No. 655,078. Patented July 31, 1900.

T. HARRISON.

CAR COUPLING.

(Application filed Apr. 2, 1900.)

(No Model.)

Fig. 1.

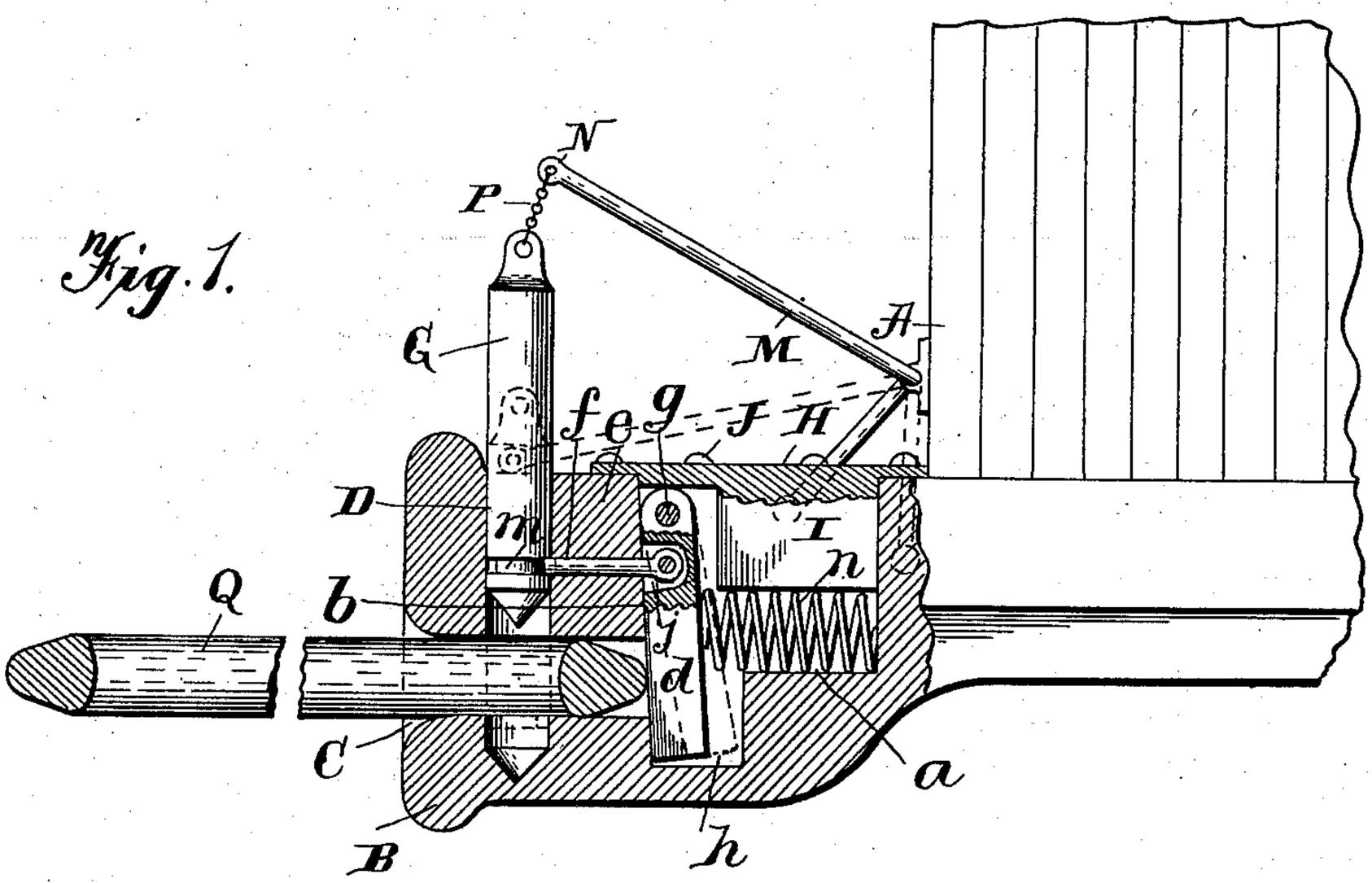


Fig. 2.

