



(No Model.)

2 Sheets—Sheet 2.

P. SWEENEY.

CAR AXLE BOX.

No. 270,262.

Patented Jan. 9, 1883.

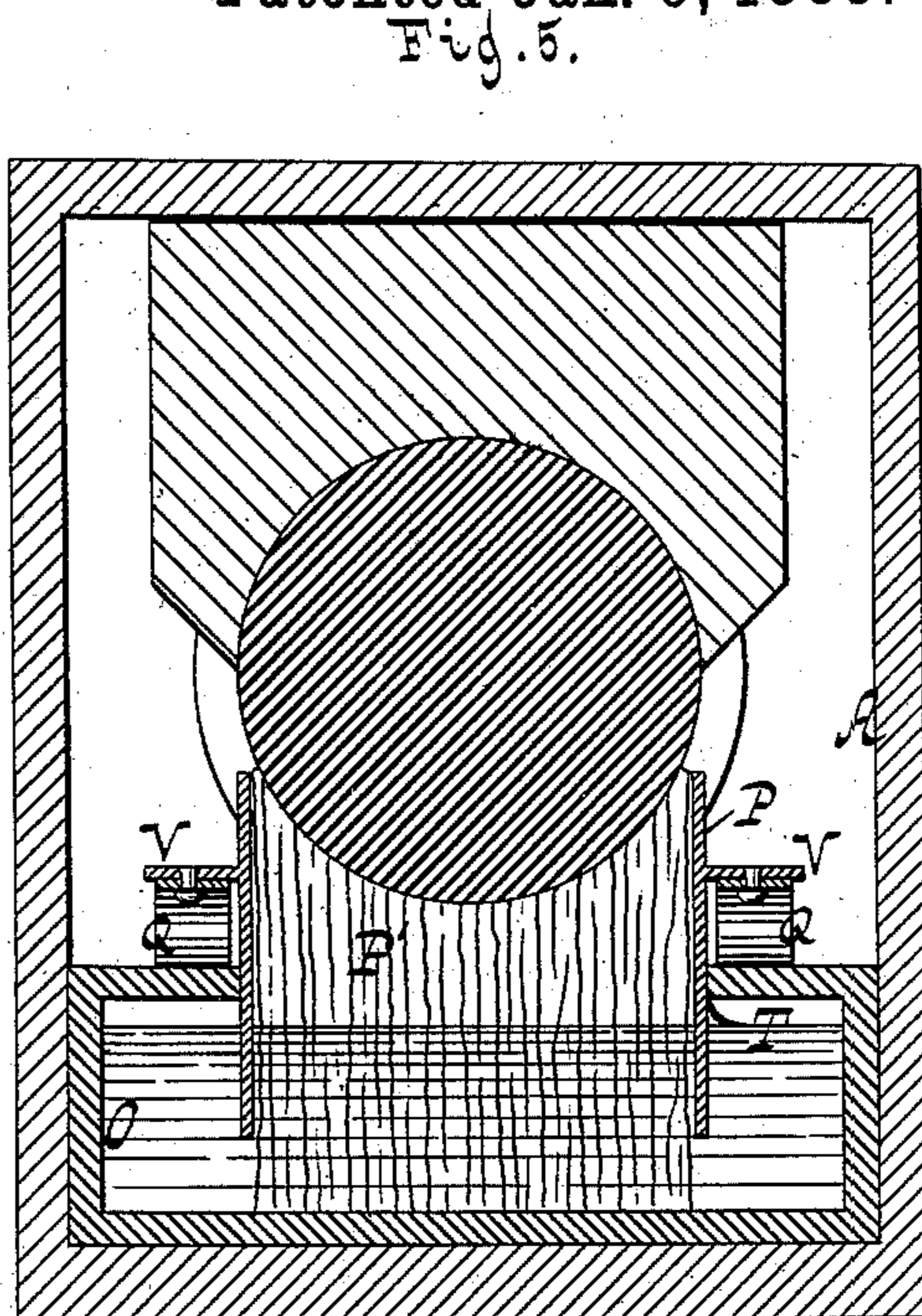
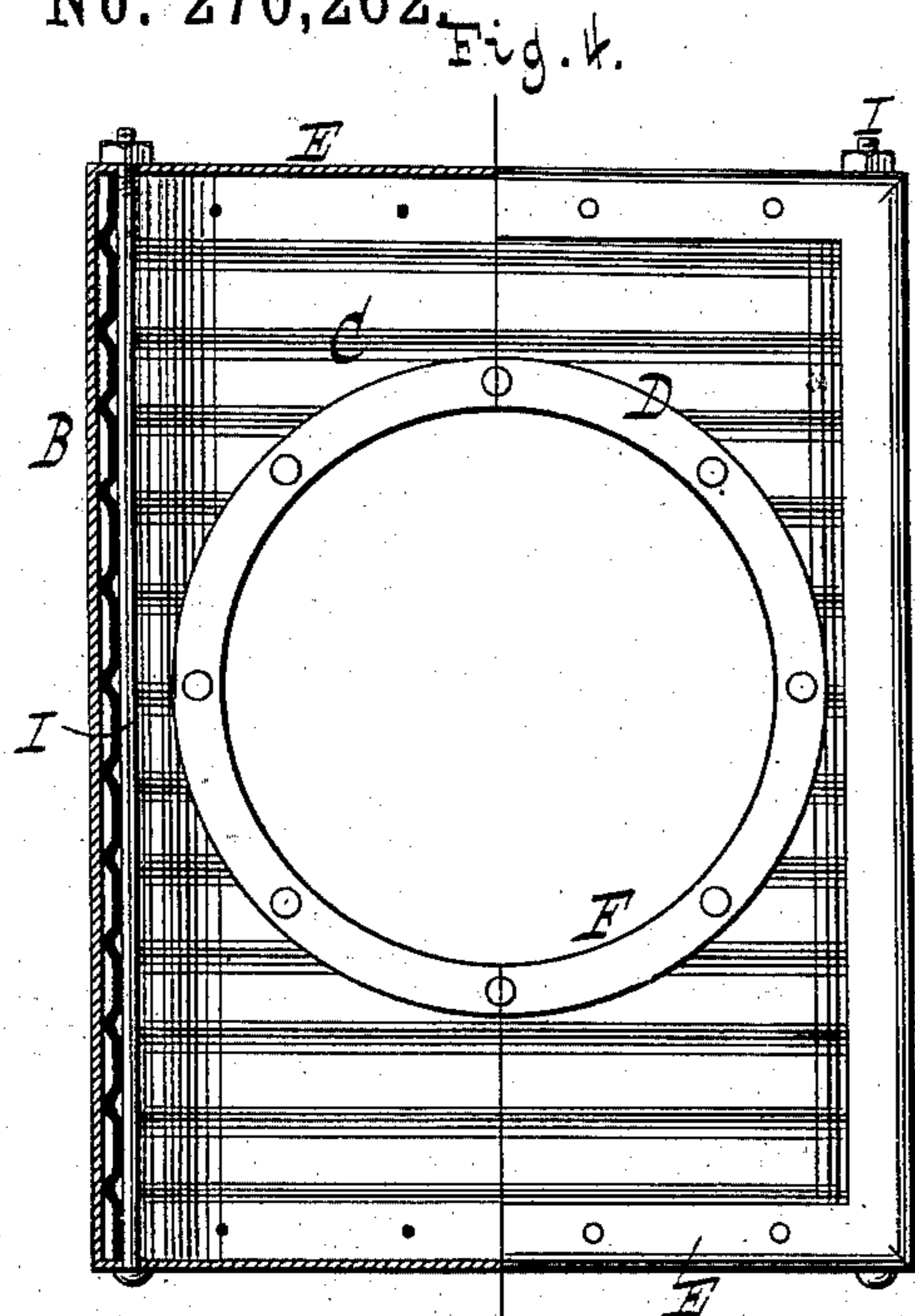


Fig. 6.

