

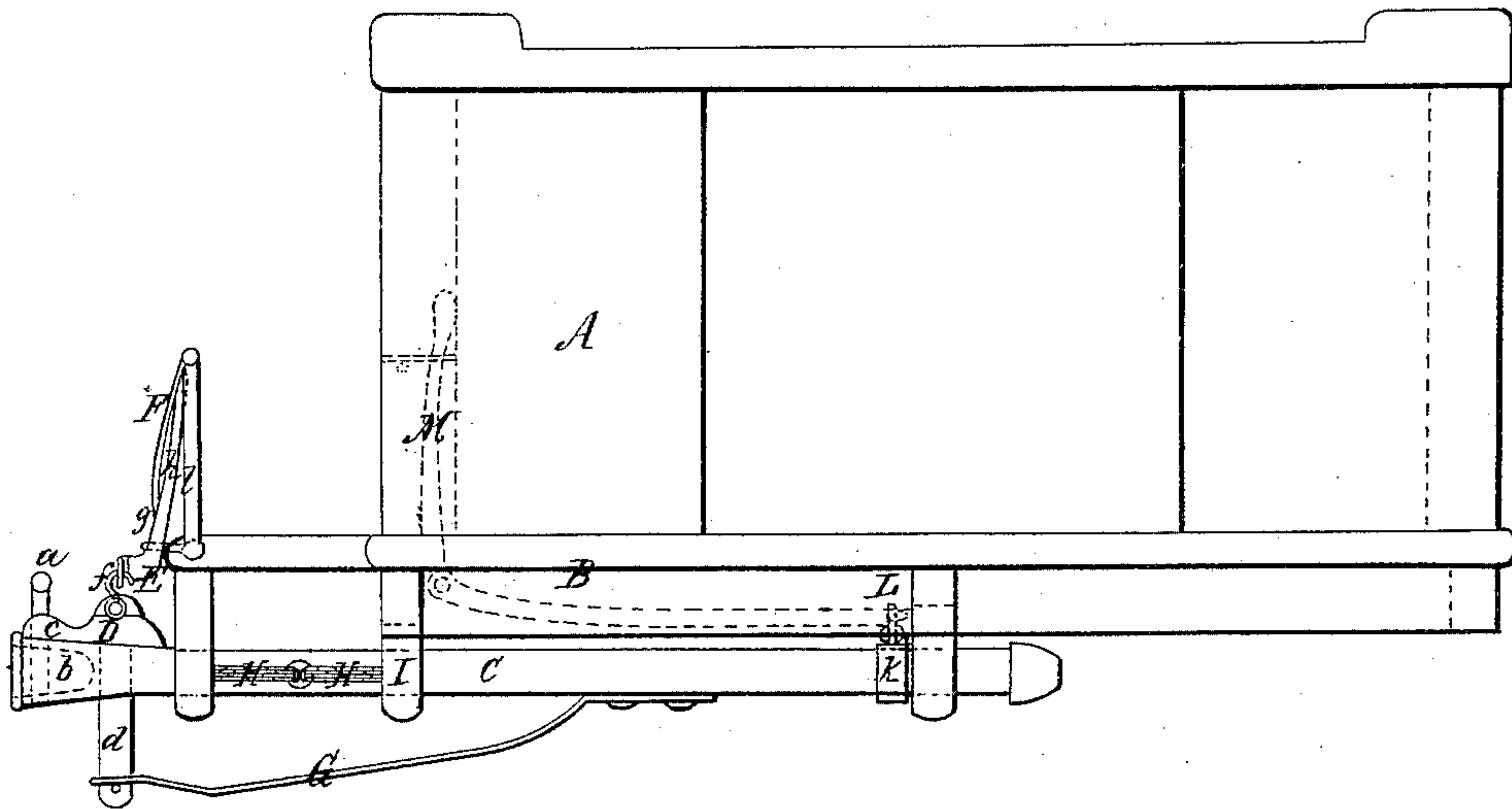
C. FLANDERS.  
Car Coupling.

