

(No Model.)

G. M. MURR.
CAR COUPLING.

No. 433,357.

Patented July 29, 1890

Fig. 1.

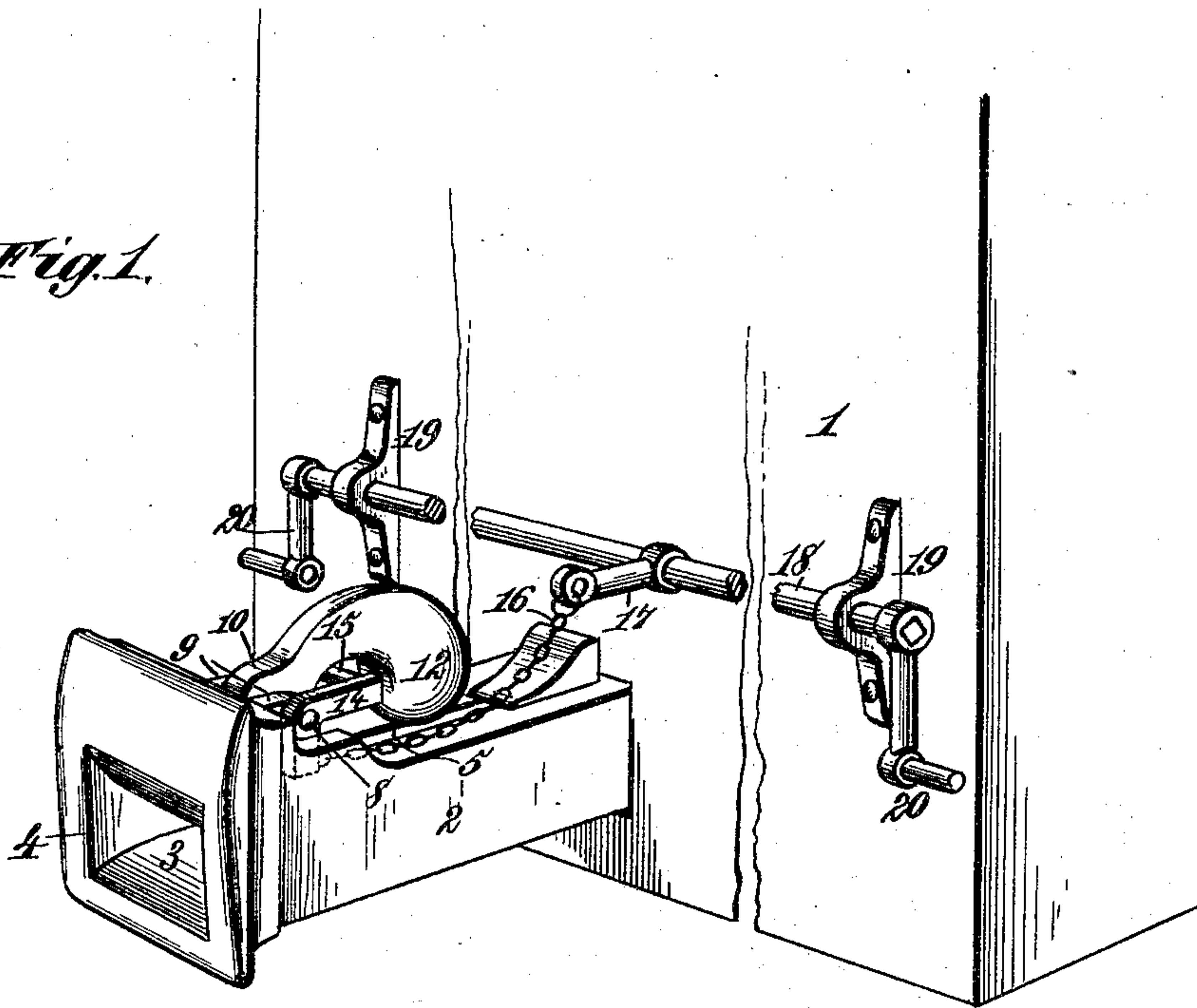


Fig. 2.

