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PATENTED DEC. 4, 1906.

F. S. BAIRD & E. W. CARROLL.

WHEEL FLANGE OILER.

APPLICATION FILED MAY 2, 1906.

2 SHEETS—SHEET 1.

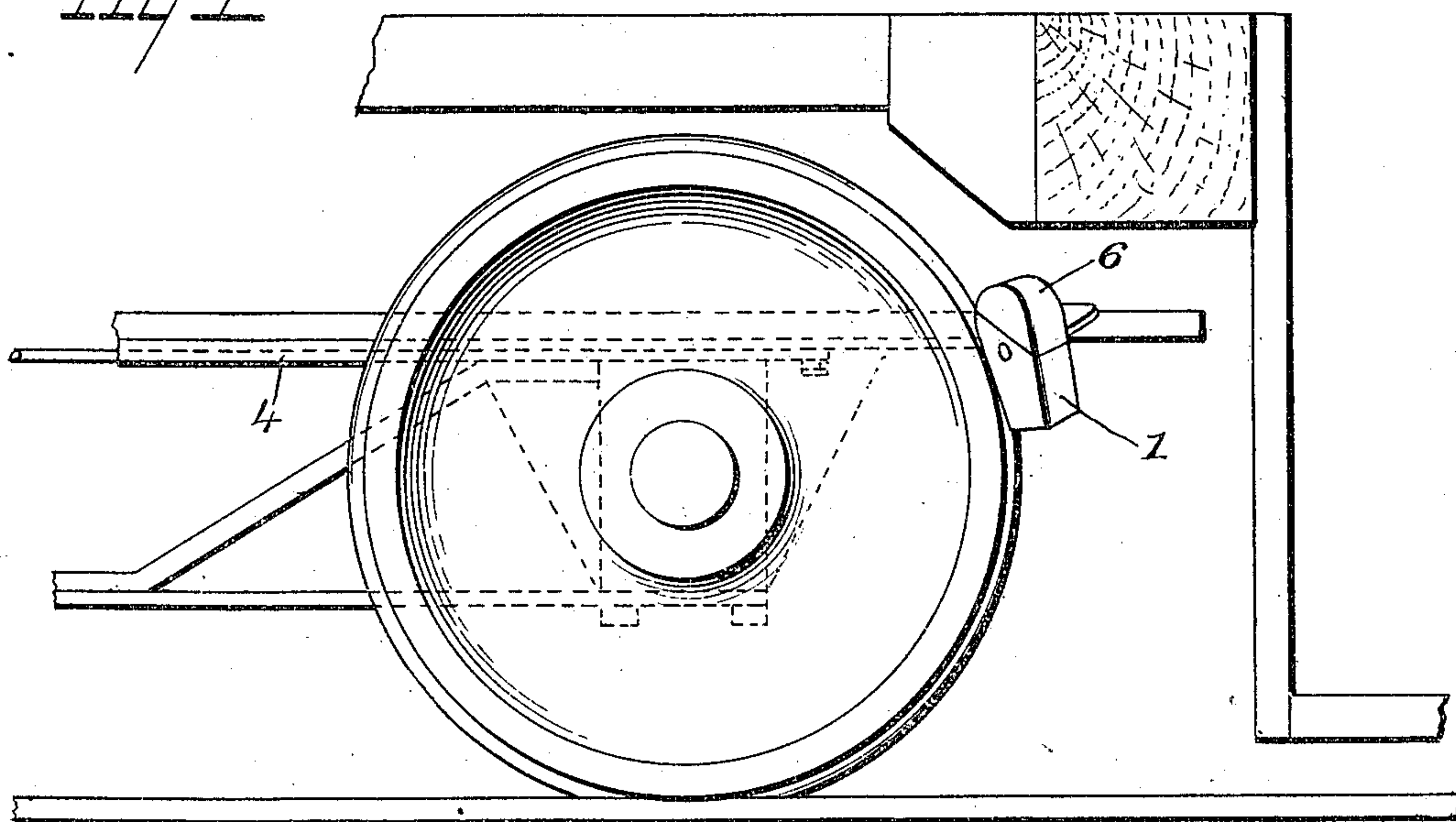
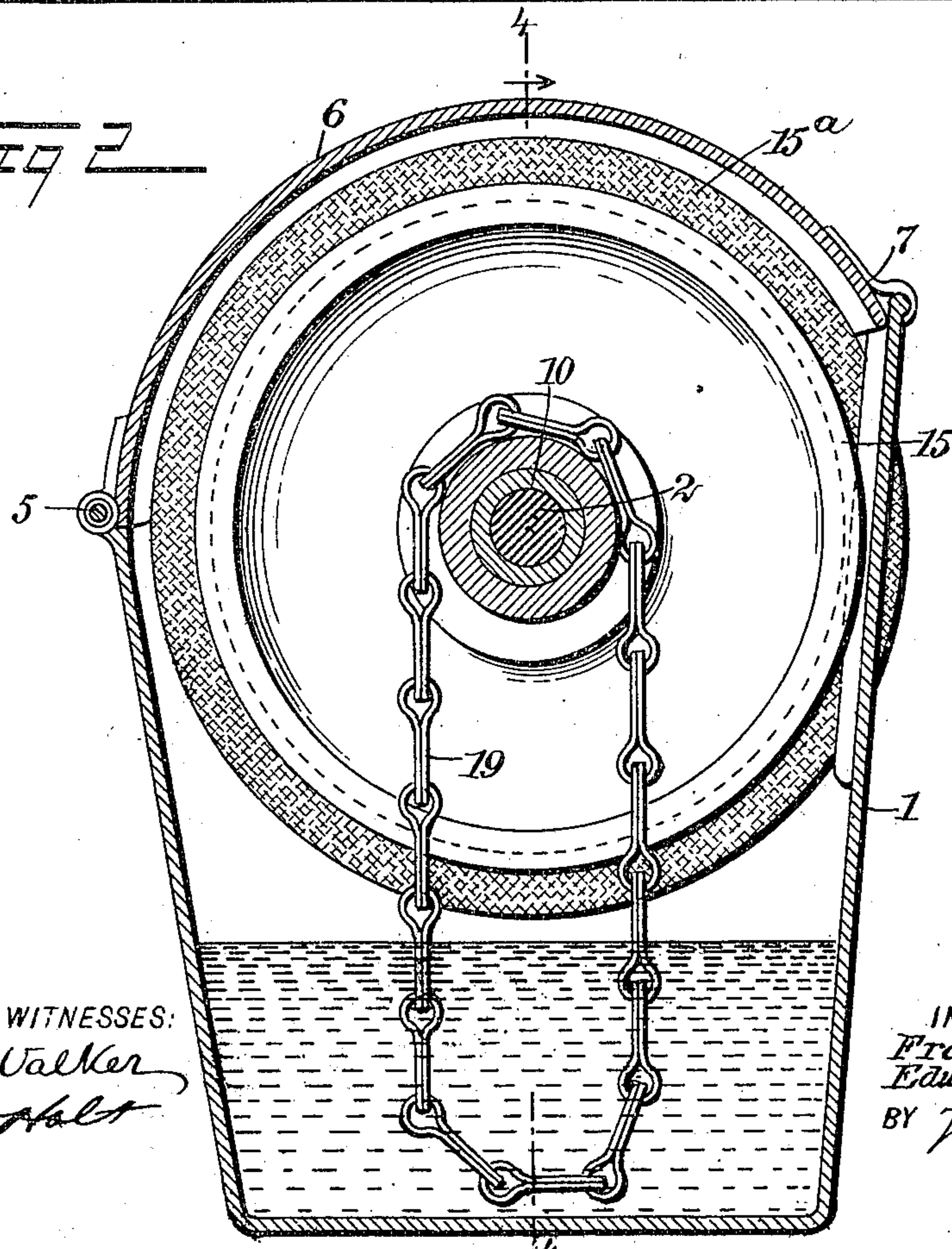


Fig 2



WITNESSES:

H. Walker
17.2.1941

INVENTORS
Frank S. Baird
Edward W. Carroll
BY Mumroe

ATTORNEYS:

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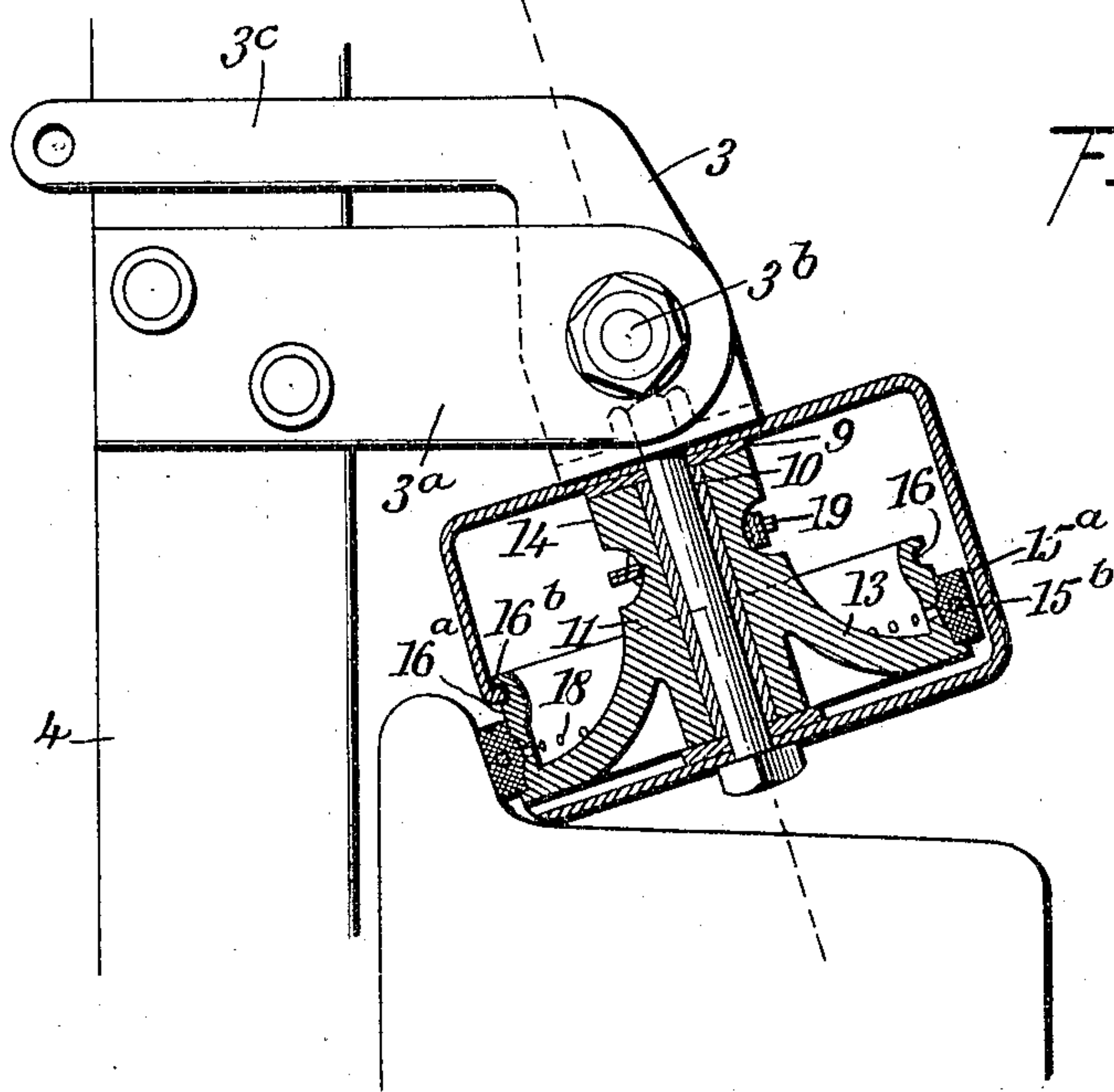


Fig. 3.

