

(No Model.)

M. P. COOK.
COOLING DEVICE FOR CAR JOURNALS.

No. 552,350.

Patented Dec. 31, 1895.

Fig. 2.

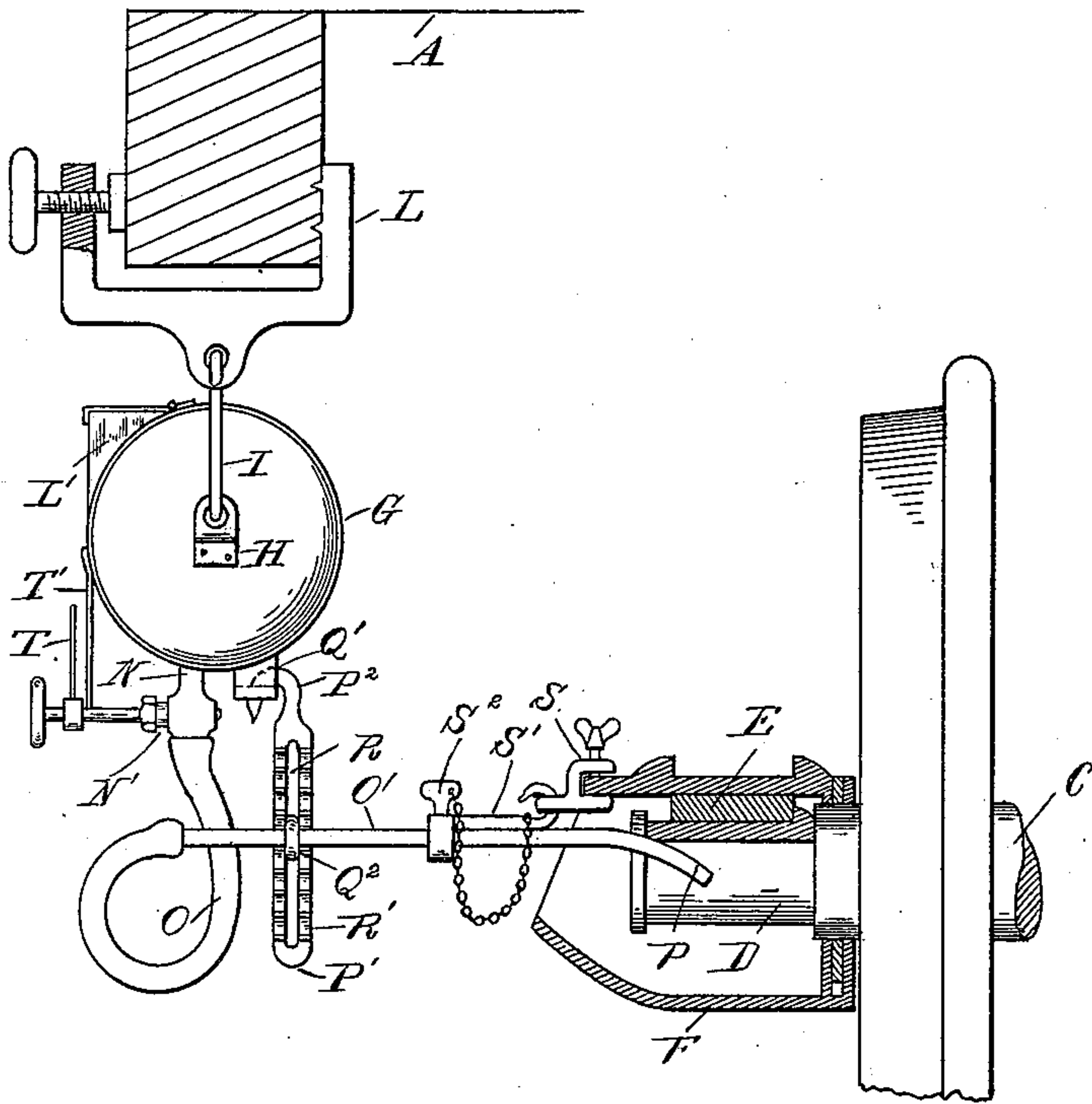


Fig. 1.

