

(No Model.)

T. M. GALLAGHER.
CAR COUPLING.

No. 538,581.

Patented Apr. 30, 1895.

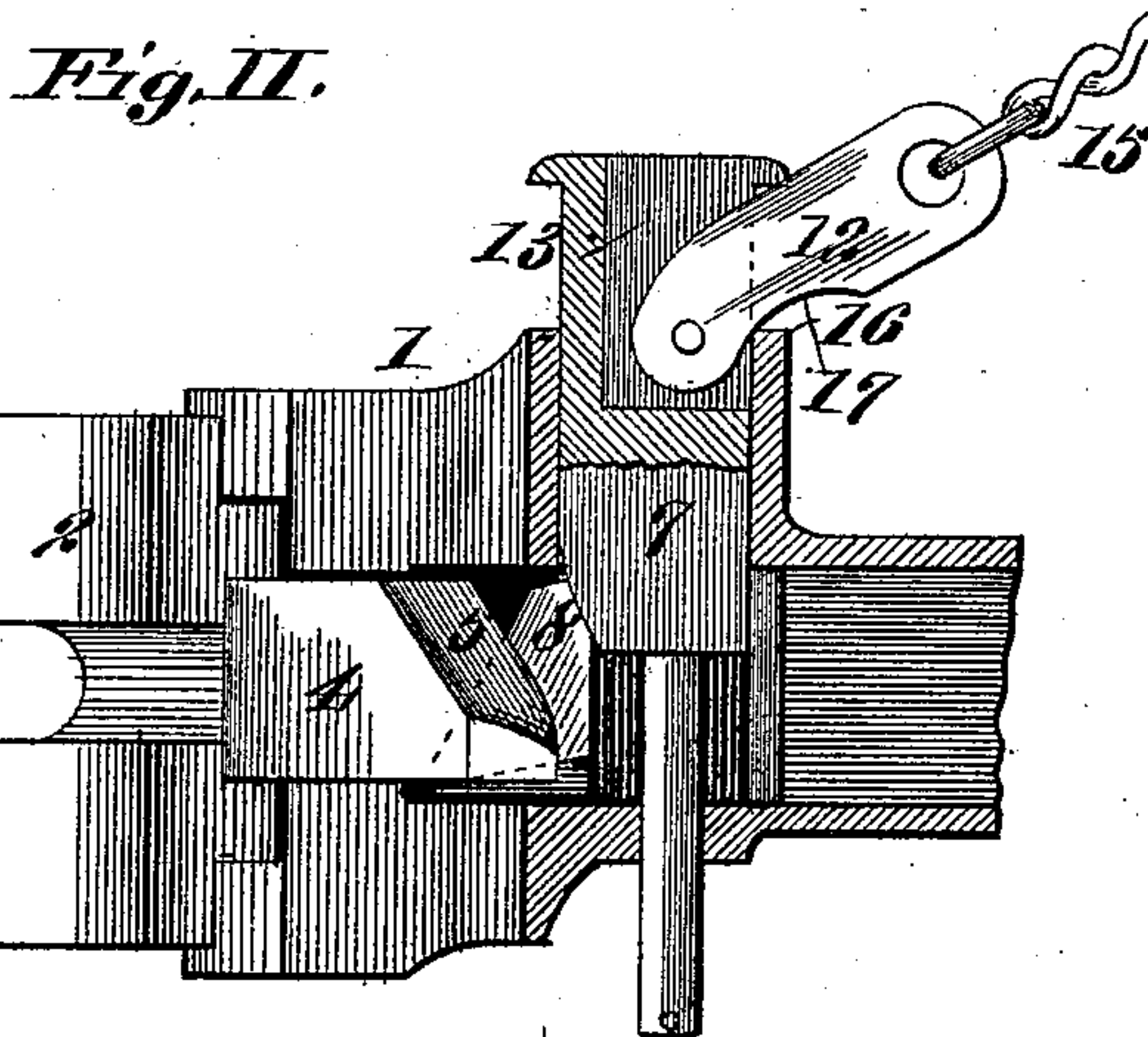
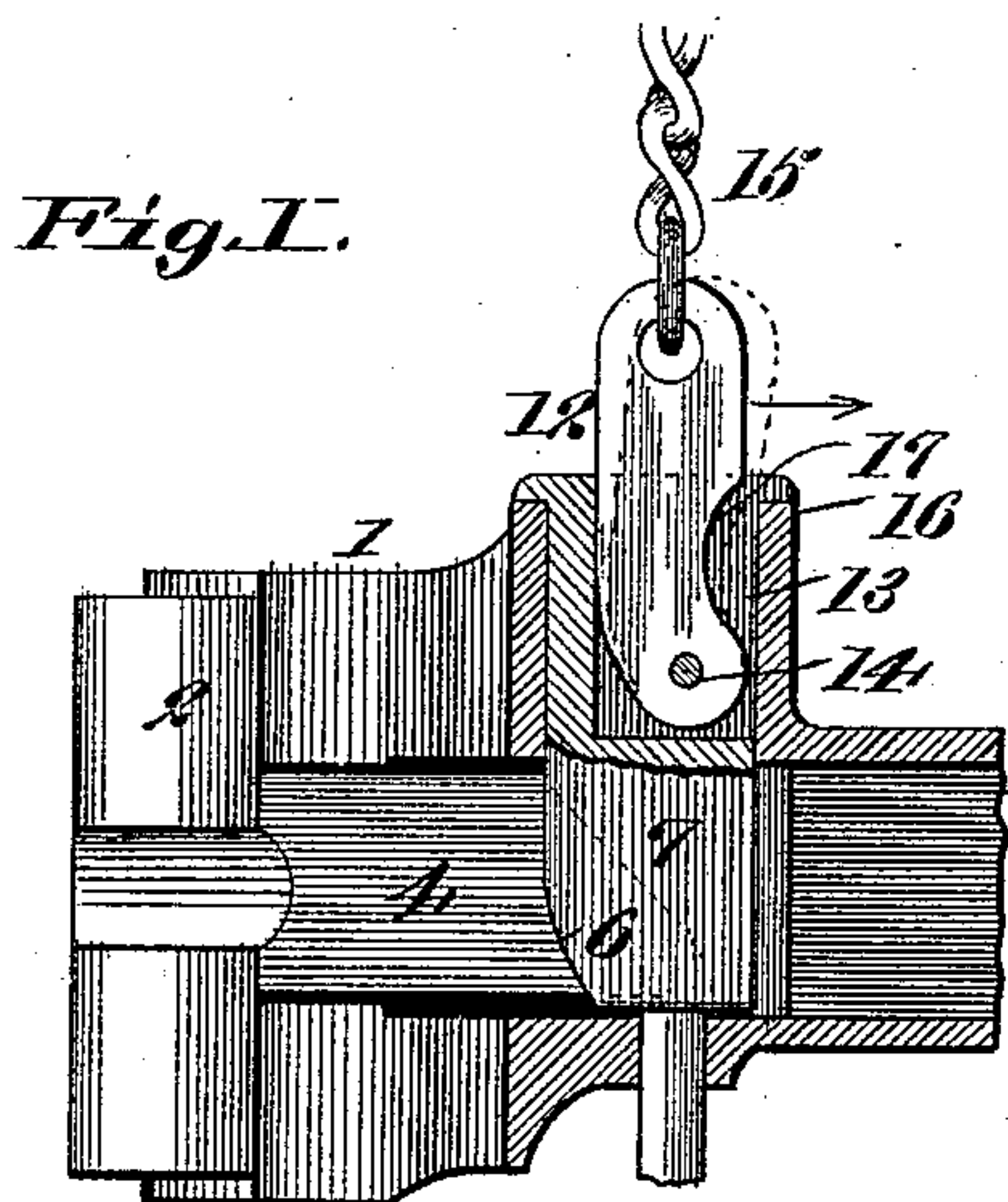


