(No Model.)

W. H. WELLSTEED.

CAR COUPLING.

No. 363,868. Patented May 31, 1887.

Fig 1.

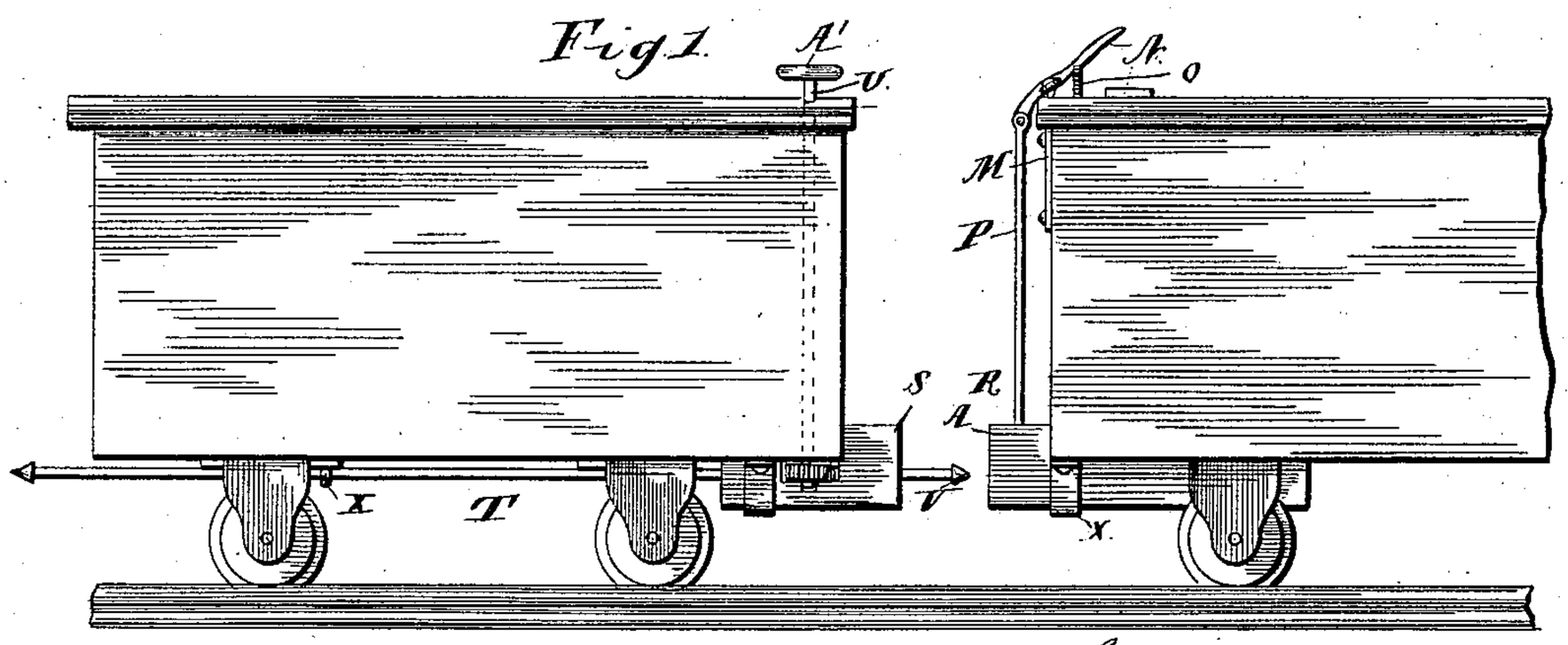


Fig 2.

