

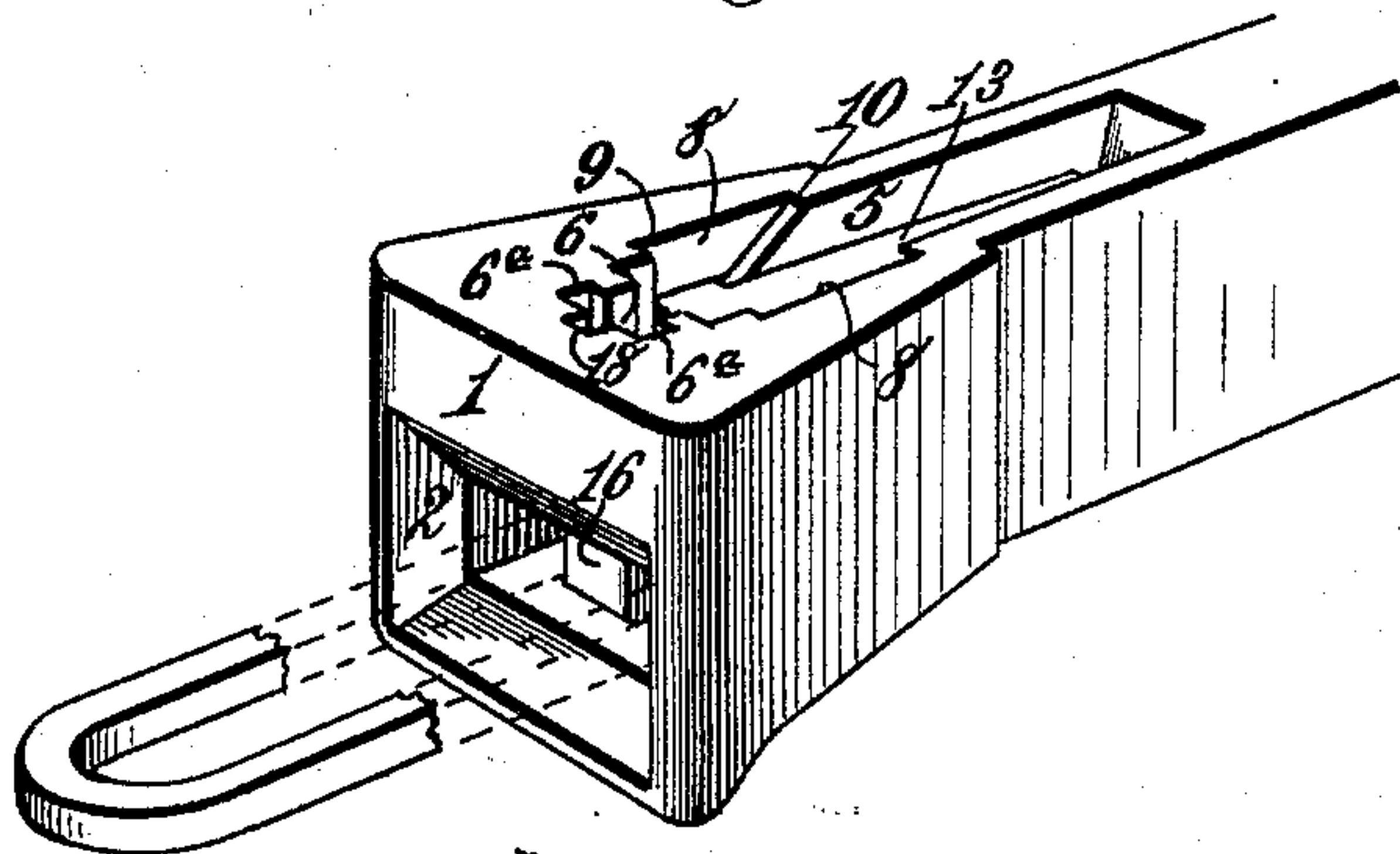
(No Model.)

