(No Model.) 2 Sheets—Sheet 1.

A. S. WEAVER.

CAR COUPLING.

No. 549,410. Patented Nov. 5, 1895.

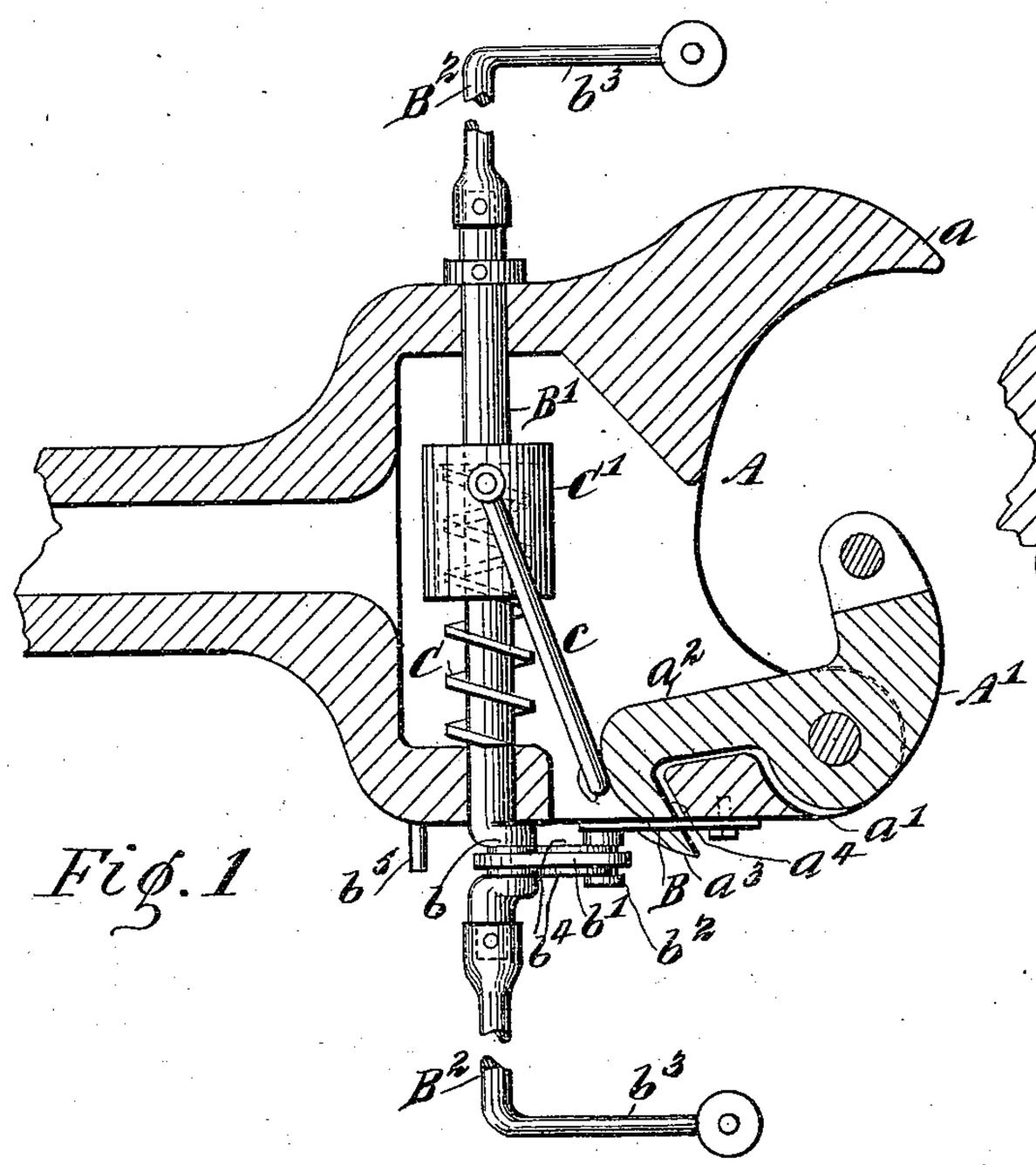

Fig. 1

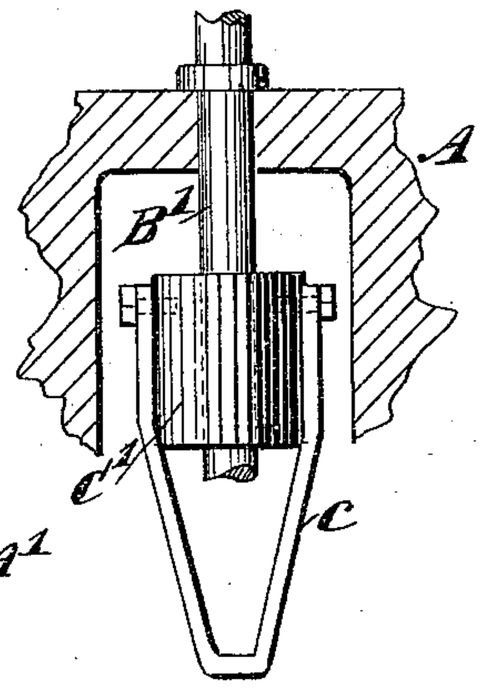

