(No Model.) 2 Sheets—Sheet 1.

H. C. BUHOUP.

CAR COUPLING.

No. 427,737. Patented May 13, 1890.

FIG. 1.

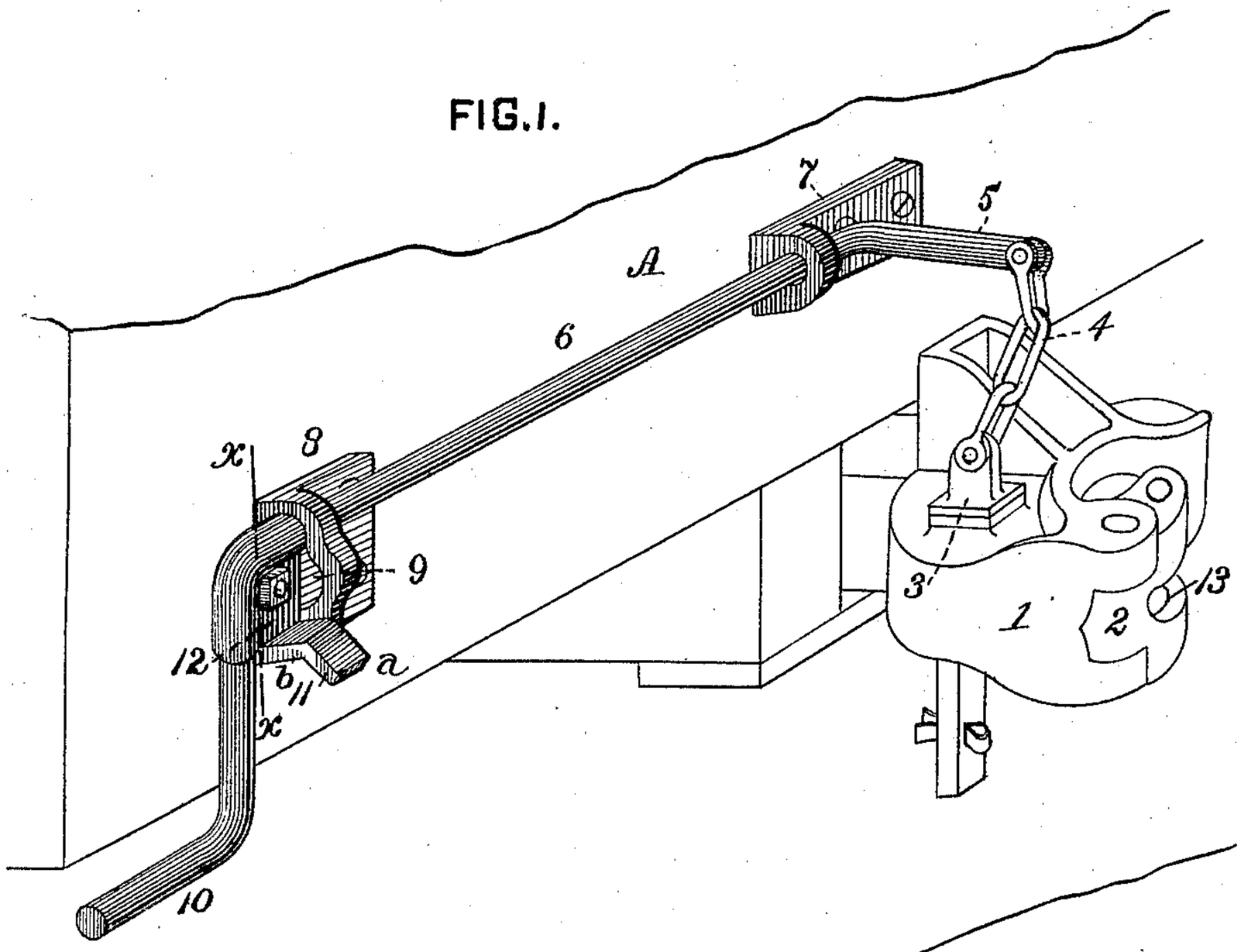


FIG. 2.

