

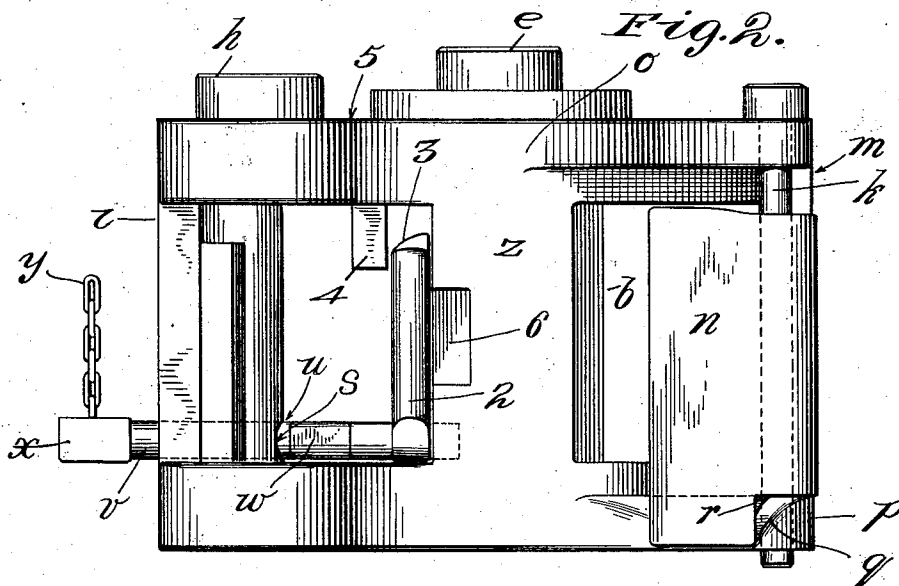
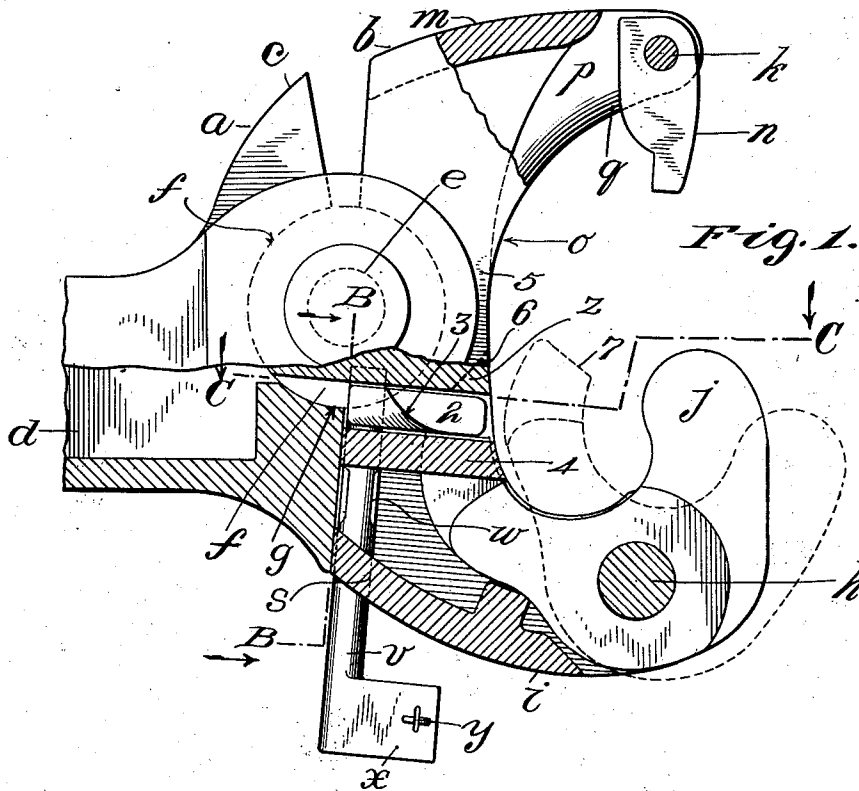
J. V. MUNGER.
CAR COUPLING.

APPLICATION FILED JULY 27, 1910.

Patented Mar. 26, 1912.

2 SHEETS—SHEET 1.

1,021,698.



Witnesses:
Hamp. Hebig
W. Hamilton.