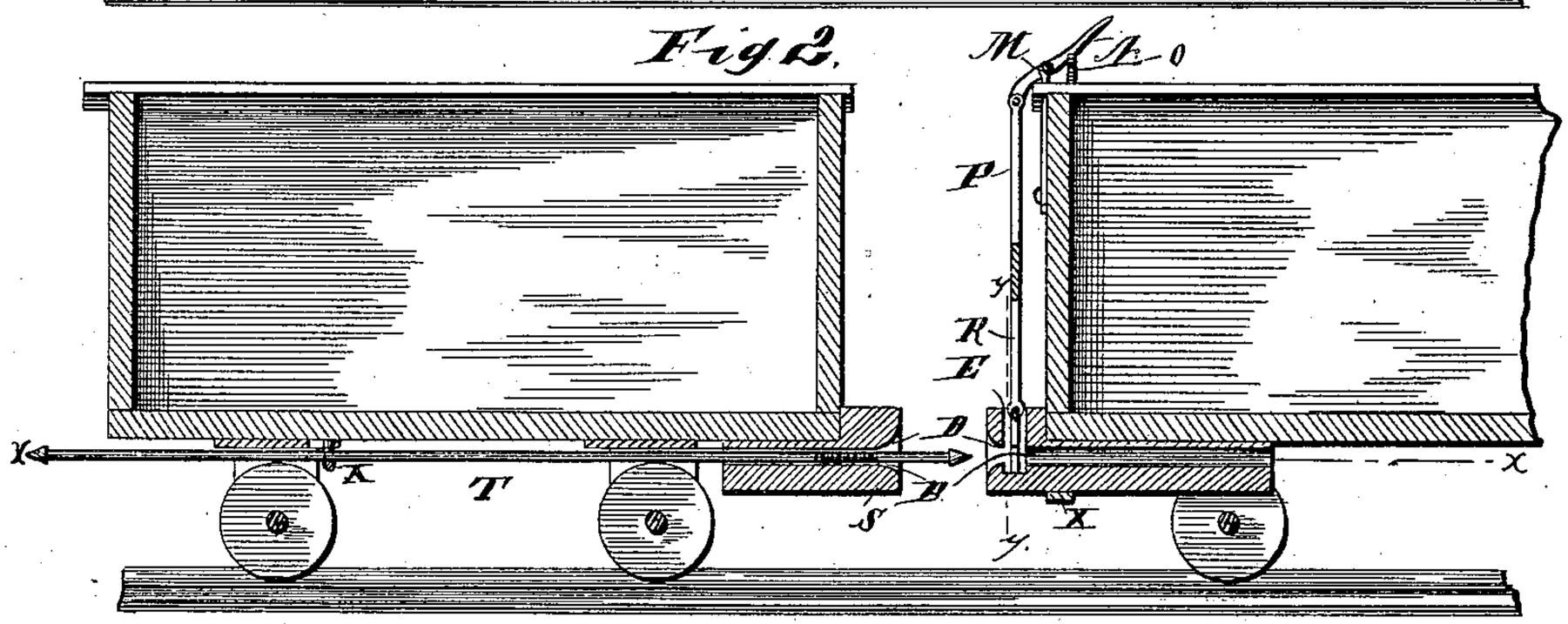


Fig 3.

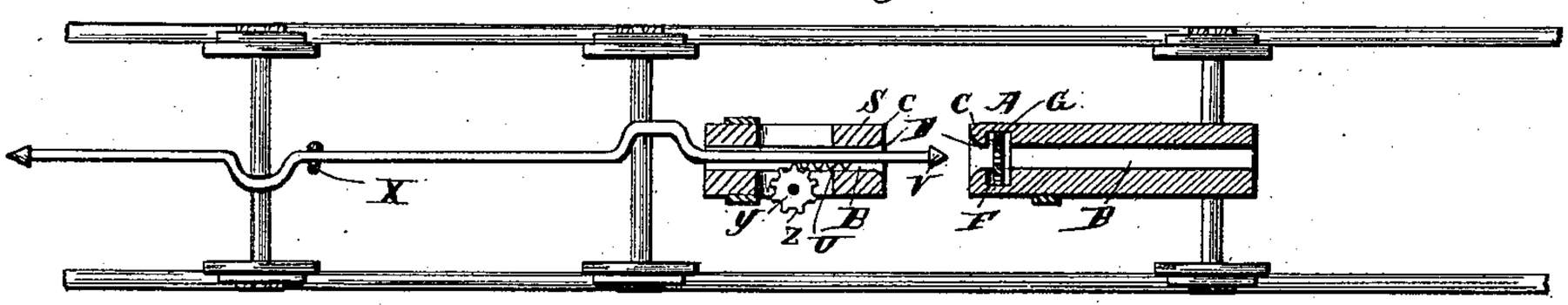


Fig 4.

