

(No Model.)

J. McKAY.  
GAS SCRUBBER.

No. 328,134.

Patented Oct. 13, 1885.

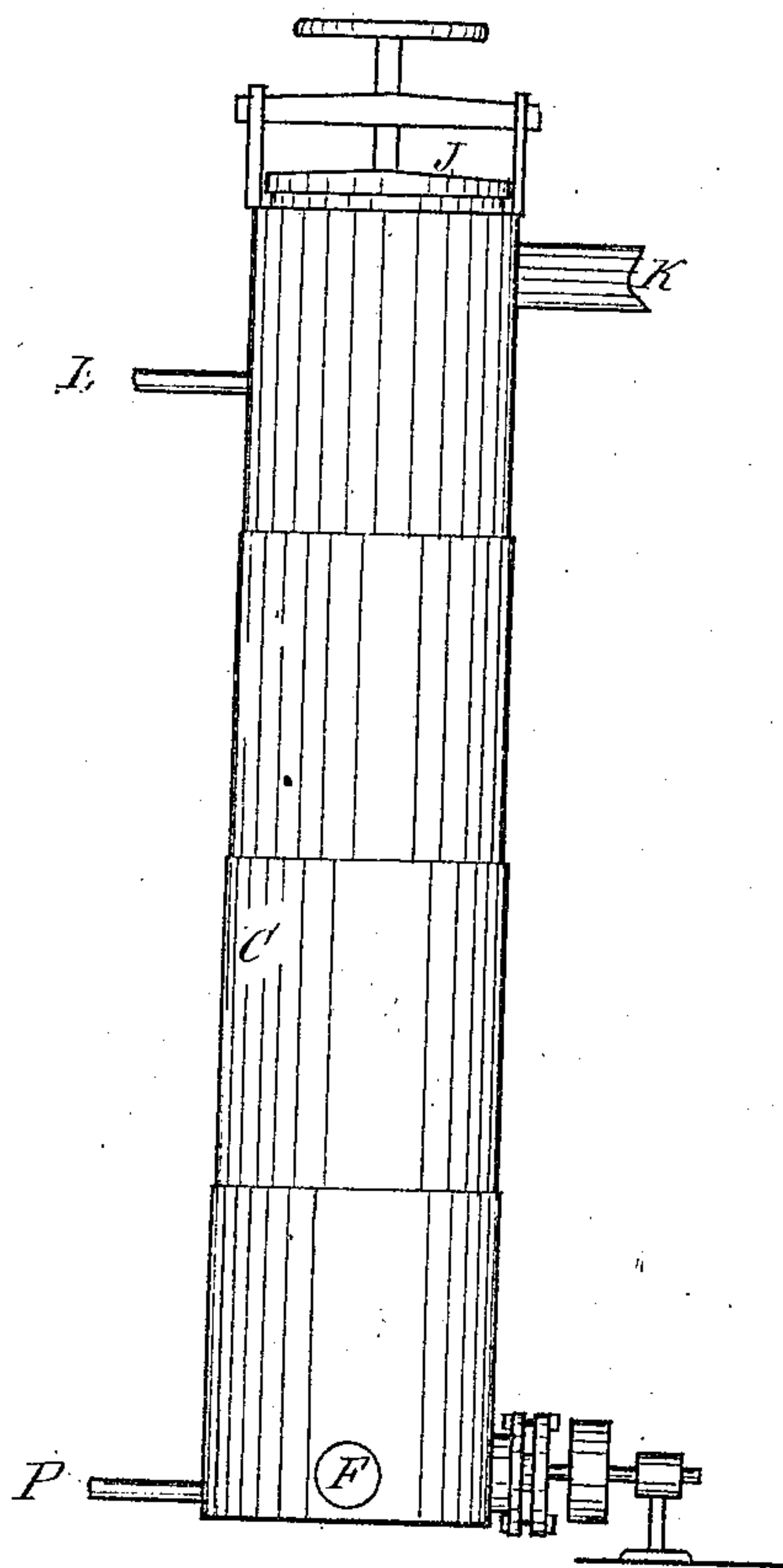


Fig. 1.