2 Sheets—Sheet 1.

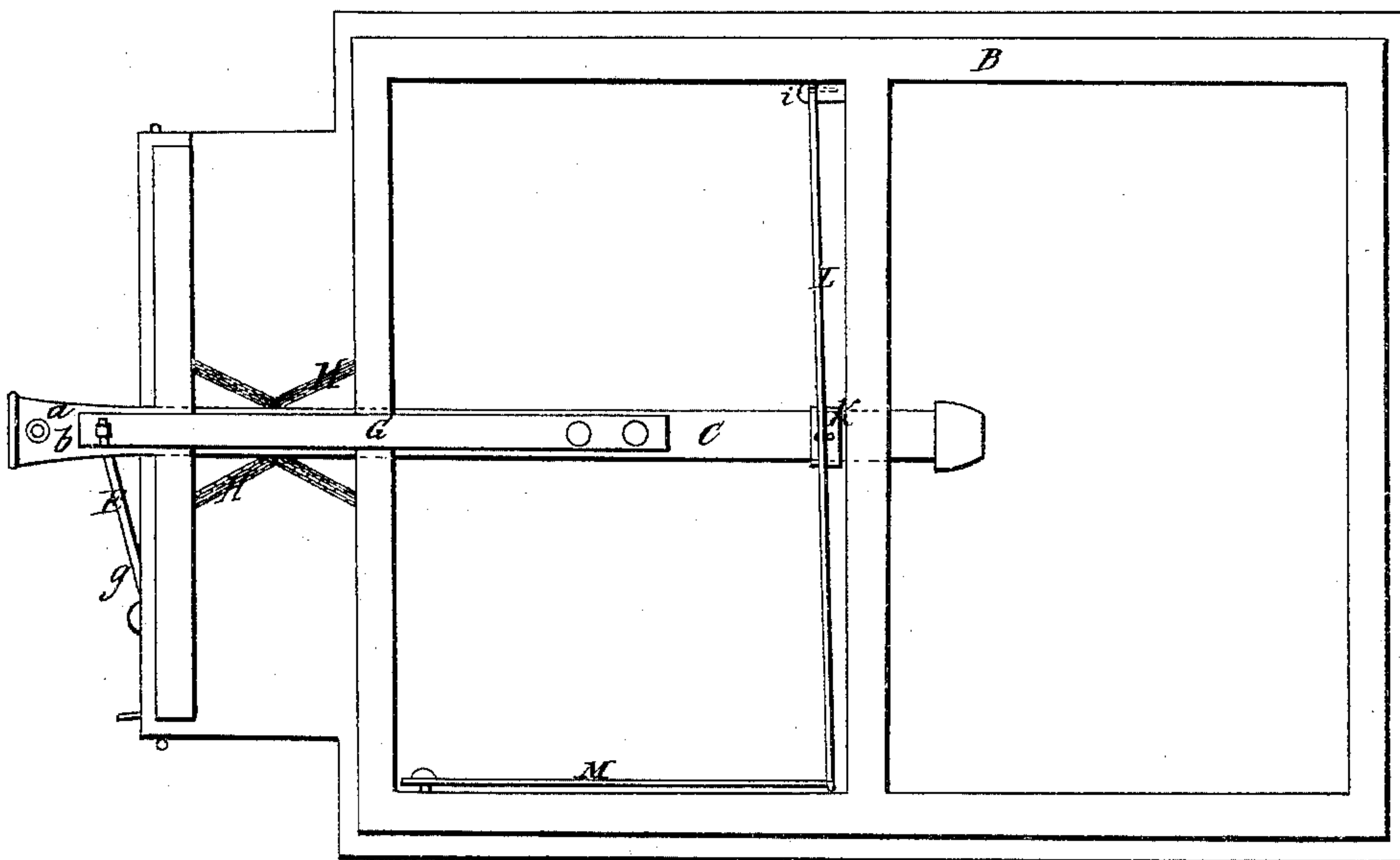
No. 16,230.

Patented Dec. 16, 1856.