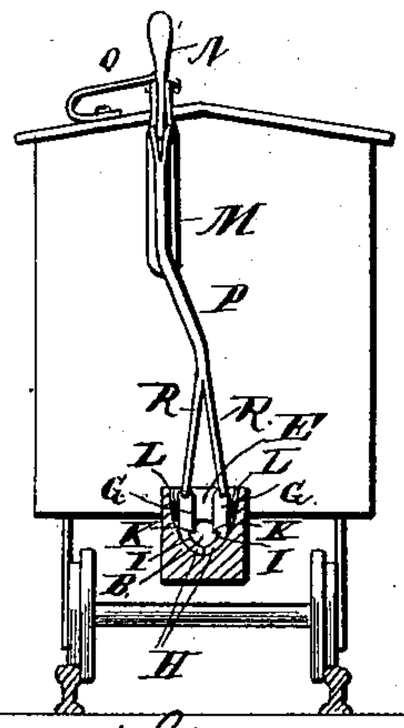
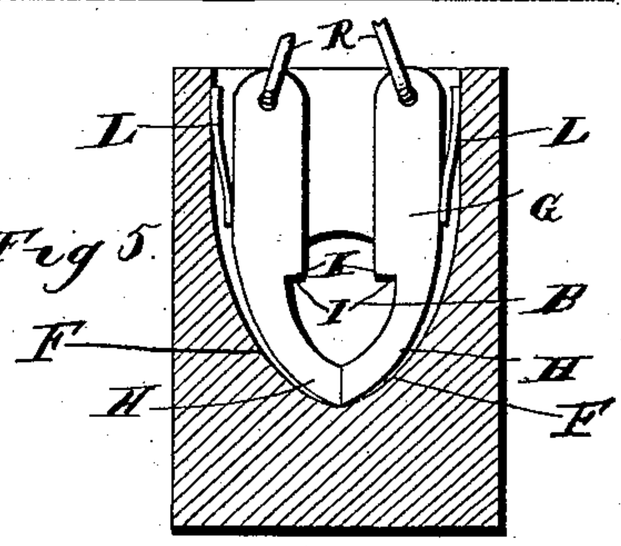


Fig 5.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM HENRY WELLSTEED, OF BRAMPTON, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 363,868, dated May 31, 1887.

Application filed March 22, 1887. Serial No. 231,982. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY WELLSTEED, a citizen of the United States, residing at Brampton, in the county of Delta and State of Michigan, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention relates to an improvement in car-couplings; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is an elevation of parts of two railway-cars provided with couplings embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of my improved coupling. Fig. 3 is a longitudinal horizontal sectional view of the same, taken on the line *x x* of Fig. 2. Fig. 4 is a vertical transverse sectional view taken on the line *y y* of Fig. 2; Fig. 5, an enlarged view of the same.

A represents a draw-head attached to the under side of one of the cars and projecting beyond one end thereof in the usual manner. This draw-head is provided with a longitudinal opening, B, and the front end of the draw-head has a cap, C. The latter is provided with a flared opening, D, that communicates with the opening in the draw-head. On the rear side of the cap is a vertical recess, E, the sides of which are parallel with each other and have their lower ends converging toward the bottom of the cap, and thereby forming inclines F.

G represents a pair of coupling-jaws, which are secured in the recess E on opposite sides of the openings B and D. The lower ends of the said coupling-jaws are curved toward each other, as at H, and on their inner opposing edges, at a suitable distance from their lower ends, are formed offsets or recesses I, thereby forming shoulders K at the upper ends of the said recesses.

L represents flat springs, which have their lower ends secured to the outer edges of the coupling-jaws at a suitable distance from the lower ends thereof, and the upper ends of the said springs project outwardly and upwardly from the said jaws and bear against the opposing sides of the recess E. The function of these springs is to normally force the upper portions of the coupling-jaws toward each other.

