

WILLIAM F. GRASSLER.

Improvement in Railway Car Couplings.

No. 120,430.

Patented Oct. 31, 1871.

Fig. 1.

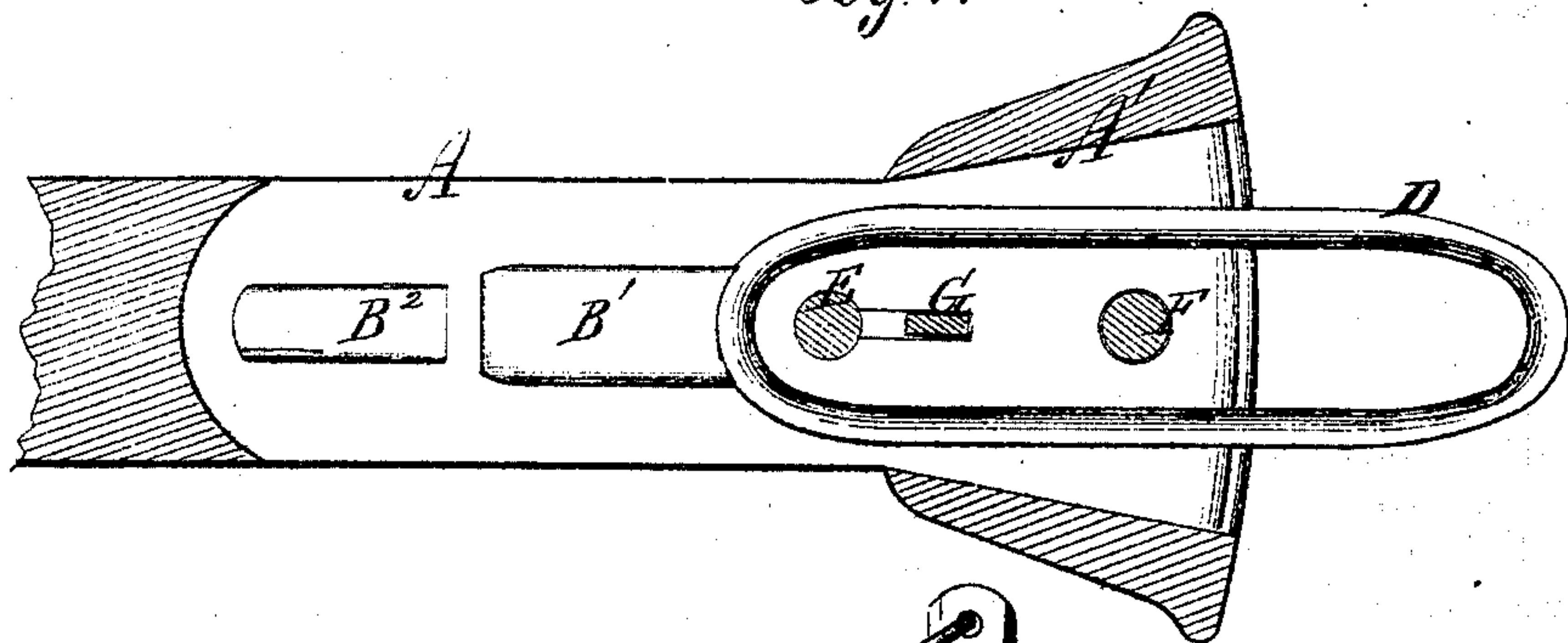


Fig. 2.

