

No. 641,866.

Patented Jan. 23, 1900.

E. R. KINNEY.

AUTOMATIC JOURNAL OILER FOR LOCOMOTIVE AXLE JOURNALS.

(Application filed Nov. 6, 1899.)

(No Model.)

Fig. 1-

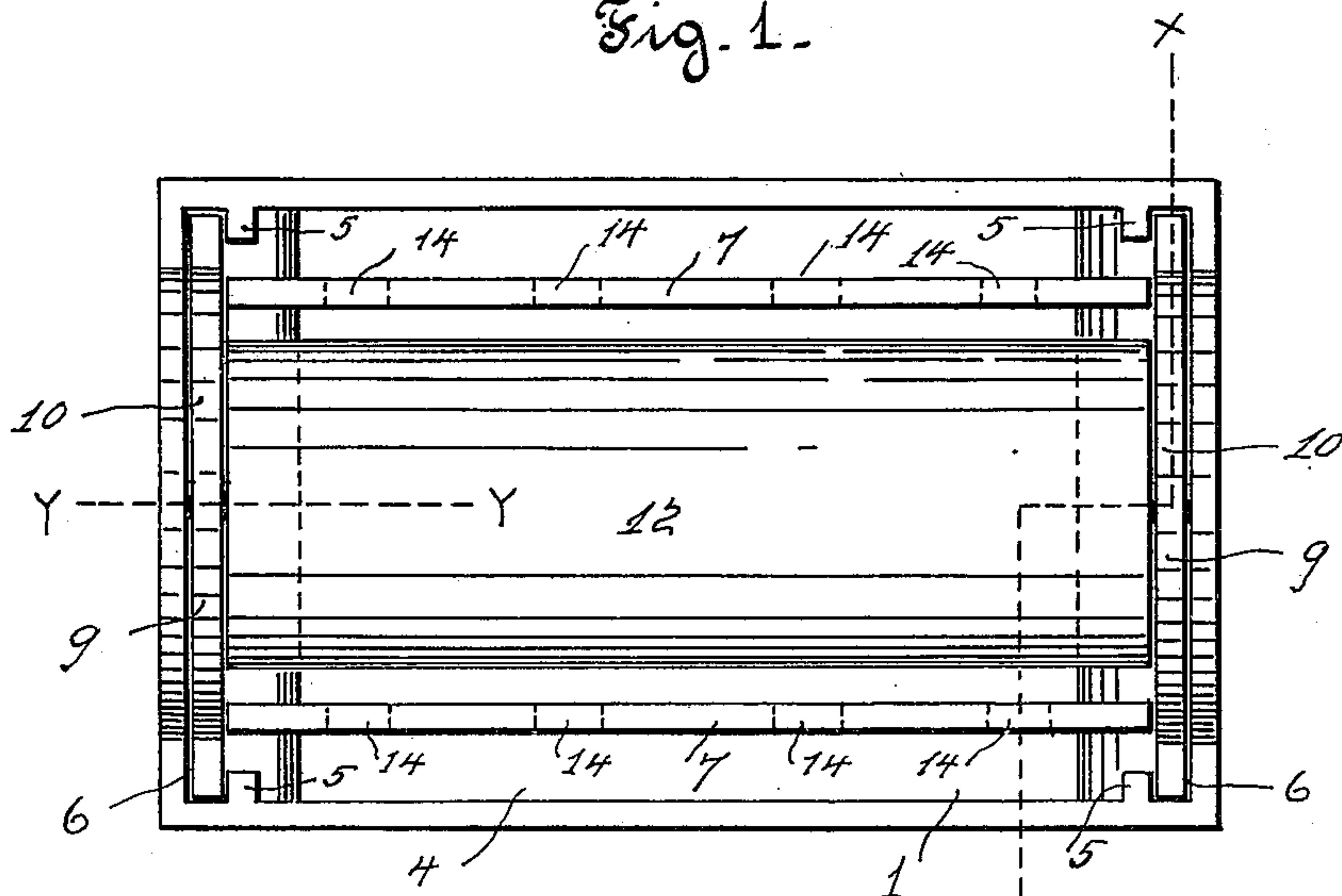


Fig. 2-

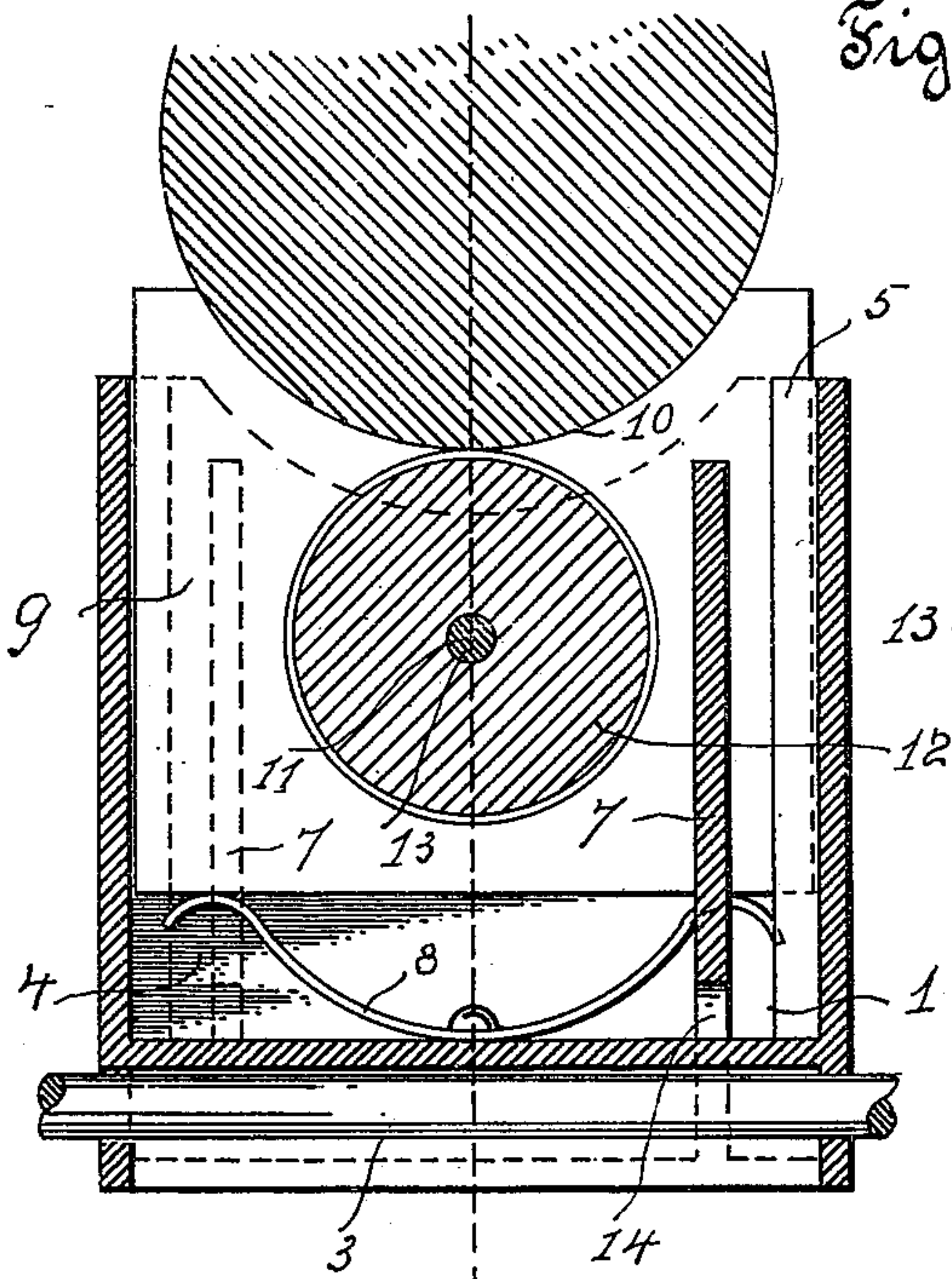
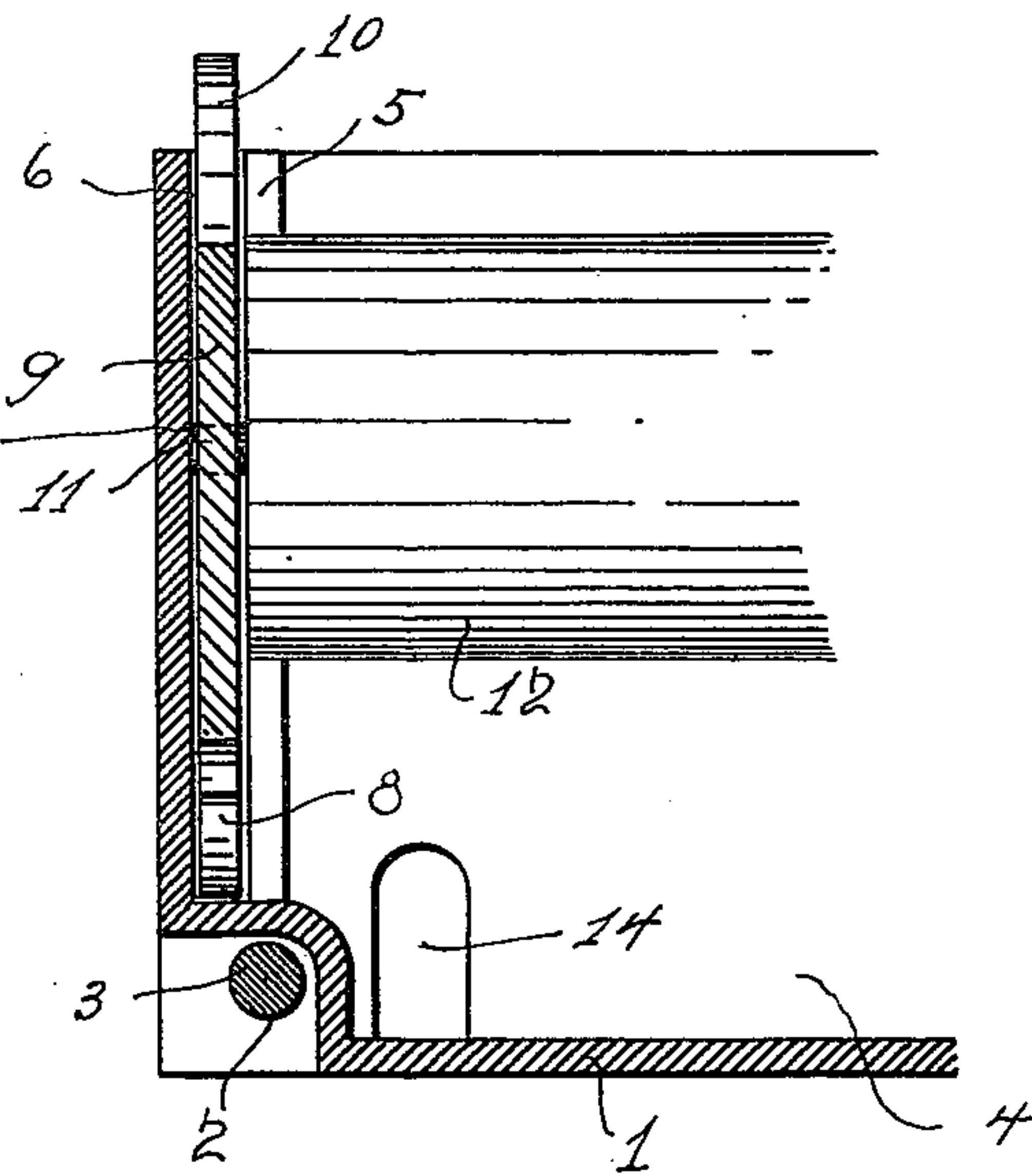


