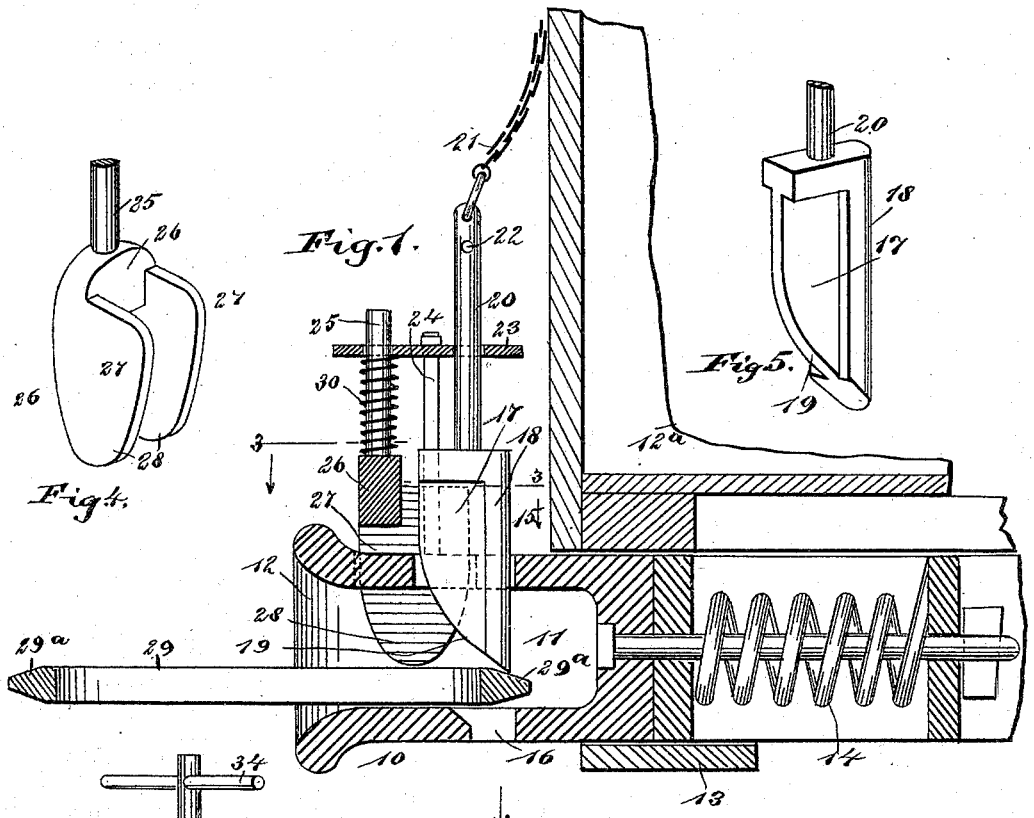
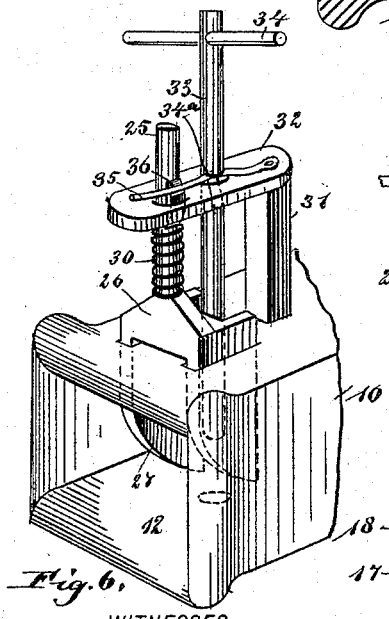
(No Model.)

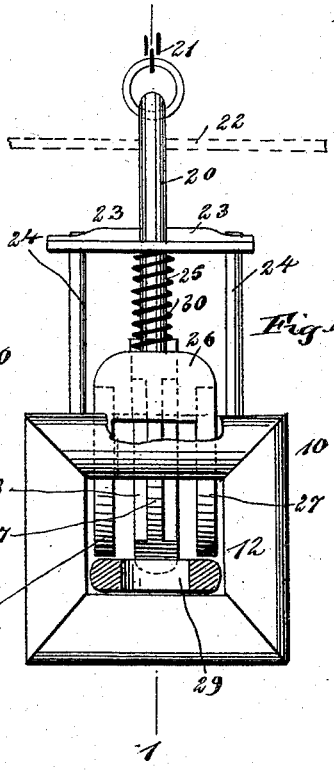
J. B. BAUM & O. F. SENSABAUGH.

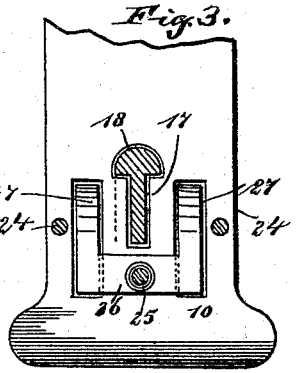
CAR COUPLING.

No. 492,376. Patented Feb. 21, 1893.









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UNITED STATES PATENT OFFICE.

JAMES B. BAUM AND OSCAR F. SENSABAUGH, OF DURANGO, COLORADO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 492,376, dated February 21, 1893.

Application filed April 19, 1892. Serial No. 429,698. (No model.)

