

(No Model.)

G. A. NORCROSS.
CAR COUPLING.

No. 529,045.

Patented Nov. 13, 1894.

Fig. 1.

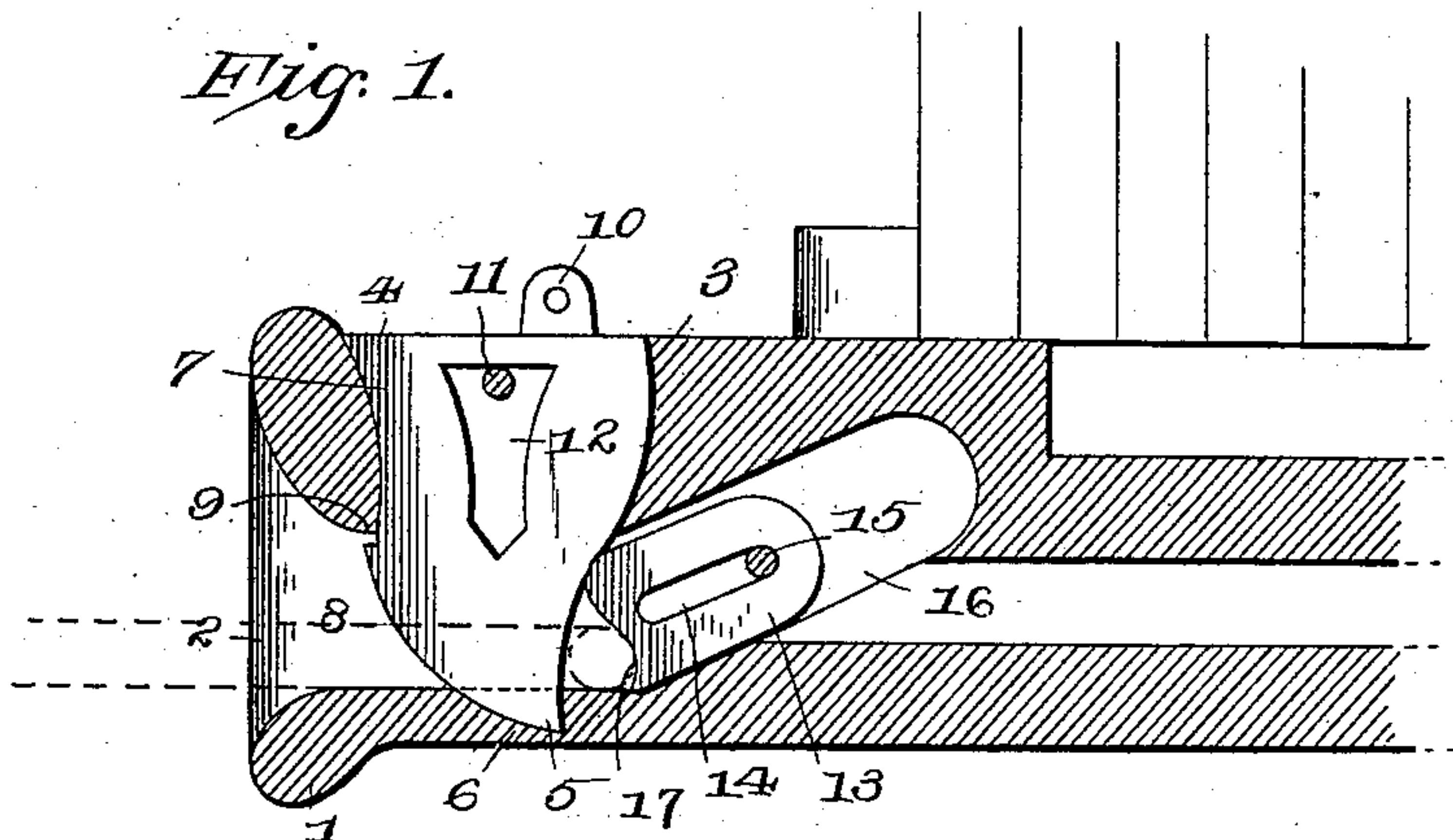


Fig. 2.