James V. Munger Inventor
By his Attorney
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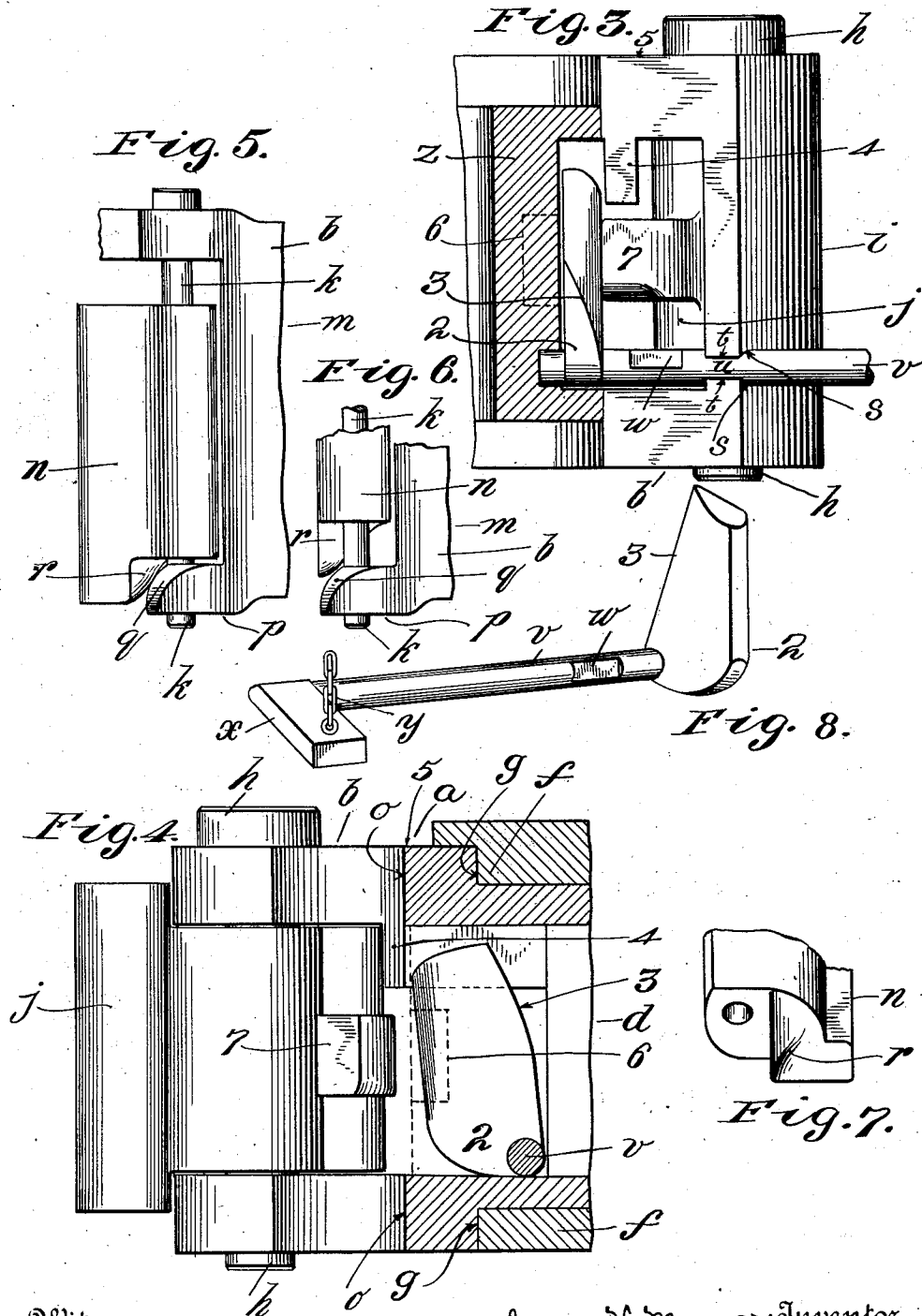
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Harry Hebig
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UNITED STATES PATENT OFFICE.

JAMES V. MUNGER, OF PORTLAND, NEW YORK, ASSIGNOR TO GEORGE H. DUNHAM, OF WARREN, PENNSYLVANIA.

CAR-COUPLING.

1,021,698.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed July 27, 1910. Serial No. 574,052.

