

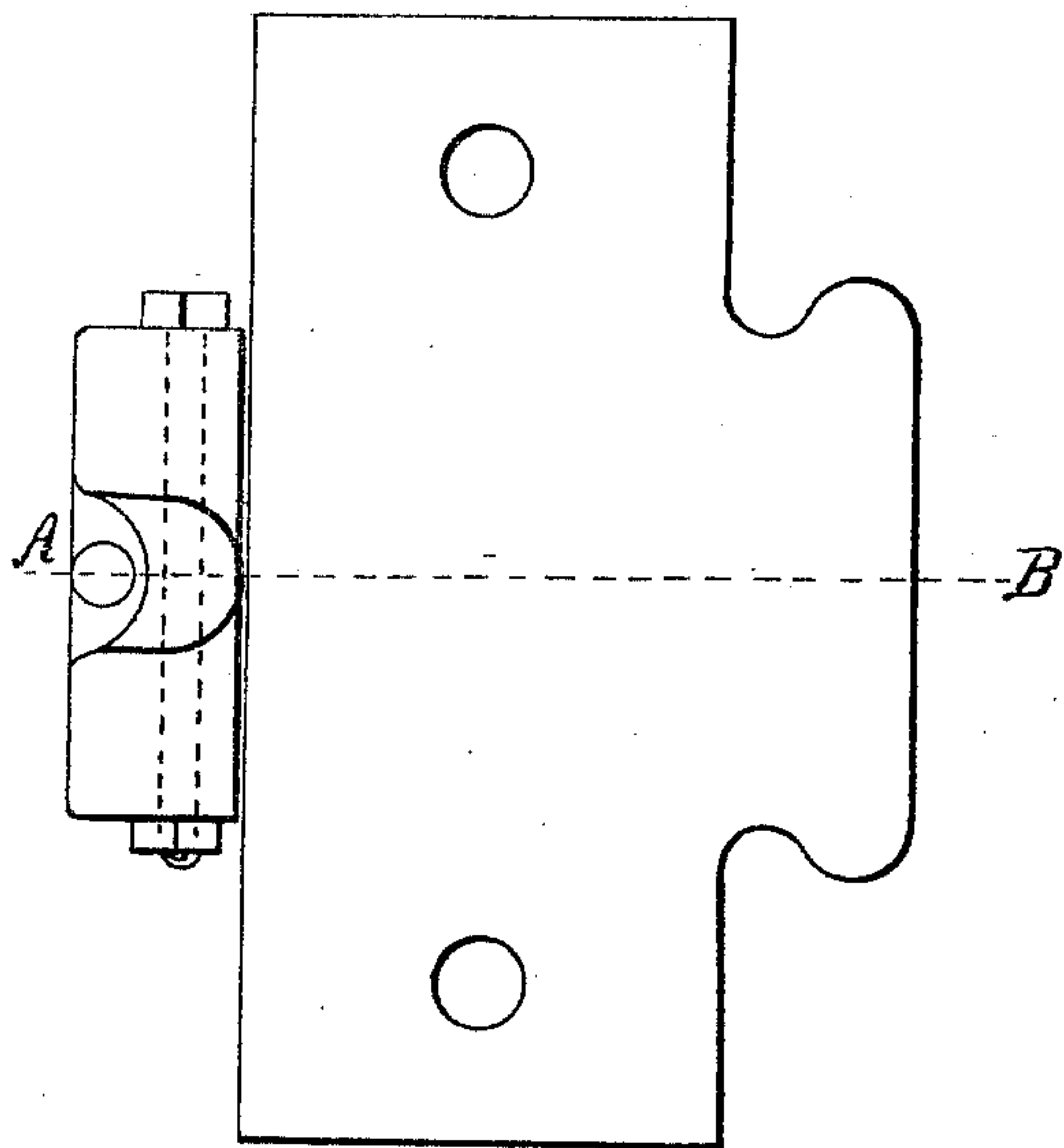
R. McWILLIAMS.

