

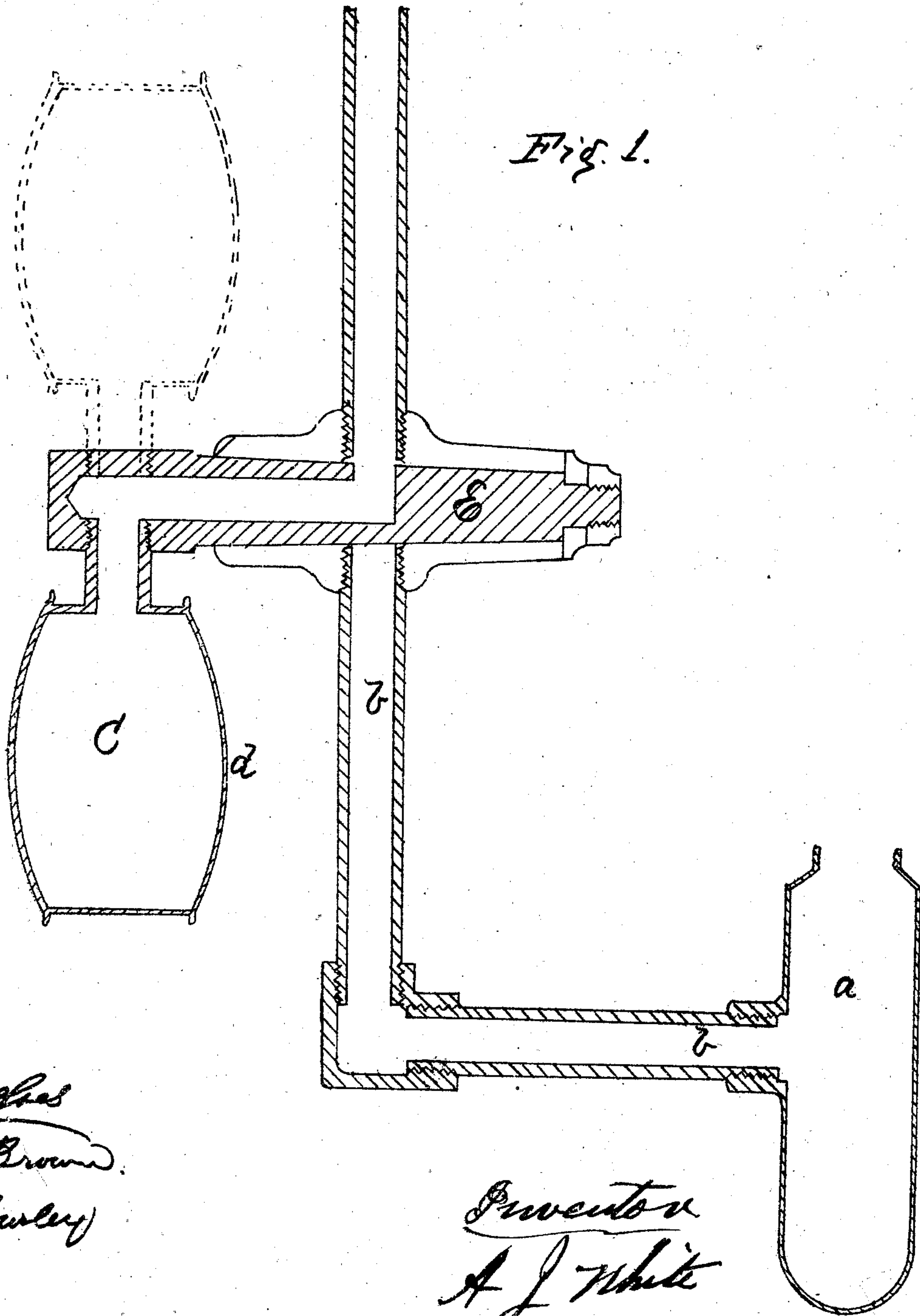
Sheet 1 - 2 Sheets

A. J. White.

Burning Oils.

Nº 74648

Patented Feb. 18, 1868



Witnesses
Edw. P. Brown.
Wm. Hawley

Inventor
A. J. White

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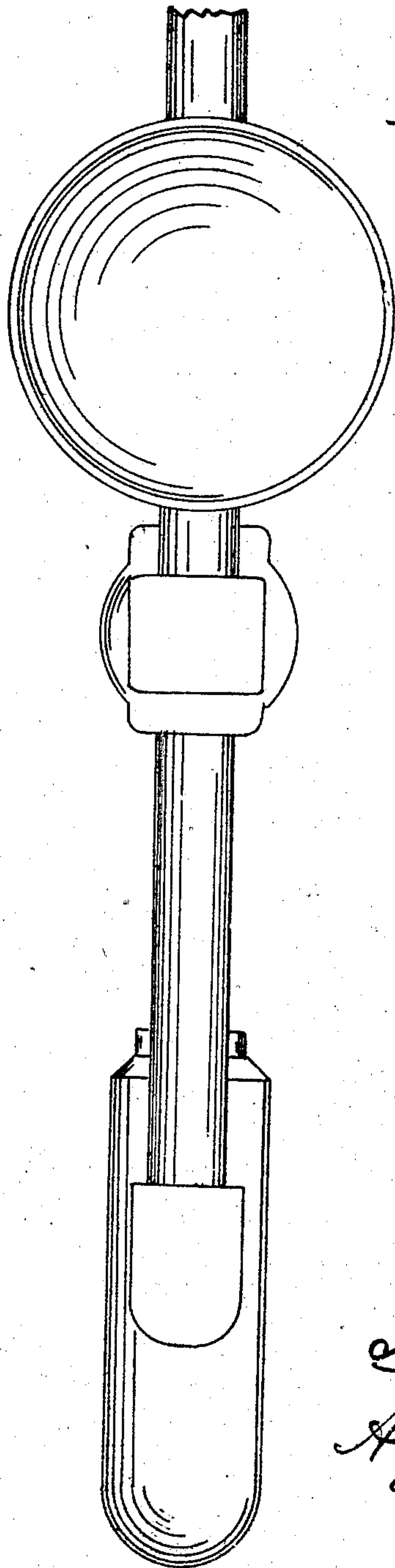