Fig. 2

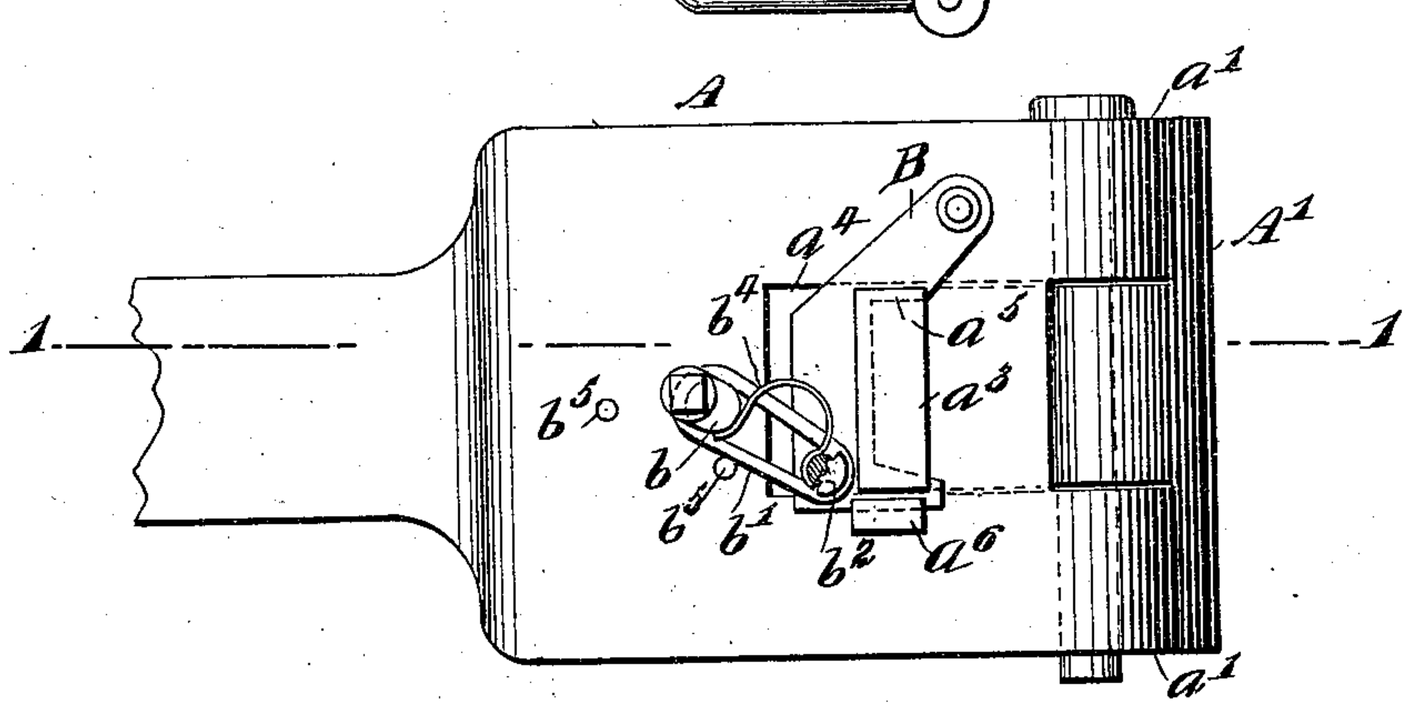

Fig. 3

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ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4