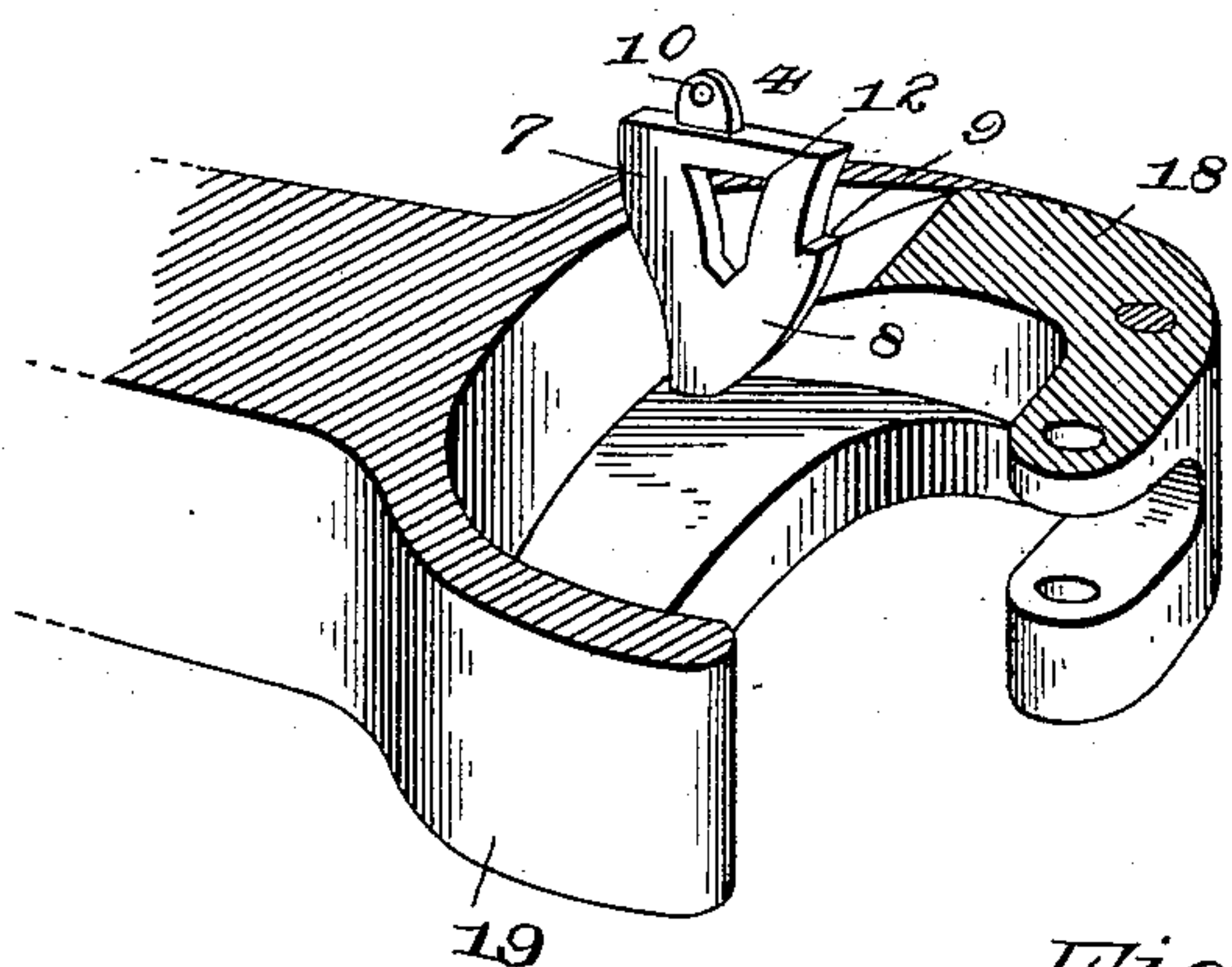


Fig. 3.