Fig. 2.

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A. J. WHITE, OF BALLSTON SPA, NEW YORK.

Letters Patent No. 74,648, dated February 18, 1868.

IMPROVEMENT IN OIL-BURNING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, A. J. WHITE, of Ballston Spa, county of Saratoga, State of New York, have invented an Improvement in Lamps or Oil-Burning Apparatus; and I do hereby declare that the following, taken in connection with the drawings which accompany and form a part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

The invention relates to the illumination of buildings with hydrocarbon liquids or oils.

The mode of illuminating a building with this invention is as follows: In the lower room of the building, or, what is better, in an out-house, situated as low as the lowest room to be lighted, I place a reservoir, with force-pump. To this force-pump are attached iron pipes, which are conducted up to the top of the building to be lighted, and then through the upper room, then down and through the next room below, and then to the next, and so on, in one continuous line of pipe, through all the rooms to be lighted, and back to the reservoir. Perpendicular or pendent pipes are attached to this continuous line of pipe at such points as lights are desired. To each of these pendent pipes is attached a wick-tube or burner, connected with a stop-cock and small reservoir, as shown in the drawing.

a denotes the wick-tube or burner, with a pipe entering it a short distance from its top, as shown by *b*. This pipe *b* is bent nearly at right angles about four inches from the burner, and to the other end is attached a stop-cock, *c*. This stop-cock is constructed as follows: Its cylinder has two openings, top and bottom, the lower one for the attachment of the pipe *b*, and the upper one for the attachment of one of the pendent pipes before mentioned. The stem or plug of this cock is hollow, with an opening in one side and an opening in one end. The opening in the side of the stem is so arranged as to correspond with the openings in the cylinder of the cock. To the opening in the end of the stem is attached a small reservoir, *e*, which is made to serve as a handle of the cock. When the pendent pipes are filled with oil, as hereinafter shown, this burner, cock, and reservoir will be used as follows: The handle or reservoir *e* will be turned down as shown in the drawing by the full lines *d*. The opening in the side of the stem of the cock will now be opposite the opening in cylinder of the cock, on its upper side, which will allow the oil in the pendent pipe to flow through the hollow stem into the reservoir *e*, the air contained in the reservoir passing up into the pendent pipe, taking the place of the oil. The handle of the cock or reservoir *e* is now turned up, as shown in the drawing by the dotted lines. The opening in the stem of the cock is now opposite to the lower opening of the cylinder of the cock, which will allow the oil to flow down from the reservoir *e* through the pipe *b*, into the burner *a*, air passing up and taking its place until the opening in the side of the wick-tube is closed by the presence of oil, when it will remain stationary. When the lamp is lighted the oil is consumed till it uncovers the opening in the wick-burner, when air will again pass up into the reservoir *e*, and oil flow down again into the wick-tube, this process being repeated until all the oil in the reservoir *e* is consumed, when the reservoir is turned down again and refilled as before.

When burners are attached to all of the pendent pipes they are filled with oil in the following manner: The large reservoir is filled with oil; then, by working the pump, the oil will be forced up through the continuous pipe, and the air contained in the pipe will be forced before the oil until it escapes through the end of the return-pipe, and when the pipe is filled with oil, air will cease to escape through the end of the return-pipe, and oil will flow in its stead into the reservoir. While the oil is passing through this continuous pipe the pendent pipes and the small reservoirs attached to them will be filled. The small reservoirs will be turned down while the pipes are being filled. After the pendent pipes are filled, a cock attached to the pump for that purpose is opened, and all the remaining oil in the continuous pipe is allowed to flow back into the reservoir. This process is repeated daily when the lamps are in use. It is intended that the small reservoirs, *e*, shall hold sufficient oil to last one evening.

The essence of this invention consists in the construction of a wick-burner, pipe, and movable reservoir, combined with a hollow-stem cock, so as to supply the wick-tube with oil as fast as it shall be consumed, without any danger from overflowage, and applying these wick-tubes to lines of pipe, from which the movable reservoirs are to be supplied with oil.

I claim the combination of a wick-tube, *a*, and pipe *b*, with a movable reservoir, *e*, attached to a hollow-stem cock, the whole arranged so as to operate substantially as set forth.

A. J. WHITE.

Witnesses:

EDM. F. BROWN,
WM. HURLEY.