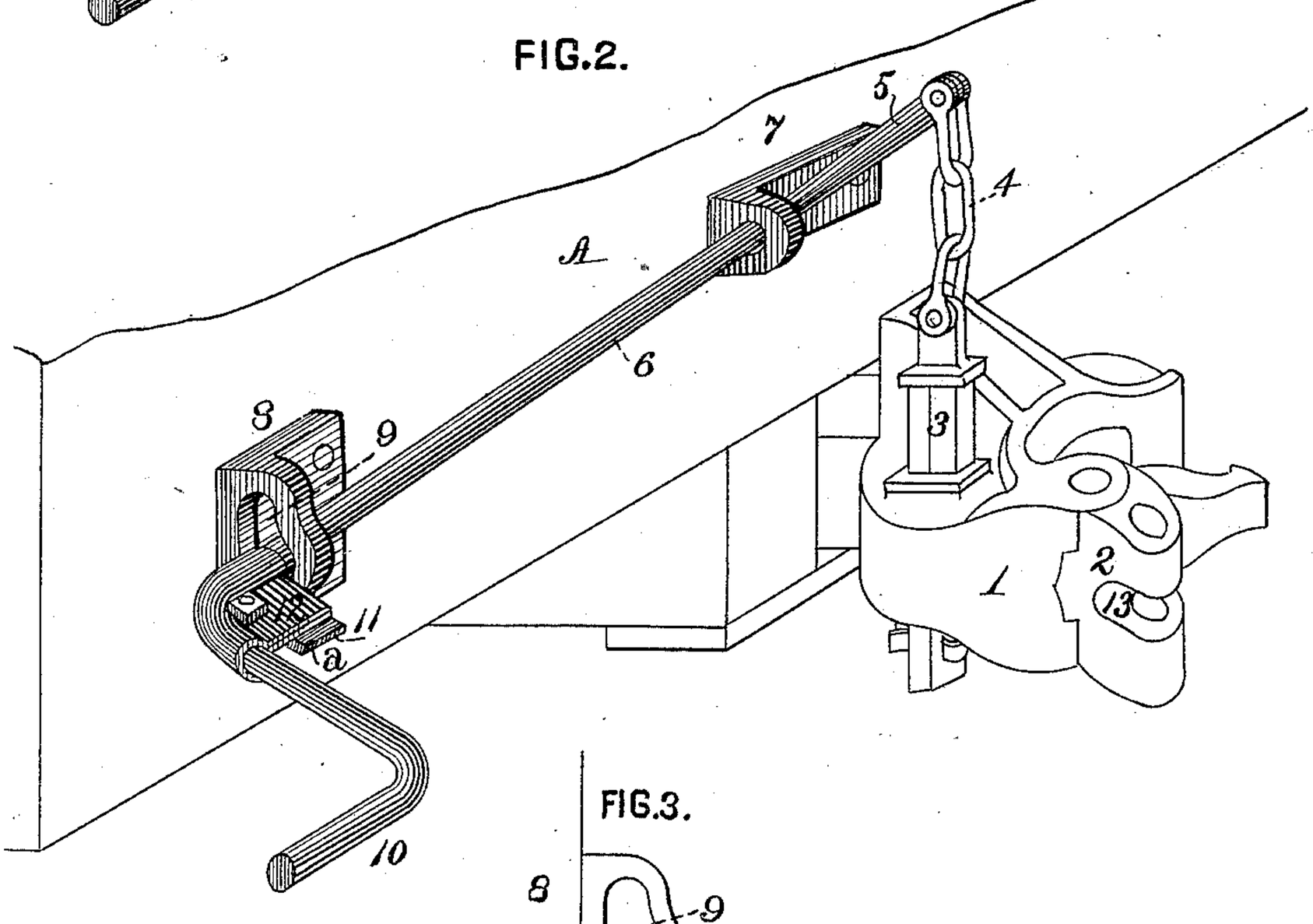
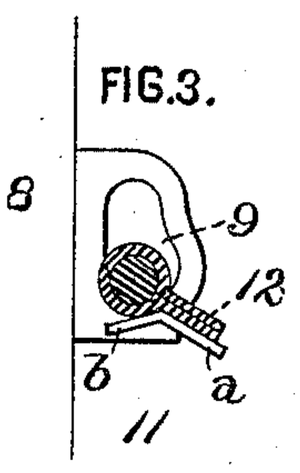


FIG. 3.



WITNESSES:

Darwin S. Wolcott

F. E. Gaither.

INVENTOR,

Henry C. Buhoup

by George H. Christy

Att'y.

(No Model.)

2 Sheets—Sheet 2.

H. C. BUHOUP.

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FIG. 4.

