

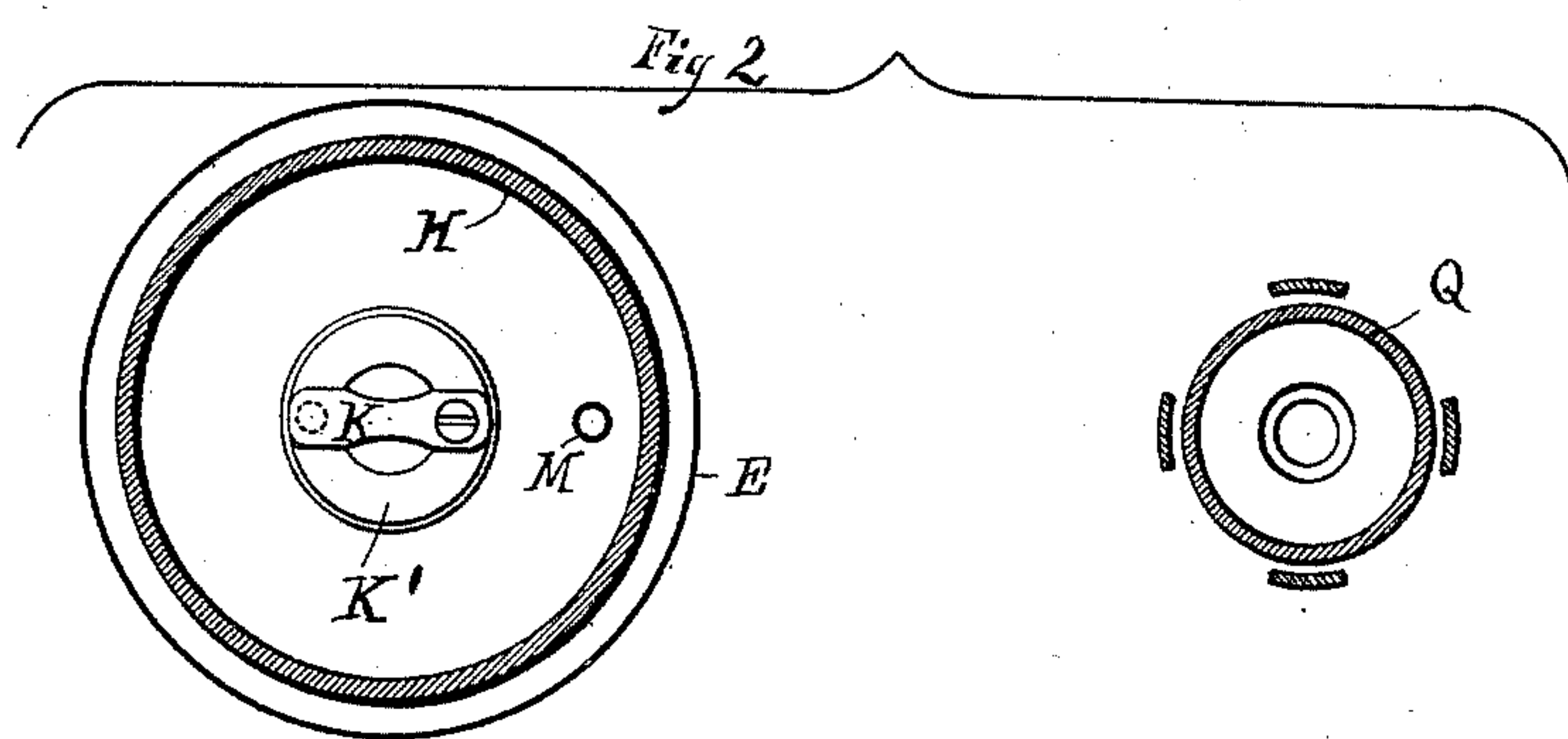
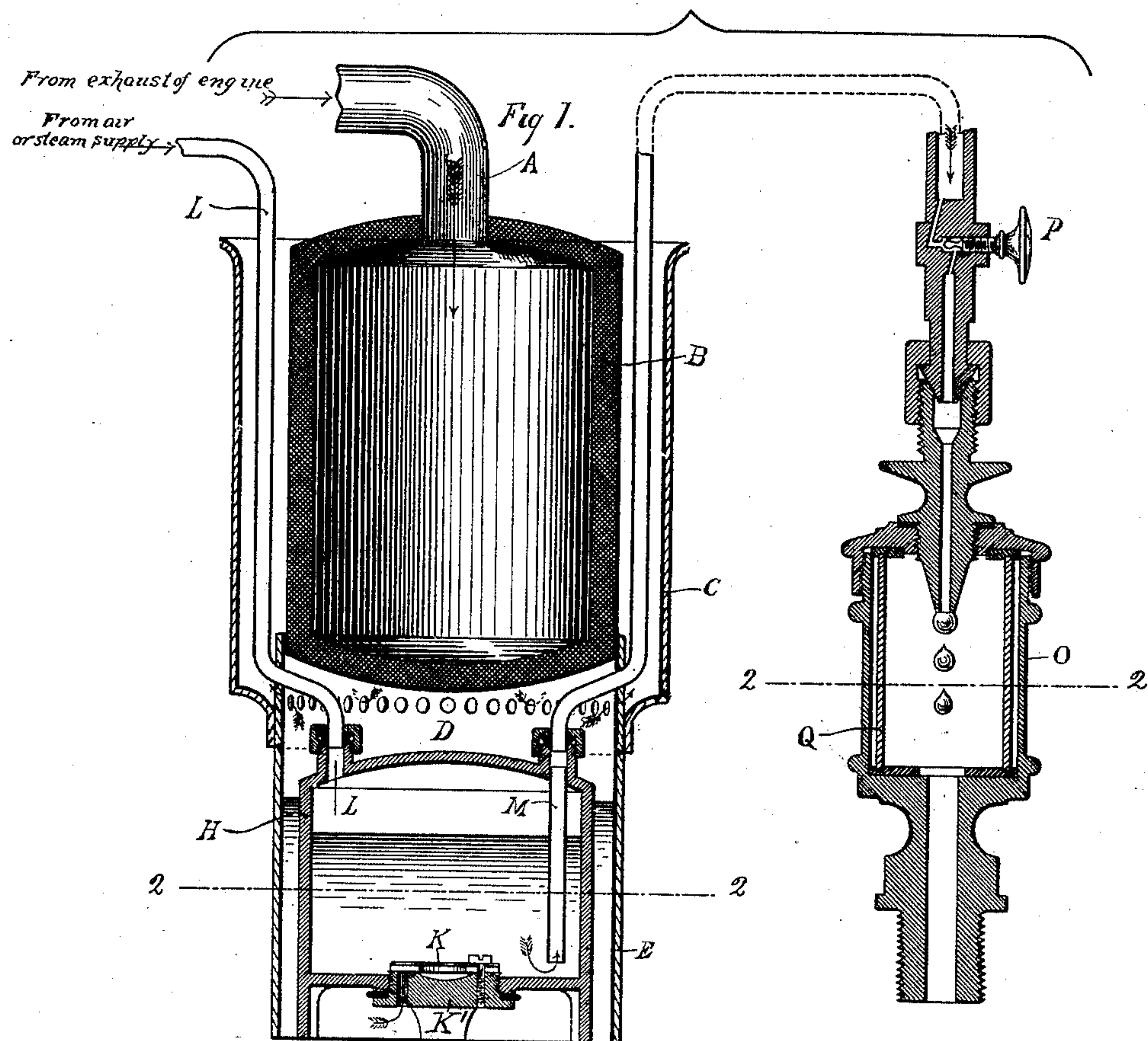
(No Model.)

