

J. McMULLEN.
 AUTOMATIC CURTAIN HOOK AND RELEASE FOR VESTIBULE CARS.
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917,107.

Patented Apr. 6, 1909.

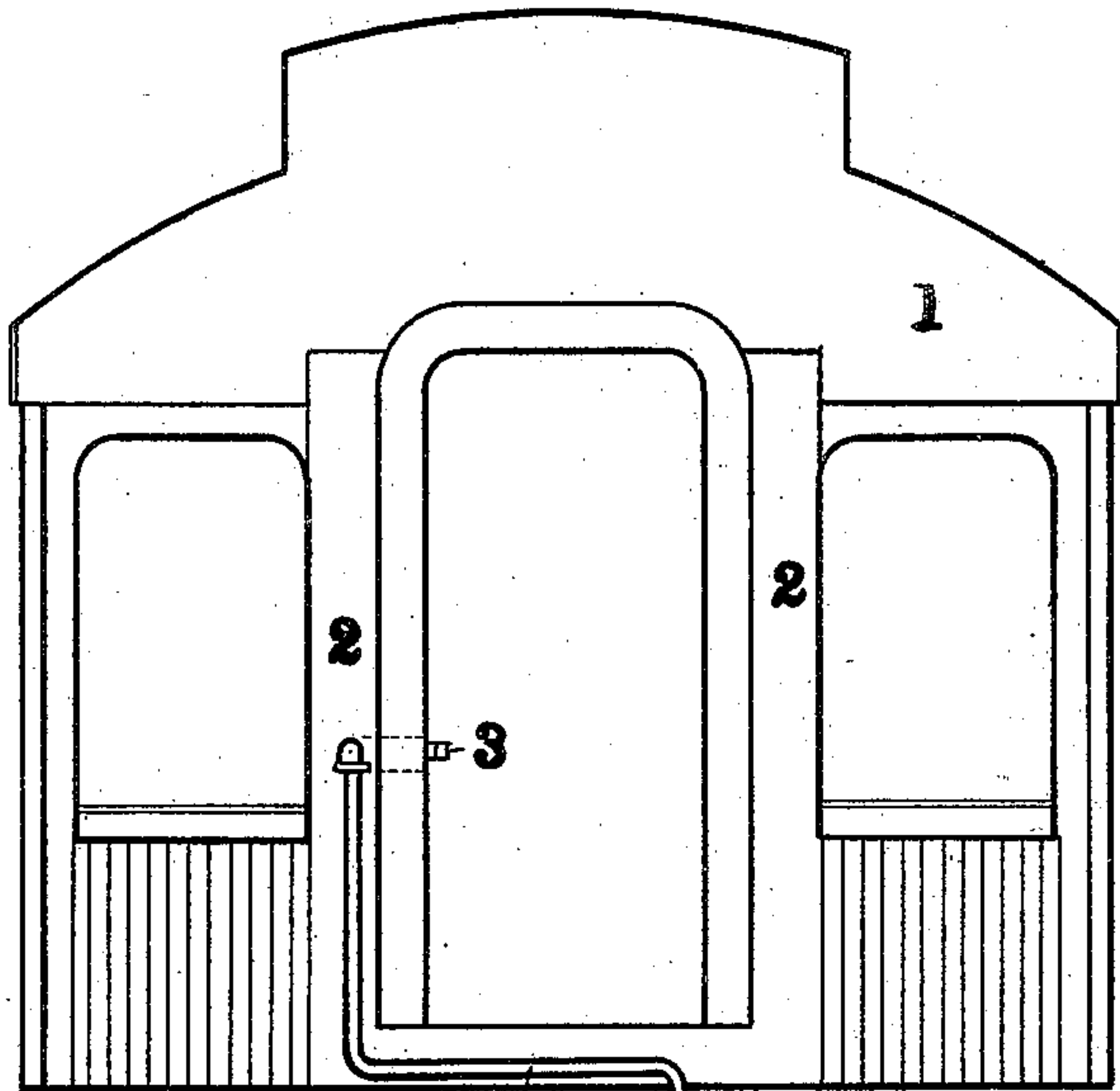


FIG. 1

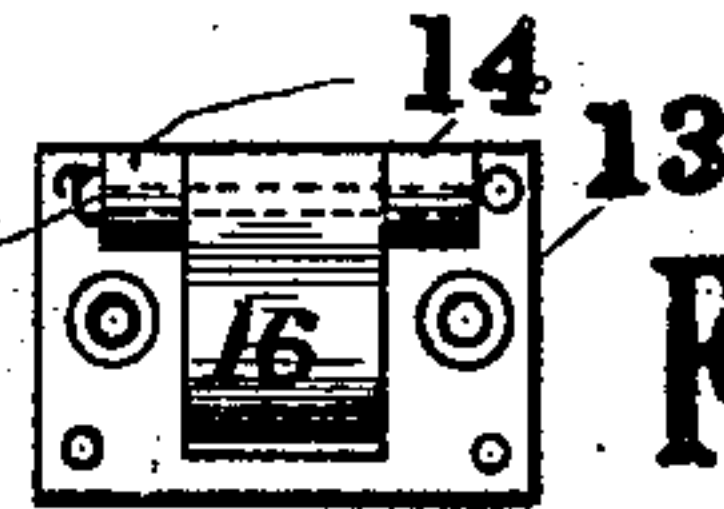


FIG. 3

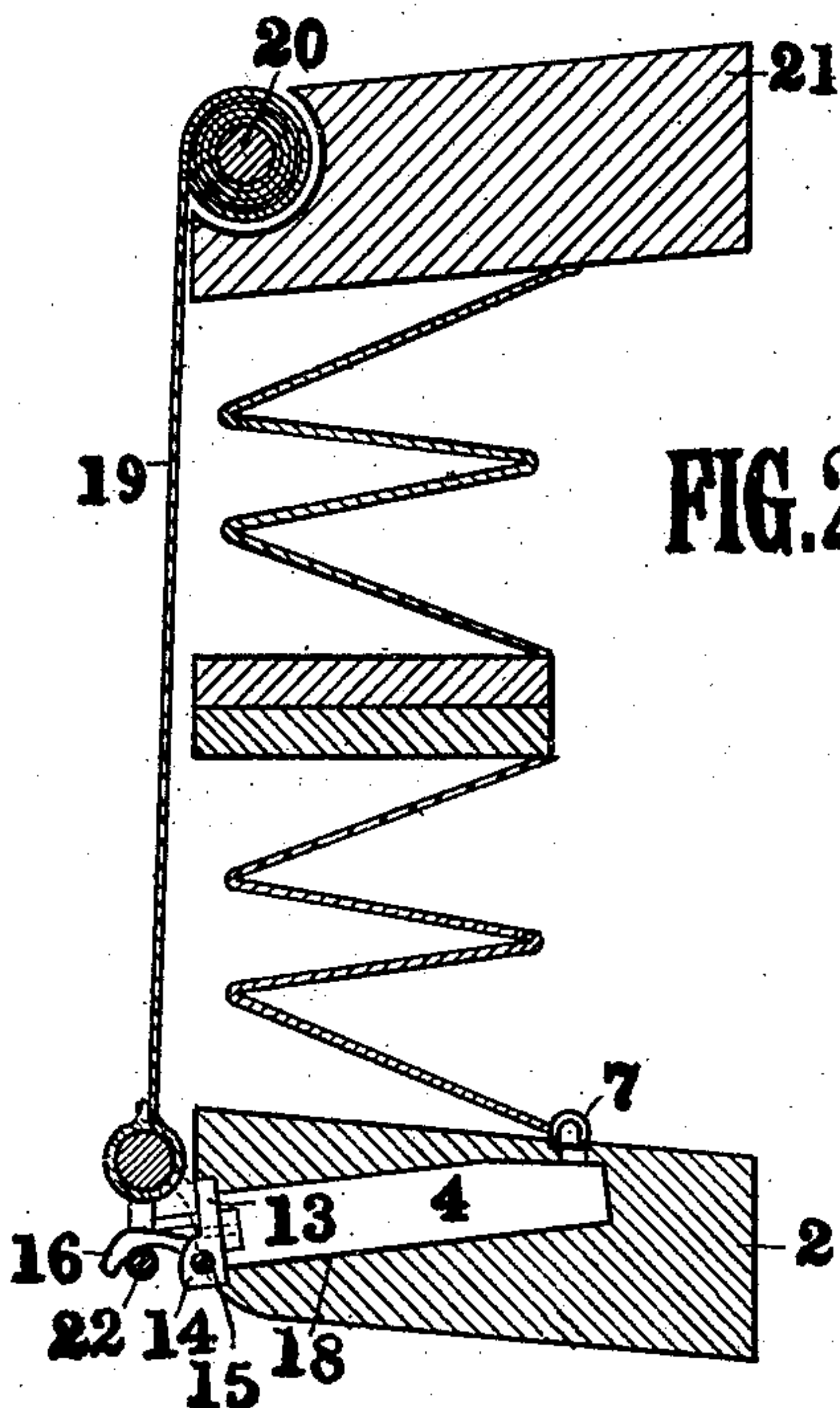


FIG. 2