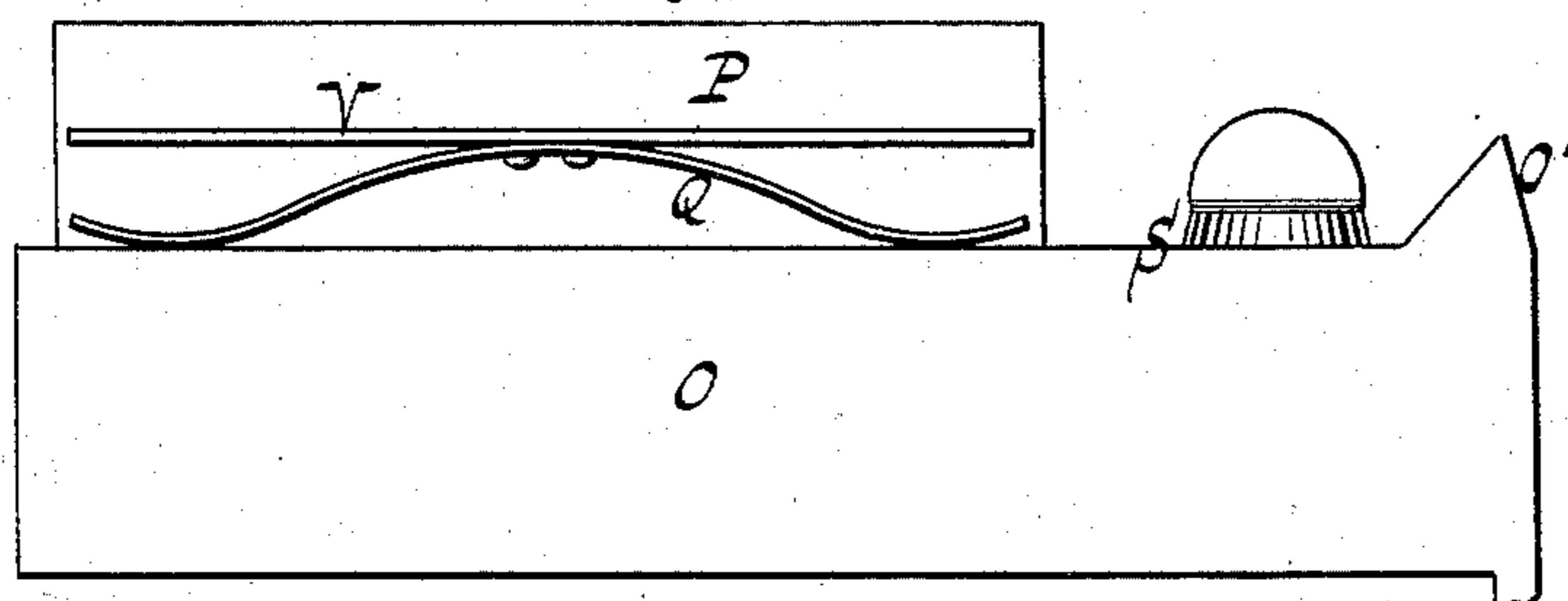
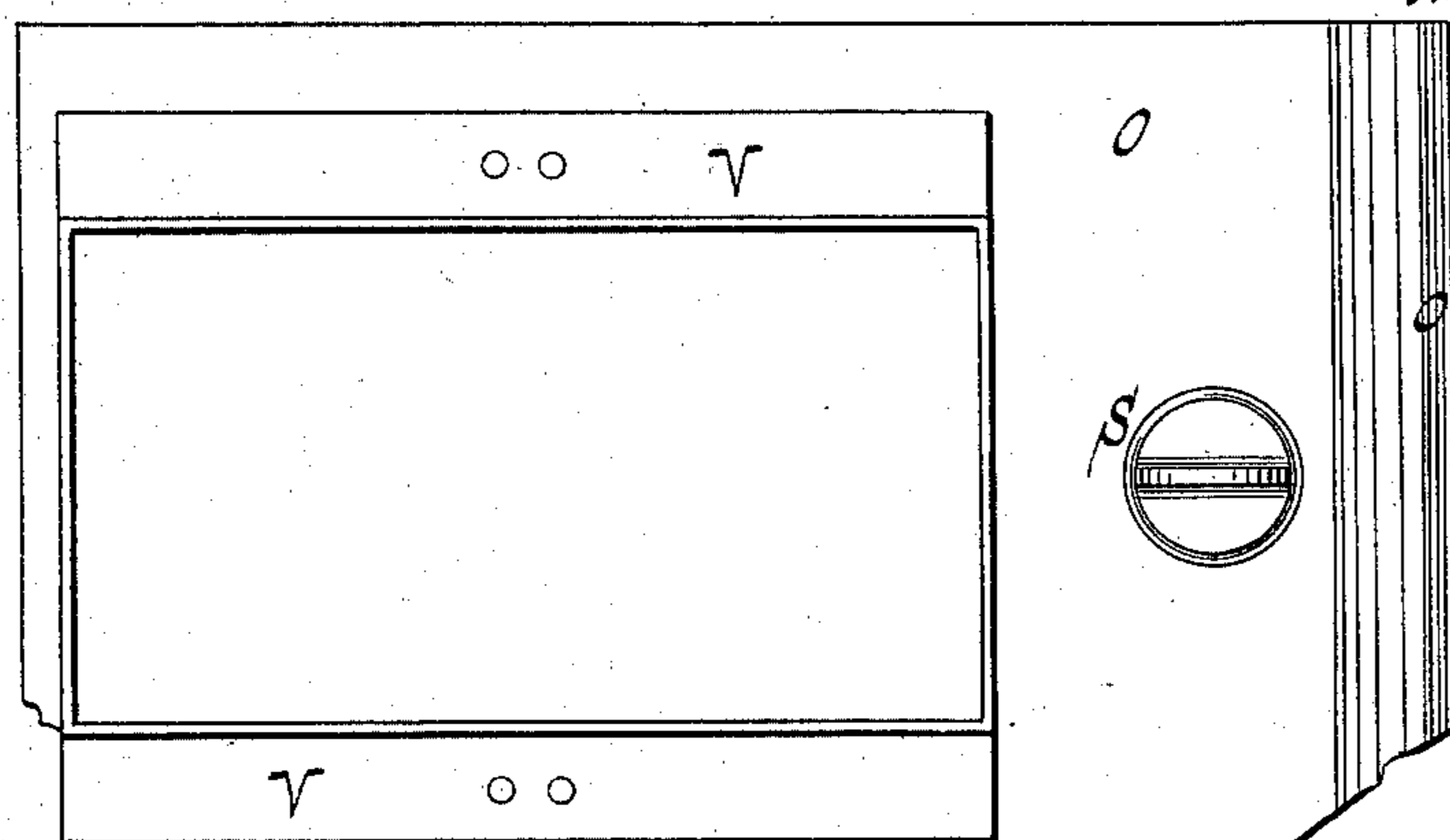


