(No Model.) 2 Sheets—Sheet 1.

J. A. BOSCH.

CAR COUPLING.

No. 367,586. Patented Aug. 2, 1887.

FIG. 1.

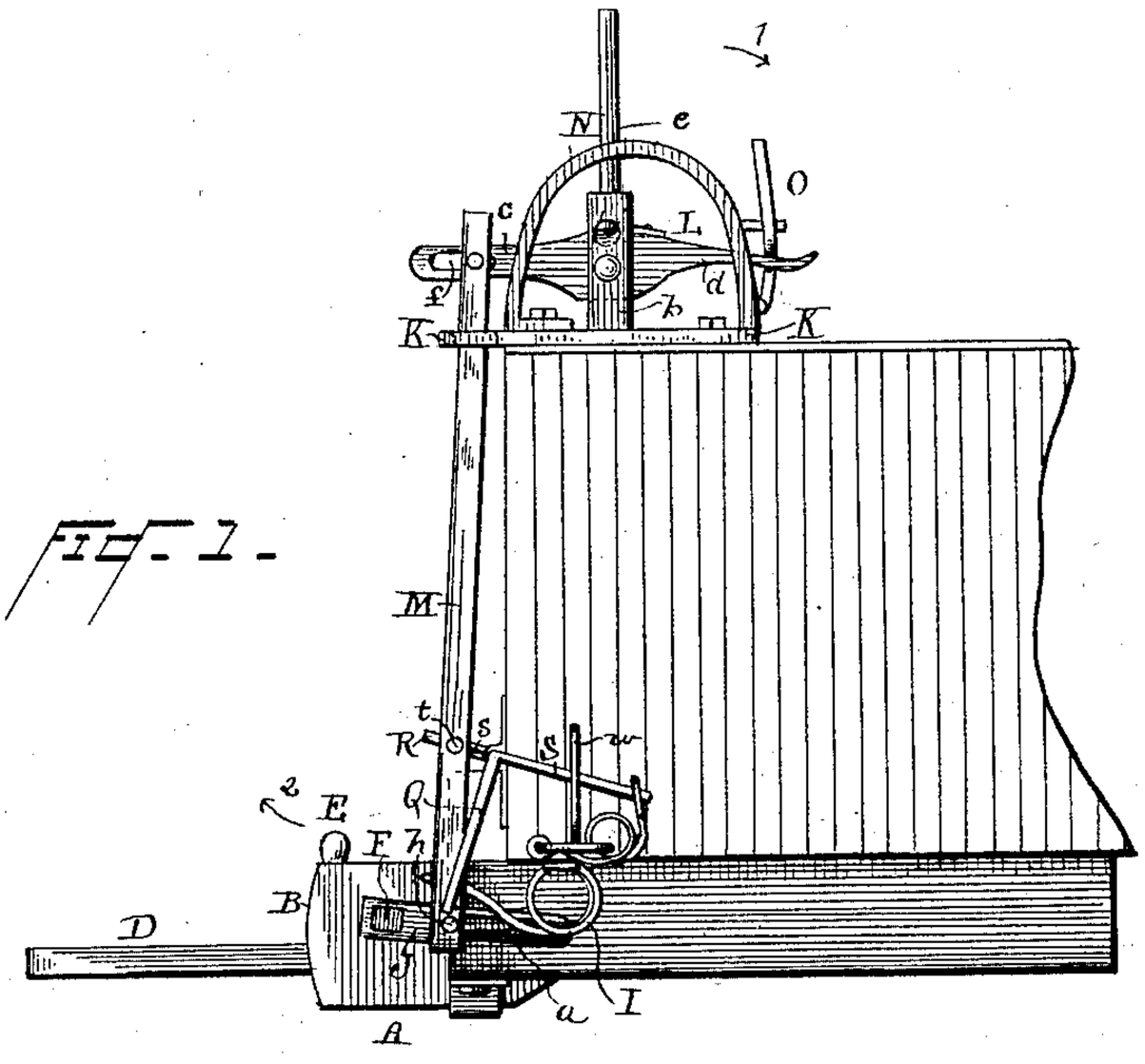
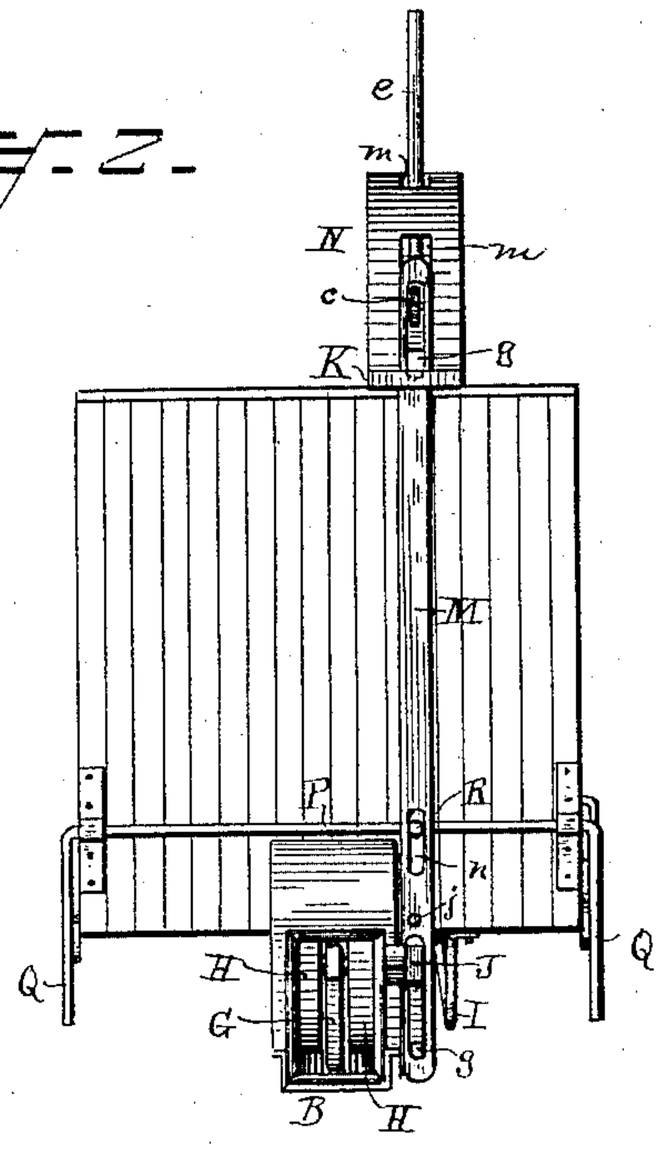