*Fig. 1.*



*Fig. 3.*



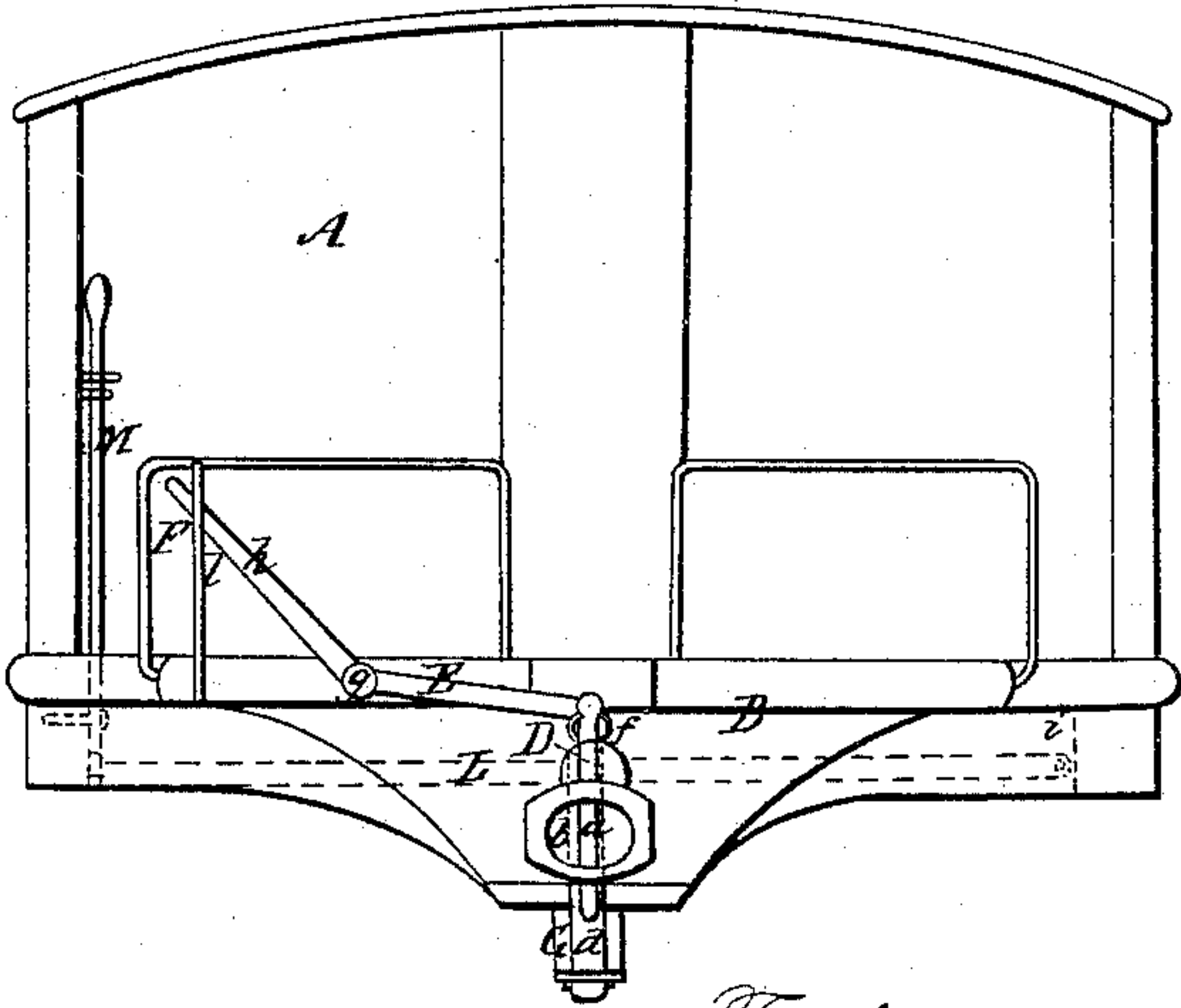
C. FLANDERS.

Car Coupling.

