

C. C. SMITH.
Car-Couplings

No. 151,628.

Patented June 2, 1874.

Fig. 1.

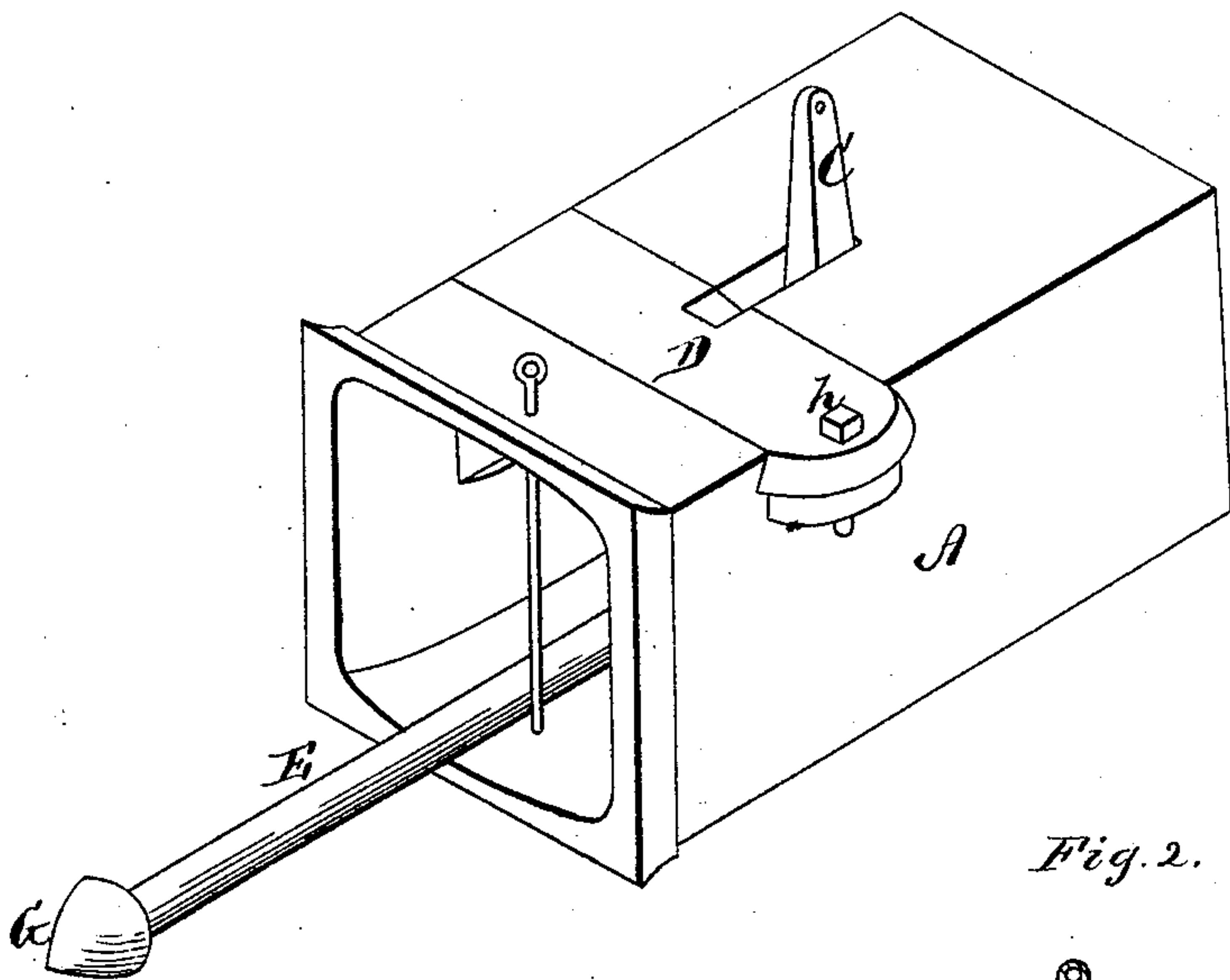


Fig. 2.

