

No. 746,025.

PATENTED DEC. 8, 1903.

T. CHEW.
CAR COUPLING.

APPLICATION FILED DEC. 16, 1902.

NO MODEL.

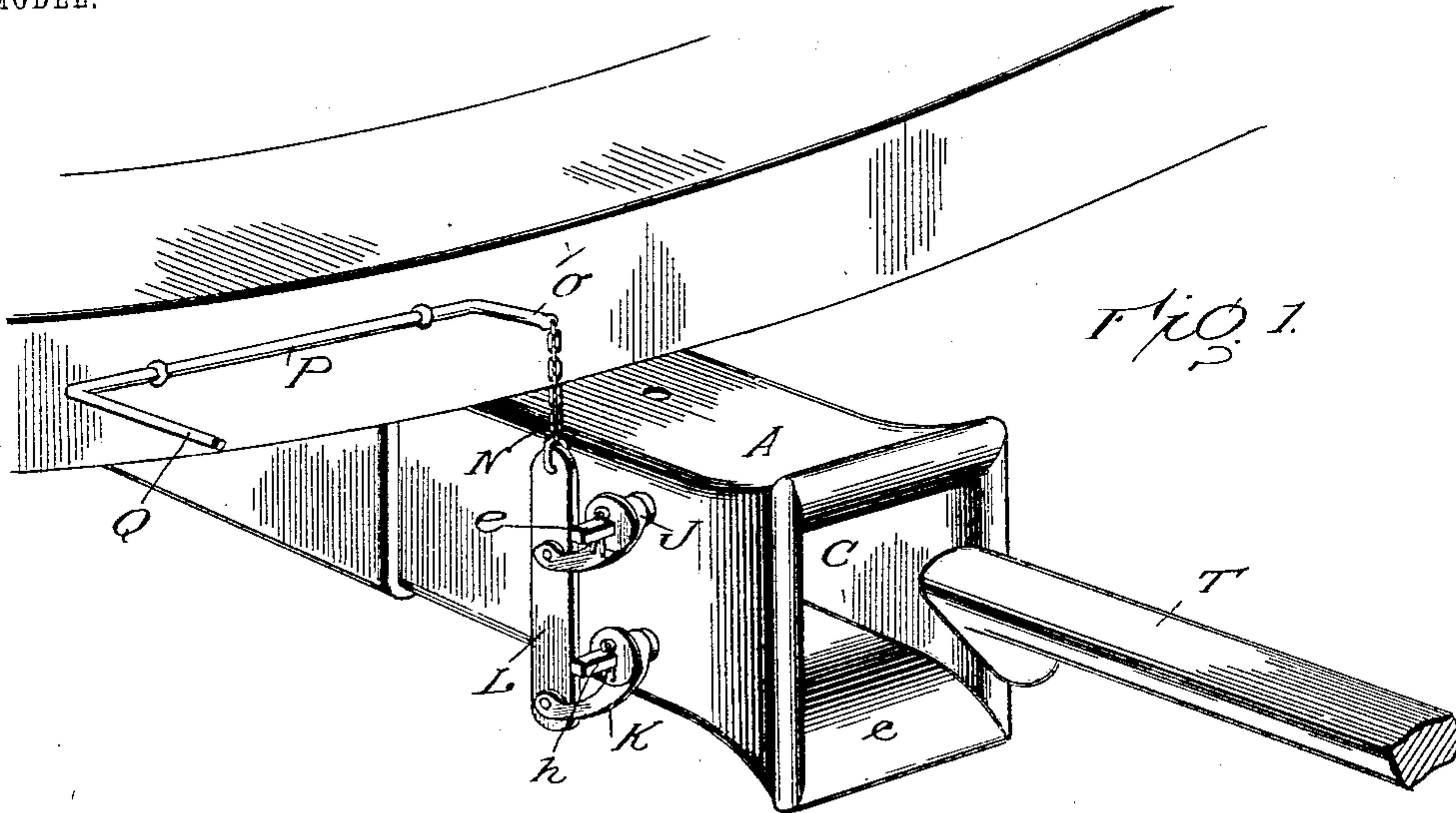


Fig. 2.

