

No. 774,236.

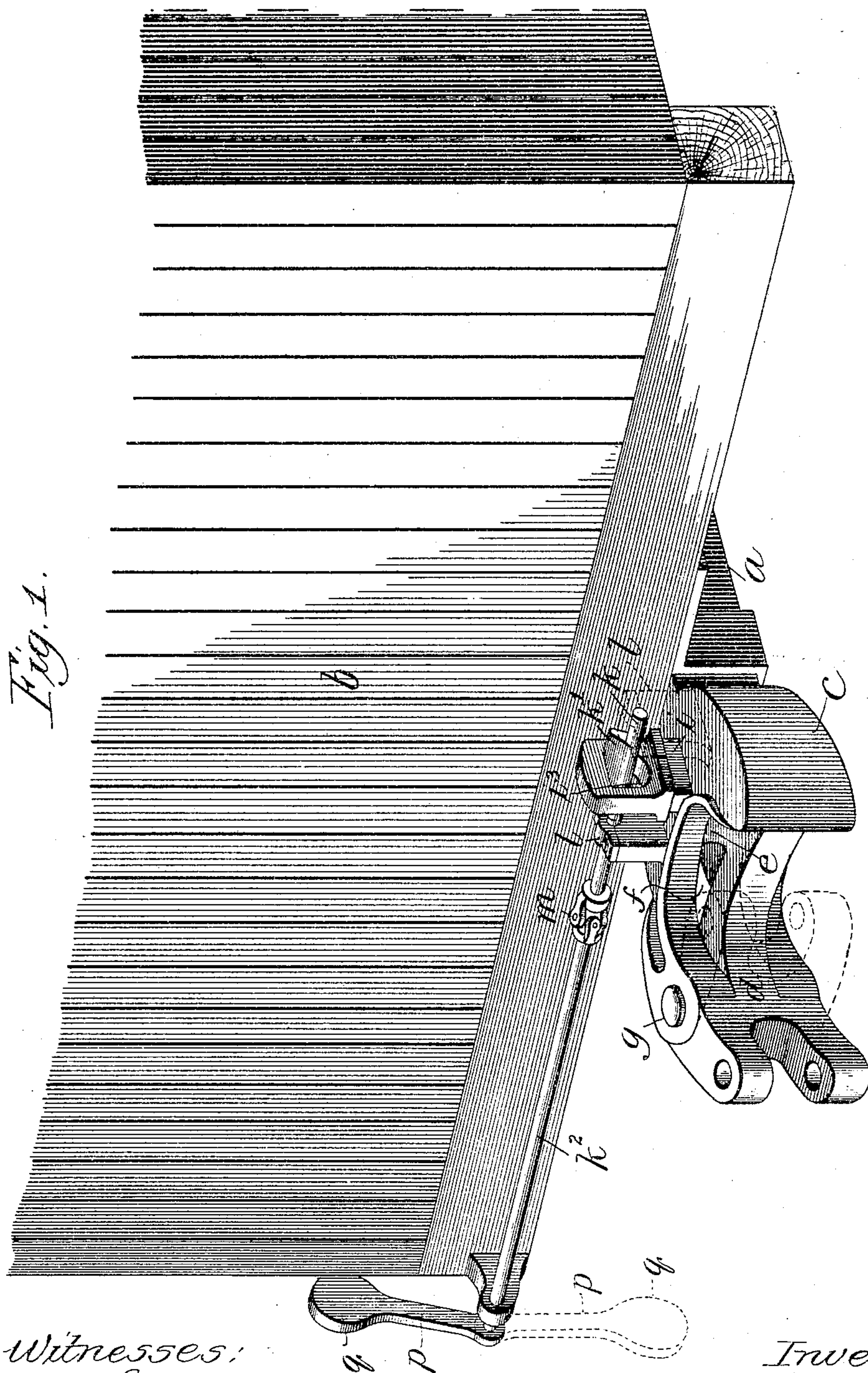
PATENTED NOV. 8, 1904.

C. DIETZ.  
CAR COUPLING.

APPLICATION FILED NOV. 7, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:  
John Enders.  
Geo. C. Larison.

