

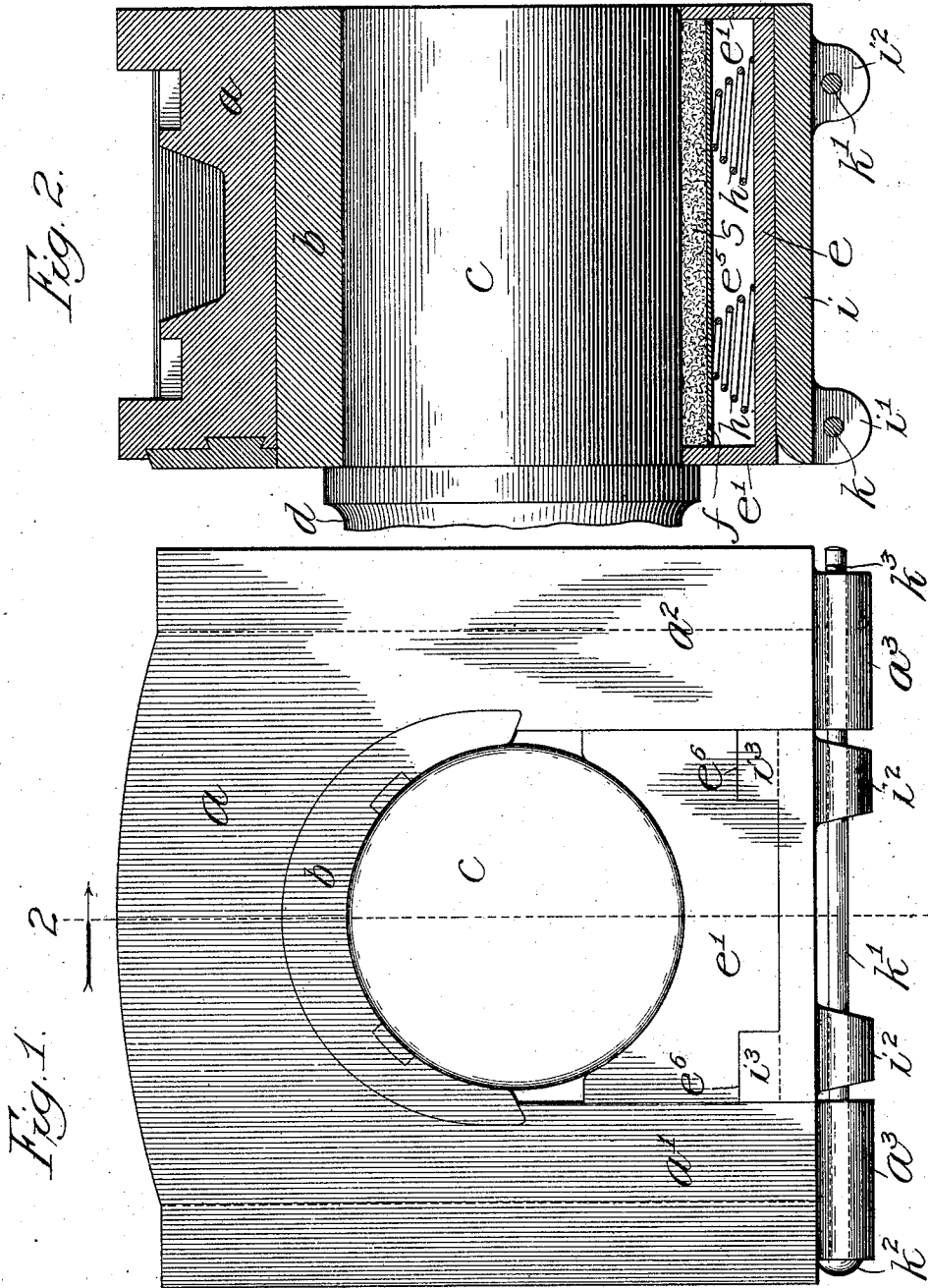
No. 845,780.

PATENTED MAR. 5, 1907.