On the front end of the car, to which the draw-head A is attached, is secured a vertical arm, M, the upper end of which projects above the top of the car, and is bifurcated to form ears, between which is pivoted an operating-lever, N.

O represents a bearing-spring, which is arranged between the top of the car and the rear end of the said lever, the function of the said spring being to normally raise the rear end of the lever.

P represents a rod, which is attached to and depends from the projecting front end of the lever N. The lower end of the said rod is bifurcated or divided to form arms R, which are pivoted to openings in the upper ends of the coupling-jaws G.

It will be observed from the foregoing that as the spring bears upwardly on the lever N it forces the rod P downward, and thereby causes the coupling-jaws to be forced downward in the draw-head A, so that their inclined lower ends bear against the inclines F in the lower sides of the recess E.

S represents a draw-head, which is secured on the under side of the opposing car. This draw-head S is provided with a longitudinal opening, through which extends a coupling-rod, T. The said rod is provided on one side with a series of rack-teeth, U, and has at its front end an enlarged conical head, V, which is adapted to enter the openings D and B in the draw-head A. The coupling-rod T extends under the car throughout its entire length, so that the ends of the coupling-rod project beyond the ends of the car. The coupling-rod is guided and supported under the car by means of suitable keepers, X.

Y represents a vertical shaft, which is journaled near the end of the car to which the draw-head S is attached. The lower end of the said shaft is provided with a pinion, Z, which meshes with the rack-teeth U of the rod T, and the upper end of the shaft has a hand-wheel, A′, by means of which it may be rotated, so as to cause the pinion to turn, and thereby move the rod T endwise, so as to cause the head V thereof to be projected from or withdrawn into the draw-head S.

The operation of my invention is as follows: In order to couple the cars, the shaft Y is turned so as to project the head V from the draw-head S. When the cars come together, the said head V enters the opening D in the cap C and extends between the coupling-jaws G, forcing them apart against the resistance of the springs L until the head V enters the opening B, when the jaws move toward each other as soon as the base of the head V passes beyond them. The spring-actuated jaws thus engage the said head and securely couple the cars together.

In order to uncouple the cars, the lever N is depressed, so as to cause the rod P to move the coupling-jaws G upward, and as the inclined lower ends of the said jaws move upward on the inclines F they diverge or move from each other a sufficient distance to clear the base of the head V of the coupling-rod, and thereby release the said rod and disconnect the cars.

If it is desired to let the cars come together without coupling, this may be accomplished by turning the shaft Y so as to withdraw the head V of the coupling-rod into the draw-head S, and thus prevent the said head V from entering the opening in the draw-head A.

Having thus described my invention, I claim—

1. The combination, in a car-coupling, of the draw-head A, having the longitudinal opening B, and the vertical recess E, intersecting the said opening, and having the cams F on its opposing lower sides, with the vertically-movable rod P and the coupling-jaws G, connected to the said rod and working in the recess E, the said coupling-jaws having the curved or inclined lower ends, H, to bear against the inclines F, and the springs L to normally move the coupling-jaws toward each other, substantially as described.

2. In a car-coupling, the draw-head A, having the longitudinal opening B, the cap C on the outer end of the draw-head, and having the opening D, to communicate with the opening B, and provided with the recess E on its inner side, the said recess having the inclines F on opposite sides, in combination with the vertically-movable coupling-jaws G, having the inclines H on their lower ends to engage the inclines F, and the springs L to force the said coupling-jaws toward each other, for the purpose set forth, substantially as described.

3. In a car-coupling, the combination of the draw-head and the longitudinally-movable coupling-rod therein, having the enlarged shouldered head V, adapted to be drawn into or projected from the draw-head, substantially as described.

4. In a car-coupling, the combination of the draw-head, the longitudinally-movable coupling-rod T therein, having the enlarged shouldered head V, and provided with the rack-teeth U, and the shaft Y, having the pinion Z to engage the said rack-teeth, substantially as described.

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

WILLIAM HENRY WELLSTEED.

Witnesses:
COVELL C. R. ROYCE,
F. C. BUCK.