

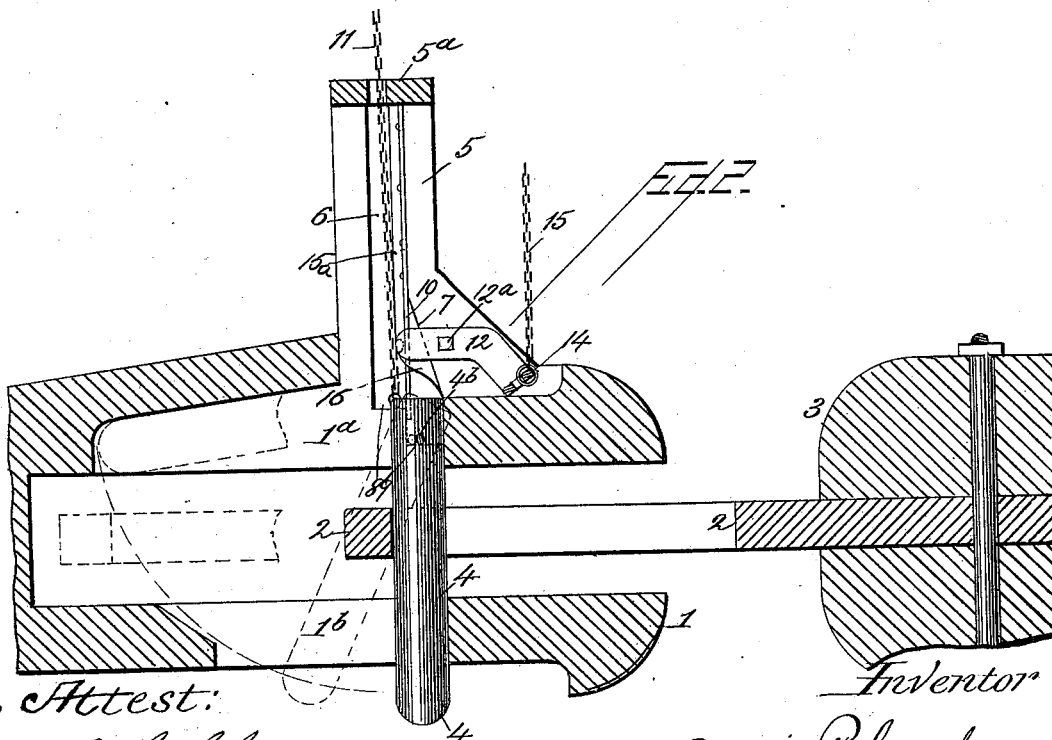
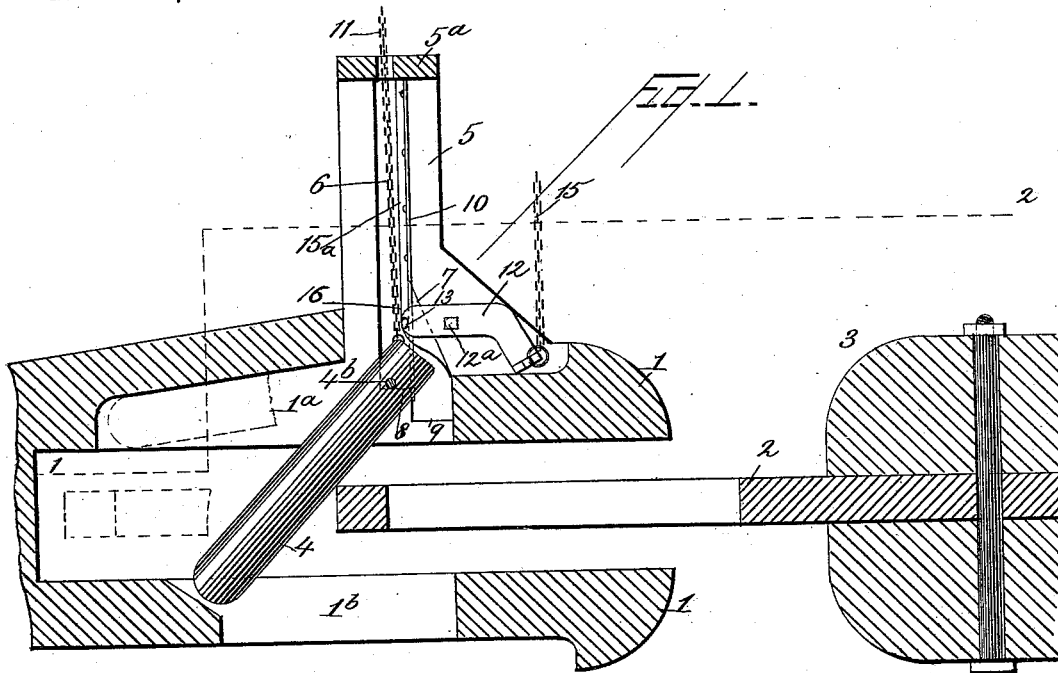
(No Model.)

