No. 896,998. PATENTED AUG. 25, 1908.

G. W. LEWIS.

JOURNAL BOX.

APPLICATION FILED SEPT. 11, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

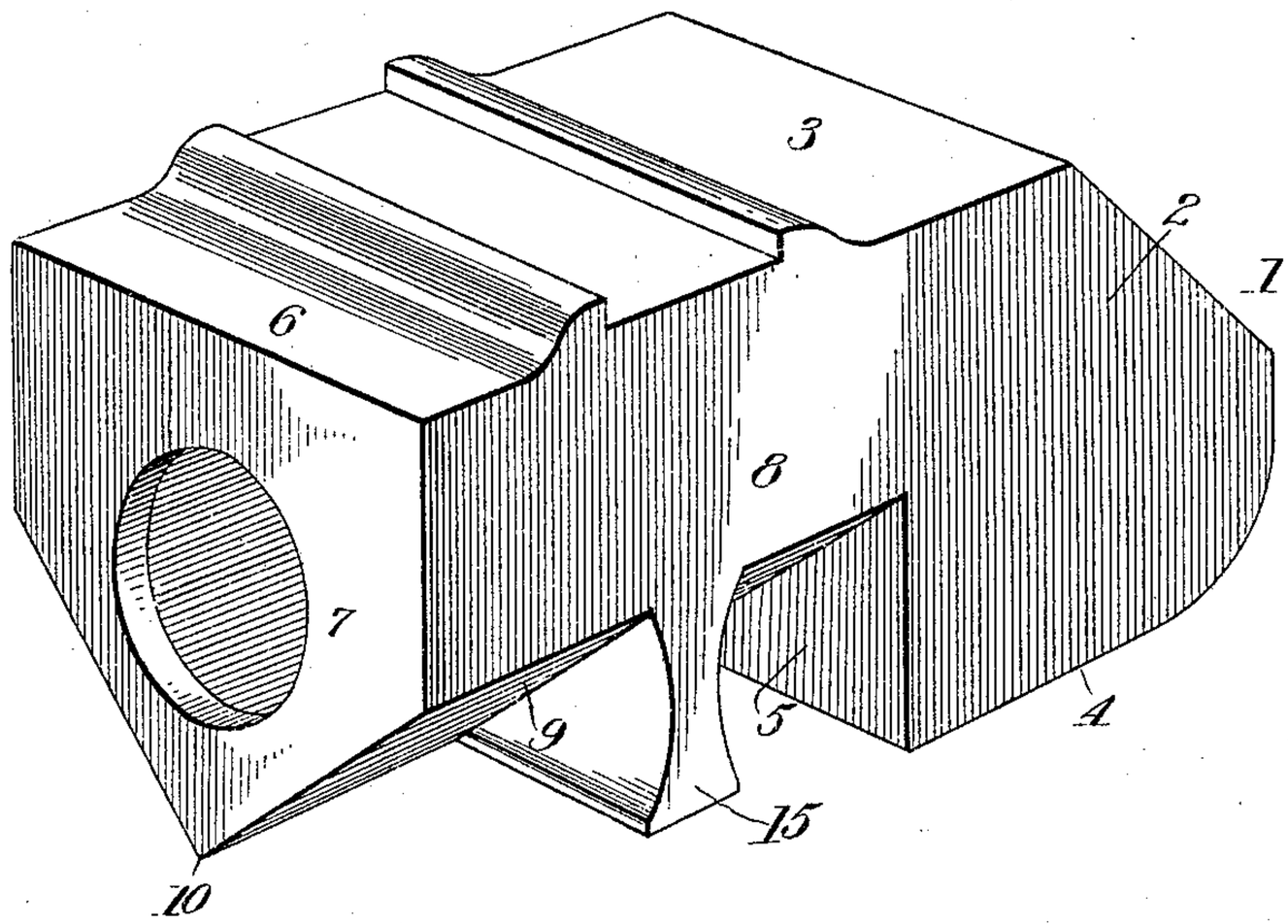
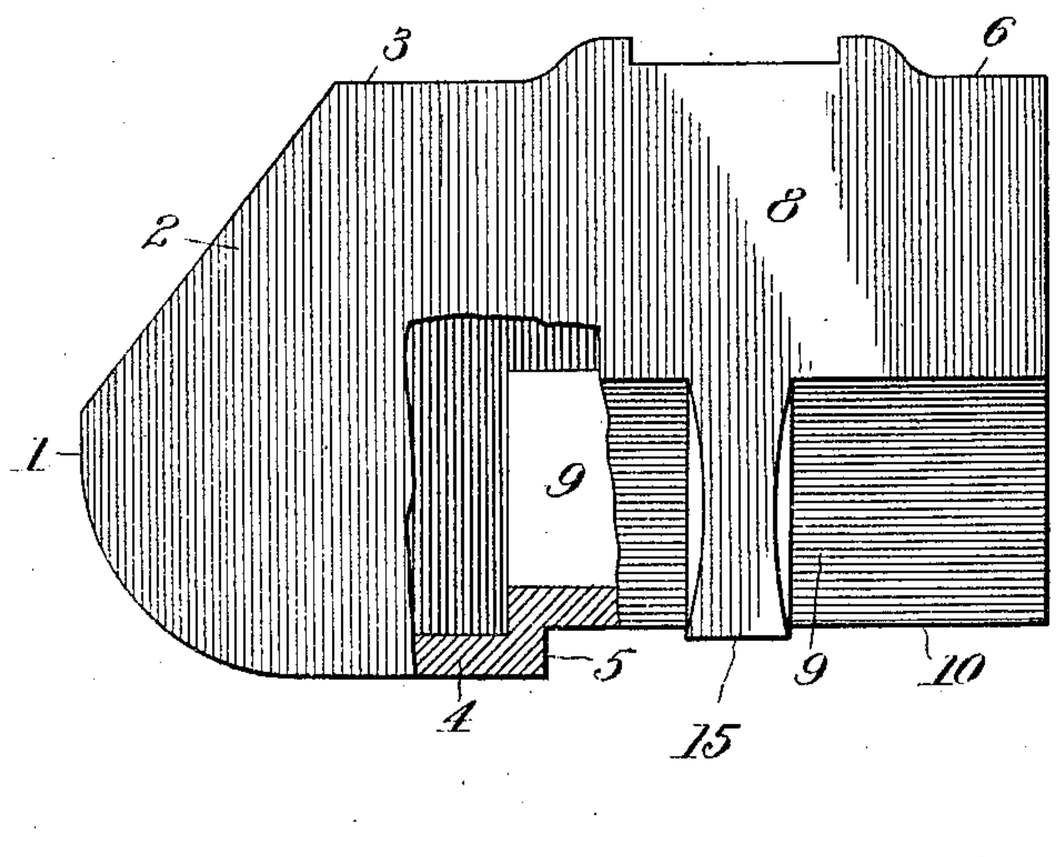


