No. 803,579. PATENTED NOV. 7, 1905.

J. A. FRENZEL.

CAR COUPLING.

APPLICATION FILED JULY 10, 1905.

Fig. 2.

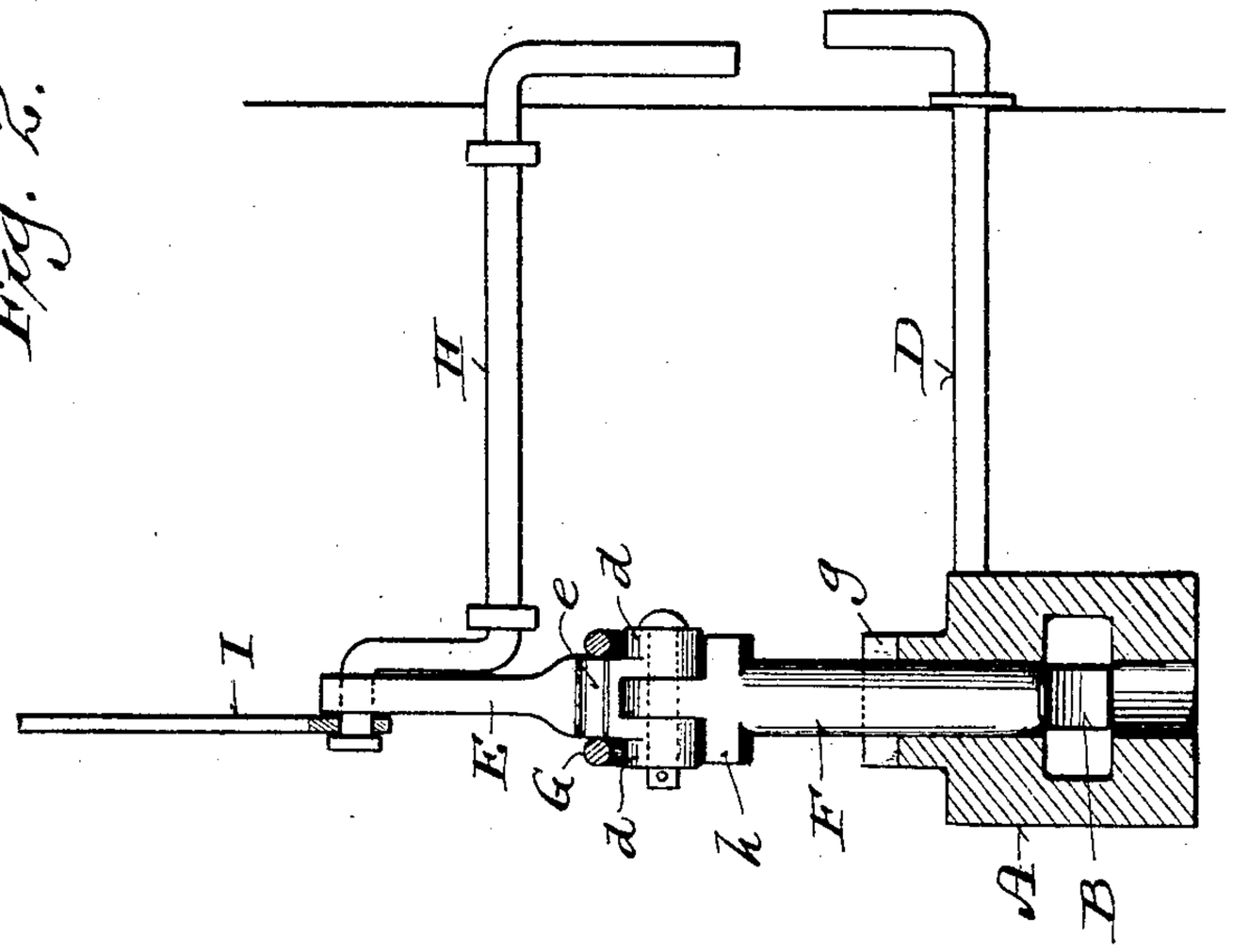
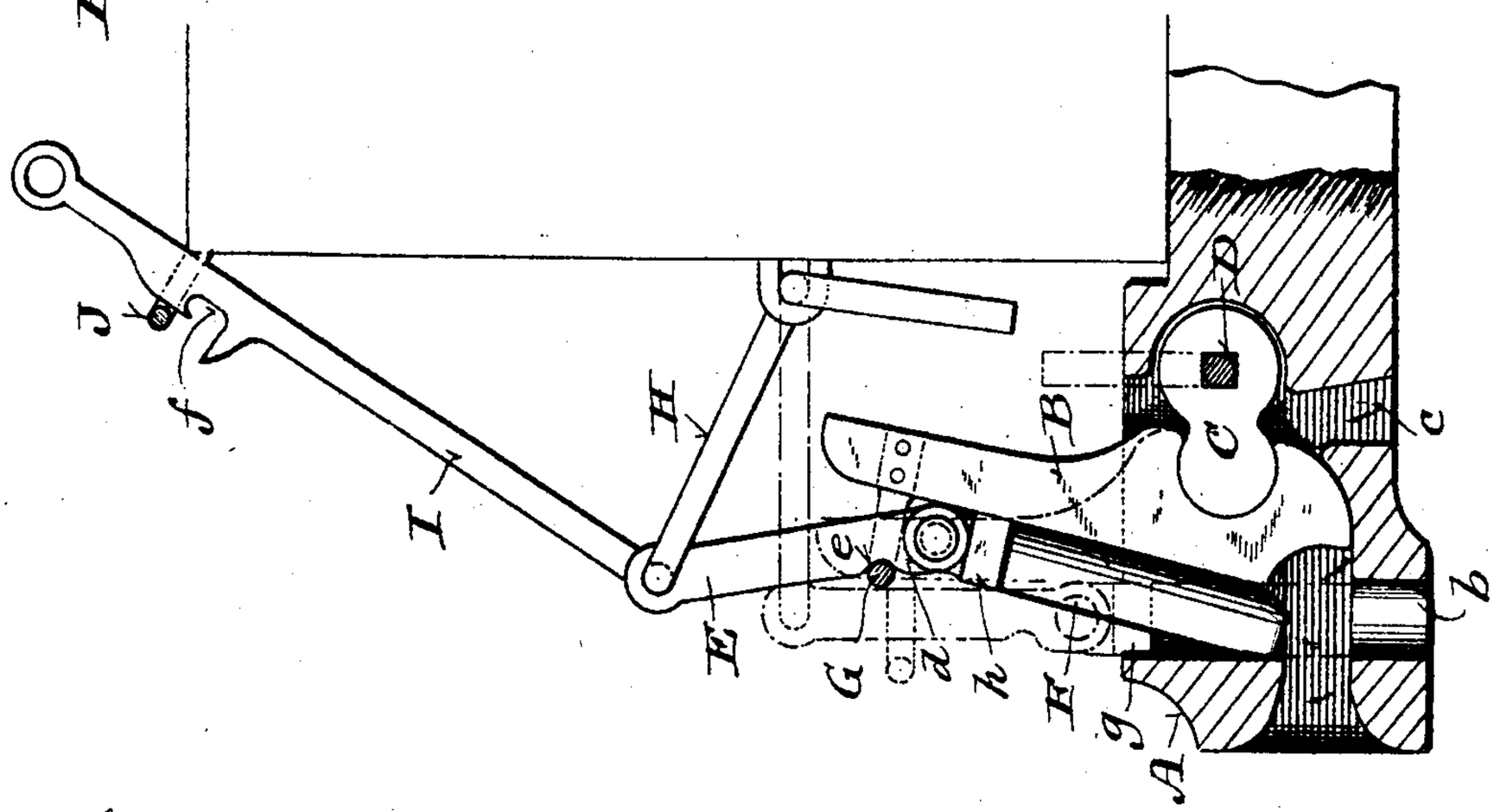