To all whom it may concern:

Be it known that we, JAMES B. BAUM and OSCAR F. SENSABAUGH, both of Durango, in the county of La Plata and State of Colorado, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

Our invention relates to improvements in car couplings; and the object of our invention is to produce a simple, cheap, strong, and durable car coupling which may be applied readily to any ordinary car, which will automatically couple with an opposing coupler when the two are pushed together, and which may be uncoupled from the top and sides of the car, thus obviating the necessity of having a brakeman step between the cars.

To this end our invention consists in a car coupling, the construction of which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a vertical longitudinal section on the line 1—1 in Fig. 2, of the coupling, showing our improvements. Fig. 2 is a broken end view of the coupling with the link in section. Fig. 3 is a sectional plan on the line 3—3 in Fig. 1. Fig. 4 is a detail perspective view of the link holder and guide. Fig. 5 is a detail perspective view of the coupling pin; and Fig. 6 is a perspective view of a modified form of the coupling.

The drawbar 10 is substantially like the ordinary drawbar and it has the usual link recess 11, and flaring mouth 12, and is supported beneath the car 12^a upon a cross bar 13 and is backed by the ordinary buffer spring 14. In the top wall of the drawbar is a recess 15 and in the lower wall is a recess 16, which aligns with the recess 15 but is somewhat smaller, these recesses being adapted to receive a coupling pin 17 which is adapted to move vertically through the drawbar and which is preferably of a flat shape and provided at its back edge with a strengthening flange 18. The front lower portion of the pin is curved rearward, as shown at 19, and the lower extremity of the pin is thus brought to a point. This arrangement enables the pin to be raised by the coupling link when it is pushed into the drawbar, as the pressure of the link on the curved or inclined surface of the pin will crowd the pin upward. The pin has at the top a shank 20 which is secured to a chain 21 extending to the top of the car, so that the link may be raised from this point, and if desired, any ordinary lever mechanism may be employed for lifting the pin from the sides or top of the car. The pin may be provided, if desired, with a handle 22 near its upper end to enable it to be easily raised by hand. The pin shank 20 is held to slide vertically through a plate 23 which is held above the drawbar and is supported by uprights 24 which are secured at their lower ends to the drawbar. This plate 23 also serves as a guide for the shank 25 of the link holder and guide 26, which holder has on opposite sides depending parallel side pieces 27 which extend downward into the drawbar and are held to move in recesses therein, as shown in Fig. 3, the side pieces being arranged in front of the pin and having rounding lower ends 28 which enable the coupling link 29 to be pushed easily beneath them.

The holder 26 is normally pressed downward by a spiral spring 30 which encircles the shank 25 and is arranged between the body of the holder and the plate 23.

The operation of the coupling is as follows:—When the link 29 is pushed into the drawbar 11, it slips beneath the side pieces 27 of the holder 26 and also crowds its way beneath the coupling pin 17, and in order that this may be more easily done, the link is preferably provided with thinned or beveled ends 29^a, as shown in Fig. 1. When the inner end of the link has passed the coupling pin, the coupling pin drops through the link of its own weight and the lower end of the pin enters the recess 16, the flange 18 engaging the vertical wall of the recess, and the link is thus securely locked in place. To uncouple the cars, the pin 17 is raised by means of the chain 21, and the link 29 may be pulled out. When the link is in position in the drawbar the side pieces 27 of the link holder will be pressed downward by the spring 30, and the pressure of these side pieces upon the inner end of the link will hold the link in a sub-

stantially horizontal position, as in Fig. 1, and the link will thus be held so as to automatically enter an opposing coupling.

In Fig. 6 we have shown a modified form of coupling in which an upright 31 is secured to the top of the drawbar and provided with a top plate 32 in which a coupling pin 33 is held, this pin being adapted to move vertically through a hole in the drawbar and having at its upper end a suitable handle 34. In one side of the pin 33 is a notch 34^a which is adapted to receive a spring 35 secured to the top plate 32, and the notch is placed at such a point on the pin that the spring will engage the notch when the pin is raised and hold the pin out of the way of a coupling link. The link holder 26, in this case, is like that already described and the shank 25 of the holder moves through the top plate 32 and has on one side a cam 36 which is adapted to engage the spring 35 and push the same out of the notch 34^a, so as to permit the pin 33 to drop; it follows then that when the link is pushed into the drawbar the holder 26 will be raised and the cam 36, striking the spring 35, will release the pin 33 and permit the same to drop through the link, thus fastening the link in position.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination with the drawbar and the vertically movable coupling pin, of a spring-pressed link holder held in the drawbar in front of the pin, the link holder having depending side pieces to press upon the sides of the link, substantially as described.

2. The combination with the drawbar, of the vertically movable coupling pin having an inclined front side, and the spring-pressed link holder held in front of the pin and having parallel side pieces to engage the sides of the link, substantially as described.

3. The combination with the drawbar having recesses in its upper and lower walls, of the inclined pin having a back flange to engage the lower recess wall, and a spring-pressed link holder held in the drawbar in front of the pin, the link holder having depending parallel side pieces to press upon the sides of the link, substantially as described.

4. The combination with the drawbar having a suitable coupling pin, of the guide plate held above the drawbar and the link holder having depending side pieces with rounded lower ends, these side pieces being held to move in the drawbar in the path of the link, and an upwardly extending shank held to move in the guide plate, substantially as described.

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