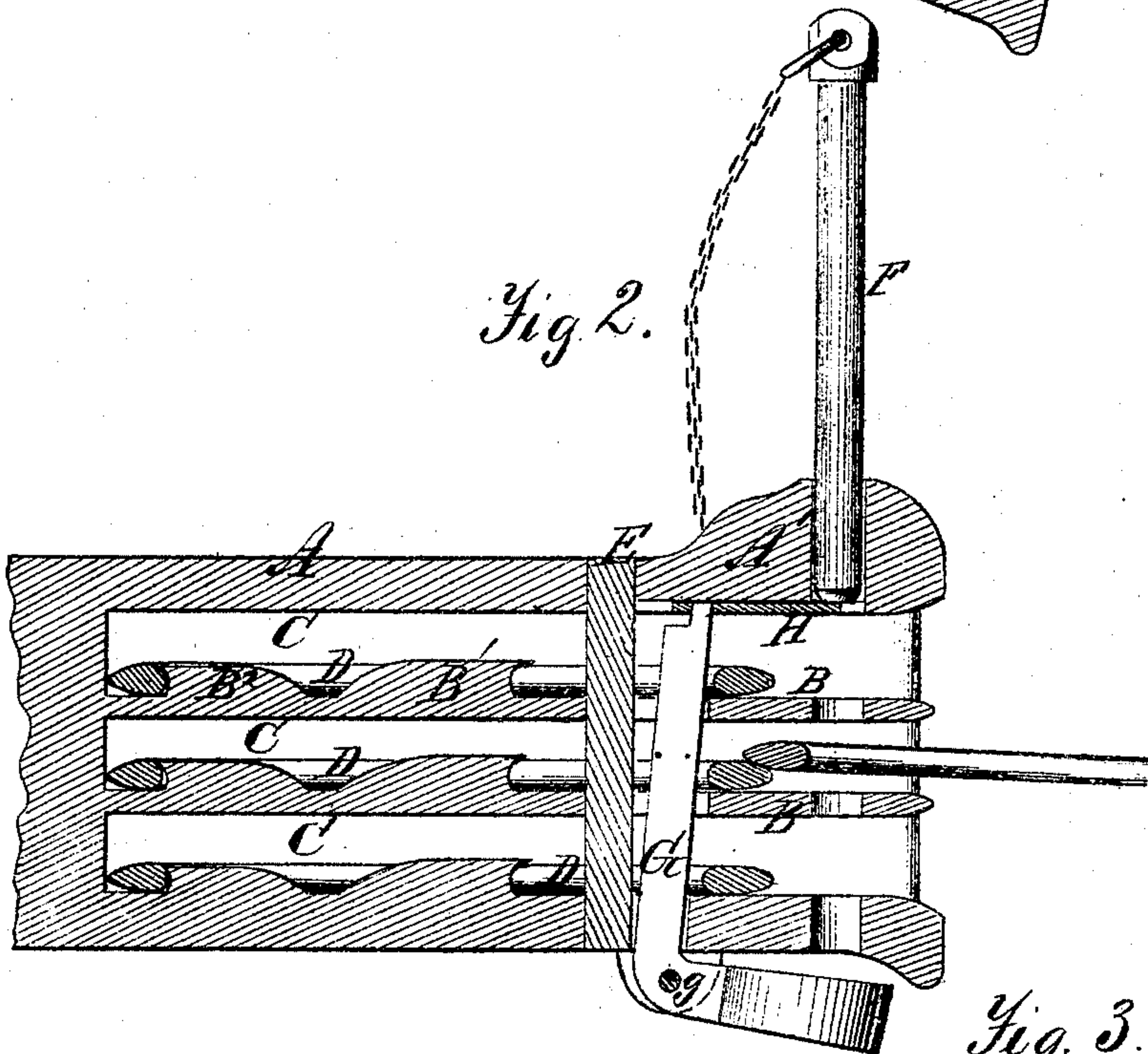
