(No Model.)

H. R. DORE.

CAR COUPLING.

No. 493,913. Patented Mar. 21, 1893.

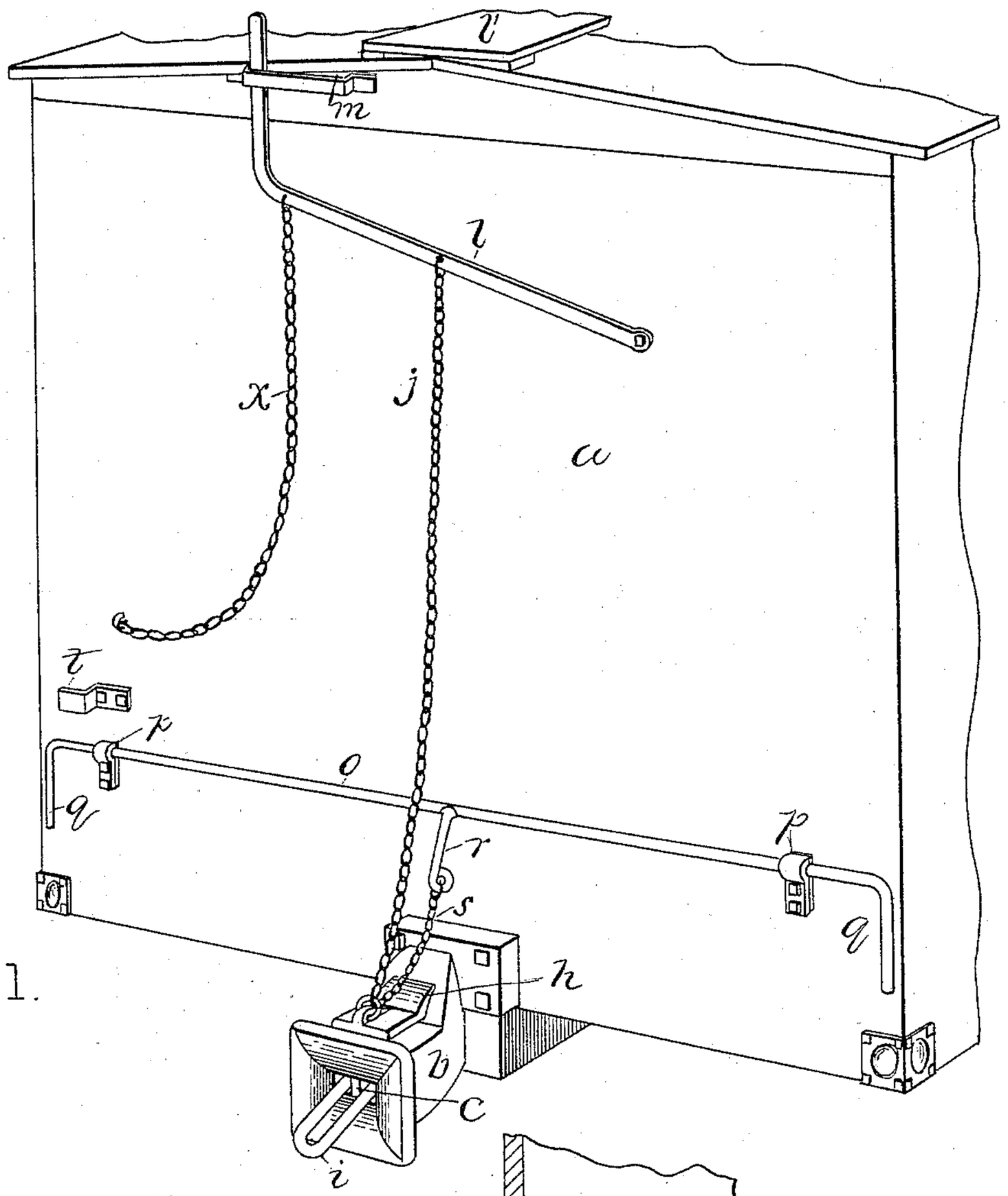

FIG. 1.

