

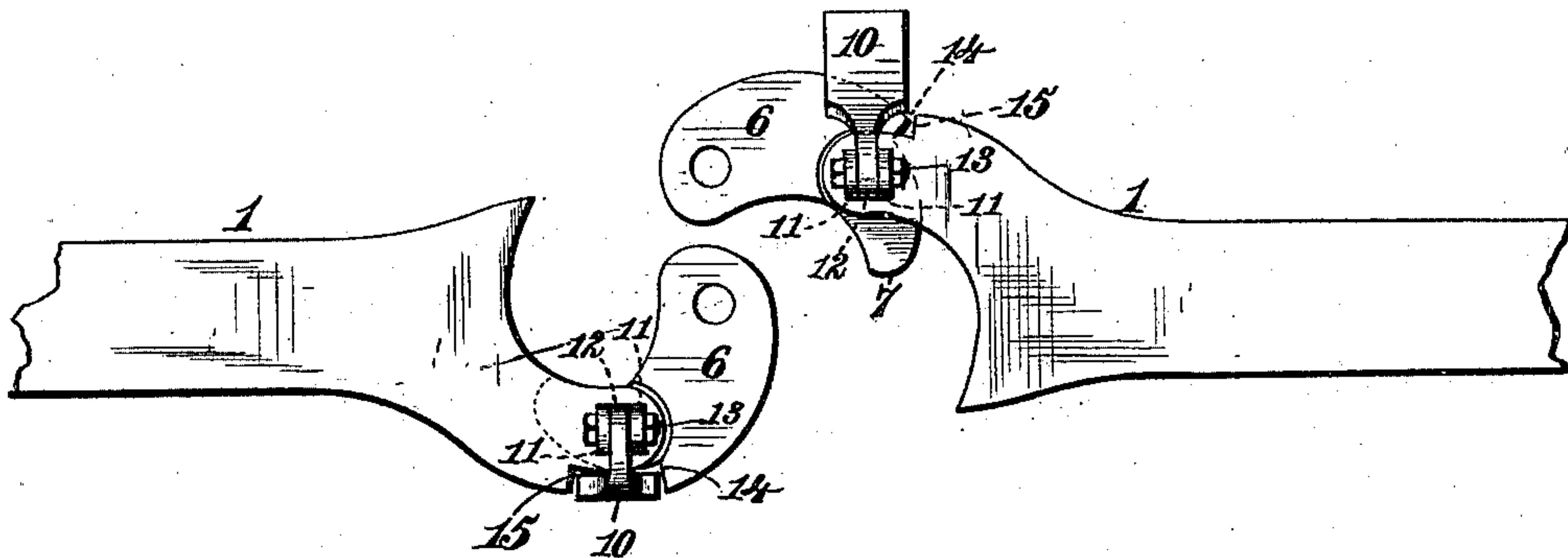
(No Model.)

M. JOO.  
CAR COUPLING.

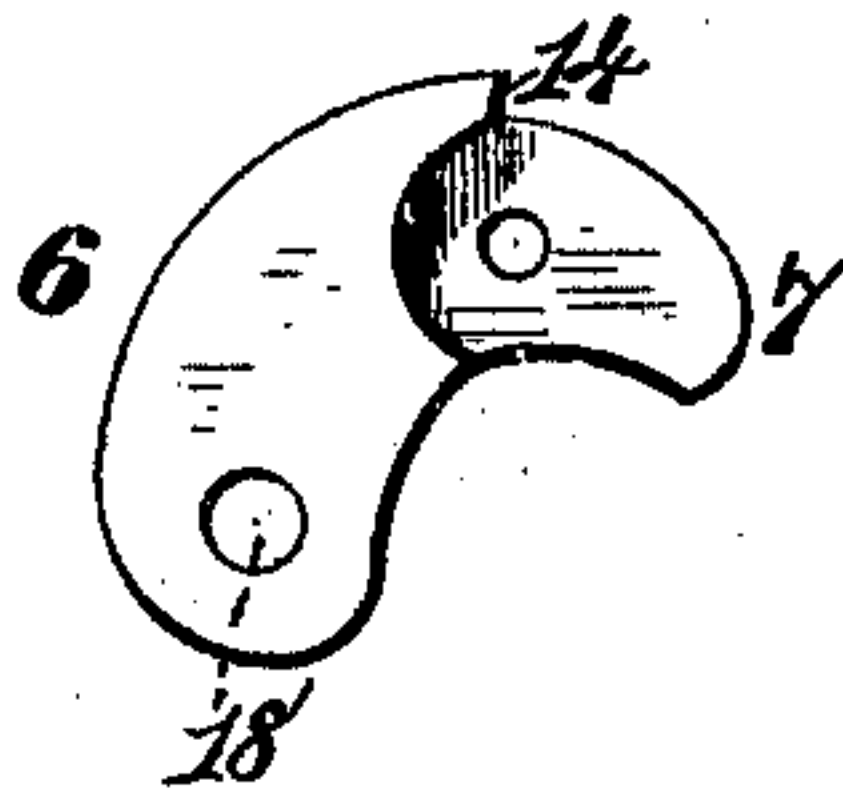
No. 312,861.

