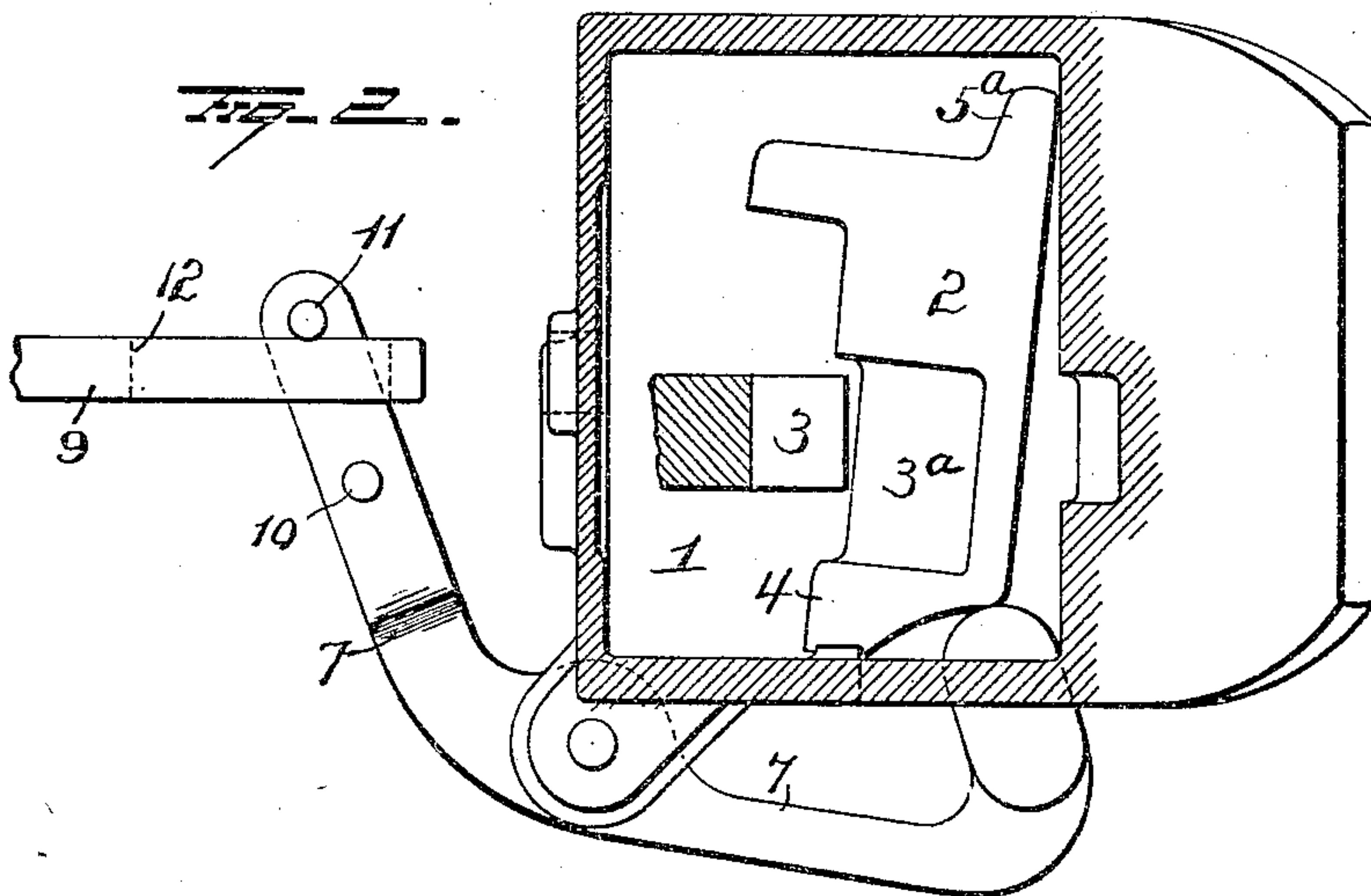


CAR COUPLING.

958,359.