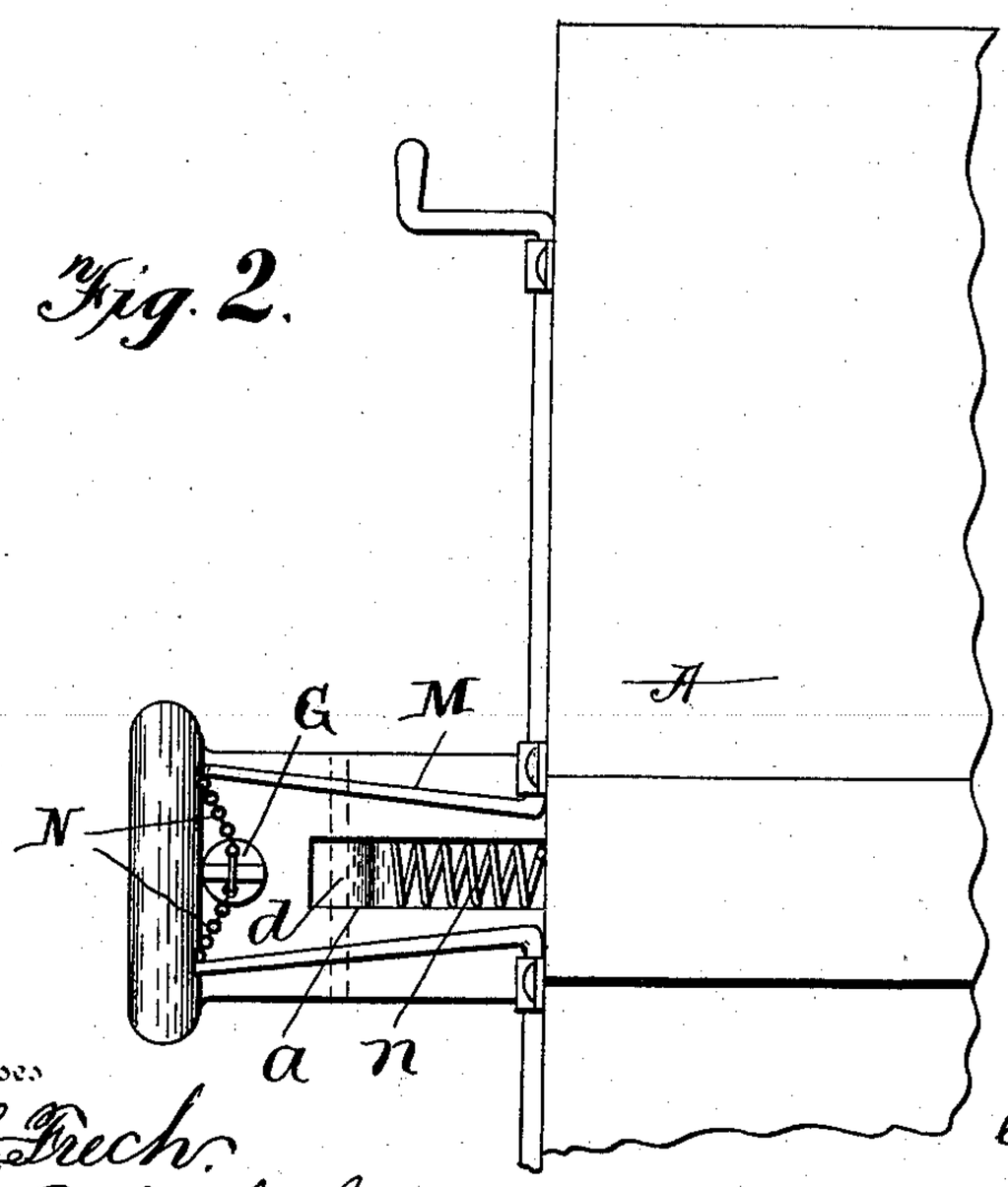
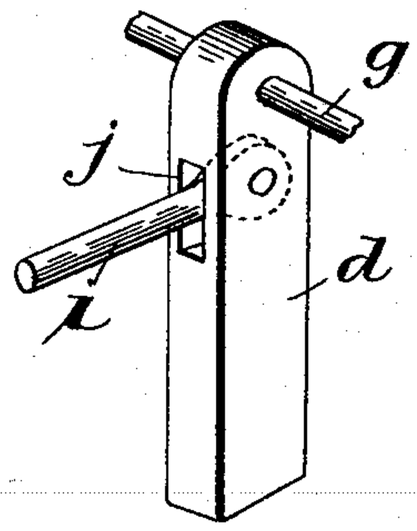


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS HARRISON, OF BOWLING GREEN, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 655,078, dated July 31, 1900.

Application filed April 2, 1900. Serial No. 11,124. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HARRISON, a citizen of the United States, residing at Bowling Green, in the county of Wood and State of Ohio, 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 it pertains to a coupling provided with means for supporting the coupling-pins whereby the link from the adjacent car in entering the coupling will cause the release of the pin and the automatic falling thereof through the link for coupling the cars, all of which will be fully described hereinafter and particularly pointed out in the claim.

The object of my invention is to provide a car-coupling which will automatically couple the cars when they run together, thus preventing the necessity of the brakeman or other person entering between the cars in the coupling thereof, and thus preventing the loss of life and limb which frequently happens when it is necessary for the brakeman or other person to stand between the cars which are being coupled.

