No. 635,123. Patented Oct. 17, 1899.

E. D. BRONNER.

JOURNAL BOX.

(Application filed Feb. 1, 1899.)

(No Model.)

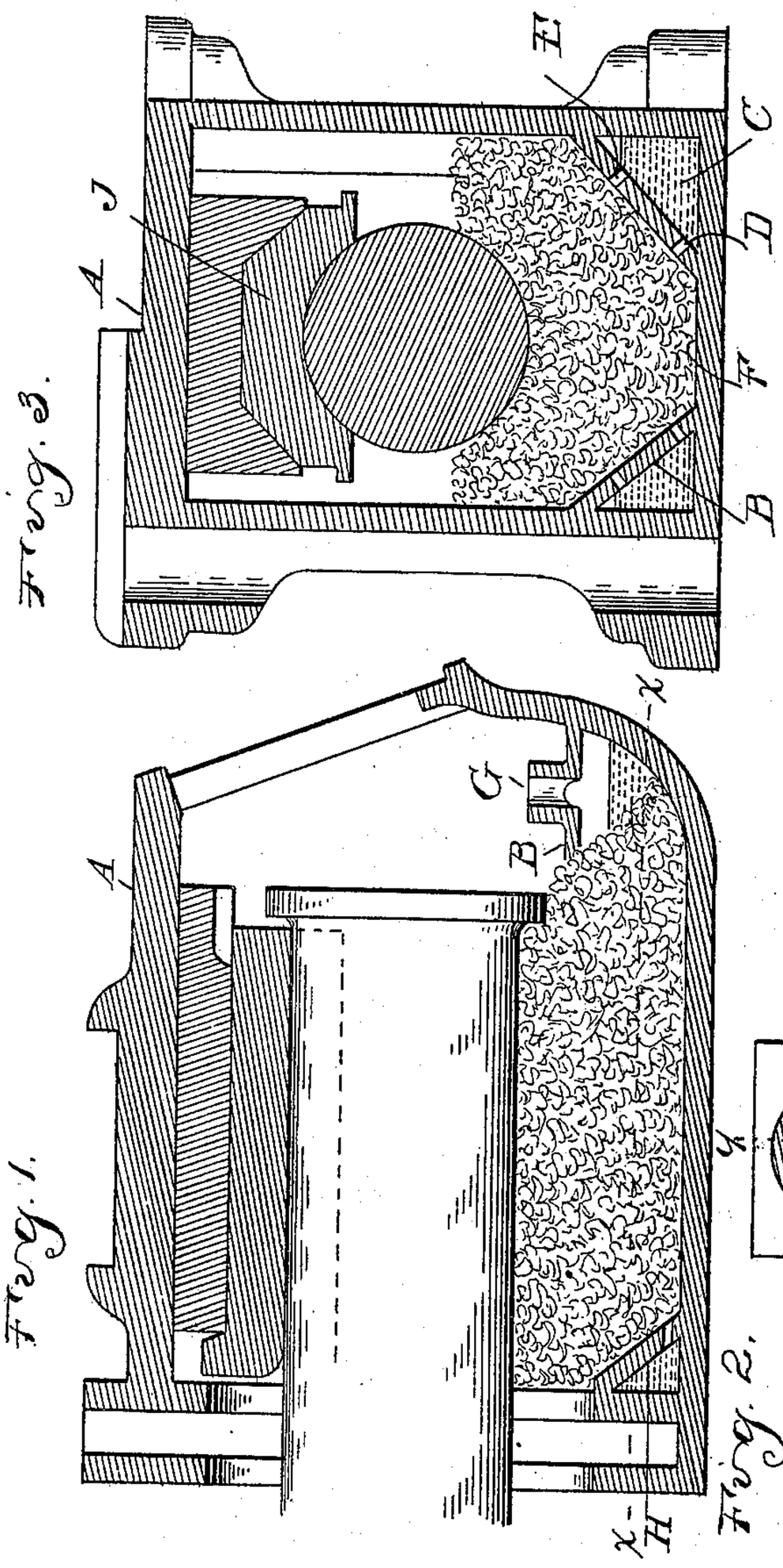

Fig. 3.

