

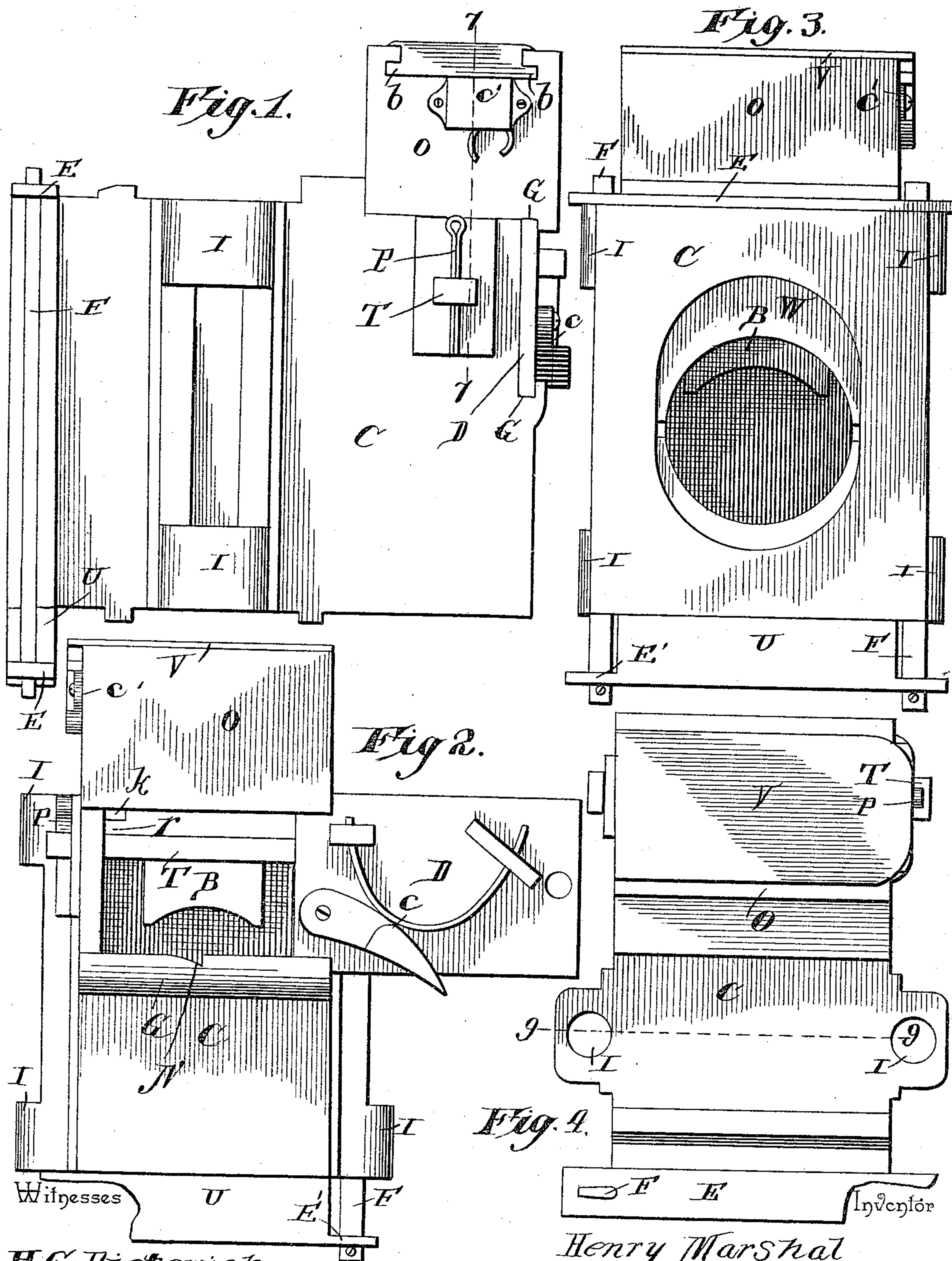
(No Model.)

