

(No Model.)

H. ROGERS.

CAR AXLE BOX.

No. 370,088.

Patented Sept. 20, 1887.

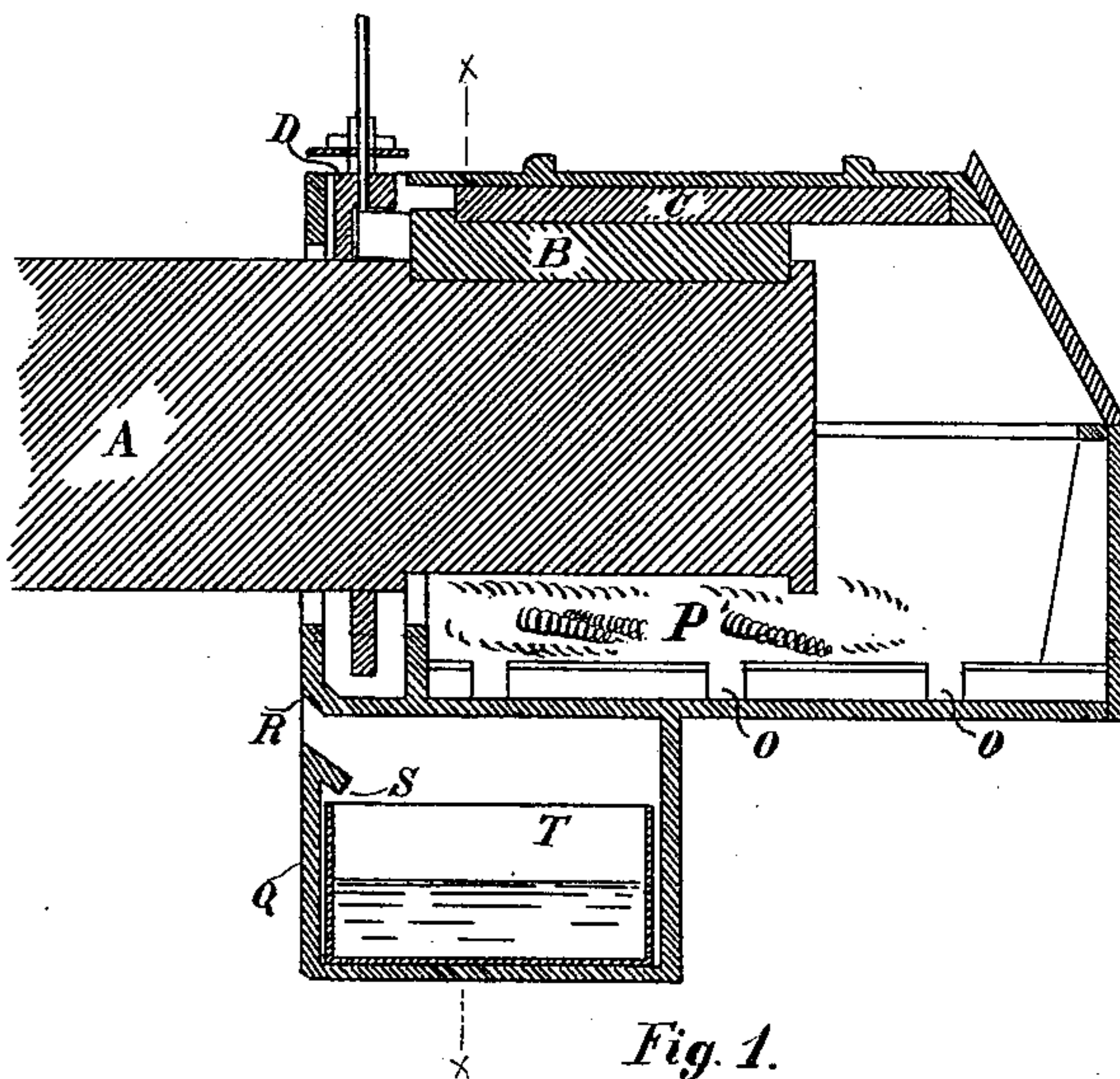


Fig. 1.