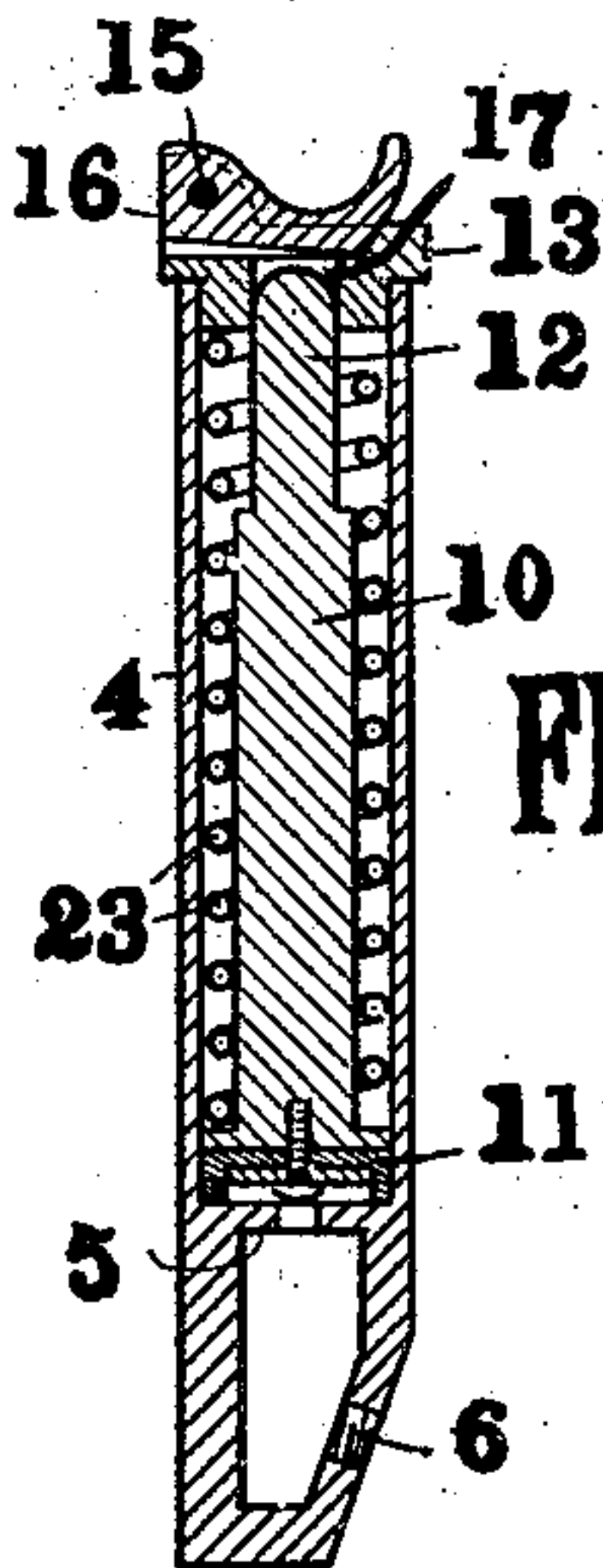


FIG. 4

WITNESSES

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AUTOMATIC CURTAIN HOOK AND RELEASE FOR VESTIBULE-CARS.

