

W. COOK.
Car Coupling.

No. 62,475.

Patented Feb. 26, 1867.

Fig. 1.

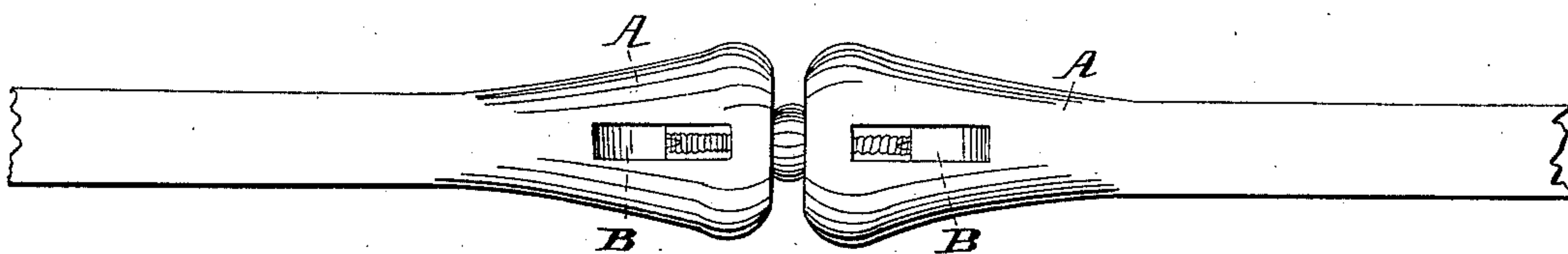


Fig. 2.

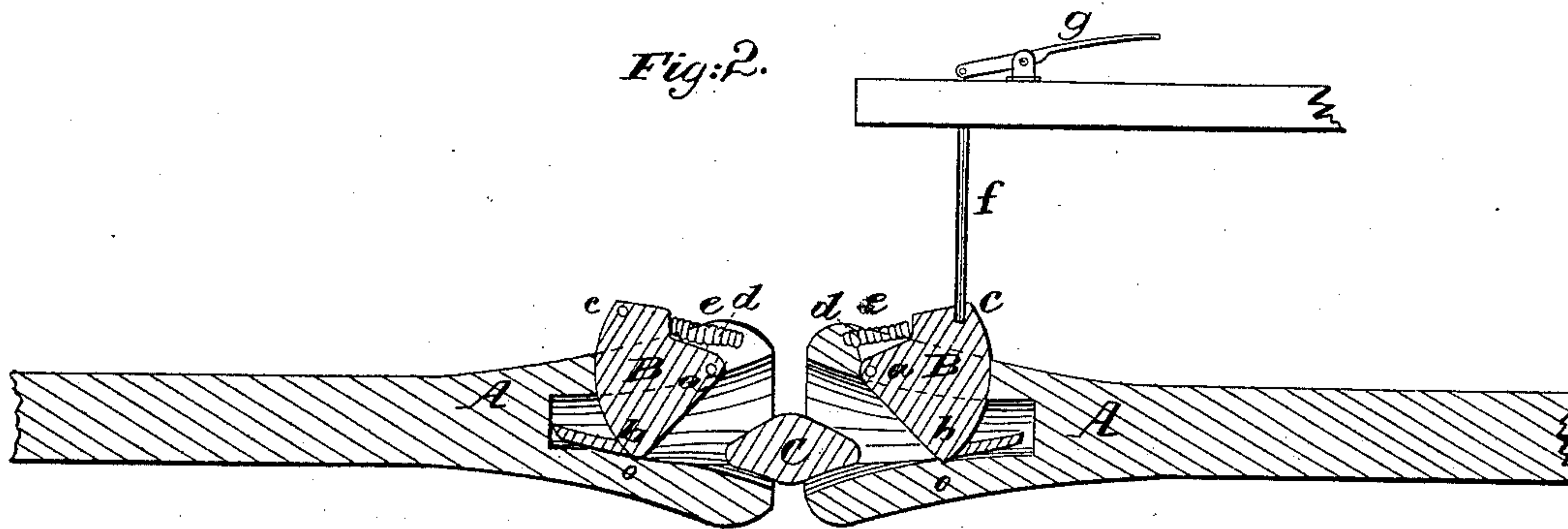


Fig. 3.