Fig. 2.



Witnesses

C. M. Wacker.

Ed. Fincke.

Inventor

George W. Lewis

by

Wm. N. Fincke

Attorney

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2 SHEETS—SHEET 2.

Fig. 3.

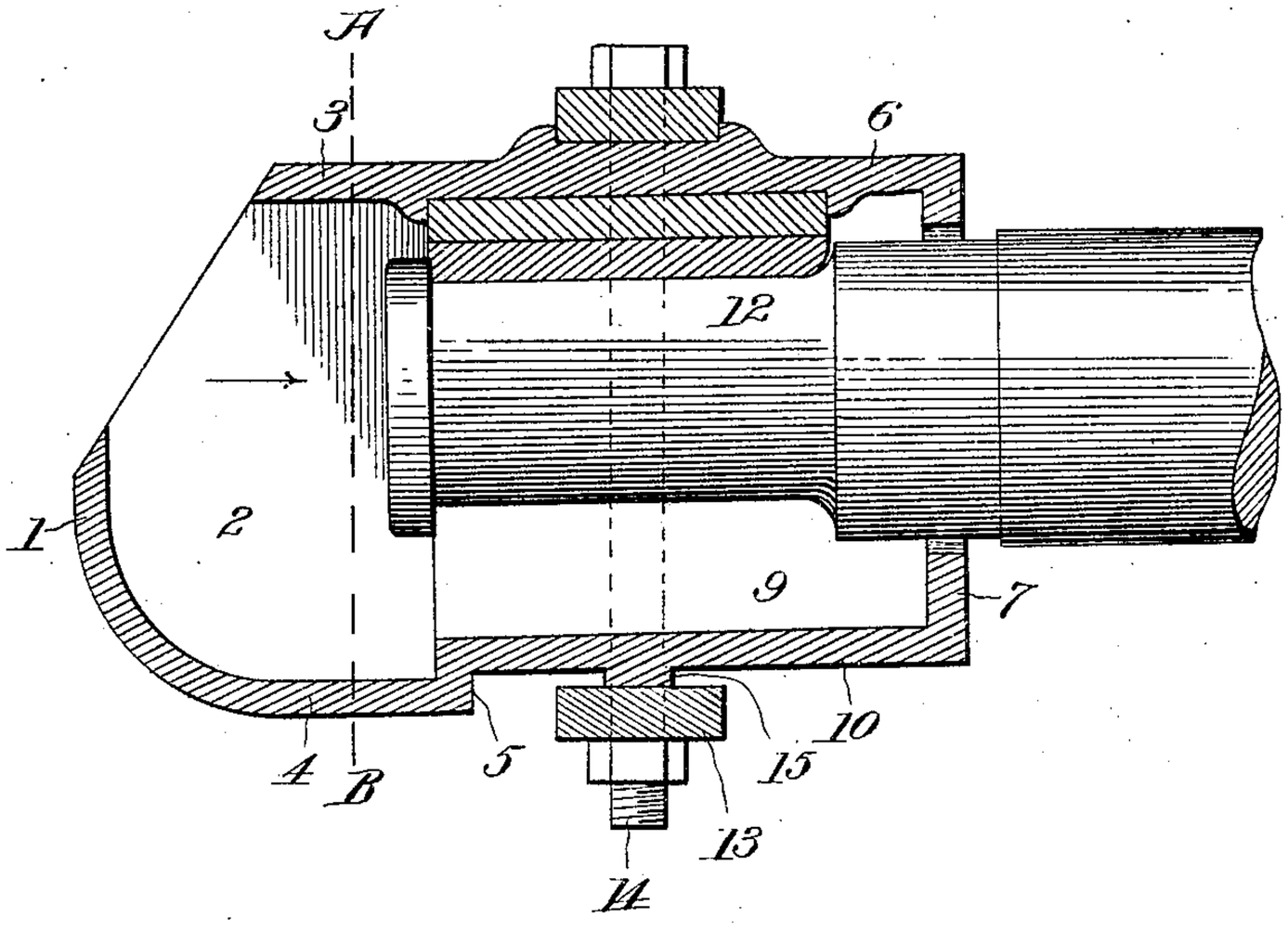


Fig. 4.