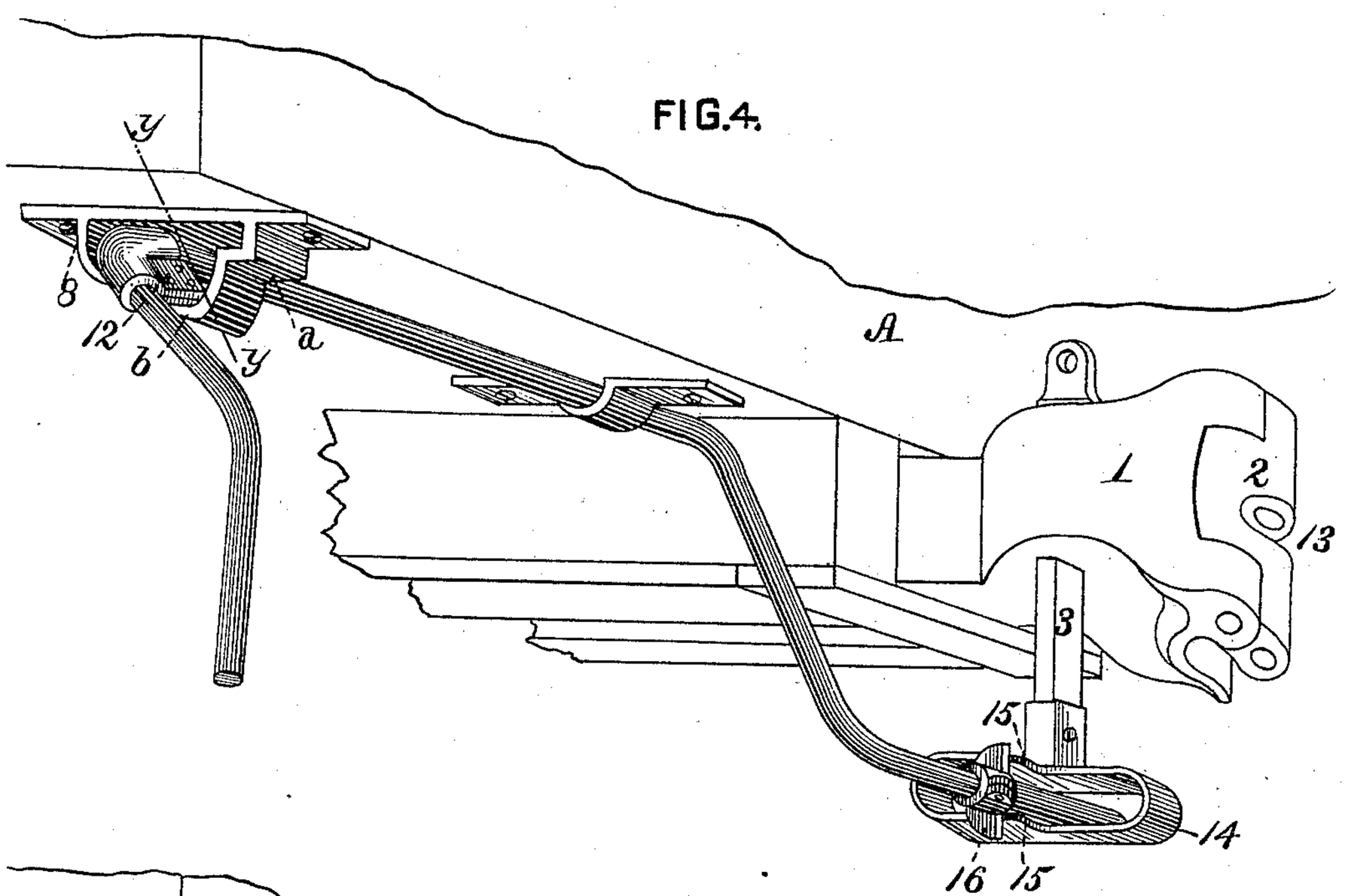


FIG. 5.