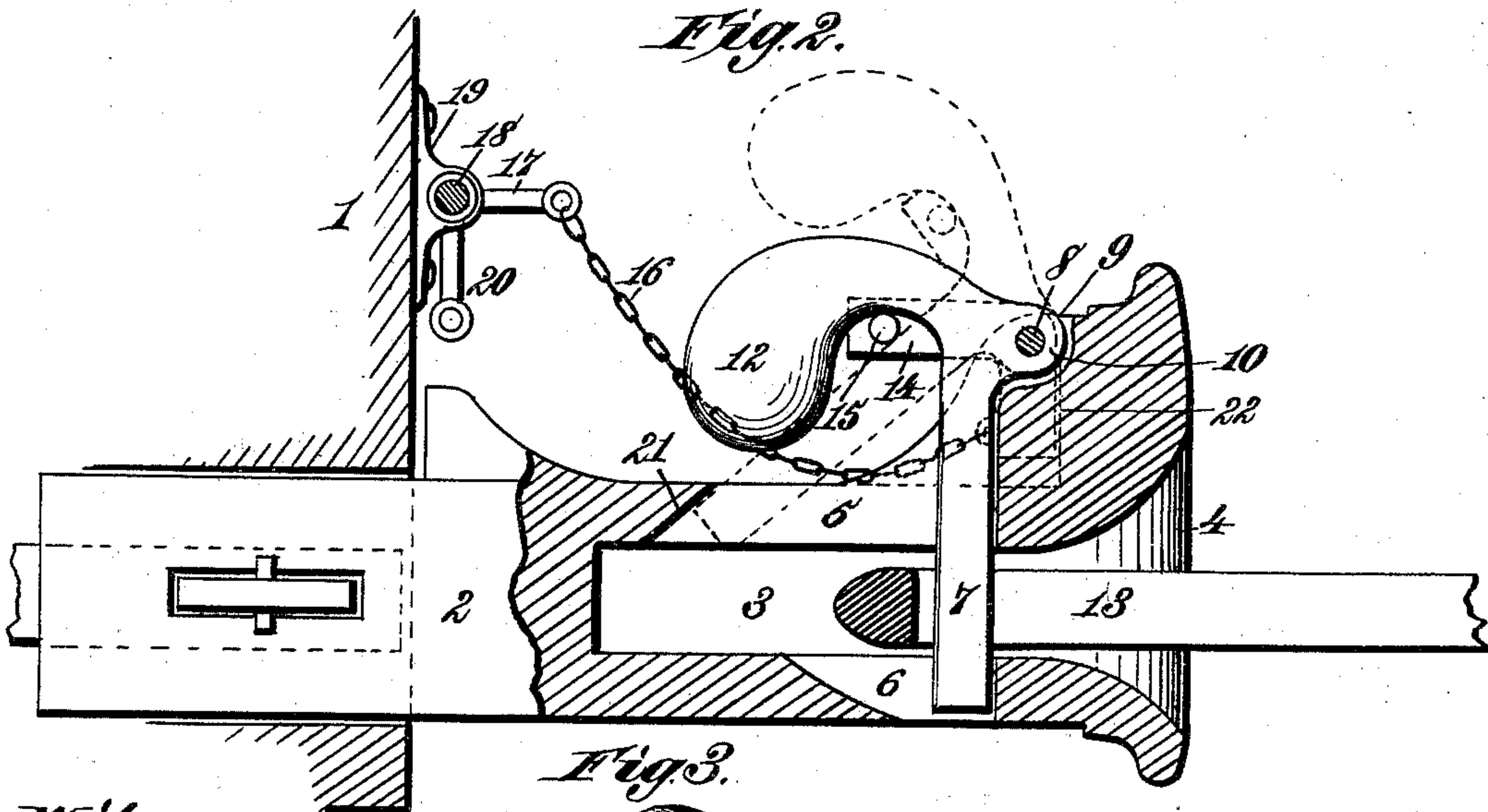
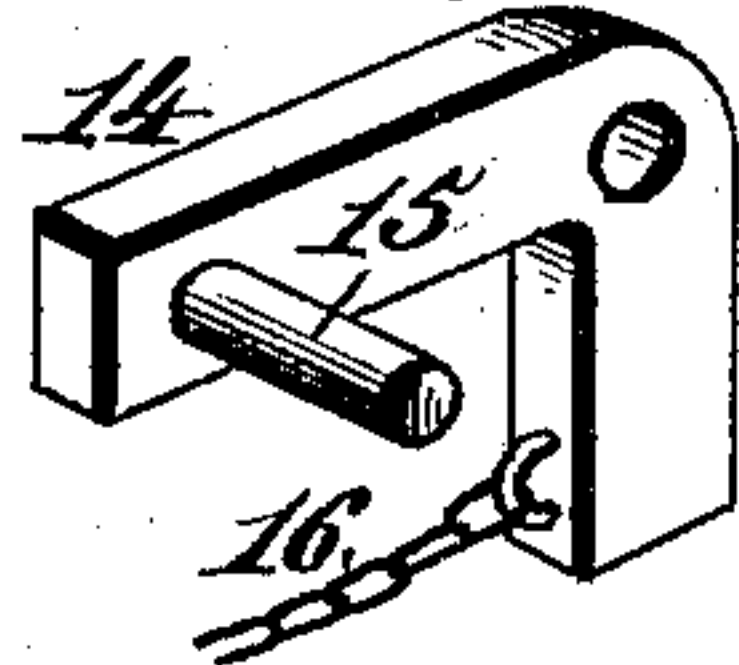


