

No. 812,883.

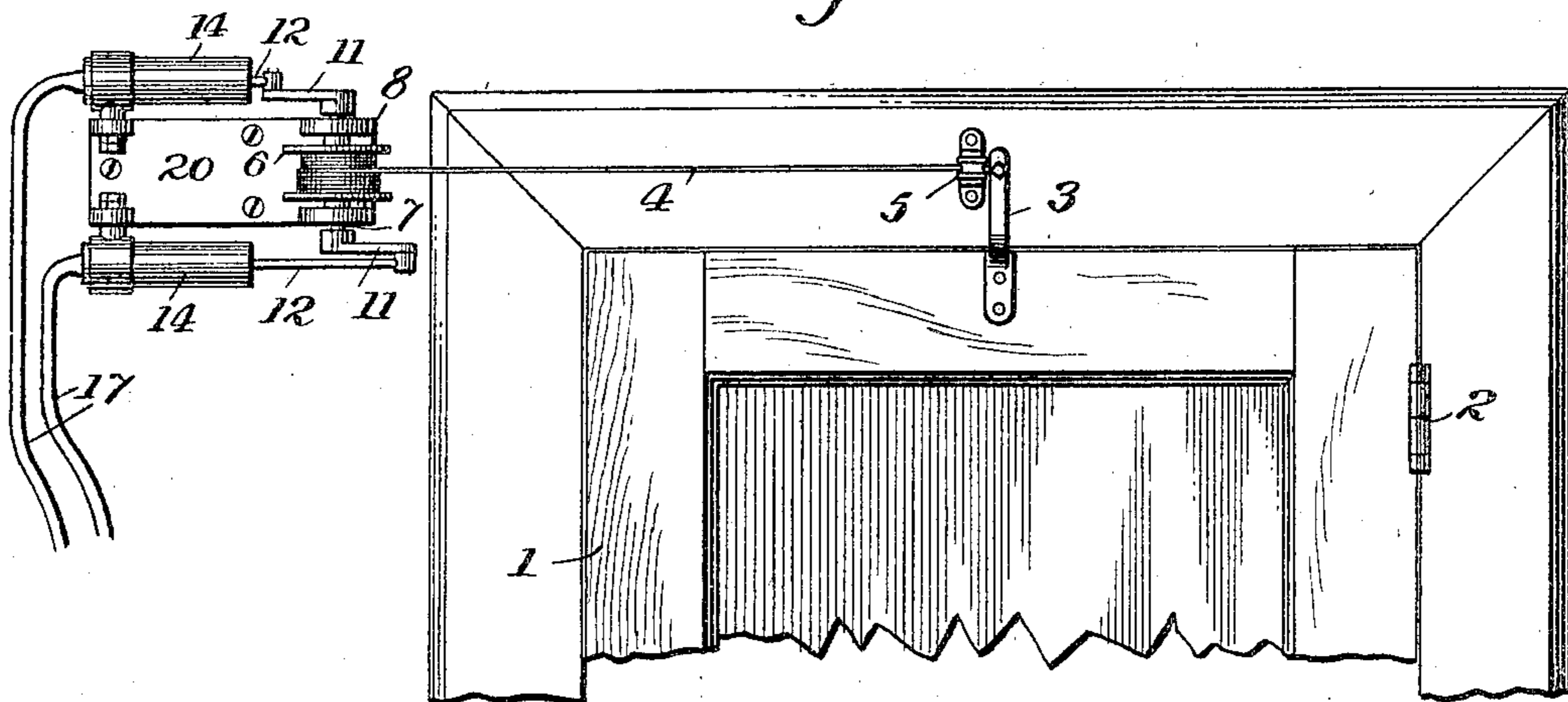
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W. H. ROSE.

