

(No Model.)

2 Sheets—Sheet 1.

T. F. N. FINCH.
CAR AXLE LUBRICATOR.

No. 395,887.

Patented Jan. 8, 1889.

FIG. 1.

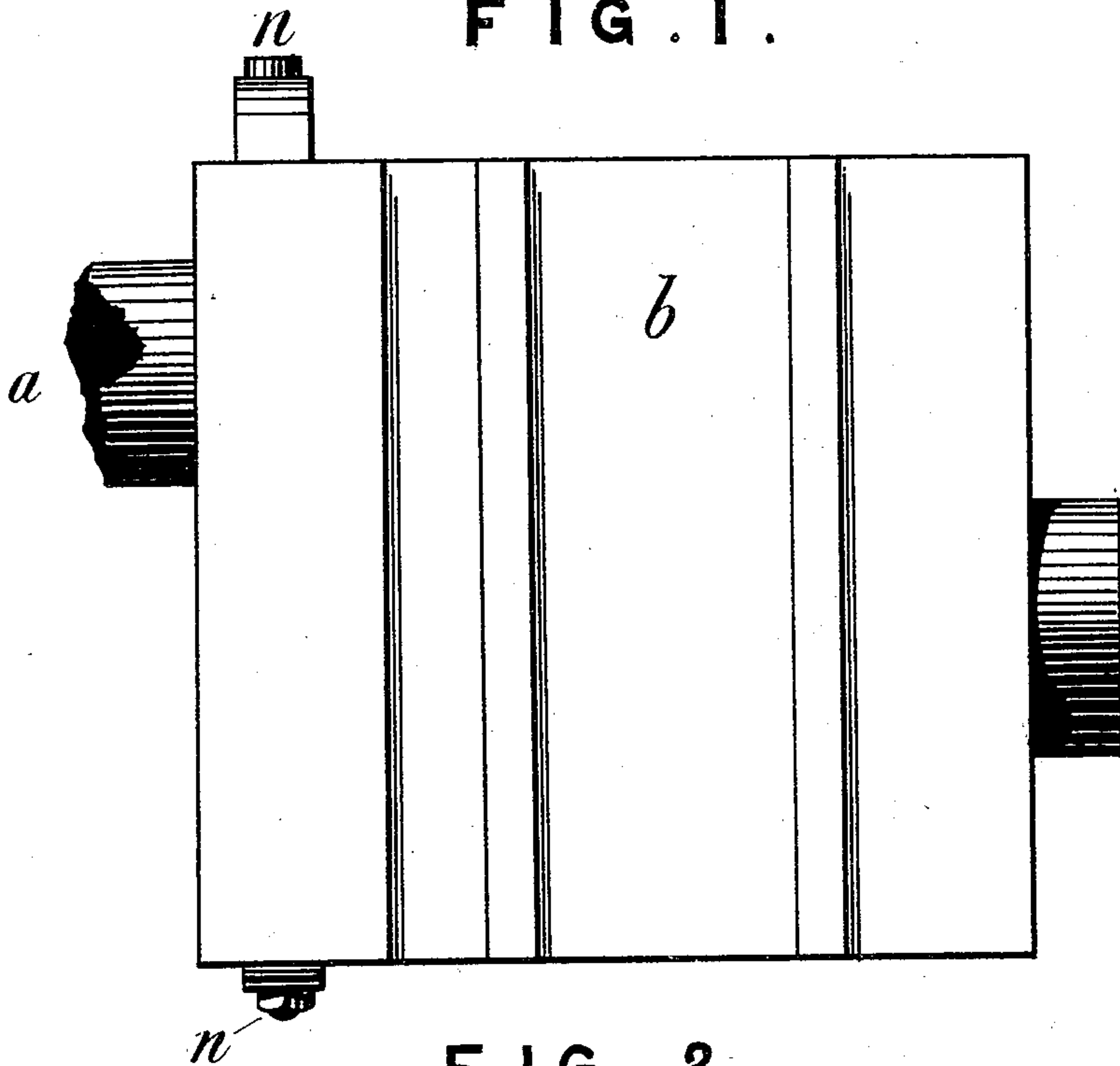
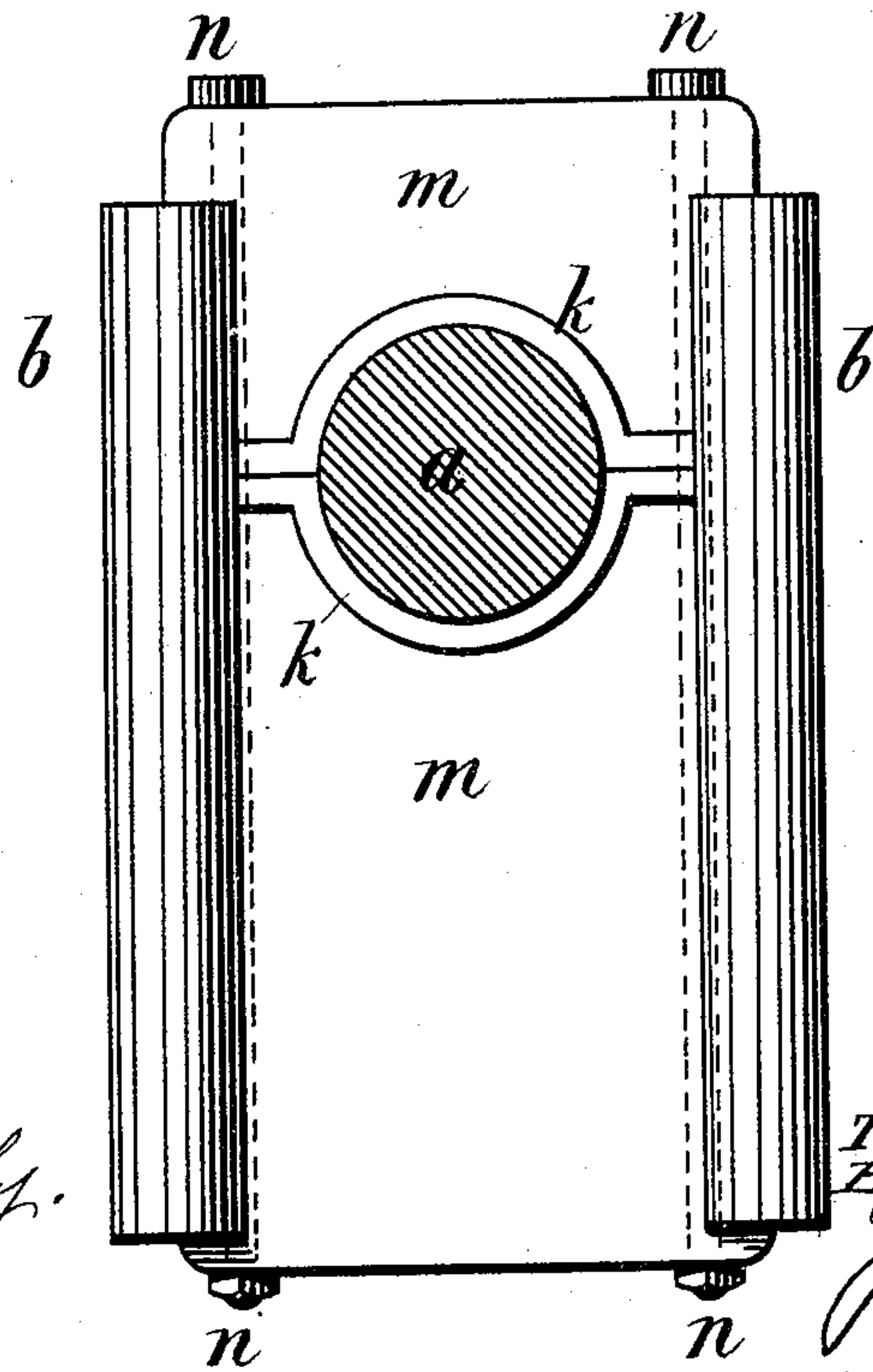


