A. J. BAZELEY.

CAR COUPLING.

APPLICATION FILED DEC. 21, 1908.

1,067,578.

Patented July 15, 1913.

4 SHEETS—SHEET 1.

Fig. 1.

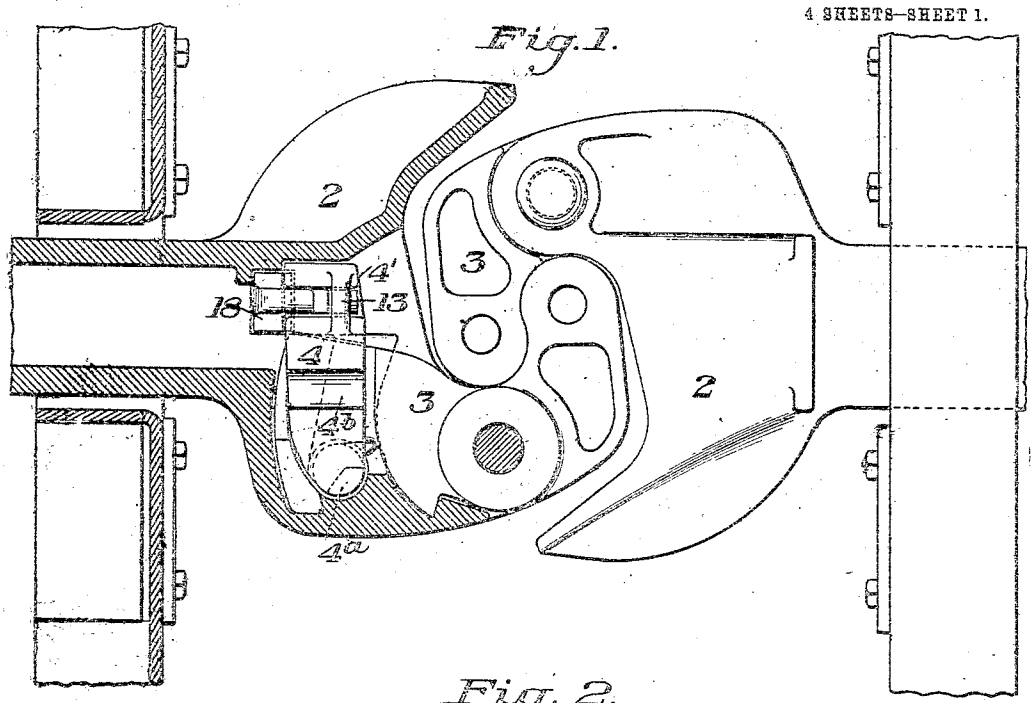
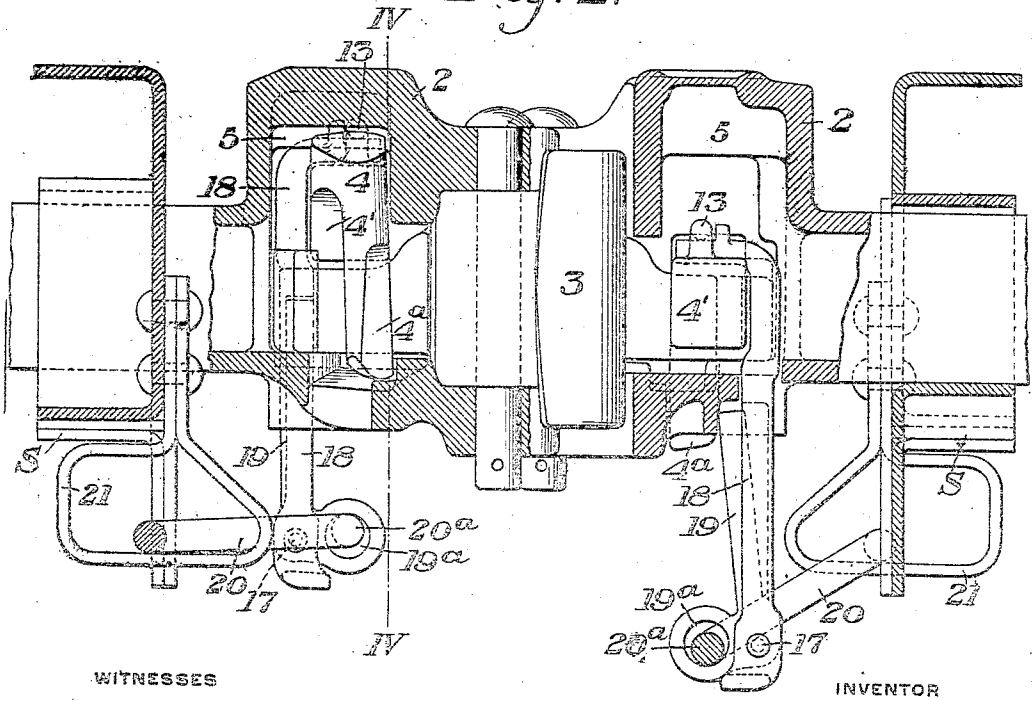