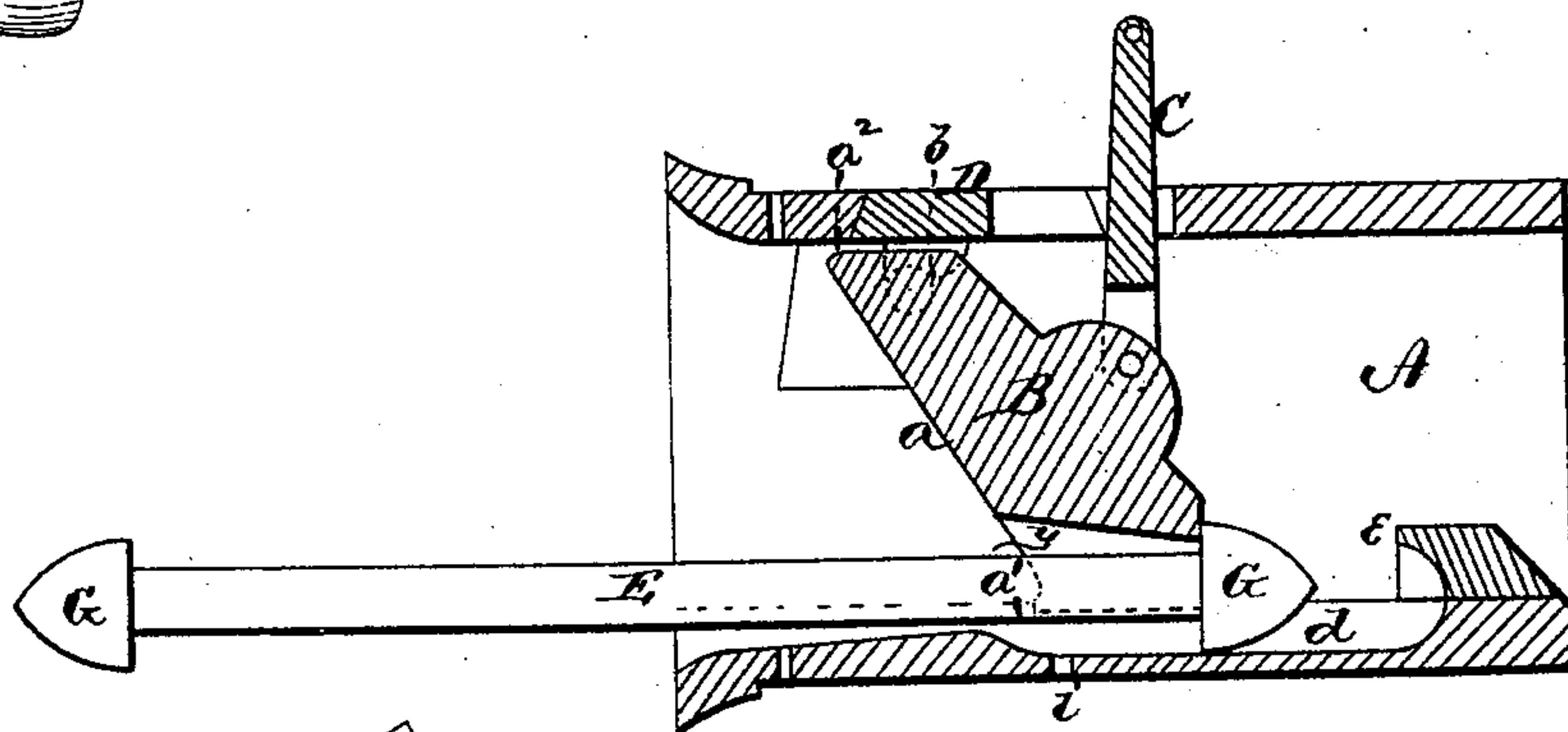
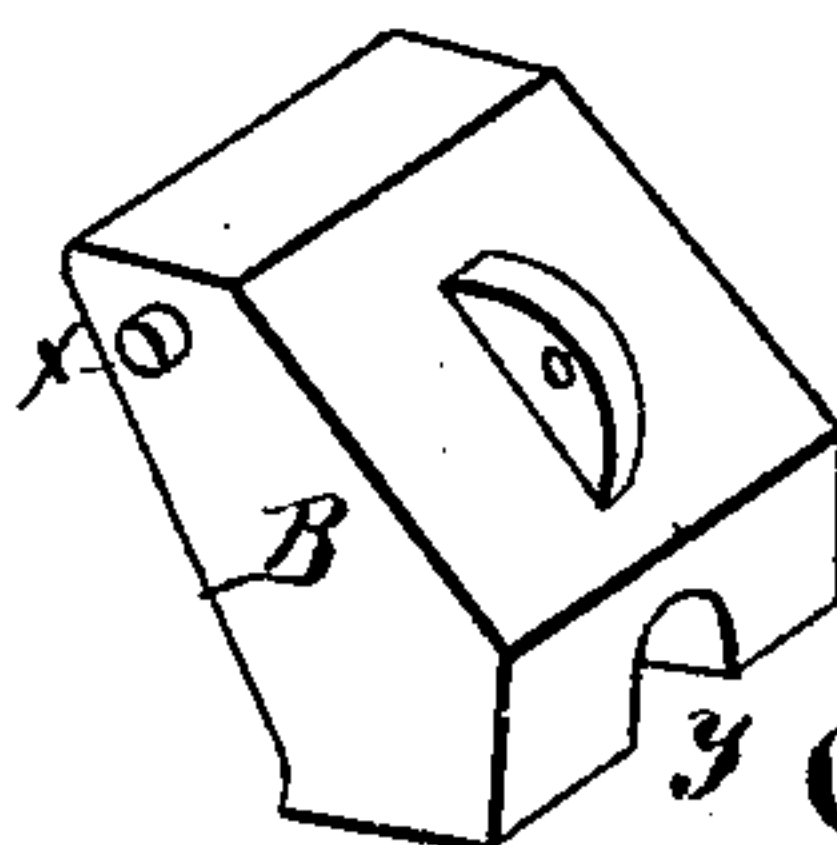
