ROGERSON & BEYEA.

Car Coupling.

No. 113,932. Patented April 18, 1871.

Fig. 1.

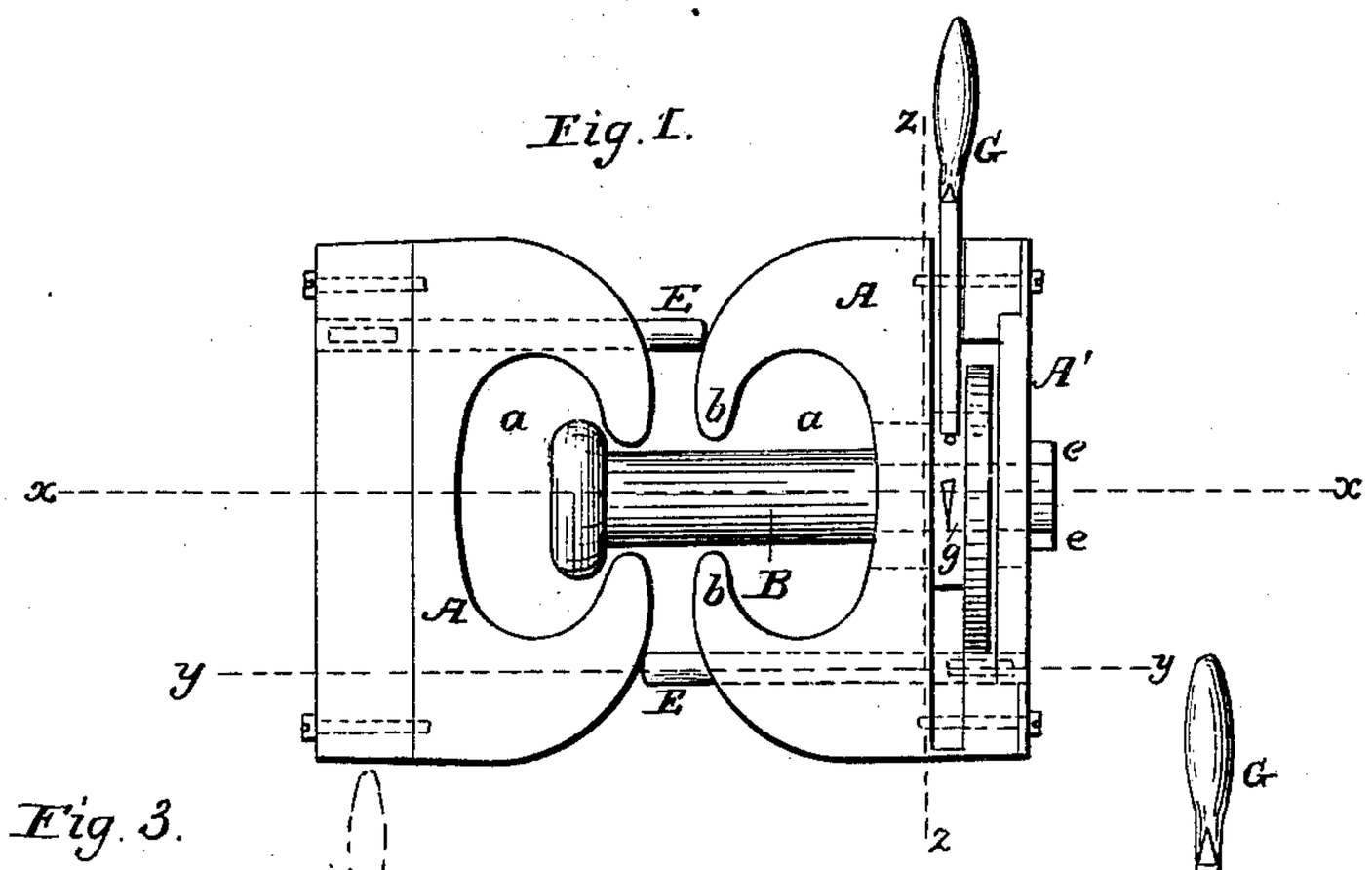


Fig. 3.