Fig. 2.



WITNESSES

R. H. Baldwin.

G. L. Winter

INVENTOR

Arthur J. Bazeley

by Bakewell Byrnes & Bakewell

his attys

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4 SHEETS—SHEET 2.

Fig. 3.

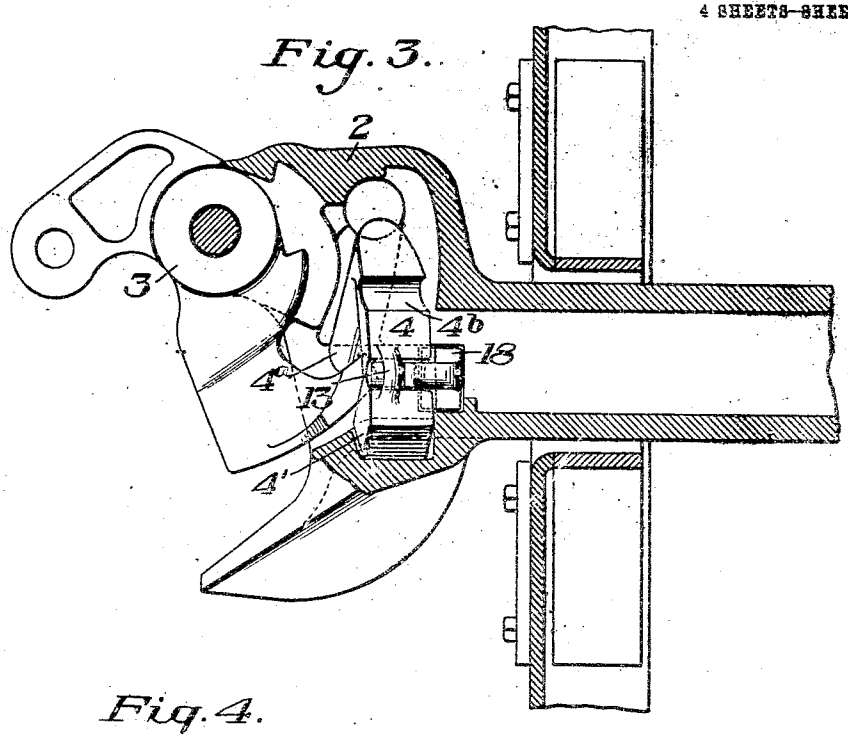
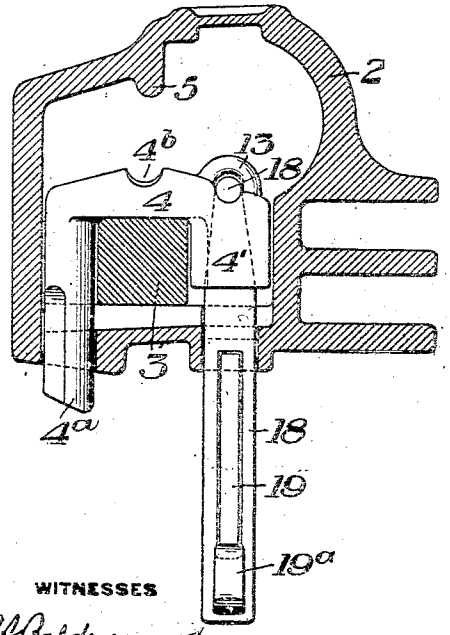


Fig. 4.



WITNESSES

R. A. Baldwin

G. L. Whitten

INVENTOR

Arthur J. Bazeley

by Redfield, Agnew & Ronald

his attys

A. J. BAZELEY.

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4 SHEETS—SHEET 3.

