

J. C. NICHOL.
CAR AXLE LUBRICATOR.
APPLICATION FILED JAN. 18, 1908.

917,477.

Patented Apr. 6, 1909.
2 SHEETS—SHEET 1.

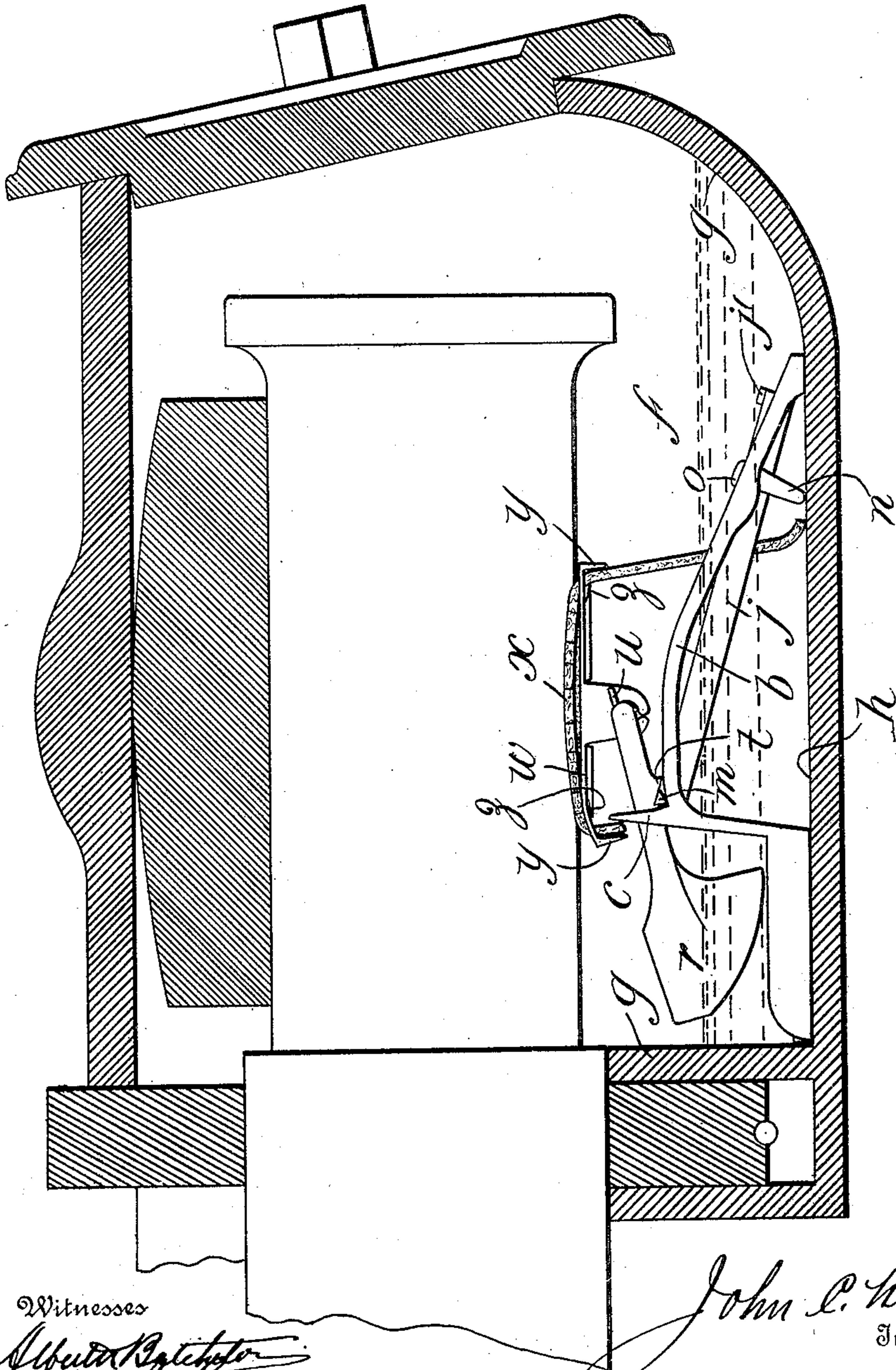


Fig. 1.