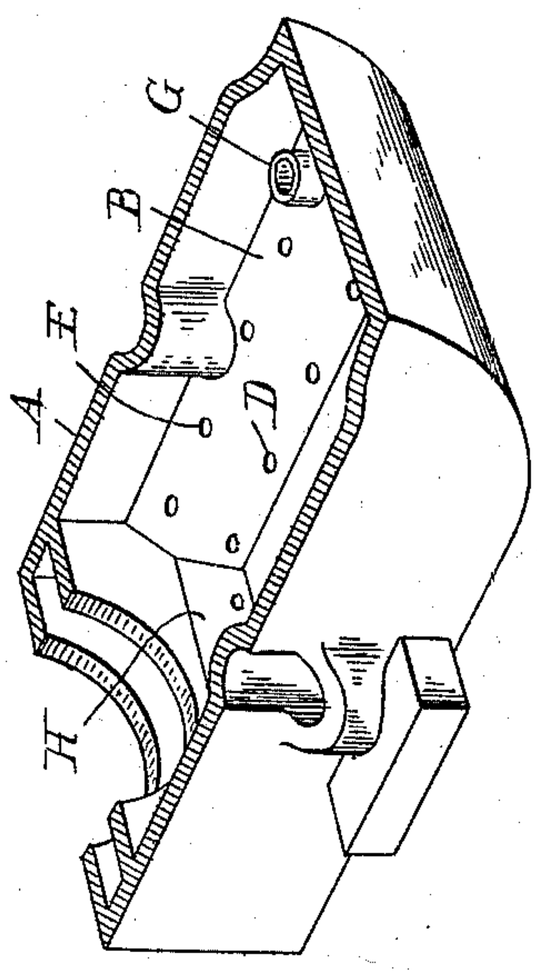

Fig. 4.

Fig. 1.

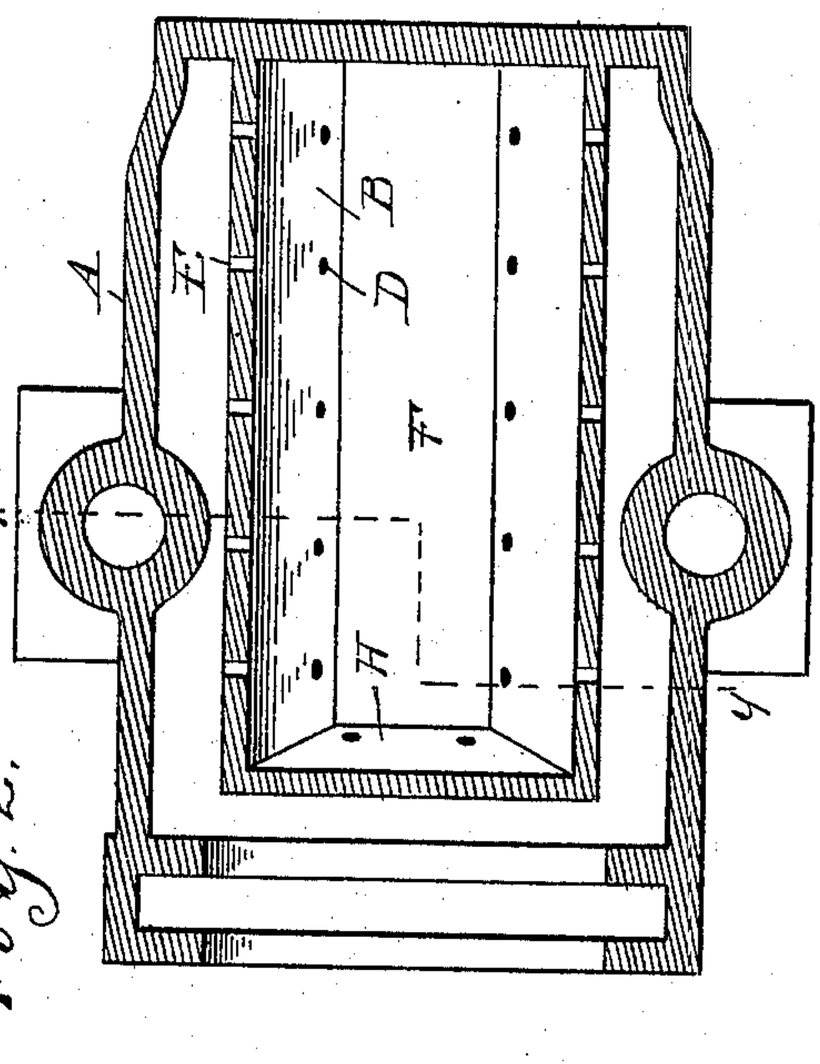

Fig. 2.

Witnesses.
H. C. Smith.
W. D. Dogherty.

Inventor.
Edmond D. Bronner.
By Wm. G. Sprague & Son
Attys.

UNITED STATES PATENT OFFICE.

EDMOND D. BRONNER, OF DETROIT, MICHIGAN, ASSIGNOR OF TWO-THIRDS TO WILLIAM A. PUNGS AND WALTER W. SMITH, OF SAME PLACE.

JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 635,123, dated October 17, 1899.

Application filed February 1, 1899. Serial No. 704,159. (No model.)