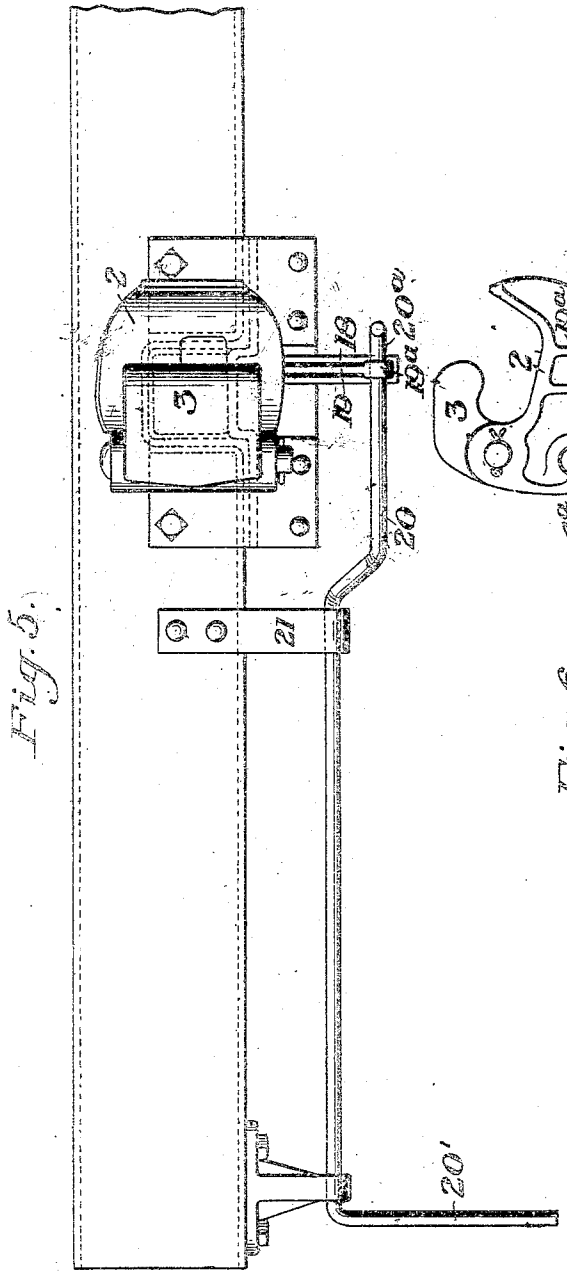


Fig. 5.

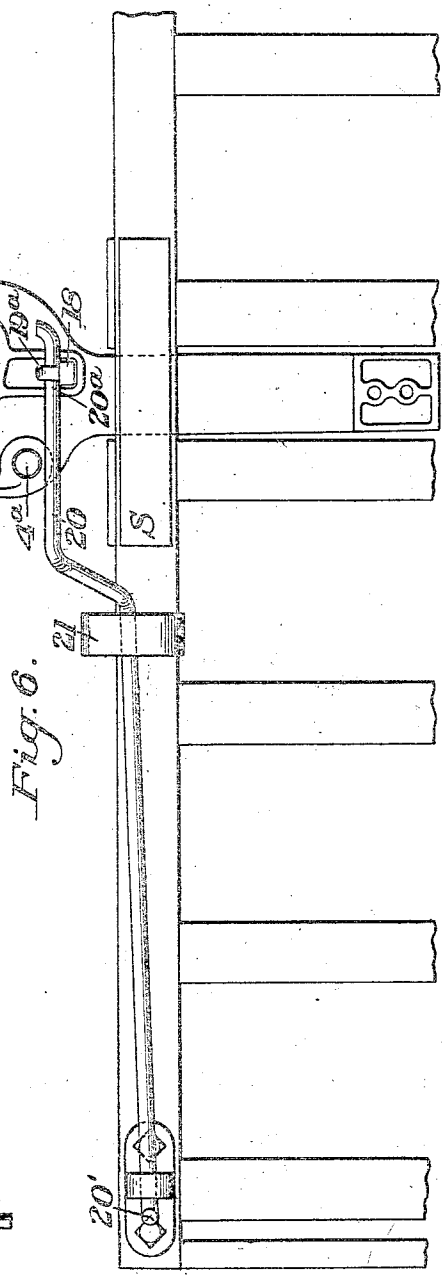


Fig. 6.