No. 917,107.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN McMULLEN, a citizen of the United States, residing at Kent, in the county of Portage and State of Ohio, have invented new and useful Improvements in Automatic Curtain Hooks and Releases for Vestibuled Cars, of which the following is a specification.

This invention relates to improvements in catches for vestibuled car curtains, its object being to provide a device which will hold curtains securely and positively when the cars are coupled together, but which will automatically release the curtain when the cars are pulled apart or separated.

When two vestibuled cars are coupled together, the face plates on the diaphragms of the cars are normally in spring-pressed contact with each other, but when the train is in motion the plates are liable to be jerked apart by sudden pulls or pushes of the engine as well as moved sidewise past one another in the swinging of the train. To shield these plates from people passing from one car to another and to prevent passengers from being injured by being caught between the plates, vestibuled cars are usually provided with curtains extending across from one car to another. These curtains, as it is well known, are usually secured to the post of the vestibule of one car at one edge by means of a spring-mounted curtain roller, the tension of which tends to wind up the curtain while the free end thereof is arranged to be detachably coupled to the post of the vestibule of the connected car, usually by a handle on said curtain that is interlocked with a hook on the vestibule of the adjacent car.

In practice a large number of curtains are torn to pieces by separation of the cars on account of the fact that the brakemen and others in charge of the handling of the cars in switch yards and elsewhere frequently forget to uncouple the curtains when they uncouple the cars, thus causing a tearing of the curtains when the cars are separated.

The object of this invention, therefore, broadly speaking, is to provide a catch adapted to hold the free end of a vestibuled car curtain which will be held in operative position to engage the curtain by means of air pressure derived from the train service pipe in which air is conveyed to the brake mechanism of the cars and arranged to be rendered inoperative, whereby said catch

will release said curtain upon a lowering or absence of pressure in the train service pipes.

In carrying into effect the foregoing object, this invention contemplates the positioning of a catch on the post of a vestibuled car adapted to engage and hold the handle of a vestibuled car curtain and to provide mechanism for holding the catch in operative position by means of a piston carried in a cylinder operated by air pressure derived from the angle-cock to which the hose-pipes connecting the cars are attached and to be released upon a release of pressure in the train service pipes or hose connecting adjacent cars, as by disconnection or breaking of the same.

With the foregoing and other objects in view, the invention consists in the novel construction, combination and arrangement of parts constituting the invention to be hereinafter specifically described and illustrated in the accompanying drawings which form a part hereof, wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings, in which similar reference numerals indicate like parts in the different figures: Figure 1 is a diagrammatic view of the end of a vestibuled car embodying this invention. Fig. 2 is a horizontal sectional view of the vestibules and co-operating parts of two connected cars. Fig. 3 is a plan view of a catch and head of an air cylinder used in connection with this device; and, Fig. 4 a vertical, central, sectional view of an air cylinder used for operating the catch in connection with this invention.

Referring specifically to the drawings, the reference numeral 1 denotes the end of an ordinary vestibuled car provided with the usual posts 2, 2, one of which is adapted to be provided with a catch 3 and the other with a curtain roller. The catch 3 consists of a hollow cylinder 4 having a perforated septum 5 and an inlet 6 which connects through the medium of the pipe 7 with the angle-cock 8 outside of the plug or gate 9. Mounted in the cylinder 4 is a piston 10 having a flanged lower end and provided with a packing ring 11 and further provided with a reduced end 12. On the open end of

the cylinder 4 is a head 13 bearing two lugs 14 extending through which is a pin 15 pivotally supporting a catch 16. The head 13 is further provided with a central opening 17 through which the reduced end 12 of the piston may project. Surrounding the piston 10 is a coiled spring 23 adapted to engage the flanged lower end thereof and also the head 13 the normal tendency of which is to maintain the piston in inoperative position by withdrawing its forward or reduced end from the opening 17. This cylinder 4 is positioned in a suitable recess 18 in the post 2 of the vestibule of one car, as shown in Fig. 2 and when air under pressure from the angle-cock 8 is admitted through the inlet 6 it passes through the perforation in the septum 5 to the interior of the cylinder 4 and forces the piston 10 outwardly causing the reduced end 12 thereof to project through the opening 17 in the head 13 which forces the catch 16 outwardly into operative position as shown in full lines in Fig. 2.

