(No Model.)

H. A. HANNA.

CAR COUPLING.

No. 596,875. Patented Jan. 4, 1898.

Fig. 1.

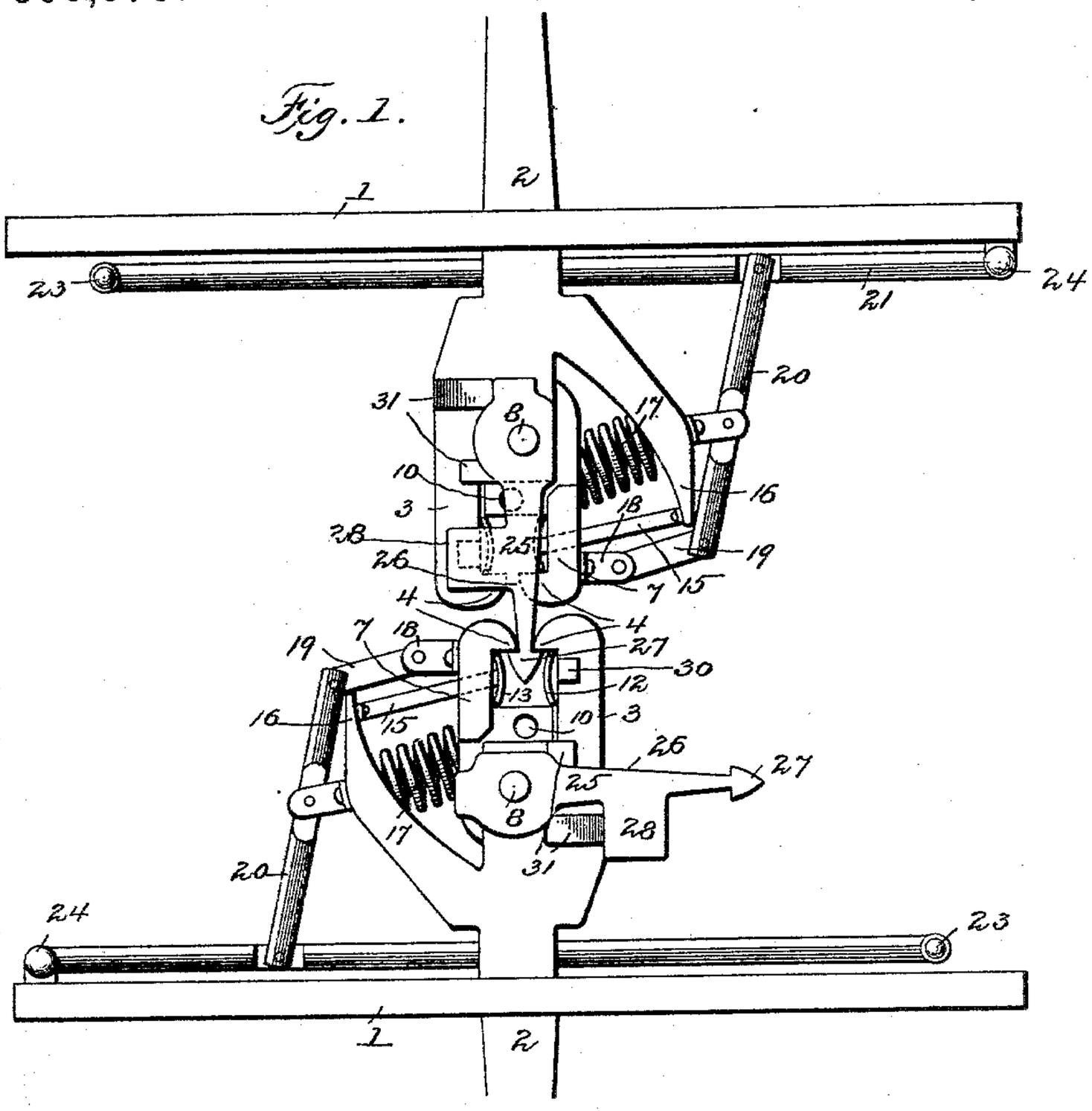


Fig. 2.

