

(No Model.)

R. T. MORRISON, Jr.
CAR COUPLING.

No. 475,283.

Patented May 17, 1892.

Fig. 1.

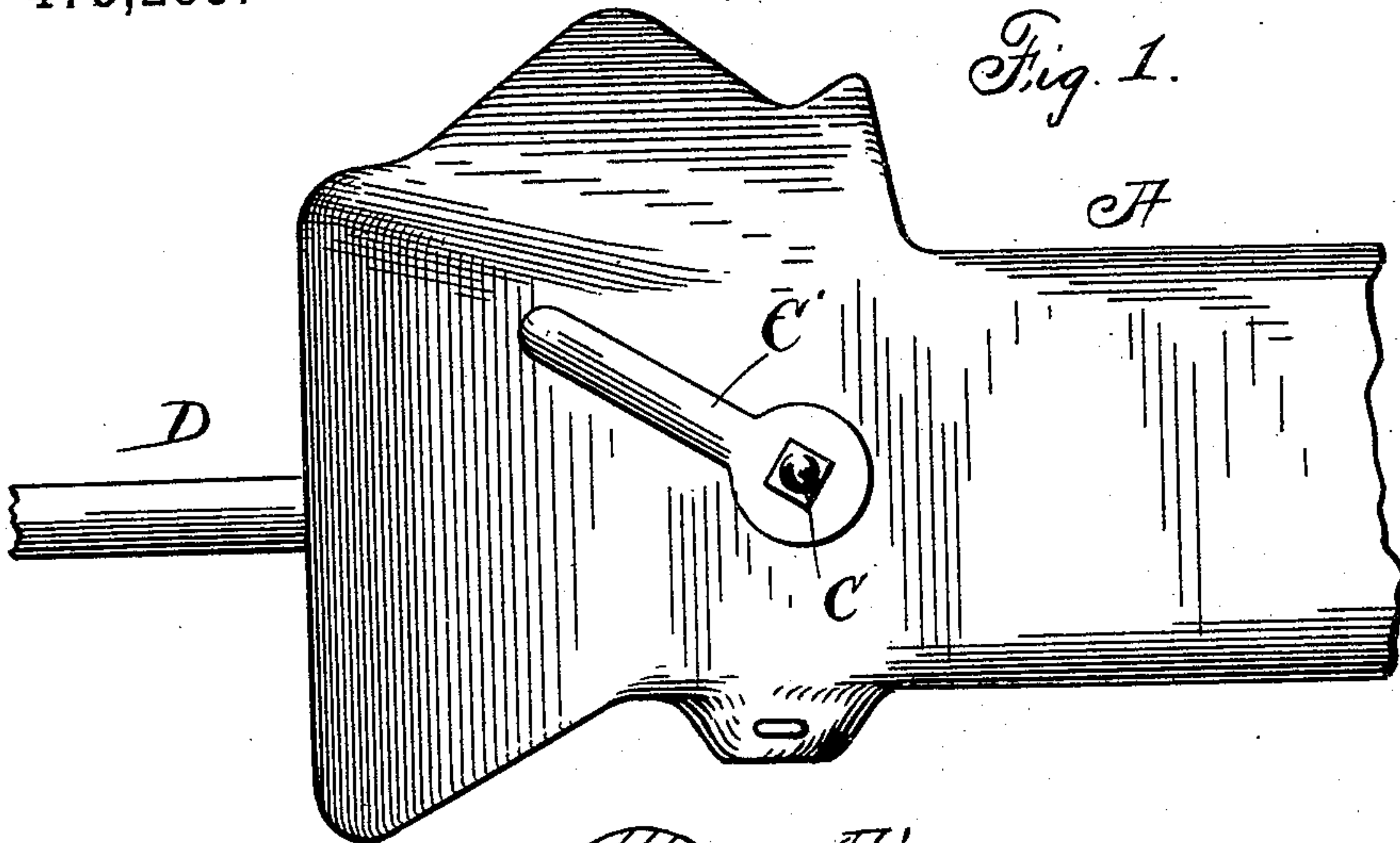


Fig. 2.