Patented Feb. 24, 1885.

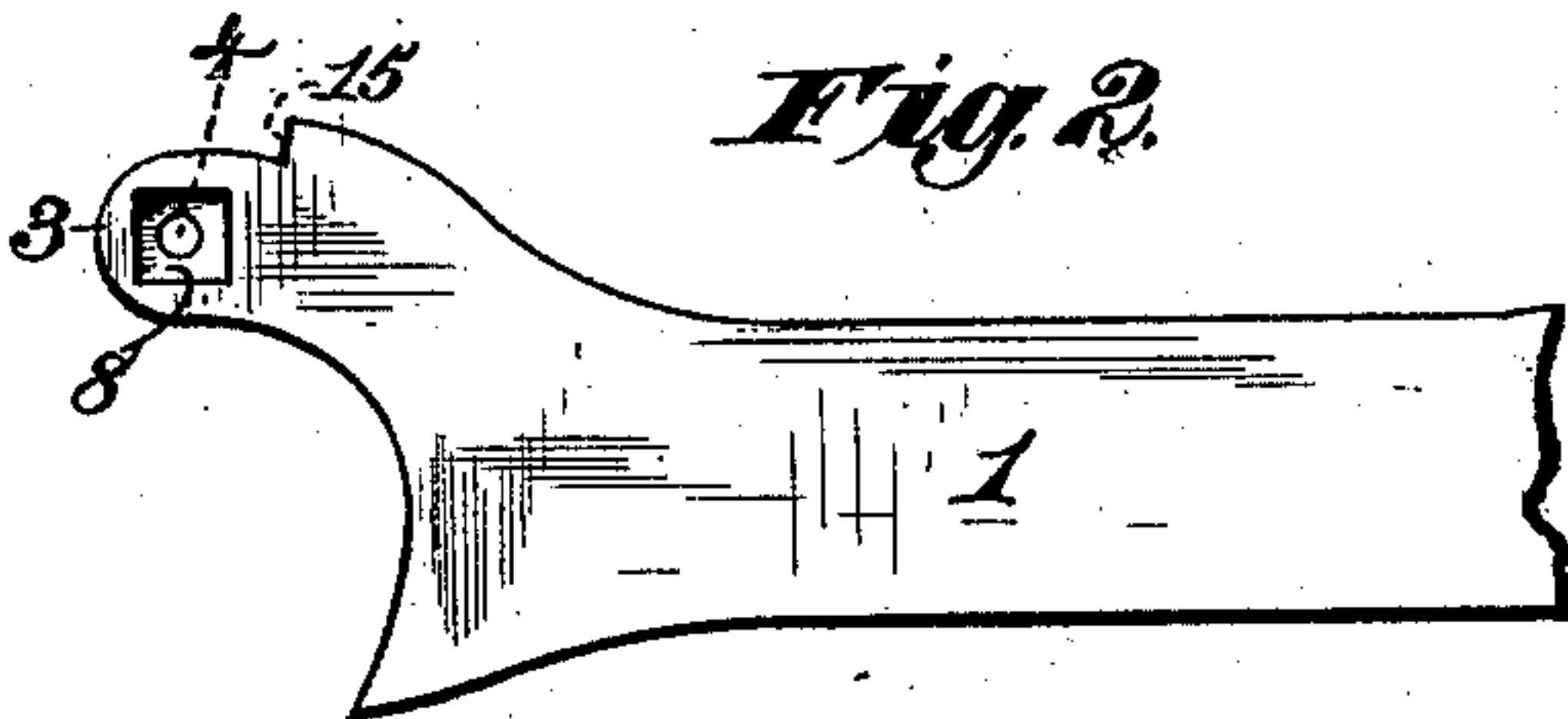
*Fig. 1.*



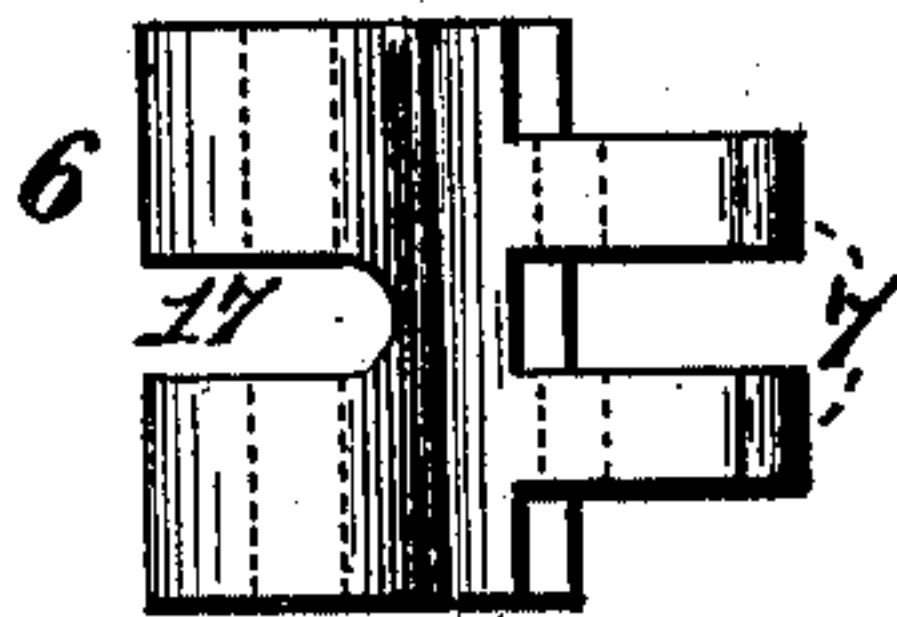
*Fig. 3.*



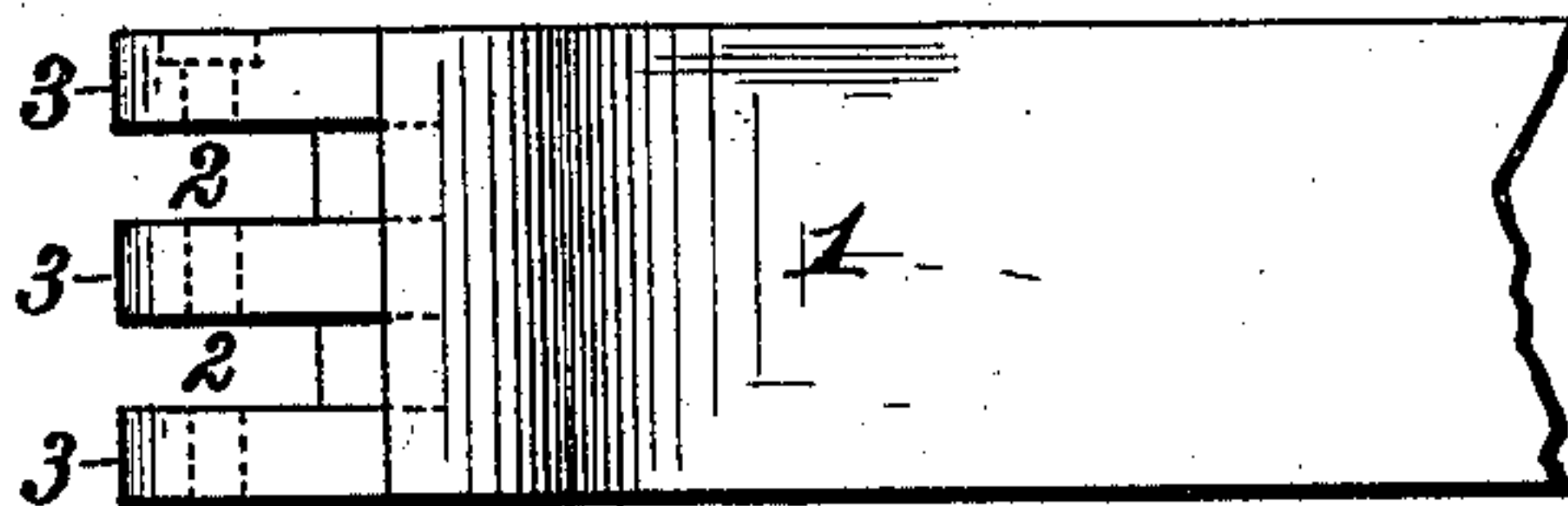
*Fig. 2.*



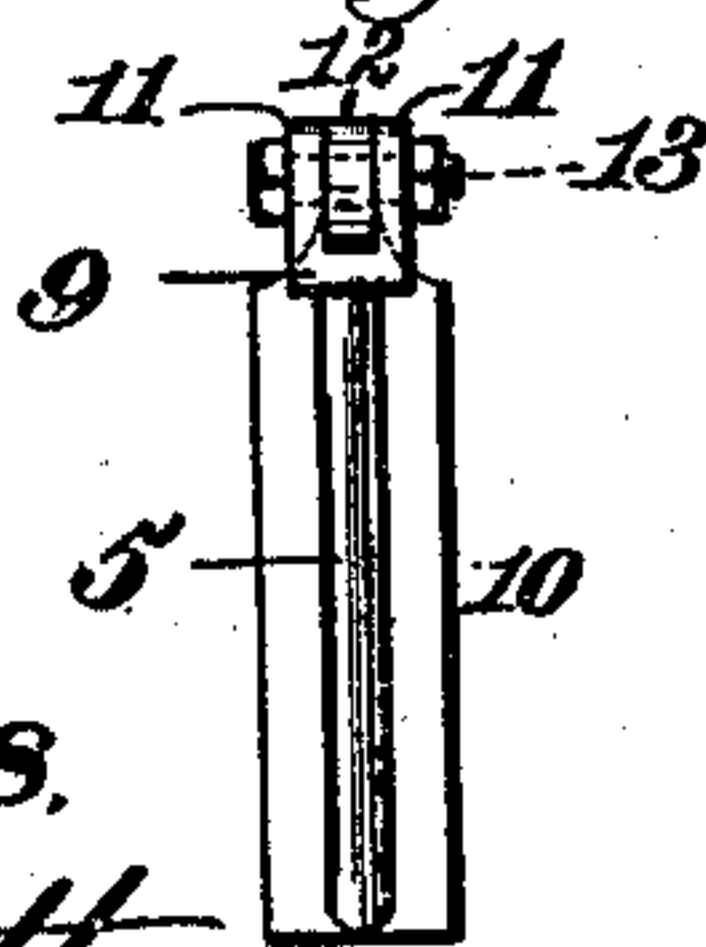
*Fig. 5.*



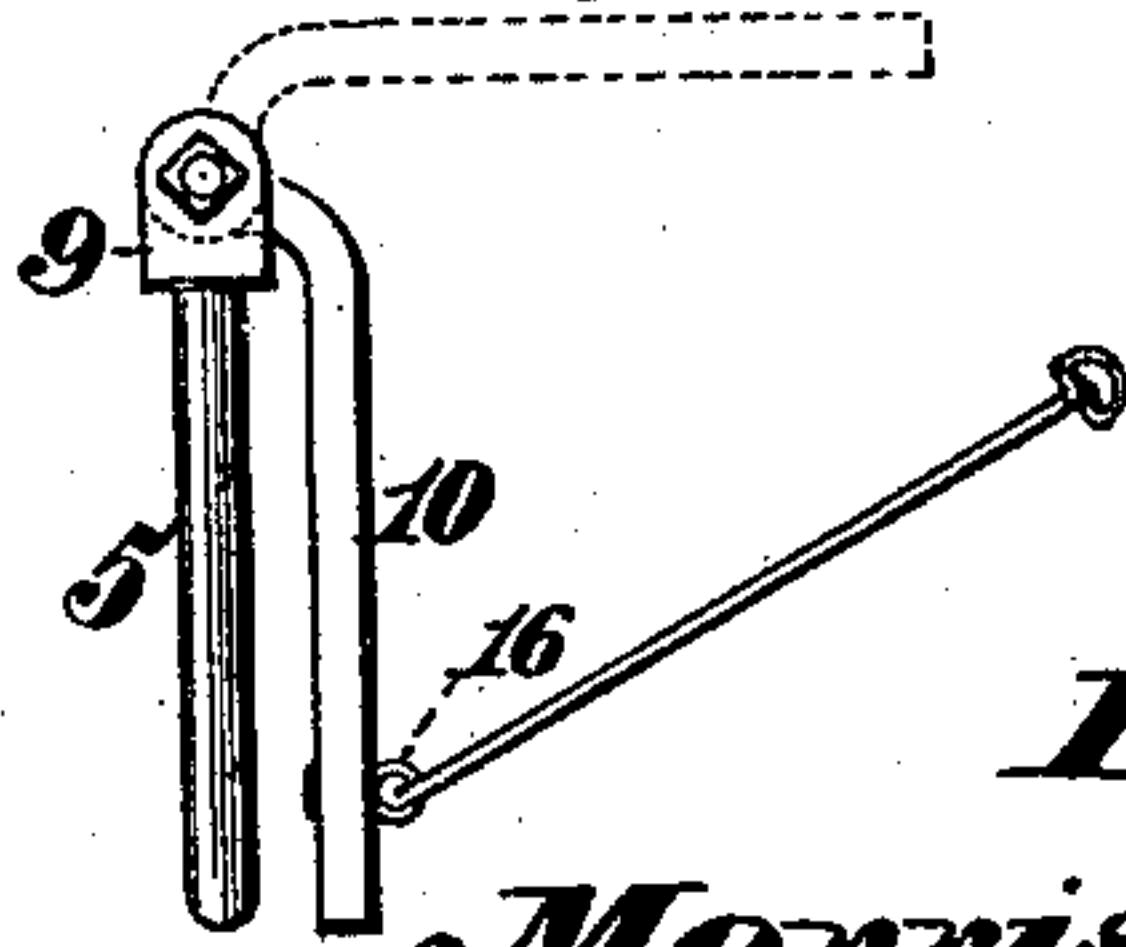
*Fig. 4.*



*Fig. 6.*



*Fig. 7.*



Witnesses.

*Robert Everett.*

*George W. Rea*

Inventor.

*Morris Joo.*

By *James L. Norris.*

*Atty.*



# UNITED STATES PATENT OFFICE.

MORRIS JOO, OF ROANOKE, VIRGINIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 312,861, dated February 24, 1885.

Application filed October 24, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, MORRIS JOO, a citizen of the United States, residing at Roanoke, Roanoke county, Virginia, have invented new and useful Improvements in Car-Couplers, of which the following is a specification.

This invention relates to improvements in that class of car-couplings wherein a draw-bar is provided with a pivoted coupling-hook having a curved arm projecting laterally in the path of a similar pivoted coupling-hook on the draw-bar of an adjacent car, so that the coupling-hook of one will strike the lateral arm of the other, and thereby move the hooks into engagement with each other. Ordinarily the coupling-hooks are locked in engagement to couple the cars by a block carried on the end of a flat spring, which block enters between shoulders formed, respectively, on the coupling-hook and the draw-bar.