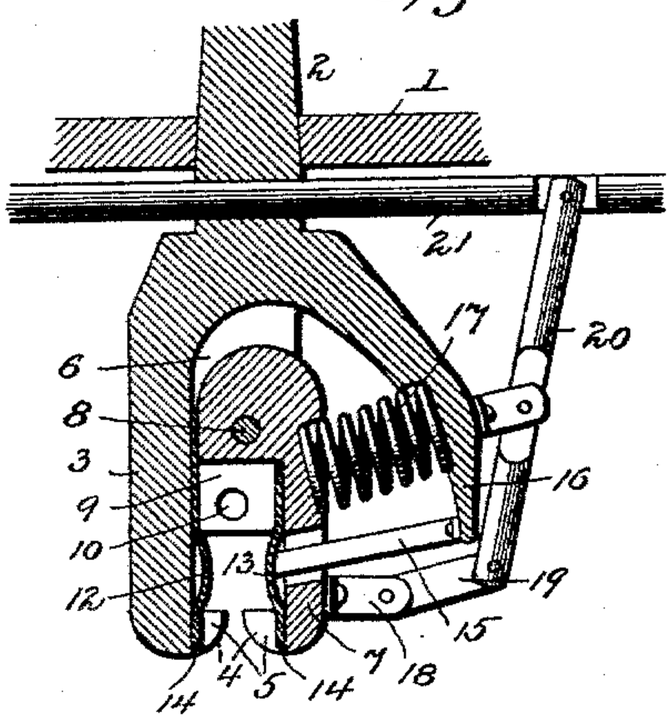


Fig. 3.

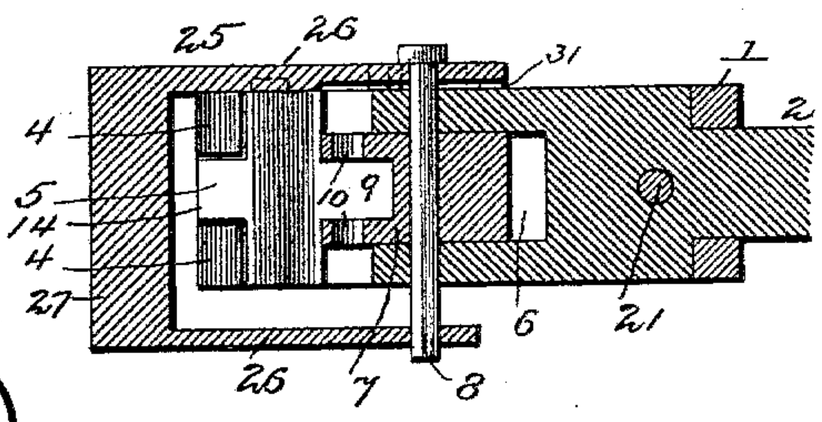
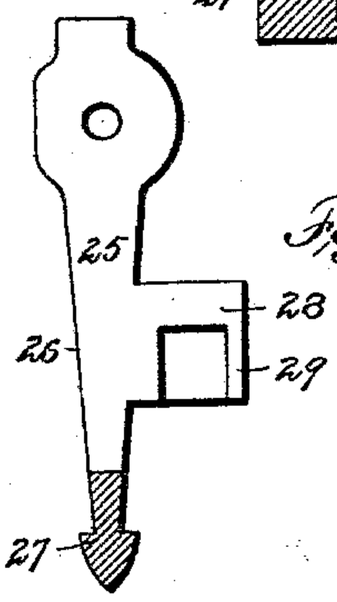


Fig. 4



Witnesses
John Enders, jr.
Edward Hoare.

Inventor
Harry A. Hanna.
By L. Deane & Son.
his Attorneys.

UNITED STATES PATENT OFFICE.

HARRY A. HANNA, OF ST. PAUL, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 596,875, dated January 4, 1898.

Application filed May 4, 1897. Serial No. 635,026. (No model.)

To all whom it may concern:

Be it known that I, HARRY A. HANNA, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in spear-head yoke-link car-couplings of that class or description which are automatically coupled when the cars come together, thereby obviating the necessity of a brakeman or other person going between the same for the purpose of coupling the cars.

The object of the invention is to provide an improved construction of the same which shall possess superior advantages with respect to efficiency in use and which can also be used with the ordinary link couplers and pins, if necessary.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a plan view showing two car-couplers constructed according to my invention connected or coupled together. Fig. 2 is a central horizontal section of one of the couplers. Fig. 3 is a central longitudinal section. Fig. 4 is a detail of the upper arm of the link.