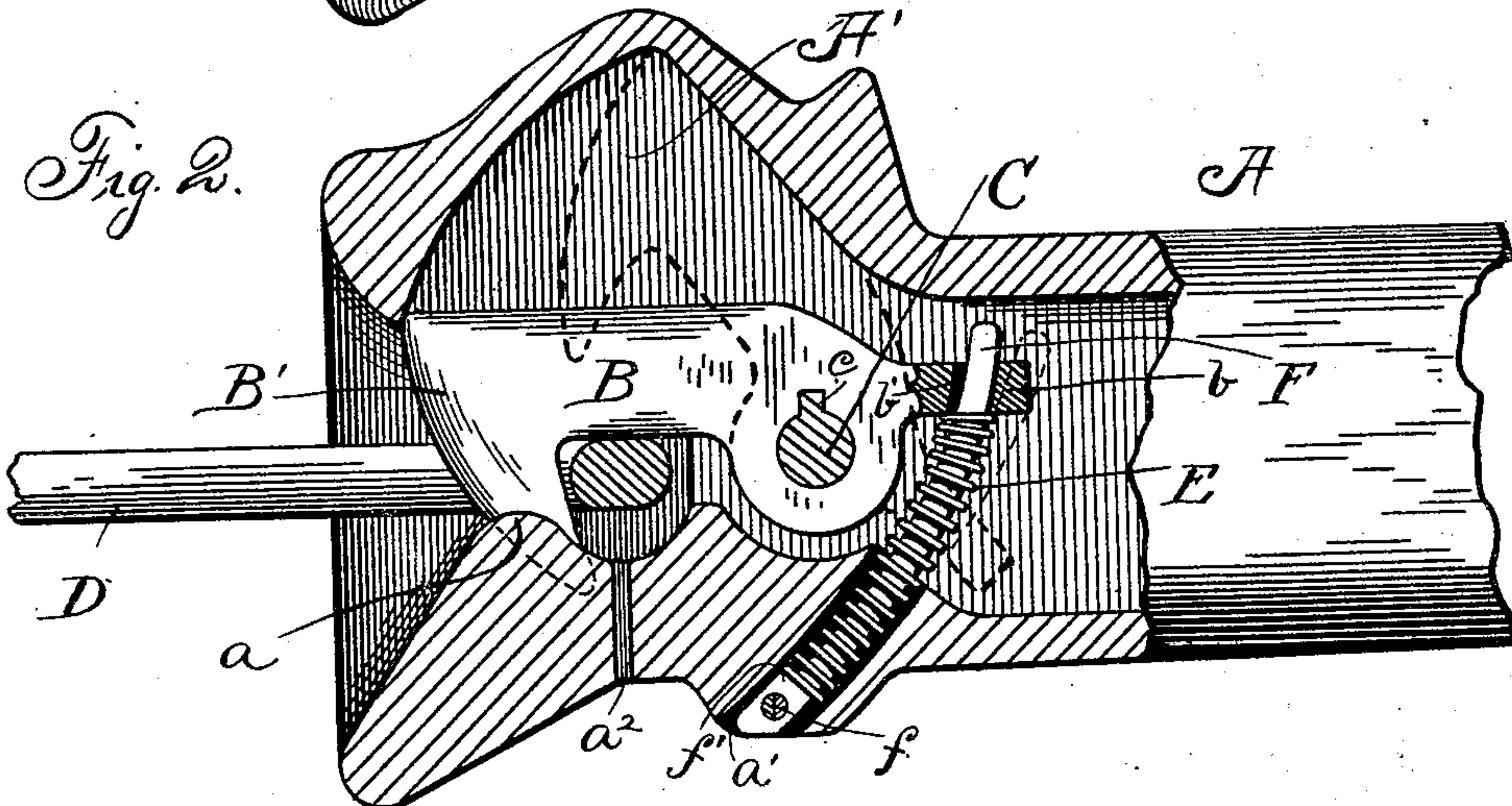