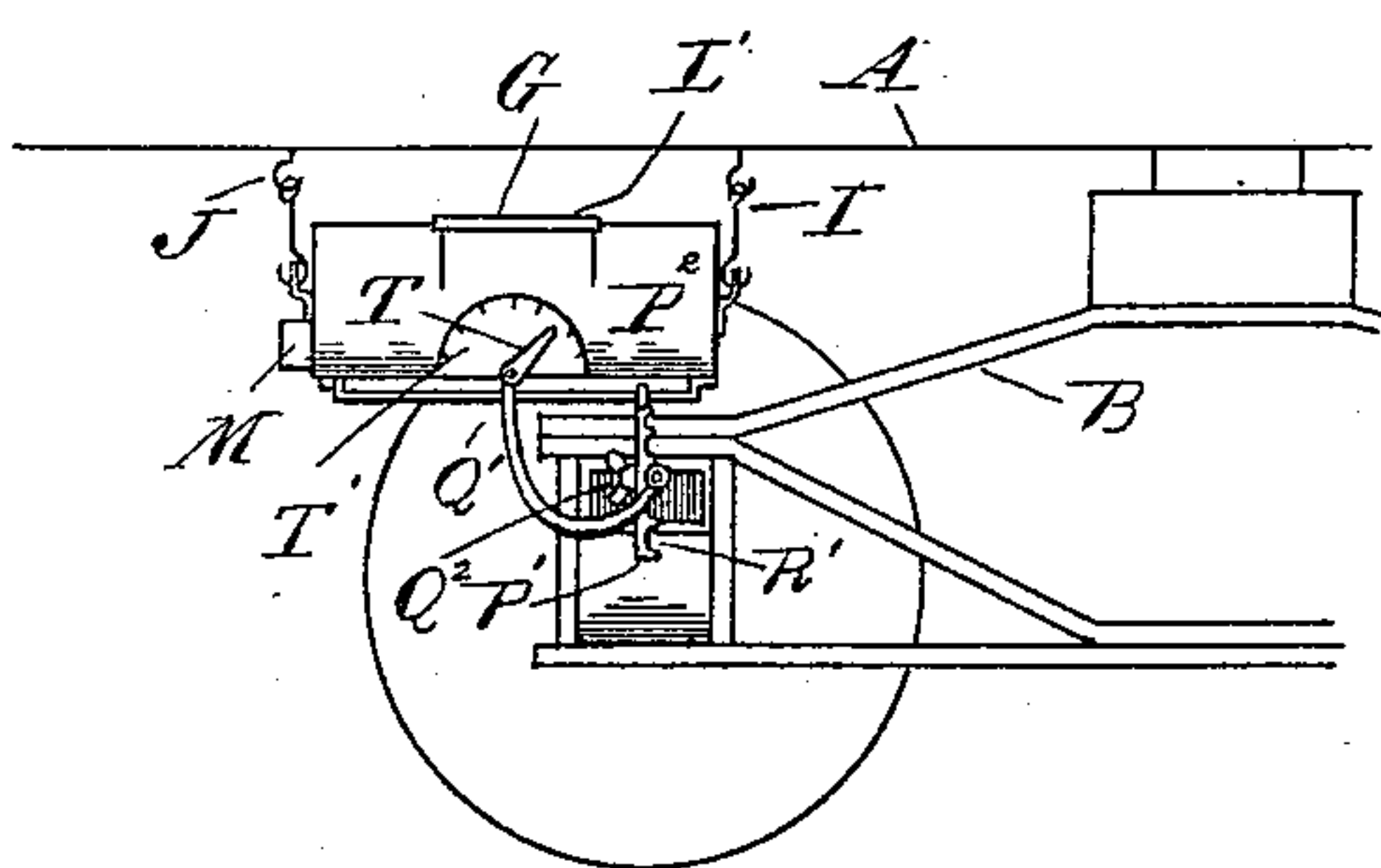
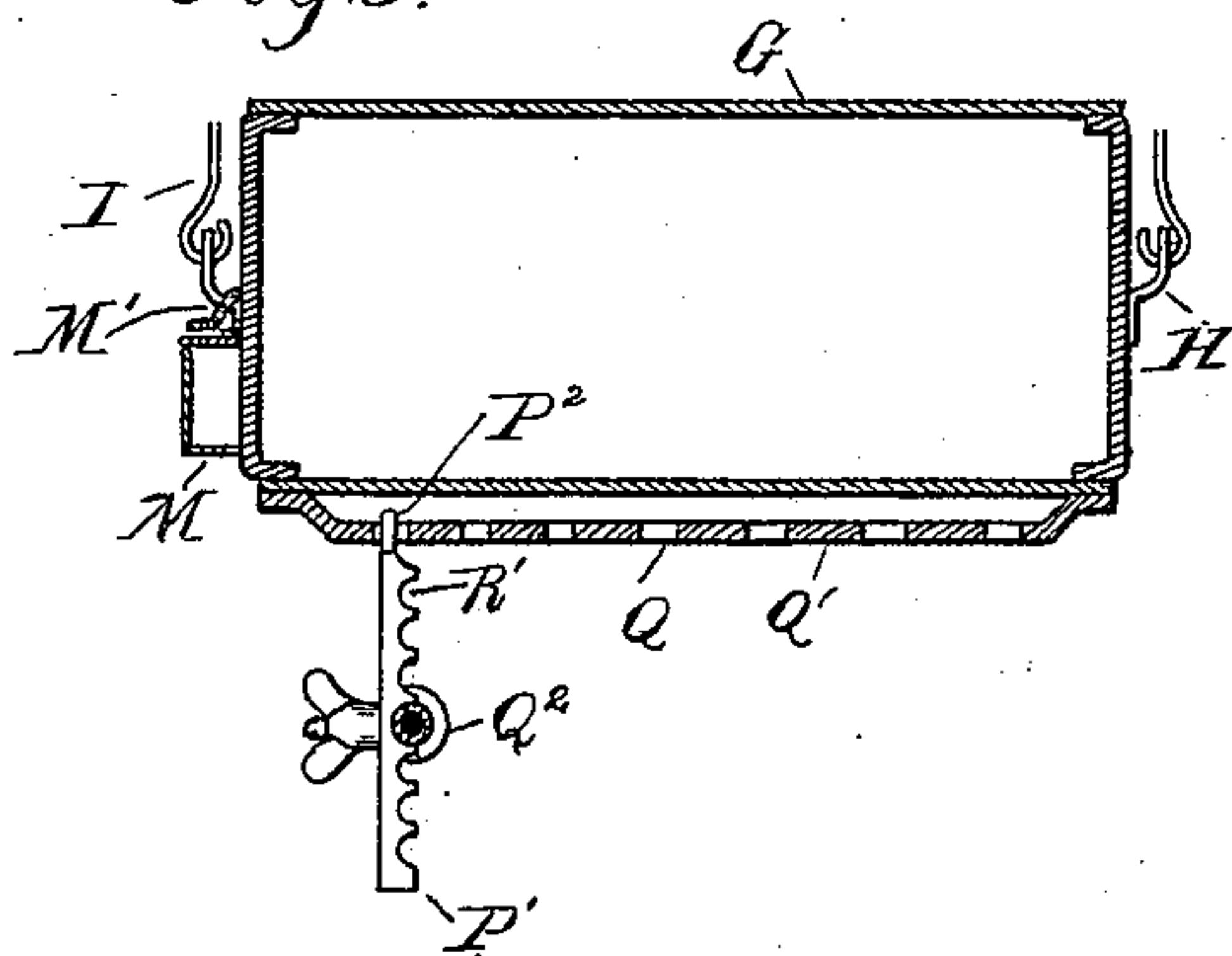


