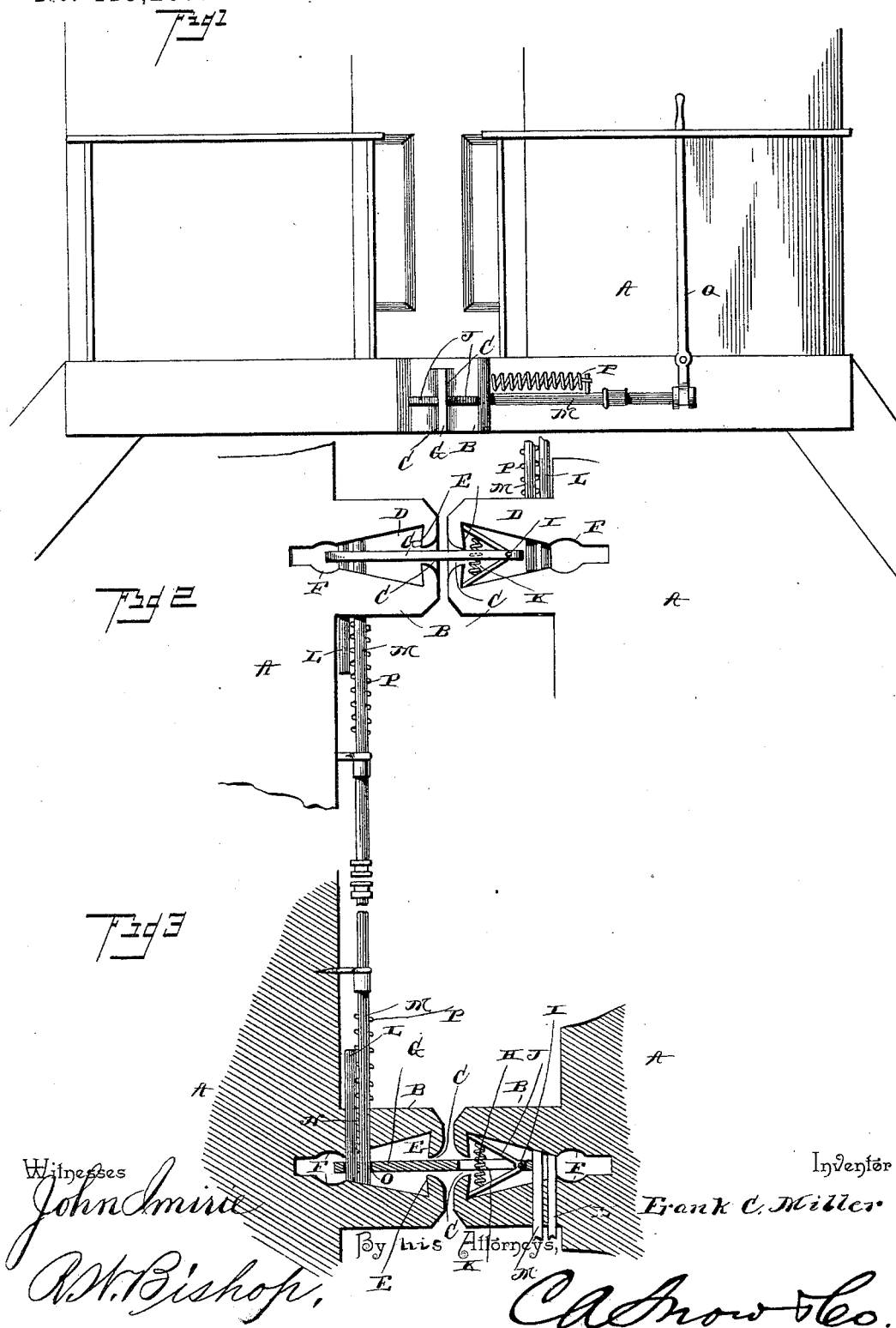


(No Model.)

F. C. MILLER.
CAR COUPLING.

No. 419,207.

Patented Jan. 14, 1890.



Witnesses

John Smith

W. B. Bishop,

Inventor

Frank C. Miller

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

FRANK C. MILLER, OF BELVIDERE, NEW JERSEY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 419,207, dated January 14, 1890.

Application filed May 17, 1889. Serial No. 311,111. (No model.)

To all whom it may concern:

Be it known that I, FRANK C. MILLER, a citizen of the United States, residing at Belvidere, in the county of Warren and State of New Jersey, have invented a new and useful Car-Coupling, of which the following is a specification.