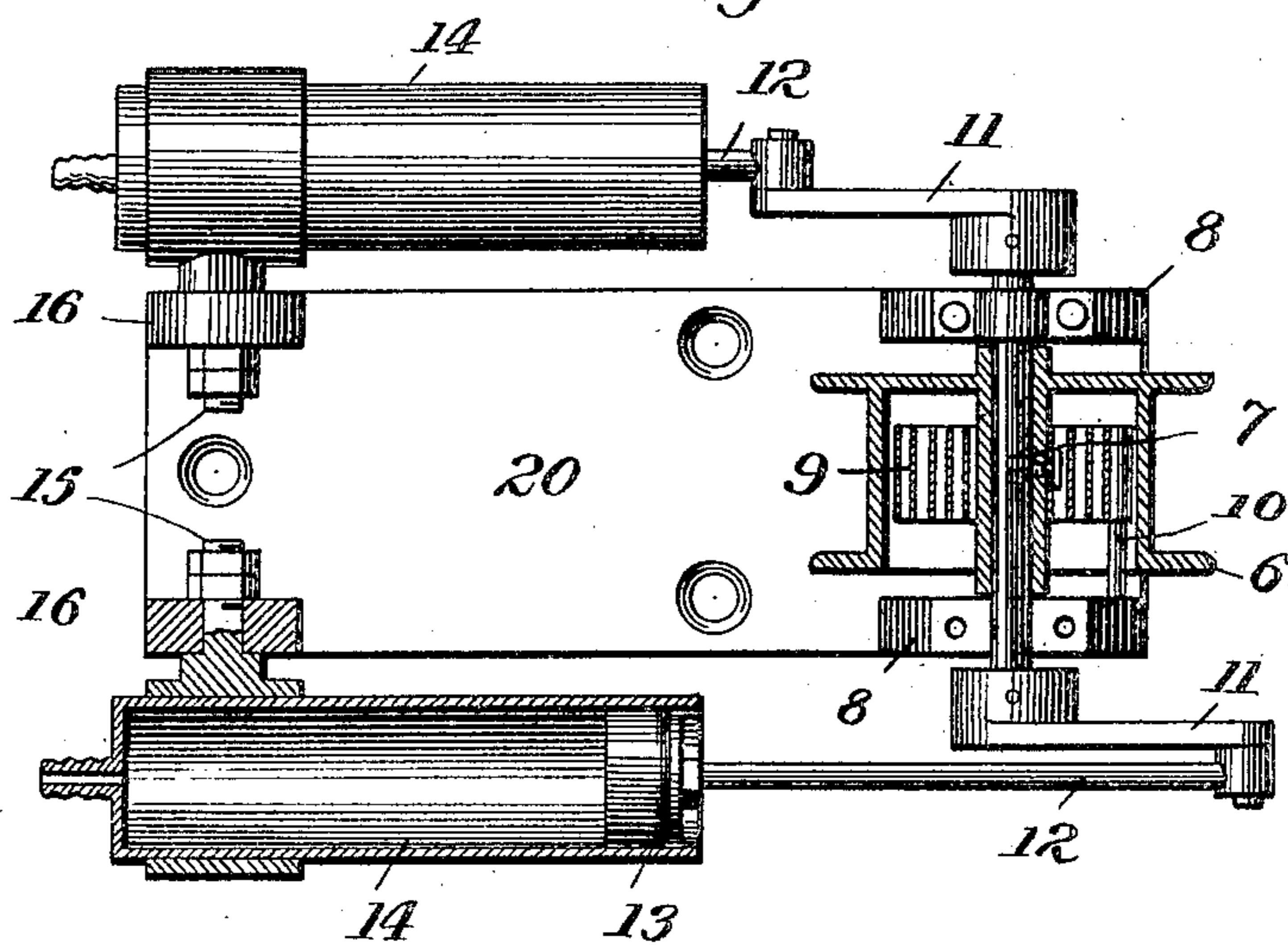
DOOR OPERATED AIR PUMP FOR ATOMIZERS.

APPLICATION FILED OCT. 30, 1905.

*Fig. 1.*



*Fig. 2.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## DOOR-OPERATED AIR-PUMP FOR ATOMIZERS.

