

No. 612,167.

Patented Oct. 11, 1898.

J. A. LIPPINCOTT.

DISINFECTING OR PERFUMING AIR OF WATER CLOSETS.

(Application filed June 24, 1897.)

(No Model.)

2 Sheets—Sheet 1.

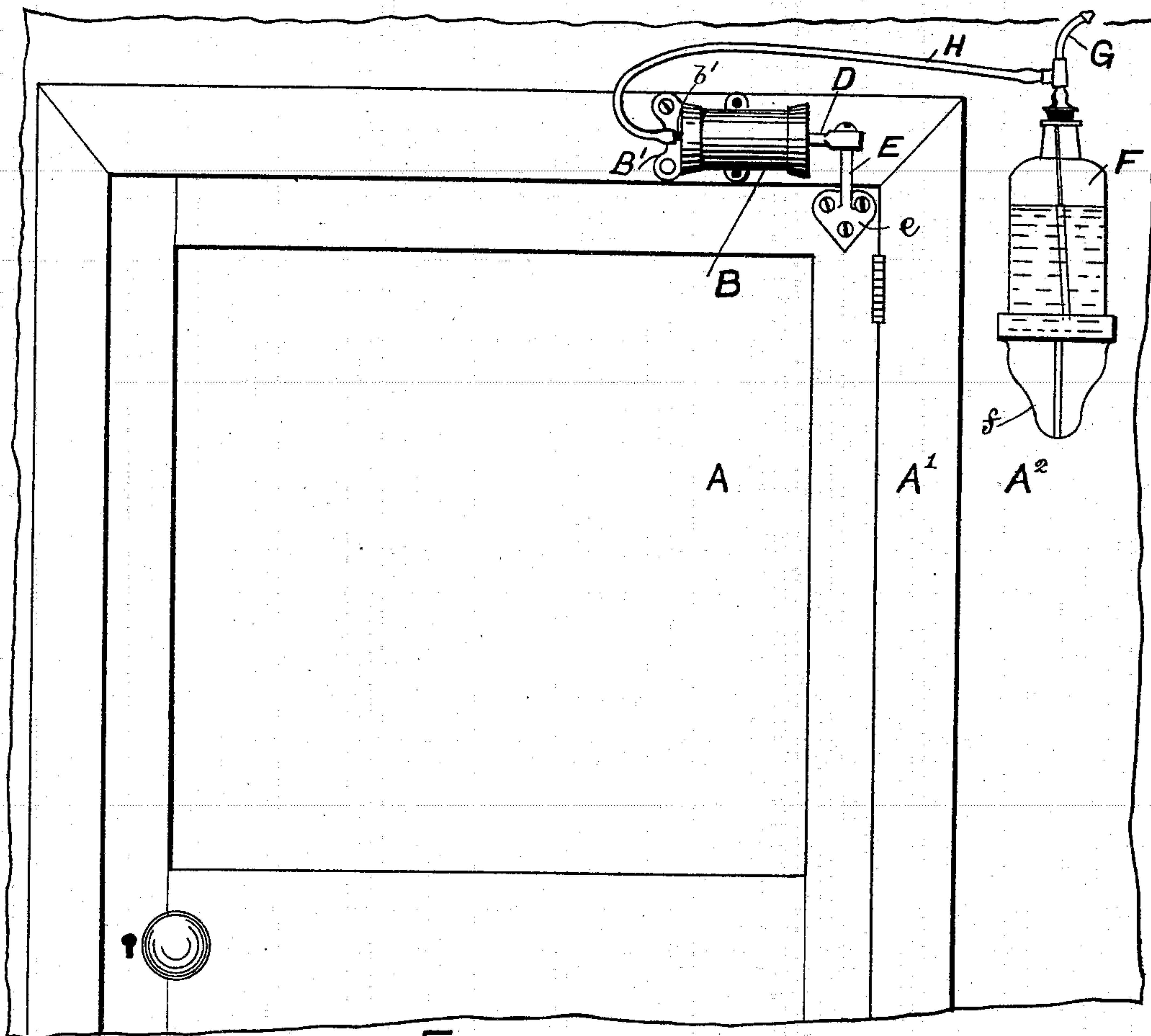


FIG. 1.