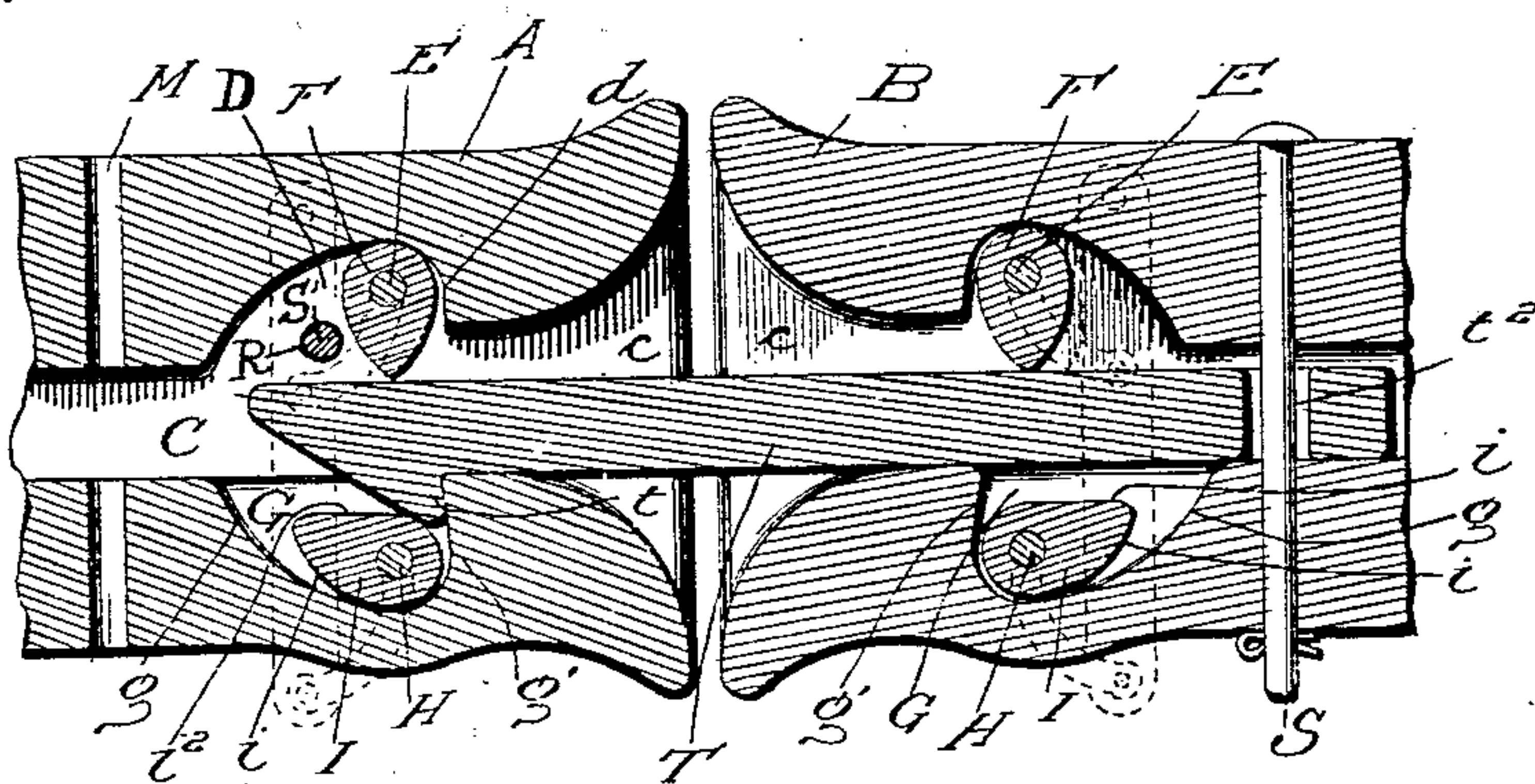
