No. 632,861. Patented Sept. 12, 1899.

J. C. YEISER & E. B. HANCOCK.

CAR COUPLING.

(Application filed Feb. 21, 1899.)

(No Model.)

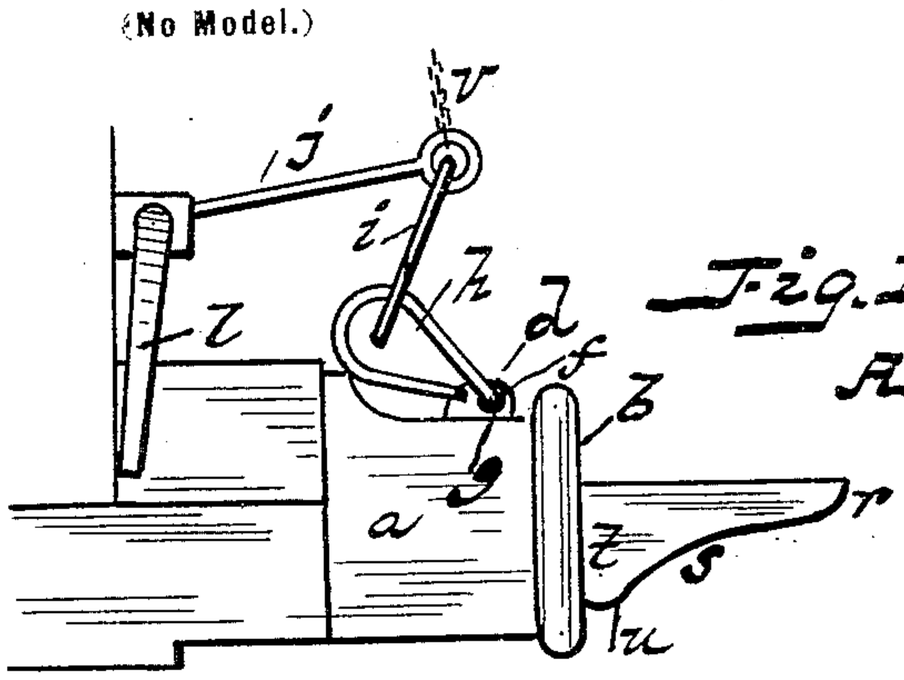
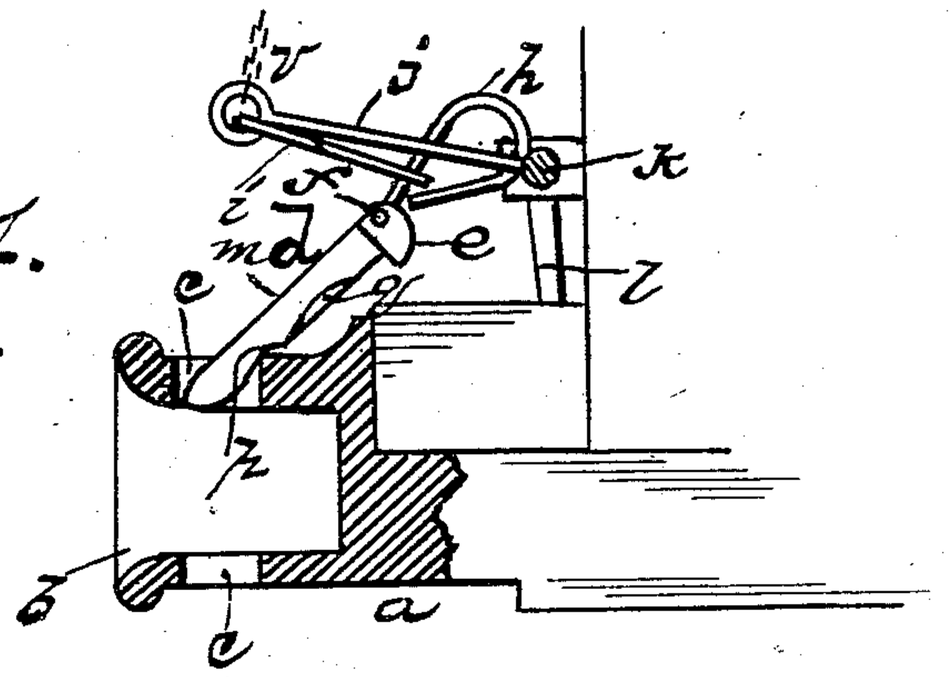


Fig. 1.