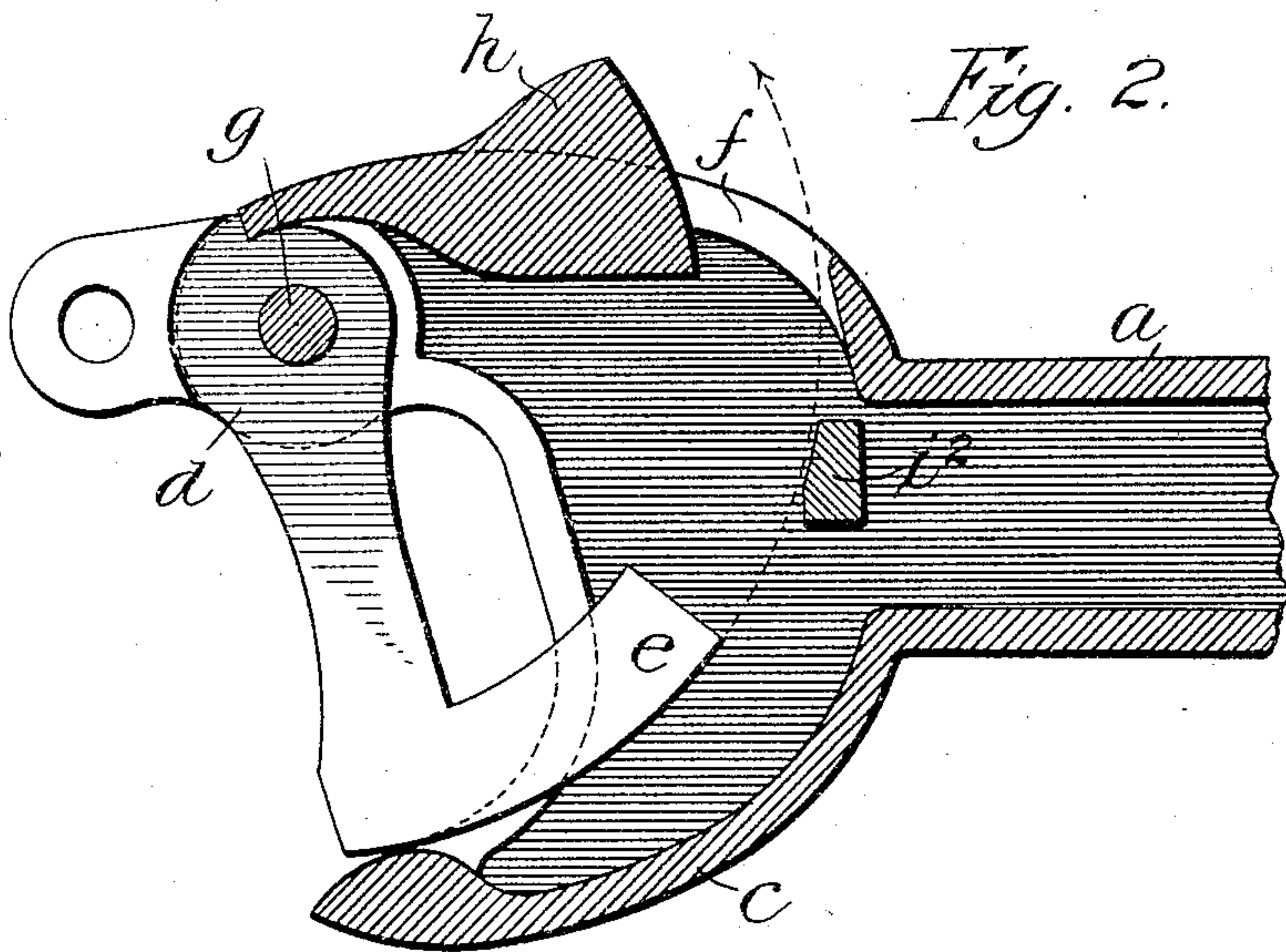
Inventor:  
Charles Dietz.  
By Thomas F. Sheridan,  
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C. DIETZ.  
CAR COUPLING.