2 Sheets—Sheet 1.

V. POPP.
AUTOMATIC OILING DEVICE.

No. 426,468.

Patented Apr. 29, 1890.



WITNESSES.

Edward S. McKinney
E. A. Chartrand

INVENTOR

Victor Popp
by Blackwell Blane & Branstetter
attys

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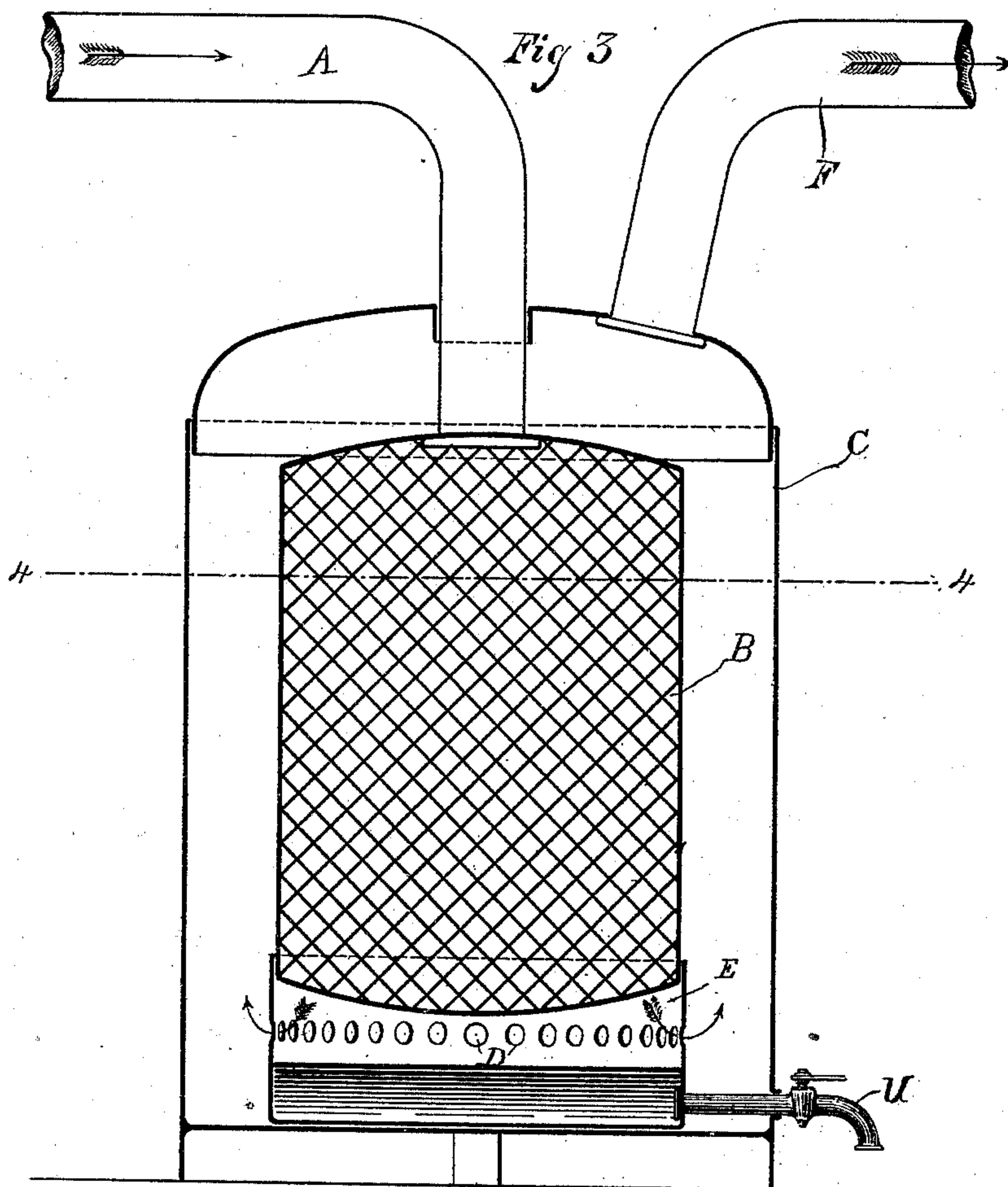
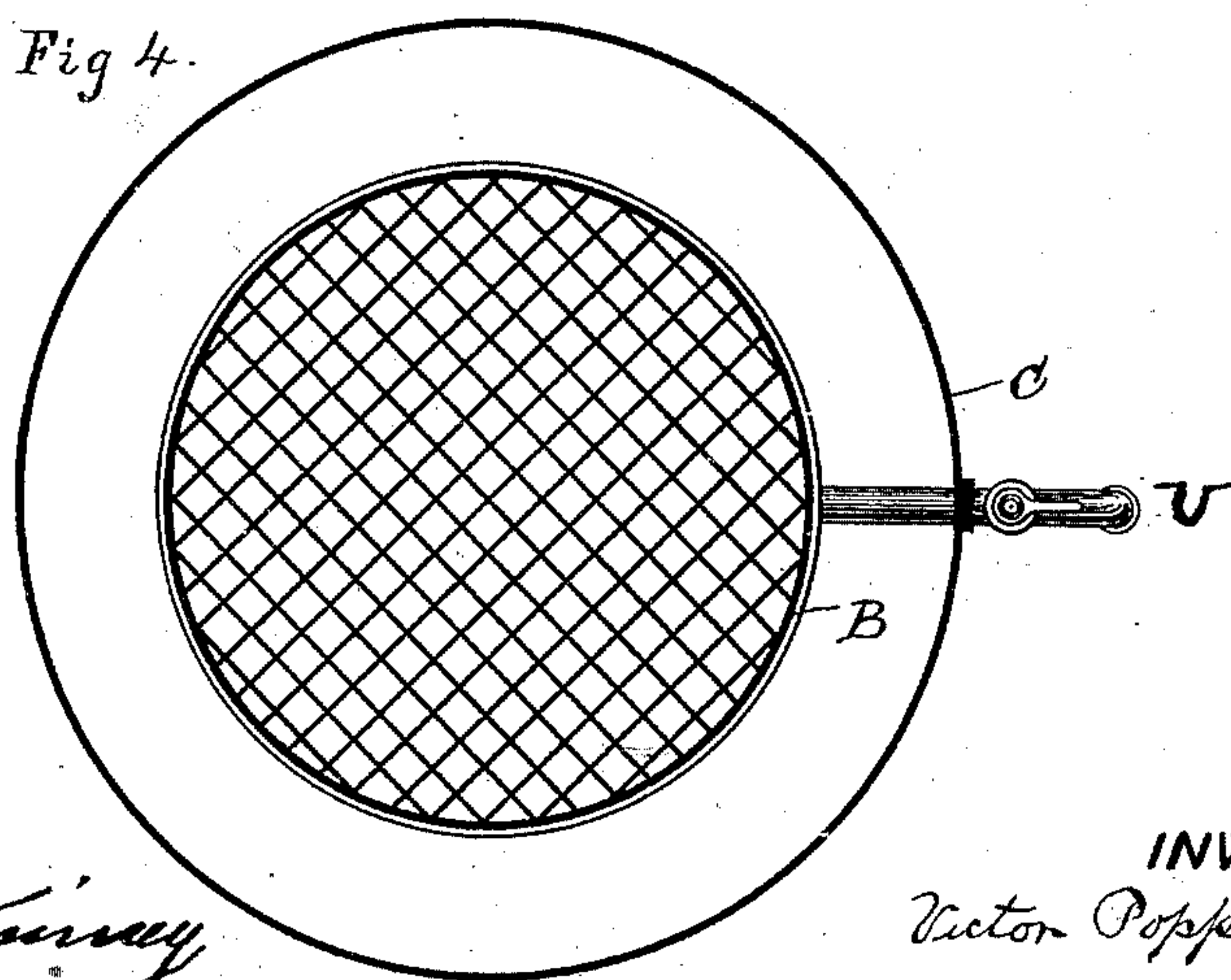