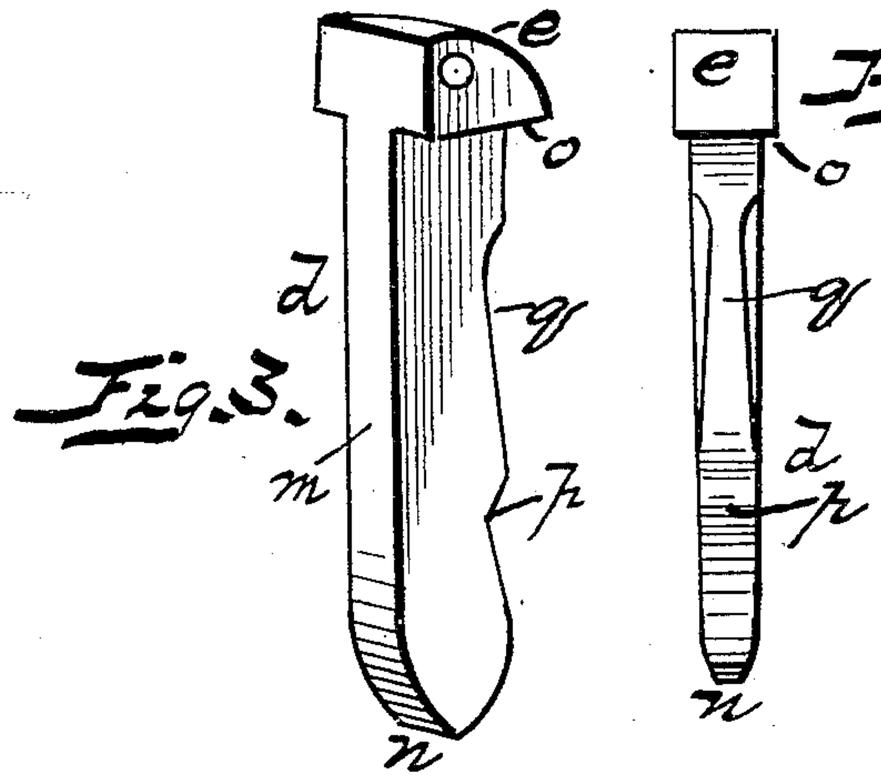


Fig. 3.

Fig. 4.