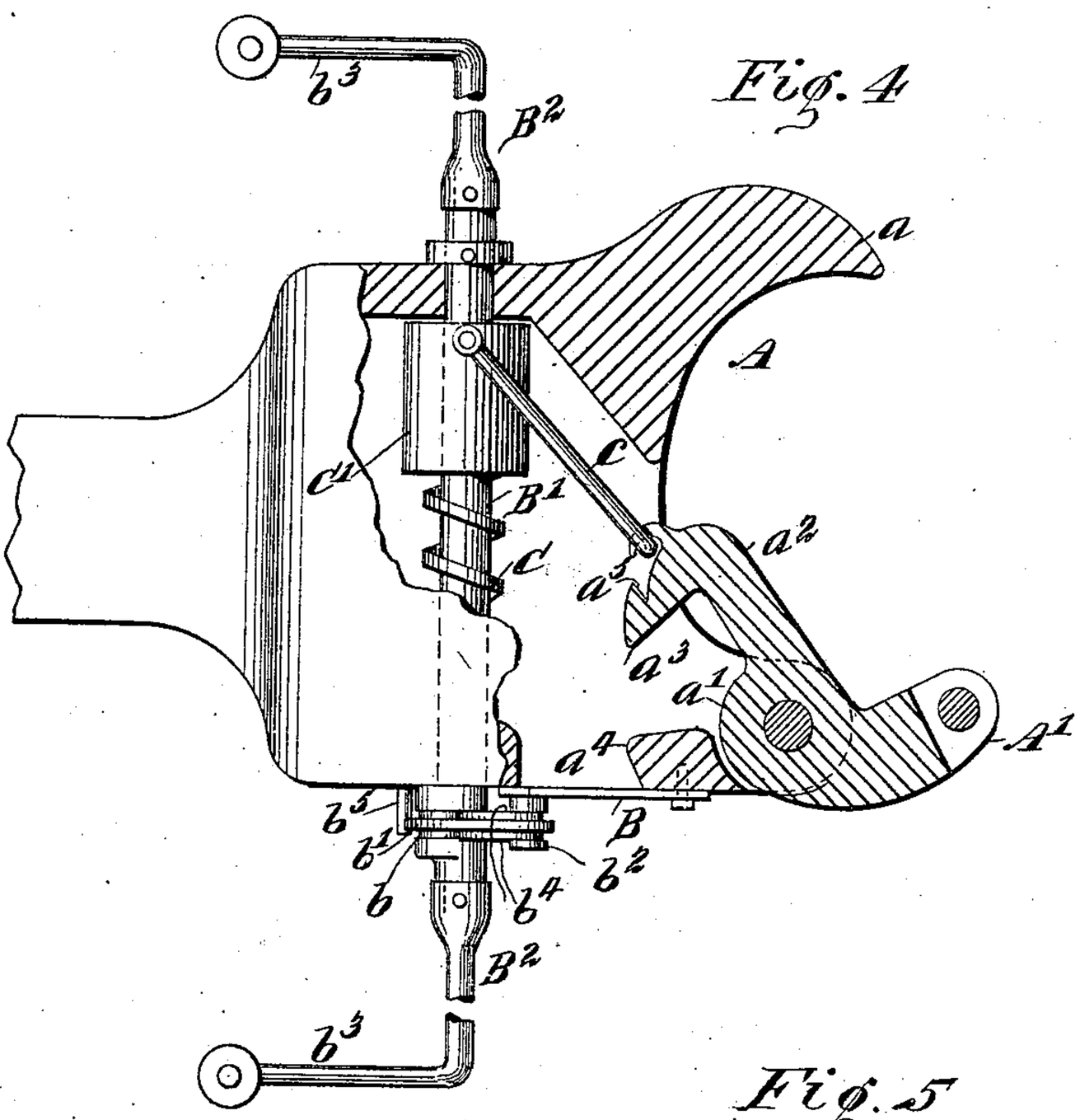