2 Sheets—Sheet 1.

H. MARSHAL.
JOURNAL BOX.

No. 442,631.

Patented Dec. 16, 1890.



H. G. Dieterich.

By his Attorneys.

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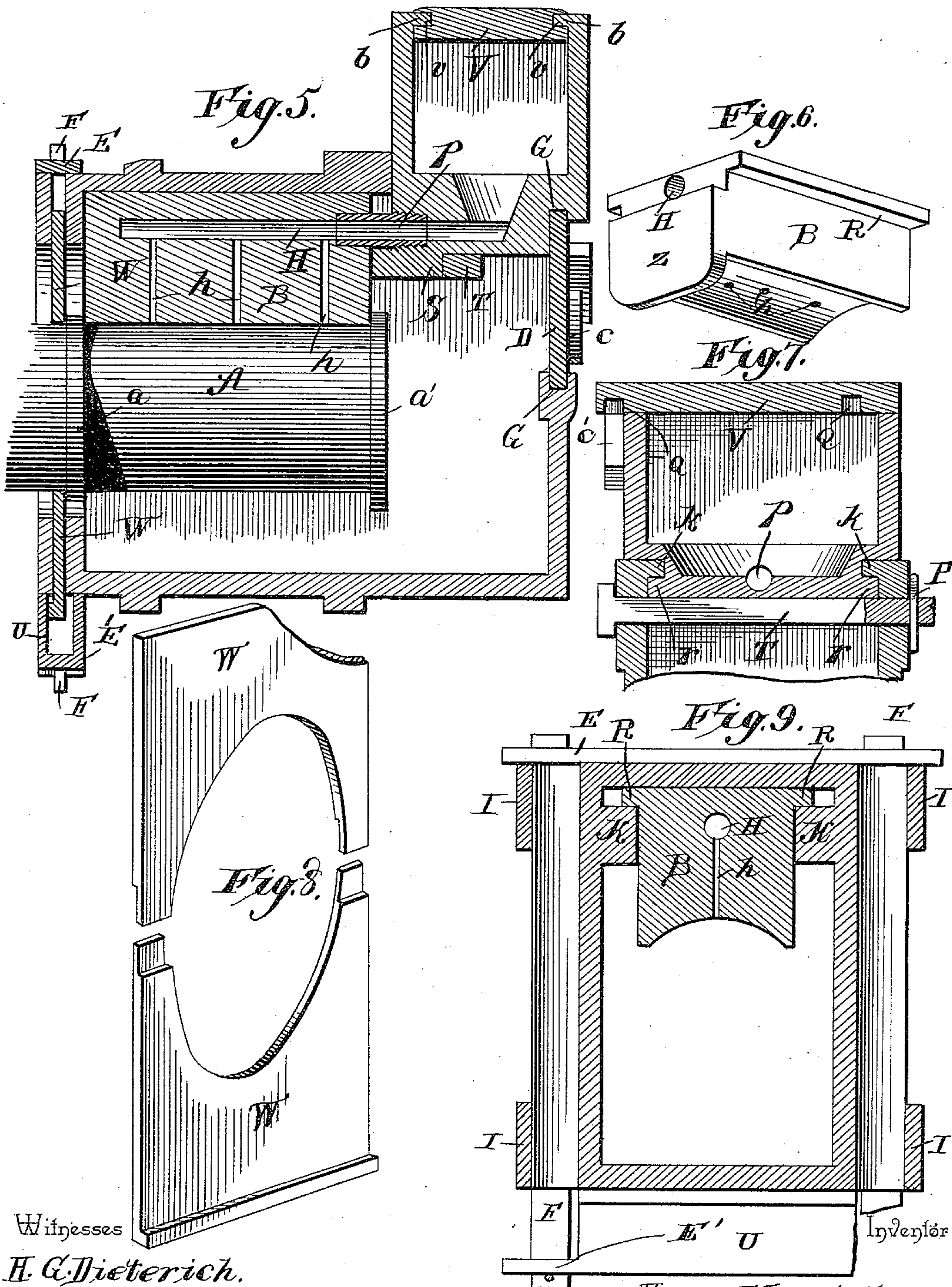
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Witnesses
H. G. Dieterich.

