2 Sheets--Sheet 1.

E. P. WHEELER.

Carbureting Apparatus.

No. 153,872. Patented Aug. 4, 1874.

Fig. 1.

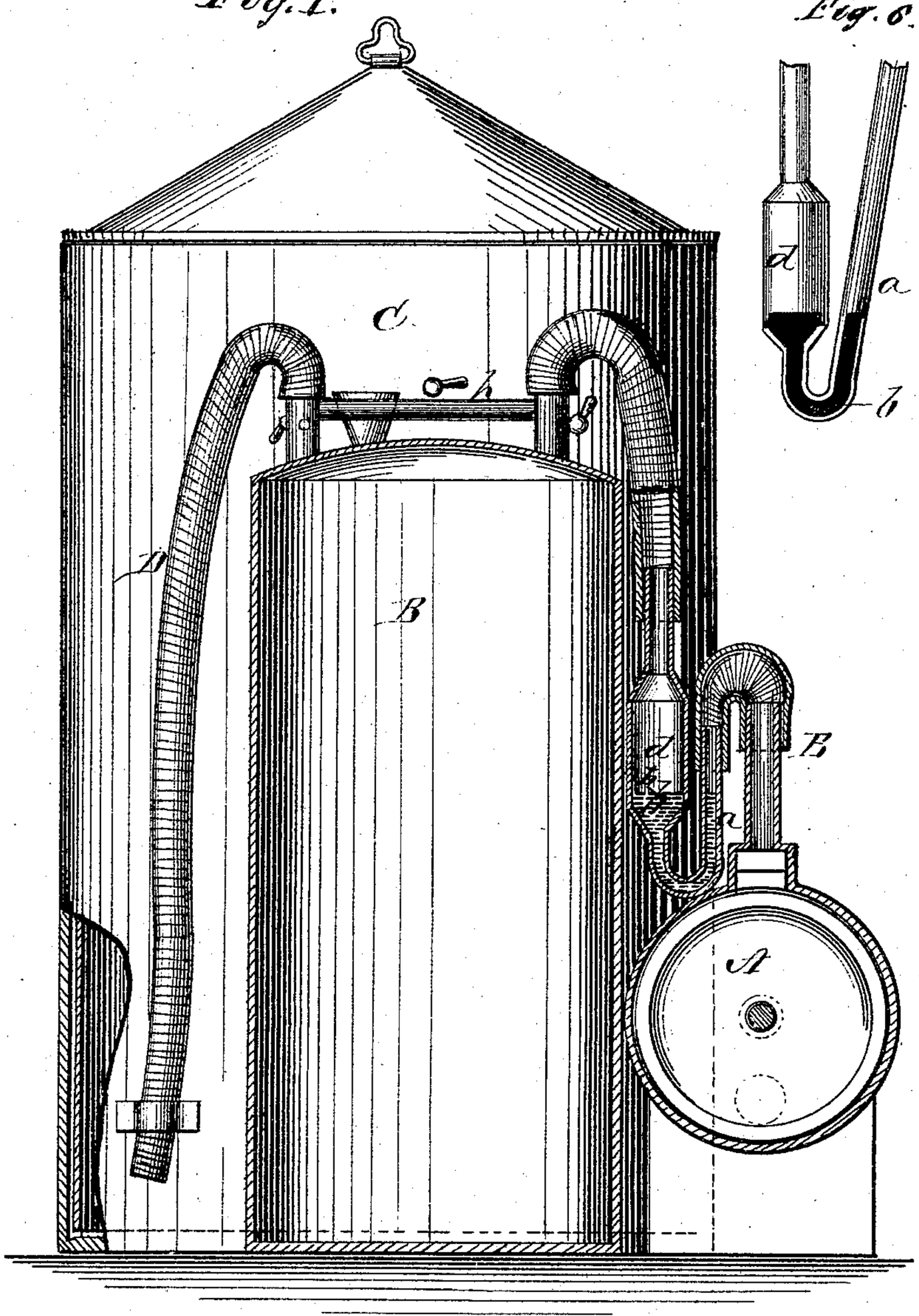

Fig. 6.

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Carbureting Apparatus.

No. 153,872. Patented Aug. 4, 1874.

Fig. 2.