Fig. 3.



Witnesses.
Robert Everett.
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Inventor:
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UNITED STATES PATENT OFFICE.

GEORGE M. MURR, OF CONCORD, NORTH CAROLINA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 433,357, dated July 29, 1890.

Application filed May 31, 1889. Serial No. 353,847. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. MURR, a citizen of the United States, residing at Concord, in the county of Cabarrus and State of North Carolina, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to that class of car-couplings in which a weighted swinging coupling-pin is pivoted in the draw-head to automatically engage the coupling-link by gravity after the link has been inserted in the draw-head against said pin, so as to cause the pin to swing backward to permit the passage of the link; and the invention consists in the combination, with the swinging pin, of a lifter composed of a bell-crank lever having a lateral arm projecting beneath the rearwardly-curved weighted upper end of the coupling-pin and means for actuating said bell-crank from the top or side of the car to disengage the swinging coupling-pin from the link in uncoupling.

The invention also consists in the novel features of construction and combinations of parts in a car-coupling, as hereinafter described and claimed.

In the annexed drawings, illustrating the invention, Figure 1 is a perspective of a car-coupling embodying my improvements. Fig. 2 is a vertical longitudinal section of my improved car-coupling. Fig. 3 is a perspective of the pin-lifter detached.

Referring to the drawings, the numeral 1 designates an end portion of the body of a box-car, and 2 the draw-head, which is provided with the link-receiving recess 3, having a flaring mouth 4, as usual. In the top of the draw-head is a longitudinal slot 5, and in the bottom is a similar longitudinal slot 6 to receive the swinging coupling-pin 7, which is mounted on a pivot 8, supported in bearings 9, located on each side of the upper longitudinal slot 5 on top of and near the forward end of the draw-head.

The depending portion of the coupling-pin 7 is preferably made with substantially square edges, as shown, though it may be cylindrical, if desired. On the front of this coupling-pin, near its upper end, is a perforated lug 10, by which it is mounted on its pivot 8 without

weakening the pin by forming a perforation through its body, as would otherwise be necessary. The upper end of the swinging coupling-pin 7 is curved rearward and downward, as shown, and this rearwardly-curved part of the pin is enlarged sufficiently to form a weight 12, that causes the depending portion or body of the pin to normally assume a vertical position within the slotted and recessed draw-head. The weight 12 also causes the pin 7 to remain securely in engagement with the link 13 when the cars are coupled and obviates any liability of its jumping out of place under sudden jars or strains.