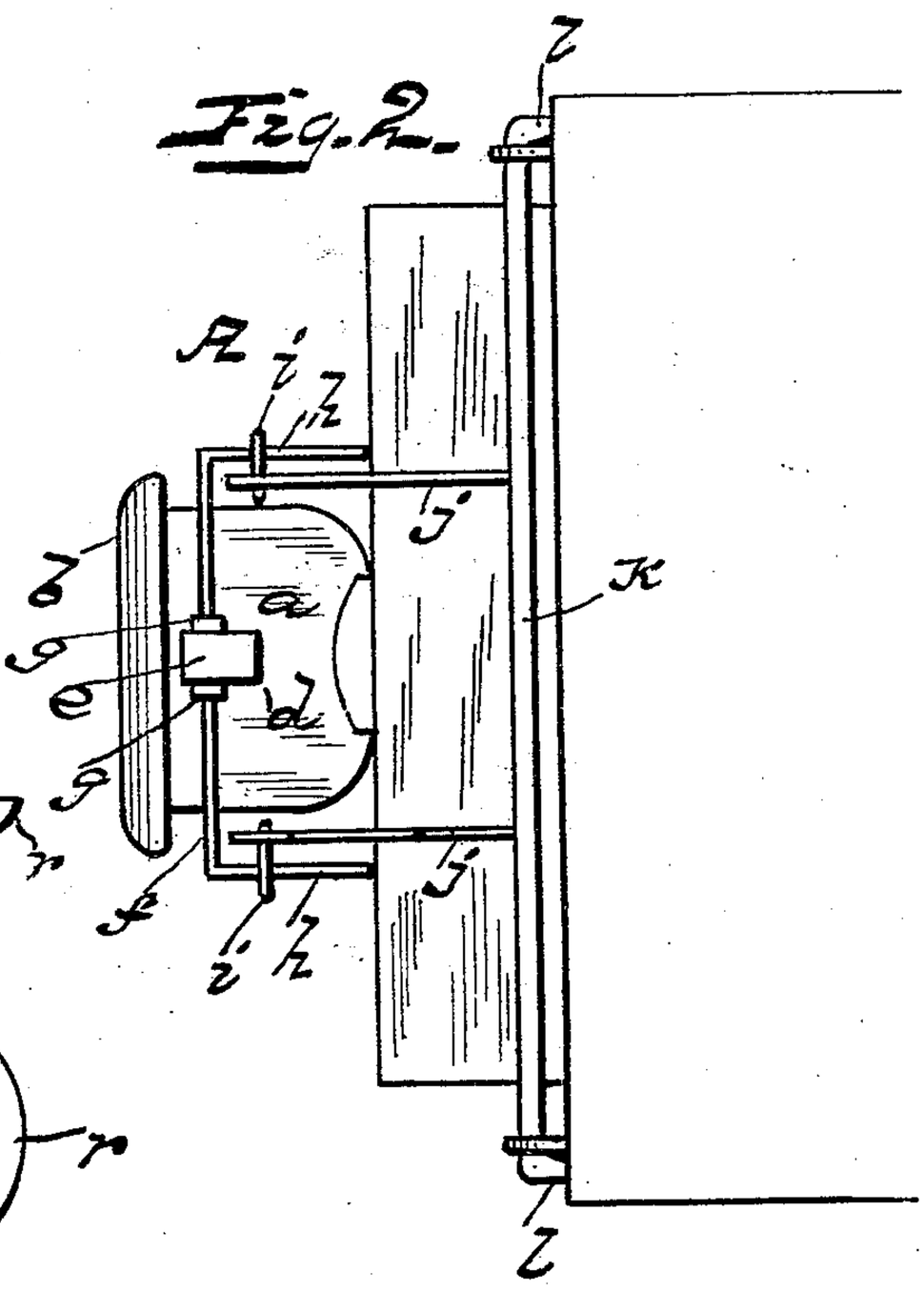


Fig. 2.