H. SCHAEFFER.  
CAR COUPLING.

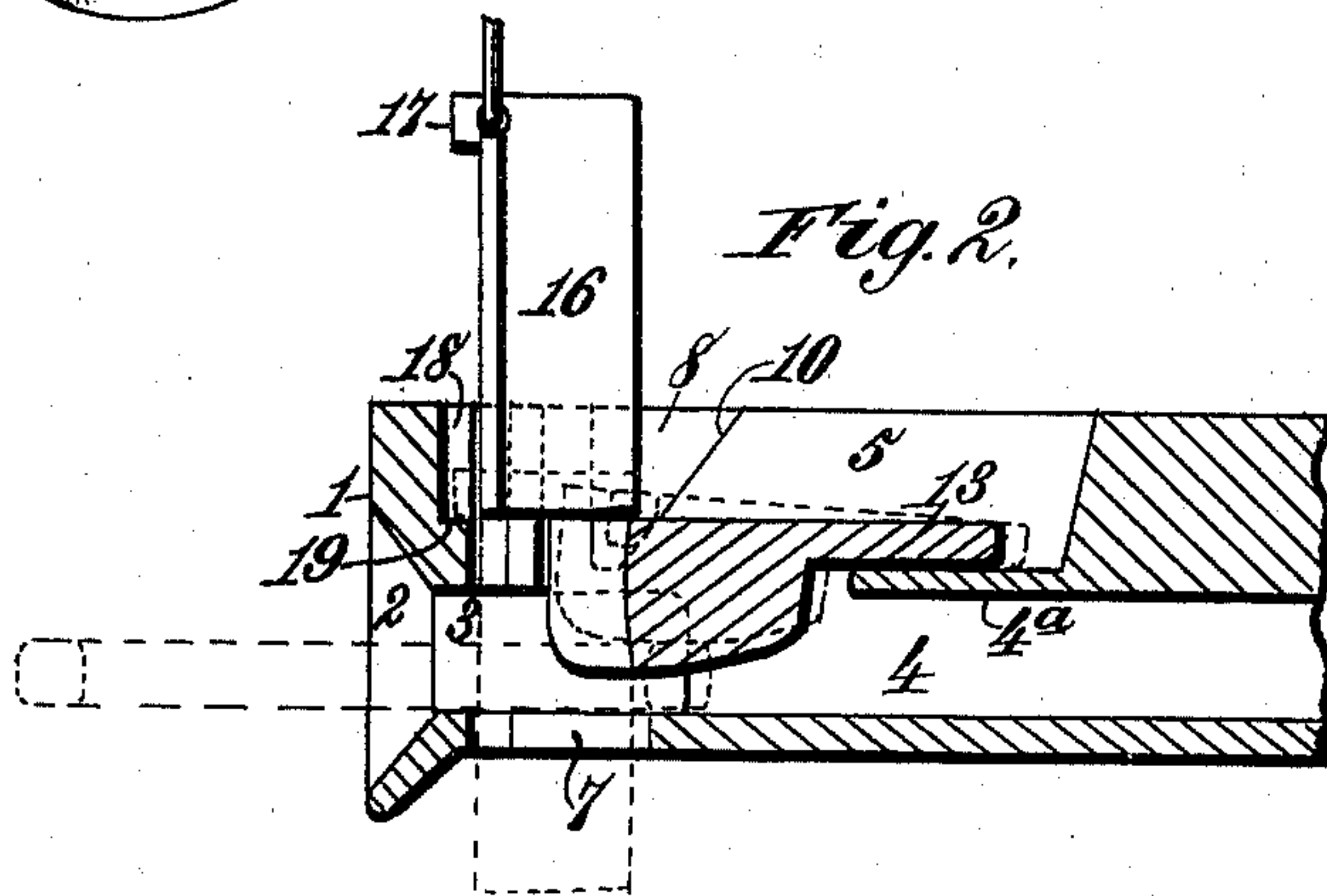
No. 567,866.

Patented Sept. 15, 1896.