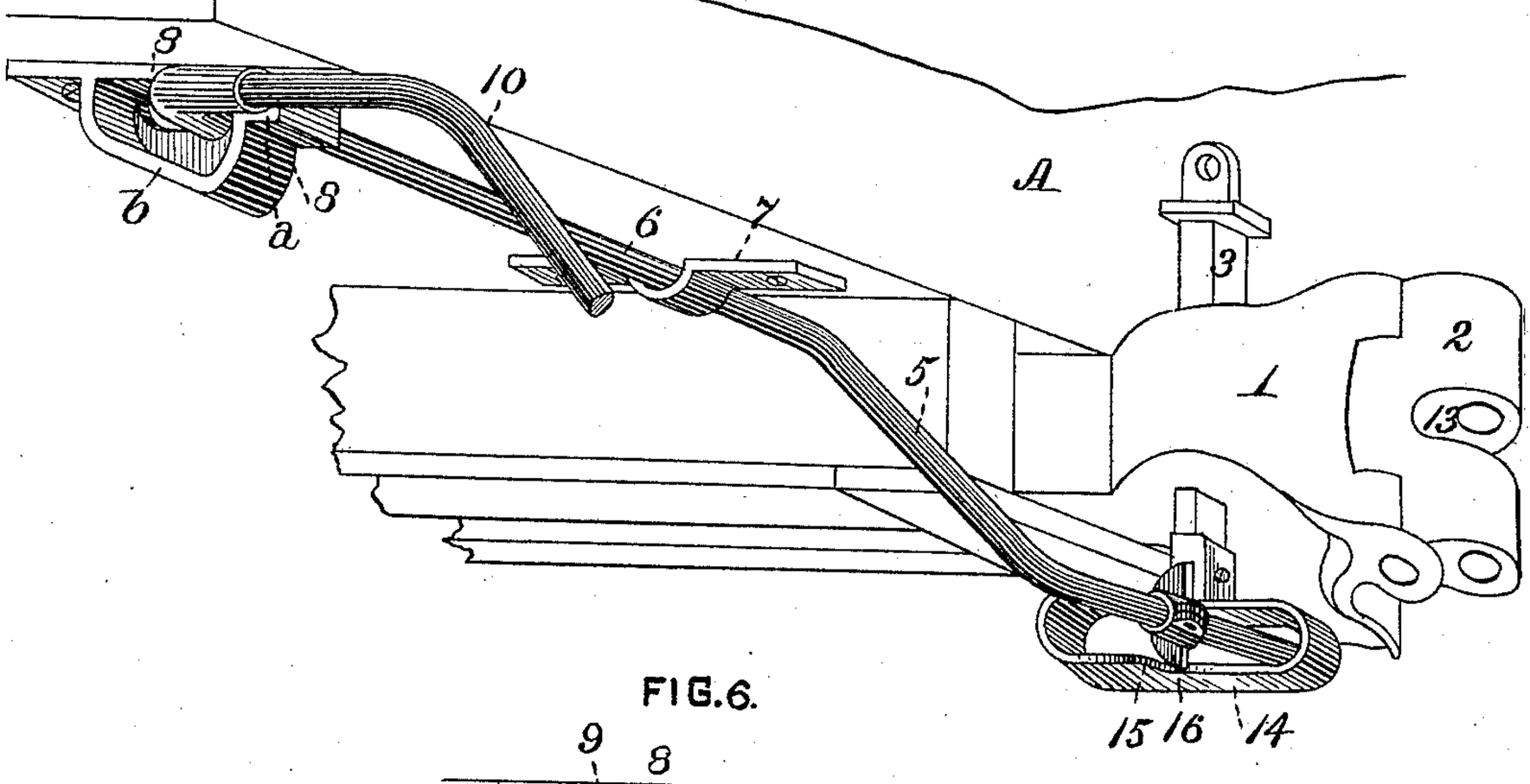
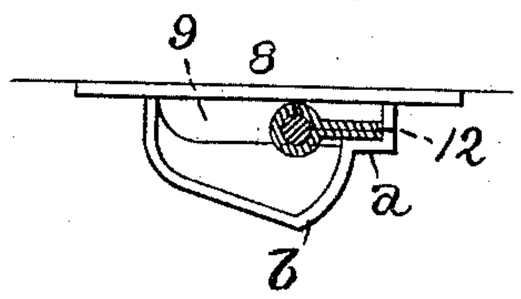


FIG. 6.



WITNESSES:

Damon S. Wolcott
F. E. Gaither.

INVENTOR,

Henry C. Buhoup
by George H. Christy
Atty.

UNITED STATES PATENT OFFICE.

HENRY C. BUHOUP, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM McCONWAY, OF PITTSBURG, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 427,737, dated May 13, 1890.

Application filed July 31, 1889. Serial No. 319,263. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. BUHOUP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented or discovered a certain new and useful Improvement in Car-Couplers, of which improvement the following is a specification.

The invention described herein relates to certain improvements in mechanism for releasing couplers of the Janney or swinging-hook type; and said invention has for its object such a construction of mechanism as will not only permit of the operation of the locking-pin from the side of the car, thus avoiding the necessity of the brakeman's going between the cars, and the maintenance of the pin in its unlocked position, but will as well permit of the automatic return of the pin to a locking position.