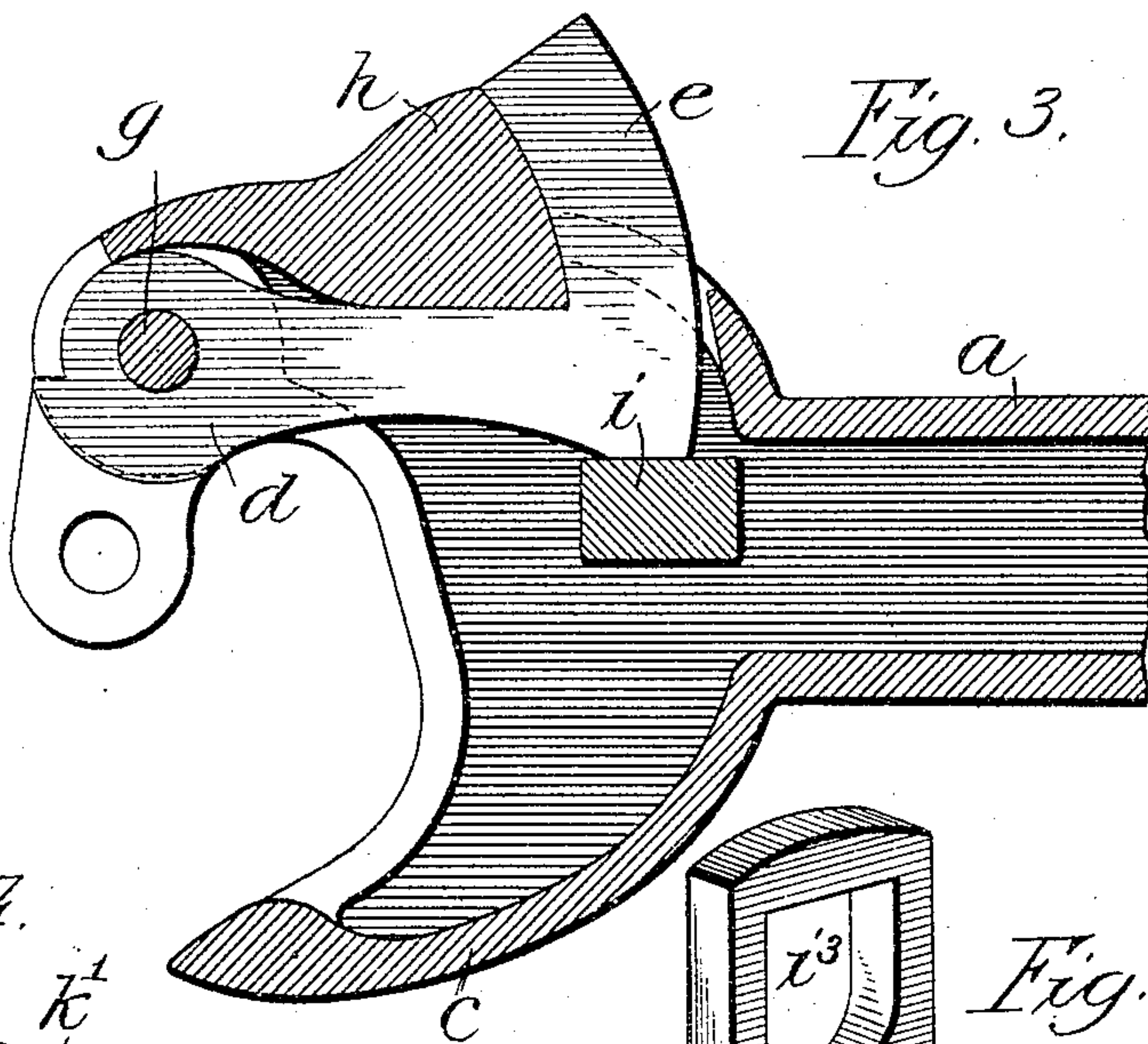
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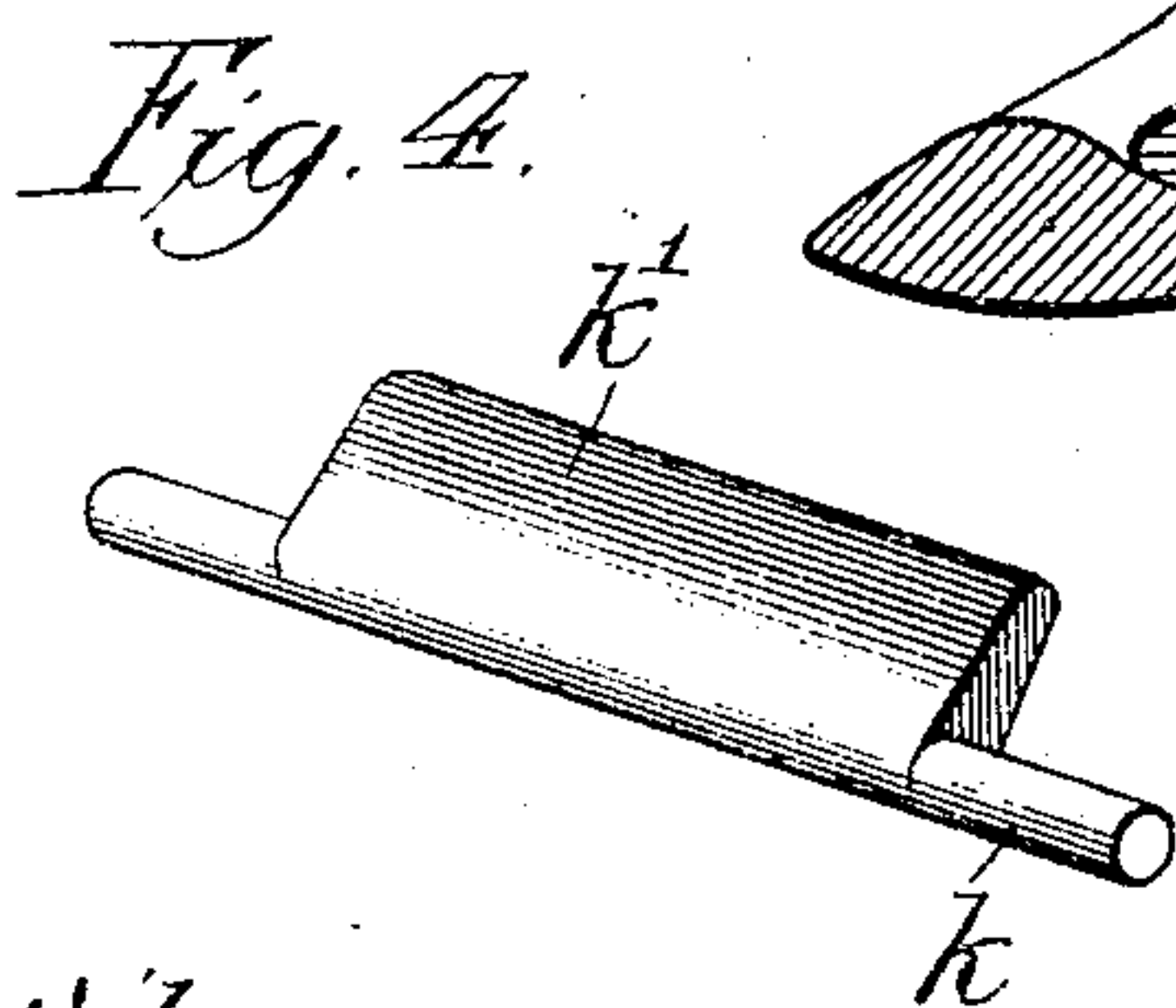
2 SHEETS—SHEET 2.