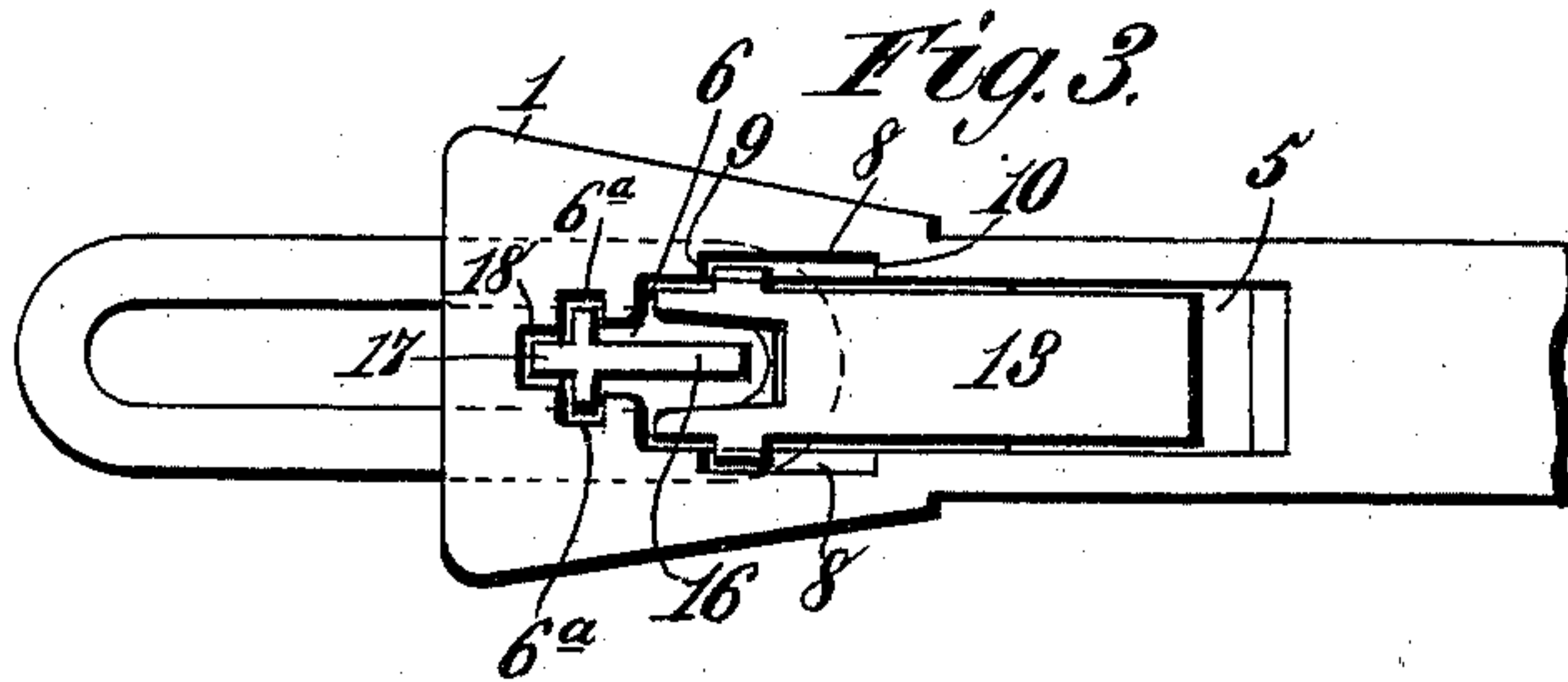
*Fig. 1.*



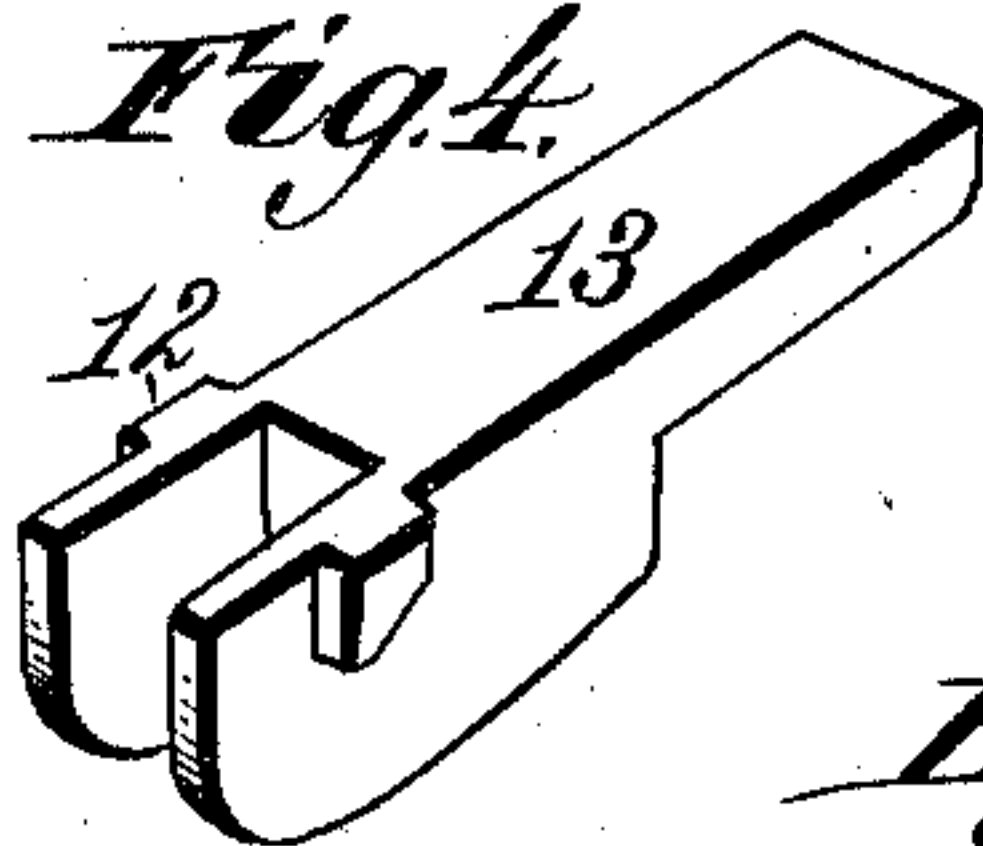
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses.*  
*Robert Connett.*  
*Geo. M. Rea.*

*Inventor.*  
*Henry Schaeffer.*  
*By James L. Norris.*  
*Atty.*



# UNITED STATES PATENT OFFICE.

HENRY SCHAEFFER, OF FARMINGTON, IOWA, ASSIGNOR OF ONE-THIRD TO  
NEWTON J. HEADDING AND CHARLES B. HEADDING, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 567,866, dated September 15, 1896.

Application filed March 20, 1896. Serial No. 584,155. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY SCHAEFFER, a citizen of the United States, residing at Farmington, in the county of Van Buren and State of Iowa, have invented new and useful Improvements in Car-Couplers, of which the following is a specification.

My invention relates to car-couplers, my purpose being to provide a simple, inexpensive, and reliable coupling which shall be automatic in its action and divested of all complication of form or arrangement, which produce a great liability to uncertainty in operation, besides largely increasing the expense and the dead-weight to be carried by the car.

It is one purpose of my invention, also, to provide a car-coupler which shall consist of the minimum number of parts, each having the utmost simplicity of form and operation, and one which shall require no springs to produce its automatic action.

The invention also comprises features of novelty which will be fully explained hereinafter, and then particularly pointed out and defined in the claim which concludes this specification.

To enable others to clearly understand and to make and use my said invention, I will here describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a coupler in which my invention is incorporated. Fig. 2 is a central vertical section taken in the longitudinal line of the coupler. Fig. 3 is a plan view of the parts shown in Fig. 1. Fig. 4 is a perspective view of the pin-supporting head.

