I. N. MITCHELL.

Car Coupling.

No. 92,866. Patented July 20, 1869.

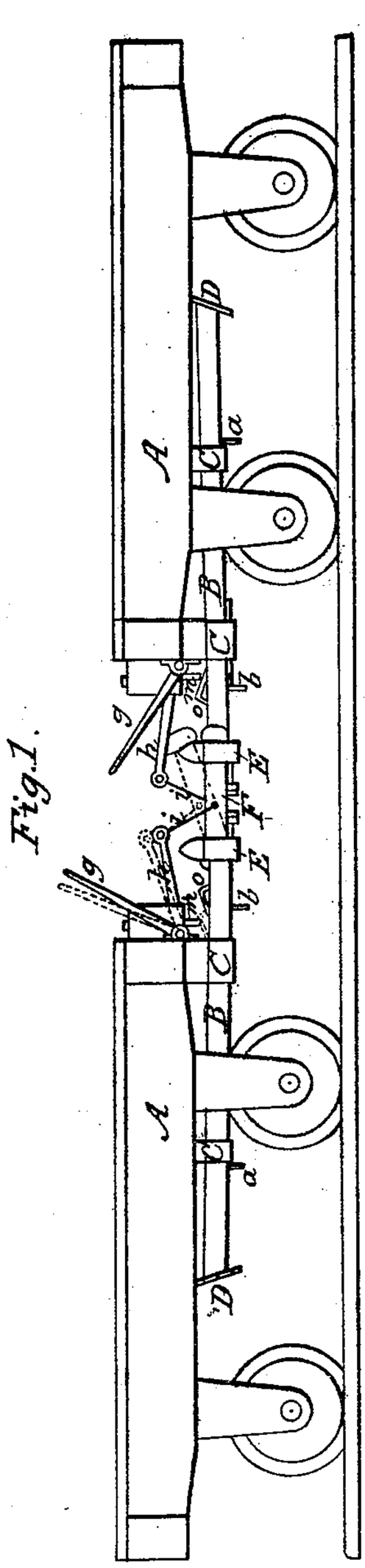

Fig. 1.

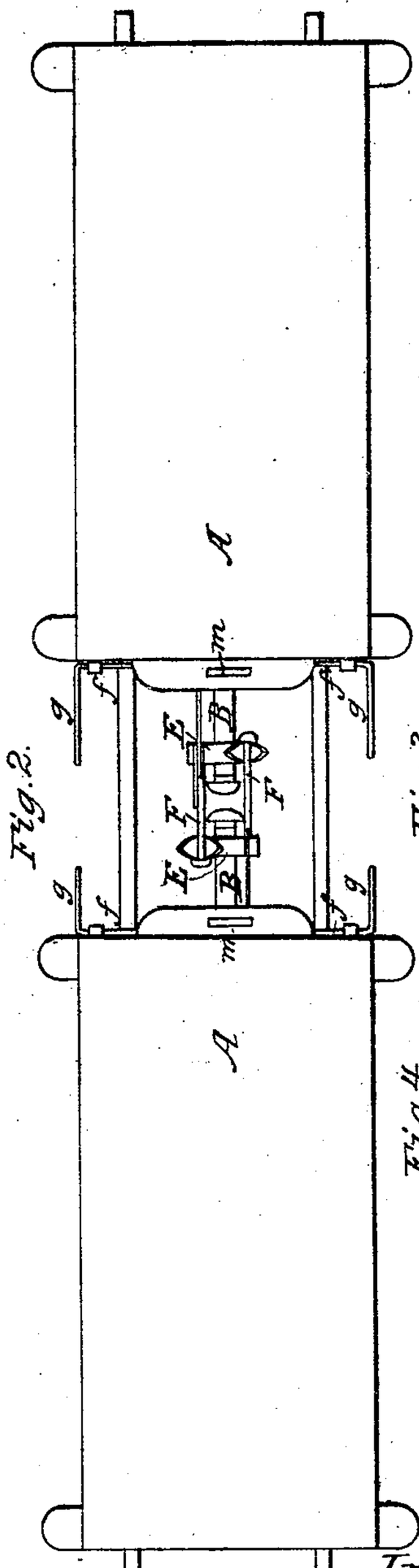

Fig. 2.

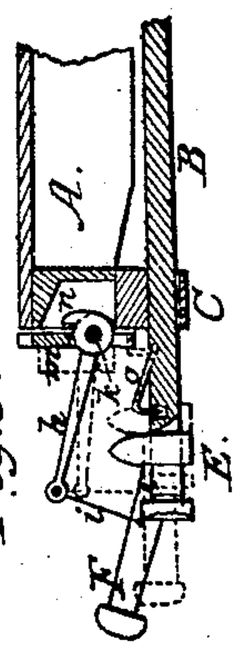

Fig. 3.