Fig. 7.



WITNESSES:

*Chas. Wahlers.*

*William Miller*

INVENTOR

*Peter Sweeney*

BY

*Van Santvoord & Hauff*

ATTORNEY

# UNITED STATES PATENT OFFICE.

PETER SWEENEY, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO  
LEMUEL MORGAN, OF SAME PLACE.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 270,262, dated January 9, 1883.

Application filed May 10, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, PETER SWEENEY, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Car-Axle Boxes, of which the following is a specification.

This invention relates to improvements in that class of car-axle boxes which are provided at their rear open ends with attached flexible diaphragms having central orifices for the passage of the journals, said diaphragms permitting ordinary movements of the axles, but preventing the entrance of dust into the boxes.

The objects of my invention are to provide a frame with an attached flexible and expansible diaphragm, which frame can be conveniently applied to and removed from a recess formed at the rear of the box, and to provide a novel oil-receptacle, which is detachably secured to the bottom wall of the axle-box by a set-screw, said oil-receptacle having a wick-holder supported by springs. These objects I accomplish by the construction of parts illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section, showing the parts in position within the box. Fig. 2 is a like section of the screen detached. Fig. 3 is a cross-section thereof. Fig. 4 shows the screen partly in side view and partly in section. Fig. 5 is a vertical cross-section of the box. Fig. 6 is a side view of the lubricator. Fig. 7 is a plan or top view thereof.