To all whom it may concern:

Be it known that I, JAMES V. MUNGER, a citizen of the United States, residing at Portland, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in car-couplers; and an object of this invention is to cheapen the construction, lessen the cost of repair and increase the durability of the locking parts of automatic car-couplers.

In the drawings illustrating the principle of this invention and the best mode now known to me of applying that principle, Figure 1 is a plan, partly in section, of so much of a car-coupler as is necessary to illustrate my invention; Fig. 2 is a front elevation of what is shown in Fig. 1, except that the jaw or knuckle is omitted from Fig. 2; Fig. 3 is a section on the line B—B of Fig. 1; Fig. 4 is a section on the line C—C of Fig. 1, the knuckle or jaw being open; Fig. 5 is a detail showing the locking guard in elevation and turned inwardly slightly on its pivot-pin; Fig. 6 is a detail which shows the lower portion of the locking guard, when the latter is forced inwardly toward the buffing face; Fig. 7 is a detail in perspective of the lower cam-faced end of the locking guard viewed from the inside; and Fig. 8 is a detail showing the lock plate and its shaft detached.

The coupler-head *a* is two-part, being made up of the coupling member *b* and the drawbar member *c*. The latter is formed integral with the drawbar *d* and is connected to the coupling member *b* by means of a pin *e*, so that the coupling member is free to swing on the drawbar member of the coupler-head. Projecting rearwardly from the top and bottom of the drawbar member *c* are the tongues *f* which fit in recesses *g* formed in the top and bottom of the coupling member *b*. Mounted free to turn on the pivot-pin *h* at the front end of cheek *i* of the coupling member *b* is the usual jaw or knuckle *j*; and rotatably mounted on the pivot-pin *k* in the front end of the opposite cheek *m* is the locking guard *n*. The latter is free to slide vertically on its pivot-pin *k*. It will be understood that, when the locking-guard *n* is struck by the knuckle of an opposing coupling

member in the operation of coupling, the locking guard will yield and turn inwardly on its pivot-pin *k* toward the buffing face *o*. By reason of the following construction, this inward movement of the locking guard results in an upward vertical movement of the same on its pivot pin *k*. The lower edge of the cheek *m* is formed with an inwardly-projecting flange *p* which is shaped with a cam face *q* on which rests the lower end of the locking guard *n* having a cam *r*. The cams *q*, *r* are normally in contact with each other; and, when the locking guard is forced inwardly on its pivot-pin *k* toward the buffing face *o*, these two cams rub against each other, whereby it results that the locking guard *n* is raised (see Figs. 2, 5 and 6). When the locking guard is relieved of the pressure of the knuckle of the opposing coupler-head, it falls, being thus gravity-controlled; and, by virtue of the action of the cams *q*, *r*, it resumes its outward or locking position.

In the rear edge of the cheek *i* is formed a recess *s* the walls *t* of which are separated by the interval or opening *u*. In the groove *s* is mounted free to turn the outer end-portion of a lock-plate shaft *v*. The latter is cut away near its middle to form a reduced portion *w* and on its outer end is an enlargement or boss *x* which serves as a weight and also as a point of attachment for the usual operating chain *y* by which the lock-plate shaft *v* may be turned to release the knuckle or jaw *j* as hereinafter described. The inner end of the shaft *v* is pivotally mounted in a side-wall of the partition block *z* and is formed with the integral lock-plate 2, which is cut away at its rear edge, as is shown at 3, whereby the center of gravity of the lock-plate is thrown to the front and the lock-plate tends normally to assume its locking position. This tendency is increased by the weight of the boss *x*. The lock-plate 2 is held from lateral or sidewise displacement by means of a downwardly-projecting rib 4 which extends inwardly from the top 5 of the coupling member *b*. The lock-plate 2 and its shaft *v* may be readily removed from the latter by first removing the connecting-pin *e* and uncoupling the members of the coupler-head *a* from each other. The lock-plate shaft *v* is then turned toward the rear, until the lock-plate 2 clears the inwardly-extending rib 4.

The shaft *v* may then be drawn outwardly to release its inner end from the partition block *z* and to bring its reduced portion *w* into register with the interval *u* between the edges of the walls *t* of the recess *s*. This interval *u* is of just sufficient size to permit the reduced portion *w* to pass and, therefore, the shaft *v* is retained in the recess *s* (the walls of which serve as a bearing for it), until the reduced portion *w* is brought into register with the interval *u*, as just described.