FIG. 2.



WITNESSES
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INVENTOR
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Attys

(No Model.) 2 Sheets—Sheet 2.

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CAR COUPLING.

No. 367,586. Patented Aug. 2, 1887.

FIG. 3.

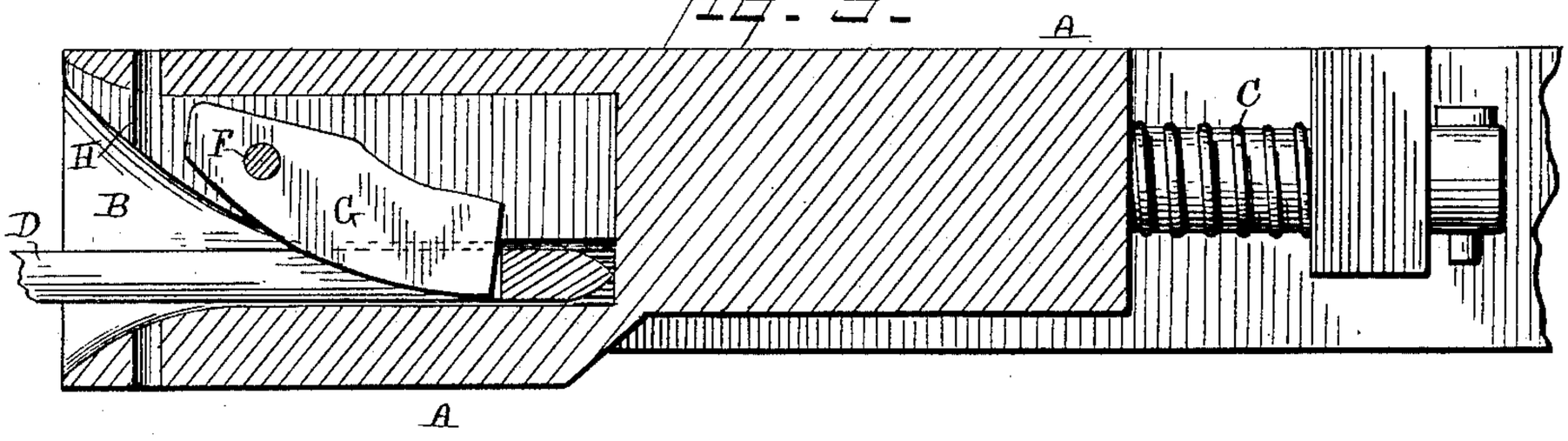


FIG. 4.