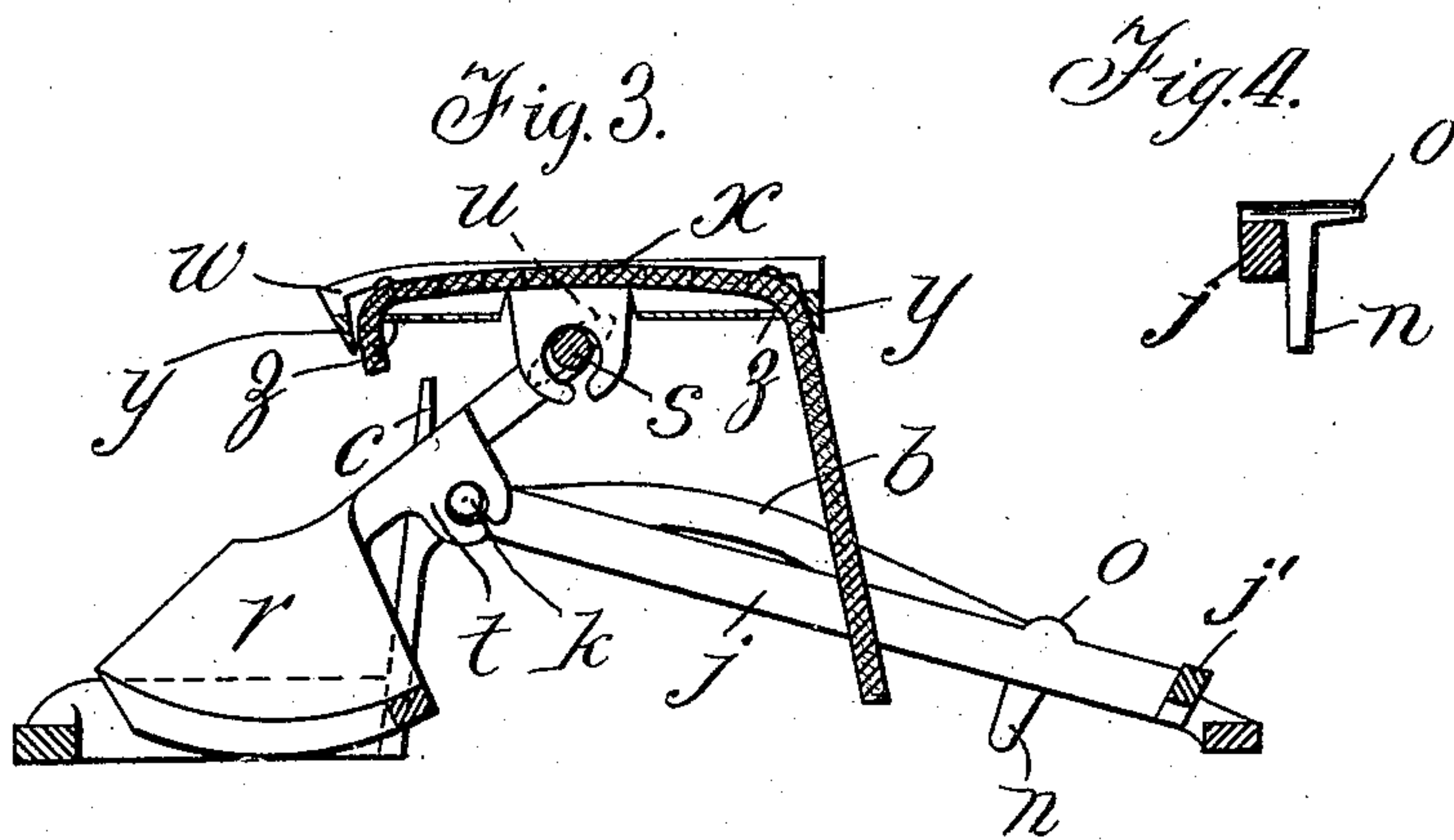
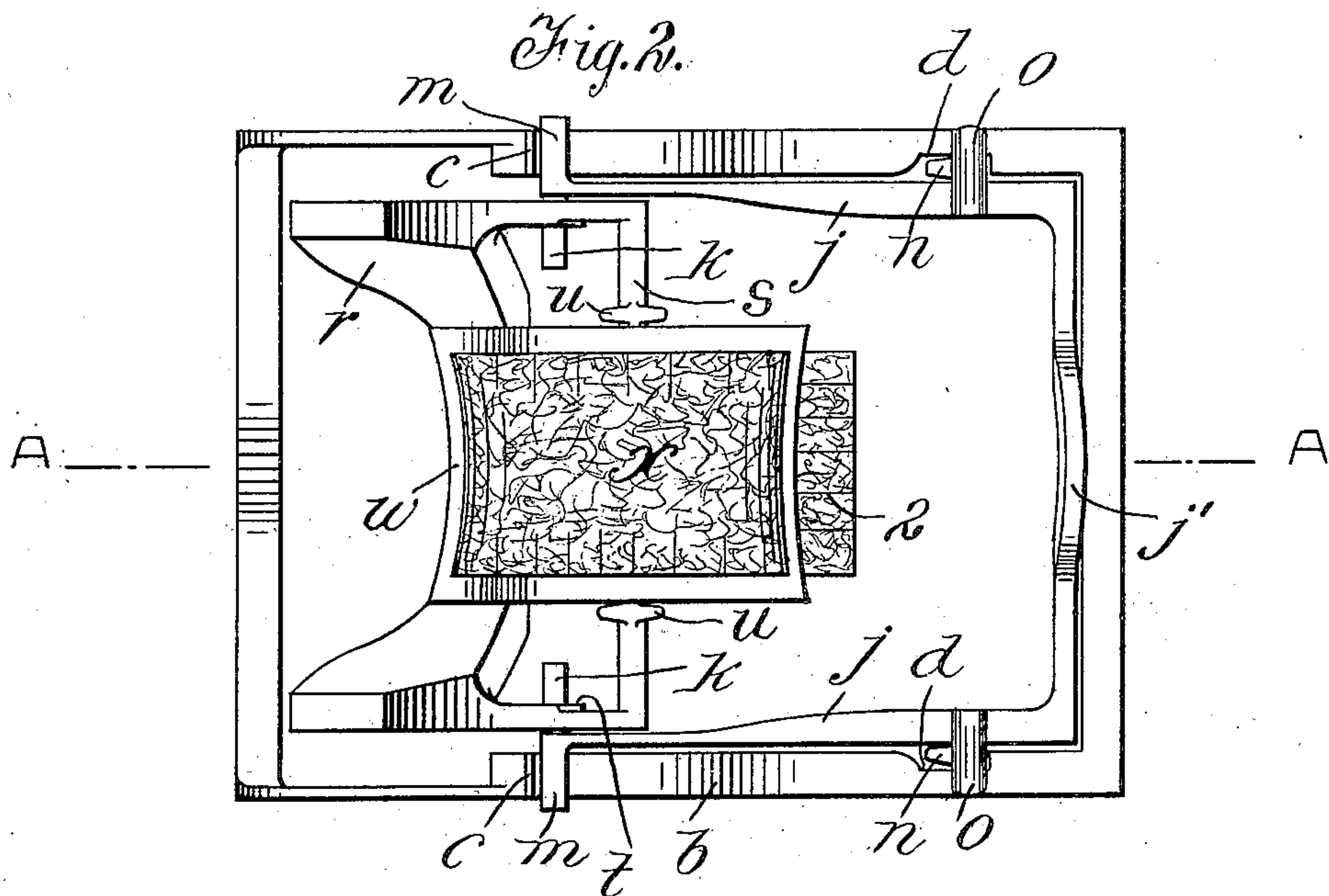
Witnesses
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UNITED STATES PATENT OFFICE.