By his Attorneys, Henry Marshal
N. J. Gollamer. Cash & Co.

UNITED STATES PATENT OFFICE.

HENRY MARSHAL, OF LINCOLN, NEBRASKA.

JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 442,631, dated December 16, 1890.

Application filed August 29, 1890. Serial No. 363,431. (No model.)

To all whom it may concern:

Be it known that I, HENRY MARSHAL, a citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented a new and useful Journal-Box, of which the following is a specification.

This invention relates to railway-cars, and more especially to the journal-boxes and axle-lubricators thereof; and the object of the same is to provide an improved journal-box of this character.

To this end the invention consists in the specific details of construction, hereinafter more fully described and claimed, and as illustrated in the drawings, in which—

Figure 1 is a side elevation of my improved journal-box. Fig. 2 is an elevation of the outer end, and Fig. 3 of the inner end. Fig. 4 is a plan view. Fig. 5 is a central longitudinal vertical section showing the end of the axle journaled in the box. Fig. 6 is a perspective detail of the bearing proper, showing a slight modification in the form thereof and taken from the under side. Fig. 7 is a vertical transverse section on the line 7 7 of Fig. 1. Fig. 8 is a perspective detail of the wings which serve as dust-guards. Fig. 9 is a section on the line 9 9 of Fig. 4.

Referring to the said drawings, the letter C designates a casing having eyes I on the sides thereof, whereby the same may be secured beneath the car-body or beneath the spring on the same, as is usual in this class of devices, and this casing is closed on all sides, except as hereinafter specified. Within said casing and at the upper side corners thereof is formed a pair of cleats K, and B is the bearing proper, which is preferably of brass and provided with ribs R at its upper side corners adapted to slide in said cleats. The outer end of the casing is open, Fig. 2, and in grooves G, below the opening therein and in the lower side of an oil-cup O, hereinafter described, slides a door D, by which said opening is closed. A spring-actuated catch c is pivoted to said door and takes into a notch N in the edge of the lowermost groove, whereby the door is held closed. When this catch is raised, the door can be withdrawn laterally from the casing, after which the bearing B can

be withdrawn outwardly through the hole thus opened in the outer end of the casing.

Small cleats k are formed at the upper side corners upon the interior of the casing, Fig. 7, and an oil-cup O, having ribs r, slides upon these cleats, the body of the oil-cup standing above the casing proper. The bearing being first inserted in place, the oil-cup O is then passed into the outer end of the box, a strip S upon the lower side thereof striking the outer end of the bearing and holding it in place. A transverse bolt or strip T is then inserted through and across the casing just in rear of the strip S, whereby the oil-cup is held in place, and a split pin P is passed through the smaller end of this bolt to prevent its dislocation. The door D is then slit inwardly, as above described, and all the parts are thereby retained in proper relative position.

Referring now to Fig. 5, a pipe p leads from the bottom of the oil-cup O a short distance into a hole H in the bearing B, and from the hole H several smaller holes h extend downwardly and open through the curved lower face of the bearing directly onto the car-axle A. By this means when the parts are properly assembled the oil will pass from the oil-cup O in several fine streams onto the axle, and the latter will be constantly lubricated. The cover V for the oil-cup has side grooves v, which slide upon correspondingly-shaped ribs b upon the top of the cup, and this cover is provided in its under side near each end with a hole Q, as best seen in Fig. 7. c' is a spring-actuated catch mounted upon the end of the oil-cup and engaging one of the holes Q, whereby the cover is held in either opened or closed position, as will be readily understood.