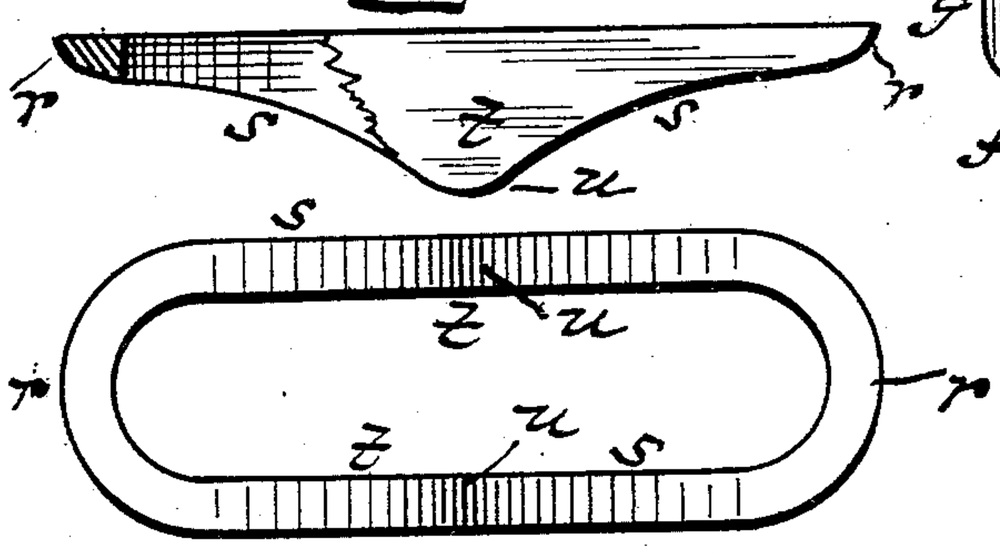


Fig. 5.

Fig. 6.

WITNESSES

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 632,861, dated September 12, 1899.

Application filed February 21, 1899. Serial No. 706,428. (No model.)

To all whom it may concern:

Be it known that we, JOHN C. YEISER and EDWIN BRIGHAM HANCOCK, citizens of the United States, residing at Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Car-Coupling Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in automatic couplers for cars; and it consists in the novel construction and arrangement of parts of which it is composed, all as will be hereinafter fully described, and particularly pointed out in the claims.

The annexed drawings, to which reference is made, fully illustrate our invention, in which—

Figure 1 represents a vertical sectional view of our car-coupler, one draw-head being a side view. Fig. 2 is a plan view of the same. Fig. 3 is a perspective view of the coupling-pin. Fig. 4 is a rear view of the same. Fig. 5 is a side view, part sectional, of the link; and Fig. 6 is a plan view of the same.

Referring by letter to the accompanying drawings, A designates the car-coupling consisting of the draw-head *a*, that is attached to the end of the car in the usual manner. This draw-head has the flaring mouth *b* and the vertical openings *c c* for the pin *d*, which latter is provided with a transverse opening in the head to receive the transverse rod *f*, to which this pin is pivoted, collars *g g* on either side of said pin preventing the pin from lateral movement on said rod. This transverse rod *f* is provided with looped arms *h h*, that are bent at right angles to said rod, and the same are connected to split links *i i*, that in turn are connected to the outer end of the arms *j j*, which are extended at right angles from a transverse rod *k*, having at each side an arm forming handles *l l*, said bar being pivoted to the car, as shown in the drawings.

The coupling-pin, as well as the coupling-link, is of peculiar construction. The pin has a flat face *m* and a rounded lower end *n* and a shoulder *o*, which extends to all sides near the head, and flat to permit the pin to rest squarely upon the face of the upper slot of the draw-head when the pin is in position and the cars are coupled. This pin is rounded at its point in rear and slightly rounded or beveled on its sides at said point, as well as being provided with a shallow notch *p* on its rear face, while above said notch the pin is rounded, as at *q*, thus presenting no sharp angles or corners to the coupling-link when the latter is in position. In constructing the pin with its rounded point the same is not liable to strike the sides of the lower slot in the draw-head, but will enter the same and be guided easily into said slot and through the link, which latter is constructed with beveled ends *r r*, from which the sides *s s* curve toward the center *t*, where the sides of the link terminate at a point *u*, whereby the central portion of said link is wider than the ends thereof. This construction of link is designed to be placed in different positions to accommodate itself to different heights of cars. Thus when it is desired to couple with a higher opposite draw-head the link is set back in its draw-head, the link resting on the points *u u*, which elevates the outer end of said link to meet the higher draw-head on the opposite car. Should an opposite car have a lower draw-head, the link is withdrawn from its draw-head, when the outer end of said link will have a downward inclination, thereby meeting the lower draw-head of the opposite car, and from the construction of our link it allows cars to be coupled to any draw-head now in use. A chain or cord *v*, connected to the outer end of the lifting-arm, may extend to the roof of a box or freight car, whereby the uncoupling may be accomplished from the roof of said car.