G. J. HATZ.
LOCOMOTIVE JOURNAL BOX.

APPLICATION FILED APR. 24, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

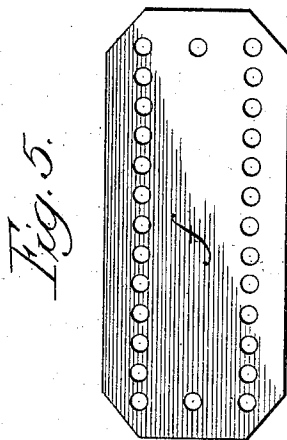


Fig. 5.

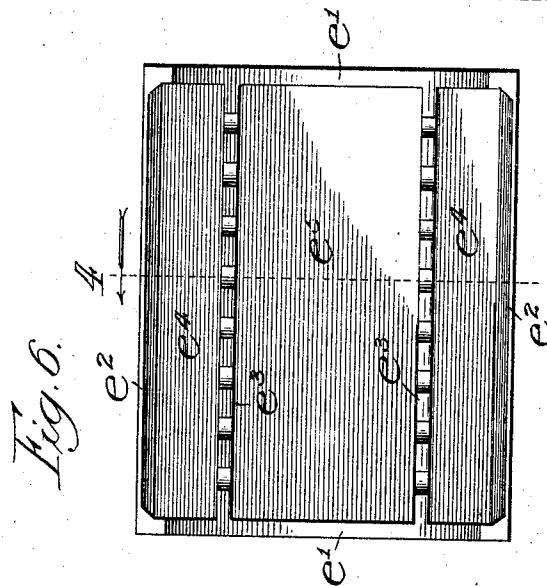


Fig. 6.

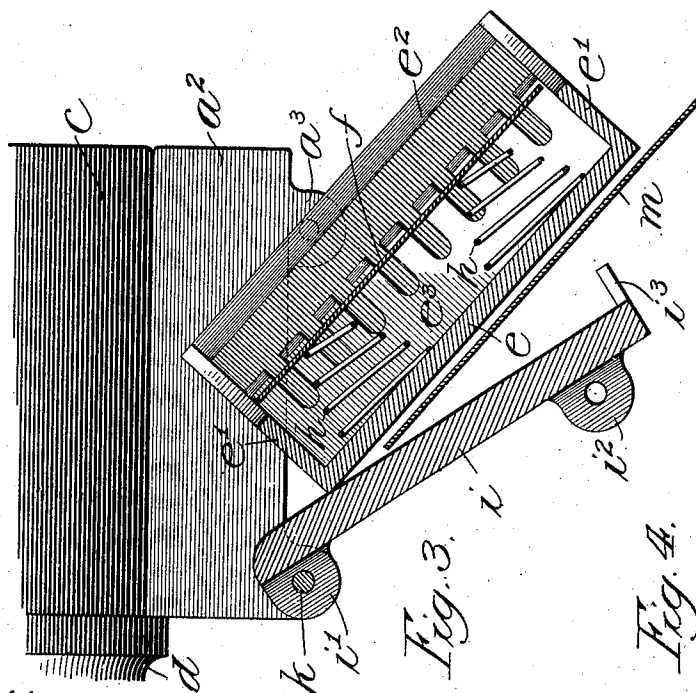


Fig. 3.

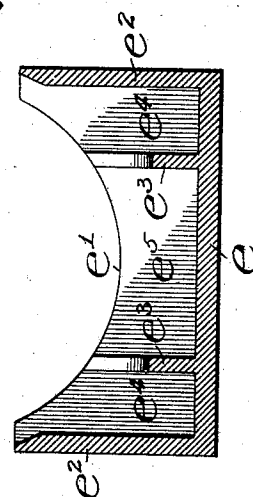


Fig. 4.

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UNITED STATES PATENT OFFICE.

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LOCOMOTIVE JOURNAL-BOX.

No. 845,780.

Specification of Letters Patent.

Patented March 5, 1907.

Application filed April 24, 1905. Serial No. 257,200.

To all whom it may concern:

Be it known that I, GEORGE J. HATZ, a citizen of the United States, residing at Bloomington, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Locomotive Journal-Boxes, of which the following is a specification.

The invention relates to that class of journal-boxes used in connection with the axles of locomotive-engines, and more particularly to the mechanisms by which the oil-cellar is detachably held in position, all of which will more fully hereinafter appear.