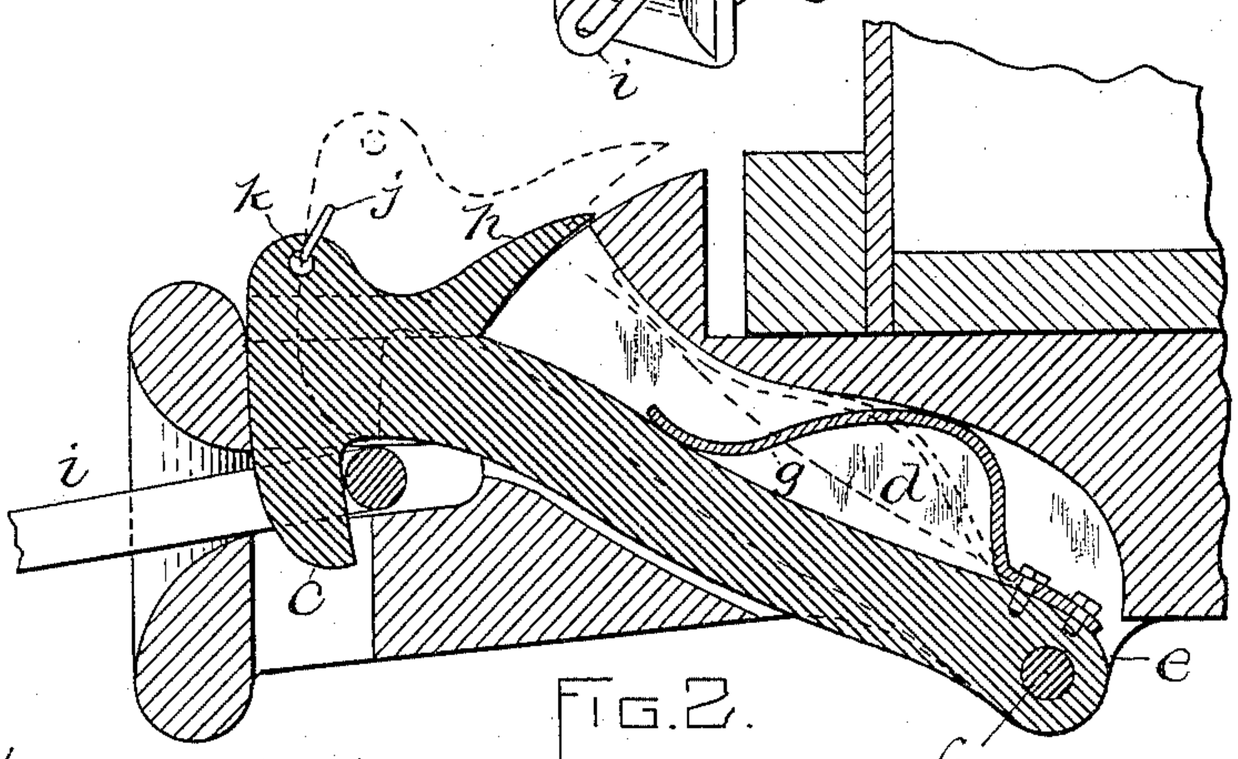

FIG. 2.

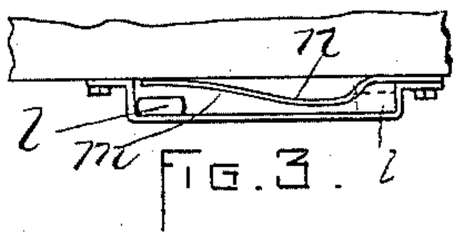

FIG. 3.

WITNESSES:
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H. S. McLeod.

INVENTOR:
H. R. Dore
by
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UNITED STATES PATENT OFFICE.

HERMAN R. DORE, OF MOULTONVILLE, NEW HAMPSHIRE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 493,913, dated March 21, 1893.

Application filed December 15, 1892. Serial No. 455,282. (No model.)

To all whom it may concern:

Be it known that I, HERMAN R. DORE, of Moultonville, in the county of Carroll and State of New Hampshire, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention has relation to that class of car couplings in which a spring-pressed or gravitating hook is used in place of a pin for coupling with a link.

It is the object of the invention to provide such improvements in the manner of pivoting the shank of the hook in the drawhead as will enable the hook to be readily detached or disconnected from the drawhead in case of repair or for other reasons.

It is also the object of the invention to provide such improvements as will maintain the hook in engagement with the link with greater security than heretofore, and protect the spring which bears upon the hook against the weather and against accidental damage.

It is also the object of the invention to provide means for the manipulation of the hook in coupling and uncoupling cars which shall be more ready of manipulation and more efficient than heretofore.

Reference is to be had to the annexed drawings and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

In the drawings—Figure 1, is a perspective view of the end of a car, and a drawbar, equipped with my improvements. Fig. 2, is a longitudinal sectional view of the drawbar provided with my improvements drawn to an enlarged scale. Fig. 3, is a top plan view of the means for holding the lever, which is designed to be manipulated from the top of the car in raised position.