Fig. III.

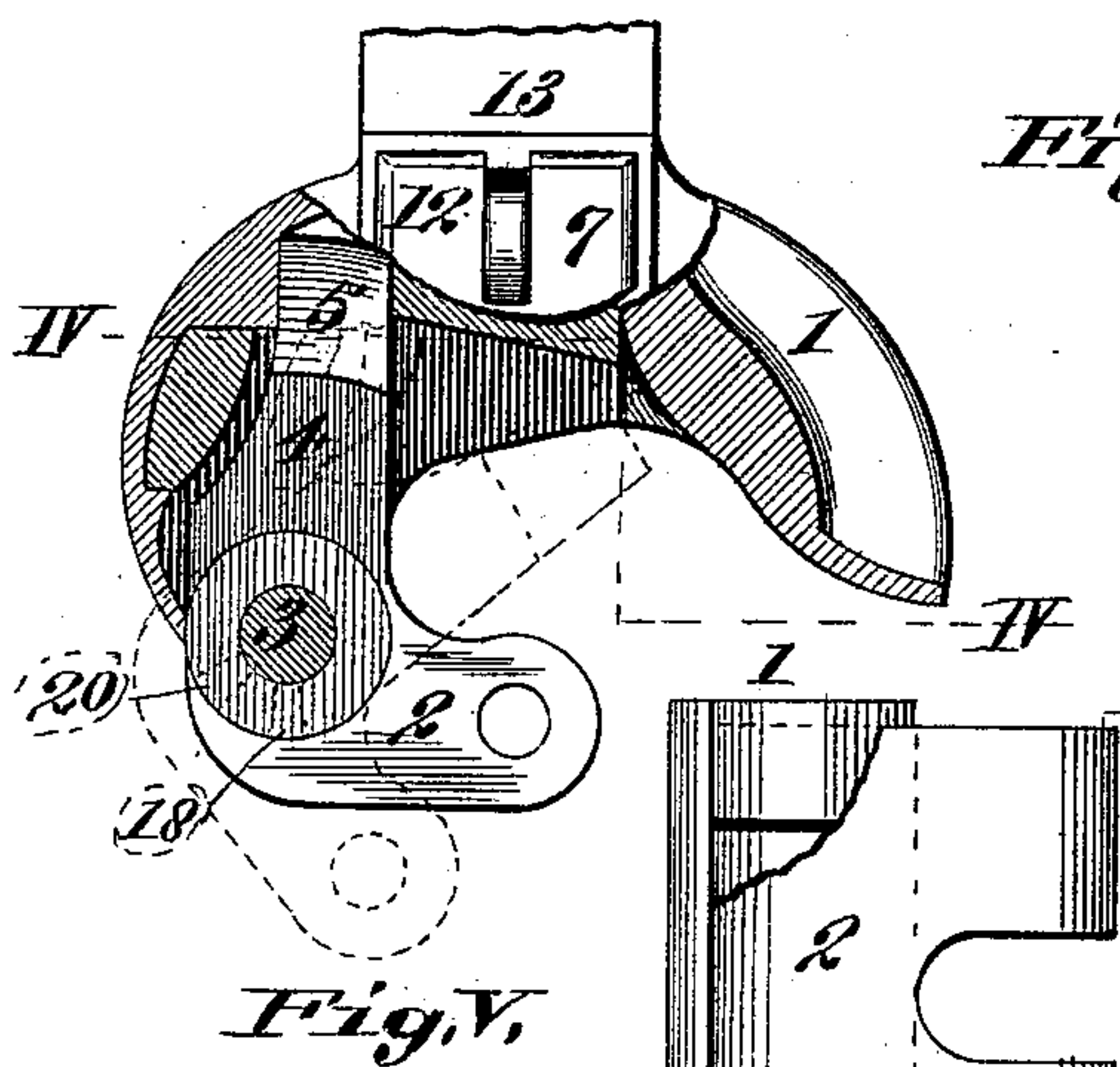


Fig. IV.