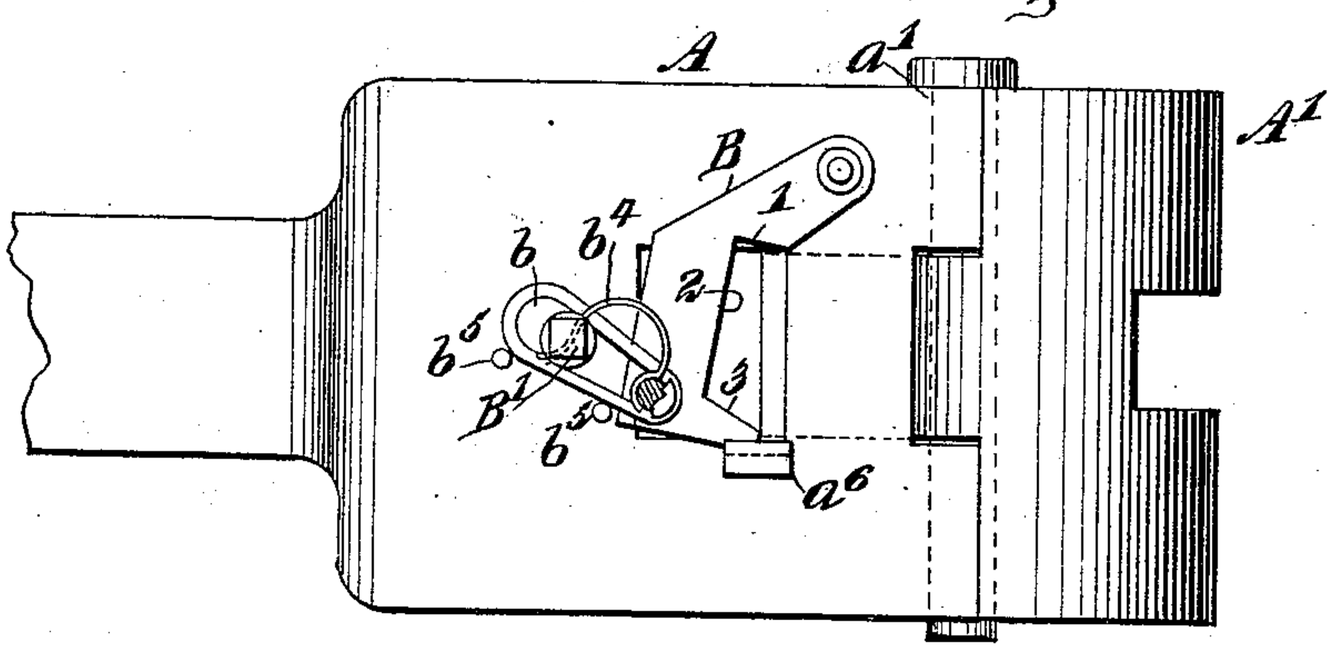