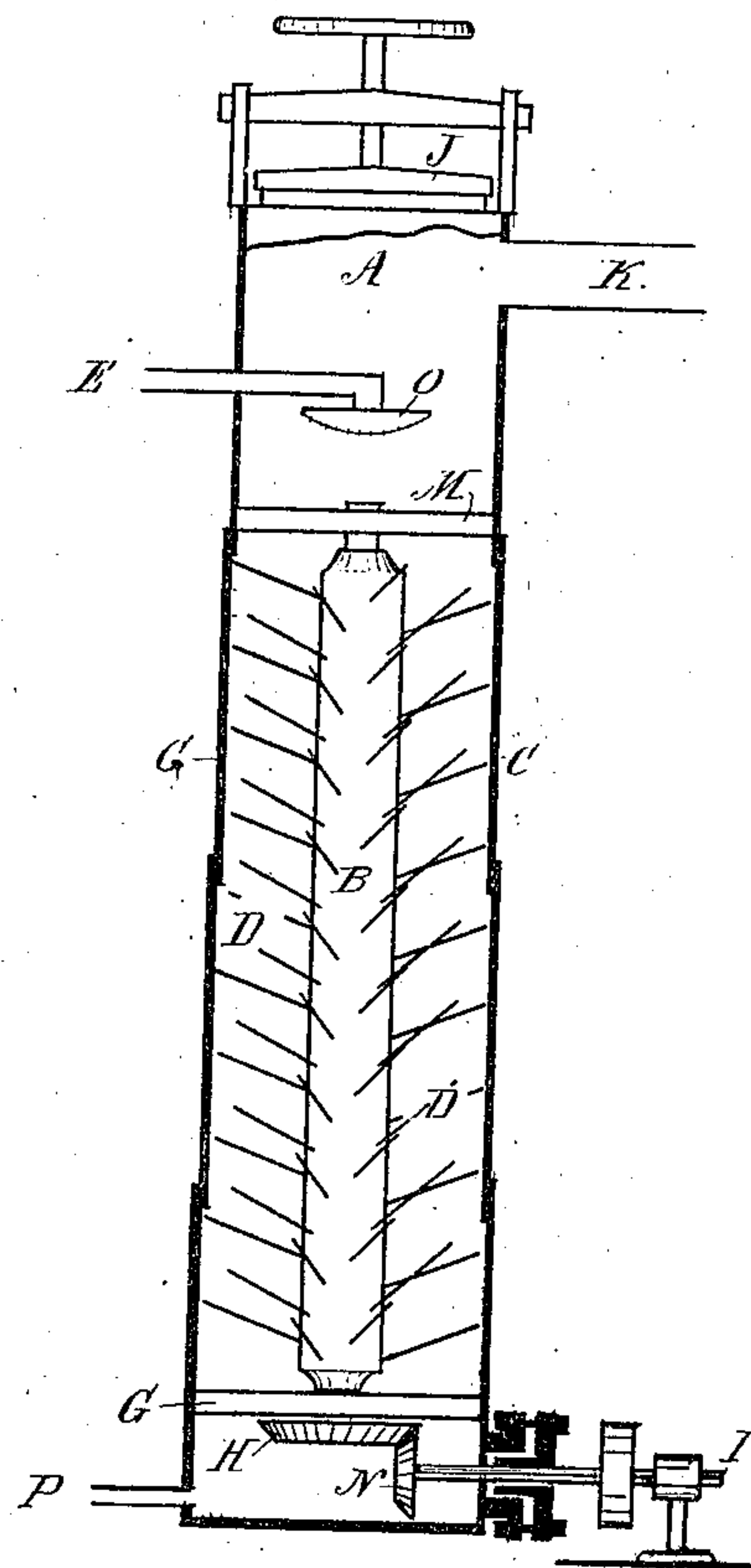


Fig. 2.