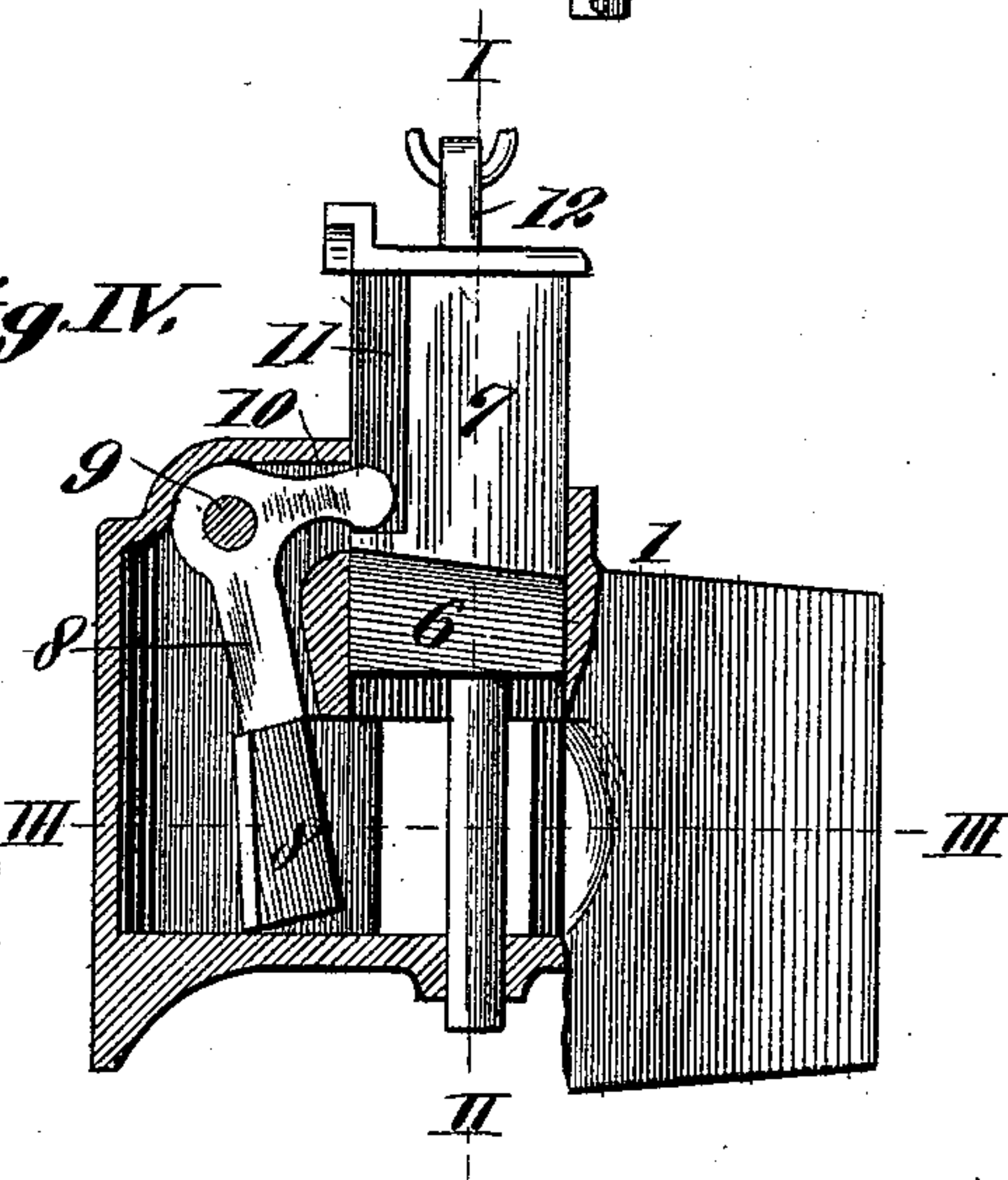


Fig. V.

Attest: 20

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UNITED STATES PATENT OFFICE.

THOMAS M. GALLAGHER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE SHICKLE, HARRISON & HOWARD IRON COMPANY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 538,581, dated April 30, 1895.

Application filed February 11, 1895. Serial No. 538,027. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. GALLAGHER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Couplers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a means whereby the coupler is automatically uncoupled when the draw bar is pulled or broken from its attachment with the car, the arrangement being such that when the draw bar breaks loose from its attachment and moves endwise relatively to the car body, the coupler will be automatically released, so that the cars will be uncoupled, while the draw bar is still supported in its guides although its draft attachment with the car has been severed, the result being that in case the draw bar pulls loose from its anchor, it will not be caused to fall upon the track, where there is danger of its causing derailment of the cars.

My invention further relates to a means for keeping the knuckles of car couplers from closing, after they are opened, until the cars come together again, or until they are closed by force.

My invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figures I and II are detail vertical longitudinal sections taken on line I II, Fig. IV, and illustrating my invention, Fig. I showing the knuckle closed and Fig. II showing it open and the locking-block raised. Fig. III is a detail horizontal section taken on line III III, Fig. IV. Fig. IV is a detail horizontal section taken on line IV IV, Fig. III, with the knuckle removed. Fig. V is a detail end view, part broken away.

The general construction of the coupler I have shown is the same as that set forth in the application of John M. Harrison, filed January 28, 1895, Serial No. 536,427; 1 representing the draw head, and 2 the knuckle pivoted to the draw head at 3 and having an inner arm 4 provided with an incline 5 that engages,

when the knuckle is moved to coupled position, an incline 6 on the lower end of a locking block 7.

