

J. H. CALKIN.
Axle-Lubricator.

No. 35,137

Patented May 6, 1862.

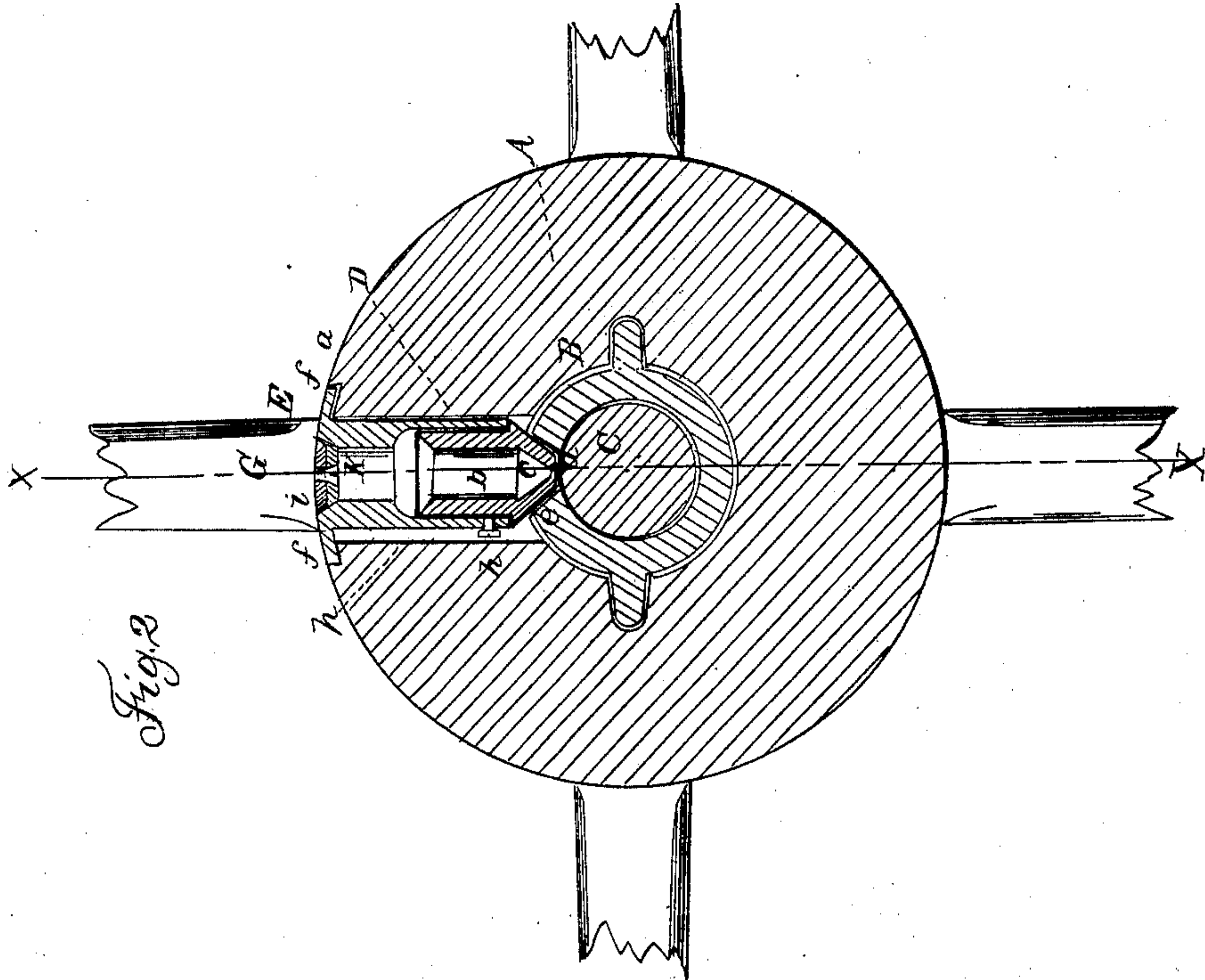


Fig. 2

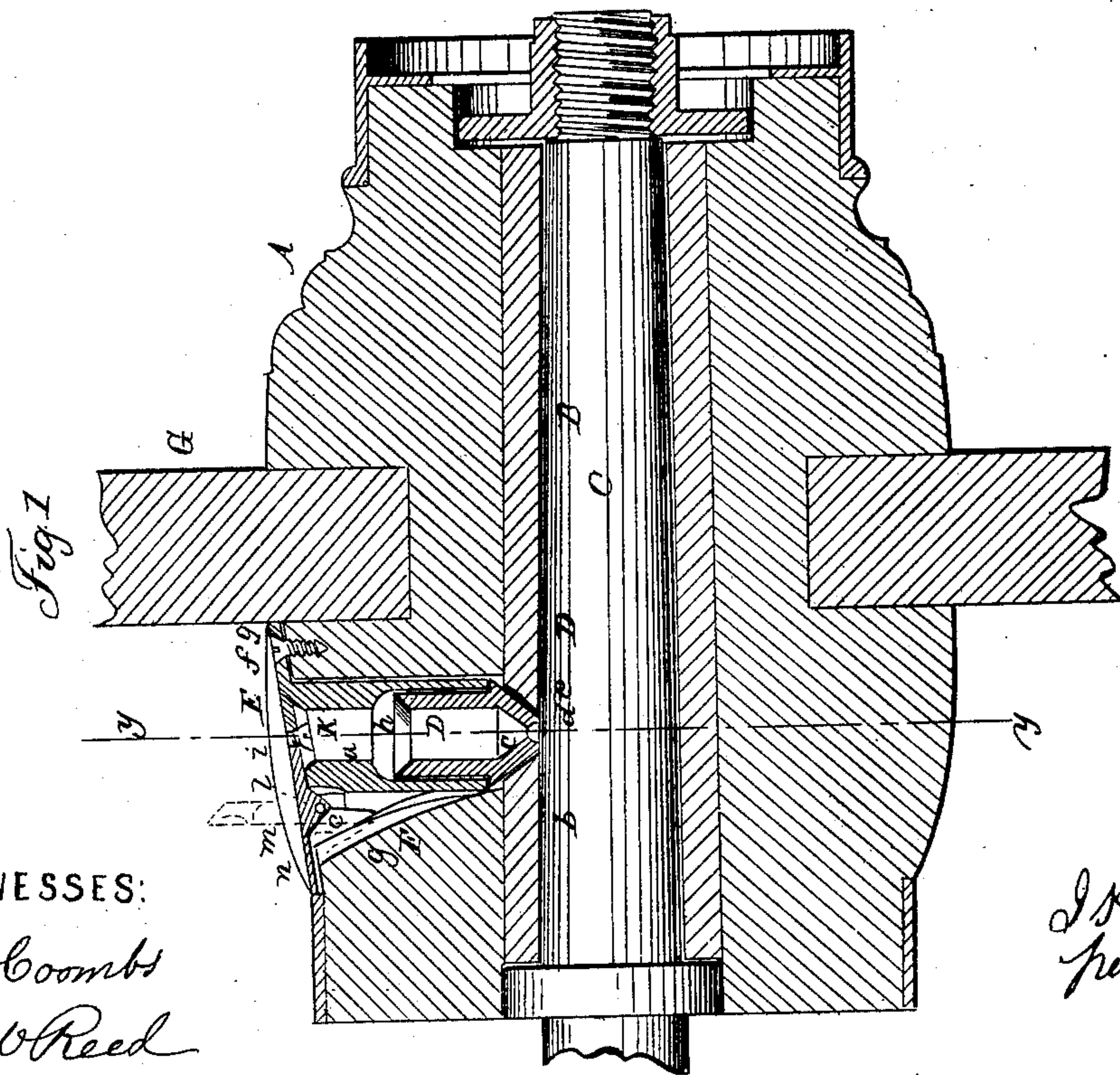


Fig. 1

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN H. CALKIN, OF TROY, PENNSYLVANIA.

IMPROVEMENT IN LUBRICATING AXLES OF WHEELS.

Specification forming part of Letters Patent No. 35,137, dated May 6, 1862.