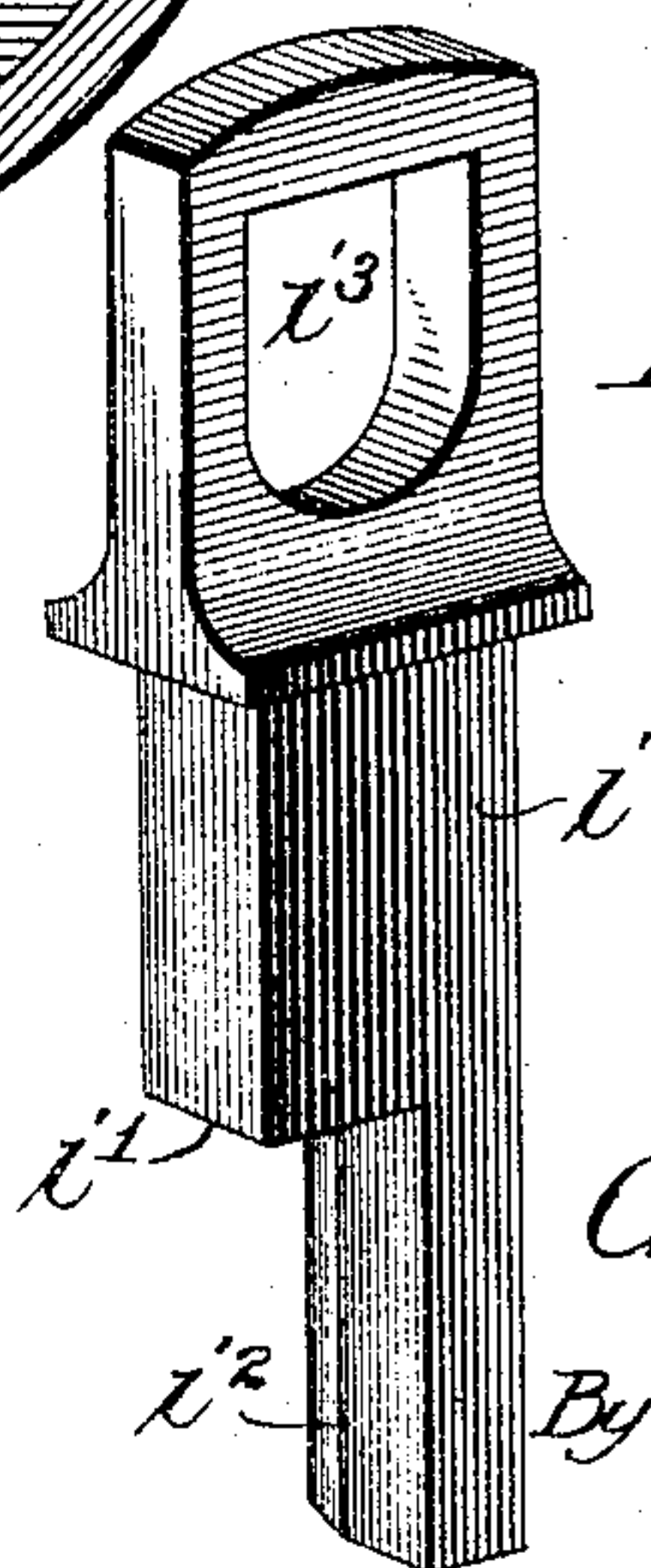
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*