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# UNITED STATES PATENT OFFICE.

JOHN MCKAY, OF TITUSVILLE, PENNSYLVANIA.

## GAS-SCRUBBER.

SPECIFICATION forming part of Letters Patent No. 328,134, dated October 13, 1885.

Application filed July 29, 1885. Serial No. 172,947. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN MCKAY, a citizen of the United States, residing at Titusville, in the county of Crawford and State of Pennsylvania, have invented a new and useful Improvement in Gas-Scrubbers, of which the following is a specification.

My invention relates to the mechanical device for washing gas, destroying and removing all impurities therefrom, the object being to bring the gas and water into closer and more intimate connection and to more thoroughly purify the gas.

My device is fully illustrated in the accompanying drawings, in which Figure 1 is a side elevation of an upright cylinder embodying my invention, and Fig. 2 a sectional view of the same.

Similar letters in the two views refer to the same parts.

C is the shell or vessel constructed of any size or shape, preferably a cylinder, and provided with a chamber, A, in the upper part. B is an upright shaft standing in the center of the vessel C and supported near the bottom by the bracket G, the top being held in position by the bracket M. Attached to the shaft B and surrounding it is the brush D, composed of iron or steel wires, bamboo, or any other suitable material. The weight of the shaft B is supported by the bracket G, but has a gudgeon extending through the bracket, and to that gudgeon is attached the pinion H.

I is a shaft extending through the shell C and having a gear-pinion, N, working in with the pinion H, and by which motion is communicated to the shaft B and brush D. The shaft I, where it passes through the shell C, passes through a stuffing-box, which prevents the escape of gas.

J is a door or man-hole on the top of the chamber A for access to the chamber, to clean out, examine, or remove any portion of the machinery.

F is a pipe entering the cylinder near the base for the induction of the gas, and K a pipe near the top for the eduction of the same.

E is a pipe entering the cylinder above the brush for the introduction of water or any other fluid. This pipe is led to the center of the cylinder over the brush and terminates in the sprayer O.

P is a pipe for drawing off the water from

the bottom of the cylinder below the brush.

A door or man-hole is also made in the shell C, (not shown in the drawings,) for entering the chamber below the brush.

The operation is as follows: The shaft B and brush D being revolved by the action of the shaft I communicated through the pinions N and H the gas is made to enter through the pipe F, and passing upward through the brush D enters the chamber A and passes out through the pipe K. At the same time water is introduced through the pipe E and sprayer O, and passes downward through the brush D and out through the pipe P, and as it passes through the brush meets the gas ascending, and by the action of the revolving brush the two fluids are kept in constant agitation and are mingled together, the water removing any tar or other impurities held in suspension in the gas and carrying them away through the pipe P.

Instead of water, naphtha or other fluid may be used, or water and naphtha mingled may be used, which in mingling with the gas enriches it and increases its illuminating power.

I do not claim the broad idea of an upright cylinder with a revolving shaft inside with beaters attached thereto where the water and gas both flow downward together through the purifiers, nor for an upright cylinder divided into compartments by horizontal diaphragms and with beaters revolving in each separate compartment.

I claim as my invention—

A gas scrubber or purifier, consisting of a plain vertical cylinder with an upright shaft and attached brush revolving in said cylinder and filling it horizontally, but leaving a gas-chamber in the upper part, an induction water or liquid pipe entering the cylinder and terminating in a sprinkler over the upper end of the brush, and an eduction water or liquid pipe from the bottom, an induction gas-pipe near the bottom below the brush, and an eduction gas-pipe from the top above the sprinkler, the whole constructed and operated substantially as shown, and for the purposes here in set forth.

JOHN MCKAY.

Witnesses:

F. B. BOSCH,  
J. J. HOLDEN.