The partition block *z* is formed with a recess or notch 6 to permit the passage of the tailpiece 7 of the knuckle *j*, when the latter swings to its unlocking position (see the dotted line position of Fig. 1).

I claim:

1. In a car-coupler, the combination of a drawbar member; a coupling member detachably connected therewith; a knuckle mounted on said coupling member; a stop device for said knuckle; and a shaft on which said stop device is mounted; one of said members being formed with a recess in which said shaft is rotatably mounted and the latter being formed with a reduced portion adapted to pass through the opening between the walls of said recess to permit the ready removal of said shaft from said recess, when said members are disconnected from each other.

2. In a car-coupler, the combination of a coupling member; a knuckle mounted thereon; a stop device for the latter; and a shaft on which said stop device is mounted; said member being formed with a recess in which said shaft is mounted and said shaft being formed with a part shaped to pass readily through the opening between the walls of said recess in a direction other than lengthwise of said shaft.

3. In a car-coupler, the combination of a drawbar member; a coupling member connected therewith detachably; a knuckle mounted on said coupling member; a stop device for said knuckle; and a shaft on which said stop device is mounted; said coupling member being formed with a stop which prevents the lateral displacement of said stop device and the lengthwise displacement of its shaft and with a recess in which the latter is mounted and from which it is readily removable, after said members are disconnected from each other.

4. In a car-coupler, the combination of a draw-bar member; a coupling member detachably connected therewith; a knuckle mounted on said coupling member; a locking device for said knuckle; and a shaft on which said locking device is mounted and which extends transversely of the rear face of said coupling member and is opposed to the front face of said drawbar member; said coupling member being formed in its rear face with a recess in which said shaft is

mounted and from which the same is readily removable, after said members are disconnected from each other.

5. In a car-coupler, the combination of a drawbar member; a coupling member detachably connected therewith; a knuckle mounted on said coupling member; a lock-plate for said knuckle; and a shaft which carries said lock-plate; said coupling member being formed with a stop which engages said lock-plate and prevents thereby lengthwise displacement of said shaft; one of said members being formed with a recess in which said shaft is mounted said lock-plate being adapted to be thrown away from said stop and thereby render said shaft displaceable lengthwise and readily removable from said recess, after said members are disconnected from each other.

6. In a car-coupler, the combination of a drawbar member; a coupling member detachably connected therewith; a knuckle mounted on said coupling member; a lock-plate for said knuckle; and a shaft which carries said lock-plate; said coupling member being formed with a stop which engages said lock-plate and thereby prevents lengthwise displacement of said shaft; that face of one of said members which is opposed to the other of said members being formed with a recess in which said shaft is mounted and said lock-plate being adapted to be thrown away from said stop and thereby render said shaft free to be displaced lengthwise and readily removed from said recess, after said members are disconnected from each other.

7. In a car-coupler, the combination of a coupling member; a knuckle mounted thereon; a lock-plate for the latter; and a shaft on which said lock-plate is mounted; said member being formed with a recess in which said shaft is mounted and with a stop which is arranged to engage said lock-plate and thereby prevent lengthwise displacement of said shaft and away from which said lock-plate is adapted to be thrown to render said shaft free to be displaced lengthwise and removed from said recess.

8. In a car-coupler, the combination of a drawbar member; a coupling member detachably connected therewith; a knuckle mounted on said coupling member; a lock-plate for said knuckle; and a shaft on which said lock-plate is carried; one of said members being formed with a stop which is arranged to engage said lock-plate and thereby prevent lengthwise displacement of said shaft and one of the opposed faces of said members being formed with a recess in which said shaft is mounted; the other of said faces being arranged to limit the rotation of said lock-plate away from said stop, when said members are connected; said shaft being formed with a reduced portion

adapted to pass through an opening between the walls of said recess, after said members are disconnected from each other and said lock-plate has been thrown away
5 from said stop and said shaft has been thereby made free to be displaced lengthwise to bring said reduced portion into proper position.

In testimony whereof I hereunto set my hand in the presence of the two undersigned witnesses at Portland, New York, this twenty-third day of July, 1910.

JAMES V. MUNGER.

Witnesses:

FRED B. LEWIS,
A. D. TITUS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
