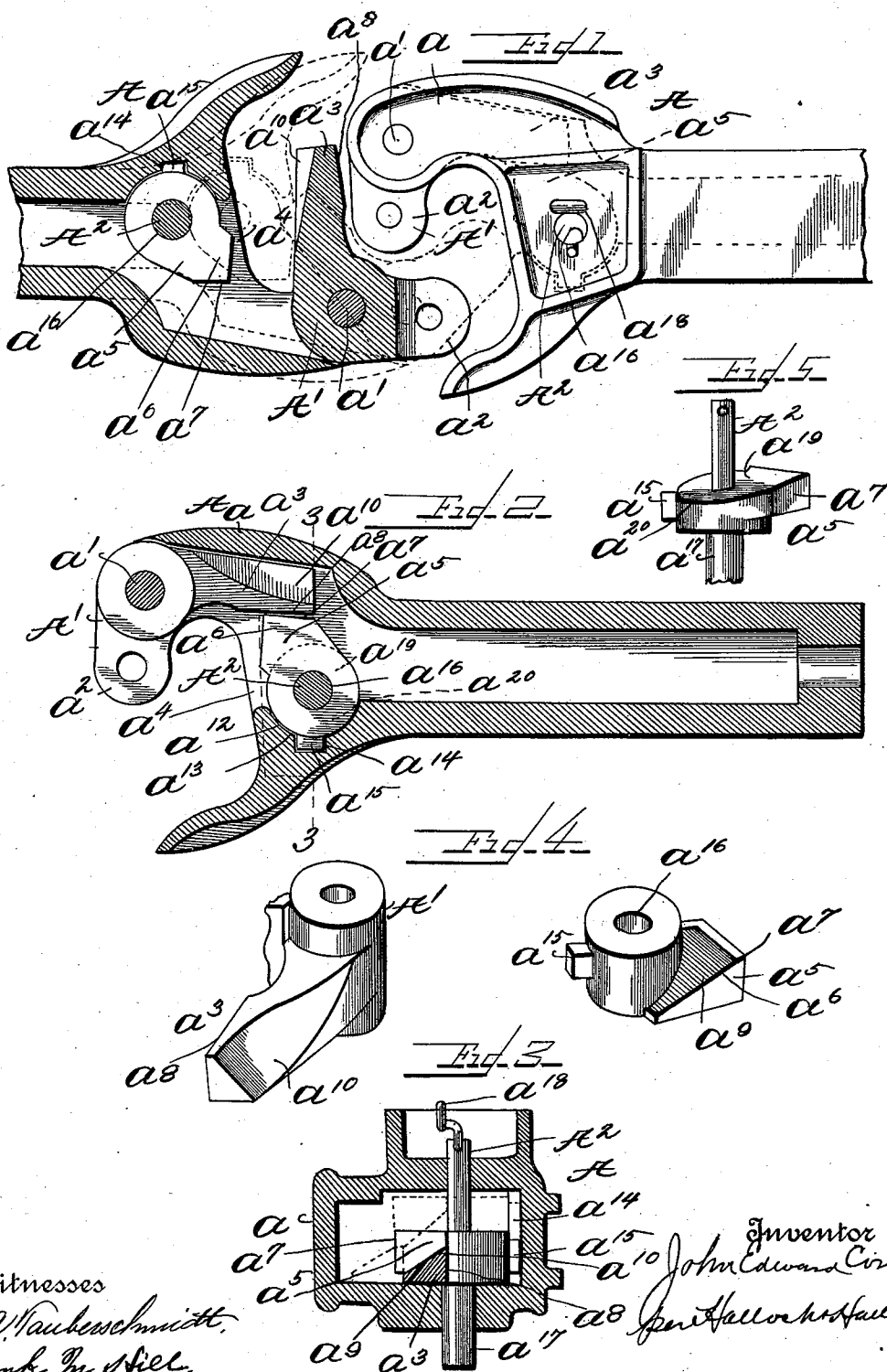


(No Model.)

J. E. CORSA.
CAR COUPLING.

No. 537,142.

Patented Apr. 9, 1895.



Witnesses

G. A. Taubenschmidt.
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UNITED STATES PATENT OFFICE.

JOHN EDWARD CORSA, OF ALEXANDRIA, VIRGINIA, ASSIGNOR OF ONE-FOURTH TO FRANK MURPHY HILL, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 537,142, dated April 9, 1895.

Application filed July 7, 1894. Serial No. 516,821. (No model.)