2 SHEETS--SHEET 1.



E. Nottingham
G. F. Downing.

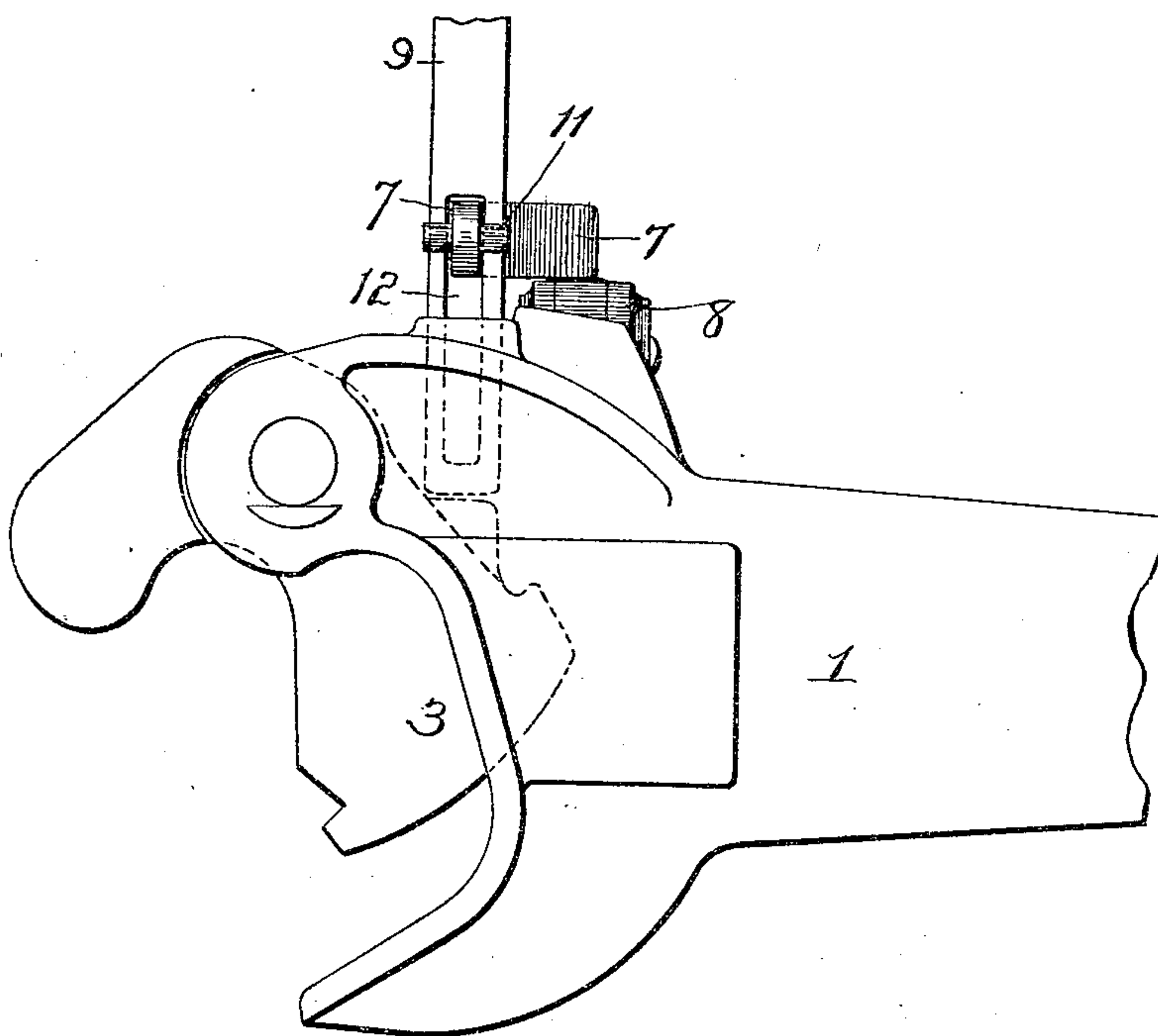
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958,359.

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CAR COUPLING.
APPLICATION FILED SEPT. 27, 1907.

Patented May 17, 1910.
2 SHEETS—SHEET 2.

Fig. 3.



WITNESSES
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SAMUEL P. BUSH, OF COLUMBUS, OHIO, ASSIGNOR TO THE BUCKEYE STEEL CASTINGS COMPANY, OF COLUMBUS, OHIO.

CAR-COUPLING.

958,359.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed September 27, 1907. Serial No. 394,911.

To all whom it may concern:

Be it known that I, SAMUEL P. BUSH, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in car couplings, the object being to provide improved means for moving the locking block or pin to an unlocking or lock set position, and for throwing the knuckle to its open position, and it consists in the parts and combination of parts as will be more fully explained and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in vertical cross section through the draw head of a coupling, showing the parts in locked position. Fig. 2 is a similar view showing the parts in lock set position, and Fig. 3 is a view in plan.

1 represents the draw head of a coupling, which constitutes the housing for the locking block 2 and the rear end or tail of the knuckle 3.

The locking block may be of any approved form, and may be retained in its elevated position, or position to release the knuckle, by any preferred means, but for the purpose of illustration I have shown and will describe the locking block disclosed in Patent 823,990 granted to me June 19th, 1906. This locking block comprises a body portion 2 with a recess 3^a near the lower end of the latter, the said recess being sufficiently large to permit the knuckle tail 3 to swing from its closed to its open position, and back again to its closed position, when the locking block is in its elevated or lock set position.