2 Sheets—Sheet 1.

F. P. LENAHA.
CAR COUPLING.

No. 418,731.

Patented Jan. 7, 1890.



Attest:

J. H. Schott
W. C. Buckley

Inventor
Francis P. Lenahan
by L. D. Murphy
his Atty

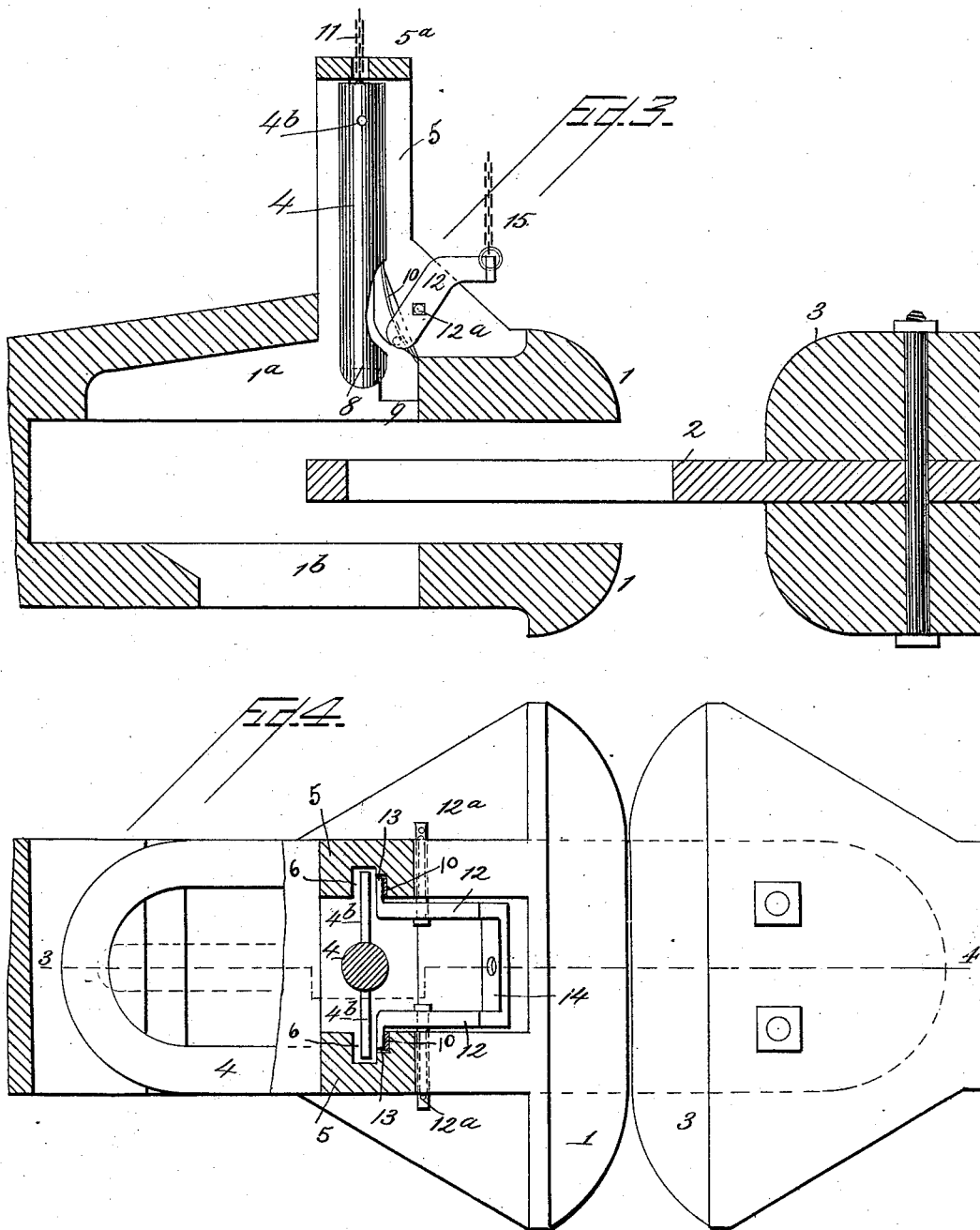
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UNITED STATES PATENT OFFICE.

FRANCIS P. LENAHA, OF WILKES-BARRÉ, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 418,731, dated January 7, 1890.

Application filed June 27, 1889. Serial No. 315,844. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS P. LENAHA, a citizen of the United States, residing at Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Car-Coupler, of which the following is a specification.

My invention relates to that class of car-couplings which employ a swinging pin having a cross or rock bar moving within a vertical slot automatically coupling the cars and permitting the same to be readily uncoupled; and it consists, primarily, in devices and means of accomplishing this result hereinafter described.