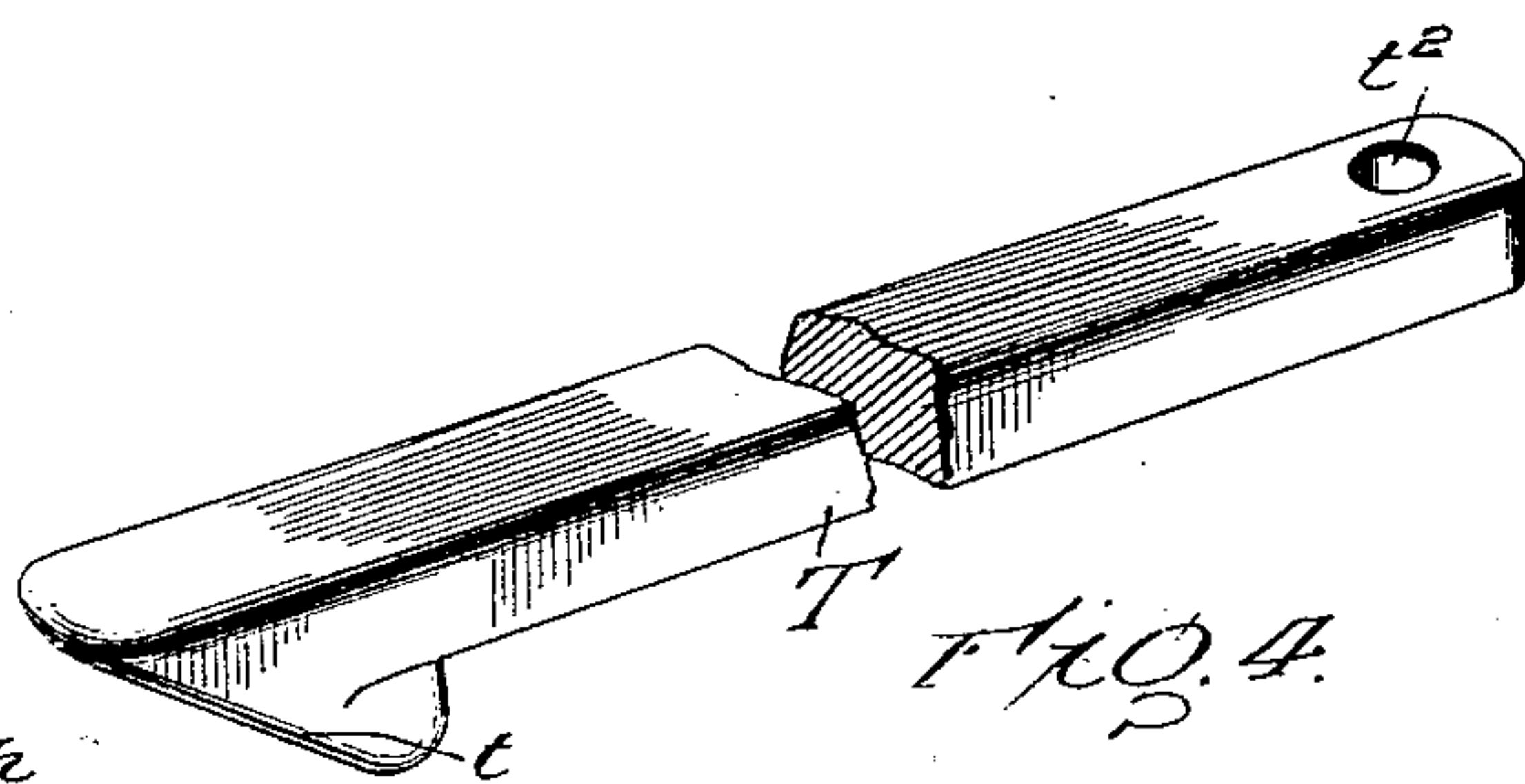