The principal object of the invention is to provide the journal-bearing of a locomotive-axle with a journal-box, removable oil-cellar, and means for holding it in position, requiring little labor to remove it when necessary to do so.

The invention consists principally in a locomotive journal-box in which there are combined a main box portion, a removable oil-cellar, and a movable cellar-retainer with upwardly-extending flange-lips at its forward end only for removably holding the oil-cellar in position.

The invention consists, further, in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a front elevation of a journal-box for locomotives as it appears when constructed in accordance with these improvements; Fig. 2, a cross-sectional elevation taken on line 2 of Fig. 1 looking in the direction of the arrow and showing the parts in operative position; Fig. 3, a similar view of the lower portion of the mechanism shown in Fig. 2 in a swinging open position to permit the removal or insertion of the oil-cellar and other parts; Fig. 4, a sectional elevation of the oil-cellar, taken on line 4 of Fig. 6; Fig. 5, a plan view of the perforated waste-supporting plate shown separate from the rest of the parts; and Fig. 6, a plan view of the oil-cellar, shown particularly in Figs. 3 and 4 looking at it from above.

In the art to which this invention relates it is well known that the present type of oil-cellars and the means for holding them in position are objectionable in view of the fact that there is great difficulty in removing the same from operative position, especially if the journal has become heated, owing to lack of lubrication or otherwise, all of which causes the free ends of the box to spring together.

Further, as the old type of cellar served as a brace between the free ends of the box as well as an oil-cellar it was necessary to make a close fit of it in the box, which made it very difficult, if not well-nigh impossible, to remove. With my improvements these objectionable features or defects are entirely eliminated, in that it is not necessary to make the oil-cellar fit closely between the depending free edges of the main box-casting. The oil-cellar rests easily upon a pivoted cellar-retaining block, which latter part serves as a brace between the free ends of the box. It is very easy to remove the parts for any desired purpose by merely removing one of the cellar-pins and driving an iron wedge between the top of the retaining-block and the bottom of the oil-cellar, which swings the parts into open position, making the removal of one or more a comparatively easy matter.

In illustrating and describing these improvements I will only herein illustrate and describe that which I consider to be new, taken in connection with so much that is old as will properly disclose the invention to others and enable those skilled in the art to practice the same, leaving out of consideration other and well-known elements, which, if set forth herein, would only tend to confusion, prolixity, and ambiguity.

In constructing a journal-box in accordance with these improvements I provide the usual main box frame or casting *a*, preferably of an inverted-U-shape form when viewed in side elevation, as shown in Fig. 1, and having two depending portions *a'* and *a''*. This main box frame or casting is provided, as is usual, with an opening formed by the upper portion and the depending side portions, the upper part of which has a detachable crescent-shaped "brass" *b*, which, as shown, in such instances can be repaired or renewed whenever desirable or necessary. The journal *c* of the locomotive-axle *d* is arranged to rotate therein, and the weight of the parts is supported on this journal through the intervention of the replaceable brass portion above set forth. It is very desirable to provide some means by which lubricant may be fed to this journal portion. To do this in as economical and efficient manner as possible, a removable oil-cellar *e* is provided, formed in the shape of a removable box having a base portion with end walls *e'* and side walls *e''*. The end walls are hollowed out or concaved, as shown in Fig. 2, to receive the loco-