Fig. 1.



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CAR-COUPLING.

No. 803,579. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed July 10, 1905. Serial No. 268,941.

To all whom it may concern:

Be it known that I, JOHN A. FRENZEL, a citizen of the United States, and a resident of Wausau, in the county of Marathon and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in certain peculiarities of construction and combination of parts, hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed, its object being to improve the structural detail of the car-coupling disclosed in my Patent No. 428,389 of May 20, 1890.

Figure 1 of the drawings represents a partly-sectional side elevation of my improved car-coupling; and Fig. 2 a front elevation of the coupling, partly in section.

Referring by letter to the drawings, A indicates the draw-head of my improved car-coupling, this draw-head being similar to the one set forth in the aforesaid patent except in the particulars hereinafter noted. Instead of being provided with a lower longitudinal slot, as was formerly the case, it is now provided with a lower pin-aperture *b* and a clearance-aperture *c* for dust, dirt, rain, snow, or sleet; but said draw-head may be solid where the clearance-aperture is shown. The metal in the lower forward portion of the draw-head is thicker than in the draw-head of the previously-patented coupling and offers proportionately greater resistance to the strain upon the coupling-pin when the latter is in working position. Back of the pin-aperture *b* the bottom of the longitudinal recess in the draw-head is curvilinear, and opposing the same, to rock thereon, is the curved lower end of the link-regulating lever B, having the circular rear recess engaged by the circular forward end of the crank C, fast on a rod D, for which said draw-head is provided with bearings, this rod being extended outward beyond one or both sides of the car to which the aforesaid draw-head is connected.