In the accompanying drawings, Figure 1 represents a longitudinal section of my improved coupler on the line 3 4, Fig. 4, showing the same in the act of coupling. Fig. 2 is also a longitudinal section on the line 3 4, Fig. 4, showing the coupling effected. Fig. 3 is the same, showing the positions assumed when the cars are uncoupled. Fig. 4 is a top plan view, partly in section, on the line 1 2, Fig. 1.

1 represents the draw-head, provided with recessed portions 1^a and 1^b.

2 is the stationary link, secured within the draw-head 3 by means of bolts or by any other desired means.

4 is a swinging pin provided with a cross or rock bar 4^b, which latter is more clearly shown in Fig. 4.

Mounted upon and secured to the upper side of the draw-head 1 are vertical posts 5, which are connected together by means of a top cross-piece 5^a. On the inner side of each of said posts are formed vertical slots 6, so constructed at their lower ends as to form beveled faces 7 and upper and lower floors 8 and 9, respectively. Spring tongue-pieces 10, secured to the forward side of the slots 6, extend downwardly to a point slightly below the upper floor 8 and serve to separate said vertical slots 6 into double slots from a point beginning at the upper ends of the beveled faces 7.

To the upper end of the swinging pin 4 is secured a lifting-chain 11, which extends upwardly, and, passing through a hole in cross-piece 5^a, is carried to a point conveniently within the reach of the train or yard man.

Double bell-crank-lever arms 12, (shown in detail in Fig. 4,) pivoted at 12^a, having at their two outer ends lugs 13, extending at right angles to the said bell-crank-lever arms, have their remaining ends connected together by means of a connecting-piece 14, to which is secured the actuating-chain 15, carried to a point conveniently within the reach of a train or yard man. I also provide guarding-flanges 15^a, which extend slightly outwardly from the forward sides of the slots 6, having their lower portions so formed at 16 as to guide the rock or cross bar 4^a of pin 4 from contact and engagement with the lever-arms 12 and their lugs 13.

The operation of my device is as follows: When it is desired to make a coupling as the cars approach each other, the link 2 enters into the draw-head 1, and, impinging against the swinging pin 4, pushes the latter into the recess 1^a, as shown by dotted lines, the cross or rock bar 4^b resting upon the upper floor 8. When the link 2 has entered into the draw-head 1 for a certain distance, the pin 4 is permitted to fall again into its vertical position and within said link 2. As the slack of the train is taken up, the stress of the link 2 is brought to bear upon the pin 4, causing the cross-bar 4^b of the latter to press to one side the spring tongue-piece 10, permitting said cross-bar 4^b to enter that portion of the slot 6 below the upper floor 8 and to rest upon the lower floor 9, the spring tongue-piece 10 returning to its normal position. It will thus be seen that the pin 4 is so held that unusual jars or other exigencies cannot uncouple the cars. When it is desired to uncouple the cars, the operator may by pulling upward upon the chain 15 draw the spring tongue-piece against the beveled face 7, thus opening communication between the divided portions of the vertical slot 6. When this is accomplished, the operator by pulling upward upon chain 11 draws the pin 4 out of engagement with link 2. The spring tongue-piece may then be permitted to resume its normal position, the parts being then relatively in position for being again coupled.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is the following:

1. In a car-coupling, the combination, with

the draw-head and vertical posts, of vertical slots in said posts so constructed as to provide double floors, one lower than the other, beveled or inclined faces, downwardly-extending spring tongue-pieces, the upper portions of their lengths secured to upper portion of the slots, and their remaining lower portions serving to separate the lower portion of the said vertical slots into double slots.

2. The combination, in a car-coupling, of a vertically-movable cross or rock bar carrying the pin, vertical posts secured to the draw-head and provided with slots having double floors, one lower than the other, beveled faces, and downwardly-extending spring tongue-pieces forming double slots within which said cross or rock bar moves.

3. The combination, in a car-coupling, of a vertically-movable rock or cross bar carrying the coupling-pin, said rock or cross bar moving and resting within double slots formed in the lower part of vertical slots by downwardly-extending spring tongue-pieces, and means by which the spring tongue-pieces may be pressed

forward against beveled faces to permit the rock-bar to move from one slot to the other.

4. The combination, in a car-coupling, of downwardly-extending spring tongue-pieces, beveled faces, and a pivoted bell-crank lever acting upon the said tongue-pieces, as set forth.

5. The combination, with the link of a coupling, of a rock or cross bar carrying the pin and vertical slots having their lower portions divided into double slots by a downwardly-extending spring tongue-piece, one of said slots being longer than the other and having a beveled face.

6. The combination, with vertical slots formed in vertical posts, of flanges or guide-pieces so constructed as to ride the cross or rock bar out of engagement with the bell-crank lever.

FRANCIS P. LENAHAN.

Witnesses:

SCHUYLER DURYEE,

R. E. GRANT.