M. CONNELLY.

Car Coupling.

No. 95,431. Patented Oct. 5, 1869.

Fig. 1

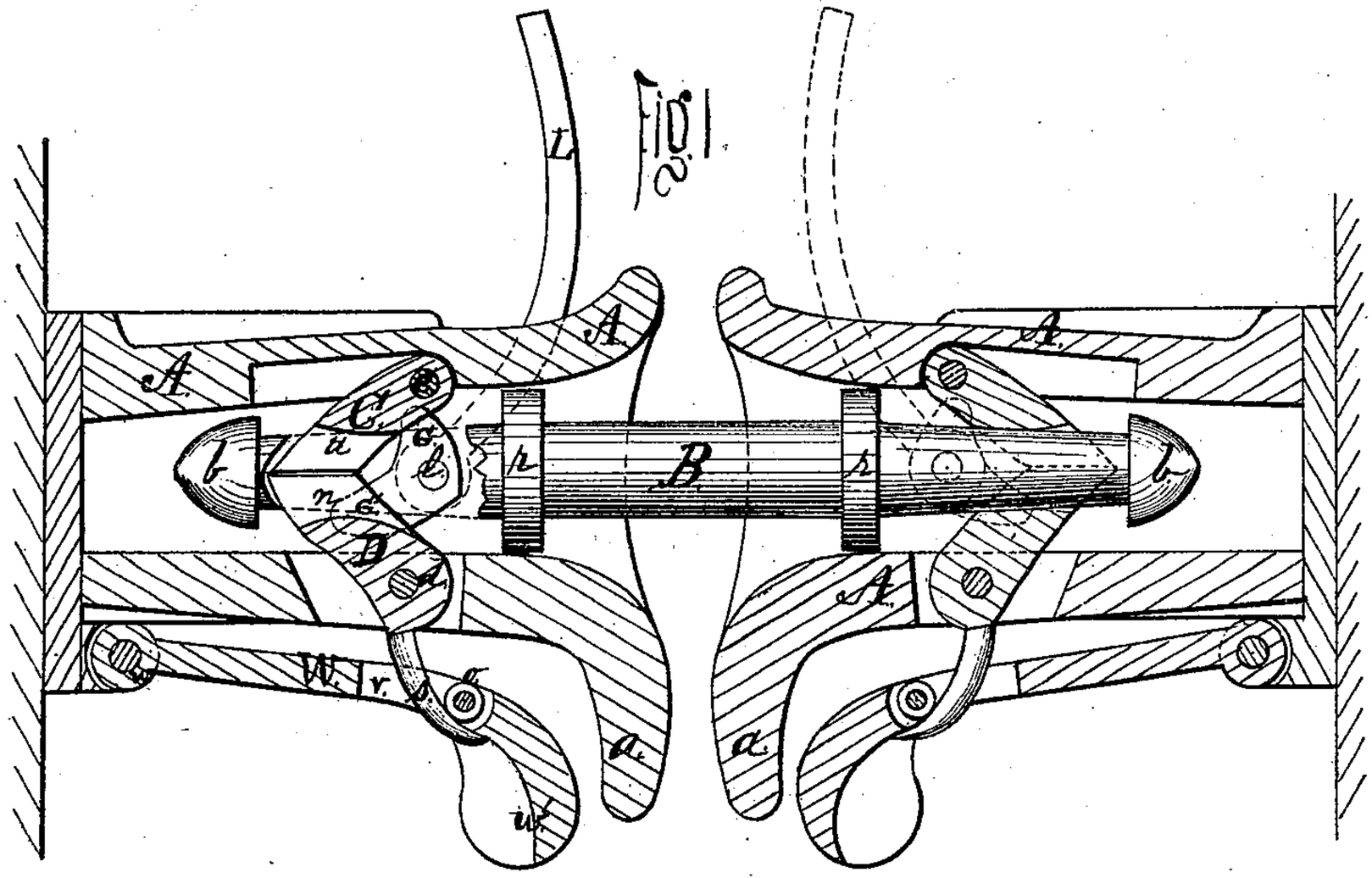
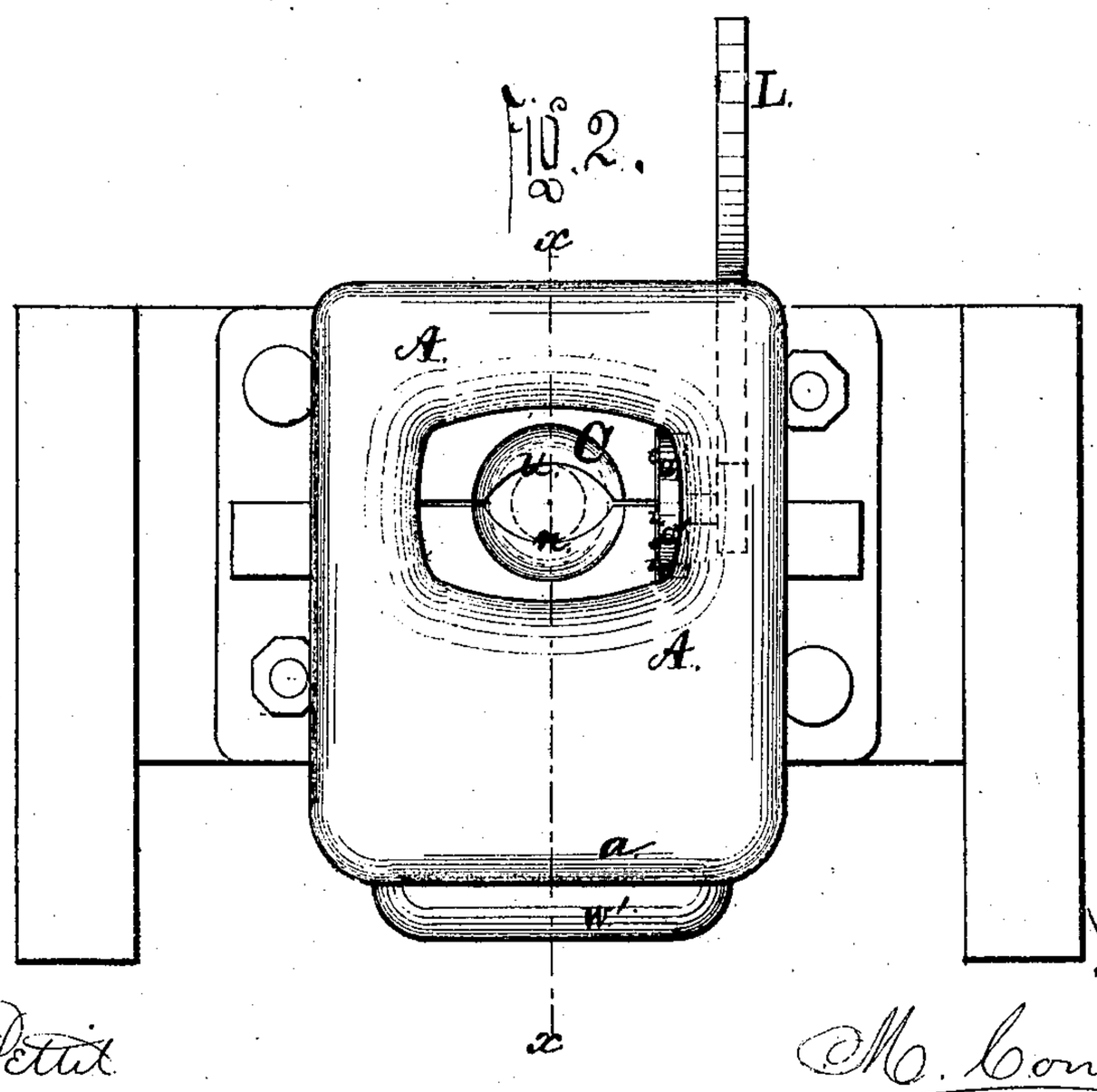