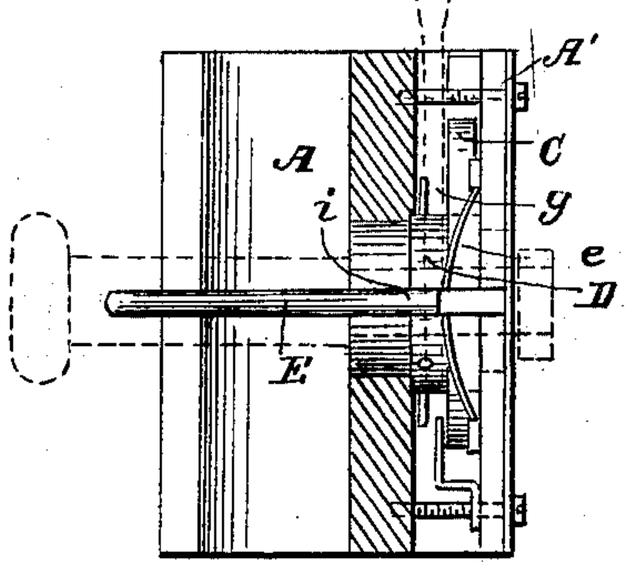


Fig. 2.

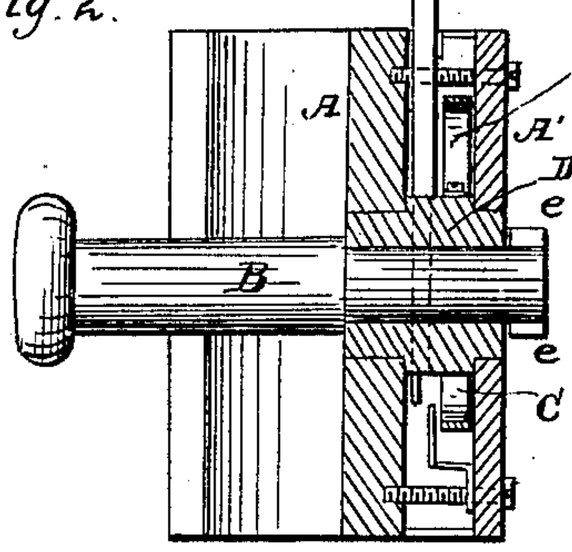
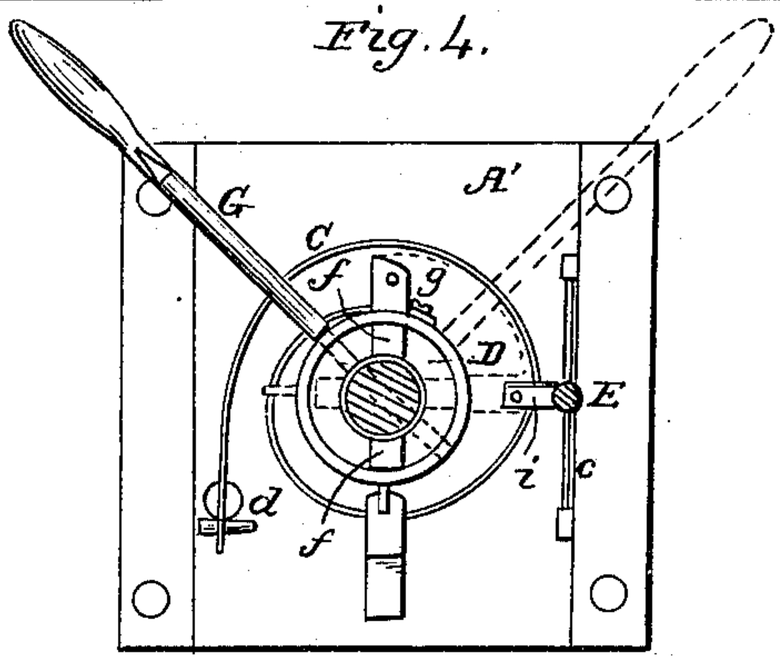


Fig. 4.



Witnesses:
Wheeler W. Phillips
L. A. Lowes.

Inventors:
N. B Rogerson
N. Beyea
Per Burke Fraser & Osgood
attys

UNITED STATES PATENT OFFICE.

W. BOLTON ROGERSON AND HARVEY BEYEA, OF PATERSON, NEW JERSEY.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **113,932,** dated April 18, 1871.