Fig 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

VICTOR POPP, OF PARIS, FRANCE, ASSIGNOR TO THE POPP COMPRESSED AIR AND ELECTRIC POWER COMPANY, (LIMITED.)

AUTOMATIC OILING DEVICE.

SPECIFICATION forming part of Letters Patent No. 426,468, dated April 29, 1890.

Application filed April 7, 1888. Serial No. 269,986. (No model.) Patented in France November 15, 1887, No. 186,823; in England November 18, 1887, Nos. 15,878, 15,878^A, and 15,878^B; in Germany December 24, 1887, Nos. 44,745 and 47,546; in Belgium May 7, 1888, No. 81,725, and in Italy June 30, 1888, XLVI, 247.

To all whom it may concern:

Be it known that I, VICTOR POPP, a citizen of the Republic of France, residing at the city of Paris, France, have invented certain new and useful Improvements in Automatic Oiling Devices, of which the following is a specification.

This invention is embodied in patents in the following countries: In France, November 15, 1887, No. 186,823; in England, November 18, 1887, Nos. 15,878, 15,878^A, and 15,878^B; in Germany, December 24, 1887, Nos. 44,745 and 47,546; in Belgium, May 7, 1888, No. 81,725, and in Italy, June 30, 1888, Vol. 46, No. 247.