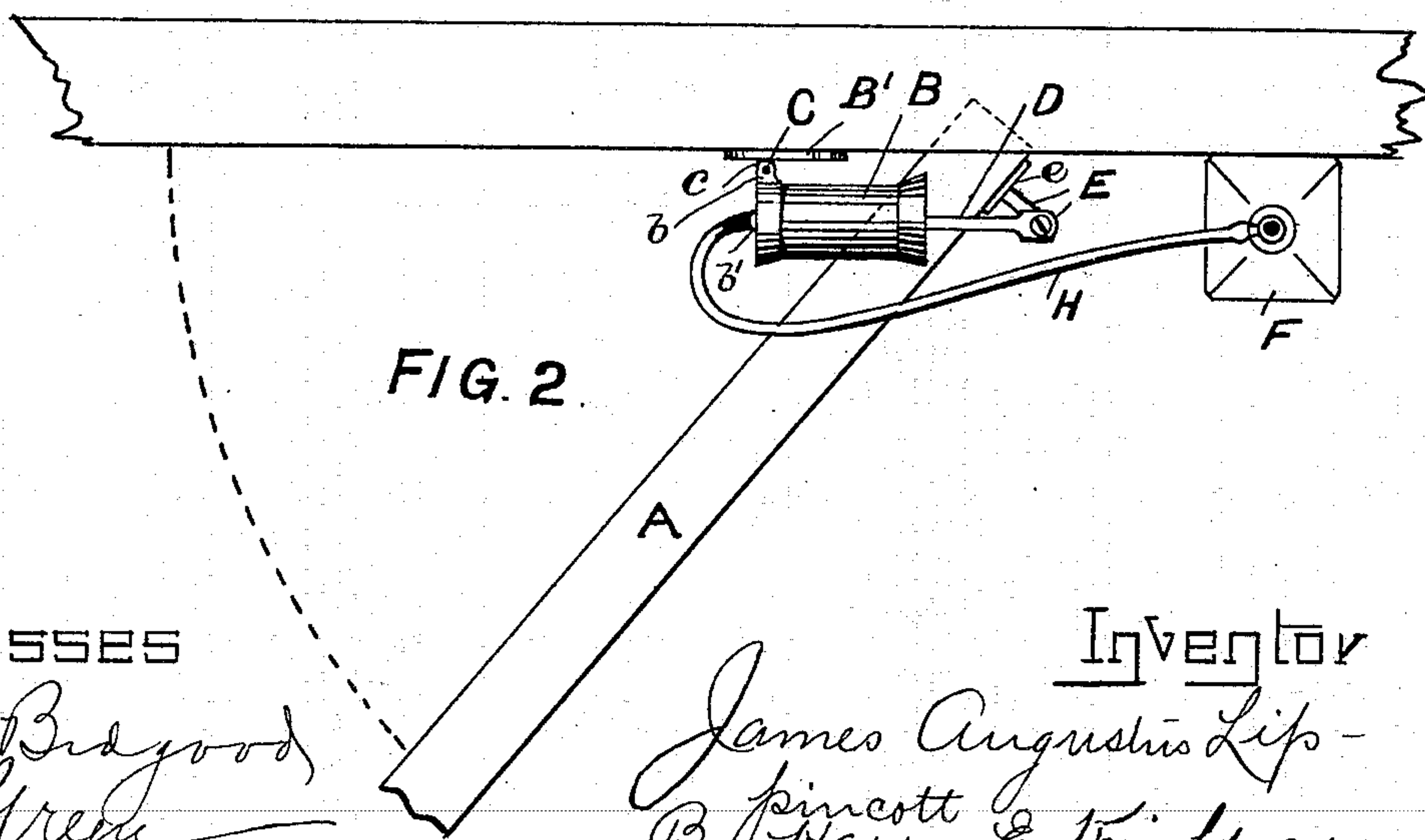


FIG. 2.