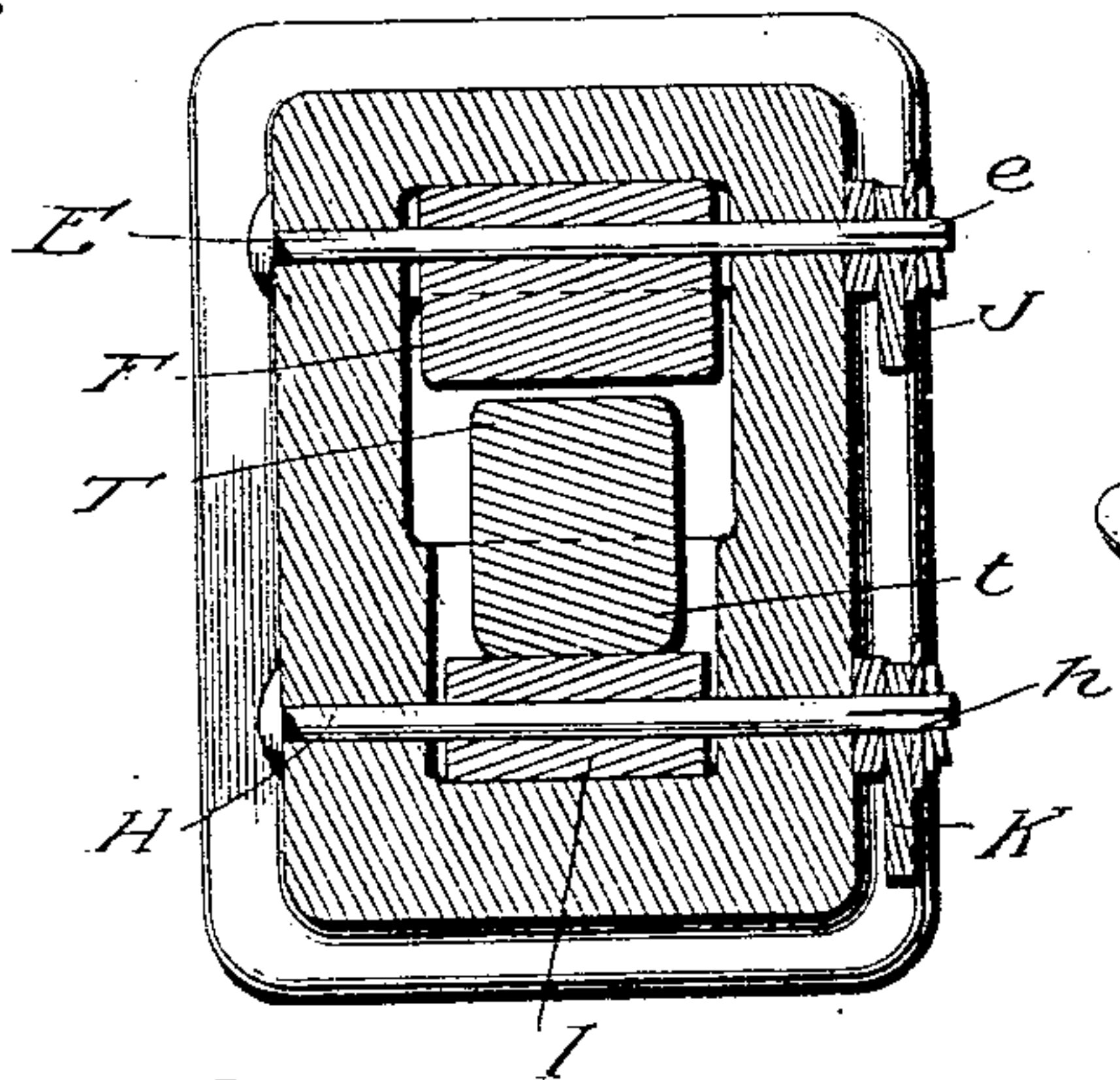