My invention consists in an automatic oiling device for a motor operated by compressed air, steam, gas, or similar fluid, whereby the oil contained in the exhaust-fluid may be recovered and automatically returned to the cylinder of the engine. It is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of my apparatus. Fig. 2 is a horizontal section on the line 2 2, Fig. 1. Fig. 3 is a view of a detached filter. Fig. 4 is a horizontal section on the line 4 4, Fig. 3.

In Fig. 1, A is the exhaust-pipe from a compressed-air or similar motor. With the exhaust is carried a considerable amount of oil used for lubrication in the cylinder. The pipe A terminates in a chamber B, having walls of wire-netting and felt, which serves as a filter, retaining the oil and water from the air while permitting the air itself to escape.

C is a surrounding vessel of sheet iron or brass. At its lower part is a receptacle E, in which the oil is collected as it is slowly filtered through the walls of B. The upper portion of the receptacle E is formed with holes D for the escape of air.

This apparatus constitutes my filter for exhaust-fluids, and it may be used alone, as shown in Fig. 3, where the whole apparatus is completely surrounded by the casing C, which in this case is provided with an outlet-pipe F for the air, a faucet U being provided for drawing off the oil from the receptacle E.

In Fig. 1 the filter is combined with an ap-

paratus for automatically returning the collected oil to the cylinder of the engine.

H is a closed vessel placed in receptacle E and communicating therewith through a valve K (it may be of steel) in its bottom. The vessel H has legs lifting it above the bottom of receptacle E, so that the oil can readily circulate under it and up through the passage in the valve-seat K', the valve opening upwardly to permit the oil to pass.

L and M are two tubes entering the top of the vessel H, the latter being continued to a point near the floor of the vessel. The tube L is connected to a supply of compressed air or other actuating-fluid, while the tube M leads to the cylinder of the engine through the oiler O, which is provided with a regulating-valve P and a glass Q, through which the flow of the oil may be observed.

In operation the compressed air entering by tube L exerts a pressure upon the oil contained in vessel H and tends to force it out through the tube M into the cylinder of the engine through oiler O. The oil which is gradually collected in receptacle E forms a constant supply, which is forced into the vessel H through the valve K in the following manner: When the compressed air is shut off from the engine, the piston will continue to operate for a short time on account of its momentum. This will cause it to act as a pump, tending to produce a vacuum in the tube M. This will cause the oil in receptacle E to rise under the pressure of the outside air through the valve K and fill vessel H. The action of the apparatus is thus perfectly automatic, the supply in receptacle E being constantly maintained by the dripping from filter B. The vessel C is also open at its upper end, so that fresh oil can be readily added.

I claim—

1. The combination, with the exhaust-pipe of a compressed-air or similar motor, of a filter placed across the course of the fluid, and an adjacent receptacle for collecting the oil from the filter.

2. The combination, with the exhaust-pipe of a compressed-air or similar motor, of a

chamber having walls of filtering material—such as felt or wire-netting—and a receptacle for collecting the drippings from the filter formed by the said chamber.

5 3. The combination, with the exhaust-pipe of a compressed-air or similar motor, of a filter for collecting the oil, a receptacle for the oil, and a tube leading therefrom to a part of the motor requiring lubrication.

10 4. The combination, with the exhaust-pipe of a compressed-air or similar motor, of a filter for collecting the oil, a receptacle for the oil, a tube leading therefrom to a point in the motor requiring lubrication, and a second tube
15 connecting the receptacle with a supply of air or other liquid under pressure.

20 5. The combination, with the exhaust-pipe of a compressed-air or similar motor, of a filter for collecting the oil, a receptacle for the oil, a vessel connected therewith through an intermediate check-valve, a tube leading from said vessel to a part of the motor requiring lubrication, and a second tube connecting the

vessel with a supply of air or other fluid under pressure.

6. In an automatic oiling device, the combination, with a receptacle containing a supply of oil, of a vessel connected therewith through an intermediate check-valve, a tube leading from said vessel to a part of the motor requiring lubrication, and a second tube connecting the vessel with a supply of air or other fluid under pressure.

7. The combination, with exhaust-pipe A, of filtering-chamber B, inclosing-vessel C, terminating in receptacle E, a closed vessel H, placed in receptacle E, an intermediate valve K, a tube M, leading to the cylinder of a compressed-air or similar motor, and a tube L, connected with a supply of air or other fluid under pressure.

VICTOR POPP.

Witnesses:

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