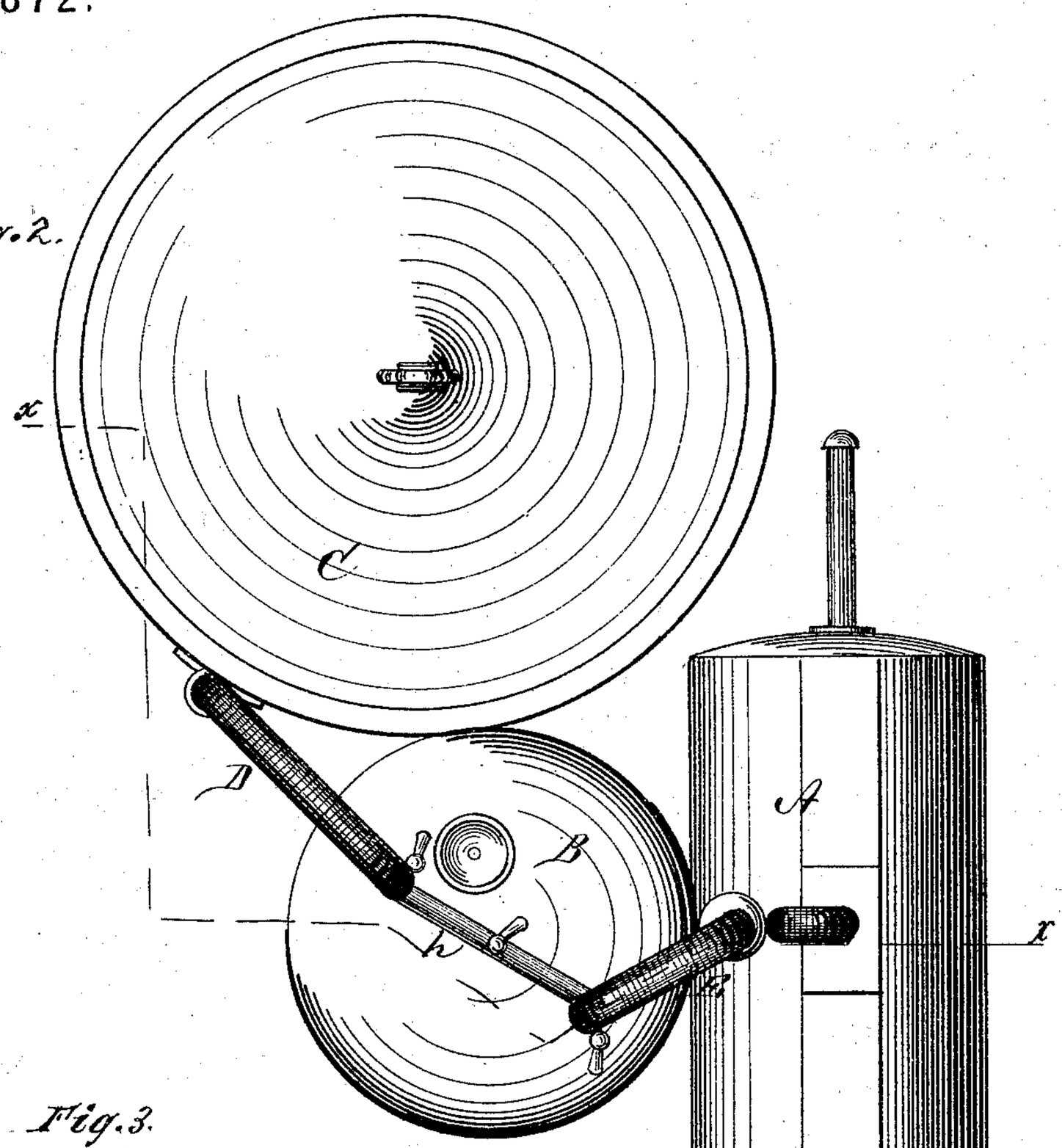

Fig. 3.

