

(No Model.)

O. P. JERVIS.
SELF REGULATING OIL BOX.

No. 507,734.

Patented Oct. 31, 1893.

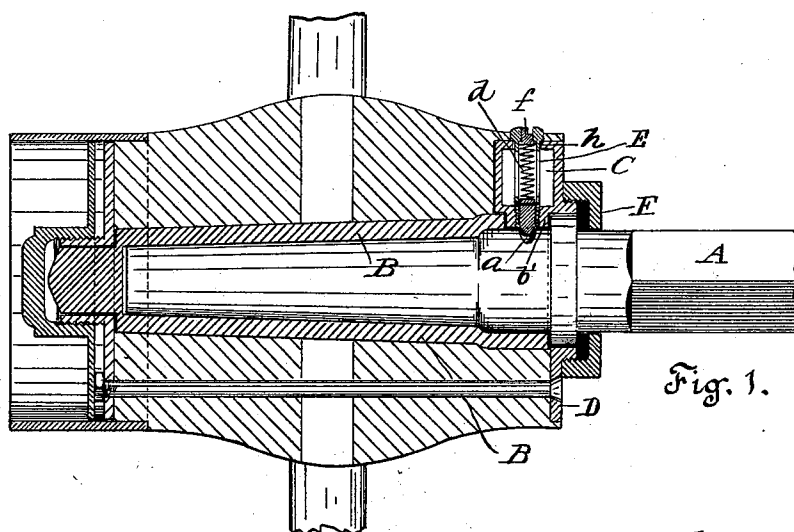


Fig. 1.

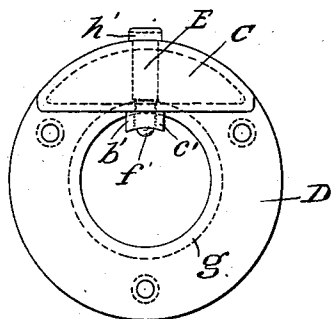


Fig. 2.

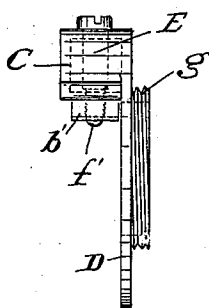


Fig. 3.

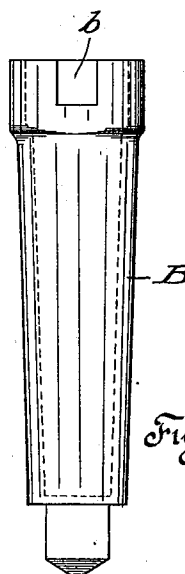


Fig. 4.

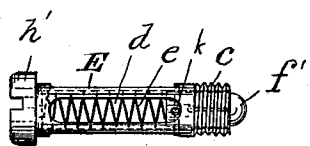


Fig. 5.

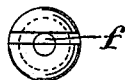


Fig. 6.



Fig. 7.

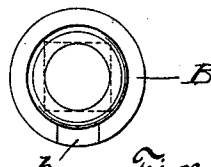


Fig. 8.

Witnesses

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UNITED STATES PATENT OFFICE.

OLIVER P. JERVIS, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO
THOMAS MACKENZIE AND COSMO T. MACKENZIE, OF SAME PLACE.

SELF-REGULATING OIL-BOX.

SPECIFICATION forming part of Letters Patent No. 507,734, dated October 31, 1893.

Application filed April 15, 1893. Serial No. 470,562. (No model.)

To all whom it may concern:

Be it known that I, OLIVER P. JERVIS, a citizen of the United States, residing in Baltimore city, in the State of Maryland, have invented
5 a new and useful Improvement in Self-Regulating Oil-Boxes, of which the following is a specification.

Figure 1. shows a longitudinal section of a wheel hub and represents the oil-box and its
10 relation to the axle-arm. Fig. 2. is the inside view of a plate which carries the oil-box and is fastened upon the rear end of the hub of a wheel. Fig. 3. is a side view of the same plate, showing the oil-box with pin through the
15 same. Fig. 4. is a view of the axle-box with square hole cut in the shoulder through which the pin from oil-box protrudes. Fig. 5. is a view of the screw pin which passes through the oil-box. Fig. 6. is an end view of the axle-
20 box. Fig. 7. is a sectional view of the top of pin showing the small plug which closes the orifice through which the oil is poured into the oil-box. Fig. 8. is a view of the top of the pin.

25 A designates the axle into which upon one side the small cross-groove, *a*, is cut.

B, designates the axle-box secured in the wheel-hub in the usual manner; this box has at the large end a notch or hole, *b*, to receive
30 the feed end, *b'*, of the oil-box, C. An annular plate, D, has the oil-box, C, attached and said plate is secured to the hub.

The oil-box has its feed-opening immediately adjacent to the axle. This box is provided with a pin E which passes into the box
35 freely through outer hole, *h*, and is there held by the threads, *c*, on the end of the pin which fit into similar threads in the inner hole *c'* in the oil-box. The head, *h'*, of the pin covers
40 and closes the outer hole, *h*. This pin is hollow and has side slots, *d*; in the center of the pin is a spiral (wire) spring, *e*, holding in place a small movable plug, *f*, which fits into the head and closes a filling orifice through which
45 the oil is poured into the oil-box, as well as

pushing out the feed-plug, *f'*, whenever in the revolution of the wheel the said plug, *f'*, reaches the cross-groove *a* in the axle, and carrying with it a small quantity of the oil which
50 surrounds it. The feed plug has in its side a small cup or hollow *k* which carries the oil; when the plug is pushed up oil fills this cup or hollow *k* and when the spring forces the plug down into the cross-groove the oil is carried down and thus reaches the axle. The
55 annular plate, D, has a circular flange, *g*, which is screw-threaded, and onto which the nut, F, is screwed.

This oil-box, while shown applied to the wheel fastener and axle-box heretofore patented to me can also be used upon other
60 wheels of different construction.

Having described my invention, I claim—

1. The combination of an axle provided with a cross-groove; a wheel having an axle-box
65 provided at its large end with a notch or hole; and an oil-box secured to the wheel-hub and having its feed-end fitting in the said notch or hole, and a spring-seated plug closing the feed-end of the oil-box and co-acting with the
70 cross-groove in the axle.

2. The combination of an axle having a suitable groove; a wheel-hub; an oil-box secured to the wheel-hub with its feed-opening adjacent to the axle; and a spring-seated plug
75 closing the said feed-opening.

3. The combination of a wheel-hub; an oil-box secured to the wheel-hub and having an outer hole, *h*, and an inner hole, *c'*, a hollow
80 pin having a head, *h'*, which closes the said outer hole and a screw-threaded end fitting in the said inner hole and said pin provided with side-openings; a movable feed plug; and a spring to keep the plug normally projected.

OLIVER P. JERVIS.

Witnesses:

S. MAGRUDER TUBMAN,
ROBERT SIMPSON.