We, W. BOLTON ROGERSON and HARVEY BEYEA, both of Paterson, in the county of Passaic and State of New Jersey, have invented certain Improvements in Car-Couplings, of which the following is a specification:

This invention relates to certain improvements in what are known as "automatic car-couplings;" and consists of the combination and arrangements of parts, as will hereinafter be more fully set forth.

In the accompanying drawing, Figure 1 is a plan view of the two draw-heads, shown as coupled by the draw-bolt B. Fig. 2 is a vertical section through the draw-head, on the line *x x* of Fig. 1, with the draw-bolt B shown in elevation. Fig. 3 is a vertical sectional view on the line *y y* of Fig. 1, showing the draw-bolt in dotted lines, and the push-pin E, rotating socket D, and spring C, with the back plate, A, in elevation, the intervening solid parts of the draw-head A being removed from view. Fig. 4 is an elevation of the operating parts and the back plate, A′, on the line *z z*, Fig. 1, the draw-pin B being shown in section, and the front part, A, of the draw-head removed.

The front portion, A, of the draw-head may be of cast or wrought iron, with the back plate, A′, firmly bolted or otherwise secured thereto, the part A being formed with a face, rounded in horizontal section, and a clear opening, *a*, extending through from top to bottom, the two proximate jaws *b b* leaving a vertical slot to receive the draw-bolt B.

The rear portion of A is bored horizontally to receive a revolving socket or hub, D, and this is also bored to receive the neck of the draw-bolt B, and slotted to allow the two wings or flanges *e e*, which constitute its inner head, to pass through and remain beyond it. These slots are shown at *f f*, Fig. 4.

When the inner head of B has been passed through, it is turned, so that the head is retained by the socket, and they are pinned together by the hand-lever G, passing through both, so that they cannot separate until it is withdrawn, and the parts *e* and *f* brought in coincident position.

The hub or rotating socket D has an enlarged annular center, which rests in a chamber between the parts A and A′, so that the resistance of the draft of the cars is upon the solid metal of the draw-head. A coiled spring, C, is also provided, one end of which is fastened to a fixed stud, *d*, on the back plate, and the other end to the hub D. The force of this spring holds the hub and draw-bolt in such a position that the flat cross-head of the latter is horizontal, which position it is required to maintain when coupled, the head being too broad in that position to pass between the jaws *b b*.

To prepare it for coupling, the lever G is thrown into the position shown by dotted lines in Fig. 4, revolving the hub, and with it the bolt, a quarter of a circle, whereby the narrow face of the head is placed parallel with the vertical slots between the jaws *b b*, so that it will pass them freely.

An arm on the socket D is carried by the reverse movement of the lever into position to engage with a catch, *i*, on the push-bar E, by which it is retained in position for coupling until the draw-head of the next car strikes the projecting end, as seen in Fig. 1, and by pushing it disengages the arm *g*, when the spring C returns the revolving socket and the draw-bolt to their former position, connecting the two draw-heads. The lever G, being fixed, returns with it and remains in the position shown in Fig. 4, while the cars remain coupled; but it is thrown over, as shown in dotted lines, to uncouple them, and remains set in the manner described for automatic coupling when next required.

A spring, *c*, Figs. 3 and 4, holds the push-bar E in position to engage with the arm *g* at all times.

The socket D may be made of oval or ball shape to adjust itself to the lateral motion of the cars. The vertical slot of the draw-head and the chamber or opening *a* (both being open from top to bottom) admit of free vertical motion with the coupling-bolt, and prevent any obstruction from snow or ice accumulating in them, while the rounded faces of the two heads prevent undue strain upon the draw-bolt from the flexion of the cars in following curves.

The construction is simple, strong, and secure, and not liable to get out of order, while it obviates the necessity of entering between the platforms of the cars for coupling.

What we claim as our invention is—

The round-faced draw-blocks A A′, formed with the vertical slot and the chamber *a*, as described, arranged and operating in connection with the double-headed draw-bolt B, rotating socket D, lever G, spring *c*, arm *g*, and push-bar E, with its stop *i*, the whole constructed as herein shown and set forth.

W. BOLTON ROGERSON.
HARVEY BEYEA.

Witnesses:
G. A. HOBART,
J. S. CHRISTIE.