

J. E. OSMER.
DOOR OPERATING MECHANISM.
APPLICATION FILED OCT. 15, 1906.

899,796.

Patented Sept. 29, 1908.

Fig. 1.

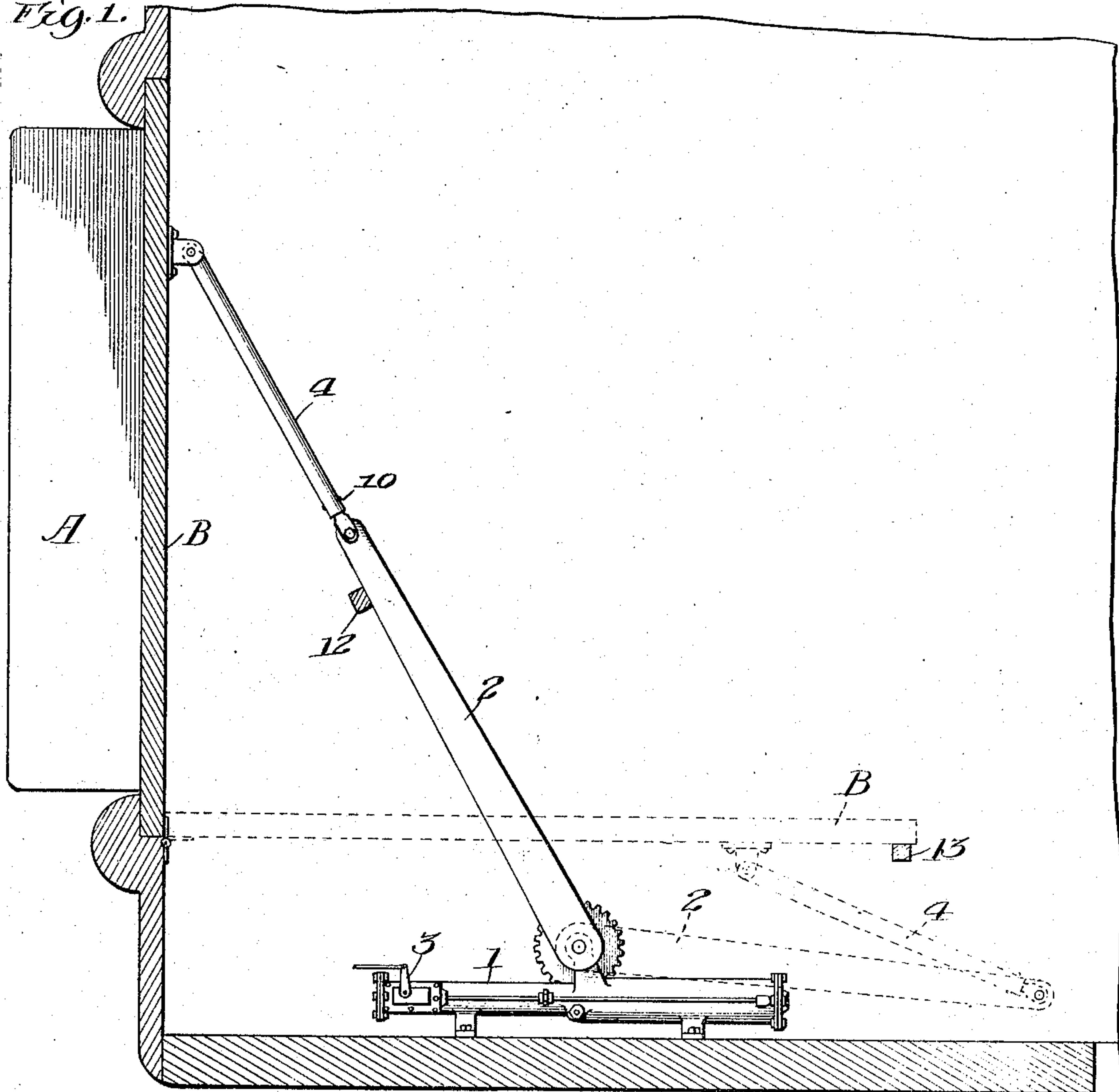
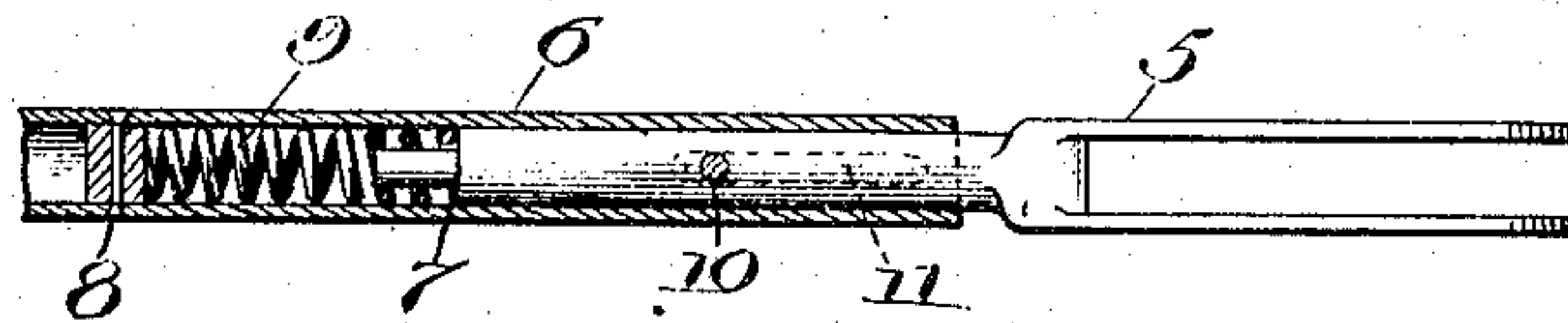