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# UNITED STATES PATENT OFFICE.

CHARLES DIETZ, OF CHICAGO, ILLINOIS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 774,236, dated November 8, 1904.

Application filed November 7, 1903. Serial No. 180,146. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES DIETZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have  
5 invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

The invention relates to that class of car-couplers known as the "twin-jaw" coupler of  
10 the Master Car-Builders' type, and particularly to the construction and arrangement thereof by which the coupling parts are locked and released, all of which will more fully hereinafter appear.

15 The principal object of the invention is to provide a simple, economical, and efficient car-coupler.

A further object of the invention is to provide a twin-jaw coupler with locking mechanism and means for operating the same.  
20

Other and further objects of the invention will appear from an examination of the drawings and the following description and claims.

The invention consists principally in a twin-jaw coupler of the Master Car-Builders' type,  
25 in which there are combined a coupler-head, a knuckle pivotally mounted therein, a vertically-movable locking-pin mounted in the coupler-head, and a rock-shaft for moving the  
30 locking-pin to and holding it in its released position.

The invention consists, further and finally, in the features, combinations, and details of construction hereinafter described and  
35 claimed.

In the accompanying drawings, Figure 1 is a perspective view of one end of a freight-car, showing my improvements as they appear when attached thereto; Fig. 2, a sectional  
40 plan view of a twin-jaw coupler as it appears when constructed in accordance with these improvements and showing the knuckle in its open position; Fig. 3, a similar view to that shown in Fig. 2 with the parts in locked position; Fig. 4, a perspective view of one portion of the rock-shaft with its eccentric, and  
45 Fig. 5 a perspective view of the locking-pin.

In constructing a car-coupler in accordance with these improvements I provide the usual  
50 draw-bar *a*, which is mounted in position on

a freight-car *b* in any well-known or usual manner. This draw-bar is provided with a coupler-head *c*, in which is pivotally mounted a knuckle portion *d*. The coupler and knuckle portion are made of the twin-jaw  
55 type—a type which is well known and has been adopted by the Master Car-Builders' Association.

An examination of Figs. 2 and 3 will show that the coupler-knuckle is not only pivotally  
60 mounted, but has an L-shaped tail portion *e*, the angular portion of which is passed through a perforation *f* in the side wall of the coupler-head. The arrangement is such that should  
65 the usual pivot-pin *g* become broken the knuckle cannot be pulled out, as the L-shaped portion will engage the block or lug *h* on the coupler-head and prevent its withdrawal, while at the same time assisting in pulling  
70 the train along.