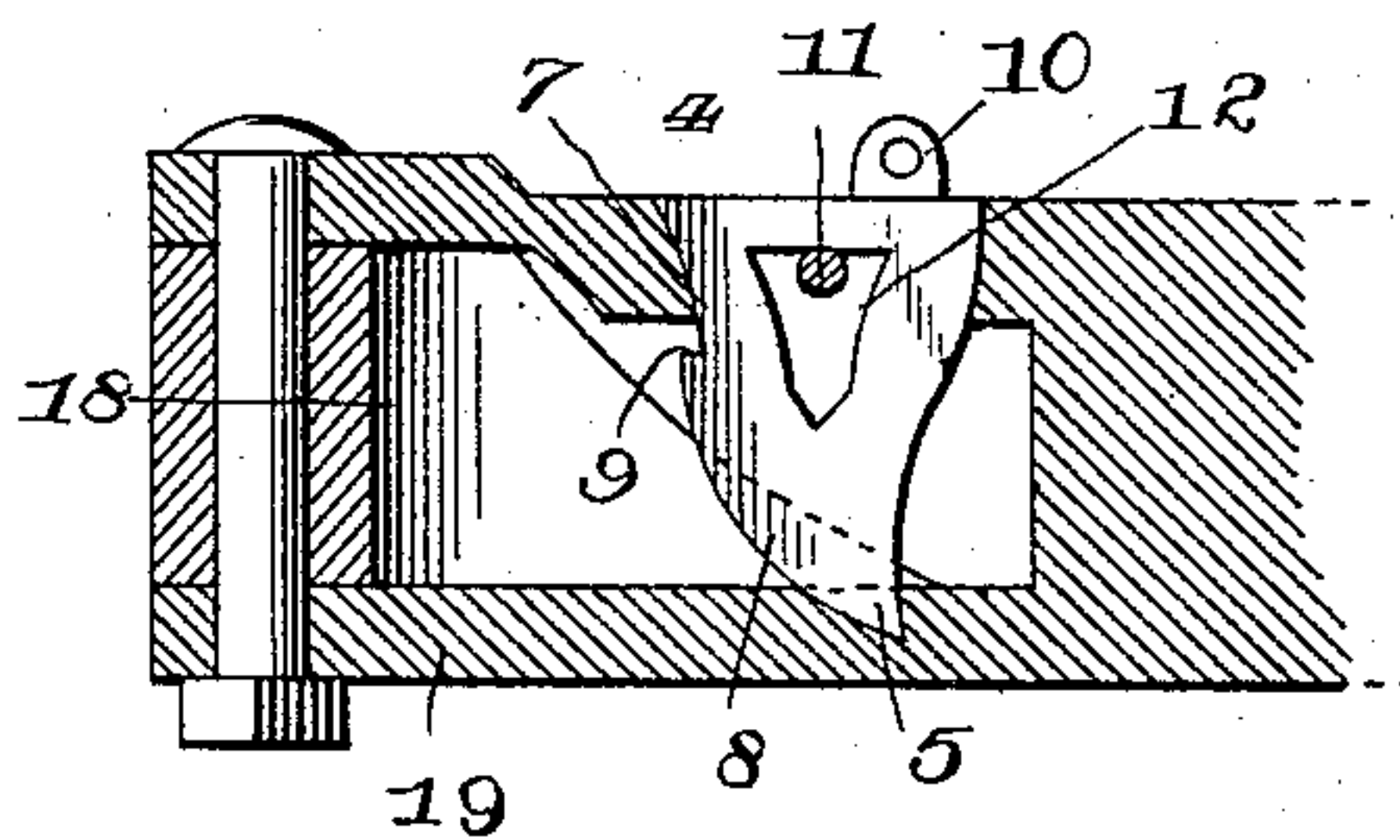
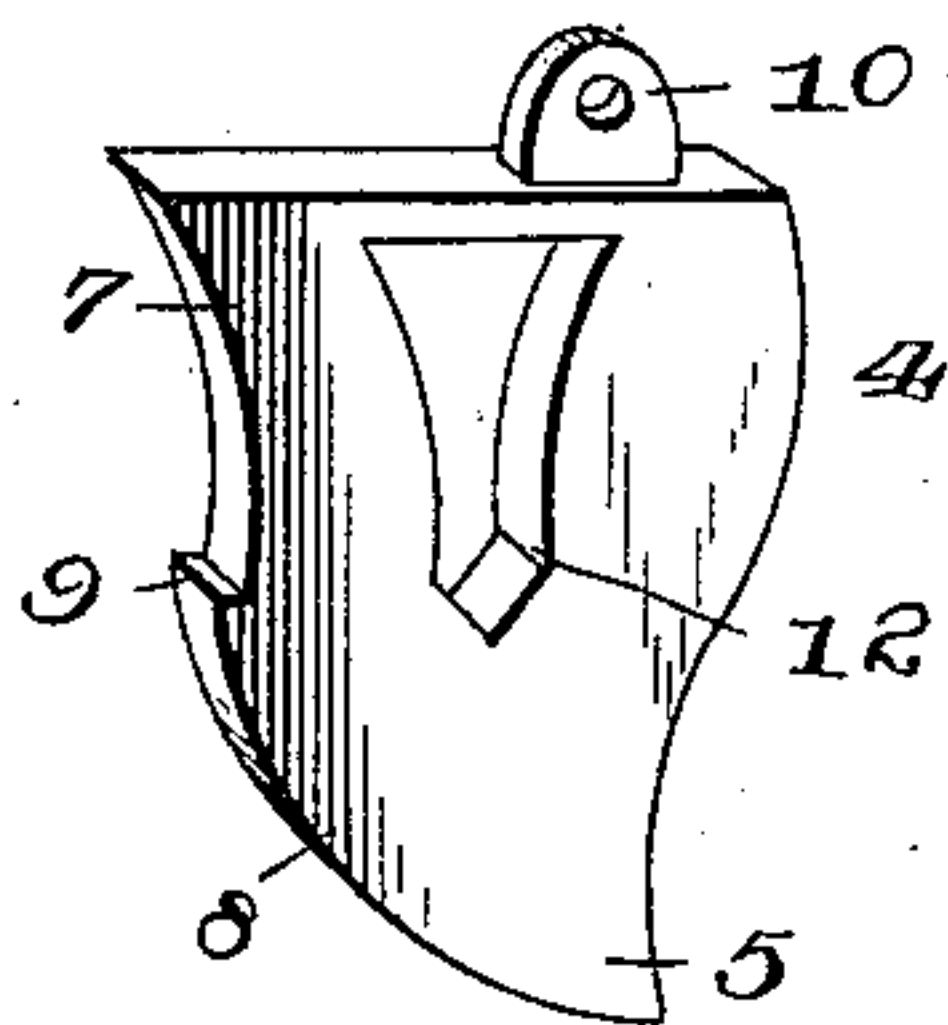