The object of my invention is to improve the construction and efficiency of the devices used to lock such pivoted coupling-hooks in engagement to couple the cars; and to such end my invention consists in the mechanism hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a plan view showing the coupling-hooks upon two adjacent draw-bars arranged in position for coupling; Fig. 2, a detached plan view of a part of one of the draw-bars; Fig. 3, a detached plan view of one of the coupling-hooks; Figs. 4 and 5, side views of Figs 2 and 3, respectively; and Figs. 6 and 7 detached views of the devices for pivoting the coupling-hooks and locking the latter in engagement for coupling purposes.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, where—

The number 1 indicates a draw-bar, of any suitable construction as regards its connection with a car, and having one or more slots, 2, formed in its front end to constitute lugs 3, which are perforated, as at 4, for the passage of the pivot-pin 5 of the coupling-hook 6. The coupling-hook is provided with a tail-piece, 7, which, when in the uncoupled position, projects laterally in the path of a similar coupling-hook pivoted on the draw-bar of an adjoining

car in such manner that when the cars are brought together the coupling-hook 6 of one will strike the laterally-projecting tail-piece 7 of the other, and thereby the two hooks will be moved toward each other and caused to engage by one hooking into or interlocking with the other. The upper one of the lugs 3 on the draw-bar is countersunk around the perforation 4 therein to form an angular or square seat, 8, for receiving the angular or square head 9 of the cylindrical pivot-pin, so that while the coupling hook can turn or swing on the pin the latter is held against rotation. A locking-bar, 10, is pivoted at one end to the upper or angular head of the pivot-pin, and, as here shown, this is simply and efficiently effected by constructing the head of the pivot-pin with two ears, 11, between which a knuckle, 12, on the locking-bar is pivoted, by a transverse bolt or pin, 13, in such manner that the locking-bar will by gravity have a tendency to hang perpendicularly, so that when the two coupling-hooks are engaged or interlocked the locking-bar will automatically fall inward between two shoulders, 14 and 15, formed, respectively, on the coupling-hook and the draw-bar, thereby locking the parts in coupling engagement until such time when it is desired to uncouple the cars, when the locking-bar is swung outward, thus releasing the hooks, which will turn laterally by the draft-strain and become disengaged. For the purpose of swinging the locking-bar from between the shoulders on the coupling-hook and draw-bar, I may employ any suitable device or mechanism. As here shown, the bar is provided with a rod loosely attached thereto, as by an eyebolt, 16, and adapted to extend up to the car platform, to be manipulated by the brakeman for operating the bar.

By my invention the locking-bar moves by gravity into its locking position, and I therefore am enabled to dispense with springs; and by making the locking-bar as an attachment to the pivot-pin of the coupling-hooks the parts are simplified and rendered certain and efficient in their action. The locking-bar is angular, so as to squarely abut the shoulders on the coupling-hook and draw-bar, and the pivot-pin being held against rotation, the bar is always maintained in proper position to automatically fall between the said shoulders to



lock the hooks in coupling engagement. The coupling-hook may have a slot, 17, and a perforation, 18, in its outer end, for the purpose of being coupled to an adjacent car through the medium of the ordinary link and pin.

If desired, a spring may be arranged to act upon the coupling-hook in such manner as to throw it out of engagement with the adjacent hook immediately on the locking-bar being swung from between the shoulders on the coupling-hook and draw-bar.

Having thus described my invention, what I claim is—

1. The combination, with a draw-bar and a coupling-hook, of a pivot-pin carrying a locking-bar for locking the hook in its coupling position, substantially as described.

2. The combination, with a draw-bar and a pivoted coupling-hook, each having a shoulder, of a locking-bar pivoted at its upper end to fall by gravity between the shoulders on the hook and draw-bar, substantially as described.

3. The combination, with a draw-bar and a coupling-hook, of the pivot-pin, and the locking-bar pivoted to the upper end of the pin, substantially as described.

4. The combination, with the draw-bar having the angular seat, and the coupling-hook, of the pivot-pin having an angular head, and the locking-bar pivoted to the pin, substantially as described.

5. The combination of the draw-bar, the coupling-hook, the pivot-pin, the locking-bar pivoted to the pin, and a device connected with the bar for operating it, substantially as described.

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

MORRIS JOO.

Witnesses:

E. J. COLLINS,  
JNO. I. MUNSON.