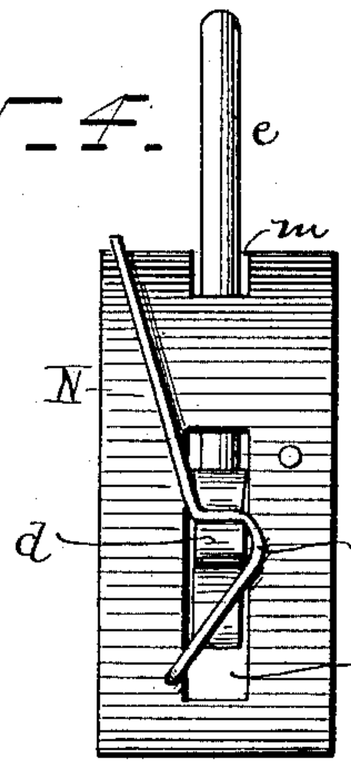


FIG. 5.

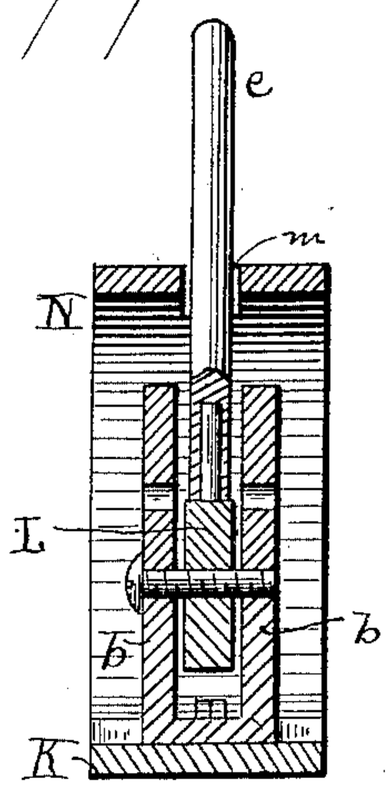


FIG. 6.

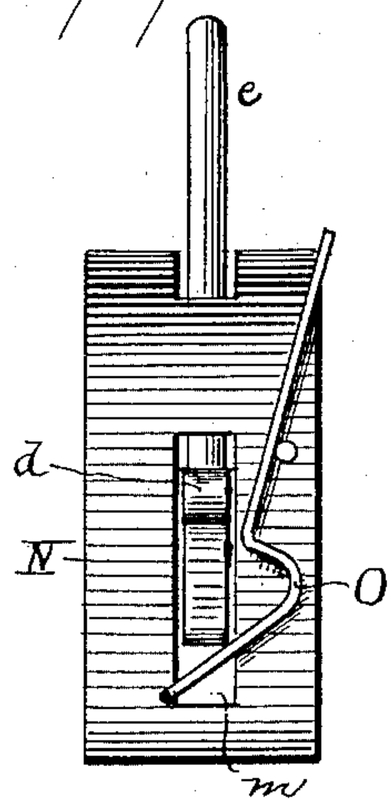
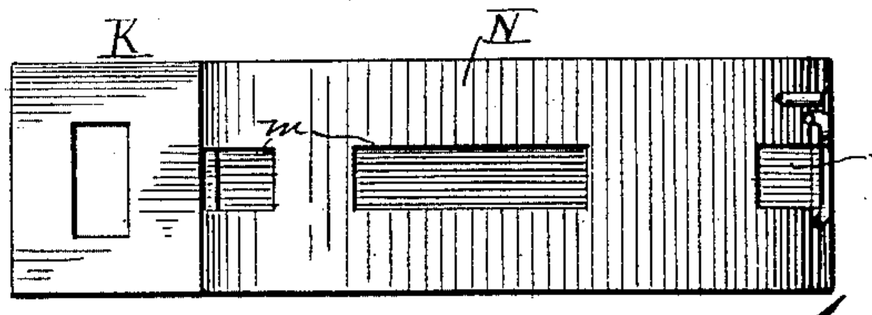


FIG. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN ALBERT BOSCH, OF MARYVILLE, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 367,586, dated August 2, 1887.

Application filed June 21, 1887. Serial No. 241,968. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALBERT BOSCH, a citizen of the United States, residing at Maryville, in the county of Nodaway and State of Missouri, have invented certain new and useful Improvements in Car-Couplings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to an automatic car-coupling for freight-cars, in which a link is used which can be employed to couple with cars having the ordinary couplings, in which the cars can be uncoupled from either side or from the top if the car is a box-car, and in which the automatic coupling device can be held out of operative position in case it is desired to buff the cars.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a portion of a car provided with the improved coupling. Fig. 2 is a front view of the same. Fig. 3 is a longitudinal sectional view of the draw-head. Figs. 4, 5, 6, and 7 are views of parts in detail.