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

MILES P. COOK, OF FLINT, MICHIGAN, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE COOK COOLER COMPANY, LIMITED, OF SAME PLACE.

COOLING DEVICE FOR CAR-JOURNALS.

SPECIFICATION forming part of Letters Patent No. 552,350, dated December 31, 1895.

Application filed February 10, 1894. Serial No. 499,765. (No model.)

To all whom it may concern:

Be it known that I, MILES P. COOK, a citizen of the United States, residing at Flint, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Cooling Devices for Car-Journals, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in cooling devices for car-journals; and it consists in the construction and arrangement of the parts hereinafter set forth, and definitely pointed out in the claims, reference being had to the accompanying drawings, wherein is shown a practical embodiment of the invention.

In the drawings, Figure 1 is a side elevation of a portion of a car and truck showing my invention as applied in use. Fig. 2 is an enlarged section through the journal showing my device in elevation. Fig. 3 is a longitudinal section through the tank.

At the present time, in the running of cars, when a "hot box" is found, the usual manner of cooling the box is to take out the waste and oil packed in the box and the brasses and pour in water with pails until the box is cooled. This often takes a considerable time, thus causing the train to run behind its schedule time. With my invention it has been found by a practical demonstration that the journal can be cooled while running by simply directing upon the journals a stream of cooling fluid, such as water. This stream is preferably directed upon the rear side of the journal, so that as much as possible of the fluid will be carried up by its movement against the brass or bearing.

A represents a car; B, the truck thereof, and C the axle; D, the journal; E, the brass or bearing, and F the journal-box, all of any desired construction.

G is a tank or receptacle, preferably of sheet metal of any desired construction, provided on its ends with eyes or bails H with which the hook-links I are adapted to engage. These hooked links at their upper ends may engage with screw-eyes J, which may be secured into the under side of the car-body whenever the

tank is desired to be used in proper relation to the hot box. These links may be made of coil-springs, if desired.