The locking block is provided at its lower end with a foot or lateral extension 4, which, when in its lock set position rests on the shoulder 5 of the draw head, the shoulder being located adjacent to one side of the opening in the bottom of the draw head through which the lower end of the locking block projects. The locking block is also provided at its upper end, at the side opposite that provided with the lateral extension 4, with the upward projection 5^a, which

when the locking block is elevated, engages the top wall of the draw head and tilts the block laterally in a direction to carry the foot 4 over the shoulder 5, so that when the lifting power on the block has been removed, the foot 4 will seat on shoulder 5, with the recess 3^a in the block, in a position to permit the tail of the knuckle to swing outwardly to its open position.

The locking block, when in its locking position rests with its body portion between the tail of the knuckle and the side wall of the draw head, with its lower end projecting through the opening in the bottom wall of the draw head, in the path of the lower free end weighted lever 7. This lever is in the form of a bell crank lever pivoted at its elbow to the bracket 8 integral with the draw head, its other member extending up to one side of the draw head, in a position to be actuated from one side of the latter, as in my patent previously referred to.

In my said patented device and in all other couplings having means at the side for actuating the locking block, and for forcing the knuckle outwardly, of which I am aware, the free end of the lever actuating bar is always within the draw head and is supported by the latter or by the tail of the coupling.

In my patented device the free end rests within the draw head and on the tail of the knuckle. In others it rests upon the wall of the coupling head and is supported thereby in rear of the tail of the knuckle.

In my improved coupling this knuckle opening bar 9 is supported at its outer end adjacent to the side of the car, by any suitable bracket or other support in which the bar is free to move, and at its inner end on the pin 10 or other support carried by lock actuating lever 7, the pin being in a plane with the lower wall of an opening in the side of the draw head, so as to direct the free end of the bar 9 into said opening, as the bar is forcibly pushed inwardly during the operation of throwing the knuckle to its open position. This bar 9 is limited in its upward movement on lever 7 by the pin 11 secured to the lever arm 7 above the bar 9, and is slotted longitudinally as at 12 for the passage of the vertical arm of the lever 7. The slot 12 in the bar 9, is of sufficient length to permit the bar to throw the knuckle to its open or unlocked position, and if

from any cause the lower, or lifting end of the lever should remain in its elevated position, the inward movement of the bar 9 would turn it so as to carry the lower or lifting end of the lever out of the path of the locking block thus permitting the latter to fall when the knuckle has been turned to its closed position. The lower, or locking block lifting end of the lever, is purposely made of a weight sufficient that it will fall when released, hence it normally rests in its lowered position out of the path of the locking block.

When the knuckle is closed, the inner end of the bar 9 rests in rear thereof, and while this inner end may project slightly into the wall of the coupling head, it is not supported by said wall, but wholly by the pin 10 on the lever 7, thus avoiding the necessity of slotting or recessing the tail of the knuckle.

In my patented device referred to, wherein the inner end of bar rests upon the tail of the knuckle, the latter is provided with a recess into which the end of the bar drops, when the latter is pulled out preparatory to pushing the knuckle to its open position, and in those wherein the inner end of the knuckle throwing bar is supported by the wall of the coupling head, the portion of the bar between its inner end and the slot in which the locking block moving lever rests, must be of a length sufficient to rest on said wall when the bar is moved outwardly as in elevating the locking block, thus necessitating a recess in the tail of the knuckle to receive this end of the bar when the knuckle is in its closed position and locked by the locking block or pin. All of these prior devices require close and accurate fitting and adjustments in order to secure the necessary throw of the locking block or pin, and the complete throw of the knuckle, all of which accurate fitting and adjustment is avoided by supporting the free end of the bar on the lock operating lever.

It is evident that many slight changes

might be resorted to in the relative arrangement of the parts shown and described without departing from the spirit and scope of my invention hence I would have it understood that I do not wish to confine myself to the exact construction shown and described, but,

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. In a car coupling, the combination with a draw head having an opening through the side thereof, a swinging knuckle and a lock, of a bell crank lever one end of which is adapted to engage the lock and move same to lock set position, and a bar engaging the upper end of said bell crank lever, the inner end of said bar adapted to pass through the opening in the side of the draw head and engage the tail of the knuckle when the latter is in closed position, for moving the knuckle to its open position, the inner end of said bar being supported solely by said lever.

2. In a car coupling, the combination with a draw head, a swinging knuckle therein and a lock, of a bell crank lever, one end of which is adapted to engage the lock and move same to lock set position, a bar having a slot through which the other end of said lever passes, the said bar adapted to be moved through an opening in the wall of the draw head and engage the tail of the knuckle, and a device on said lever for supporting the inner end of the bar, the inner end of the bar being solely supported by the lever in a position to enter the draw head when the locking block is in lock set position.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

SAMUEL P. BUSH.

Witnesses:

GEO. G. MERRING,
FRED. G. BENNETT.