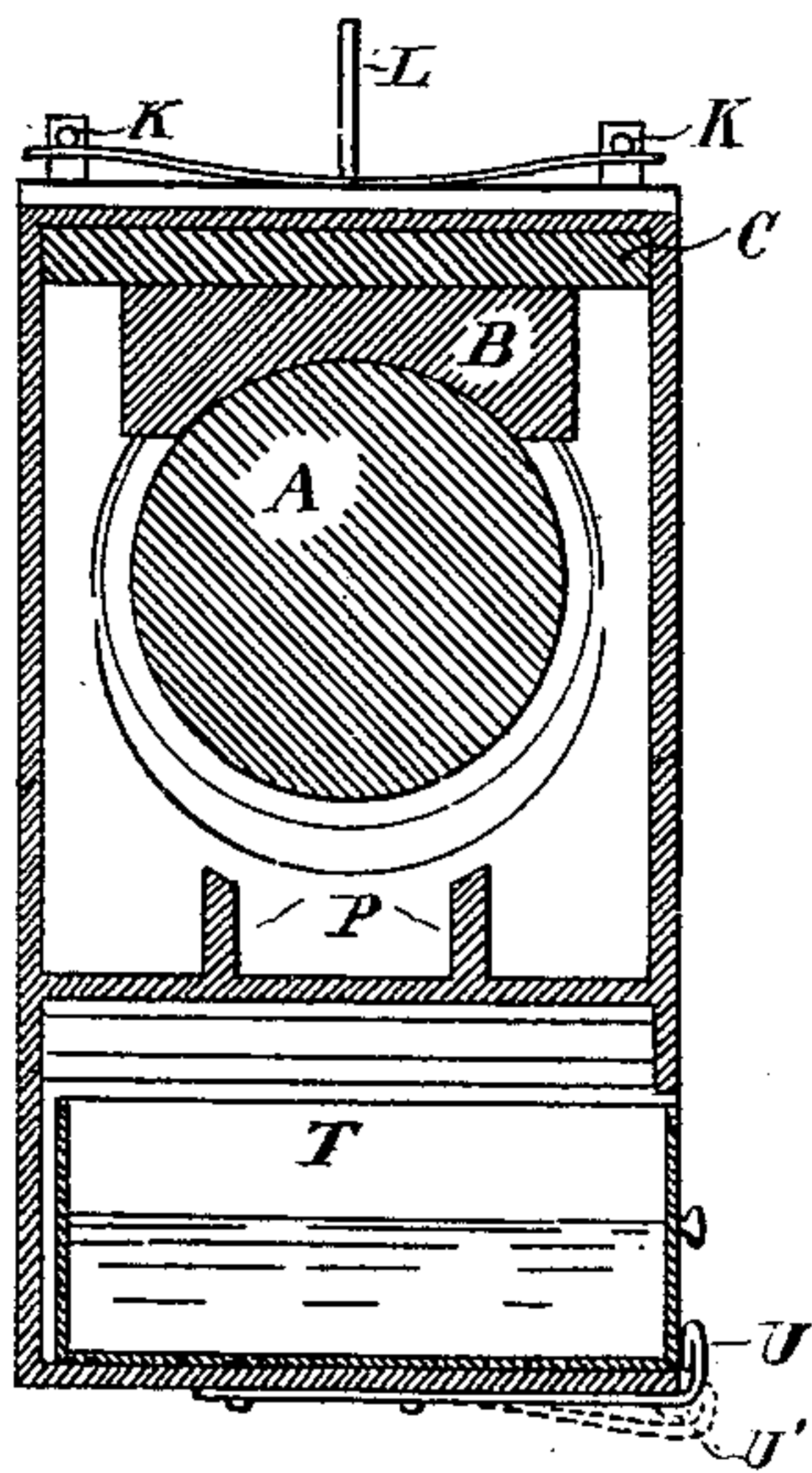


Fig. 2.