To all whom it may concern:

Be it known that I, EDMOND D. BRONNER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Journal-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the construction of a car journal-box, and relates to the construction of the box with interior integral walls which brace the bottom of the box and form longitudinal oil-passages therein, at the same time reducing the waste space beneath the journal.

To this end the invention consists in the construction, arrangement, and combination of the parts, as hereinafter described.

In the drawings, Figure 1 is a vertical longitudinal section through a car journal-box embodying my invention. Fig. 2 is a horizontal section on line *x x*. Fig. 3 is a vertical section on line *y y*, Fig. 2. Fig. 4 is a sectional perspective view of the interior of the box.

At the present time in car-building every effort is being made to lighten all parts of the car structure, and efforts have been made to reduce the weight of car journal-boxes, among other ways by making them of malleable metal, and when thus made the bottoms are usually quite thin. It has been found that with these thin-bottomed boxes in case the car is jacked up by placing the jack beneath the journal-box the bottom is not sufficiently strong to carry the load and a number of boxes are broken in this way. My invention overcomes this difficulty.

Another object of my invention is by the same means which strengthens the bottom to reduce the spaces below the journal in which the waste is packed and to make that space conform more or less accurately to the under face of the journal. The object of this is to save the amount of waste required for packing a box, which in the total amounts to a considerable thus saved, and also to insure of more even packing of the waste around the journal because of its conforming substantially to the lower face of the journal itself.

Another object of my invention is to by the same means provide oil-passages which will distribute the oil regardless of the manner of packing the box the whole length of the journal. The benefit of this is that it frequently happens in packing a box with waste the waste is crowded so tightly into the back of the box (where the oil is most needed) that if the oil is simply poured in front it will not flow back, and hence the back portion of the journal will not be lubricated. These oil-passages distribute the oil uniformly throughout the box, and thus insure its delivery through the waste to the journal the entire length of the bearing.

A represents the box, that shown in the drawings being the usual form of box now used by the railroad companies, being cast in a single piece and open at the rear for the insertion of the journal and at the front for the insertion of the waste and for inspection purposes. As is usual, the box may be provided at the front with a cover, and suitable dust-guards may be provided for the journal, these forming no part of my present invention.

B are walls or diaphragms which are cast integral with the box proper and which are inclined from the sides to the bottom, extending along both sides from front to rear thereof, and thus acting as braces for the middle portions of the bottom in a most efficacious manner. These walls are provided with apertures, so that if oil is poured into the box it may flow into the chambers C, formed beneath these walls or diaphragms, and flow out therefrom into the waste in the box. I preferably form two series of apertures D and E, the apertures D forming the oil-apertures and the apertures E forming in effect vent-apertures, so that the oil will flow freely into and out of the chambers C. I preferably arrange these bracing-walls so that between the lower ends in the bottom of the box is formed a longitudinal oil-channel F, which, as the waste is usually packed in, will be left more or less free for the flow of oil therethrough. I may and preferably do form a supply nipple or

opening G at the forward end of one or both of the channels or chambers C, and I also preferably connect the two chambers by a cross-connection. This I preferably form by the inclined wall H, extending from the rear wall down to the bottom, as shown in Figs. 1 and 2, and also preferably aperture this wall, so that the oil will be distributed therefrom.

The parts being thus constructed and the journal and its brass J being in the position and relation as shown in Figs. 1 and 2, it is evident that a much less amount of waste will be required beneath the journal if these walls are employed than if they are omitted. It is also obvious that in case the waste is packed too tightly at the back to allow the oil to flow through it freely the oil will be distributed the whole length of the box through the middle passages, and thus the whole length of the journal will be lubricated. It is also obvious that if the car is jacked up by jacks placed beneath the box the side walls will brace the bottom, so as to prevent the breaking in thereof when thus carrying the load.

What I claim as my invention is—

1. A car journal-box cast in a single piece, having formed integrally therewith inclined longitudinal, apertured brace-walls extending from the sides to the bottom of the box, forming beneath the journal a reduced waste-space, and beneath the walls, oil-passages extending along the sides of the journal.

2. A car journal-box cast in a single piece, having formed integral therewith on opposite sides, inclined, longitudinal brace-walls, having two sets of apertures, one near the bottom for oil-feed, and one above for air-vent, and a connecting-passage between the side passages within the walls.

3. A car journal-box cast in a single piece, inclined apertured brace-walls extending from the sides to the bottom near the middle, forming longitudinal side chambers, an oil-supply nipple at the front, and a cross-passage connecting the side chambers.

4. A car journal-box cast in a single piece, inclined apertured, brace-walls, extending from the sides to the bottom cast therewith, and an apertured inclined wall across the back, connecting the passages beneath the side walls.

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

EDMOND D. BRONNER.

Witnesses:
JAMES WHITTEMORE,
H. C. SMITH.