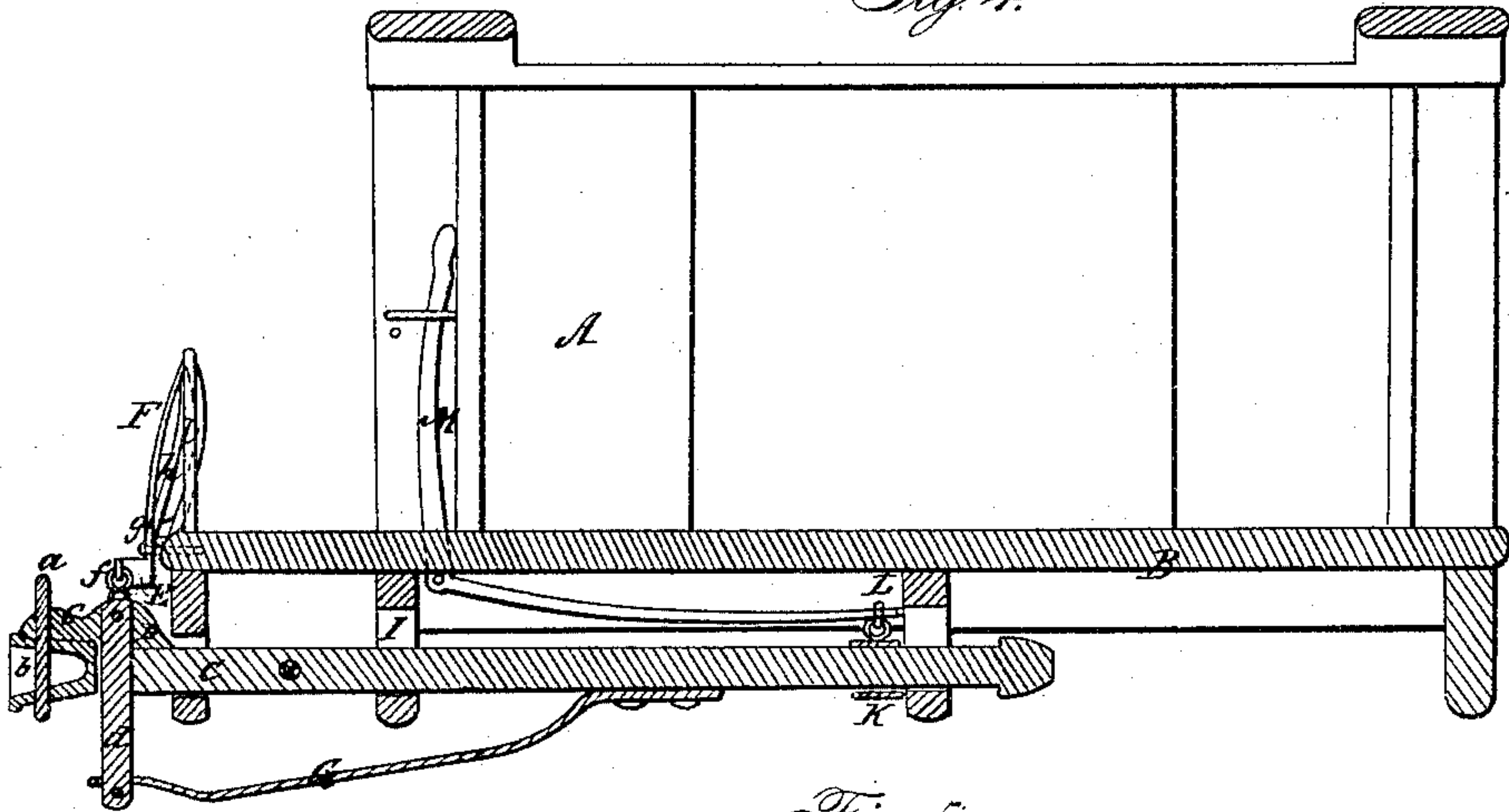
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*Fig. 2.*

