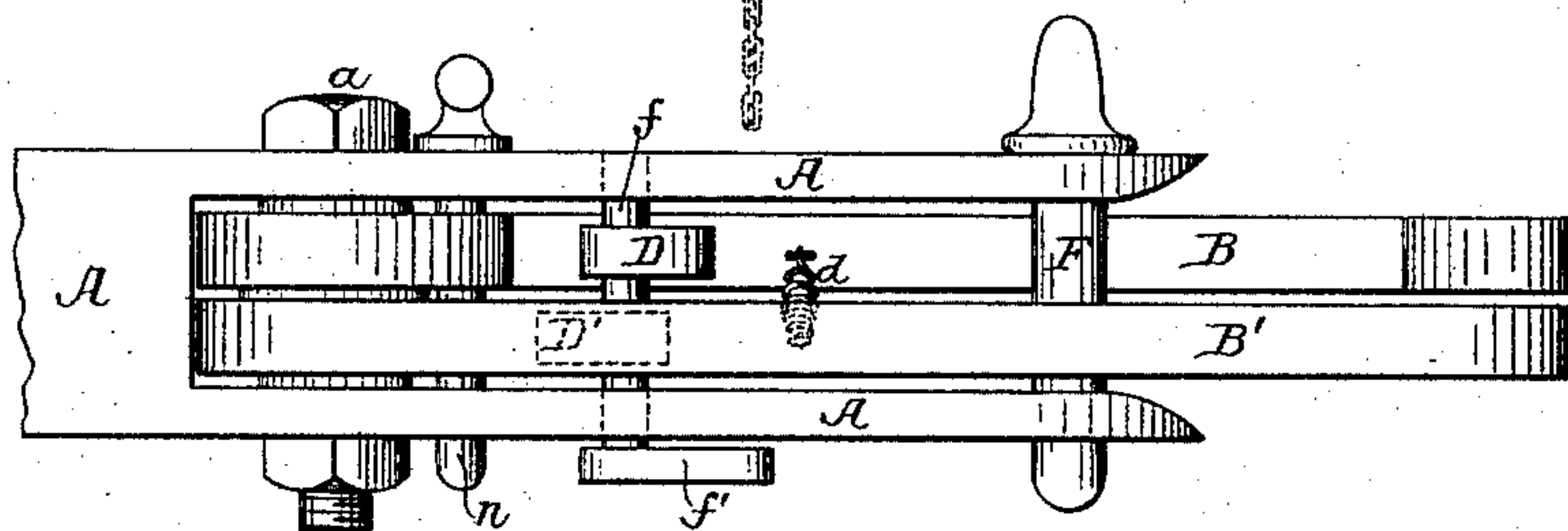
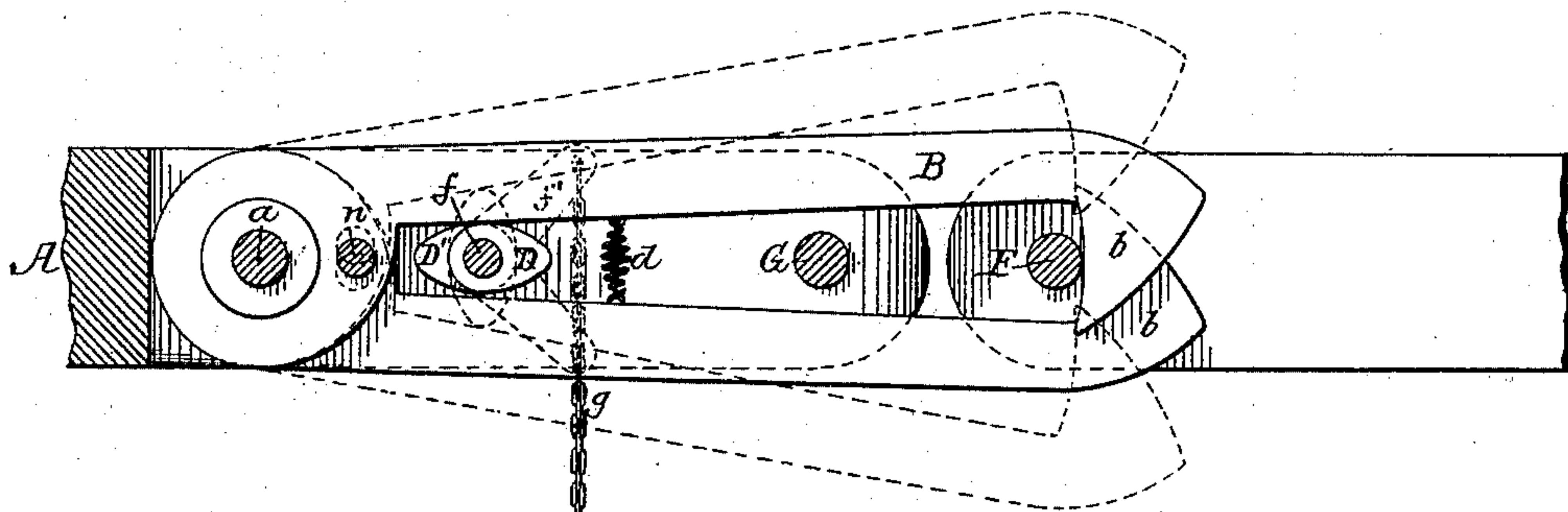