It will be seen from the above description, when taken in connection with the annexed drawings, that in uncoupling the cars the operator, standing by the side of the same and out of danger, simply raises the handle-bar, thereby raising the outer end of the arms, and through the medium of the links *i i* and looped transverse bar *f* the pin is raised from engagement from the coupling-link, and at the same time the pin is thrown back in an inclined position on its draw-head, the notch *p* in the rear of said pin engaging the rear edge of the upper slot and upper surface of the draw-head, and will remain in that position until the car is to be again coupled, when the shock caused by the cars coming together

will cause the pin to disengage the said notch and drop to a vertical position and through the link entering the draw-head. The rounded rear portion of the pin prevents the pin from being raised by the working of the link against the same, thus preventing accidental displacement of the pin in permitting the cars to be accidentally uncoupled.

While our device is applicable to the draw-heads now in use, still in constructing our draw-head we would make the upper portion somewhat thicker for strength than the lower portion, and in constructing our coupling-pin we make the same of flat sides and face with square edges and short as well as heavy, the weight of which has a tendency to cause the pin to drop quickly when the cars come together and couple, and the pin has a short head with shoulders which rest upon the upper surface of the draw-head above the upper slot, and the pin being short and thick it is not liable to be bent or wedge in the draw-head, and the looped arms, with their connecting-links, are intended to give weight to the outer ends of the arms *j j*, whereby the handle-bars are kept close and in position to the front of the car and said handles prevented from rising up and raising the pin and accidentally uncoupling the cars.

The arms of the lever can be constructed of either flat or round material, and the lifting-arms can be either bolted or welded to the transverse operating-bar or formed integral therewith.

It will be further observed that by our invention the link is always in position on the draw-head for coupling by impact, and either end of the link will enter draw-heads varying in height, and by the peculiar shape of our coupling-link the same accommodates itself to the flaring mouth of the draw-head, and the end of the link rests on the lower portion or floor of the draw-head and is held in position by the pin and the link caused to couple closely to one another, thus taking up any slack between the draw-heads, and the links being short and heavy in the center will hold the cars at a high rate of speed over grades and around curves without danger of breaking or the cars becoming accidentally uncoupled, and such a link will prevent the rocking or up-and-down movement of the cars and cause the same to travel steady, and a device as herein described is simple in construction and operation, durable, and is not liable to get out of order. At the same time the operator in uncoupling the cars is not required to go between them, but can stand to one side and uncouple them simply by raising the hand-lever on either side of the car, and being a self-coupler services of an operator for coupling the cars is not needed.

When two cars are to be coupled, both having a link already in the draw-head, it becomes necessary to drop one on the ground, which can be done by the operator raising the handle-bars of either car without going between the cars, and, further, when switching the cars and making up trains and kicking off cars the pin will not fall, but remain in position for coupling until the actual impact.

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

1. In a car-coupling, the combination with the draw-head, bar *f*, arms *j*, *j*, a bar *k*, having end handles, links *i*, *i*, and coupling-link, of the coupling-pin constructed with the beveled notch *p*, and rounded portion *q*, all substantially as described.

2. In a car-coupling, the combination with the transverse handle-bar *k*, of the arms *j*, *j*, bar *f*, links *i*, *i*, pin *d*, constructed with the notch in its rear edge and the coupling-link, all substantially as described.

3. In a car-coupling, the within-described coupling consisting of the draw-head, having upper and lower slots, the pin entering these slots and provided with the rounded point, a rounded rear face and shoulder, and a notch in the rear face thereof, and pivoted to the cross-bar *f* said bar having its ends bent at right angles to the body, and forming loops *h*, *h*, the split links *i*, *i*, and the operating pivoted handle-bar *k* having lifting-arms *g*, *g*, said split links interposed between said loops and the outer ends of the lifting-arms, and the coupling-link constructed with beveled ends and expanded side portions, the longer portion of said expanded sides being midway between the beveled ends of the links, all as shown and described.

In testimony whereof we have affixed our signatures in presence of two witnesses.

JOHN C. YEISER.
E. B. HANCOCK.

Witnesses:
C. H. MILLER,
J. W. MCCLENDOR.