To all whom it may concern:

Be it known that I, JOHN EDWARD CORSA, a citizen of the United States, residing at Alexandria, in the county of Alexandria and State of Virginia, 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 that class of car couplings shown in my application filed on even date with this and is a modification of the device therein described and is particularly applicable to freight cars although it can be used upon cars of other kinds.

The object and nature of the invention will more fully appear in the subjoined description and will be pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 represents a top plan one head partly in section and showing one jaw in several positions; Fig. 2, a horizontal section of one head; Fig. 3, a section on line 3—3 Fig. 1; Fig. 4, details in perspective, and Fig. 5, a detail showing the opposite side of the block from that shown in Fig. 3.

A represents the heads which are of the ordinary construction and provided with projections a having openings for a pivot pin a' which passes through a jaw A' inserted between the projections. The jaw A' is provided with a gripping end a^2 and a tail piece a^3 that projects rearwardly when the jaws are locked. When disengaged from the locking device the jaw can be swung at right angles to its locked position to bring the tail piece in front of the throat a^4 of the head and in the path of the opposite jaw that is to be coupled. In the throat a^4 is located a block a^5 having a projection a^6 provided with a face a^7 that engages the face a^8 of the tail-piece when the jaws are locked, and a cam face a^9 that is operated upon by a cam face a^{10} on the tail-piece to lift the block so that the tail-piece can be moved to its proper position to lock the jaw in place which is accomplished by the block falling back to its normal position at the bottom of the throat. The block is rounded upon

the side a^{12} which abuts into a recess a^{13} in the head which is also provided with a guide groove a^{14} for the guide lug a^{15} on the block. This block is held in position by a pin A^2 that is passed down through the pin-hole a^{16} for the ordinary coupling pin and said block. The opening or hole a^{16} in the block is of sufficient size to permit of free play of the block so that when the jaws are locked together the drawing strain will be off the pin and on the head, the block, and the jaw, the tail-piece of which is in contact with the block and the block is in contact with the head. The pin is provided with a shoulder a^{17} upon which the block normally rests and from which said block is raised when the cam face upon the tail-piece is forced against the cam face on the block by the jaw on the other head and returns by gravity to said seat when the tail-piece has passed the block. This return of the block locks the tail-piece in place and prevents the unlocking of the same until said block is raised by lifting the pin which also elevates the block. Any tendency of the block to turn is overcome by the guide lug a^{15} . The pin is held in place by any suitable means, preferably by a link a^{18} of a chain for elevating it.

The operation of the device is as follows: The couplingman releases the tail-piece from the block in one of the heads by raising the pin and block out of the way of the tail-piece and swings the jaw so that the gripping end will be at right angles to its normal position and the tail-piece across the throat. He then allows the block and pin to resume their normal position. The jaw of the car to be coupled is locked in place and the gripping end is on the same line as the tail-piece of the other jaw. The gripping end of the locked jaw forces the tail-piece of the other jaw against the block and the cam face on the tail-piece operates upon the cam face on the block which is thereby lifted out of the path of the tail-piece allowing said tail-piece to assume a position at right angles to its former position and permitting the block to fall back to its normal position and lock the tail-piece in place, thereby holding the gripping end in a locked position with the gripping end on the other jaw. The jaws are uncoupled by

lifting either of the blocks and swinging the jaw to one side. If the jaw should be left to swing, the first movement of the tail-piece against the block will lift said block until the
5 tail-piece has passed over the cam and will then lock the jaw in place.

It will be noted that the top a^{19} of the block slants downwardly and rearwardly from the projection a^5 to the part a^{20} that rests in the
10 rear part of the recess as shown in Fig. 5, making the block thinner at the latter point. The object in so constructing the block is to balance it upon the pin so that when raised or lowered it will not be tilted or cramped on
15 said pin, but one part will counterbalance the other, thus giving to said block an even movement when raised upon the pin.

What I claim as new is—

1. In a car coupling the combination of a
20 head, having a guide groove, a jaw pivoted to said head and having a gripping jaw and a tail-piece provided with a cam face; a block

in the throat of said head and having a cam face by which it is elevated by said cam face on the tail-piece, and a guide lug; and a pin
25 having a shoulder for supporting said block and means for elevating said block to allow the tail-piece to be unlocked.

2. In a car coupler of the kind described, the combination of a block having an open-
30 ing for the pivotal pin, a projection extending laterally from said block and having a cam face, and the top of said block inclined downwardly and rearwardly from the point of the projection; and a jaw the tail piece of which
35 is provided with a cam surface, substantially as described.

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

JOHN EDWARD CORSA.

Witnesses:

S. C. MILLS,
FRANK M. HILL.