FIG. 2.



Witnesses.

Dennis Lumbly.
Robert Everett.

Inventor.

Thomas F. N. Finch.

By

James L. Norris.
Atty.

(No Model.)

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FIG. 3.

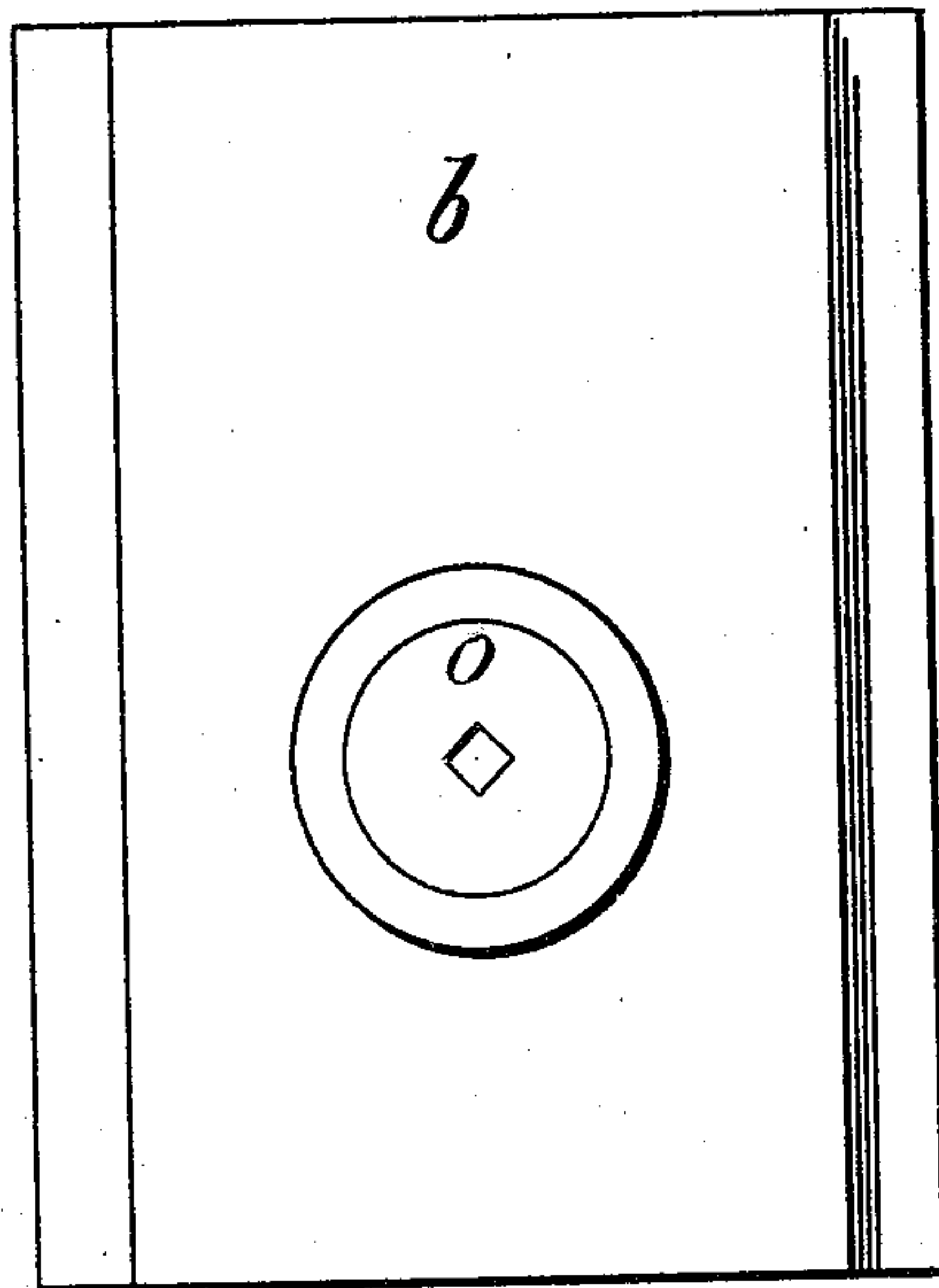
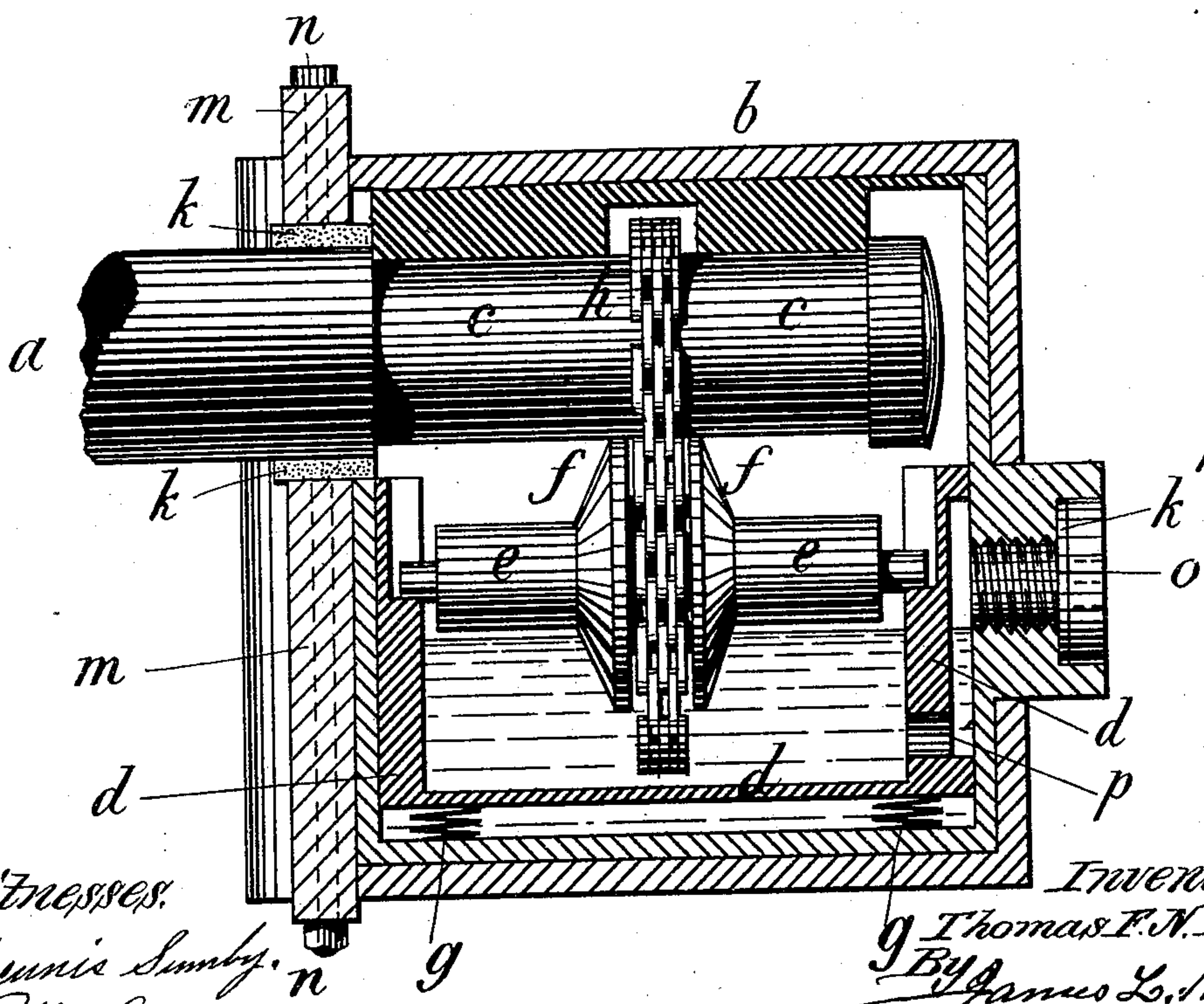