My invention relates to improvements in car-couplings; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an end view of a car having my improved coupling applied thereto. Fig. 2 is a bottom plan view showing two draw-heads coupled together by my improved device. Fig. 3 is a longitudinal horizontal section of the same.

The car A is of the usual size and construction, and the draw-head B is secured to the bottom of the same at the end thereof in any desired manner. The draw-head is provided at its outer end with a flared mouth C, and in the bottom of the draw-head I provide the longitudinal recess or slot D, which communicates with the hollow interior of the draw-head. Within the draw-head and near the mouth of the same I provide the vertical shoulders E E, the function of which will hereinafter appear, and near the rear end of the draw-head I provide the vertical recesses F, as shown.

The link G consists of a flat bar or body of any desired material and of any desired size, and is provided near its free end with a slot or opening H, in which I arrange a vertical pin I, and on this pin I pivot the spring coupling-jaws or arms J, as shown. The said jaws or arms are pivoted on the pin I and extend outward and rearward therefrom and are normally pressed apart by a coiled spring K, arranged between them. Instead of this form the coupling-arms may be substantially U-shaped and the spring may be arranged between the shorter branches thereof, so as to draw the said branches normally together and thereby hold the outer ends thereof apart. The link is pivoted at its inner end within the draw-head by a removable pivot-pin L, so that it can be easily removed, when so desired, for repairs or other purposes.

On the end of the car I mount the sliding

bolt M, which is normally projected into the draw-head through an opening N therein, so as to engage an opening O in the link by a spring P, having its opposite ends secured, respectively, to the platform or draw-head and to the bolt. The bolt is withdrawn from the draw-head and disengaged from the link by a lever Q, fulcrumed on the platform and having its lower end engaging the bolt.

The operation of my device is as follows: The link is pivoted in one draw-head and is held in a horizontal position projecting forward therefrom by allowing the sliding bolt to engage the link, as will be readily understood. The two draw-heads are then brought together and the link will enter the opposing draw-head, the spring-jaws or coupling-arms being thereby compressed so as to pass through the mouth of the draw-head, and when the said jaws have entered within the draw-head they will be separated by the spring, so as to engage the vertical shoulders E. The coupling will thus be completed. When it is desired to uncouple the cars, the sliding bolt is withdrawn from engagement with the link and the link will then fall, by reason of its own weight, from the coupled draw-head, thereby separating the cars.

It will be seen from the foregoing description that I have provided a car-coupling which is composed of few parts, is simple in its construction, and efficient in its operation. By providing the draw-heads with the vertical shoulders and accomplishing the coupling by engaging said shoulders with the spring coupling-jaws I am enabled to positively couple together draw-heads which are at different heights from the ground, as the said jaws can engage the shoulders at any point of their height, so that it is not necessary to guide the jaws to any particular point of the shoulders. The mouth of the draw-head being flared and the draw-head being provided with the recesses F the link is allowed ample lateral play to accommodate itself to the position of the cars when a train is rounding a curve. The links may be provided on each draw-head, but it will ordinarily be found sufficient to employ only one link. When the draw-heads are both provided with links, one

link will be left depending from the draw-head and will only be used in case of accident.

5 The coupling is accomplished automatically and the advantages of the device are thought to be obvious.

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

10 1. The combination of the draw-head, the link pivoted therein, and the locking-bolt adapted to enter the draw-head and engage the link to hold it raised, as set forth.

15 2. In a car-coupling, the combination of the draw-head having the vertical shoulders E on its inner side, the link held in one draw-head and adapted to enter the opposing draw-head, and the coupling-jaws pivotally mounted in the link and adapted to engage the vertical
20 shoulders, as set forth.

3. The combination of the draw-head having the flared mouth and the vertical recess F, and the coupling-link pivoted in the draw-head and extending forward from the same,

the rear end of the link being adapted to 25 play in the recess F, as set forth.

4. The combination of the draw-heads provided with the internal vertical shoulders E, the coupling-link pivoted in one draw-head and adapted to enter the opposing draw-head, 30 and the spring-actuated coupling-jaws pivotally mounted at the free end of the link and adapted to engage the vertical shoulders E, as set forth.

5. The combination of the draw-head, the 35 link pivoted therein and having an opening O, the bolt passing transversely through the draw-head and engaging said opening, the spring to project the bolt through the draw-head, and the lever to withdraw the bolt, as 40 set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FRANK C. MILLER.

Witnesses:

JOHN H. SIGGERS,
R. J. MARSHALL.