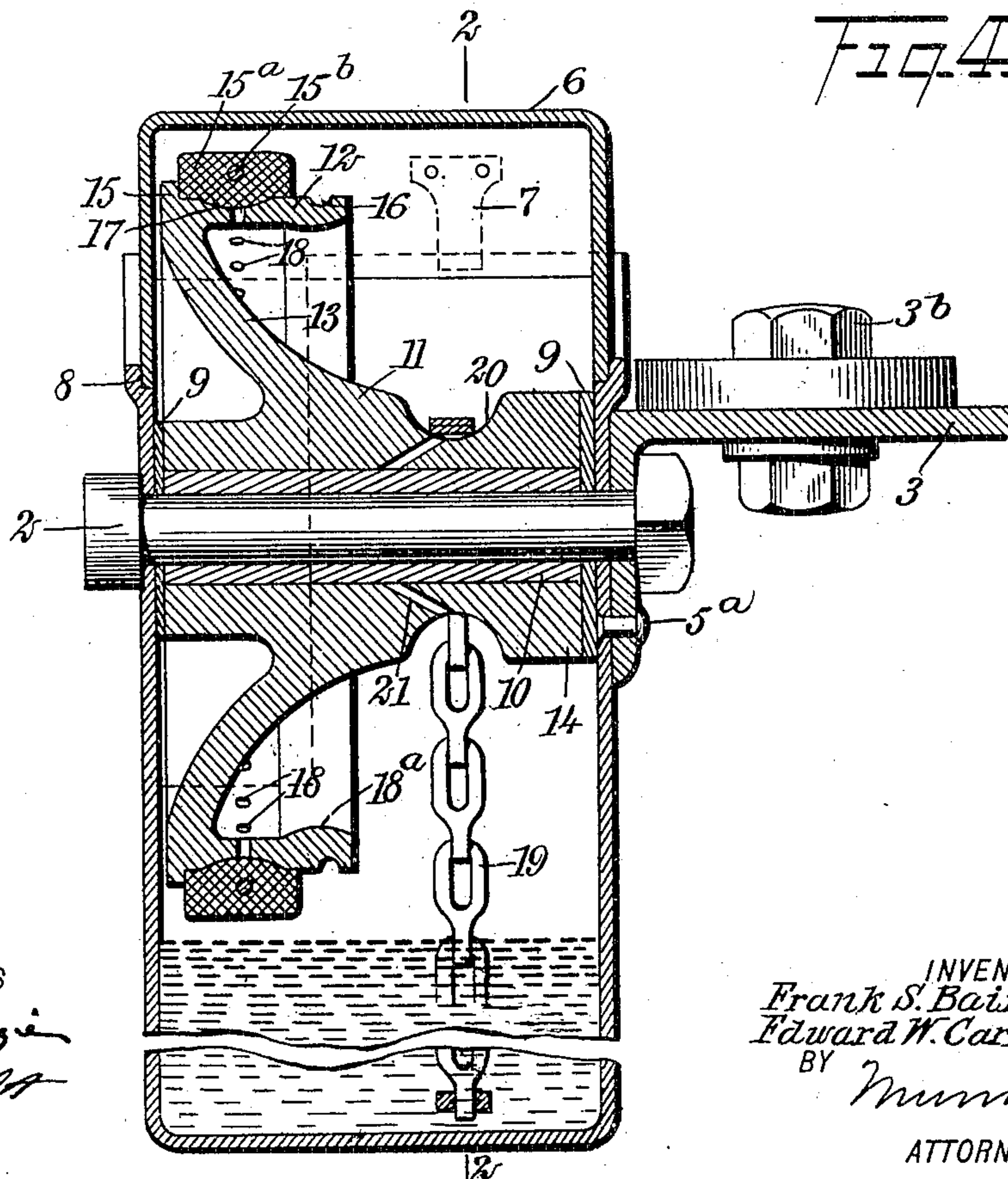


Fig. 4.

WITNESSES
Wm. H. H. H. H.
Wm. H. H. H. H.

INVENTORS
Frank S. Baird
Edward W. Carroll
BY *Mum & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK SIDES BAIRD AND EDWARD WILLIAM CARROLL, OF CONGRESS,
ARIZONA TERRITORY.

WHEEL-FLANGE OILER.

