

G. B. ESSEX.
LUBRICATOR.

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930,462.

Patented Aug. 10, 1909.

Fig. 1.

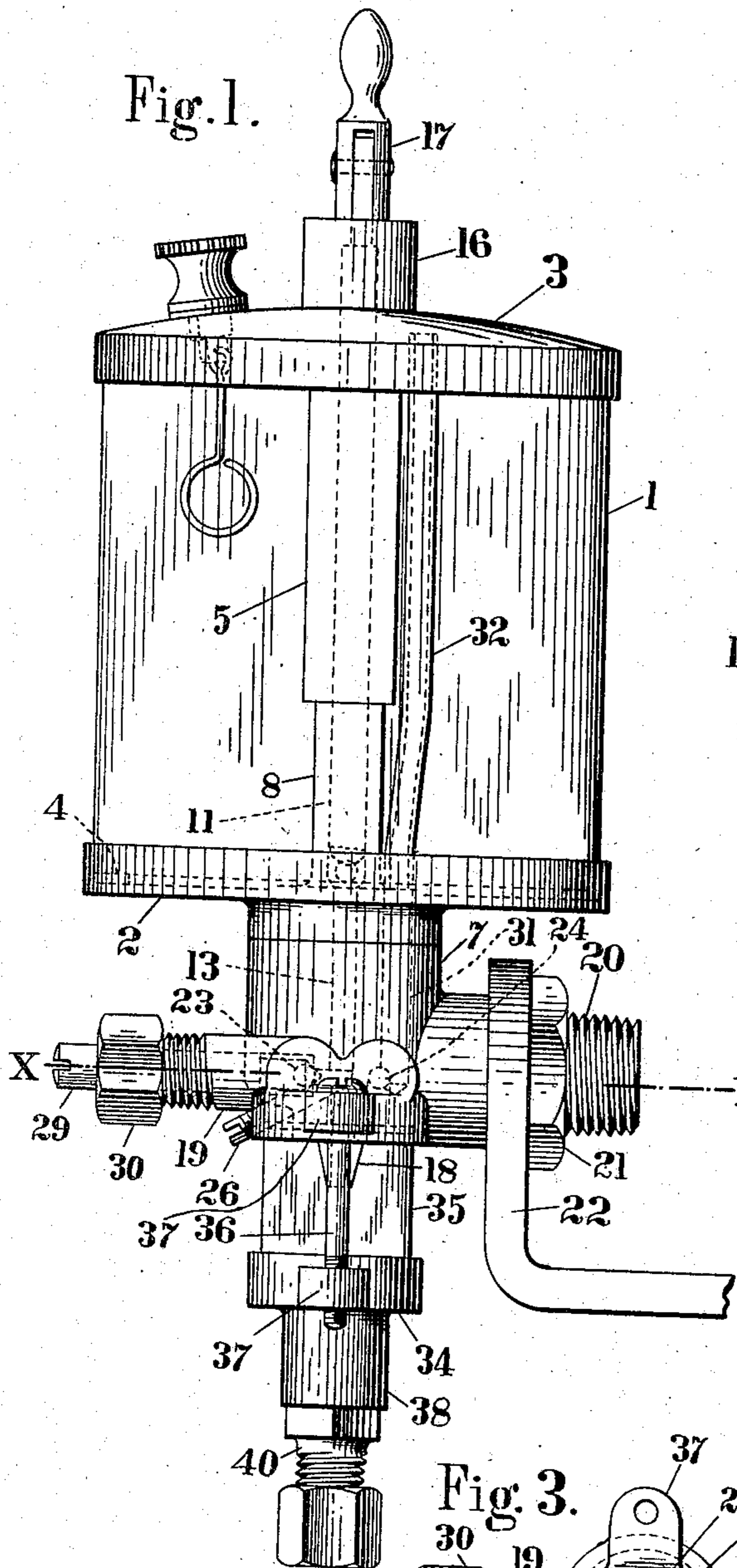


Fig. 2.