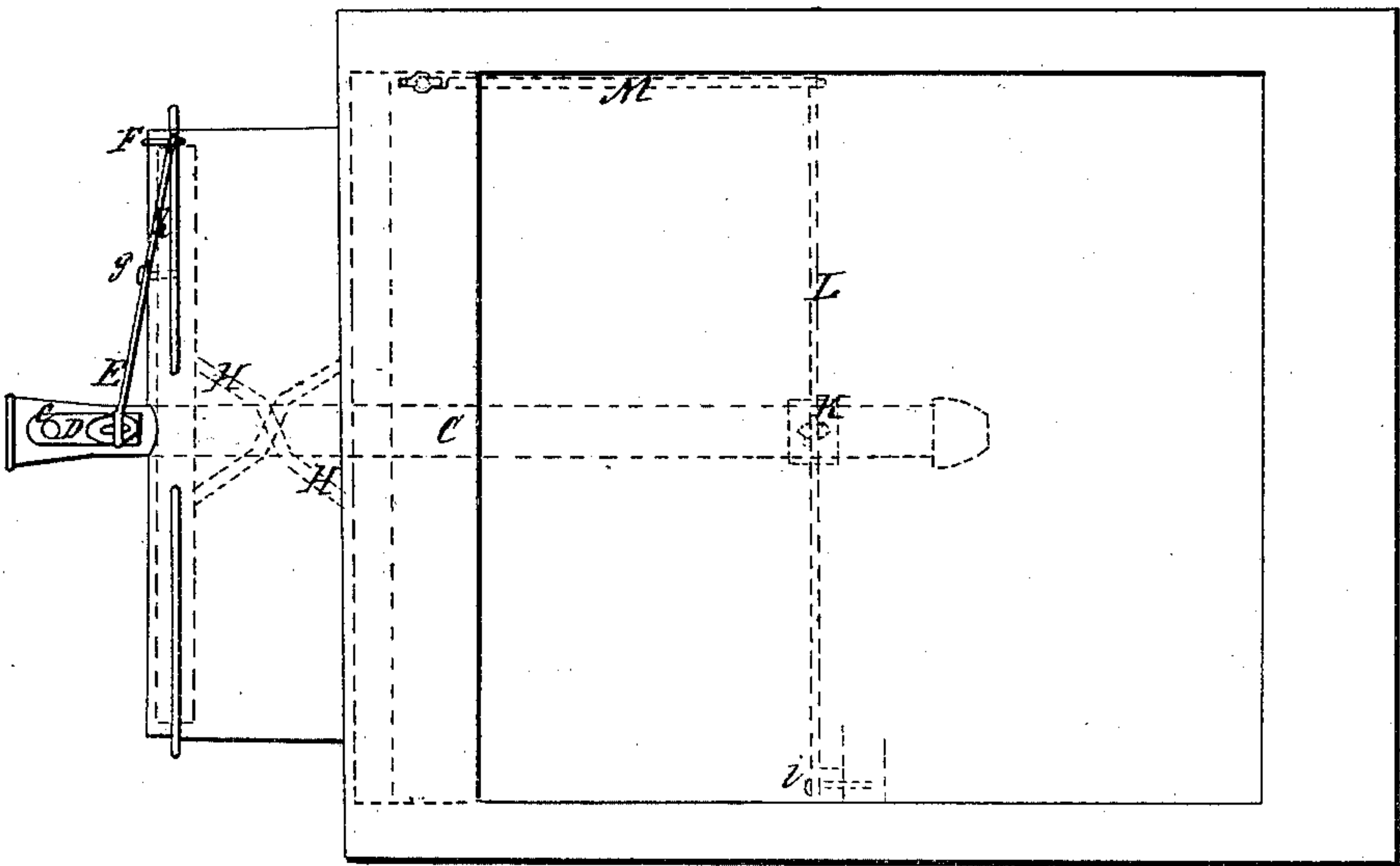
Patented Dec. 16, 1856.



*Fig. 4.*



*Fig. 5.*





# UNITED STATES PATENT OFFICE.

CHARLES FLANDERS, OF CHARLESTOWN, MASSACHUSETTS.

## RAILROAD-CAR COUPLING.

Specification of Letters Patent No. 16,230, dated December 16, 1856.

*To all whom it may concern:*

Be it known that I, CHARLES FLANDERS, of Charlestown, in the county of Middlesex and State of Massachusetts, have invented an Improved Car-Coupling; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1, is a side view of a railway car body having my improved coupling apparatus applied to one end of it. Fig. 2, is a front end elevation of the same. Fig. 3, an underside or bottom view of it. Fig. 4, a vertical, central and longitudinal section. In such drawings A, is the car body; B, the flooring frame or platform thereof; C, a spring bunter draw bar. Fig. 5, is a top view of the car and its mechanism.

A shackling pin, *a*, is applied to the front end of the draw bar or so as to pass down through the link chamber *b*, thereof, in the usual way, such shackle pin being fastened to and supported by a lifter D, which consists of a horizontal arm, *c*, and a vertical slider *d*, the latter being applied to the draw bar so as to slide freely through the same and in rear of its link chamber the arm, *e*, projecting from the slider above the bunter or draw bar as seen in the drawing. The said lifter, D, is connected by a shackle or short chain, *f*, with the inner arm of a bent lever E, which works upon a fulcrum or pin, *g*, extending from the front end of the car platform, B, the said lever being formed as seen in the drawings and so applied to its fulcrum, as not only to be capable of being moved in a vertical plane, but also of being moved laterally or horizontally, in accordance with the longitudinal movements of the draw-bar. The upper arm, *h*, of the lever E, extends through a catch plate F, which is formed and arranged upon the platform B, as shown in the drawings. A spring, G, is fastened at one end to the lower extremity of the lifter, D, while at its other, it is attached to the draw bar as seen in Fig. 4. This drawbar is supported horizontally by springs, H, H, which allow it to have longitudinal movements in the customary way, and such drawbar should also be supported and be so applied to the platform by proper contrivances as to enable it to be tilted in a vertical direction, either up or down. For this purpose, the said drawbar may rest on a bearer, I, arranged between its two ends and it may