motive-axle journal, which is held closely against the same, so as to prevent the packing from working out either at the front or rear portion of the cellar. This oil-cellar is provided with two longitudinally-extending comb-shaped partitions e^3 , which form with the other portions of the cellar two side oil-catching members e^4 , which are filled with waste; but this waste is not held under pressure, which allows it to retain all the oil it will possibly hold. As the journal rotates in one direction or the other the surplus oil, which is fed from the top of the driving-box, is scraped off by the projecting surface and drops into one or the other of the side oil-catching chambers and after it has reached a certain level flows through the openings in the comb-shaped partitions and into the central waste-chamber. To keep the oil in the desired manner against the lower moving surface of the axle-journal, the central waste-chamber is provided with a movable perforated waste-supporting plunger f , formed, preferably, of metal. The waste is arranged thereon, as shown in Fig. 2, and is held yieldingly against the lower surface of the moving journal by means of a pair of coil-springs h , arranged under this perforated plate or plunger, which, as above stated, is in the waste-chamber of the oil-cellar, in which the waste is held against the journal under pressure. It is also desirable to provide means by which this oil-cellar may be easily inserted in position or removed therefrom for any desired purpose, either for replacement or repair of the part or replacement or repair of any of the other parts above mentioned. In order to accomplish this result in an effective and economical manner, a pivoted retaining-block i is provided having lugs i^1 and i^2 arranged in pairs on its under surface and at its forward and rear portions and in alignment with similar lugs a^3 on the lower surfaces of the downwardly-extending side portions of the main box-casting, as shown particularly in Figs. 1 and 3. All of these lugs are perforated, and these perforations are in alignment, so that a pintle or pin k may be passed through the rear set of lugs to permit the hinging of the parts and enable them to be swung into open or closed position whenever desirable or necessary and a supporting-pin k' to be passed through the perforations in the front set of lugs to hold or support the parts in their upper closed and operative position, as shown in Figs. 1 and 2. Both of these pintles or pins are provided with heads k^2 at one end and at the opposite end are perforated to receive split keys k^3 . When it is desired to remove the oil-cellar or other parts, the forward supporting-pin k' is removed and the parts swung to open position, as shown in Fig. 3, when any desired renewal, replacement, or repair can be performed.

Another important advantage arising from

the use of these improvements is the cheap and easy method of lining the cellar up against the journal to take up the wear of the brass bearing, which continually allows the old-style cellar to leave the journal and the waste packing to work out of the end of the cellar. To secure this advantage, a liner plate or plates m may be inserted between the upper surface of the cellar-retaining block and the lower surface of the oil-cellar to raise the same and hold it close to the lower surface of the axle-journal, the liners being held in place by the two lugs on the cellar-retaining block and the hub of the driving-wheel. This latter improvement has a decided and distinct advantage, in that it permits of the use of the oil-cellar for a longer period of time than has heretofore been possible, all of which will be understood and appreciated by those skilled in the art. The forward portion of the oil-cellar is provided with two recesses e^6 at its lower corners, into which two upwardly-extending lip portions i^3 on the retaining-block are fitted, so as to hold the oil-cellar in position or prevent its longitudinal withdrawal when the parts are in operative position, as shown in Figs. 1 and 2.

I claim—

1. In a journal-box of the class described, the combination of a main box-casting, a removable oil-cellar provided with upwardly-extending end and side walls, intermediate partitions extending longitudinally of the oil-cellar forming side oil-catching chambers and a central waste-holding chamber, a perforated plate in the waste-chamber upon which waste or similar material may be laid, means for pressing said plate upwardly, and a swinging retaining-block with upwardly-extending flange-lips at its forward end only for removably holding the oil-cellar in position, substantially as described.

2. In mechanisms of the class described, the combination of an inverted-U-shaped main box-casting, a removable oil-cellar provided with upwardly-extending outer walls inserted between the downwardly-extending portions of the main box-casting, comb-shaped partitions longitudinally arranged in said oil-cellar so as to form side oil-catching chambers and a central waste-chamber, means for yieldingly holding any waste therein against the lower part of the axle-journal, a swinging oil-retaining block pivotally mounted in the main box-casting between the lower ends of the downwardly-extending side portions and provided with upwardly-extending lips at its forward portion only to prevent the removal of the oil-cellar when the parts are in operative position, a pintle passed through the rear ends of the retaining-block and the main box-casting and forming the pivotal connection therebetween, and a second bolt passed through the forward ends of said parts to support the said

parts in operative position, substantially as described.

3. In mechanisms of the class described, the combination of an inverted-U-shaped
5 main box-casting, a removable oil-cellar provided with upwardly-extending end and side walls and inserted between the downwardly-extending portions of the main-box casting, a swinging retaining-block for removably
10 holding the oil-cellar in position and provided with upwardly-extending lip portions

at its front end only to prevent the withdrawal of the same when the parts are in operative position, and a liner plate or plates inserted between the pivoted retaining-block 15 and the removable oil-cellar, substantially as described.

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