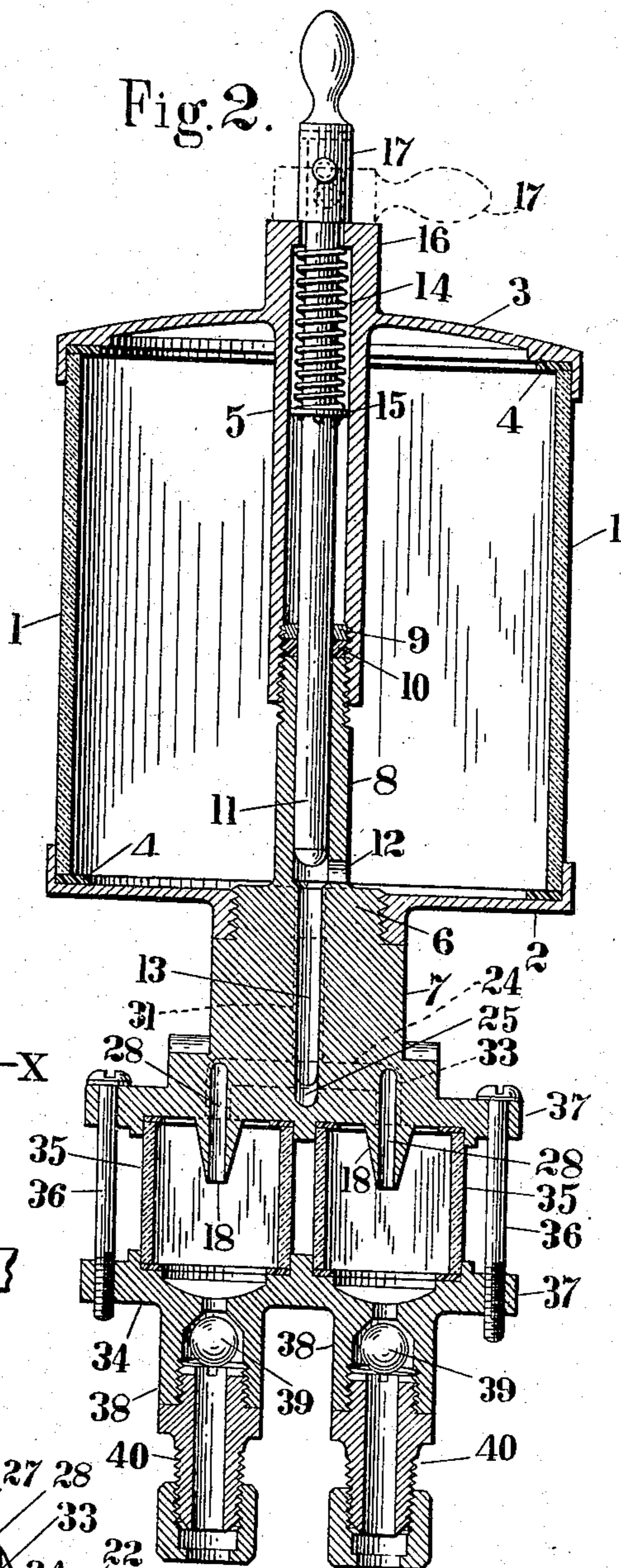
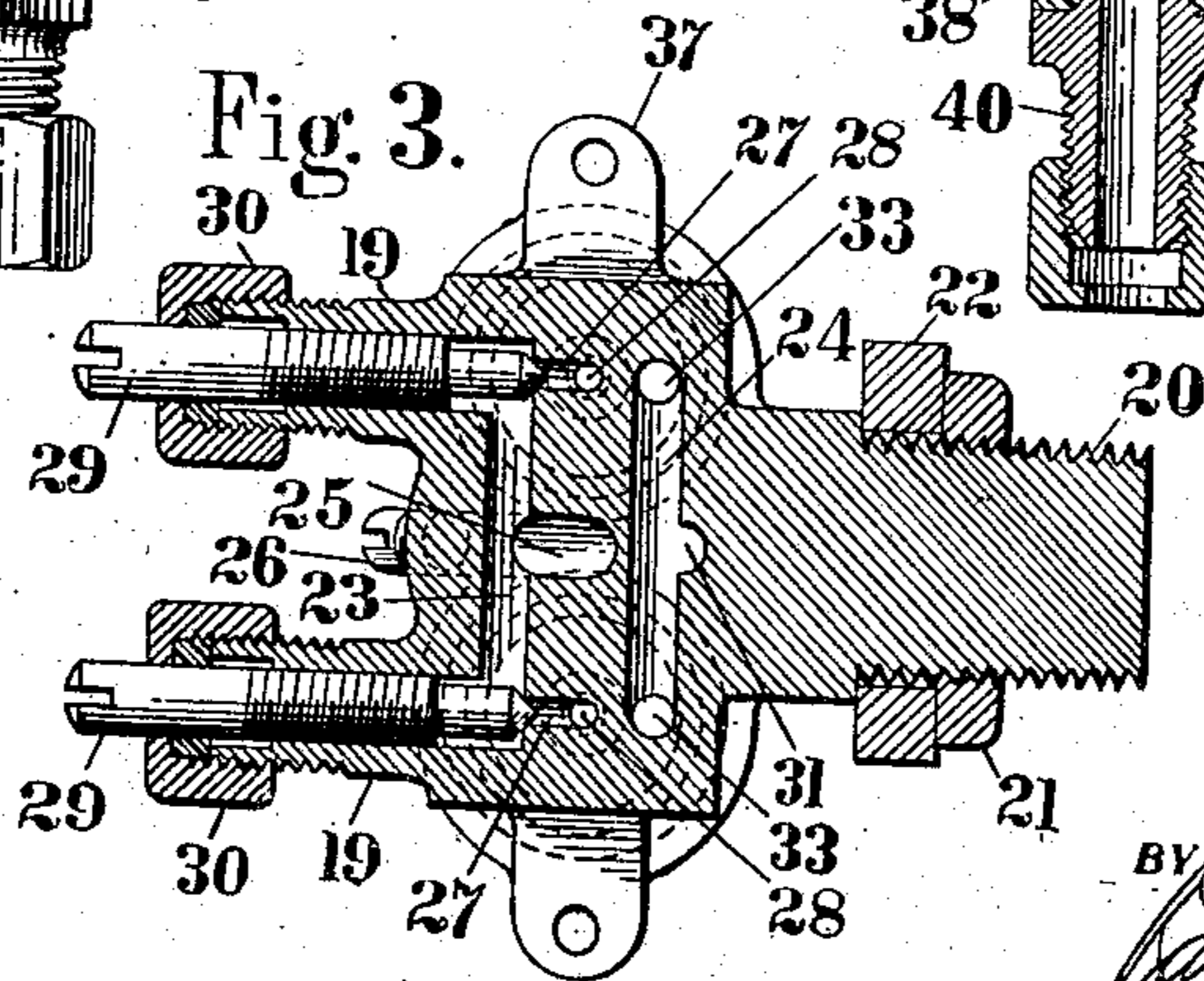