The hanger E for the coupling-pin F is provided at its lower end with lateral shoulders *d*, and the hanger guide or yoke G, in connection with the upper end of the link-regulating lever B, opposes said shoulders when said hanger and coupling-pin are lifted, the wear and strain coming upon the aforesaid shoulders instead of upon the pivot-pin connecting the aforesaid hanger and coupling-pin, as was formerly the case. The coupling-pin hanger E is provided with a forward lower notch *e*, in which the yoke G on the link-regulating lever is caught when said hanger is lifted and canted forward as a result of an operation of either of the connected levers H I herein shown, there being a rearward cant of said link-regulating lever and the coupling-pin when this operation takes place.

The lever H is of the bell-crank type and is operated from the side of the car. Its upper outer end extends through the upper end of the link-regulating lever B and the lower end of the lever I, the latter lever being guided in a yoke J, attached to said car adjacent to the top of same. The lever I is provided with a notch *f*, by which it may be caught on the yoke J to suspend the hanger and coupling-pin aforesaid, the coupling being then non-efficient.

When the coupling-pin is elevated by either lever and its hanger caught by the yoke G on the link-regulating lever, the lower notched end of said link-regulating lever is in the path of a link entering the draw-head, and contact therewith of the link will result in automatic disengagement of said hanger from said yoke and descent of said pin to prevent withdrawal of said link, provided the lever I is not latched on the yoke J, in which it is guided.

The draw-head is provided with an upper outer recess constituting a seat *g* for the angular head *h* of the coupling-pin, and said head being caught in said seat said coupling-pin is prevented from straining on the mechanism by which it is controlled.

The link-regulating lever is adjusted by means of the rod D and crank C therewith, the same as like parts in my former patent, to vary the angle of the link with respect to coupling cars upon which the opposing draw-heads are at different elevations.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupling, the combination of a draw-head provided with a longitudinal recess the bottom of which is curvilinear back of a coupling-pin aperture therein, a crank-controlled link-regulating lever having a curved lower end that rocks upon the curvilinear bottom portion of said recess, a coupling-pin, a hanger in pivotal connection with the same, a hanger-guide attached to the aforesaid lever, and lever mechanism in connection with said hanger.

2. In a car-coupling, the combination of a draw-head provided with a longitudinal recess, the bottom of which is curvilinear back of a coupling-pin aperture therein, a crank-controlled link-regulating lever having rocking support on the curvilinear bottom portion of the draw-head recess, a coupling-pin, a hanger in pivotal connection with the pin and provided with laterally-extending shoulders, a hanger-guide in the form of a yoke attached to the aforesaid lever in the upward path of the hanger-shoulders, and lever mechanism in connection with said hanger.

3. In a car-coupling, the combination of a draw-head provided with a longitudinal recess the bottom of which is curvilinear back of a coupling-pin aperture therein, a crank-controlled link-regulating lever having rocking support on the curvilinear bottom portion of the draw-head recess, a coupling-pin, a hanger in pivotal connection with the pin and provided with a notch, a hanger-guide in the form of a yoke attached to the aforesaid lever in the path of the joint of said pin and hanger to be engageable with the hanger-notch when the aforesaid pin is lifted, and lever mechanism in connection with said hanger.

4. In a car-coupling, the combination of a draw-head provided with a longitudinal recess the bottom of which is curvilinear back of a coupling-pin aperture therein, a crank-controlled link-regulating lever in rocking contact with the curvilinear bottom portion of the draw-head recess, a coupling-pin, a hanger in pivotal connection with the pin, a hanger-guide attached to the aforesaid lever, a bell-crank lever in connection with the hanger to extend beyond a side of the car to which the draw-head is connected, another hanger-controlling lever provided with a notch, and a guide-yoke for the latter lever attachable to said car adjacent to the top of same.

5. In a car-coupling, the combination of a draw-head provided with a longitudinal recess the bottom of which is curvilinear back of a coupling-pin aperture therein, a crank-controlled link-regulating lever in rocking contact with the curvilinear bottom portion of the draw-head recess, a coupling-pin, a hanger in pivotal connection with the pin and provided with a notch, a hanger-guide in the form of a yoke attached to the aforesaid lever in the path of laterally-extended pivot-shoulders of the hanger and engageable with the hanger-notch when said coupling-pin is lifted, a bell-crank lever in connection with said hanger to extend beyond a side of the car to which the draw-head is connected, another hanger-controlling lever provided with a notch, and a guide-yoke for the latter lever attachable to said car adjacent to the top of same.

In testimony that I claim the foregoing I have hereunto set my hand, at Wausau, in the county of Marathon and State of Wisconsin, in the presence of two witnesses.

JOHN A. FRENZEL.

Witnesses:
WILLIAM R. KOPPE, Jr.,
W. J. GEHRKE.