No. 837,774.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed May 2, 1906. Serial No. 314,784.

To all whom it may concern:

Be it known that we, FRANK SIDES BAIRD and EDWARD WILLIAM CARROLL, citizens of the United States, and residents of Congress, in the county of Yavapai and Territory of Arizona, have invented a new and Improved Wheel-Flange Oiler, of which the following is a full, clear, and exact description.

This invention contemplates the production of a device whereby the flanges of car or locomotive wheels may be oiled economically and expeditiously while the car or locomotive is in motion.

It is well known that in rounding curves on street or steam railways considerable friction is developed between the flanges of the car or engine wheels and the rails. This is objectionable for two reasons—first, because of the increased power required to move the car or engine on the curve, and, second, for the reason that the rails and flanges of the wheels are subjected to considerable wear at this point.

The object of this invention is to construct an oiling attachment for the car or engine to overcome the above objections and which may be applied to the flanges of the wheels from the cab or inside of the car as they pass around the curve, and thereby decrease the friction and wear.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a fragmentary view of a car-truck with our improved oiler applied thereto. Fig. 2 is a section on the line 2 2 of Fig. 4. Fig. 3 is a horizontal transverse section through the pivotal bolt of the oiler to more clearly disclose the application of the invention to a car-truck. Fig. 4 is a vertical section on the line 4 4 of Fig. 2.

In carrying out our invention a casing or tank 1, oblong in cross-section and tapering toward its bottom, has secured to one side thereof, by a bolt 2 passing through its center, an angular lever 3 for pivotally attaching it to a frame of a truck 4. This construction of the lever is best shown in Fig. 3, being of

bell-crank shape pivotally mounted on a bracket 3^a by a bolt 3^b, with an arm 3^c passing over the truck-frame 4 and an eye or other means for attaching it to a link for operating the oiler from the inside of a car or engine-cab. The lever 3 is additionally secured to the tank by rivets 5^a, passing through the tank and bracket below the bolt 2. The top edge of the tank is sloped backward and has hinged to the lowest side at 5 a lid or cover 6, formed concentric with the bolt 2 and is held closed at its free end by a catch 7.

As shown in Fig. 4, the upper edge of the tank is slightly offset at 8 to permit the cover 6 to enter the tank and rest upon the shoulder formed by the offset. Mounted on the bolt 2 are washers 9 adjacent to each side of the tank and between which on the bolt 2 a sleeve 10 is engaged for preventing the sides of the tank from being pressed inward when the nut on the bolt is screwed up to the foot of the lever 3. On the sleeve 10, between the washers 9, is journaled a wheel 11, having a rim 12, connected by a flaring web 13, passing to the outer edge thereof, and an extending hub 14, projecting to the opposite side of the tank. By this construction the rim 12 of the wheel is thrown to one side of the casing and the hub extends to the opposite side, where it is provided with means hereinafter described for feeding oil to the under face of the rim.

The rim 12 has a flange 15 at its outer edge, a groove 16 at the inner edge, and an intermediate concave depression 17, into which leads a series of holes 18, passing to the under face of the rim. The position of these holes is such that they will be intermediate of the web 13 and a swelled or beaded portion 18^a at the opposed under edge of the rim. In the concave depression 17 and abutting against the flange 15 is held a wick 15^a by a wire 15^b passing circumferentially through the center of the wick, with its ends entering a hole in the rim. The location of the bolt 2 is such that the wick will protrude at an opening 16^a in the tall side of the tank, and an inturned edge 16^b of the opening will register with the groove 16 to collect the surplus oil gathering

in this groove and conduct it back to the oil-reservoir. A continuous length of chain 19, hanging to the bottom of the tank, passes around a groove 20 in the extending hub 14 for the purpose of carrying oil to this hub, which is centrifugally afterward taken to the rim 12 through the holes 18. This chain also carries oil to the oil-holes 21 in the hub for lubricating the bearing between the sleeve 10 and wheel 11.