Fig. 4.



Inventor

George A. Norcross,

Witnesses

C. A. Ford
J. H. Wiley

By his Attorneys.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

GEORGE A. NORCROSS, OF SAN ANTONIO, TEXAS, ASSIGNOR OF SEVENTWELFTHS TO W. E. SANDERS AND J. O. SULLIVAN, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 529, C45, dated November 13, 1894.

Application filed April 27, 1894. Serial No. 509,269. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. NORCROSS, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car couplings.

The object of the present invention is to improve the construction of car couplings, and to provide a simple and inexpensive one capable of coupling automatically and adapted to hold a link in horizontal position to obviate the necessity of guiding the same by hand.

A further object of the invention is to provide one in which the operation of uncoupling may readily be performed without going between cars.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings: Figure 1 is a longitudinal sectional view of a car coupling constructed in accordance with this invention. Fig. 2 is a perspective view, partly in section, showing the invention applied to another form of draw-head. Fig. 3 is a longitudinal sectional view of the same. Fig. 4 is a detail perspective view of the catch.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a draw-head, having a longitudinal link-opening 2, and provided at its top with a vertical slot 3, communicating with the link-opening 2, and receiving a vertically-movable catch 4, adapted to engage and confine a link for coupling similar to the ordinary coupling-pin. The catch tapers generally toward its lower end 5, which is pointed and normally rests in a recess or cavity 6 of the bottom of the draw-head in order to support the catch at that point. The front edge of the catch has its upper portion 7 concavely-curved and its lower portion 8 convexly curved, and has an intermediate shoulder 9 located slightly below the upper portion of the draw-head when the catch is in its normal position, and adapted

to engage the draw-head to prevent the catch from being forced upward by the link, which might be liable during the passage over a rough or bad road. The shoulder 9 of the catch is disposed horizontally, and the lower face of the top of the draw-head, directly in advance of the slot, is horizontal, to be engaged by the square shoulder 9, to form an absolute lock against upward movement. If the link jerks upon the catch, or tends to force the latter upward, the front shoulder 9 will come in contact with the draw-head and prevent any further upward movement, and as soon as this tendency ceases the catch will drop backward to its normal position.