Fig. 2.



Witnesses:

Om. Vennich

Geo. R. Chindahl

Inventor:

John E. Osmer.
By Luther L. Miller
Atty.

UNITED STATES PATENT OFFICE.

JOHN E. OSMER, OF CHICAGO, ILLINOIS, ASSIGNOR TO ELEVATOR SUPPLY & REPAIR COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION.

DOOR-OPERATING MECHANISM.

No. 899,796.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed October 15, 1906. Serial No. 338,900.

To all whom it may concern:

Be it known that I, JOHN E. OSMER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door-Operating Mechanisms, of which the following is a specification.

This invention relates to means for opening and closing a door, and is herein shown in connection with a swinging door, though applicable as well to sliding doors.

The embodiment herein shown of this invention is particularly intended for opening and closing the doors of railway cars, and the object of the invention is the provision of means, in a door-operating mechanism, for cushioning the closing movement of the door in order to prevent injury to the hand or other part of the person of a passenger that may be in the doorway when the door is being closed.

In the accompanying drawings, Figure 1 is a top plan view of a door-operating mechanism embodying the features of my invention, said mechanism being illustrated in operative relation to a swinging door. Fig. 2 is a fragmental detail view, partly in section, of a link comprised in said door-operating mechanism.

A refers to a doorway and B to a swinging door for closing said doorway.

The door-operating mechanism comprises a motor 1, which, in this instance, is substantially similar to the compressed-air motor shown and described in my co-pending application No. 328,254, filed July 28, 1906. The motor 1 comprises an oscillatory operating lever 2, and a valve mechanism 3 for controlling the movements of said lever. The motor 1 is adapted to be supported upon a side wall of the car, or in any other convenient location with the lever 2 arranged to swing in a horizontal plane. The outer end of the lever 2 is connected with the door B by means of a link 4.

To permit the door to be yieldingly stopped so as to prevent injury to a passenger who may have his hand in the doorway when the

door is being closed, the link 4 is made in two telescoping sections 5 and 6. The section 5 is bifurcated at one end for attachment to the lever 2, the opposite end of said link-section being reduced in diameter, providing an annular shoulder 7, between which shoulder and a pin 8 fixed in the tubular section 6 of the link is interposed a coiled spring 9. To limit the movement of the link-sections 5 and 6 with relation to each other a pin 10 is fixed in the section 5 with its ends lying within slotted openings 11 in the link-section 6.

12 is a stationary stop supported in suitable position to limit the door-closing movement of the lever 2, said lever and the link 4 being in alinement when the door is fully closed.

In use, the motor 1 is operated to swing the lever 2 to open and close the door as desired. The lever 2 and the link 4 are so proportioned that when the door is fully closed said lever and said link are in alinement, thus locking said door in its closed position. It will be seen that the end of the closing movement of the door B is cushioned by the spring 9 to prevent injury, should a passenger's hand be caught in the doorway when said door is being closed.

I claim as my invention:

1. In a door-operating mechanism, in combination, a motor, a lever actuated by said motor, a link for connecting said lever with the door, and a cushioning device in said link.

2. In a door-operating mechanism, in combination, a motor; a lever adapted to be moved by said motor; and a link for connecting said lever with the door, said lever comprising two telescoping sections, a spring interposed between said sections, one of said link-sections having a slot therein, and a pin fixed to said other link-section and extending within said slot.

JOHN E. OSMER.

Witnesses:

L. L. MILLER,
GEORGE L. CHINDAHL.