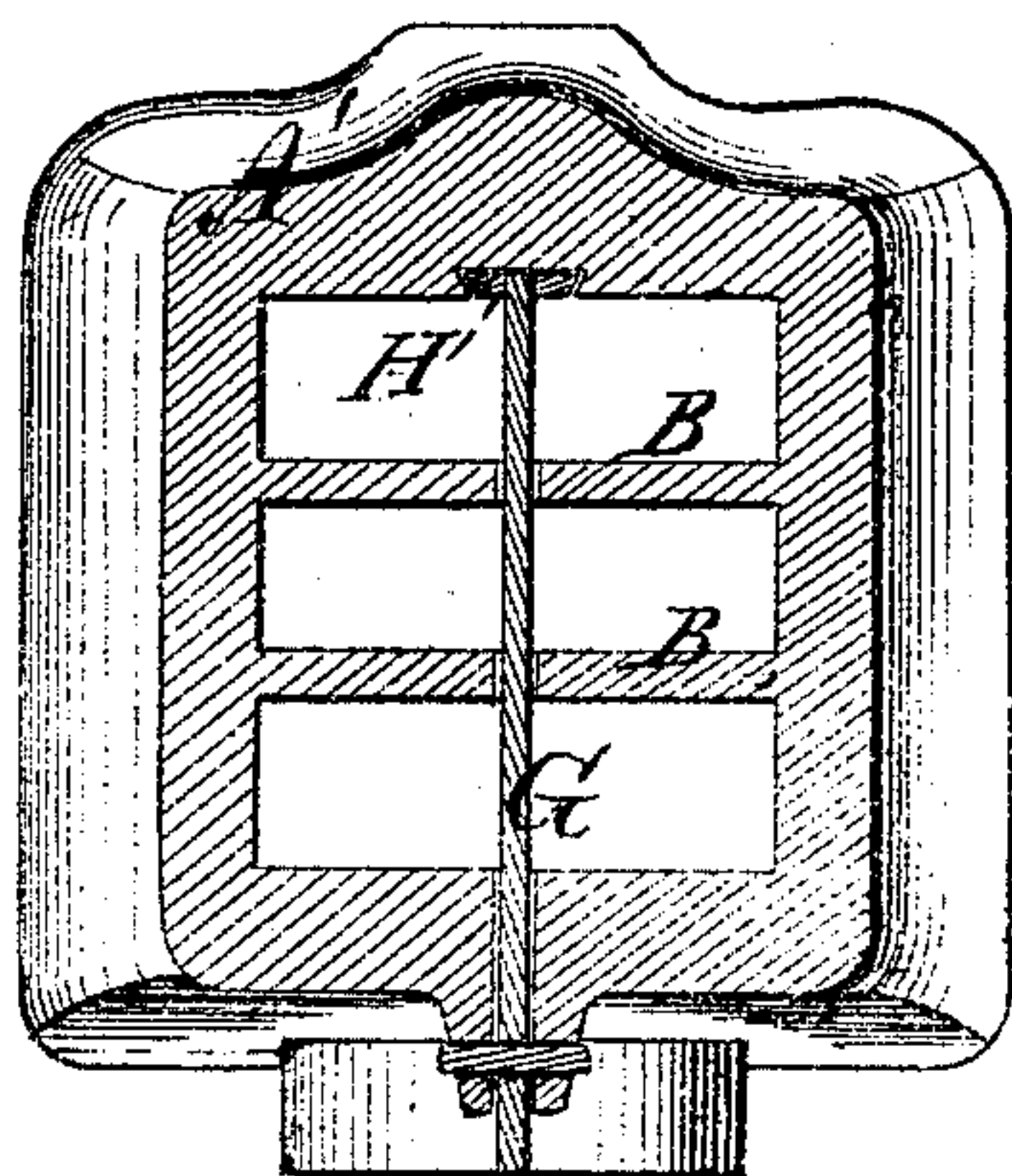