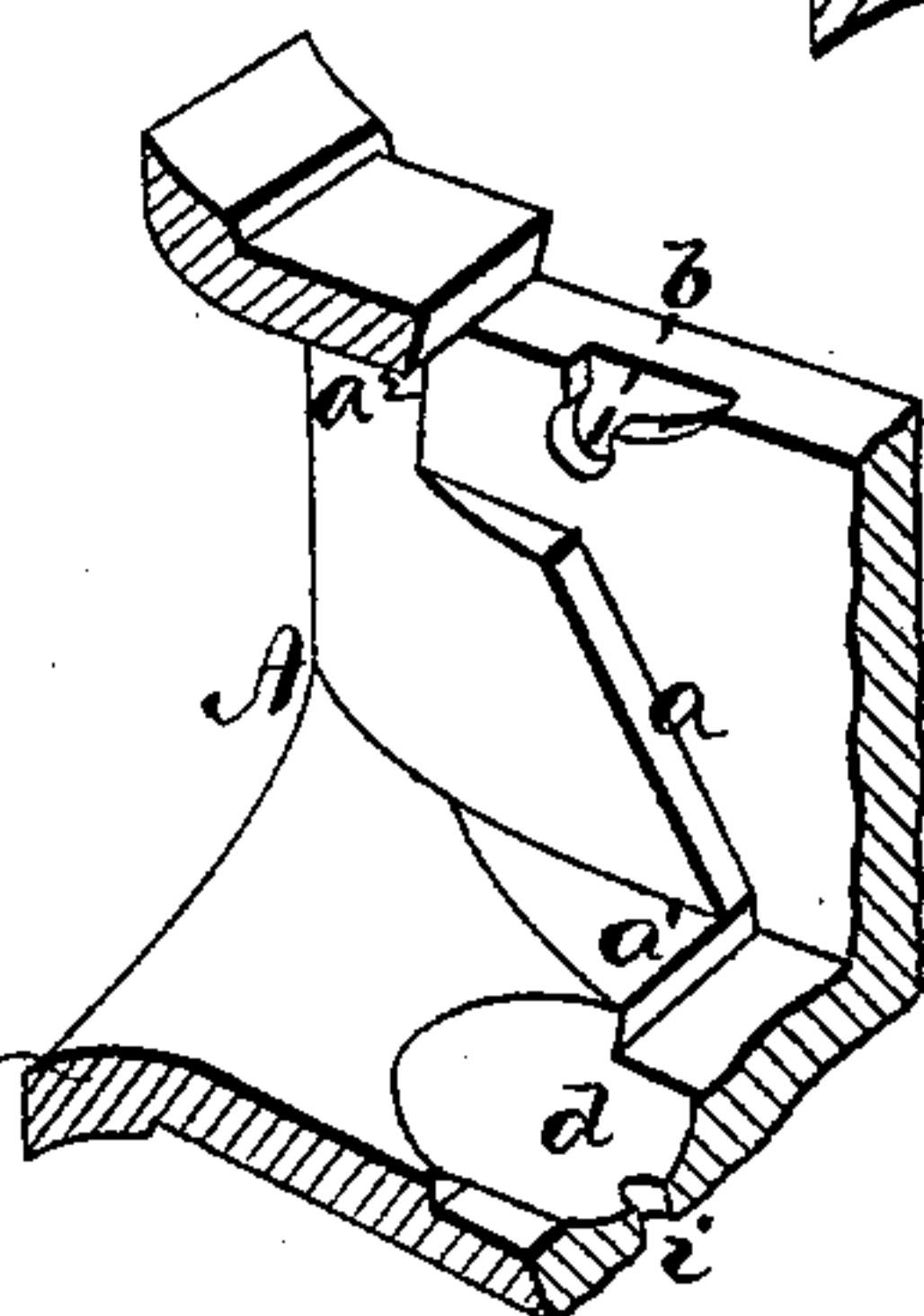