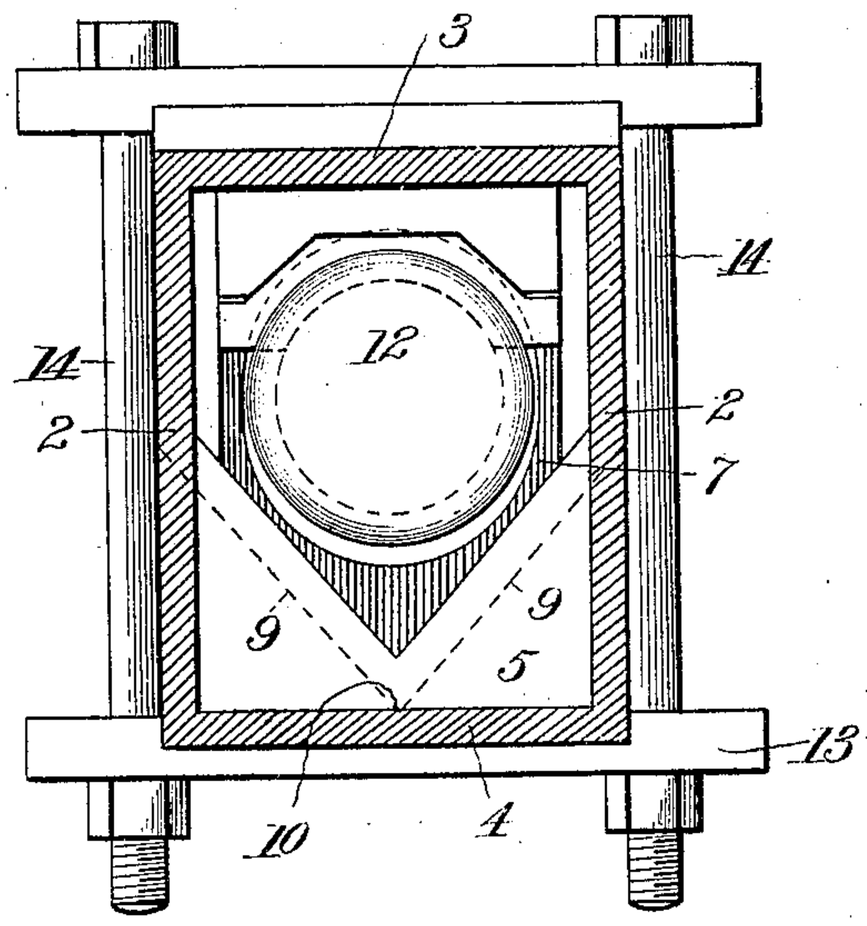
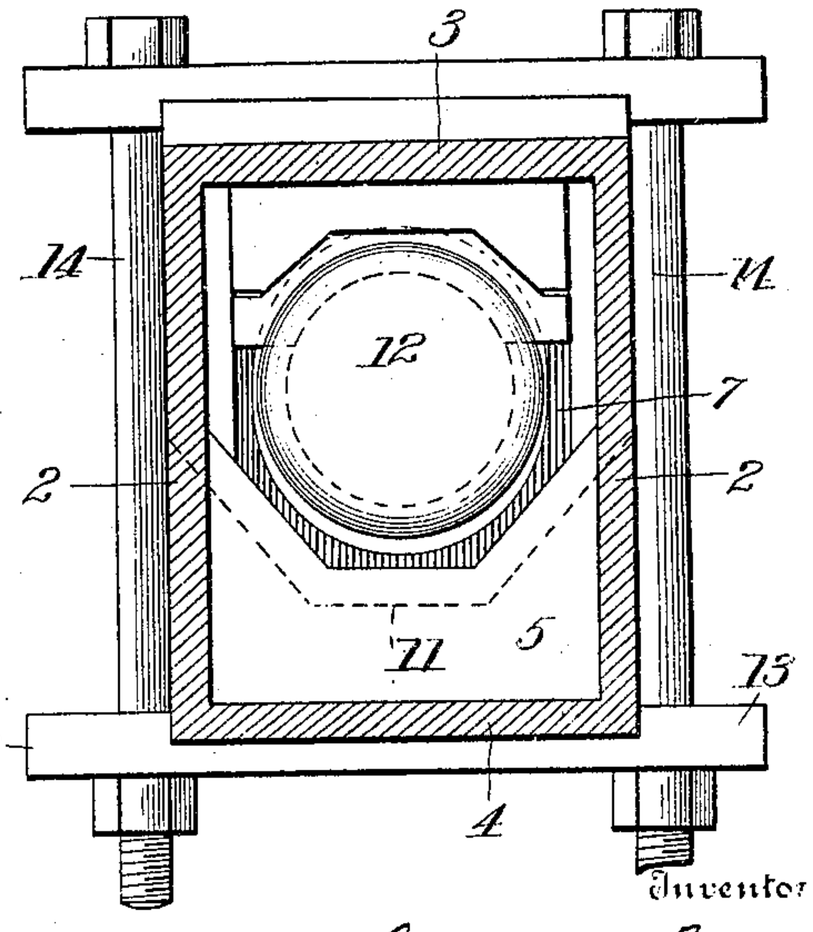


Fig. 5.



Witnesses
C. H. Walker.
E. A. Finnell.

Inventor
George W. Lewis
by
Wm. F. Finnell
Attorney

UNITED STATES PATENT OFFICE.

GEORGE W. LEWIS, OF PORTSMOUTH, VIRGINIA, ASSIGNOR OF ONE-HALF TO ALBERT ROWLAND NASH, OF NORFOLK, VIRGINIA.

JOURNAL-BOX.

No. 896,998. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed September 11, 1907. Serial No. 392,396.

To all whom it may concern:

Be it known that I, GEORGE W. LEWIS, a citizen of the United States, residing at Portsmouth, in the county of Norfolk and State of Virginia, have invented a certain new and useful Improvement in Journal-Boxes, of which the following is a full, clear, and exact description.

The object of this invention is to provide for the economical oiling of the journals of car-axles; to use less waste, increase the oil-carrying capacity of the box, and decrease the weight of the box. In attaining this four-fold object, the fore part of the box is made rectangular in cross-section so as to provide an oil-well and the remainder of the box is polygonal in cross-section, with the side walls convergent beneath the journal and closely approaching the journal and forming a trough in which it turns, so that only a small quantity of waste is needed to attract the oil to the journal from the well-filled oil-well. Thus, also, the total weight of the box is decreased by the difference in metal necessary to make a box rectangular throughout and only partly rectangular.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view looking from the rear. Fig. 2 is a side elevation with the side wall broken out in part. Fig. 3 is a central longitudinal section with the axle journal in position. Fig. 4 is a vertical transverse section taken in the plane of line A B, Fig. 3, looking in the direction of the arrow. Fig. 5 is a view similar to Fig. 4 but showing a modification.