Car-Axle Box.

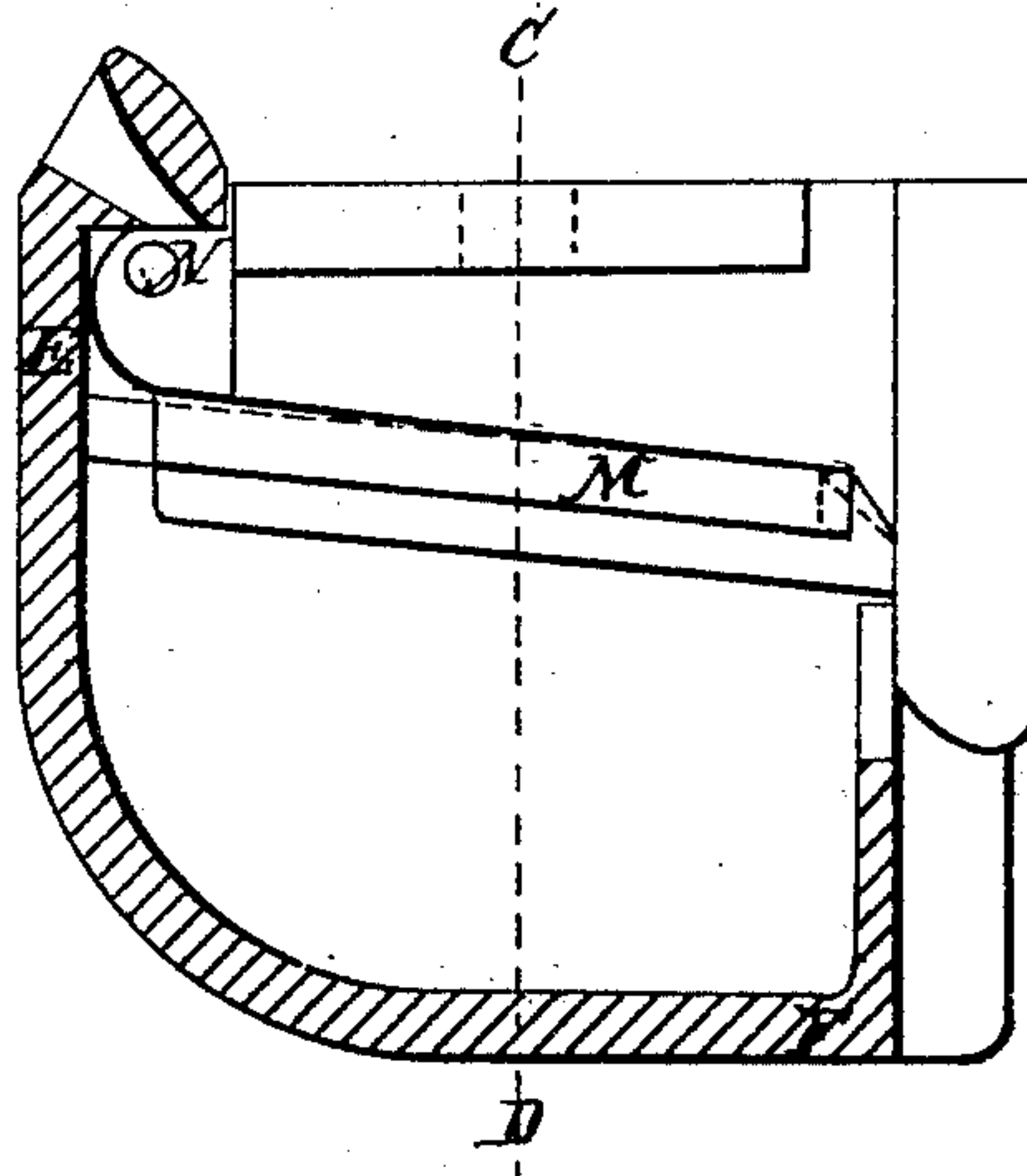
No. 18,884.