The reference-numeral 1 in said drawings indicates the draw-head, which may be mounted upon the car in substantially the same manner as usual, its general shape and dimensions remaining substantially the same as heretofore. It is provided with the ordinary flaring opening 2 in its end for the entrance of the link, said opening giving passage into a link-receiving chamber 3, which extends back into the draw-head a distance about equal to half the length of the link. From its inner end a somewhat narrower open-

ing 4 runs entirely through the draw-head to its rear end.

Opening through the top of the draw-head is a longitudinal chamber 5, which is of substantially the same width as the opening 4, with which it communicates, as far back as about half-way between the middle and the rear end of the draw-head, and in the opposite direction about half the length of the link-receiving chamber 3. The rearward portion of this chamber 5 is separated from the continuous opening 4 by a partition 4<sup>a</sup>, which is horizontal or parallel with the axis of the draw-head, or nearly so. At the forward end of the draw-head is a pin-opening 6, of cruciform shape, which extends vertically into the link-receiving chamber 3. A T-shaped opening 7 in the lower wall of said chamber permits the passage of the lower end of the pin when it engages the coupling-link.

In the opposite vertical walls or sides of the chamber 5 are formed shallow recesses 8, having vertical or nearly vertical front edges 9 and rearwardly and upwardly inclined rearward edges or shoulders 10, which closely approach the vertical shoulders 9 at their lower ends, leaving narrow openings into the link-receiving chamber 3. These recesses 8 receive lateral ears or projections 12 upon the pin-supporting head. This head consists of an elongated bar 13, having a bifurcated forward end which is considerably thicker from top to bottom than the rearward end. When in place in the draw-head, the weight of the head draws the ears 12 to the lowest point upon the inclined shoulders 10, thereby drawing the rearward end forward upon the partition 4<sup>a</sup> and causing the forward bifurcated ends to abut against the shoulders 9. In this position the length of the pin-opening from front to rear is slightly less than the width of the pin, which consists of a flat bar 16, having lateral ribs at its forward edge, which extend the full length of the pin and enter the lateral channels 6<sup>a</sup> of the pin-opening 6. Having entered the latter part way, the rearward lower angle of the pin catches a bearing upon the pin-supporting head 13, just in rear of the bifurcation. The end of the coupling-link, as it enters the draw-head,



pushes the pin-supporting head backward slightly and upward, its projections 12 riding up upon the inclined shoulders 10 and its rearward end sliding horizontally upon the partition 4<sup>a</sup>. The pin then drops by gravity between the two parts of the bifurcated end and passes through the link and through the opening 8 in the lower wall of the link-chamber, its passage being arrested at the proper point by a lug 17 on the pin, which moves in a channel 18 until it reaches a shoulder 19, which arrests it. It will be seen that I employ any ordinary link, and that the automatic coupling action is rendered practically certain by supporting the rearward end of the head 13 upon the horizontal partition 4<sup>a</sup>, in contradistinction to throwing the entire support upon the inclined shoulders 10, which would be apt to cause the head to bind or stick should the parts become worn. By the compound movement, however, secured by giving the rearward end of the head a rearward horizontal movement and the forward end a rearward and upward movement, I not only prevent such binding, but I practically avoid wearing away of the parts in

contact and greatly increase the ease with which the head is moved. The head 13 also supports the link, so that it may be caused to enter an opposite draw-head.

What I claim is—

In a car-coupling a draw-head having a vertical pin-opening provided with a channel terminating in a shoulder, a pin having a lug to move in said channel and rest on said shoulder when the link is engaged, and an elongated pin-supporting head, having its forward, bifurcated end heavier than the rear end and provided with lateral ears to lie in recesses in the side walls of a chamber in the draw-head, and to move upon rearwardly and upwardly inclined shoulders, while the rearward end of the head lies and is movable upon a horizontal support, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HENRY SCHAEFFER.

Witnesses:

G. E. E. TOWNSEND,  
A. H. MOORE.