Fig. 3-



Witnesses
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UNITED STATES PATENT OFFICE.

EDWIN R. KINNEY, OF NORWALK, OHIO.

AUTOMATIC JOURNAL-OILER FOR LOCOMOTIVE-AXLE JOURNALS.

SPECIFICATION forming part of Letters Patent No. 641,866, dated January 23, 1900.

Original application filed June 21, 1899, Serial No. 721,284. Divided and this application filed November 6, 1899. Serial No. 735,919. (No model.)

To all whom it may concern:

Be it known that I, EDWIN R. KINNEY, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented a new and useful Improvement in Automatic Journal-Oilers for Locomotive-Axle Journals, of which the following is a specification.

In an application filed June 21, 1899, Serial No. 721,284, for Letters Patent for an improvement in automatic journal-oilers for car or locomotive axle journals and bearings I presented a form of my invention adapted to insertion within the ordinary journal-boxes in common and general use on cars and locomotives. My present invention relates to a modified form of said invention adapted especially for locomotive-axle journals which may be substituted for the lower section of the ordinary locomotive journal-box without modification or change of the other parts of the box, and has for its objects to provide such a lower section equipped with ready and effective means of keeping the bearing-surface of the axle-journal constantly and uniformly lubricated and of preventing waste of the lubricating-oil. I attain these objects in the manner and by the means illustrated in the accompanying drawings, in which—

Figure 1 is a top view of the oiler. Fig. 2 is a view in cross-section of the same through line *x x* of Fig. 1, and Fig. 3 is a view in longitudinal section of the same through line *y y* of Fig. 1.