In the accompanying drawings, Figure 1 is a vertical longitudinal central sectional view of a car-coupling embodying my invention. Fig. 2 is a top plan view thereof. Fig. 3 is a detached perspective view of the pivoted lever which carries the pin-supporting rod or member.

Referring now to the drawings, A indicates the front of a car, and B the coupling-head. The coupling-head is provided with the usual link-receiving opening C and the usual vertically-arranged pin-receiving opening D. Formed in the upper portion of the coupling-head is a horizontally-elongated spring-receiving opening *a*, and communicating with the front lower end of this spring-receiving opening *a* is a vertical passage-way *b* for the reception of a swinging lever *d*. A vertically-arranged web *e* lies between the rear side of the pin-opening D and the front end of the spring-receiving passage *a*. A horizontally-arranged rod or locking member passage-way *f* passes through this vertically-arranged web portion *e* and communicates at its opposite ends, respectively, with the pin-receiving opening D and the recess *a*.

A pivotal pin *g* passes through the upper portion of the coupling-head B near its upper side and through the upper end of the swinging lever *d*, thus serving to pivot the said swinging lever and permitting its lower end to move back and forth. This swinging lever *d* is preferably made of a length sufficient to extend down into the lower portion of the coupling-head B, and the lower portion thereof is provided with a receiving-recess *h*, made sufficiently long to permit the lower end of the swinging member to vibrate horizontally and longitudinally.

A locking-pin *i* has its rear end pivoted in an opening *j*, the latter being formed in the lever *d* at a point intermediate its ends, and the opposite and outer end of the locking-pin *i* passes through the passage-way *f* in the vertically-arranged web *e* and is adapted to engage the coupling-pin G. The lower end of this coupling-pin G is provided with a peripheral groove *m*, with which the forward end of the locking-pin *i* is adapted to engage and to prevent the coupling-pin G being withdrawn from its opening D except when the swinging lever *d* has its lower end moved backward, thus carrying the forward end of the locking-pin out of engagement with the groove in the coupling-pin G. Situated in the elongated recess *a* is a spiral or other suitable spring *n*, having its forward end in engagement with the rear side of the swinging lever *d* and its rear end in engagement with the rear wall of the said passage-way. Preferably this passage-way is closed by means of a suitable cap H, which cap has a depending lug I extending down into the rear portion of the passage-way *a* for the purpose of holding the spring in its proper position. This cap H is preferably held in position by means of suitable screws or bolts J, by means of which it is readily removable for the purpose of placing the parts into their operative position or for the purpose of replacing a new part for a damaged or broken part of the coupling.

In operation the coupling-pin G is preferably never withdrawn from its opening D, and indeed it cannot be withdrawn except by releasing the locking-pin *i* from the groove in the lower end thereof when the pin is elevated. The advantage of this construction

is that the brakeman or other person operating the coupling is never obliged to handle the coupling-pin for the purpose of inserting it into its receiving-opening, which would likely be the case if there were no means provided to prevent the removal of the pin G from its opening.

For the purpose of lifting the pin G, I provide two separate and independent levers M, which are pivoted to the front end of the car, as shown, their inner ends N being connected with the upper end of the coupling-pin G through the medium of suitable connections P and their outer and depending ends Q serving as handles by means of which the pin G may be elevated. When the pin G is raised for the purpose of coupling, it is instantly caught by the forward end of the locking-pin *i* engaging the groove in the lower end of the coupling-pin and in which position the coupling-pin is held until it is released by the passage within the coupling of a link Q or equivalent locking member, which by engagement with the lower end of the swinging lever *d* moves it backward against the tension of the spring and carries the locking-pin *i* out of engagement with the coupling-pin G, and thus permitting it to automatically drop into the coupling position.

By means of a coupling as herein shown and described the automatic coupling of cars is readily accomplished, thus preventing accidents, which are of frequent occurrence with a coupling which has no means provided for automatically coupling the cars.

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

A car-coupling comprising a coupling-head having a vertically-arranged coupling-pin opening and a horizontal link-receiving opening in the lower portion thereof, said head having a vertically-arranged lever-receiving opening extending below the link-receiving opening, a lever pivoted therein, a web between the pin-opening and the lever-opening, said web provided with horizontal locking-pin openings, a locking-pin pivotally connected to the lever and entering said opening, said head provided with a horizontally-extending spring-receiving opening above the lower end of the lever-opening and extending to the top of the coupling-head, a plate covering said opening, a block secured to the under side of said plate over the spring-receiving opening and resting on the spring, and means for detachably securing the said plate in place, substantially as described.

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

THOMAS HARRISON.

Witnesses:
ELMER E. LYON,
GUY C. NEARING.