Fig. 5



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UNITED STATES PATENT OFFICE.

ANDRUS S. WEAVER, OF NEWARK, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 549,410, dated November 5, 1895.

Application filed September 18, 1895. Serial No. 562,877. (No model.)

To all whom it may concern:

Be it known that I, ANDRUS S. WEAVER, of Newark, in the county of Wayne and State of New York, have invented new and useful Improvements in Car-Couplings, of which the following is a full, clear, and exact description.

This invention relates to car-couplings of the type having a swinging knuckle, and a main object of my invention is to provide a strong yet simple locking means for the knuckle that may be automatic in its locking action, and a further object is to provide a coupler that will withstand the rough usage incident to heavily-loaded cars—such, for instance, as cars loaded with coal.

I will describe a coupling embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a horizontal section of a coupling-head embodying my invention substantially on the line 1 1 of Fig. 3 and showing the knuckle closed. Fig. 2 is a partial section and partial plan view of a portion of the coupling. Fig. 3 is a side elevation showing the knuckle as closed. Fig. 4 is a partial section and partial plan view showing the knuckle as open, and Fig. 5 is a side elevation thereof.

Referring by reference-characters to the drawings, A designates the coupling-head, having the forwardly-projected horn a at one side and the vertically-perforated lugs a' at the opposite side, between which the swinging knuckle A′ is pivoted in the usual manner. The top and bottom walls of the coupling-head are preferably made quite thick, so as to withstand the shock incident to coupling two heavily-loaded cars. The coupling-head is recessed or chambered to receive the inner arm a^2 of the swinging knuckle A′, and the arm a^2 has a hook-like projection a^3 extended at substantially right angles to the arm and adapted to project its end through an opening a^4 in a side wall of the coupling-head.

B is a locking-latch for the knuckle, pivoted at its upper end portion to the outer-side of the coupling-head and adapted to swing over the opening a^4, to engage the protruding end of the projection a^3. On its upper and lower and rear side the projection a^3 is kerfed, as indicated at a^5, and the front edge of the latch B is notched to form walls 1, 2, and 3 to engage in these kerfs when the knuckle is in its closed position. A slotted lug a^6 extends from the side of the coupling-head to form a guide and abutment for the latch.

B′ is a shaft or rod extended transversely through the coupling-head. This rod B′ is provided with a crank portion b, from which a link connection b' extends to a wrist-pin b^2 on the latch-plate B.

Arms B^2 extend outward from the shaft or rod B′ to the sides of the car, and the ends of the arms have weighted crank-handle portions b^3. Springs b^4, curved upward at their central portion, engage with the adjacent sides of the crank b and the wrist-pin b^2 and serve to hold the locking-latch yieldingly in a closed position when the crank is thrown to its closing position.

In operation when it is desired to release the knuckle for uncoupling, the arm B^2 is swung to bring the crank b to a rearward position. This will draw the locking-latch out of engagement with the knuckle, so that it may swing open. Stop pins or lugs b^5, projected from the side of the coupler-head, will prevent the crank for swinging too far below the center. In locking the knuckle the rod B′ is rocked to throw the crank forward, and this, of course, will place the latch in engagement with the knuckle. If desired, the locking-latch may be moved to its locking-position before the knuckle is closed, and in this event when two couplings come together the knuckle will be swung by the contact to its closed position, and the longitudinally-curved or cam-shaped outer end of the projection a^3 will force the latch back until the kerfs a^5 come in line with the latch, and the latch will move into said kerfs under the influence of the spring or springs b^4.

As a means to automatically move the knuckle to its open position after the locking-latch shall have been moved therefrom I employ a spring C, surrounding the shaft or rod B′ within the coupling-head and bear-

ing at one end against the inner wall of the coupling-head and engaging at the other end with a sleeve C′, movable on the shaft or rod B′, and from which a link *c* extends to a pivotal connection with the arm a^2 of the knuckle. Obviously when the knuckle is released from the locking-latch, the spring C, under tension, will draw inward on the arm a^2 and swing the knuckle open.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A car coupling, comprising a head, a swinging knuckle having a lateral projection movable through an opening in a side wall of the head, a locking latch to engage therewith, a rocking shaft journaled in the coupling head and having a short crank portion, and a link extended from the crank to a pivotal connection with the latch, substantially as specified.

2. A car coupling, comprising a head, a knuckle mounted to swing in said head and having a projection adapted to move through an opening in a side wall of the head, a latch plate pivoted to said side wall and adapted to engage with said projection to lock the knuckle, a rock shaft having a crank portion, a link extended from the crank to a wrist pin on the latch, and a spring arranged between the crank and wrist pin, substantially as specified.

3. A car coupling, comprising a head, a knuckle mounted to swing in said head, a shaft or rod extended transversely through the head, a spring-impelled sleeve on said shaft or rod, a link connection between the sleeve and knuckle, and a locking device for the knuckle, substantially as specified.

ANDRUS S. WEAVER.

Witnesses:
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WILLIAM DICKENS.