have applied to it, in rear of said bearer, a stirrup, K, through which it may slide freely in a longitudinal direction, the said stirrup being hung to a lever L, extended transversely across the framing of the platform D, and turning on a fulcrum, *i*, (see Fig. 3). The front end of said lever, L, or that opposite to the end at which its fulcrum is situated, should be jointed to a bent shifter or lever, M, arranged as seen in Figs. 2, 4, and 5. By means of said levers L, M, and the bearer, I, the bunter draw bar may be tilted so as to depress its front end or bunter or adjust it to meet a bunter of a corresponding size, whatever may be the height of the latter bunter.

It is well known, that from various causes the bunters of different cars vary somewhat in their distances above the rail track, and as it is desirable when two cars are in the act of being connected, that their adjacent bunters should be on a level, or that one should be so moved either upward or downward as to cause the shackling link of the other, to be received into its link chamber. I have applied to the bunter bar, mechanism as described, by which a person when standing on a platform, and laying hold of the shifting lever, M, thereof may adjust or regulate to a proper height, the bunter of the drawbar of the carriage or car on which he may be standing.

In operating with the remainder of the coupling mechanism, an attendant should first prepare the drawbar for the reception of the link of the bunter of another car. This while standing on the platform, he accomplishes by laying hold of the upper arm of the bent lever E, and pressing it downward and moving it laterally underneath a catch, *l*, of the catch plate, F. In so doing he will raise the lifter, D, of the shackle pin, *a*, which at the same time will lift the said pin out of the link chamber, *b*. Now, when the two cars come together so that their bunters are brought into contact and the shackle link of one bunter has entered the chamber, *b*, the momentum of the approaching car will press backward the drawbar, C, and so as to move the lever, E, in such manner as to discharge it from the catch of the catch plate, F. As soon as such takes place, the lifter, D, with the shackle pin, *a*, will be drawn downward by the action of the spring G, and in such manner as to cause the shackle pin, *a*, to pass through the coupling



link and thereby connect the two cars together.

My improved apparatus is one by which cars are caused to be shackled together without the necessity of having a person go directly between their platforms in order to insert a shackle pin in the link, while it is being made to enter the link chamber of the drawbar. It is very dangerous, and often has proved fatal to persons, who have thus ventured between the cars. With such apparatus all danger of any accident of this kind is completely obviated.

Although this apparatus, in some respects, is like other mechanism for accomplishing the same purpose, yet it differs therefrom particularly in the employment of the lifter slide D, applied to the shackle pin and draw bar, and the mechanism for raising and depressing such lifter. And, furthermore the draw bar itself is made movable vertically so as to adjust its link mouth and buffer head to such contrivance of another car to be coupled. These differences are important, and it is in such that my invention consists.

I do not claim the mere application of a lever to the shackle pin for the purpose of elevating the same. Nor do I claim connecting such lever to such pin by a chain or any flexible equivalent, but for the purpose of steadying the pin, maintaining it in its

proper position with respect to its hole in the draw bar and enabling it to be drawn downward.

I claim—

1. Combining and arranging the lifter, D, and the spring G, with the pin, *a*, the drawbar, C, and the elevating lever, E, so as to operate therewith substantially as specified.

2. I do not claim the combination of a horizontally acting hook with a vertically moving box arranged in a draw bar, made to slide longitudinally and against springs and merely for the sake of disengaging the hook from its fellow, such having been patented by Joseph Miller, November 14th 1854 but what I do claim is my improvement thereon, the same consisting in arranging the draw bar itself so as to rock or tilt on a bearing, I, and to slide through a lifter stirrup, K, applied to a system of levers, L, M, whereby the drawbar itself may be moved vertically so as to properly adjust its receiving mouth with respect to that of another drawbar as may be necessary in order to couple two cars together.

In testimony whereof I have hereunto set my signature this 28th day of March A. D. 1856.

CHAS. FLANDERS.

Witnesses:

R. H. EDDY,  
F. P. HALE, Jr.