Fig. 3.



Witnesses

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 746,025, dated December 8, 1903.

Application filed December 16, 1902. Serial No. 135,456. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CHEW, a citizen of the United States, residing at Bradford, in the county of McKean and State of Pennsylvania, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to improvements in car-couplings, and more particularly pertains to that class which is automatically coupled and locked in said position.

The object of my invention is to provide a coupling of this character in which the link is more effectively locked in its operative position and the unlocking of said means raises the link and releases it.

Another object of my invention is to provide a coupling in which the ordinary link and coupling-pin can be readily and effectively used without injury to any of the working parts of my invention.

A further object of my invention is to provide a simple, cheap, and more effective coupling of this character than has heretofore been produced.

In the accompanying drawings, Figure 1 is a perspective view of my coupling, showing the uncoupling means and the links connecting the locking means. Fig. 2 is a vertical sectional view taken on line 2 2, Fig. 1. Fig. 3 is a transverse sectional view taken on line 3 3, Fig. 1. Fig. 4 is a perspective view of the coupling-links.

Referring now to the drawings, A and B represent the two members of the coupling, which may be of any form or shape on the outside, but preferably that shown in the drawings, and are provided with the elongated recesses C, which have their outer ends flared at *c*, like the ordinary coupling, for the purpose of guiding the link to said recesses. The upper face of said recess C is provided with a curved recess D, which is provided with a vertical straight wall *d*. Passing transversely through the said recess is a bolt or rod E, which has rigidly connected and carried thereby the locking member F. The said locking member has its upper and lower ends beveled, and thus it will be seen that said member is adapted to swing rearwardly within the recess, but is prevented from swinging forward by the straight wall *d*. The said rod or bolt

E is journaled within the body portion of the coupling, and one end extends out beyond the outer surface thereof and carries a squared portion *e*, the purpose of which will be hereinafter more fully described. The lower portion of the said body portion of the coupling is provided with a curved recess G, which is considerably deeper than the recess D and is provided with a curved rear wall *g* and a forward rearwardly-extending oblique wall *g'*. Extending transverse the lower curved portion of the lower opening is a bolt or rod H, which has its ends journaled in the sides of the body portion of the coupling and has one end extending out through the same side as the rod E and has its extreme outer end *h* squared, as shown. Rigidly connected to said shaft within the curved portion of the recess G is a member I, which has a curved portion *i* to fit within the recess and a straight portion *i'* to allow the hooked portion of the link to drop within the upper portion of the recess. Surrounding the outer squared ends of the rods E and H are the links J and K, which have their outer ends *j* and *k* pivoted to a vertical bar L and so arranged that when the member F, carried by the rod E, is in a horizontal position the member I, carried by the rod H, is in a vertical position, and vice versa. The said coupling members A and B are provided with vertical openings M, communicating with the rear portion of the openings C and adapted to receive the ordinary coupling-pin, and thus it is seen that my device can be readily used in connection with the ordinary link and coupling-pin S.

The upper end of the link L carries an eye *l*, and secured within said eye is a link N, which has its upper end extending upwardly and secured to a crank-arm *o*, which is carried by a rock-shaft P, which is carried by the side of the car and adapted to oscillate. The opposite end of the rock-shaft P carries an operating handle or crank Q, and upon turning said crank it will be readily seen that the link is readily raised and the car uncoupled, and upon releasing said crank the weight of the link L will throw the members F and H in the position shown on the right of Fig. 2, and thus the link is adapted to automatically couple and lock itself in said position. In order to positively lock the link in its coupled

position against accidental uncoupling, I provide a transverse opening R, which is adapted to receive a pin S', and thus it will be seen that the member F cannot possibly be swung upwardly, and thus the coupling-link T cannot be raised out of the recess G. The said link T is composed of a flat piece of metal having at one or both ends the downwardly-extending hooked portion *t*, provided with a beveled portion *t'*, which is adapted to drop into the recess G and engage the oblique forward wall *g'* thereof. When the said link carries a hook at but one end, the opposite end carries a vertical opening *t''*, which is adapted to receive the ordinary coupling-pin which is at all times carried by both members of the coupling.

The operation is as follows: The weight of the link L normally holds the two members in the position shown on the right of Fig. 2, and as the link T enters it forces the member F rearwardly until the hook portion *t* comes opposite the opening G, and then the weight of the link L through the member F forces the link T into said recess G and the said member F locks it against any upward movement. When it is desired to uncouple the cars, the link L is raised, as heretofore described, thus throwing the member F rearwardly, so that the link T can be raised and the member I is thrown forward and engages the beveled portion of the hook *t* and raises it out of the recess G, thus uncoupling the cars.