To all whom it may concern:

Be it known that I, JOHN H. CALKIN, of Troy, in the county of Bradford and State of Pennsylvania, have invented a new and useful Improvement in Lubricating the Axles of Wheel-Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section of a hub attached to its axle and having my invention applied to it. *xx*, Fig. 2, indicate the plane of section; Fig. 2, a transverse section of the same, taken in the line *yy*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain an oiling or lubricating device which will be capable of being so adjusted that it can be applied to hubs of different sizes or diameters and operate equally as well as if made for hubs of a specific size only, and admit of the axle being lubricated with the hub attached to it, and be also capable of being perfectly protected from dust, so that none can come in contact with the oil and be conveyed by it to the axle.

The invention consists in the employment or use of a tube formed of two parts and so arranged that one part may fit within the other, and in using, in connection with said tube, a cap or cover so arranged and applied as when closed to effectually exclude dust from the tube and also confine the oil therein, and at the same time admit of being readily opened when it is necessary to supply the tube with oil or other lubricating material.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a hub, B the metal box secured therein in the usual or in any proper way, and C the axle on which the hub is secured. These parts may be constructed in the ordinary way, and therefore do not require a minute description.

D represents a metallic tube, which is formed of two parts, *a b*, the part *b* being smaller than *a*, so that it may slide within it, as shown in both figures. The inner part of *b* is of inverted conical form, as shown at *c*, and has a

small hole, *d*, at its end to admit of the escape of oil from D. The conical part *c* of *b* is fitted in a conical hole, *e*, in the box B, the inner part of *c* just clearing the axle C. By this arrangement the inner part of the tube is firmly retained in position, and the upper part of the tube is held in position by means of a flange, *f*, on the upper part of *a*, said flange being let in the hub so as to be flush with its external surface. Screws *g* pass through this flange into the hub. (See Fig. 1.) The part *b* of the tube is secured in *a* at any desired point by means of a set-screw, *h*. (Shown in Fig. 2.) By having the tube D thus formed of two parts, *a b*, it will be seen that the tube may be adjusted to suit hubs of different diameters, as the part *b* may be secured at a greater or less distance in *a*.

E represents a cap, which is formed of a circular plate, *i*, having a beveled edge, so as to fit snugly in the upper end, *j*, of the part *a* of the tube D, the side of the upper end or orifice, *j*, of *a* being also of beveled form corresponding to that of *i*. The under side of *i* also has a piece of leather or cork, *k*, attached to it to serve as a packing and prevent leakage. The plate *i* has a tang, *l*, connected to it, which is simply a straight bar secured to the under side of the flange *f* by a fulcrum-pin, *m*, as shown in Fig. 1. The outer end of the tang *l* is beveled at *n* in Fig. 1, so as to be acted upon by a spring, F, which is attached longitudinally to the outer side of the part *a* of the tube D. The spring F has its outer end provided with a V-shaped projection, *o*, for the beveled end *n* of the tang *l* to bear against. The spring F thus arranged will keep the cap E in both an open and closed state. When the cap is closed, the upper surface of *o* bears against the outer end of *n*, as shown in black outline and yellow tint in Fig. 1, and when the cap is open the lower side of *o* bears against the outer surface of the tang *l* at its outer end, as shown in red outline in Fig. 1.

The hub A has a hole, *p*, made radially in it just behind a spoke, G, to receive tube D, and a mortise or slot, *q*, is cut in the hub adjoining pole *p* to receive the spring F and tang *l*, as shown clearly in Fig. 1. The spring F thus arranged and applied to the tang *l* of the cap E prevents the latter from casually

opening and closing, and the cap may, when necessary, be readily opened by applying the thumb-nail to it and forcing it upward. The spring and cap are also connected to the tube, so that there are no detached parts liable to get lost or mislaid.

The tube D is filled with oil or other suitable lubricating material, which escapes through the hole *d* of the part *c* of *b*, and keeps the axle in a properly-lubricated state.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The oil-tube D, formed of two parts, *a b*, arranged substantially as shown, to admit of being adjusted to suit hubs of different diameters or sizes, as set forth.

2. In combination with the tube D, the cap E and spring F, constructed and applied to the tube, substantially as and for the purpose specified.

JOHN H. CALKIN.

Witnesses:

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P. R. McKEAN.