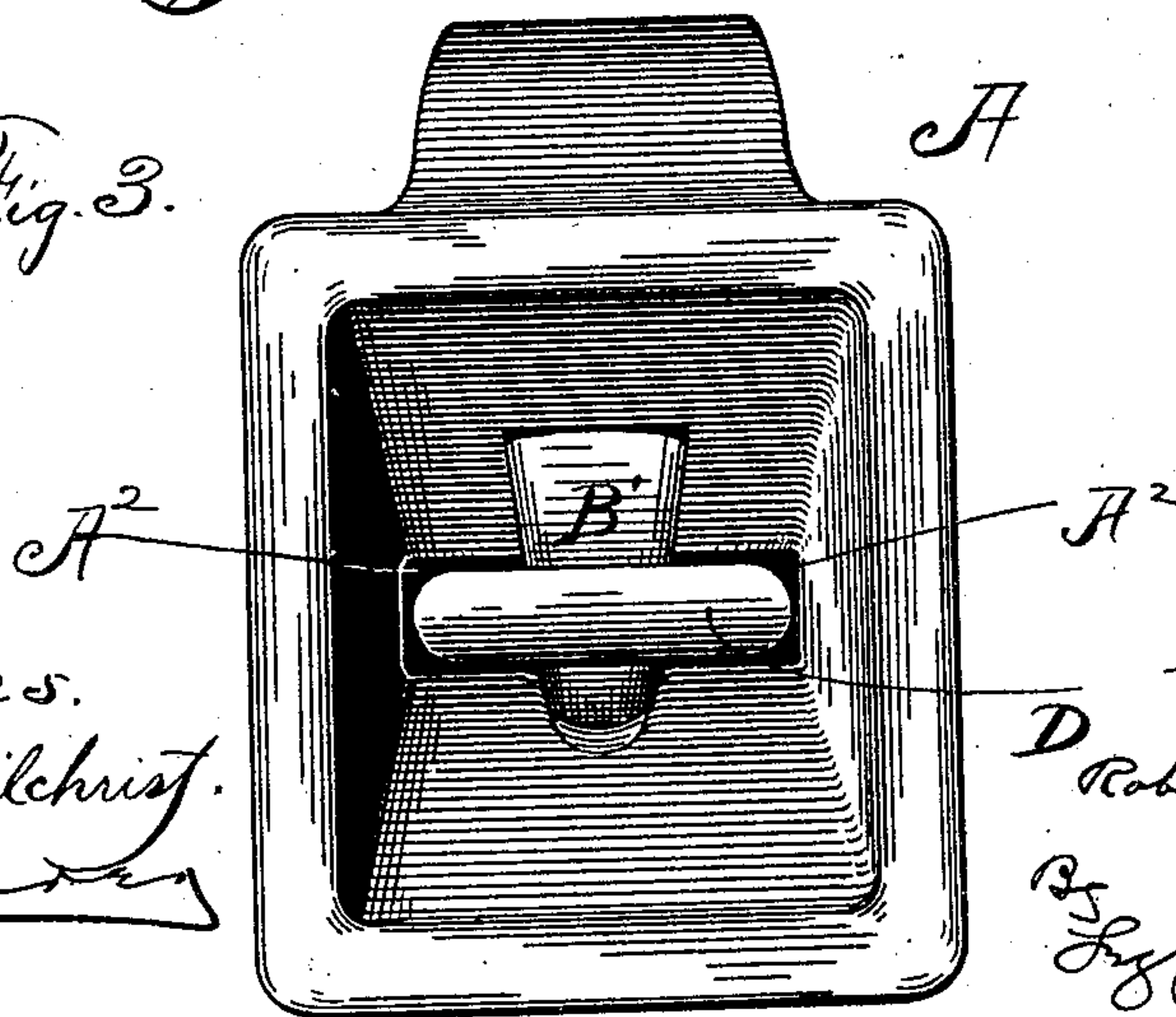