In the operation of the attachment it is pivotally mounted to the bracket 3^a by the lever 3, so that when swung on the bolt 3^b by suitable means from the inside of the car or engine-cab the wick 15^a will contact flat against the flange of the wheel at an angle to the tread of the wheel, as shown in Fig. 3, thereby applying the oil to and only at the place required. As the wick contacts with the moving car or engine wheel it is rotated by the frictional engagement, causing the chain 19 to pass about the hub 14 and carry oil from the bottom of the tank to the groove 20. A small part of this oil passes through the oil-holes 21 and keeps the bearing of the lubricating-wheel in an easy-running condition. The remainder is driven by the centrifugal force up the web 13, collecting between the web and the beaded edge 18^a over the holes 18, where the centrifugal force drives it through the holes into the wick 15^a. The wick, which soon becomes saturated with this lubricant, applies it evenly to the flange of the wheel, thereby permitting the latter to pass with ease around a curve, after which the attachment is swung on its pivot to separate the wick and the flange. Should the wick be left pressing against the flange of the car-wheel when the same is stopped, the oil will run from the wick and wheel to the lowest point thereof and back into the oil-reservoir.

It is evident that various changes may be made in the details of construction hereinbefore described without departing from the spirit of our invention, and we consider that we are entitled to such modifications as fall within the scope of the invention as claimed.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of an oil-tank, an oil-applying wheel journaled therein and protruding at one side of the tank, a hinged cover for the tank passing over the wheel, an oil-collecting groove and a flange at the sides of the rim of the wheel, a wick secured by a wire intermediate the flange and groove, oil-feed holes passing through the rim to the wick, a chain passing in a groove about the hub of the oil-applying wheel, for automatically lubricating the journal thereof and feeding oil

to the wick, and a lever for attaching the tank to a car or engine, whereby the oil-applying wheel may be brought into engagement with the flange of the car or engine wheel at an angle to the tread of the wheel when desired.

2. The combination of a lubricating-tank, rotary lubricant-applying means journaled therein, and means for attaching the tank to a car or engine, whereby the lubricant-applying means may be brought into engagement with the flange of the car or engine wheel at its outer face only.

3. The combination of an oil-tank, oil-applying means journaled therein, and means for attaching the tank to a car or engine, whereby the oil-applying means may be brought into engagement with the flange of the car or engine wheel in a substantially transverse direction.

4. The combination of a lubricating-tank, a lubricating-wheel journaled therein, a wick carried by the wheel, and unitary means for lubricating the bearing of the wheel and the wick.

5. The combination of an oil-tank, a revoluble oil-applying wheel journaled therein and protruding at one side of the tank, and means for attaching the tank to a car or engine, whereby the protruding side of the oil-applying wheel may be made to move to and from the flange of the car or engine wheel in a substantially transverse direction.

6. The combination with a tank, an oil-applying wheel journaled therein, a wick passing about the rim of the wheel, and a wire passing through the wick for holding the wick in engagement with the rim.

7. The combination with a tank, an oil-applying wheel journaled therein and protruding at one side of the tank, a wick passing about the rim of the wheel, oil-holes passing through the rim of the wick, an oil-collecting groove in the rim at one side of the wick, and means carried by the tank for collecting the oil from the groove and conducting it into the tank.

8. The combination with a tank, an oil-applying wheel journaled therein and protruding at one side of the tank, a wick passing about the rim of the wheel, oil-holes passing through the rim to the wick, an oil-collecting groove in the rim at one side of the wick, means carried by the tank for collecting the oil from the groove and conducting it into the tank, and a continuous length of chain passing about the hub of the wheel for lubricating the wick about the wheel and the journal thereof.

9. The combination with a tank, an oil-applying wheel journaled therein, a wick passing about the rim of the wheel, oil-holes pass-

ing through the rim to the wick, and a wire passing through the wick for holding it in engagement with the rim.

5 10. A wheel-flange lubricator comprising means for containing a lubricant, means for applying the lubricant to a wheel-flange, and rotary means intermediate the lubricant-applying means and lubricant, for feeding the lubricant to the lubricant-applying means.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FRANK SIDES BAIRD.

EDWARD WILLIAM CARROLL.

Witnesses:

FRED W. WATTS,

P. L. WARREN.