In the drawings *a* designates the car body, *b* is the drawbar which may be of usual construction, excepting as it may be modified to suit it to my improvements which are designed to be employed with a link of common form to couple or shackle cars.

c designates the hook, the shank of which extends downward and inward through an inclined chamber *d* formed in the drawbar, and is pivoted at its inner lower end in lugs *e* which extend below the plane of the lower surface of the drawbar so that in case of necessity the pivot bolt *f* may readily be withdrawn to remove the hook, without disturbing other parts of the device.

g designates a spring arranged within the chamber *d* and bearing upon the hook to keep it from being accidentally thrown up and so uncoupling the cars. The upper outer end of the hook is provided with a hood *h* which extends across the opening to the chamber *d* and so keeps the latter closed against the entrance of dirt, snow, and ice to the said chamber. By the means described, the spring *g* is not only protected against means which might prevent its free operation, but it is put out of the way and protected against accidental breakage or damage by contact with other things. By pivoting the hook at a point considerably below the line of draft, as I do, the draft on the hook is made to assist in keeping it down in engagement with the link *i*. The forward face of the hook proper may be inclined, as shown, so that when the same is struck by the end of a link, as when two cars come together, it may be raised and the cars coupled automatically. The upper and outer surface of the hook and drawhead may be rounded or inclined so as to assist in the shedding of water therefrom.

j designates a chain connected at one end to the hook *c*, as at *k*, and at its other end to a lever *l* which is pivoted to the car body, and extends up so that it may be manipulated by a person on the running-board *l'*. By raising the lever *l* the hook *d* may be raised, and by lowering the same, the hook may be allowed to fall or be pressed down by the spring *g*.

To provide for maintaining the hook in raised position when manipulated through the medium of the lever *l*, as when it is wanted to set off a car and prevent another car from becoming automatically coupled thereto, I provide the guideway *m* with a bowed spring *n*, which, when the lever is raised will engage the latter as shown by dotted lines in Fig. 3, and maintain it in raised position.

o designates a rock rod extending from side to side of the car, which rod is supported in bearings *p* secured to the car, and provided at

each end with angular or crank portions *q*. At a central point on the rock rod *o* is an arm *r*, to the outer end of which is connected one end of a chain *s*, the other end being connected with the hook *c*. With this means of taking hold of the angular or crank ends *q* of the rod *o*, and turning the latter, the hook *c* may be raised in substantially the same manner as by raising the lever *l*.

t designates a clip secured to the end of the car so that when the crank or angular ends of the rod *o* are raised by sliding the rod longitudinally, said crank ends may be carried behind the clip *t*, and so maintain the hook in raised position, when it is desired to set off a car or prevent another car from being automatically coupled with the one in which the hook is raised in the drawbar.

x designates a chain, the upper end of which is connected with the lever *l*, and the lower end is attached to the car body at any convenient point to keep it in place, this provision being made for the purpose of enabling a person who may be upon the ground to take hold of the said chain and by drawing on it move the lever *l* from raised to lowered position in order to bring the hook into coupling position. In this way cars may be coupled and uncoupled without the necessity of going between the same, or without the necesity of an attendant upon the running board getting down therefrom.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. A car coupling comprising in its construction a drawbar provided with an inclined chamber *d* and lugs *e* extending below the plane of the lower surface of the drawbar, and the hook *c* provided with a shank extended through the said inclined chamber and pivoted in said lugs, whereby in case it is desired to remove the hook, the same can be done without removing the drawbar, as set forth.

2. In a car coupling, a drawbar provided with the inclined chamber *d*, the hook *c* having its shank extended through the said chamber and pivoted at its lower inner end, a spring in the said chamber bearing upon the said shank, and a hood connected with the hook and covering the opening to the chamber, as set forth.

3. The combination, with the coupling hook, of the lever *l*, the chain *j* connecting the lever with the coupling hook, and the bowed friction spring in the guideway of the lever, as set forth.

4. The combination, with the coupling hook, of the lever *l*, the chain *j* connecting the latter with the coupling hook, the chain *x* for drawing the lever *l* down, the rock rod *o* provided with the crank or angular ends *q*, arm *r*, connecting chain *s*, and retaining clip *t*, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 5th day of December, A. D. 1892.

HERMAN R. DORE.

Witnesses:
ALMON F. ABBOTT,
FRANK WEEKS.