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM F. GRASSLER, OF MUNCY, PENNSYLVANIA.

## IMPROVEMENT IN RAILWAY CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 120,430, dated October 31, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM F. GRASSLER, of Muncy, in the county of Lycoming and State of Pennsylvania, have invented certain Improvements in Car-Couplings, of which the following is a specification:

The first part of my invention consists in constructing the buffer-heads of car-couplings with a series of chambers in rear of the mouth, in each of which a link may be kept in reserve. The second part of my invention consists in novelties of the details of construction to be generally explained in the following description, and specifically pointed out in the drawing and claims.

Figure I is a horizontal section of my improved buffer or draw-head. Fig. II is a vertical longitudinal section. Fig. III is a vertical transverse section.

The same letters of reference are employed in all the figures in the designation of identical parts.

The draw-bar A is made of cast-iron, steel, wrought-iron, or other suitable material, and terminates at one end in a deep-mouthed head, A', made flaring laterally in the ordinary manner. The bar shown consists of an open frame-work or yoke, in width about equal to the rear or narrowest end of the mouth in the head, which is of sufficient size to let an ordinary coupling-link pass horizontally between its vertical walls. The mouth of the head is open at the rear and contracted end, communicating with the open space in the bar, which space really forms a prolongation of said mouth, and both the mouth of the head and its prolongation in the bar are divided by a number of horizontal division-plates, B, which are either formed in one piece with the bar and its head, or bolted thereto, as circumstances may dictate. The mouth of the head A' is thus divided up into a number of compartments, upon one or the other of the partitions of which the coupling-links may be carried, to adapt it to couple into either a high or low car, and still cause the draft to be in a horizontal line or nearly so, notwithstanding the difference in the elevations of the draw-bars of the two cars. The same division-plates form a corresponding number of chambers, C, in the bar A, each of which is intended for the reception of a coupling-link, D, to be held in reserve until wanted. When the links have been placed in their respective chambers in the bar a

stout bolt, E, is passed vertically through them and suitable apertures in the division-plates, and secured in the top and bottom plates of the bar, as best seen in Fig. II. The links extend some distance beyond this bolt E in the mouth of the head, but not sufficiently far to interrupt or interfere with the movement of the coupling-pin F embracing the gravitating bar G, which is pivoted at g between ears on the under side of the head A'. The gravitating bar is in form like a bell-crank lever, the horizontal arm, projecting forward, of which is made sufficiently heavy to throw forward the vertical arm which extends up through elongated slots in the bottom of the head and the division-plates to the roof of the mouth, and is connected at the upper end by a slip-joint to a plate, H. The latter slides in a dovetailed groove in the roof of the mouth, and is projected under the aperture through which the coupling-pin passes by the gravitating bar, for the purpose of sustaining the pin in an elevated position, as seen in Fig. II. On the entrance of the link of an adjacent car, such link will strike the gravitating bar, pushing it back sufficiently far to withdraw the plate H from under the coupling-pin, which immediately falls through the apertures in the head and division-plates between the bars of the links, and thus confines the latter. The links are made wedge-shaped at their exterior ends, so that an entering link may readily pass under or over the reserve links and pass on to strike the gravitating bar. Cleats B<sup>1</sup> and B<sup>2</sup> are formed upon the top surface of the division-plates in the chamber C. The cleats B<sup>1</sup> serve as abutments for the rear end of the reserve links when it is projected for the purpose of coupling onto an adjacent car, as shown in Fig. I, while the cleats B<sup>2</sup> are simply intended to hold the links in proper position in their respective chambers when not in use—that is, to prevent them from being jerked forward by the joltings of the car. The cleats B<sup>1</sup> are made to overhang the links a short distance when abutting against them, as shown, so as to hold the projecting link in a horizontal position.

In car-couplings constructed as hereinbefore set forth, no loose coupling-links need be used, as each draw-bar is provided with a number of links, one of which can be readily drawn out whenever two cars are to be coupled together; and as these links are permanently confined in

the draw-bars none can ever be lost or removed by mischievous persons. In the use of these draw-heads the links employed for coupling will be confined by the pin or bolt E of one and the pin F of the other.

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

1. A draw-head in which both the bar A and mouth A' are constructed with a series of corresponding chambers one above another, substantially as and for the purpose set forth.

2. The combination of the gravitating bar G and sliding plate H, arranged to operate substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. F. GRASSLER.

Witnesses:

WM. BRINDLE,

J. M. M. GERNERD.

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