It is proposed to conform to the Master Car Builders' standards in the construction of the box, so that the box may be used interchangeably and in equipments already installed, and by this statement it is to be understood that without reference to the exact dimensions shown in the drawings, the construction follows the Master Car Builders' standards.

It is also to be noted that there is no showing of lid construction, since this may be of any usual or preferred form and arrangement, and there is no showing of a dust-guard, since the box may be used with or without a dust-guard.

The front or fore portion of the box, designated 1, is rectangular in cross-section and provided with the usual front opening and comprises the vertical side walls 2, the top wall 3, the bottom wall 4, curved upwardly to the front opening and the rear wall 5, and this front portion is of a depth relatively greater than the rear portion hereinafter described, and constitutes a well of considerable capacity to receive the waste and oil or other lubricant; and, as will presently appear, since the journal-receiving or rear portion of the box is relatively shallow, only a small quantity of waste can be placed in it, and consequently, the box requires a relatively small quantity of waste, and, as a result, there is a relative increase of its oil or lubricant receiving capacity.

The rear portion of the box, or that portion in which the brass and wedge or key and journal are located, has the usual top wall 6, a rear wall 7, and vertical side walls 8, but the side walls instead of extending down to the level of the bottom 4, are of less depth than the side walls 2 of the front portion and have their lower or bottom wall portions 9 inclined toward each other, and either meeting in a V point 10, Figs. 1, 2, 3 and 4, or in a flat bottom-wall 11, Fig. 5, elevated considerably above the level of the bottom 4. This rear portion of the box, therefore, is polygonal in outline, and it forms a shallow trough beneath the journal 12 in which a small portion of waste is placed, the waste being trained up from the well in the fore part of the box and spread out in the trough beneath the journal, so as to attract the lubricant into the trough and keep the journal thoroughly lubricated.

By the use of the convergent walls in V or other polygonal form, the lubricant is accumulated in close contact with the journal, and since there is a relatively small quantity of waste, there is a decided economy in consumption of lubricant, and there is a reduction in quantity of waste immediately exposed to the action of the journal.

It will also be observed that the weight of the box is decreased by the amount of metal that would be required to extend the whole bottom of the box from the well clear back to the rear wall, and the sides down to such bottom.

In order to adapt the box to the Master Car Builders' standards of pedestal tie-bar 13 and bolts 14, the bottom may be built out in casting, as at 15, to take a flat bearing on the

tie-bar, but the invention is not limited to this detail.

What I claim is:—

1. A journal box, comprising a front portion provided with a front opening and constructed of vertical side walls, a bottom wall curved upwardly to said front opening, and a rear wall connecting said vertical side walls, and a rear portion constructed of vertical side walls of less depth than the side walls of the front portion, bottom walls extending from said side walls and inclined toward each other and connected at a point above the bottom wall of the front portion at the rear thereof, and a rear wall provided with a journal opening and connected with and conforming to the shape of the edges of the side walls and inclined bottom walls, and a top wall for said front and rear portions.

2. A journal box, comprising a front portion provided with a front opening and constructed of vertical side walls, a bottom wall curved upwardly to said front opening, and a rear wall connecting said vertical side walls, and a rear portion constructed of vertical walls of less depth than the side walls of the front portion, bottom walls extending from said vertical side walls and inclined toward each other and connected by a flat bottom wall at a point above the level of the bottom wall of the front portion at the rear thereof, and a rear wall provided with a journal opening and connected with and conforming to the shape of the edges of the side walls and bottom walls of the rear portion, and a top wall for said front and rear portions.

3. A journal box, comprising a front portion provided with a front opening and constructed of vertical side walls, a bottom wall curved upwardly to the front opening, and a rear wall connecting said vertical side walls, and a rear portion constructed of vertical side walls of less depth than the side walls of the front portion, bottom walls extending from said vertical side walls and inclined toward each other and connected at a point above the bottom wall of the front portion at the rear thereof, and a rear wall provided with a journal opening and connected with and conforming to the shape of the edges of the side walls and inclined bottom walls, and a top wall for said front and rear portions, the said front portion constituting a waste and lubricant receiving well, and the rear portion constituting a journal-receiving portion with a shallow waste-receiving trough below the journal and a brass and wedge receiving portion above the journal.

In testimony whereof I have hereunto set my hand this sixth day of September A. D. 1907.

GEORGE W. LEWIS.

Witnesses:
NORMAN CASSELL,
WILLIAM HODGES BAKER.