JOHN CHRISTOPHER NICHOL, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR OF ONE-THIRD
TO WILLIAM JOHN PATERSON, OF TORONTO, CANADA.

CAR-AXLE LUBRICATOR.

No. 917,477.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed January 18, 1908. Serial No. 411,465.

To all whom it may concern:

Be it known that I, JOHN CHRISTOPHER NICHOL, of the city of Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Car-Axle Lubricators; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to the type of car axle lubricators for applying the lubricant by capillary action and it has for its object to provide a lubricator which can be readily introduced into and removed from the axle boxes at present in use, and one which will maintain its proper working position without special construction of the axle box or the use of adjusting devices.

The invention may be said briefly to consist of the combination of parts hereinafter described and pointed out in the claims.

For full comprehension, however of my invention reference must be had to the accompanying drawings forming a part of this specification, in which similar reference characters indicate the same parts, and wherein—

Figure 1 is a longitudinal vertical sectional view of an axle box, with the axle end and my improved lubricator shown therein in elevation; Fig. 2 is a plan view of the lubricator; and Fig. 3 is a longitudinal vertical sectional view thereof taken on line A A, Fig. 2. Fig. 4 is a detail transverse sectional view of one leg of the fulcrum frame illustrating particularly one of the devices for preventing displacement of such frame on the base.

Specifically speaking the base preferably consists of an open frame rectangular in plan view and having its sides curved upwardly as at *b* and presenting a pair of vertical stops *c* and a pair of notches *d*, such base being intended for permanent location in the axle box and its dimensions, in plan, are such that it fits snugly the lines of juncture of the sides *f* and ends *g* of the box with the flat bottom *h* thereof. A removable fulcrum frame *j* rests on this base and it is preferably of U-form and presents a pair of inwardly extending trunnions *k* and outwardly extending lugs *m* of polygonal cross section at the ends of its legs, while a pair of locking devices *n*, *o*, extend outwardly and downwardly from such legs near the opposite ends thereof. The lugs *m* fit tightly against the bases of the stops *c*, the vertical portions *n*

of the locking devices *n*, *o* project into and engage the rear walls of the notches *d*, and the horizontal portions *o* of such devices *n*, *o* rest upon the top of the sides of the base, when the parts are in operative position. This frame presents an upwardly curved portion *j'* to serve as a means whereby it and the shoe with the felt can be withdrawn from the axle-box independently of the base. A gravity member is pivoted upon this removable frame and consists preferably of an open frame, of substantially rectangular form, presenting weighted feet *r*, a cross bar *s*, and a pair of bearings *t* between its ends, such bearings being rotatably fastened upon the trunnions *k*, and the cross bar *s* has a pair of stops *u* cast thereon. This gravity member supports and coacts with a tilting shoe *w* carrying the felt *x* or other medium through which the lubricant is conducted to the axle by capillary action.

The tilting shoe is preferably of rectangular form in plan view and curved transversely concentrically to the axle, the underside thereof being reinforced at its ends by transverse ribs *y* while the body thereof is formed with transverse slots *z* through which the felt is passed, one or both ends of the latter being slit as at 2 and trailing in the lubricant in the bottom of the box. The dimensions of the base being commensurate with the bottom of the box localize the operating parts a sufficient distance from the sides and ends thereof to effectively prevent the weighted feet or shoes in their operation striking or being interfered with by any part of the interior of the box.

Operation: The weighted feet *r* are normally supported free of the floor of the box by the depression of the shoe as it bears upon the underside of the axle, and they thus cause the felt carried by the shoe *w* to bear yieldingly upon the axle and apply thereto the lubricant picked up by capillary action, and owing to the curvature of the shoe and the pivotal relation between the same and the gravity frame and the base, such shoe will automatically adapt itself to any variations, horizontal, vertical or diagonal, in the angular position of the axle relatively to the axle box, while the working parts can be readily removed from the base in the box in their entirety for inspection or cleansing or the renewal of the felt, and returned to place at will.

What I claim is as follows:—

1. The combination with an axle-box, of a lubricator comprising a base, a removable member supported by the base, a rocker frame fulcrumed upon the removable mem-
5 ber and having one end weighted, and a shoe pivotally secured to the opposite end of the rocker frame.
2. The combination with an axle-box, of a
10 lubricator comprising a base resting upon the bottom of the box and consisting of an open rectangular frame having its sides curved upwardly and presenting stops and notches, a member removably supported by
15 the base and presenting lugs adapted to en-

gage the notches, a pair of trunnions upon such member; a rocker frame fulcrumed upon the trunnions and having one end weighted and a transverse bar carried by the
20 opposite end thereof; and a shoe pivotally secured to the transverse bar of the rocker frame and adapted to carry a lubricant conveying medium.

In testimony whereof, I have signed my
25 name to this specification, in the presence of two subscribing witnesses.

JOHN CHRISTOPHER NICHOL.

Witnesses:

WILLIAM P. McFEAT.

FRED J. SEARS.