Referring now to Fig. 8, W W are wings sliding in recesses in the inner end of the casing above and below the axle A, and the inner edges of these wings are provided with semi-circular recesses, whereby they will fit closely around the axle and adjacent a ridge or annular projection a thereon. A horizontal strip E rests upon the upper end of the upper wing, and a similar strip E' stands across the lower end of the lower wing and supports a cup-shaped box U, in which said lower end

fits. Vertical bars or bolts F connect the outer ends of the two strips E, and by this means the wings are drawn closely against the upper and lower sides of the axle A, and dust and dirt are prevented from getting into the journal-box.

In Fig. 6 I have illustrated a bearing B of slightly different form. In this case a plate Z depends from the inner end of the bearing, and against this plate the end of the axle rests, whereas in the construction shown in Fig. 5 the axle has an annular shoulder a' , which extends above the level of the curved lower face of the bearing B, and the plate Z is therefore unnecessary.

With a journal-box of this improved construction no waste is necessary. The oil-cup O is filled with oil and put in place, and the door D is locked in position. While the axle is at rest, the small holes h are closed thereby; but as soon as the axle commences to rotate a little of the oil within the holes is drawn out of them as the side of the axle moves from beneath their lower ends, and as long as the axle continues to revolve the oil will be slowly fed thereto. The size of the holes h and the thickness of the oil should be so regulated that the latter will not drip off the axle, but in case it does it will fall inside the casing, as will be obvious. Said casing, together with the wings W, prevents any dust striking the axle and forming grit thereon. The cover V of the oil-cup can be removed when it is desired to clean or fill the cup, or the latter might be filled through a suitable plug without departing from the spirit of my invention. When the bearing has become worn, it can be replaced by another bearing, as will be obvious. The oil-cup O and door D being at the outer end of the journal-box, access can be had thereto from the side of the track, as is common in devices of this character.

What is claimed as new is—

1. In a journal-box, the combination, with the casing C, having a removable door D in its outer end, and the cleats K at the upper corners of and within said casing, of the bearing B, having ribs R, loosely engaging said cleats, the bearing being longitudinally removable through said door and having a longitudinal hole H, opening into small holes h , which discharge at the face of the bearing, and an oil-cup O, supported by said casing and communicating with said longitudinal hole, substantially as described.

2. In a journal-box, the combination, with the casing C, the cleats k at the upper corners

of and within said casing, the removable door D, closing the outer end thereof, and the bearing B within the casing, said bearing having a longitudinal hole H, opening into small holes h , which discharge at the face of the bearing, of an oil-cup O, having ribs r , engaging said cleats, and a pipe p , leading from the bottom of said cup and connecting with said longitudinal hole when the parts are in position, substantially as described.

3. In a journal-box, the combination, with the axle A, having an annular ridge a , of the casing C, the bearing B therein, resting upon said axle, the plate Z, depending from the outer end of said bearing and resting against the end of the axle; and the wings W at the inner end of said casing, having semicircular faces resting against the sides of said axle adjacent the ridge thereon, substantially as described.

4. In a journal-box, the combination, with the casing C, having an opening in its outer end, a groove G along the bottom of said opening, and a notch N in said groove, of a bearing B within said casing and removable longitudinally through said opening, an oil-cup O, mounted upon said casing and having a groove G, a door D, sliding in said grooves, and a spring-actuated catch c on said door engaging said notch, substantially as described.

5. In a journal-box, the combination, with the casing C and the bearing B, longitudinally removable through the outer end thereof, of an oil-cup O, also longitudinally removable from the outer end of the casing, a strip S, depending from said oil-cup and abutting against the outer end of said bearing, a transverse bolt T through the casing in rear of said strip, and a split pin P through the smaller end of said bolt, as and for the purpose set forth.

6. In a journal-box, the combination, with the casing, a bearing therein, and an oil-cup O, removably mounted upon said casing, of cleats k along the sides of the top of said oil-cup, a cover V, having side grooves v , loosely engaging said cleats, and also provided with holes Q in its lower face near each end, and a spring-catch c' , mounted upon the end of the oil-cup and adapted to engage said holes, as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HENRY MARSHAL.

Witnesses:

A. D. SPENCER,
R. BINFORD.