No. 812,883.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed October 30, 1905. Serial No. 285,060.

*To all whom it may concern:*

Be it known that I, WILLIAM H. ROSE, a citizen of the United States, and a resident of Baltimore, Maryland, have invented certain new and useful Improvements in Door-Operated Air-Pumps for Atomizers, of which the following is a specification.

The present invention relates to an air-pump which is automatically operated both by the opening and closing of a door to which it is connected for the purpose of supplying air under pressure to an atomizer, the object being to spray a deodorizing or disinfecting fluid in a toilet-room or like place.

The invention is in the nature of an improvement upon the pump described in my Letters Patent No. 801,477, dated October 10, 1905.

The invention will be described in connection with the accompanying drawings, in which—

Figure 1 is an elevation of the upper part of a door and door-frame, illustrating my improved air-pump in working position; and Fig. 2 is an enlarged view of the pump, partly broken away.

Referring to the drawings, 1 indicates a door swinging upon hinges 2, and 3 indicates a bracket fastened on the upper part of the door, to which a suitable cord 4 is connected. The cord passes around a guide-pulley 5 and has its opposite end connected to a drum 6, which is fixed upon a crank-shaft 7, mounted in suitable bearings 8. A coiled spring 9 within the drum has one end connected with the drum and its other end connected to a stationary part, such as the pin 10, which is fixed to one of the bearings 8. On the ends of the shaft 7 are diametrically-opposed cranks 11, which are connected by piston-rods 12 with pump-pistons 13, running in pump-cylinders 14.

The pump-cylinders are provided with suitable pivotal mountings, such as the trunnions 15, which are mounted in bearings 16, and they are suitably connected with air-discharge pipes 17, the connections being preferably made by means of rubber or other flexible hose.

For simplicity single-acting pumps are used having cup-pistons like those commonly used in bicycle-pumps.

The operation of the invention is as fol-

lows: The bracket 3 and pulley 5 are adjusted according to requirements. If the bracket be placed near the hinge, the pump will be moved but slightly and the resistance to moving the door will be less. As the bracket is adjusted away from the hinge the amount of movement given to the cord and the pump will increase. A considerable range of adjustment of the amount of air discharged at each operation of the door can thus be provided. In other words, the discharge of air can be regulated according to the requirement of each case. It will also be noted that the discharge of air takes place during both the opening and closing of the door, the pumps being operated in one direction by the spring and in the opposite direction by the door.

The pump is preferably mounted upon a suitable base 20, adapted for convenient attachment to a wall. The pipes 17 may of course be arranged to conduct the air to atomizers located in any desired position, either in the room in which the door opens or in any adjacent room.

It will be noted that the construction described is simple and compact and comparatively inexpensive.

It is to be understood that I may use either one or a plurality of pumps connected to a spring-drum and that I may in case several pumps are used conduct the air to atomizers in different apartments, thus operating a series of atomizers from a single door.

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

1. In a door-operated air-pump, the combination with a door, of a spring-drum, a pump connected with said drum and operated thereby, a cord upon the drum, and means for connecting the cord to the door.

2. In a door-operated air-pump, the combination with a door and means for connecting a cord thereto in any desired relation to the hinge of the door, of a base plate, a crank-shaft mounted in bearings on said plate, a pump operated from said crank-shaft, a spring-drum connected with said shaft, and a cord connecting said drum with said door.

3. In a door-operated air-pump, the combination with a bracket on the door and a pulley on the door-frame, of a spring-drum, a

cord extending from said drum around said pulley to the bracket, and an air-pump operated by said drum.

4. In a door-operated air-pump, the combination with a door and means for connecting the cord thereto, of a base-plate, a plurality of pump-cylinders pivotally connected to said plate, a crank-shaft mounted on said plate and having cranks for operating the

pumps, a spring-drum connected with said crank-shaft, and a cord connecting said drum with the door.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. ROSE.

Witnesses:

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