WITNESSES

R. A. Balderson.

G. Gibbinters.

INVENTOR

Arthur J. Bazeley

by Baldwin, Hyers & Banister

his attys

A. J. BAZELEY.

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4 SHEETS—SHEET 4.

Fig. 7

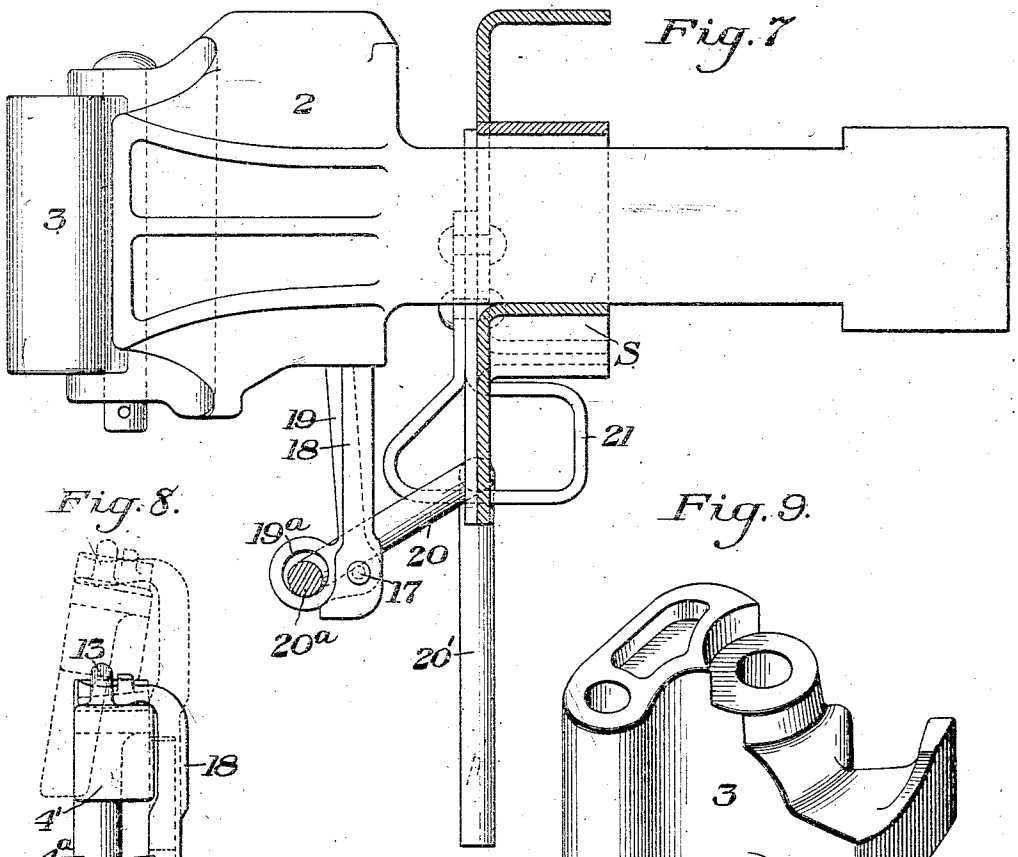


Fig. 8.

Fig. 9.

WITNESSES

R. A. Balderson

G. L. Binnie

INVENTOR

Arthur J. Bazeley

by Bakewell, Byrnes & Parmelee

his attys

UNITED STATES PATENT OFFICE.

ARTHUR J. BAZELEY, OF CLEVELAND, OHIO, ASSIGNOR TO THE NATIONAL MALLEABLE CASTINGS COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

BEST AVAILABLE COPY

CAR-COUPLING.

1,067,578. Specification of Letters Patent. Patented July 15, 1913.

Application filed December 21, 1908. Serial No. 468,418.