Patented Dec. 15, 1857.

*Fig. 1.*

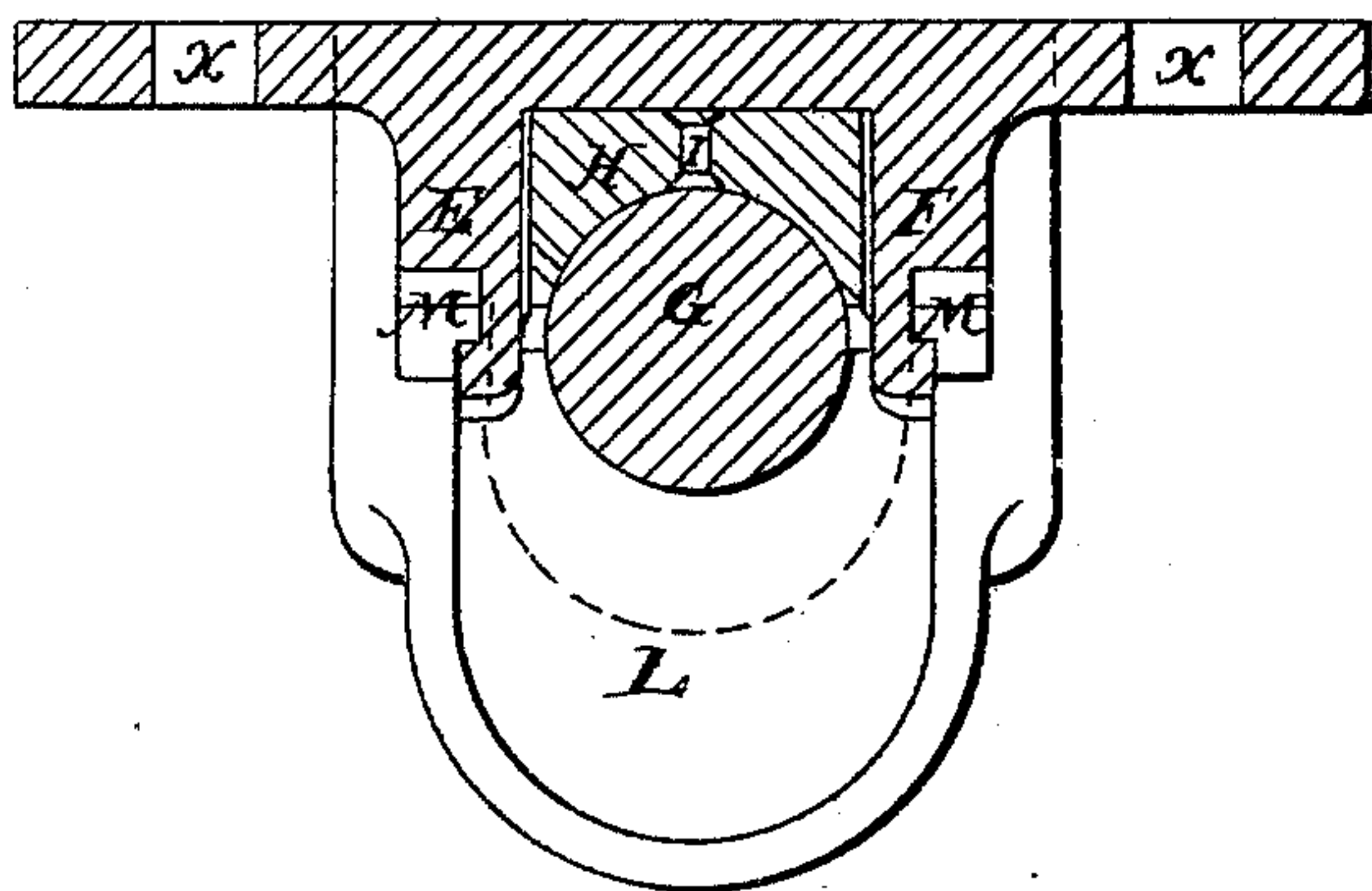


*Fig. 2.*



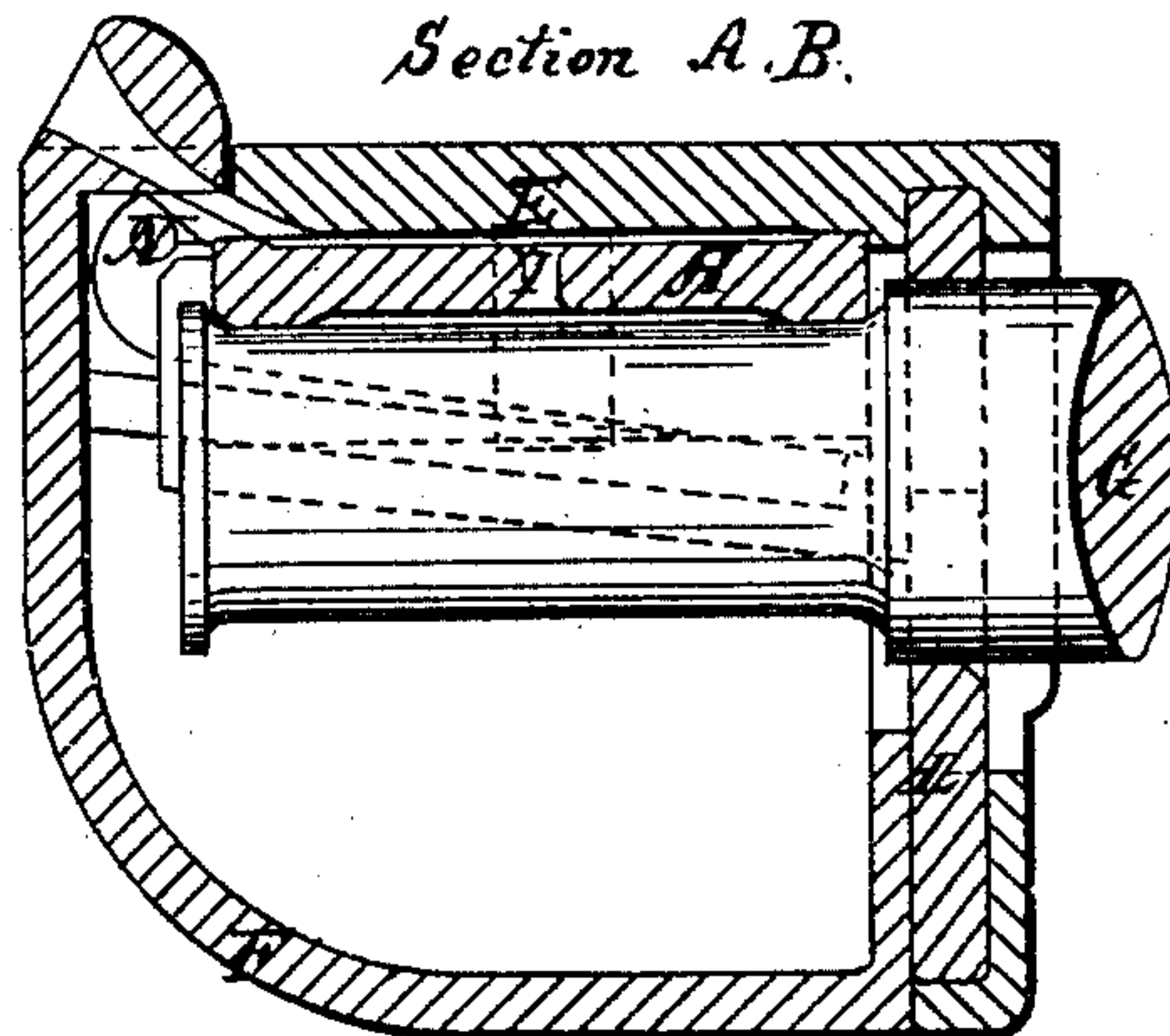
*Fig. 3.*

*Section C. D.*

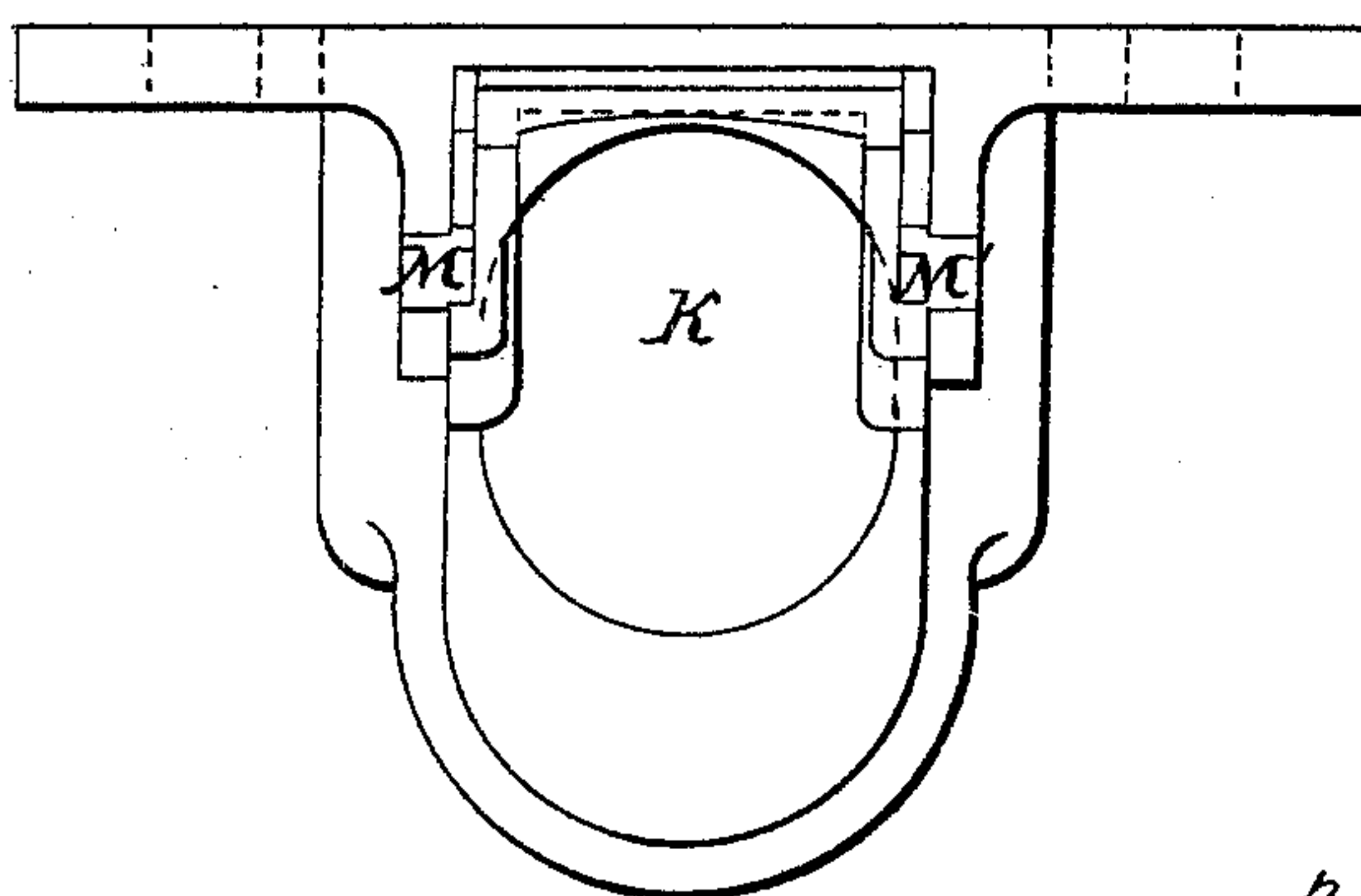


*Fig. 4.*

*Section A. B.*



*Fig. 5.*



**Witnesses:**

*D. E. Maw*

*J. H. B. Jenkins*

**Inventor:**

*Robert McWilliams*



# UNITED STATES PATENT OFFICE.

ROBERT McWILLIAMS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND  
ADAM J. FREDERICK, OF SAME PLACE.

## JOURNAL-BOX FOR RAILROAD-CARS.

Specification of Letters Patent No. 18,884, dated December 15, 1857.

*To all whom it may concern:*

Be it known that I, ROBERT McWILLIAMS, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Journal-Boxes for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, in which—

Figure I represents a top view; Fig. II a side view; Fig. III a section on the line C D of Fig. II; Fig. IV a transverse section on the line A B of Fig. I; Fig. V an end view with the journal and brass bearing removed.