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE B. ESSEX, OF DETROIT, MICHIGAN.

LUBRICATOR

No. 930,462.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed October 19, 1908. Serial No. 458,375.

To all whom it may concern:

Be it known that I, GEORGE B. ESSEX, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Lubricators, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to new and useful improvements in lubricators and has for its object to combine the advantages of the glass body snap lever type with those of a multiple sight feed whereby a simple, cheap and compact construction is obtained more especially adapted for use on explosive engines where the lubricator is directly supported on the engine and adapted to lubricate the various parts from the one common oiler.

To this end the invention consists in the peculiar construction, arrangement and combination of parts all as more fully hereinafter described and shown in the accompanying drawings, in which:—

Figure 1 is a side elevation of a lubricator embodying features of the invention; Fig. 2 is a vertical central section looking at right angles thereto; Fig. 3 a horizontal section on the line $x-x$ Fig. 1.

As shown in the drawings, 1 indicates the cylindrical body and 2 and 3 the heads to close the ends thereof to form the oil reservoir, suitable packing rings 4 being interposed between the glass body and heads. The upper head 3 is provided with an internally screw-threaded downwardly extending portion 5 and the lower head 2 is provided with an internally threaded opening adapted to receive the screw-threaded boss 6 on the upper end of the sight fitting 7, said fitting having an upwardly extending threaded nipple 8 adapted to engage the internal threads of the downwardly extending portion 5 to securely clamp the parts together, a suitable packing ring 9 and the packing 10 being interposed.

11 indicates a needle valve axially disposed in the central bore of the nipple 8 and portion 5 and cooperating with a valve seat at the lower end thereof controlling the flow of oil from the reservoir through the port 12 in the sight fitting to the passage 13, forming a reduced continuation of the central bore.

14 indicates a coil spring sleeved on the stem of the needle valve and interposed be-

tween a shoulder on the stem formed by the washer 15 and a shoulder formed by an upward extension or boss 16 on the cap 3, said spring being adapted to normally hold the valve stem to its seat.

17 is a lever handle pivotally attached to the upper end of the valve stem and adapted in its raised position to hold the valve stem away from its seat against the action of the spring. The sight fitting 7 is integrally formed with downwardly extending drop nipples 18 laterally extending threaded nipples 19 and a threaded boss 20 provided with a locking nut 21 by means of which the lubricator is adapted to be supported on the engine, as for example, the bracket 22.

23 and 24 are parallel transverse passages formed in the sight fitting above the drop nipples, the passage 23 communicating with the passage 13 through the passage 25 at an angle thereto, the outer end of the passage being plugged by means of a screw 26 which may be removed for purposes of cleaning in case the passages should become clogged.

27 are passages extending at right angles to the passage 23 and connecting the same with the vertical passages 28 in the drop nipples.

29 indicate needle valves for controlling the passages 27 to regulate the drop and 30 are suitable packing nuts engaging the screw-threaded ends of the nipples 19.

The passage 24 communicates with the oil reservoir through a vertical passage 31 connected to the lower end of the vent tube 32 to equalize the pressure in the reservoir.

33 indicates vertical passages in the sight fitting forming a continuation of the passage 24 and extending to the sight feed chambers.