In general terms, the invention consists in the construction and combination of mechanical device or elements, all as more fully hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figures 1 and 2 are perspective views of the front end of a car having a swinging-hook coupler, the swinging hook and the releasing mechanism being shown in locked and unlocked positions, respectively. Fig. 3 is a sectional detail view on the line x x, Fig. 1. Figs. 4 and 5 are views similar to Figs. 1 and 2, showing a modification in the releasing mechanism; and Fig. 6 is a sectional detail view on the line y y, Fig. 4.

The draw-head 1 with its swinging hook 2 and locking-pin 3 are of the usual form and construction found in the Janney or other similar form or class of swinging-hook coupler, and the draw-head is connected to the car A in any suitable manner. The locking-pin 3, and within the term "locking-pin" is included any device employed in swinging-hook couplers for locking the hook in operative or closed position, is connected by a chain 4 or other suitable means, preferably of a flexible character, to a crank-arm 5 on the inner end of the shaft 6. This shaft is mounted in bearings 7 and 8, secured either to the end sill or body of the car. The bearing 7 is of a form or construction permitting of the rotation and a slight pivotal movement of the shaft, and the bearing 8 is formed with a slot 9, so that the shaft 6 may not only rotate in said bearing, but its outer portion may have a lateral movement either in a vertical or horizontal plane, dependent upon the location and arrangement of the shaft. The outer end of the shaft is provided with a handle 10, whereby the shaft may be rotated, thereby raising the pin 3 and unlocking the hook 2. This shaft is made of sufficient length to permit the brakeman's operating it without passing between the cars.

In drilling cars in a yard it is frequently desirable to prevent the hook from being locked when closed by contact with the draw-head of other cars. To this end I provide a catch-plate 11, which may have an independent attachment to the car, but is preferably formed integral with the slotted bearing 8, and a latch 12, attached to the shaft 6 in such manner as to rotate therewith. This latch-plate is so constructed as to engage the latch and retain the shaft in either one of its two positions—*i. e.*, when turned so as to support the pin in its unlocked position, as shown in Figs. 2 and 4, or so as to permit the pin to drop into locking position, as shown in Figs. 1 and 3. In the form of latch and catch shown the former is engaged by the outer portion a of the catch when the shaft is turned to raise the pin and by the portion b when the shaft is in normal position.

As the swinging-hook type of coupler is not universally applied to cars, it is frequently necessary to connect such couplers by a link to the ordinary link-and-pin coupler, and for this purpose the hook 2 is provided with a notch 13 and a vertical hole intersecting such notch. It is also desirable that the hook should be locked in its closed position when subjected to strain. I therefore provide for the automatic disengagement of the latch from the portion a of the catch, so that when the pin has been locked on its raised position during the yard drill it may be permitted to drop and lock the hook when the coupler is subjected to a pull. To this end the chain 4

is made of such a length as to be taut or under a tension when the coupler is in normal position and the crank-arm 5 is raised and locked by the latch and catch plate; hence when the coupler is moved outwardly or inwardly by the strain or push to which it is subjected in ordinary train movements the arm 5 will be pulled down, thereby raising the outer end of the shaft in the slot 9 sufficiently to disengage the latch from the portion *a* of the catch-plate, and at the same time rotating the shaft, so as to bring the latch into engagement with the portion *b* of the catch. The pin is now free to drop, and the hook will be turned in and locked when subjected to push or blow. In lieu of connecting the upper end of the pin to the arm 5 the lower end of the pin may be provided with a loop 14, with which the crank-arm 5 engages, the shaft 6 being arranged under the end sill, as shown in Figs. 3 and 4.

The operation of this arrangement is similar to that hereinbefore described, except that the slotted bearing is arranged to permit of the horizontal movement of the outer end of the shaft 6.

In order to provide for the automatic shifting of the shaft for releasing the pin, shoulders 15 are formed on the sides of the loop and are adapted to engage a disk 16 on the arm 4, said shoulders and disk being rounded, so as to permit of their slipping by each other after effecting their function.

I claim herein as my invention—

1. The combination of the locking-pin of a swinging-hook coupler, a shaft having a crank-arm connected to said pin, bearings for said shaft, one at least of said bearings being slotted, a catch-plate secured to the car, and a latch fixed on said shaft, substantially as set forth.

2. The combination of the locking-pin of a swinging-hook coupler, a shaft having a crank-arm connected to said pin, bearings for said shaft, one at least of said bearings being slotted, a catch-plate having its operative portions formed at an angle to each other, attached to the car, and a latch fixed on said shaft, substantially as set forth.

In testimony whereof I have hereunto set my hand.

HENRY C. BUHOUP.

Witnesses:
DARVIN S. WOLCOTT,
R. H. WHITTLESEY.