Fig. 3.



Witnesses.
E. Byron Gilchrist.
[Signature]

Inventor.

D Robert T. Morrison, Jr.

[Signature]
Attorneys

UNITED STATES PATENT OFFICE.

ROBERT T. MORRISON, JR., OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF
TO DAN P. EELLS, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 475,283, dated May 17, 1892.

Application filed January 14, 1892. Serial No. 418,055. (No model.)

To all whom it may concern:

Be it known that I, ROBERT T. MORRISON, Jr., of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Car-Couplers; 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 pertains to make and use the same.

My invention relates to improvements in car-couplers; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved coupler. Fig. 2 is an elevation in longitudinal central section of the same. Fig. 3 is a front end elevation.

A represents the draw-bar, the head whereof has a vertical chamber A', in which operates the hook B, this hook being fulcrumed at the inner end on a lateral pin C. Pin C outside of the draw-bar is provided with an arm or lever C' for turning the pin on its axis, and some means is provided for locking the hook with the pin, so that the hook may be tilted upward by operating the pin—such, for instance, as shown, to wit: the pin having a spline c, that operates in a corresponding groove in the hook, whereby the hook and pin turn together. Chamber A' has lateral enlargements or recesses A² A² at either side to make room for the coupling-link D, the latter being of ordinary construction. Hook B has an inclined section B', by means of which in entering a link the hook is snubbed back into the draw-head. The hook is held in its engagement with the link partly by gravity; but to cause the hook to act promptly in engaging, and also to prevent the hook from bounding upward when the cars are running at a high rate of speed, suitable spring mechanism should be provided, and the construction, arrangement, and location of this spring mechanism should be such that the spring mechanism will bear the strain to which it is subjected without any liability of becoming displaced, broken, or mutilated in any wise. A

suitable construction and arrangement of this spring mechanism is shown in Fig. 2 of the drawings, hook B having a rearwardly-projecting arm or member b perforated, as at b', for loosely embracing the free end of a curved rod or arm F, upon which spring E is mounted, rod or arm F being secured in the bottom wall of the head of the draw-bar by a lateral pin f, the draw-head being perforated, as at a', to accommodate rod or arm and spring aforesaid, member F being provided with a shoulder, as at f', between which and the rearwardly-projecting arm of the hook B the spring is confined.

As shown more clearly in Fig. 3, the top and the point or bottom of the hook are supported laterally by the side walls of chamber A', so that there is no danger of breaking the hook and no extra strain is brought on the axial pin of the hook from lateral strain caused by the lurching of the cars or in passing around curves; also, the link when in position rests on a rounded seat or ridge a, and the hook bearing upon the end section of the link some little distance inside of this seat, the link is thereby held approximately in a horizontal position ready for coupling, and consequently has not to be manipulated by hand. It will be observed that the hook is entirely inclosed or housed, so that there is little or no liability of snow or ice interfering with the coupler, although a drip-hole a² is provided to dispose of any water or dirt that might be blown in at the end of the draw-head.

In coupling, arm C' is tilted upward to elevate the hook far enough to relieve the link. A cord, chain, rod, or any suitable appliance may lead from the free end of arm C' to where it may be desired to operate the device in uncoupling.

My improved coupler is adapted to couple with any other coupler using a link.

What I claim is—

1. In a car-coupling, the combination, with a closed draw-head constructed with a vertical and horizontal chamber opening into each other, the horizontal chamber being constructed with approaching rounded ridges at the top and bottom, said ridges adapted to form bearings for the link to support and pre-

vent its rising above a certain point and prevent the hook from lateral movement and the vertical chamber extending above and below the bearings, of a hook pivoted in the cavity
5 of the draw-head in position to be embraced at all times by the inner walls of the cavity, and a rod connected with the hook and having a spring thereon which bears on the hook so as to normally depress its free end, substantially as set forth.
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2. In a draw-head, the combination, with an internal tilting hook having lateral axis and an upwardly-projecting arm or rod secured to the bottom wall of the draw-head, said tilting

hook having a rearwardly-projecting arm, of 15 a spring mounted on the first-mentioned arm or rod, said spring engaging the rearwardly-projecting arm of the hook and acting in the direction to depress the free end of the hook, substantially as set forth. 20

In testimony whereof I sign this specification, in the presence of two witnesses, this 7th day of October, 1891.

ROBERT T. MORRISON, JR.

Witnesses:

C. H. DORER,
WARD HOOVER.