FIG. 4.

Witnesses:
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UNITED STATES PATENT OFFICE.

DANIEL SCHOFIELD, OF CAMDEN, NEW JERSEY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 435,192, dated August 26, 1890.

Application filed February 24, 1890. Serial No. 341,515. (No model.)

To all whom it may concern:

Be it known that I, DANIEL SCHOFIELD, a citizen of the United States, and a resident of Camden, Camden county, New Jersey, have invented certain Improvements in Car-Couplings, of which the following is a specification.

My invention relates to that class of car-couplings in which spring-hooks are employed for effecting automatic coupling, one object of my invention being to so construct a coupling of this class that the secure coupling of the cars will be effected, a further object being to lock the hooks when they are in the coupling position, and a still further object being to permit of the coupling of two draw-heads when both are provided with coupling-hooks. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional plan view of a car-coupling constructed in accordance with my invention, the parts being shown in the uncoupled position. Fig. 2 is a similar view showing the parts in the act of coupling. Fig. 3 is a like view showing the parts coupled, and Fig. 4 is a side view of the coupling.

A represents the draw-head of a car, to which are pivoted, by means of a pin *a*, a pair of coupling-hooks *B B'*, arranged in different horizontal planes—that is to say, one hook above the other—the heads *b* of the hooks being spear-pointed and overlapping each other when said hooks are in the coupling position, as shown in Figs. 1 and 3, the hooks being normally retained in this position by means of a spring *d*, which, however, is detachably connected to one or both of the hooks, for a purpose described hereinafter.

To a vertical pin *f*, journaled in the upper and lower bars of the draw-head A, are secured two cams *D D'*, one of which is adapted to act upon the upper hook *B* of the coupling and the other upon the lower hook *B'*, the lower end of the shaft *f* being provided with an arm *f'*, which may be pro-

vided with a chain or equivalent operating device *g*, leading to the side of the car, or (in the case of passenger-cars) to the usual lever on the platform, so that the shaft *f* may be turned in order to cause its cams to act upon the hooks *B B'*, and thus force the same apart, in order to effect the uncoupling of the car. (See dotted lines, Fig. 3.)

The coupling is effected automatically, for as the car carrying the hooks *B B'* and the car having the coupling-pin *F* approach each other, as indicated by the arrows in Fig. 1, the spear-heads *b* of the hooks will be forced apart by the pin *F*, as shown in Fig. 2, until said pin has passed the hooks, whereupon the latter will, under the influence of the spring *d*, be caused to approach each other, so as to engage with the pin *F* and couple the cars together, as shown in Fig. 3. The hooks *B B'* have enlarged hubs, and in the hub of each hook is formed an opening *m*, these openings being in line with each other, as shown in Fig. 1, when the hooks are in the coupling position, so that when the cars are coupled a pin *n* may be passed through these openings in order to firmly lock the hooks in the coupling position, as shown in Fig. 3.

The draw-head A has near the front end a coupling-pin *G*. Hence if the hooked draw-heads of the two cars approach other the coupling may be effected by simply detaching the spring *d* of the hooks of one head and moving said hooks laterally, so that they will not interfere with the engagement of the hooks of the other head with the coupling-pin, any suitable means being employed for retaining the hooks after they have been moved to one side.

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

1. The combination of the draw-head, the pivoted hooks arranged one above the other and having overlapping heads and overlapping hubs, and a pin whereby said hubs may be locked when the hooks are in the coupling position, substantially as specified.

2. The combination of the draw-head, the

pivoted coupling-hooks arranged one above the other and having overlapping heads, with a spring connecting the hooks, but detachable therefrom, whereby said hooks may be
5 moved laterally out of the way, substantially as specified.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

DANIEL SCHOFIELD.

Witnesses:

WM. D. CONNER,
HARRY SMITH.