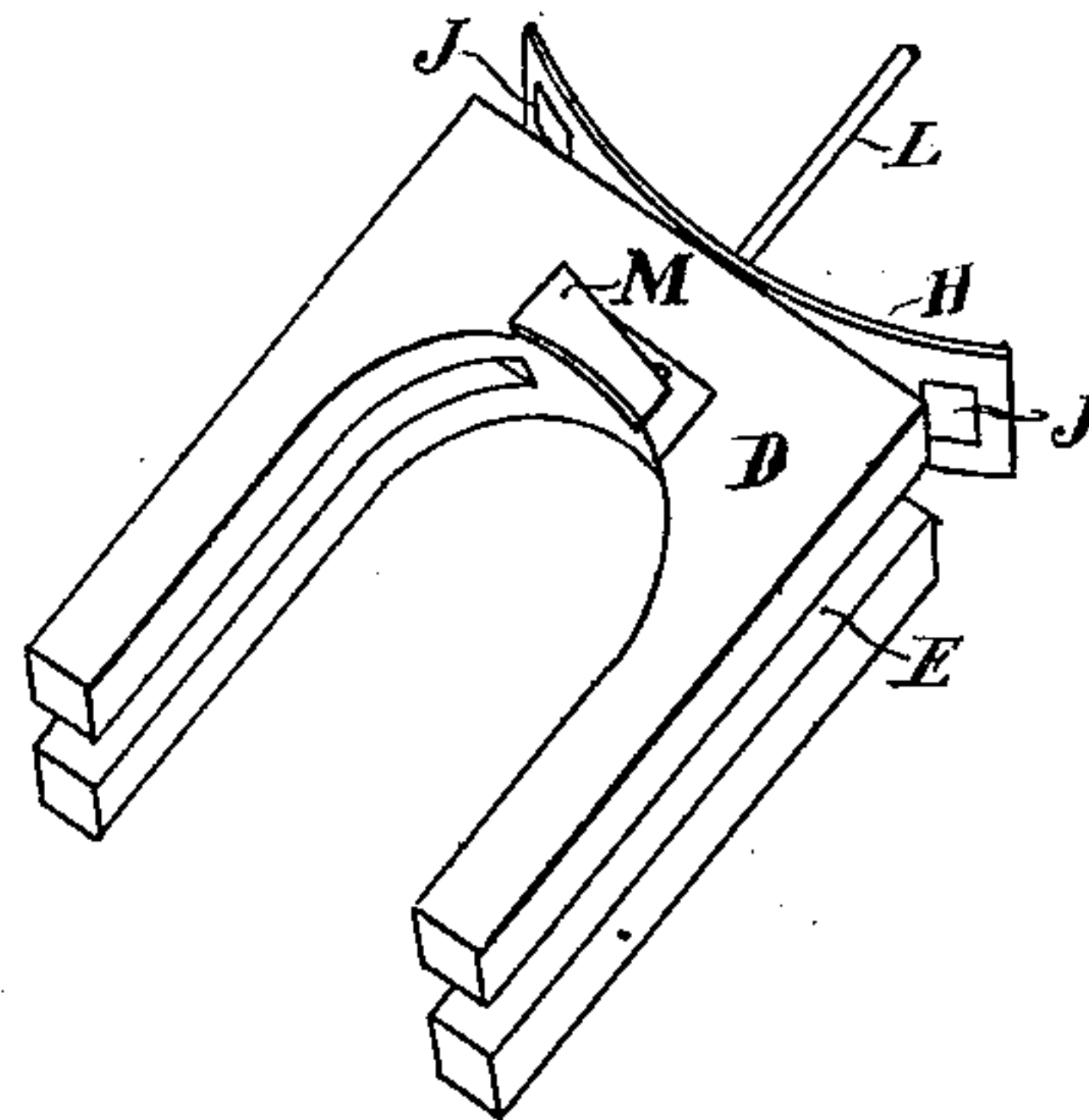
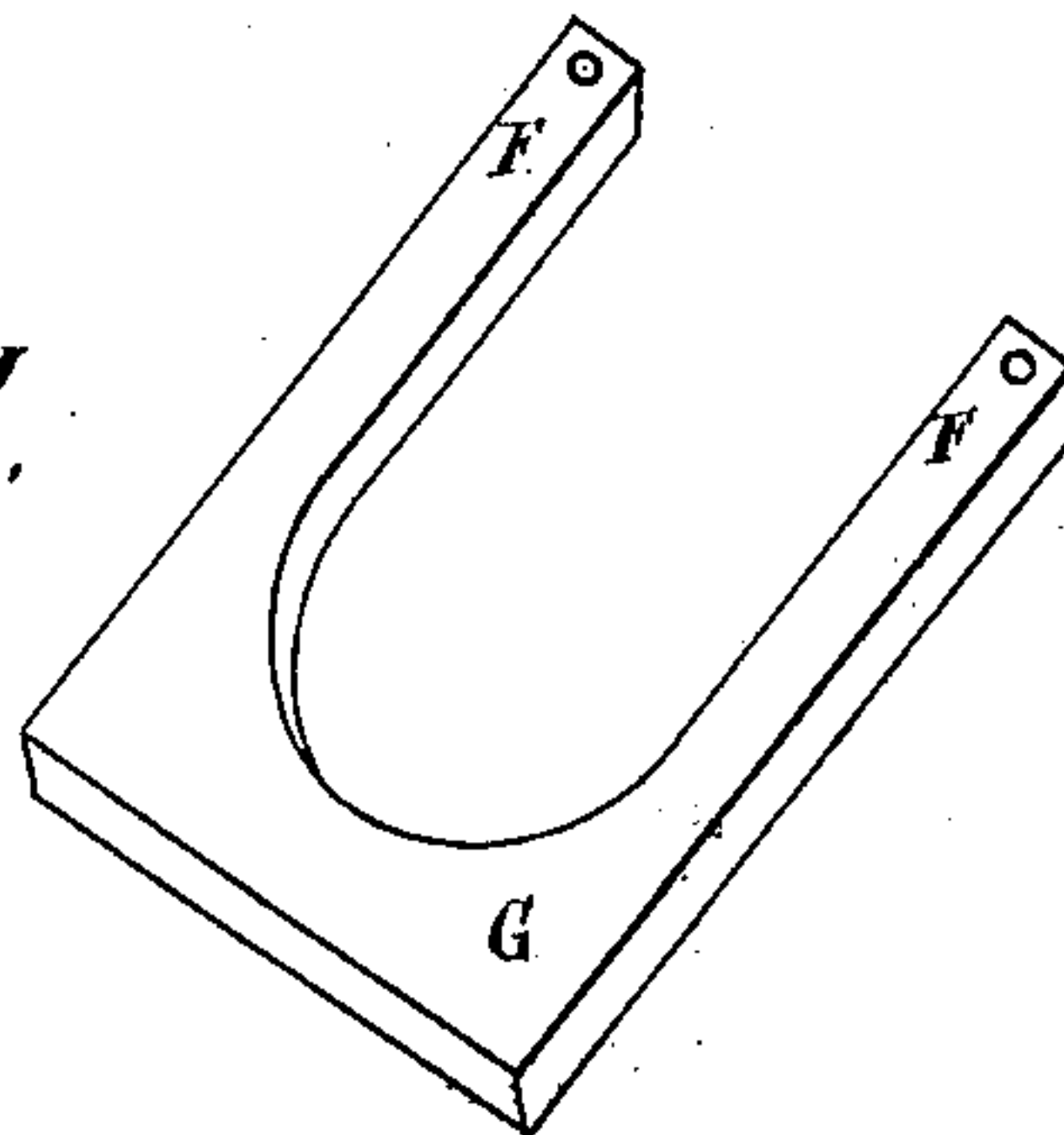