The rear edge of the catch has its upper portion convexly curved and its lower portion concavely curved, and the top of the catch is provided with a perforated lug 10, which may be connected with any suitable means for enabling the catch to be lifted from the top and sides or platform of a car to effect the operation of uncoupling.

In order to prevent the catch from being thrown out of the draw-head during the operation of uncoupling, its vertical movement is limited by a transverse pin or bolt 11, which passes through the draw-head and which is arranged in a vertical opening 12 of the catch. This opening tapers slightly toward its lower end, the upper end being slightly enlarged, and prevents any liability of the catch being accidentally jerked out of the draw-head.

In order to hold the link in a horizontal position for guiding it into the mouth of a draw-head, to obviate the necessity of guiding the link by hand, a sliding weight 13 is mounted in the draw-head in rear of the catch; it is provided with a longitudinal slot 14, and its movement is limited by a transverse pin or bolt 15, which prevents the weight from becoming displaced when the catch is raised and a link is not in the draw-head. The sliding weight is located in an inclined recess or way 16, of the draw-head. It is introduced therein through the mouth of the draw-head; and its front end contacts, at the top, with the catch, and is concavely curved at the lower portion at 17, to conform to the configuration of the link and to prevent an

upward movement of the inner end of the link, whereby the latter is maintained in a horizontal position. The rearwardly sliding weight by being normally in contact with the catch, holds the horizontal shoulder thereof in engagement with the horizontal lower face of the upper portion of the draw-head.

The catch 4 is adapted to be applied to different kinds of draw-heads, and in Figs. 2 and 3 it is shown applied to one of the Janney type, and it is adapted for locking a knuckle 18, which is pivotally mounted in the draw-head 19 in the usual manner. In this form of draw-head the catch operates in substantially the same manner as that before described, it being of course understood that the arm of the knuckle engages its beveled front lower portion to lift it for coupling, instead of a link, as in the form before described. The lower convexly-curved portion 8 forms the bevel, which enables the catch to be readily lifted by either a link or the arm of a knuckle.

It will be seen that the car coupling is exceedingly simple and inexpensive in construction, that it is automatic in its operation, and positive and reliable, and that the vertically-movable catch, which subserves the purposes of a coupling-pin, may be applied to different kinds of draw-heads.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a car coupling, the combination of a draw-head having in its bottom a recess and provided at its top with a slot, and having the lower face of its top directly in advance of the slot horizontally disposed, a vertically movable catch located in the slot of the draw-head and tapering toward its lower end and

fitting in said recess, and provided at its front with a horizontally disposed shoulder, engaging the horizontal lower face of the top of the draw-head in advance of the slot, and means for limiting the upward movement of the catch, substantially as described.

2. In a car coupling, the combination of a draw-head provided in its top with a slot and having a recess in its bottom, a downwardly-tapering vertically-movable catch arranged in said slot and provided at its front edge with a horizontally disposed shoulder arranged to engage the top of the draw-head, said catch being provided with a vertical opening, a transverse pin or bolt passing through the opening and limiting the upward movement of the catch, an inclined sliding weight mounted in the draw-head and arranged at the back or in rear of the catch and bearing against the same and provided with a longitudinal slot and adapted to engage a link, and a fastening device passing through the slot of the weight and limiting its movement, substantially as described.

3. In a car coupling, the combination of a draw-head, provided in its top with a slot, a vertically movable catch arranged in the slot of the draw head, and provided at its front edge with a horizontal shoulder engaging the lower face of the top of the draw head, and a rearwardly sliding weight arranged at the back of the catch and engaging the same, whereby the shoulder is held in engagement with the draw-head, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE A. NORCROSS.

Witnesses:

BERNHARDT WALL, Jr.,
CHRI EVERO.