Similar letters indicate corresponding parts.

The letter A designates the body of the axle-box, having substantially the usual construction, and B the dust-excluding screen, the latter being composed of a diaphragm, C, ring D, and frame E. The diaphragm C is made of canvas or other suitable flexible material, and is left slack or loose in its attachment to the frame E, so that it takes a series of folds, and is expansible. It is preferred to double the canvas or other material, in order to strengthen and increase the durability of the diaphragm. A hole, F, is made in the diaphragm of corresponding diameter to the shoulder G of the journal, and the ring D, doubled like the material composing the dia-

phragm, is secured to the edge of this hole, as by rivets, to strengthen or re-enforce the same, the ring being of metal or other rigid material.

The frame E is made of sheet metal or other suitable material, with an approximately U-shaped cross-section to form a recess, and the diaphragm is fastened therein on its vertical edges by rods I, having their ends secured to the frame, and on its horizontal edges by strips J, of wood or other similar material, which are fitted into the frame and secured thereto, together with said edges of the diaphragm, by tacks or other similar fastenings.

The axle-box is made with a double back, forming a recess, K, into which is fitted the frame E, said recess opening in an upward direction. When the frame E is placed into the box-recess the journal can be readily passed through the hole F and its ring into the box, while the opening L, left in the back of the box for the introduction of the journal, is entirely closed by the diaphragm, so that the box is screened or protected against dust or grit and other foreign matter. The diaphragm now adapts itself, due to its flexible and expansible condition, to a downward movement of the journal sufficient to permit the introduction of the brasses N, and also to the usual motions of the journal in use. The recess K is a common feature of car-axle boxes, and the frame E being fitted to the recess the screen can be readily applied to boxes now in general use.

The letter O designates the oil-receptacle, resting on the bottom of the axle-box; P, the wick-holder, and Q the supporting-springs for the wick-holder. The oil-receptacle O is removably attached to the box, as by a screw-bolt, R, (one or more,) and it is introduced into the box from the front end thereof, the box-lid A' closing against a lip, O', on the receptacle. A filling-orifice, S, closed by a suitable cap, is made in the top of the oil-receptacle. The wick-holder P is made of rectangular shape, and is fitted into an opening, T, in the top of the oil-receptacle, formed at such a place that the wick P' contained in the holder is brought in contact with the journal. The springs Q are secured to flanges V on opposite

sides of the wick-holder, and bear against the top of the oil-receptacle, so as to support the holder thereon. In this manner the wick-holder is caused to adapt itself to the motions of the journal, and the latter is continuously lubricated, while by reason of its extremely simple construction the apparatus is not liable to get out of order.

What I claim as new, and desire to secure by Letters Patent, is—

1. A dust-shield for car-axle boxes, composed of a frame, E, provided with a flexible and expansible diaphragm, C, having an opening, F, to receive the journal, said frame carrying the diaphragm being independent of but adapted to slide into a recess in the rear end of the axle-box, substantially as described.

2. The combination, with a car-axle box constructed with a double back to form the intervening recess K, of an independent frame, E, provided with the attached flexible and expansible diaphragm C, having a central opening, said frame being capable of sliding into the recess formed by the double walls of the axle-box, substantially as described.

3. The combination, with the axle-box having a recess, K, at its rear portion, of an independent frame, E, adapted to slide into said recess, and provided with a flexible and expansible diaphragm, C, having a central opening, F, and its outer edges secured within a recess in the frame by the rods I and strips J, substantially as described.

4. The combination, with a car-axle box having a front lid, A', of an oil-receptacle, O, detachably secured to the bottom wall of the oil-box by a screw, R, and having a lip, o', against which the lid rests, and the wick-holder supported by springs, which rest on the top wall of the oil-receptacle, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

PETER SWEENEY. [L. S.]

Witnesses:

W. HAUFF,  
CHAS. WAHLERS.