Fig. 2.



Witnesses:

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United States Patent Office.

MICHAEL CONNELLY, OF BALTIMORE, MARYLAND, ASSIGNOR TO HIMSELF AND HENRY W, ROGERS, OF SAME PLACE.

Letters Patent No. 95,431, *dated October* 5, 1869.

IMPROVED RAILWAY-CAR COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MICHAEL CONNELLY, of the city and county of Baltimore, and State of Maryland, have invented a new and improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 a vertical section, through line *x x* of fig. 2.

Figure 2 is a front view of the draw-head, with my improved automatic coupling attached.

The object of this invention is to provide for public use a simple and effective automatic coupling for railroad-cars.

To this end, the invention consists in the employment of four principal parts, constructed and operating as hereinafter set forth, viz:

A headed coupling-bolt, of peculiar shape; a pair of dogs or pawls, articulated to the draw-head, and operating in such a manner that they open to admit the head of the coupling-bolt, but close automatically behind it, and prevent its withdrawal; a double cam-lever, which opens or separates both dogs or pawls at once, when the cars are to be uncoupled; and a weight, of peculiar construction, which tends to keep the dogs closed together behind the head of the coupling-bolt, and which has to be overcome by the lever, in order to allow the cars to be uncoupled.

I am aware that a headed coupling-bolt is not new, and that two dogs, jaws, or pawls, opening by the action of the bolt, and closing behind its head, to hold it, have been heretofore employed.

I am also aware that both weights and springs have been used to keep the pawls closed behind the head of the pin, and that a lever has been employed to overcome the weights or springs, and open the pawls.

My invention does not, therefore, consist, broadly, in the use of a headed coupling-bolt, two jaws or pawls to hold it in place, a lever to open them, and a weight to close them, whether they be considered independently or in combination; but

It consists in the peculiar construction of those parts, as hereinafter specified and claimed, and of their combination, when thus constructed.

In the drawings—

A is the draw-head, having a "bell-mouth," with hanging under lip, as seen at *a a*.

B is the coupling-bolt, having two heads *b b*, and two collars or circumferential ribs, *r r*, so situated as to divide the bolts into three parts, nearly equal in length.

C is the upper dog or pawl, articulated to the draw-head at *c*, having one edge slightly cut away, or rebated, as seen at *e*, so that the cam-lever will act upon it to the greatest advantage, and having a portion of its lower edge cut away at *u*, to accommodate the neck of the coupling-bolt, when the cars are coupled.

D is the lower pawl, articulated to the draw-head at *d*, rebated and cut away at *i* and *n*, as the upper pawl is at *e* and *u*, and provided with a long curved spur, *s*, which projects down through a slot in the draw-head, and supports the end of the weight above referred to, as shown in fig. 1.

W is the weight, in the form of a long, flat, slightly curved arm or plate, articulated at its rear end to the draw-head at *w*, and provided with a heavy head, *w'*, recessed or concave on the under side in such a manner that the point of the spur *s* will work back and forth in the recess.

This weighted arm or plate is provided with a vertical slot, *v*, through which the spur extends, and it may also have a friction-roller, *o*, bearing upon the concave upper edge of the spur, and thus sustaining the weight of its forward end.

L is the lever employed to open the jaws or pawls, being pivoted to the draw-head at *l*, and provided with a double cam-head, G G', the form and operation of which will be readily understood from fig. 1. The general form of the cam-head is that of the letter **V**, being pivoted at the angle.

It is evident that when the handle of the lever is thrown forward, the upper cam G will raise the pawl C, while the lower cam G' will depress the lower pawl D, and thus the coupling-bolt will be liberated. As soon as the force is removed from the lever, the upper pawl will drop, by its own gravity, to its former position, while the action of weight W will bring the lower pawl up to its place.

It will also be observed that the weight W, being independent of the lower pawl, its jumping, when running over a rough road, will not necessarily depress the pawl and uncouple the cars, since, when force is applied to it directly, it may rise without affecting the position of the lower pawl. The pawl is so pivoted that it will drop by its own gravity, when the weight is raised, and when the head of the coupling-bolt is not pressing against it.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination, with the two pawls C D, the lever L, having the double cam-head G G', the latter being arranged to operate directly upon the pawls, substantially as and for the purpose described.

2. In combination with the lower pawl D, having the spur *s*, the weighted and slotted plate W, pivoted at *w*, when the several parts referred to are constructed to operate in connection with each other, substantially as and for the purposes set forth.

MICHAEL CONNELLY.

Witnesses:

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