34 indicates the complementary portion of the sight fitting and 35 are cylindrical sight glasses between the complementary portions of the sight fittings, suitable packing rings being interposed.

36 indicates screw bolts passing through suitably apertured lugs 37 on the complementary portions of the sight fitting to securely clamp the parts together.

38 indicates downwardly extending internally threaded nipples formed with a central aperture and valve seat adjacent thereto, adapted to be controlled by the check valve 39, and 40 are suitable fittings for connecting the oil discharge tubes to the lubricator.

It will thus be seen that by this arrangement two or more feeds may be combined

with the one body, since there are hardly two makes of engines requiring the same number of feeds especially in the lower priced engines where simplicity, compactness and cheapness is a great desideratum.

What I claim as my invention is:—

1. In a lubricator, a multiple sight feed fitting provided with drop nipples having discharge ducts therethrough, a reservoir having a single outlet in communication with the drop nipple ducts, a valve controlling the outlet, a regulating valve for each nipple, vent passages in the fitting, each adjacent a nipple, and a vent tube in the reservoir in communication with the vent passages.

2. In a lubricator, a multiple sight feed fitting provided with drop nipples having discharge ducts therethrough, a reservoir having a single outlet in communication with the drop nipple ducts, a valve controlling the outlet, a regulating valve for each nipple, vent passages, a vent tube in the reservoir in communication with the vent passages, discharge nipples on the fitting corresponding to the drop nipples, and back-pressure check valves in the discharge nipples.

3. In a lubricator, a multiple sight feed fitting consisting of an upper part provided with drop nipples having discharge ducts therethrough, and with an intake passage communicating with the ducts, a complementary part having discharge nipples corresponding to the drop nipples, a regulating valve in the upper part for each drop nipple, a back pressure check valve in each discharge nipple, and sight glasses clamped between the fitting parts each housing a drop nipple, a lubricant reservoir supported by the upper part and provided with an outlet communicating with the fitting intake passage, a valve controlling the reservoir outlet, and a vent tube in the reservoir in communication with air passages through the upper part of the fitting into each sight feed chamber.

4. In a lubricator, a multiple sight feed fitting consisting of an upper part having a longitudinally apertured boss in its upper side and depending drop-nipples having discharge passage therethrough in communication with the bore of the boss, a complementary part having discharge nipples corresponding to the drop nipples, and sight glasses clamped between the fitting parts each housing a drop nipple, a reservoir consisting of a lower head secured in the upper part of the fitting, an upper head having a depending tubular sleeve in screw-threaded engagement with the fitting boss, and a transparent cylinder clamped between the heads concentric with the sleeve, a valve closure reciprocable in the sleeve and boss controlling a lateral opening in the boss near the lower reservoir head, a lever on the upper head for operating the closure, a vent tube in the reservoir extending

through the lower head in communication with the drop nipple chambers, a regulating valve for each drop nipple, and back pressure check valves in the discharge nipples.

5. In a lubricator, a multiple sight feed fitting consisting of an upper part having a longitudinally apertured boss on its upper side and depending drop-nipples having discharge passage therethrough in communication with the bore of the boss, a complementary part having discharge nipples corresponding to the drop nipples, sight glasses between the fitting parts each housing a drop nipple, screw-bolts clamping the parts on the glasses, and a supporting lug extending from the upper part, a reservoir consisting of a lower head secured in the upper part of the fitting, an upper head having a depending tubular sleeve in screw-threaded engagement with the fitting boss, and a transparent cylinder clamped between the heads concentric with the sleeve, a valve closure reciprocable in the sleeve and boss controlling a lateral opening in the boss near the lower reservoir head, a lever on the upper head for operating the closure, a vent tube in the reservoir extending through the lower head in communication with the drop nipple chambers, a regulating valve for each drop nipple and back pressure check valves in the discharge nipples.

6. In a lubricator, a multiple sight feed fitting consisting of an upper part having a longitudinally apertured boss on its upper side and depending drop nipples having discharge passage therethrough in communication with the bore of the boss, a complementary part having discharge nipples corresponding to the drop nipples, and sight glasses clamped between the fitting parts each housing a drop nipple, a reservoir consisting of a lower head secured in the upper part of the fitting, an upper head having a depending tubular sleeve in screw-threaded engagement with the fitting boss, and a transparent cylinder clamped between the heads concentric with the sleeve, an apertured valve-seat in the bore of the boss at the bottom of the reservoir, a valve closure extending through the boss and sleeve controlling an opening through the side of the boss, a spring in the sleeve adapted to force the closure on to the seat, a lever on the upper head adapted to withdraw the closure from the seat past the boss opening, a vent tube in the reservoir extending through the lower head in communication with the drop nipples, a regulating valve for each drop nipple and back pressure check valves in the discharge nipples.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE B. ESSEX.

Witnesses:

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OTTO F. BARTHEL.