The curtain designated by the reference numeral 19 is unwound from the roller 20 on the post 21 on the adjacent car and the handle 22 thereof is interlocked with the catch 16 and as long as the pressure of air is maintained in the cylinder 4 the catch 16 will maintain this operative position.

When two vestibuled cars are disconnected, the angle-cocks 8 are first closed, which shuts off the air from the hose pipes connecting the two cars, then the hose are disconnected from each other in the ordinary manner which reduces the pressure in the cylinders 4 permitting the springs 23 therein to withdraw the pistons 10 from operative engagement with the catches 16, thereby disengaging the handles 22 from connection with the catches and permitting the curtains to rewind on the rollers 20 under the influence of the ordinary springs carried thereby.

From the foregoing it will be seen that if a brakeman or employee in uncoupling two vestibuled cars provided with this invention, should for any reason neglect to detach the curtains before he uncouples the cars, the very act of disconnecting the air hose will automatically release the curtains and permit them to wind up on their respective rollers, thereby avoiding the danger of tearing the curtains apart when the cars are separated from each other; in fact, the catches automatically release themselves the instant the pressure in the air-brake hose between the cars is reduced sufficiently to permit the springs 23 to withdraw the pistons 10 from operative engagement with the rear faces of the catches.

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

1. An automatic catch for vestibuled car curtains comprising a holding member for

the free end of the curtain and means operated by a fluid under pressure adapted to maintain said member in operative position.

2. An automatic catch for vestibuled car curtains comprising a holding member for the free end of the curtain, means operated by a fluid under pressure for maintaining said member in operative position and means for moving said fluid operated means to inoperative position on the withdrawal of pressure.

3. A device for holding the free end of vestibuled car curtains comprising a catch adapted to be held in operative position by means of fluid pressure and to be moved to inoperative position upon the removal of said pressure.

4. A device for holding the free end of a vestibuled car curtain comprising a catch, a fluid-actuated piston for holding said catch in operative position and resilient means to withdraw said piston from engagement with said catch whereby said catch may be moved to inoperative position.

5. A device for holding the free end of a vestibuled car curtain comprising a catch, a fluid-actuated piston adapted to hold said catch in operative position and means connected with the air brake pipes of a car for conveying a fluid under pressure to said piston.

6. A device for holding the free end of a vestibuled car curtain comprising a catch, a fluid-actuated piston adapted to hold said catch in operative position, means for conveying a fluid under pressure from the air brake pipes of a car to said piston and means to withdraw said piston from engagement with said catch upon a release of said pressure.

7. A device for holding the free end of a vestibuled car curtain comprising a catch, a cylinder connected therewith, a piston carried by said cylinder adapted to hold said catch in operative position, said piston arranged to be actuated by fluid under pressure and means for conveying fluid under pressure from the air brake pipes of a car to said piston.

8. A device for holding the free end of a vestibuled car curtain comprising a catch, a cylinder connected therewith adapted to contain a fluid under pressure, a piston in said cylinder operated by said pressure adapted to hold said catch in operative position, means to withdraw said piston from engagement with said catch whereby said catch may be moved to inoperative position and means for conveying a fluid under pressure from the air brake pipes of a car to said piston.

9. A device for holding the free end of a vestibuled car curtain comprising a catch, a piston movable to engaging relation with said catch by fluid pressure whereby said

catch is maintained in operative position,
means for withdrawing said piston from en-
gagement with said catch upon the release
of pressure, and means communicating with
5 the air brake pipes of a car for furnishing a
fluid under pressure to said piston.

In testimony whereof I have hereunto set

my hand in presence of two subscribing wit-
nesses.

JOHN McMULLEN.

Witnesses:

C. E. HUMPHREY,
GLENARA FOX.