The journals of car axles are liable to unnecessary wear and frequently to rapid destruction from the sand and other grit that get into the boxes, the action of which is to cut the bearing into ridges, which in turn rapidly wear the journal until from the constant action and reaction of the parts they are worn out and destroyed. The only remedy for this is to remove the grit, and if ridges are formed on the journal, to file down the latter to a smooth surface.

No box has yet come into use combining the elements of easy accessibility to the journal and bearing with simplicity and convenience of form and cheapness of construction, but in boxes as at present constructed whenever the necessity occurs for removing the bearing or filing the journal the whole box must be disengaged from the frame of the car.

My object has been therefore to construct a box which should combine the elements above named and the nature of my invention consists in making the lower or oil chamber of the box separable from the upper part by tapering inclined grooves in the outside thereof on a line above the lower line of the journal; thereby exposing the journal for freely filing the same when necessary by simply withdrawing the lower part of the box by the grooves. By my arrangement the bearing may at any time be quickly removed, employing a jack to raise the car,—and all the parts of the box easily cleaned.

In Figs. II, III, and IV, E F represents a section of the shell of the box of cast iron having perforations *x, x* Fig. III, through which the box may be secured to the frame

of the car. G is the journal. H is the brass bearing. I is a conduit through which fresh oil is introduced through the bearing about the middle of the upper line of the journal. K Fig. V, is an opening of elliptical shape in the back of the box through which the journal passes. It is elongated in order that the journal may fall the thickness of the bearing when it is desired to have access to the latter.

L Figs. III, IV, represents leather packing fitting into a recess, closely around the journal, easily removable, completely closing the elongated opening above described and excluding all dust from the inside of the box. M, M' are the inclined grooves into which the lower section of the box slides. These grooves are gradually tapering, the object of which is 1st to save filing and fitting and the consequent increased expense which would attend the employment of grooves of rectangular section, 2d that the parts may wedge or tighten themselves as they are brought together. (N) is a hole in lugs of the box. When the oil chamber is in place a bolt having a rivet head at one end is passed through (N) and secured by a nut and binding nut at the other end, as shown in Fig. I. This bolt is all the fastening that the oil chamber requires and by removing it, said chamber may be withdrawn and the whole internal arrangement of the box exposed. By inclining the grooves as represented the lower section of the box or oil chamber is secure at all times even although the bolt should be lost, in the passage of the car.

Having thus described my invention what I claim and desire to secure by Letters Patent is—

The combination of the lower or oil chamber of the box with the inclined tapering grooves in the outside thereof on a line above the lower line of the journal so that the latter may be easily and quickly exposed for filing; at the same time giving easy access to the packing, as set forth.

ROBERT McWILLIAMS.

Witnesses:

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J. H. B. JENKINS.