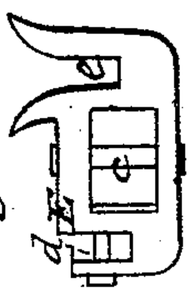

Fig. 4.

Witnesses.
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ISAAC N. MITCHELL, OF ARCANUM, OHIO.

Letters Patent No. 92,866, *dated July* 20, 1869.

IMPROVED CAR-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ISAAC N. MITCHELL, of Arcanum, in the county of Darke, and in the State of Ohio, have invented certain new and useful Improvements in Car-Coupling; 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 self-acting car-coupling, as will be hereinafter 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 drawings, in which—

Figure 1 is a side elevation,

Figure 2, a plan view, and

Figure 3, a side view, in section, of my invention.

Figure 4 is an enlarged front view of the clevis attached to the draw-bar of the car.

A represents a railroad-car, and

B, the draw-bar, which runs in loops or guides C C, on the under side of the car A.

The draw-bar B is at its rear end acted upon by a spring, D, pressing it forward, and a pin, *a*, secured to the draw-bar, and, striking against one of the guides C, prevents it from going or extending further forward than desired.

Another pin, *b*, also secured to the draw-bar, prevents it from being pushed further backward than absolutely necessary to cause the coupling of the cars, as will be hereinafter explained.

At the front end, or rather near the front end of the draw-bar B, is pivoted the clevis E, said clevis being of the peculiar shape shown in fig. 4, surrounding the draw-bar, and pivoted to the same by means of the bolt *c*.

On one side of the clevis E is a slot, in which the rear end of the coupling-link F is pivoted, by means of the bolt *d*, and on the opposite side is another larger slot, *e*, to receive the head of the coupling-link from the adjoining car.

The sides of the slot *e* extend upward above the main portion of the clevis E, and are curved outward, so that the mouth or entrance to the slot becomes enlarged, thereby facilitating the entrance of the coupling-link into the same.

The coupling-link F consists of a straight bar, of suitable dimensions, pivoted at its rear end in the side of the clevis E, and its outer end provided with a head projecting on both sides, so that when the link is dropped into the slot *e* on the clevis of the adjoining car, the projecting head will catch on the inner side of the clevis.

In suitable bearings, along the end of the car A, is placed a shaft, *f*, which, at its ends, is provided with arms *g g*, so that the shaft can be turned from the platform of the car; or the arms *g g* may extend up so as to be operated from the top of the car; or any other device may be attached to the shaft *f* for the purpose of turning the same from any point of the car desired.

From a suitable point on the shaft *f*, an arm, *h*, extends forward, which is at its outer or front end, by means of a link or chain, *i*, connected with the coupling-link F, so that when the arms *g g* are turned up, the outer or headed end of the coupling-link will be raised, and the weight alone will bring the link down again.

On the centre of the shaft *f* is placed a small wheel, *k*, having one notch or projection, *n*, and around said wheel, in suitable guides at the end of the car, is a slotted slide, *m*, so arranged that when the shaft *f* is turned in such a manner as to raise the outer end of the coupling-link, the slide *m* will drop down into the notch *n*, and consequently prevent the shaft from turning back again, thus holding the coupling-link in the raised position shown in fig. 3.

When, now, two cars are brought together, and the bumpers or draw-bars strike against each other, then a bent wire or inclined projection, *o*, on the draw-bar, will raise the slide *m* up out of the notch *n*, and allow the weight of the coupling-link to turn the shaft *f*, so that the link will fall into the slot *e* on the clevis of the adjoining car, the spring D bringing the draw-bar back in its place again.

Both cars being provided with similar devices, it will be seen that the cars are coupled by two links, one on each side of the draw-bars.

To uncouple the cars, it is only necessary to raise the arms *g g*, when the coupling-links are raised, and the slides *m m* drop down, holding them in such position.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The clevis E, constructed as described, so as to surround the draw-bar and be pivoted to the same, and having a slot on one side to pivot the coupling-link, and another slot on the other side to receive the head of the link, substantially as herein set forth.

2. The combination of the clevis E and coupling-link F, constructed as described, and arranged on the draw-bar of a railroad-car, substantially as and for the purposes herein set forth.

3. In combination with the clevis E and coupling-link F, the link or chain *i*, arm *h*, and shaft *f*, substantially as and for the purposes herein set forth.

4. The arrangement of the shaft F, notched wheel *k*, and slotted slide *m*, substantially as and for the purposes herein set forth.

5. In combination with the shaft *f*, notched wheel *k*, and slotted slide *m*, the draw-bar B, provided with a wire, *o*, or its equivalent, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 6th day of May, 1869.

ISAAC N. MITCHELL.

Witnesses:

M. BITTER,

A. F. STEINMETZ.