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **151,628**, dated June 2, 1874; application filed November 19, 1873.

To all whom it may concern:

Be it known that I, CHARLES C. SMITH, of Bonaparte, in the county of Van Buren and in the State of Iowa, have invented certain new and useful Improvements in Car-Couplings; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a car-coupling, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view, and Fig. 2 a longitudinal vertical section, of my car-coupling. Fig. 3 is a detached view of a part of the same.

A represents an ordinary car-bumper, which may be used with the common pin-and-link coupling, or with my self-coupling attachment. The bumper A is constructed on the inside so as to admit of a lock, B, at an angle of about forty-five degrees, with bearings *a* on either side, bearing *a*¹ at the bottom, and *a*² at the top, against which the lock is forced by the pin when in use. Near the top, in each side of the bumper, there is another bearing, *b*, intended as a rest for the upper part of the lock when uncoupling. This may be used, however, by inserting a rod through the lock and bumper, with a tap or burr on the outside. The bottom of the bumper is provided with a longitudinal groove, *d*, in the center, the object of which is to keep the coupling-pin always tending to the center. At the back or rear end of this groove is a stop, *e*, for the pin, said stop having a countersink for the head of the pin. This stop is also intended to assist in keeping the pin in the center of the bumper. The top of the bumper has two openings, one for a lever, C, to be used in uncoupling, and the other for a slide, D, used as a covering for the opening through which the

lock is inserted. This slide is dovetailed on either side, so as to prevent any displacement of the slide by accidental pressure from below. It also serves to keep the lock in its proper place. The lock is constructed so as to fit the bearings on the inside of the bumper, with the foot beveled so as to fit the bottom when in use, or the top when being uncoupled. The top of the lock B is also beveled, so as to permit of free use when coupling or uncoupling. The bearings on either side, near the top, may be either simply a pin, *x*, as shown in Fig. 3, or a rod running through the lock and bumper, as above described. On the back of the lock B is attached an upright lever, C, which passes through the top of the bumper, and to which is intended to be attached a perpendicular rod or chain reaching to the top of the car, or a horizontal rod attached to the lever some two or three feet above the bumper and passing to the side of the car, by means of either of which the car can be uncoupled when standing or in motion, without the necessity of passing between the cars. The coupling-pin is simply a round pin, E, with an oval-pointed knob or head, G, on each end, which passes, by the pressure caused by the coming together of the bumpers, through the opening or slot *y* in the bottom of the lock, and the groove *d* in the bottom of the bumper, the lock rising sufficiently to allow its passage, and, by means of its own weight, the lock immediately drops to its place, and, when the bumpers again separate, the coupling-pin is caught, by the shoulders at the base of the head on each end, on the lock, by which the load is drawn.

In case of bumpers of uneven height, a pin having a bend in the center is used, the top of the pin to be flat, except such part as passes through the lock, which is to be round; and the bottom of the pin to be oval, except on its actual bearings on the ends of the bumpers, which are to be flat.

The bumper is to be of cast or malleable iron, the lock of the best wrought-iron or bismuth steel, and the pin of best wrought-iron.

The slide D may be secured by means of a bolt, *h*, passing through ears on the slide and

on the side of the bumper, as shown in the drawing, or by any other suitable means. In the bottom of the bumper is a hole, *i*, which is intended as a drain for any water that may accumulate in the bumper.

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

1. The bumper A, provided with shoulders *a*, *a*¹, *a*², and *b*, and having central groove *d*, with countersunk stop *e* in the bottom, all substantially as and for the purposes set forth.

2. The combination of the bumper A, pro-

vided with bearings *a* *a*¹ *a*² *b*, groove *d*, stop *e*, and slide D, the lock B, with groove *y* and lever C, and the coupling-pin E, with oval-pointed heads G G, all constructed substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of October, 1873.

CHARLES CHAPIN SMITH.

Witnesses:

JAMES G. SHIPLEY,
JOHN BESECKER.