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

1. A car-coupling, comprising a hollow member having a recess in its lower face, a link having a hook adapted to drop in said recess, means for locking said link in said recess, means for locking said locking means in said position, means for raising said link out of said recess, and an operative connection between said locking and raising means, substantially as described.

2. A car-coupling comprising a hollow member having a recess, a link having a hooked end adapted to enter said recess, a pivoted locking member opposite said recess, and adapted to engage said link, and a pivoted member within the recess and adapted to lift said hook out of the same, substantially as described.

3. A car-coupling comprising a hollow member having a recess, a link having a hooked member adapted to enter said recess, a pivoted locking member opposite said recess, and adapted to swing against said link, a pivoted unlocking member within the recess and adapted to throw the hook out of the same, and an operative connection between the two pivoted members, substantially as described.

4. A car-coupling comprising a hollow member having a recess, a link having a hook adapted to enter said recess, a pivoted locking member opposite said recess and adapted to swing against the link, means for lock-

ing said swinging member in said position, a pivoted member within the recess and adapted to throw the hook out of the recess, an operative connection between the two pivoted members, said hollow member having a transverse opening in rear of said pivoted members, and a coupling-pin passing through said opening, substantially as described.

5. A car-coupling comprising a hollow member having oppositely-arranged recesses, a hook-link adapted to enter one of said recesses, a pivoted member in said recess below the hook and adapted to throw the same therefrom, a pivoted locking member in the opposite recess and adapted to engage said link, and an operative connection between the two pivoted members, substantially as described.

6. A car-coupling comprising a hollow member having a recess therein, a link, a hook carried by the link and adapted to enter said recess, a pivoted member within said recess and adapted to raise the hook from said recess, a pivoted member opposite said recess and adapted to engage said link, arms connected to said pivoted member, and a link pivotally connected to said arms, substantially as described.

7. A car-coupling comprising a hollow member having an upper and lower recess, the lower recess having an oblique outer wall, a link having a hook adapted to engage said oblique wall, a pivoted member within said lower recess and adapted to engage the beveled portion of said hook, the upper recess having a vertical outer wall, a pivoted member within said recess and limited in one way by said vertical wall and adapted to engage said link, arms carried by the pivotal connections of said members, a link connecting said arms, and means for operating said link, substantially as described.

8. A car-coupling comprising a hollow member, a hook-link adapted to enter said member, a pivoted locking member above said hook, a pivoted unlocking member below said hook, and an operative connection between the two pivoted members.

9. A car-coupling comprising a hollow member, a hook-link adapted to enter said member, a pivoted locking member above said hook, a pivoted unlocking member below said hook, an operative connection between the two pivoted members, and means for locking said locking member.

10. A car-coupling comprising a hollow member, a link adapted to enter said member, a pivoted locking member above said link, a pivoted unlocking member below said link, arms carried by said pivoted member and a link pivotally connecting said arms.

11. A car-coupling comprising a hollow member, a hook-link adapted to enter said member, a pivoted locking member above said link, a pivoted unlocking member below said link, an operative connection between said pivoted members, and a removable lock-

ing member in a line with the pivoted upper locking member.

12. A car-coupling comprising a hollow member having an upper and lower recess, 5 the lower recess having an oblique outer wall, a link having a hook adapted to engage said oblique wall, a pivoted member within said lower recess and adapted to be engaged by the bevel portion of said hook, the upper re- 10 cess having a vertical outer wall, a pivoted member within said recess and limited in one way by said vertical wall and adapted to engage said link, a member adapted to lock said

pivoted member against movement in the opposite direction, arms carried by the pivotal 15 connections of said members, a link connecting said arms, and means for operating said link.

In testimony whereof I have hereunto set my hand in the presence of two subscribing 20 witnesses.

THOMAS CHEW.

Witnesses:

WALTER W. HANE,
HERMAN H. NORTH.