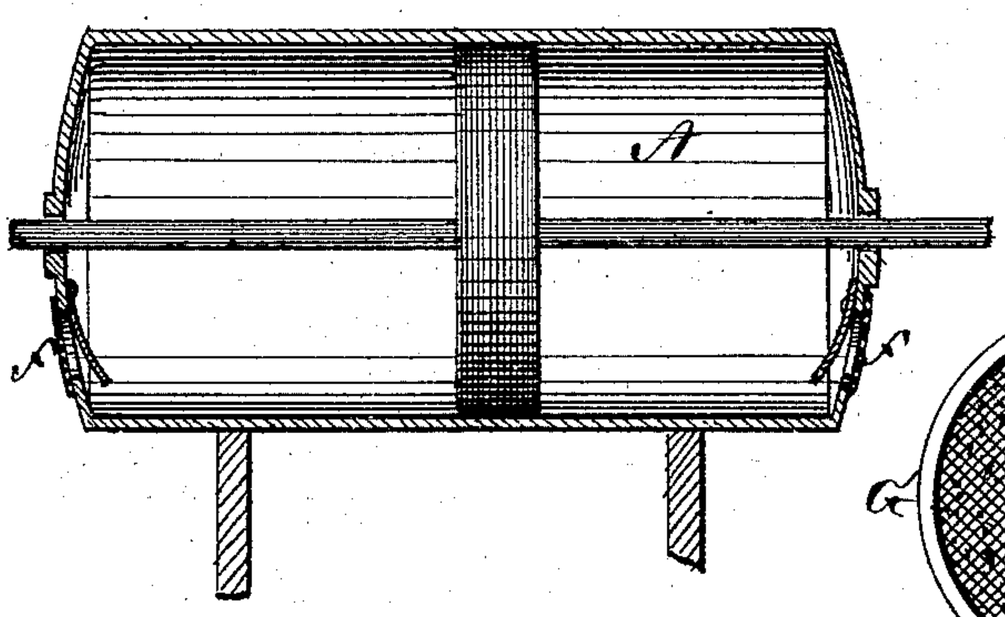

Fig. 4.

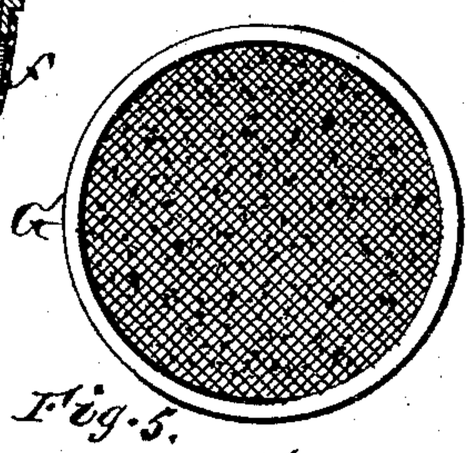

Fig. 5.

G

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THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

EDWARD P. WHEELER, OF CORINTH, MISSISSIPPI.

IMPROVEMENT IN CARBURETING APPARATUS.

Specification forming part of Letters Patent No. **153,872**, dated August 4, 1874; application filed June 18, 1874.

To all whom it may concern:

Be it known that I, EDWARD P. WHEELER, of Corinth, in the county of Alcorn and State of Mississippi, have invented certain new and useful Improvements in Carbureting Apparatus; and do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for the manufacture of illuminating-gas.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a section of my gas-machine through the line *x x*, Fig. 2. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal section of the air-pump. Figs. 4 and 5 represent a porous partition used in the gasoline-tank. Fig. 6 represents a mercury-valve used between the pump and oil-tank.

My gas-machine consists essentially of three parts—an air-pump, A, an oil-tank, B, and a gas-holder or gasometer, C. The gasometer is constructed in the ordinary manner, and connected from near the bottom with the top of the oil-tank B, by means of a pipe, D. The oil-tank B and air-pump A are also connected by means of a pipe, E, which passes from the center of the pump through the top of the oil-tank downward to near the bottom thereof. The pipes D and E may each be made in one or more sections, as required, and certain parts of each pipe be made flexible, so as to accommodate the machine to any location convenient for its reception. The pipe E, connecting the pump A with oil-tank or gasoline drum B, has a U-shaped part, *a*, in which a certain quantity of quicksilver or mercury, *b*, is placed to form a valve. Above the mercury-valve *b*, toward the oil-tank, the pipe *a* is enlarged, as shown at *d*, so that the mercury can spread, and not be carried over into the oil-tank. In passing air in the opposite direction into the small tube the mercury will rise higher and act as a check-valve in that direction. The mercury takes the place of an air-tight cock. No matter how rough the pipe may be, this valve will be air-tight at all times against a certain pressure, which can be increased at will by adding mercury, or by changing the construction of the tube. The air-pump A is provided with perforated inlets *f f*, to exclude everything but air, but most especially to exclude fire.

In the gasoline-tank B, above the gasoline or other hydrocarbon liquid used, is placed a porous sand-holder, G, to take up all surplus gasoline taken up in vapor, and prevent it being carried over into the pipes or gasometer. This makes a porous partition, on which or between which is placed sand that all vapor and gas must pass through before entering the gasometer or going to the consumer.

The sand-holder may in some cases be placed in the pipe D above the oil-tank, if so desired.

The pipes D and E above the tank are connected by a pipe, *h*, which is used in case the gas is too strong to pass pure air into the gasometer by shutting off the cocks to the gasoline-tank.

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

1. The combination of the air-pump A, oil-tank B, and pipe E, with mercury-valve *a b d*, as and for the purposes herein set forth.

2. The combination of the air-pump A, oil-tank B, pipe E, with mercury-valve *a b d*, pipe D, and gasometer C, as and for the purposes herein set forth.

3. The oil-tank B, with porous holder G, filled with sand, and the pipes E and D, in combination with mercury-valve *a b d* and air-pump A, having perforated inlets *f f*, all constructed and arranged as and for the purpose specified.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

EDWARD P. WHEELER.

Witnesses:
H. T. MASK,
W. T. DODSON.