In the drawings, in which similar reference-numerals represent similar parts, 1 is the body portion, which is a metal casting consisting of a rectangular open-topped box in outward form and dimensions adapted to enter telescopically the upper section of a locomotive-axle journal-box having the end portions of the bottom recessed upward between the sides and having a pair of holes 2 through the sides at each end, with the holes of each pair placed opposite to their respective recesses in the bottom and adapted to be in line with holes in the upper section of the journal-box and to receive the bolts 3, employed to support the lower section of a locomotive journal-box when the lower section is in op-

erative position within the upper section. By this construction the bolts 3 support the lower section 1 without passing through the inner portion of it, which avoids the leakage of oil through the openings for the bolts 3.

4 is an oil-well formed by the side and end walls of the body portion 1, at each end of which, integral with the side walls oppositely disposed, are inwardly-projecting walls 5, forming with the end walls transverse vertical pockets 6, and longitudinally through the oil-well 4 are parallel vertical walls 7, integral with the bottom of body portion 1 and terminating in the lines of the walls 5 extended. Into the bottom of pockets 6 are inserted springs 8, made bow-shaped of flat spring-steel and of a length to allow free lateral movement of their ends when the springs are depressed. Upon the top of springs 8 oil-retaining plates 9 are inserted vertically within the pockets 6, which are of dimensions to allow free vertical movement thereof within the pockets. In their upper edges plates 9 are provided with semicircular incuts 10, adapted to conform the plates for circumferential contact with the journal of the axle, and the plates are made of such height that their incut portions are yieldingly held in such contact with the under surface of the axle-journal by the pressure of springs 8. Plates 9 are also provided with orifices 11, in which an oiling-roller 12, having suitable journals 13 at its ends, is journaled, the orifices 11 being so placed in the sides of the plates 9 as to bring the roller 12 parallel with and vertically beneath the axle-journal and in contact therewith throughout the length of its bearing and centrally between the walls 7. Thus constructed the incut portions of plates 9 and the roller 12 are yieldingly held in constant contact with the axle-journal by the pressure of springs 8, and whether the oil is supplied from an oil-cup through the bearing or by having a supply in oil-well 4 the roller 12, revolved by its contact with the axle as the axle revolves, thereby spreads the oil uniformly and constantly over the bearing-surface of the axle-journal, and the plates 9 at the ends of the roller prevent the oil from spreading beyond the bearing-surface of the axle-journal and

from escaping from the oil-well through the openings for the axle.

Plates 9 may be of any suitable material; but preferably they are made of hard wood or indurated fiber, which in the event of their becoming worn from long contact with the journal may be inexpensively replaced by similar plates.

Roller 12 is preferably provided throughout its length with a covering of absorbent material; but such covering is not essential to the performance of its function and may be omitted.

Walls 7, extending upward at opposite sides of the axle-journal and roller 12, intercept any oil thrown off by the centrifugal action of the roller and prevent waste of oil from that cause by reason of the oil being thrown above the walls of the lower section and escaping between the walls of the upper and lower sections of the journal-box. The ends of walls 7 also serve as guides for plates 9 and for holding springs 8 in position; but said walls, while preferably employed in my invention, are not essential to the accomplishment of its main objects, and I therefore do not desire to be limited to their use.

Having thus fully described my invention,

what I claim to be new, and desire to secure by Letters Patent, is—

In an automatic journal-oiler for locomotive-axle journals, a body portion comprising an oil-well, in form adapted to be substituted for the lower section of a locomotive-axle journal-box of the form in common and general use on locomotives, having walls 5 integral therewith, forming with the ends of the body portion transverse vertical pockets, in combination with oil-retaining plates inserted in the pockets and movable vertically therein, and having incuts in their upper edges adapted to conform circumferentially to the locomotive-axle journal; an oiling-roller having its ends journaled in the plates and held thereby within the well parallel with and underneath the axle-journal; and springs inserted in the pockets beneath the plates, adapted to yieldingly hold the plates, and therewith the roller, in constant contact with the bearing-surface of the axle-journal, substantially as and for the purpose described.

EDWIN R. KINNEY.

Witnesses:

SHERMAN CULP,
G. B. WILLIAMS.