FIG. 4.



Witnesses:

Dennis Lumbly.
Phil Garrett.

Inventor:

g Thomas F. N. Finch,
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

THOMAS FREEMAN NOTT FINCH, OF WORCESTER, COUNTY OF WORCESTER,
ENGLAND.

CAR-AXLE LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 395,887, dated January 8, 1889.

Application filed October 9, 1888. Serial No. 287,615. (No model.) Patented in England November 7, 1887, No. 15,147.

To all whom it may concern:

Be it known that I, THOMAS FREEMAN NOTT FINCH, a subject of the Queen of Great Britain, residing at Sidbury Works, Worcester, in the county of Worcester, England, button-manufacturer, have invented certain new and useful Improvements in Appliances for Lubricating Railway and other Axles and Journals, (for which I have obtained a patent in Great Britain, No. 15,147, dated November 7, 1887,) of which the following is a specification.

The object of my invention is to effect improvements in appliances for lubricating railway, tram car, and other axles and journals; and this specification describes the method of applying the same to railway and tram car axles, from which description its application to other kinds of axles and journals will be readily understood.

A constant supply of oil or other lubricant is applied to the journal while revolving by means of a wheel or roller fitted in a reservoir or vessel under the journal. The wheel or roller is pressed upward and retained in contact with the journal by means of spiral or other springs in such a manner as to insure such contact. The lubricant is supplied to the box through a hole formed in the external wall of the axle-box. The wheel or roller may be made of any suitable material, and if necessary may be covered with felt or any other suitable substance, in order to carry up to the journal a larger supply of the lubricant than would be supplied by the bare wheel or roller. The wheel or roller is fitted with a spindle running through its longitudinal center, the two ends of such spindle entering slots or other suitable provisions in the walls of the axle-box, and sustained or pressed upward by the springs, or the wheel or roller may be formed with trunnions for the same purpose. The wheel or roller revolves wholly or partially in the oil or other lubricant and in its revolutions carries up a constant supply of the same to the axle or journal, such supply being continued so long as the roller itself is in contact with such lubricant; and in order that my said invention may be particularly described and ascertained reference is hereby made to the accompanying draw-

ings, in which similar letters of reference indicate corresponding parts.

Figure 1 is a side view of a railway axle-box. Fig. 2 is an inside end view. Fig. 3 is an outside end view, and Fig. 4 is a sectional elevation, of the same, showing the application of my invention to railway and tram car axles.

a is the axle; *b*, the axle-box; *c*, the axle-arm.

d is an inner box fitted inside the box *b*, and capable of sliding vertically therein. This inner box is fitted with an axle, *e*, carrying a grooved wheel, *f*. Springs *g g* are fitted under the box *d*, which press it upward, and thereby keep the wheel *f* in contact with the axle *c*.

h is a flexible chain or band of leather or other suitable material formed in links or sections in a similar manner to some kinds of driving-bands for machinery. In some cases I prefer to use a metal chain at *h* in combination with the wheel *f*.

k is a leather collar fitted round the axle and held by the sliding plates *m m*, which plates are held together by the screws and bolts *n n*.

o is a screw-plug, which may be unscrewed with a square key for inserting the oil.

k' is a leather washer.

The oil enters the box *d* by the hole *p* and the position of the plug *o* is adapted to the height of the oil in the box.

The wheel *f* is caused to rotate by its contact with the axle *c*, and being partly immersed in oil it carries oil upward to the axle *c*. The strap *h* also carries oil upward to the axle *c*, with which it rotates.

The grooved wheel *f* and flexible chain *h* act in concert to efficiently supply the lubricant to the under and upper sides of the axle by reason of the grooved wheel revolving in superficial contact with the under side of the axle and the chain rotating with the wheel in contact with the uppermost portions of the axle. In these respects my invention differs from those axle-boxes having a spring-pressed roller alone rotating in contact with the axle, and from those axle-boxes having a traveling spring-chain passing over the axle and under a roller mounted in a frame carrying a non-

rotating bearing-block that is pressed upon the axle by the spring-chain. I do not, therefore, broadly claim the wheel, nor do I broadly claim a spring-chain passing over the axle;
5 but

What I do claim as my invention is—

The combination of the axle-box *b*, the internal oil-carrying box, *d*, having the side oil-inlet opening, *p*, and carrying a loosely-journaled grooved wheel, *f*, revolving in superficial contact with the under side of the axle to supply the same with lubricant, the flexible chain *h*, passing around the grooved part of the wheel and over the axle to supply the
10 uppermost portions of the latter with lubri-

cant, and springs *g*, pressing the internal box upward, all substantially as shown and described.

In testimony whereof I have hereunto set my hand this 11th day of September, 1888.

THOMAS FREEMAN NOTT FINCH.

Witnesses:

FRED. WADELY,
30 Fort Royal Hill, Worcester, Clerk to Mr.
J. H. Hooper, Solicitor and Notary, Worcester.

ARTHUR C. DERRETT,
No. 11 Sandys Rd., Worcester, Clerk to the
said Mr. J. H. Hooper.