In the said drawings the reference-numeral 1 designates the cross-beam, which is secured to the end of a car, and 2 a draw-bar which is secured to the beam and car in any suitable manner. The outer end of this draw-bar is formed with a curved stationary jaw 3, having two inwardly-extending beveled lugs 4, with a central space 5 therebetween. The draw-bar in rear of this curved bar is cut away, forming a recess 6, in which is located the inner end of a jaw 7, pivotally connected therewith by a vertical pin 8. The front end of this jaw is formed with beveled lugs 4 and a recess 5, similar to and coinciding with the lugs and space of the stationary jaw. This pivoted jaw is formed with a slot 9 and alined openings 10 to receive an ordinary link and coupling-pin, when necessary. Secured to the inner end of said pivoted jaw are spring guide-plates 12 and 13, having a forwardly-projecting tongue 14 at the front or free end which rests in the central spaces 5. The said plate 13 is provided with an outwardly-projecting bar 15, which extends through an opening in said pivoted jaw, and its outer end is secured to the end of a curved arm 16, formed integral with the draw-bar. A coiled spring 17 is also interposed between the said arm and pivoted jaw, the tendency of which is to force said jaw inward or toward the stationary jaw. Secured to the said pivoted jaw is a bracket 18, to which is pivoted a link 19, which in turn is pivoted to a lever 20, pivoted to said arm 16. This lever is connected with a transverse bar 21, passing loosely through an aperture in the draw-bar and provided at one end with a handle 23 and at the other end with a lever 24, by which it may be operated.

The numeral 25 designates the coupling-yoke link, consisting of two parallel horizontal arms 26, pivotally connected with the pivot-pin, which connects the stationary and pivoted jaws, and the vertical spear-shaped head 27, which engages with the lugs 4 on the outer ends of said jaws. The link at one side is formed with a lug 28, having a groove which forms a downwardly-projecting flange 29, which engages with a stud 30 on the stationary jaw, which keeps the said head alined with the jaws of an approaching car, yet permits it to give or yield sidewise when it strikes the jaws of the draw-bar. Said stationary jaw is also provided with studs 31, with which the upper horizontal arm of the link engages and is held when thrown to one side.

The operation is as follows: As the two cars approach each other the beveled or spear head of one link will strike and enter the jaws of the draw-bar. When the said head passes the beveled lugs of the jaws, the pivoted jaw will be forced inward by the coiled spring, so as to engage therewith. To uncouple the cars, the transverse bar 21 is moved sidewise and by means of the connection will draw the pivoted jaw outward, when the guide-plates will force the spear-head out of engagement with the lugs of the jaws. It will be seen that one of these guide-plates moves

inward with the said jaw, while the other will be pushed inward by the bar connected with the curved arm.

To enable an ordinary link to be used, the yoke-link is lifted, so as to disengage the lug 28 from the stud 30, and thrown or turned to one side and then let fall to engage with the studs 31, by which it will be held in place. The distance between the horizontal arms of the yoke-link is somewhat greater than the height of said jaws to permit the rising-and-falling movement.

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

1. In a car-coupler of the character described, the combination with the draw-bar and the fixed jaw, having a stud on its upper side, of the pivoted spring-actuated jaw, and the yoke-link, pivoted to said draw-bar, having an outwardly-extending lug and a flange engaging with said stud, substantially as specified.

2. In a car-coupler of the character described, the combination with the draw-bar, the stationary jaw slotted at the inner end and provided with alined holes, and the studs on the said jaw, of the pivoted spring-actuated jaw, and the pivoted, vertically-movable yoke-link, having an outwardly-extending lug provided with a flange, substantially as specified.

3. In a car-coupler of the character described, the combination with the draw-bar, the fixed jaw having a stud on its upper side and the curved arm, of the pivoted jaw, the coiled spring, the spring-guides secured to said pivoted jaw, formed with tongues located in recesses in the front ends of said jaws, and one of said guides provided with an arm extending through a hole in the pivoted jaw and secured to said curved arm, and the pivoted yoke-plate provided with a lug having a flange at the end and means for operating said pivoted jaw, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY A. HANNA.

Witnesses:
DAVID HANNA,
T. R. PALMER.