8 represents the lever for opening the knuckle when the locking block is raised, this lever being pivoted to the draw head at 9 and having an end 10 that fits in a groove 11 of the locking block. When the knuckle is in its closed position and the locking block is in its lower position, the former is held by the latter, as shown in Fig. III. These features form no part of my present invention, and my present invention is susceptible of being applied to any car coupler of the Janney type, in which the knuckle is held in its closed position by a locking block or pin, the upward movement of which causes the release of the knuckle.

My invention consists in securing a link or bar 12 to the locking block, the block being recessed at 13 to receive the lower end of the link, and the link being pivoted to the block at 14. 15 represents the chain by which the locking block is moved vertically to release the knuckle when the cars are to be uncoupled. This chain is made fast at its lower end to the upper end of the link 12, and the chain is made fast at its upper end to the car body, preferably by being attached to a rock shaft that extends to the side of the car, and is provided with a crank by which the shaft may be turned to wind the chain thereon and lift the block. This rock shaft is common and is not shown in the drawings.

It will be observed that if the link 12 is moved in the direction of the arrow, Fig. I, it will come against the wall 16 of the draw bar and will cause the locking block to be raised, and to increase the lifting action of the link upon the locking block as the former is brought against the wall 16, I form a concave cut 17 in the link where it bears against the wall 16, so that the link has a better leverage to lift the block. The link 12 will be thus brought against the wall 16 of the draw bar in case the bar should break loose from its draft attachment with the car body and move endwise relatively to the car body, the link

being thus moved by virtue of the fact that it is connected to the car body by means of the chain 15. It will thus be seen that should the draft attachment between the draw bar and the car be severed, that the locking block will be automatically raised and the knuckle released so that the cars will be uncoupled while the draw bar is still in its guides, or even should the draw bar move a sufficient distance to be carried away from its guides before the locking block is raised sufficiently to uncouple the cars, the draw bar will not fall to the track, but will be supported by the chain 15, and thus is avoided danger of the derailment of cars by the draw bar falling upon the track.

I have shown the link 12 as extending some distance above the block 7, but it may be shortened up so as to extend but slightly, if any, above the upper end of the block, and thus is avoided danger of its being struck by some overhanging object on an adjacent car. It is desirable that this class of knuckles remain open until the cars come together again to be coupled, or until the couplers are closed intentionally by force, and as a means for thus keeping the knuckles open and holding them from jarring closed or partly closed, I form upon the lower face of the journaled portion of the knuckle a projection 18, which, when the knuckle is closed, and while it is opening and closing, rides upon the face 19 of the head of the draw bar, and when the knuckle is fully opened, this projection enters a depression or recess 20 in the head of the draw bar, and thus holds the knuckle from jarring out of an open position. The forward face of the projection 18, or the forward face of the recess 20, or both, is inclined so that when pressure is brought to bear upon the knuckle, the projection will ride up on the

face 19 of the head of the draw bar, the knuckle rising slightly in its support.

I claim as my invention—

1. In a car coupler, the combination of a knuckle, a locking block, provided with a recess, a link secured to the locking block, within the recess, and means for attaching the link to the car body, whereby the locking block will be raised when the draw bar is broken or unanchored, substantially as set forth.

2. In a car coupler, the combination of a knuckle, a locking block provided with a recess and adapted to hold the knuckle in its closed position, a link pivoted to the locking block within the recess, and means for connecting the link to the car body, whereby the locking block will be raised when the draw bar is broken or unanchored, substantially as set forth.

3. In a car coupler, the combination of a knuckle, a locking block for holding the knuckle in its closed position and having a recess formed therein, a link pivoted within the recess of the locking block and pivoted thereto, and means for connecting the link to the car body, whereby the link is thrown against the wall 16 of the draw bar when the latter is broken or unanchored, substantially as set forth.

4. In a car coupler, the combination of a knuckle, a locking block for holding the knuckle in its closed position and which is provided with a recess, a link pivoted in the recess of the block and having a concave cut-away portion 17, and means for connecting the link to the car body, substantially as and for the purpose set forth.

THOMAS M. GALLAGHER.

In presence of—

GEO. H. KNIGHT,
W. FINLEY.