Fig. 4.



Witnesses

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WILLIAM COOK, OF BELVIDERE, ILLINOIS.

Letters Patent No. 62,475, dated February 26, 1867.

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, WILLIAM COOK, of Belvidere, in the county of Boone, and State of Illinois, have invented a new and useful Improvement in Railroad Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, which make part of this specification, and in which—

Figure 1 represents a top view of bumpers connected, with my improvement attached.

Figure 2 is a vertical central section through the same; and

Figures 3 and 4 are views in elevation and plan of the coupling link.

It is the object of my invention to couple railroad cars with certainty, without requiring a hand to guide the link; to render the coupling secure when completed; and to release the coupling with ease when desired; to which end my invention consists, first, in so combining a centre-enlarged link, with trumpet-mouthed bumpers, that when the link is in place in one bumper its opposite end will of necessity enter and couple with the opposite bumper without being guided by hand; second, in combining a segment catch with the bumper so that the catch shall always enter the link and be held securely down, whatever jars or violence the bumper may encounter.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A trumpet-mouthed bumper, A, is pierced on the top with a slot, within which I place a segment-shaped catch, B, which is pivoted in front to the bumper by a pin or screw, *a*, upon which it is free to move vertically within the slot. This segment catch is of triangular outline, and as thick as necessary for resisting the pressure it is designed to exert without crushing. Its lower edge, or that from *a* to *b*, is straight, and as the corner *b* rests on the bottom of a triangular depression, *c*, in the bell-mouthed bumper, it is always ready to receive the link C with the least resistance. From *b* to *c* the form of the catch is curved in an arch of the radius of the line *a b*, and then, when the link and catch are both in place, the strain on the link will meet the best line of resistance of the catch, and the coupling cannot become displaced without some of the parts are broken. The top of the catch has a depression, *d*, to receive a spiral spring, *e*, that is secured at one end to the bumper and at the other to the catch, and serves always to keep the catch depressed to the bottom of the depression in the trumpet mouth of the bumper. Near the angle *c* of the catch it may have a rod, *f*, attached, by which to raise the catch out of the link when the coupling is to be detached; and when desired, the rod *f* may be connected with a lever, *g*, on top of the platform, so that the foot can depress the lever and operate the catch to uncouple the cars. The link C is made with an enlarged centre. The swell or enlargement does not extend over the sides, but is confined to the top and bottom of the link, as shown in fig. 3, and from this configuration of the link, while one end is in one bumper, the swell on the under side of the link, resting against the bottom of the trumpet-mouthed opening in the bumper, will keep the opposite end of the link in nearly the same horizontal plane with the centre of the opening of the opposite bumper, and of course this will always insure the entrance of the open end of the link into the opposite bumper, and thus two cars will be securely and certainly coupled without endangering the hand or person of the attendant; at the same time, as the swell is confined to the top and bottom of the link, the coupled bumpers are left in all the freedom required to accommodate the irregular motions of the bumpers when the train is in motion.

It will be perceived that in addition to the gravity of my segment catch, which tends to keep it in place, I employ the spiral spring in its notch to positively prevent its rising out of the link from any jars the bumper may receive from the train, and at the same time the spring is securely protected from injury within the slot of the bumper.

I do not limit myself to any precise dimensions, but propose to construct the parts all to be strong enough for any work required, and all the parts save the link, and pin that holds the catch, may be economically made of cast iron, but the link and pin should be of wrought iron, of a good quality.

I am aware that springs acting vertically upon the catch to hold it in the link have been used, and I do not therefore claim such; but

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

1. The combination of the centre-enlarged link, with the segment catch and bumper, arranged and operating substantially as and for the purpose set forth.

2. The combination of the segment catch with a coiled spring, placed in a recess in the catch, and acting between the bumper and catch, with a horizontal pressure to hold the catch in the link, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

WILLIAM COOK.

Witnesses:

J. C. THOMPSON,

JOEL PECKHAM.