In case of freight-cars, where the side-sill is left exposed, I make a clamp, as shown in Fig. 2, at L, having a suitable eye with which the links may engage. This or any other suitable device may be employed for attaching the tank upon the car. The tank is provided with a suitable filling-spout L', arranged at one side, so that it may be refilled, if desired, without removing it, and at its end I preferably arrange a small tool-box M, in which to carry the screw-eyes, a wrench, &c. This box has a gravity-latch M' for holding the cover closed.

N is a nipple from the under side of the tank in which is preferably secured the valve N. This nipple connects into a section of flexible discharge-pipe O, and at the end of which is the rigid nozzle O', preferably a piece of metal piping, and having the bent end P, as shown in Fig. 2.

P' is a hanger or support for the nozzle, secured to the under side of the tank. I have shown the hanger P' provided with a hook P² at its upper end adapted to engage any one of a series of apertures Q in the supporting bearing Q' on the under side of the tank, so that the hanger may be secured at any point in the length of the tank. By this means the hangers may be adjusted longitudinally of the car, so that the nozzle may be laterally adjusted relative to the axle when it is desired to change the position of the nozzle from one side of the axle to the other. This hanger is provided with a clamping-bolt Q², having an eye engaging the nozzle O', so that the nozzle may be secured to the hanger. The bolt Q² engages in the slot R in the hanger, so that it may be vertically adjustable, but I preferably provide the hanger with a series of notches or bearings R', so that the nozzle may be positively held at its adjusted point on the hanger by the set-screw without danger of accidental displacement in running.

S is a clamp swiveled to the clamp S', having a bearing in which the nozzle O' engages and the set-screw S², by means of which the nozzle may be clamped therein.

The valve N' preferably has an index-finger

T adapted to turn over a graduated scale T' on the side of the tank indicating the length of time it will take to empty the tank at different points of opening of the valve.

5 The parts being thus constructed their operation is as follows: The tank G and its connections can be carried on the locomotive or on the baggage-car, as desired, and in case
10 a hot box is found to exist on any of the cars the tank being filled with water may be taken to that car and hung beside that box, the nozzle O' being then inserted into the box and engaged with the hanger P'. The hanger can be engaged in the proper aperture Q in
15 the bar Q', so as to bring the nozzle in proper relation to the box. The nozzle is to be adjusted longitudinally in relation to the hanger P' so that its discharge end will also be in proper relation with the journal. The clamp
20 S being secured to and properly arranged on the box, and the clamp S' to the nozzle, as shown, it will be seen that by properly adjusting the hanger P' and the eye Q² on the hanger the discharge end of the nozzle can be ar-
25 ranged opposite the rear face of the journal and about midway its length irrespective of the direction in which the car is to be moved, so that when the valve N' is opened water will flow from the tank through the nozzle and
30 discharge upon the rear face of the journal. The train may then proceed and it will be found that depending upon the temperature of the journal in a short time it will be cooled by this stream, and this may be accomplished
35 without removing the oil or waste already in the box. If upon examination it is found that it is not cooled, the tank may be refilled while yet hanging on the car and the train still continue on its journey. When the box is cooled
40 the box may be returned to its place on the locomotive or baggage-car.

It will be observed that the different parts are flexibly connected together—that is, the tank is swung from the under side of the car, the hanger is swung from the under side of
45 the tank, and there is a pivotal connection between the two clamps S S' and the flexible section in the discharge-pipe. These may not all be necessary, but it is desirable that sufficient flexibility be had in the device to take up the
50 oscillation of the car and the movement of the car in relation to its truck without damage to the parts. To make it rigid would require too heavy a construction.

What I claim as my invention is—

1. The combination with a car axle and its box, of a detachable liquid-holding receptacle adjacent thereto, a valve controlled flexible
55 discharge pipe leading from the receptacle, a longitudinally adjustable support, a rigid nozzle section on the pipe having its end projecting into the box, a connection between the
60 box and nozzle, and a vertically adjustable connection between the support and nozzle, substantially as described.

2. The combination of the tank, the links for suspending it detachably to the under side of a car adjacent to any journal box, a flexible
65 discharge pipe therefrom, a hanger adjustable longitudinally on the tank, a nozzle on the discharge pipe vertically adjustably supported on the hanger and a clamp on the
70 box supporting the nozzle thereon in proper relation to the journal, substantially as described.

In testimony whereof I affix my signature
75 in presence of two witnesses.

MILES P. COOK.

Witnesses:

M. B. O'DOHERTY,
O. F. BARTHEL.