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

HAMILTON ROGERS, OF TOLEDO, OHIO, ASSIGNOR TO MYRTEE ROGERS, OF
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CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 370,088, dated September 20, 1887.

Application filed June 18, 1887. Serial No. 241,789. (No model.)

To all whom it may concern:

Be it known that I, HAMILTON ROGERS, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have
5 invented certain new and useful Improvements in Car-Axle Boxes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to an improved car-
15 axle box, and has for its object to provide means by which the packing necessarily employed shall be retained in its proper relation to the journal; also, to prevent dust from entering the box and mixing with the lubricant
20 contained therein; also, in providing a drip-box, into which any of the lubricant that may travel along the journal may be led therein and saved. I have also provided a scraper
25 intermediate the rear end of the journal-bearing and box, so pivoted as to allow a semi-revolution to conform to the direction of revolution of the axle, thereby tending to prevent escape of the lubricant in the direction of the
30 length of the axle, and tending to return the same to the oil-receptacle in the box. I have also provided a peculiar and valuable form of packing particularly adapted to my form of car-axle box, as will more fully appear in the description.

35 In the drawings, Figure 1 represents a longitudinal sectional view of my improved device. Fig. 2 is a cross-sectional elevation of the same on the line *xx*, Fig. 1. Fig. 3 is a detail view of my improved dust-board.

40 Like letters of reference indicate like parts throughout the several views.

A designates the car-axle; B, the bearing; C, the wedge. These parts are of the usual construction, and therefore need no further
45 description.

D represents the upper, and G the lower, portion of a dust-board adapted to encircle the axle within the box and prevent the ingress of dust to the lubricant. The part D is preferably formed of a width sufficient to allow the
50 formation of grooves E, into which side por-

tions, F F, of the part G slide, F F being of sufficient length to extend past the upper end of the part D and enter perforations J of a spring, H, loosely retained in place upon the
55 upper end of part D, and are held under the tension of spring H by gibbs or keys K, or in any other preferred manner.