Witnesses

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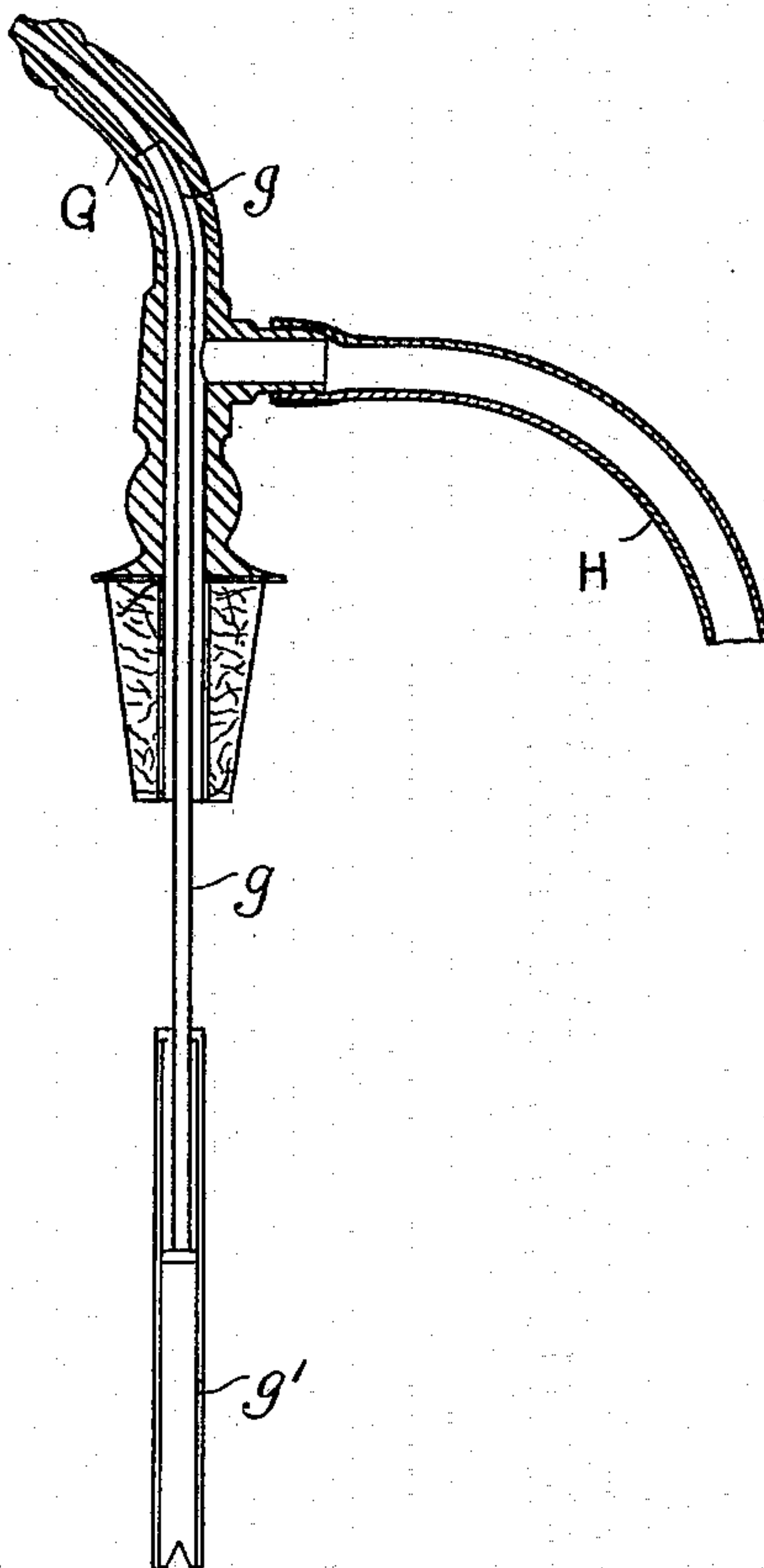
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2 Sheets—Sheet 2.

Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES A. LIPPINCOTT, OF LIVERPOOL, ENGLAND.