To provide for the locking and unlocking of the knuckle portion, a locking-pin *i* is provided and mounted in the coupler-head so as to have bearings in the upper and lower walls thereof. When the locking-pin is in its low-  
75 est or locking position, the tail of the knuckle abuts against the body portion of such locking-pin; but when such pin is raised, the knuckle may pass under the shoulder *i'*, while the lower portion *i''* will remain in its bear-  
80 ings in the lower wall of the coupler-head. To operate this locking-pin at the desired time or times, a rock-shaft is provided, one portion, *k*, of which is rotatably mounted in  
85 lugs *l* on the upper portion of the coupler-head. This part of the rock-shaft is provided with an eccentric portion *k'*, that is passed through a perforation *i'''* in the head of the locking-pin. It will be seen, therefore, that  
90 as this rock-shaft is rotated in one direction the eccentric portion will raise the locking-pin to and hold it in its released position, so that the coupling-knuckle may be swung to open position, as shown in Fig. 2.  
95

For purposes of safety and to prevent the unlocking operation or destruction of the parts during a forward withdrawal of the draw-bar to an unusual extent the rock-shaft is provided with an extension *k''*, pivotally se-  
100



cured to the other or main portion by means of a universal joint *m*. The outer end of this extension of the rock-shaft is provided with an operating-lever *p*, having a weight *q* at its extreme end. This arrangement is such that when the knuckle is in its open position and a coupling engagement with another car desired the release or locking effect of the rock-shaft will take place as soon as the coupler-knuckle is closed and a slight jar or shock administered to the draw-bar or car, all of which tends to disturb the weighted operating-lever, so that it will drop to the position shown in dotted outline in Fig. 1—that is, to a position in which the locking-pin is permitted to resume its locking position after the coupling-knuckle is closed, as shown in Fig. 3.

From the foregoing description of construction and operation it will be seen that the principal advantages incident to a car-coupler constructed in accordance with these improvements is that the accidental unlocking of the parts is prevented in that the two-part rock-shaft that operates the locking-pin is partially mounted on the coupler-head partially in the body of the car, thereby dispensing with the usual chain mechanism, while the universal joint thereof permits the withdrawal of the draw-bar to a limited extent without any unlocking action taking place or destruction of any of the parts.

I claim—

1. In a car-coupler of the class described, the combination of a coupler-head, a knuckle pivotally mounted therein, a vertically-movable locking-pin mounted in the coupling-head and provided with a perforated portion, a rock-shaft engaging the perforated portion of the locking-pin and made in two parts pivotally secured together for moving such locking-pin to and holding it in its released position, and a weighted operating-lever on such rock-shaft, substantially as described.

2. In a car-coupler of the class described, the combination of a coupler-head, a knuckle pivotally mounted therein, a vertically-movable locking-pin mounted in the coupling-head and provided with a perforated portion,

a rock-shaft engaging the perforated portion of the locking-pin and made in two parts pivotally secured together and mounted partially on the coupler-head and partially on the car-body for moving such locking-pin to and holding it in its released position, and a weighted operating-lever on such rock-shaft, substantially as described.

3. In a car-coupler of the class described, the combination of a coupler-head, a knuckle pivotally mounted therein, a vertically-movable locking-pin mounted in the coupler-head and engaging the rear portion of the knuckle so as to hold it in its locked position, a perforated head portion on such locking-pin, a rock-shaft made in two portions pivotally secured together, the inner portion rotatably mounted in bearings on the coupler-head and provided with an eccentric portion engaging the perforated head on the locking-pin, and the other portion of such rock-shaft rotatably mounted in bearings on the car-body and provided with a weighted operating-lever at its outer end, substantially as described.

4. In a car-coupler of the class described, the combination of a coupler-head provided with an opening in its side wall, a knuckle pivotally mounted therein and provided with an L-shaped tail portion extending through the side opening in the coupler-head, a vertically-movable locking-pin mounted in the coupler-head engaging the tail portion of the knuckle to hold it in its locked position and provided with a perforated head portion, a two-part rock-shaft rotatably mounted on the coupling-head, one part of which is provided with an eccentric portion engaging the perforated head of the locking-pin for moving the same to and holding it in its released position, the other part of such rock-shaft being rotatably mounted on the car-frame, a universal joint forming the connection between the two parts of the rock-shaft, and a weighted lever secured to the outer end of the rock-shaft for operating the same, substantially as described.

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Witnesses:

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