M is a scraper journaled in the part D of the dust-board by means of rod L, passing
60 through the same. The rod L extends upward from the part D a sufficient distance to allow spring H (which has a central perforation) to be held in place thereby. The part D is cut away sufficiently to allow the scraper to rest
65 therein and to be held into frictional engagement with the axle.

Q is a box supplemental to and formed beneath the main box, and is preferably cast integral therewith. Upon its under side is fast-
70 ened a spring, U', having a catch, U, for the purpose of holding a drip-pan or lubricant-receptacle, T, in its proper place within box Q.

R is an inclined cut-away portion of the main box, adapted to lead any of the lubricant
75 that may escape upon the axle into the drip-pan T as the same may drop onto the inclined projection S of the box Q.

P are longitudinal ribs or projections upon the bottom of the main box. These ribs
80 have communicating passages O, through which the lubricant may float to maintain an even height in the box. These ribs are for the purpose of retaining the packing P' in place and preventing the same from moving
85 in the direction of the rotation of the axle so far from the center of the box as to lessen, if not altogether stop, the feed of lubricant by capillary attraction.

In the packing shown in Fig. 1 I have
90 illustrated an improved means of insuring an even feed of the lubricant, in which I employ metal shavings, P', which, by their elasticity, tend at all times to hold the cotton-waste, or any fibrous material that may be incorporated
95 therewith, into engagement with the axle-journal; or, if preferred, the metal shavings alone may be employed. It will be seen that this feature is of great value, when it is considered that the cotton-waste usually em-
100 ployed, when saturated with lubricant, is of such density and weight as to fall below the

point of frictional engagement, or, in the absence of ribs P, be rolled into one corner of the box into a position to be practically useless.

5 In operation the axle-journal is placed into position within the box. The dust-board is adjusted around the axle by inserting the parts F of the bottom portion, G, through the perforations J of spring H, and are held in place
10 by gibs or keys K, by which means the dust-board at all times is caused to encircle the axle and to be held into frictional engagement sufficiently to prevent the ingress of dust. At the same time, by the attachment of these
15 parts through the medium of spring H, they are allowed to yield to the motion of the axle. When the dust-board is in position, as described, the scraper M is brought to bear upon the axle between the dust-board and bearing
20 B, the outer end of the scraper radiating toward the inner portion of the box at all times, without reference to the direction of rotation of the axle, as the friction upon the scraper M revolves the same to correspond with the di-
25 rection of the axle's rotation, the inclined portions of the cut-away part of the dust-board allowing the scraper to rest in an inclined relation to the length of the axle, thereby tending to lead the lubricant that may be upon the
30 axle back to the main box. The packing, composed of metal shavings or metal shavings wound with cotton-waste, is held from lateral displacement by ribs P, and any of the lubricant that may have passed the scraper and
35 dust-board is led down the side of the main box into the drip-pan T to be again emptied into the main box, thereby not only effecting a great saving in lubricant, but preventing the flow of the same upon the wheels of the
40 train and other parts of the running-gear of the cars.

My improvement can be attached to the

present forms of car-axle boxes with but slight expense.

Having described my invention, what I 45 claim, and desire to secure by Letters Patent, is—

1. In a car-axle box, a pivoted scraper adapted to automatically adjust the inclination of the same toward the box and in the 50 direction of the rotation of the axle, as and for the purpose set forth.

2. A flexible packing for car-axle boxes, composed in whole or in part of metal shavings, and means for holding the same in frictional engagement with the axle-journal, as 55 and for the purpose set forth.

3. A car-axle box provided with a supplemental removable drip-pan and means for leading the escaping lubricant therein, as and for 60 the purpose set forth.

4. In a car-axle box, a dust-board having a scraper pivoted therein, adapted to rest upon the axle, as and for the purpose set forth.

5. In a car-axle box, in combination with a 65 car-axle, a sectional dust-board embracing the same, formed of an upper section provided with grooves, a lower section having side portions adapted to slide within the grooves in the upper section, a half-elliptic spring resting 70 upon the upper section, and having a perforation in its center by which it is retained in place by means of a rod passing through the same, and perforations at each end through which the side portions of the lower sections 75 pass, and are held in place by keys, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

HAMILTON ROGERS.

Witnesses:

WILLIAM WEBSTER,
J. E. RAYMER.