## DISINFECTING OR PERFUMING AIR OF WATER-CLOSETS.

SPECIFICATION forming part of Letters Patent No. 612,167, dated October 11, 1898.

Application filed June 24, 1897. Serial No. 642,039. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES AUGUSTUS LIPPINCOTT, a subject of the Queen of Great Britain and Ireland, and a resident of Liverpool, in the county of Lancaster, England, have invented certain new and useful Improvements in Disinfecting Apparatus for Rooms and Closets, of which the following is a specification.

My invention has for its object an improved arrangement of apparatus for disinfecting and at the same time perfuming the air of rooms and closets and the like every time the door of the room or closet is closed after being opened.

My invention relates to that class of disinfecting apparatus in which an air-pump and sprayer are combined; and my improvement consists in an improved construction and application of such means, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it, with reference to the accompanying drawings, in which—

Figure 1 is a front elevation of my improved disinfecting apparatus applied to a door-frame and door, the door being closed. Fig. 2 is a plan view thereof, the door being partly open. Fig. 3 is an enlarged vertical section of the spraying device, the liquid-receptacle being omitted.

A is a door having a door-frame A' secured in a wall A<sup>2</sup>.

B is the laterally-extending cylinder of an oscillating air-pump, formed with ears b, whereby it is hinged by a pin C to a vertical sleeve c, formed on a bracket-plate B', secured by suitable fastenings to the door-frame, above the door.

b' is an air-nozzle secured to the head of the cylinder.

D is the rod of a piston or plunger, one end of which has a piston or plunger working in the cylinder and the other end is pivoted to a vertical pin E, projecting in front of the top of the door-frame and having a bracket-plate e, which is fastened to the inner upper corner of the door in such a way that the opening and closing of the door shall work the piston in the cylinder B. It will thus be seen

that the cylinder will oscillate with the opening and closing of the door.

F is a bottle or receptacle for liquid disinfectant and perfume, having a sprayer G for injecting the liquid from the bottle or receptacle into the room or closet to which the apparatus is applied in the form of spray. The bottle or receptacle is supported on a bracket f, secured to the wall. This sprayer is provided with a spray-tube g, which dips down into the liquid in the bottle or receptacle, and with an air-tube g', which is connected with the air-nozzle on the air-pump on the door by a flexible tube H. By one movement of the door—say the opening thereof—air is by suction drawn through the liquid in the bottle or receptacle from the immersed portion of the tube g' into the upper part of the bottle or receptacle, from whence it is conveyed to the cylinder B by the tube H. Then by the closing or reverse movement of the door this air in the cylinder is forced back along the tube H, compressed in the bottle or receptacle, above the liquid, the action of which is to force out through the tube g of the sprayer an equivalent quantity of the liquid disinfectant, thereby discharging through the nozzle of the sprayer a spray of disinfectant into the air of the room or closet. The action of the sprayer therefore depends upon the compression of the air above the liquid in the bottle or receptacle, in which liquid the lower portion of the air-tube is immersed.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

The combination, with a door-frame and a door; of a sprayer having a vessel for containing disinfecting liquid and a spray-tube having an air-tube, a bracket whereby the sprayer is supported, a bracket-plate having a vertical sleeve and secured to the door-frame above the door, a laterally-extending oscillating cylinder formed with ears and provided with an air-nozzle, a pin whereby the sleeve and ears are connected for the purpose of hinging the cylinder to the bracket-plate, the piston having a rod, a bracket-plate having a vertical pin and secured on the inner upper corner of the door, with its pin projecting over the face of the top of the door—

frame and connected with the piston-rod, and  
an air-tube connecting the air-nozzle of the  
cylinder with the spray-tube; whereby the  
opening of the door causes the piston to draw  
5 the air through the liquid in the receptacle  
and the closing of the door operates the  
sprayer; substantially as described.

In testimony whereof I have signed my  
name to this specification in the presence of  
two subscribing witnesses.

J. A. LIPPINCOTT,

Witnesses:

G. C. DYMOND,  
W. H. BEESTON.