A is the draw-bar, having chambered draw-head B. The draw-bar is a spring draw-bar of usual construction, having a limited longitudinal movement and held normally forward by a spring, C. D is the coupling-link, considerably longer than the ordinary link, which enters the chambered draw-head. The draw-head is constructed to receive the usual pin, E, if necessary.

Journaled across the upper part of the chamber of the draw-head is a shaft, F, and to this shaft is rigidly secured a downwardly and rearwardly extending coupling-plate, G. This coupling-plate is inclined on its forward or outer edge, and swings (with the shaft) between two similarly-inclined stationary guide-plates, H H, which direct the incoming end of the coupling-link to the lower part of the chamber. The coupling-plate usually retains its lowermost position, and the incoming link contacting with its inclined face swings the same upward until the solid forward portion of the link passes beyond the inner edge of the plate, when the plate descends into the slot of the link, thus coupling the cars. The descent of the plate is accelerated and the coupling insured by a spring, I, the location of which will be hereinafter specified. The guide-plates H H also act as guides to the coupling-plate, directing it into the slot of the link.

To uncouple the cars, it is only necessary to raise the inner end of the coupling-plate by the rotation of the shaft F. To effect this rotation from either side or the top of the car, the shaft is provided with a rigidly-attached rearwardly-extending lever, J, having elongated slot *a*. Journaled between suitable cheek-pieces, *b*, on a plate, K, fastened to the top of the car, is a three-armed lever, L, having two horizontal arms, *c d*, and a vertical arm, *e*. One of the horizontal arms, *c*, extends over the edge of the car, and has an elongated slot, *f*, therein.

M is a vertical connecting-rod having elongated slots *g g* in each end, which rod extends through a guide-aperture in the top plate, K. The lower slot in rod M embraces the lever J, and a pin, *h*, carried by the rod, passes through the slot *a* in lever J.

In an exactly-similar manner the upper end of the rod M is connected to the outer arm, *c*, of lever L. The slots *a* and *f* are essential, in order to prevent the parts being injured by the movement of the draw-bar. The ends of the arms *d* and *e* of lever L are shaped to adapt them to be used as a foot-piece and handle, respectively, so that they may be operated either by foot or hand. The movement of the lever L in the direction of arrow 1 raises the rod M and the lever J, thus rotating shaft F and lifting the coupling-plate, whereby the cars are uncoupled.

The several parts are caused to automatically assume their position for coupling the cars by the spring I, which is a coiled spring fastened beneath the car and having an arm, *i*, which is held in an aperture, *j*, in the rod, M, through which it slides freely during the movement of the several parts. The top plate, K, which is of metal, is bent upwardly to form a guide-arch, N, which is provided with slots *m m*, through which the arms of the lever L pass.

In case it is desired to buff the cars, the coupling-plate must be held up out of the way. To effect this, a swinging catch, O, is pivoted to

the arch N, which normally hangs down out of the way. When it is desired to buff the cars, the foot *d* of lever L is depressed as far as possible and the catch O then swung over to engage the same, thus holding it depressed and the coupling-plate out of operative position.

To uncouple from the sides of the car, a cross-shaft, P, is journaled across the end of the car, having downwardly-extending operating-levers Q Q on each end. Immediately behind rod M the shaft P has a horizontal arm, R, which extends through a slot, *n*, in the rod M. The arm R has a slot, *s*, through which passes a pin, *t*, carried by the rod M. Movement of either lever Q in the direction of arrow 2 raises arm R and rod M, thus uncoupling the car.

At each end the shaft P has a fixed horizontal arm, S, alongside the car and running beneath the guide *w*. This arm, when depressed by the movement of lever Q, is adapted to be engaged by a swinging catch, which holds the same depressed, so that the cars may be buffed when so desired.

I claim as my invention—

1. The chambered draw-head and the shaft journaled in the upper part thereof, in combination with rearwardly and downwardly inclined coupling-plate having inclined front face and the stationary inclined guide-plates H H, substantially as set forth.

2. The chambered draw-head, the shaft journaled therein, and the coupling-plate carried thereby, in combination with the lever J, secured to the shaft, the three-armed lever L on the top of the car, the rod M, connecting the levers J and L, and the catch O, substantially as set forth.

3. The chambered draw-head, the shaft journaled therein, and the coupling-plate carried thereby, in combination with the lever J, the rod M, and the shaft P, having levers Q Q and horizontal arm R, connecting with rod M, catch-arms S S on said shaft, and catches T T, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN ALBERT BOSCH.

Witnesses:
GALLATIN CRAIG,
WILLIAM R. WELLS.