To all whom it may concern:

Be it known that I, ARTHUR J. BAZELEY, a citizen of the United States, and a resident of Cleveland, in the county of Cuyahoga and state of Ohio, have invented a 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, in which—

Figure 1 shows in plan view two of my improved couplers, one of them being shown partly in horizontal section; Fig. 2 is a longitudinal vertical section through the two couplers and the adjacent parts, the coupler to the right having its parts in locked position, and the coupler to the left having its parts in lock-set position; Fig. 3 is a horizontal section of the coupler showing the parts as they are when the knuckle has been thrown completely open; Fig. 4 is a vertical cross-section on the line IV—IV of Fig. 2, showing the parts in locked position, and illustrating the bottom operating mechanism; Fig. 5 is a front elevation of the coupler having bottom operating mechanism and shown in connection with the uncoupling rod by which the coupler is operated; Fig. 6 is a bottom plan view of Fig. 5; Fig. 7 is a side elevation; Fig. 8 is a detail view showing a lock and the bottom operating mechanism; and Fig. 9 is a perspective view of the knuckle.

In the drawings, 2 represents the coupler head, having a pivoted knuckle 3, which is shown in detail in Fig. 9.

4 is the locking and opening piece, having a locking head 4′, a rear opening member 4^a and an intermediate member having a surface groove 4^b which is adapted to engage with a fulcrum rib 5 on the top wall of the coupler head, so that when the piece 4 is lifted into contact with the rib 5 the locking head 4′ will first be freed from the path of the knuckle 3 and the piece 4 will then tip on the fulcrum 5 and the member 4^a will move the knuckle forwardly into open position.

When in position in the coupler head the piece 4 extends over the tail of the knuckle, and when the parts are locked the head 4′ fits in front of and against the face of the knuckle tail, thus locking the same. Above the head 4′ the piece 4 has an integral eye 13 which, as shown in Figs. 1, 2 and 3, is engaged by the angled end of a lifting rod 18. This lifting rod has a vertical slot in which is placed a swinging stop member 19 loosely pivoted in the slot by a pin or rivet 17 and having at its bottom end an eye 19^a which is in substantially the same horizontal line with the pivot 17. The uncoupling rod 20 is engaged with this eye 19^a as shown in Figs. 5, 6 and 7, so that on raising the uncoupling rod the first action will be to move back the member 19 within the slot in the arm 18, and to disengage this member from the bottom of the coupler so as to leave the lifting rod 18 free to be moved upwardly through a hole in the bottom of the coupler, and by its engagement with the eye 13, to lift the piece 4, thereby unlocking the coupler, and eventually, if the lifting is continued, throwing the knuckle open. This construction of the lifting mechanism is described and claimed in an application filed by me on July 3rd, 1908, Serial No. 441,797. A novel construction however, consists in placing the eye 19^a horizontally in front of the pivot 17, so that any longitudinal movement of the coupler will not tend to turn the arm 19 on the pivot 17. I thus hold the lifting rod securely against accidental creeping or jumping under all conditions.

In Figs. 2, 5, 6 and 7 I show a form of uncoupling rod for the bottom opening coupler comprising a rod 20 bent into the shape shown in the drawing and having a handle 20′ at its end, located at the side of the car. The inner end 20^a of the rod 20 passes through the eye 19^a at the lower end of the lifting rod 18. 21 is a bracket of looped form, which is looped back under the end sill 8 of the car, so that the rod 20, which fits in the loop of the bracket, will have room to play back and forth as the coupler moves longitudinally, and will also have room for displacement out of its normal position in case the handle 20′ should be hit and pushed back, so as to raise that part of the uncoupling rod which extends within the bracket. The bracket also provides for a slight sliding motion of the rod as the lock is raised, due to the fact that the end 20^a of the rod must rise substantially in a vertical direction when the parts are operated. This sliding movement is reduced to a minimum by having the rod bear within the bracket about

opposite the position of its end 20ª when midway between the extreme upper and lower positions.

I claim:—

1. In a coupler, the combination with a locking mechanism, of a lock lifter engaging the lock, a stop pivoted to said lifter and prevent creeping, and an eye in said stop to receive actuating mechanism, said eye being substantially in horizontal alinement with said pivot.

2. A coupler having in combination, a lock, a lifting rod, a stop pivoted to the lifting rod and arranged to engage the coupler head to prevent creeping of the lock, and an actuating member connected to said stop at a point which is in a substantially horizontal line with the pivot of the stop; substantially as described.

In testimony whereof, I have hereunto set my hand.

ARTHUR J. BAZELEY.

Witnesses:
HARRY E. ORR,
A. H. LEWIS.