The link 13 may be of the ordinary square or round variety and either straight or crooked, according to the relative height of the draw-heads to be connected. It should be of such length as to be capable of touching the rear part of the recess in each draw-head.

In coupling it is only necessary to jam together the opposing draw-heads, so that the link carried by one draw-head will automatically raise or swing back the pin of the adjacent draw-head and become engaged therewith.

In order to provide for uncoupling either from the top or sides of the cars without passing between the same, a pin-lifter 14 is pivotally supported on one end of the pivot 8, on which the swinging coupling-pin 7 is mounted. The pin-lifter 14 consists of a bell-crank lever having a lateral arm 15, that projects beneath the rearwardly-curved portion of the coupling-pin. The arm 15 projects inward from the normally-horizontal arm of the bell-crank lifter 14, which is pivotally supported at the junction of its two arms, as shown, and to the lower depending arm of the said bell-crank lifted is attached one end of a chain 16, the other end of which is attached to an arm 17 on a rock-shaft 18, that is supported in suitable bearings 19 on the end of the car-body. The ends of the rock-shaft 18 are provided with crank-handles 20, by which it can be operated to draw on the chain 16, and thus actuate the bell-crank lifter 14, so as to raise or swing back the coupling-pin 7 and disengage it from the link. By this means the pin and link can be readily uncoupled from the side of the car. If desired, the chain 16 can be ex-

tended from the rock-shaft arm 17 to the top of the car, so as to enable the cars to be uncoupled from that point.

The rear end of the upper longitudinal slot 5 may be beveled, and so located as to form a stop for the rearwardly-swinging pin 7, so that it will not become entirely disengaged from said slot in the act of uncoupling; or a stop 21 may be located across the top of the draw-head near its rear end for this purpose. The forward ends of the slots 5 and 6 are so constructed and arranged as to form firm bearings for the depending portion of the coupling-pin 7 when suspended in the draw-head. It will be seen that the bell-crank lifter 14 is supported in such proximity to the rim of the draw-head as to afford a suitable bearing 22 for the depending arm of said lifter and so maintain its laterally-projecting arm 15 in proper position for immediate action when the rock-shaft 18 is operated.

It will be observed that the various parts of the coupling are of simple construction, not liable to get out of order, and capable of ready and efficient operation without exposure to risk of injury in passing between the cars.

What I claim as my invention is—

1. In a car-coupling, the combination, with a pivoted swinging coupling-pin having a rearwardly-curved and weighted upper end, of a pin-lifter composed of a bell-crank lever having a lateral arm projecting beneath the rear-

wardly-curved end of said coupling-pin, and means for actuating said lifter from the top or sides of a car, substantially as described. 35

2. In a car-coupling, the combination, with a pivoted swinging coupling-pin having a rearwardly-curved and weighted upper end, of a pin-lifter composed of a pivoted bell-crank lever having a lateral arm projecting beneath the rearwardly-curved upper end of said coupling-pin, a rock-shaft mounted on the end of the car and provided with crank-handles, and a chain connecting said bell-crank and rock-shaft, substantially as described. 40 45

3. In a car-coupling, the combination, with the slotted and recessed draw-head and the swinging coupling-pin pivotally supported therein and provided with a rearwardly-curved and weighted upper end, of the pin-lifter composed of a bell-crank lever mounted on the pivoted support of the coupling-pin and having a lateral arm projecting beneath the rearwardly-curved and weighted upper end of said pin, and means for actuating the bell-crank lever to raise or swing back the coupling-pin, substantially as described. 50 55

In testimony whereof I have affixed my signature in presence of two witnesses.

GEORGE M. MURR.

Witnesses:

JOHN C. LESLIE,
JNO. A. CLINE.