

(No Model.)

C. N. SWIFT.  
APPARATUS FOR MOISTENING AIR.

No. 420,317.

Patented Jan. 28, 1890.

Fig. 1.

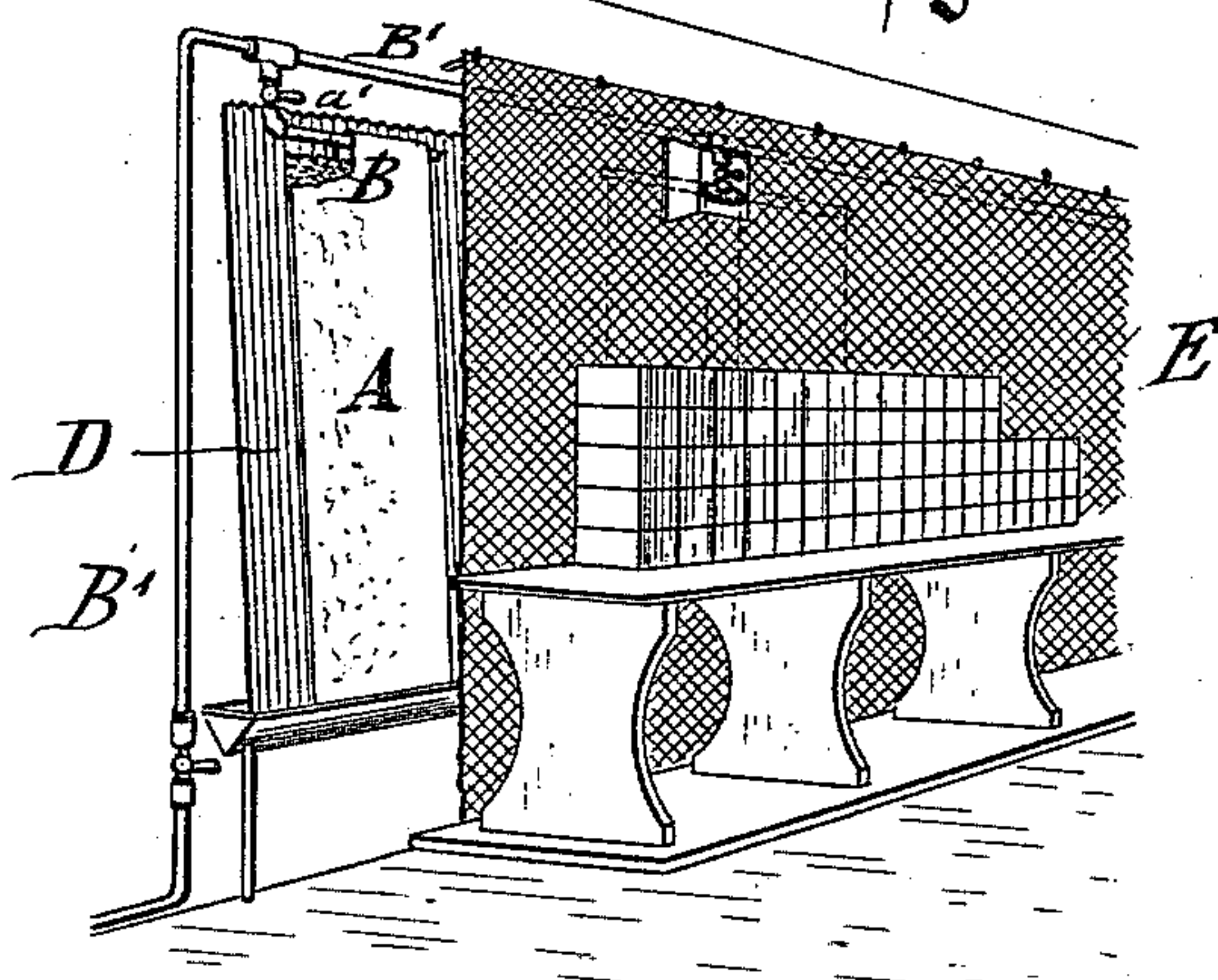


Fig. 2.

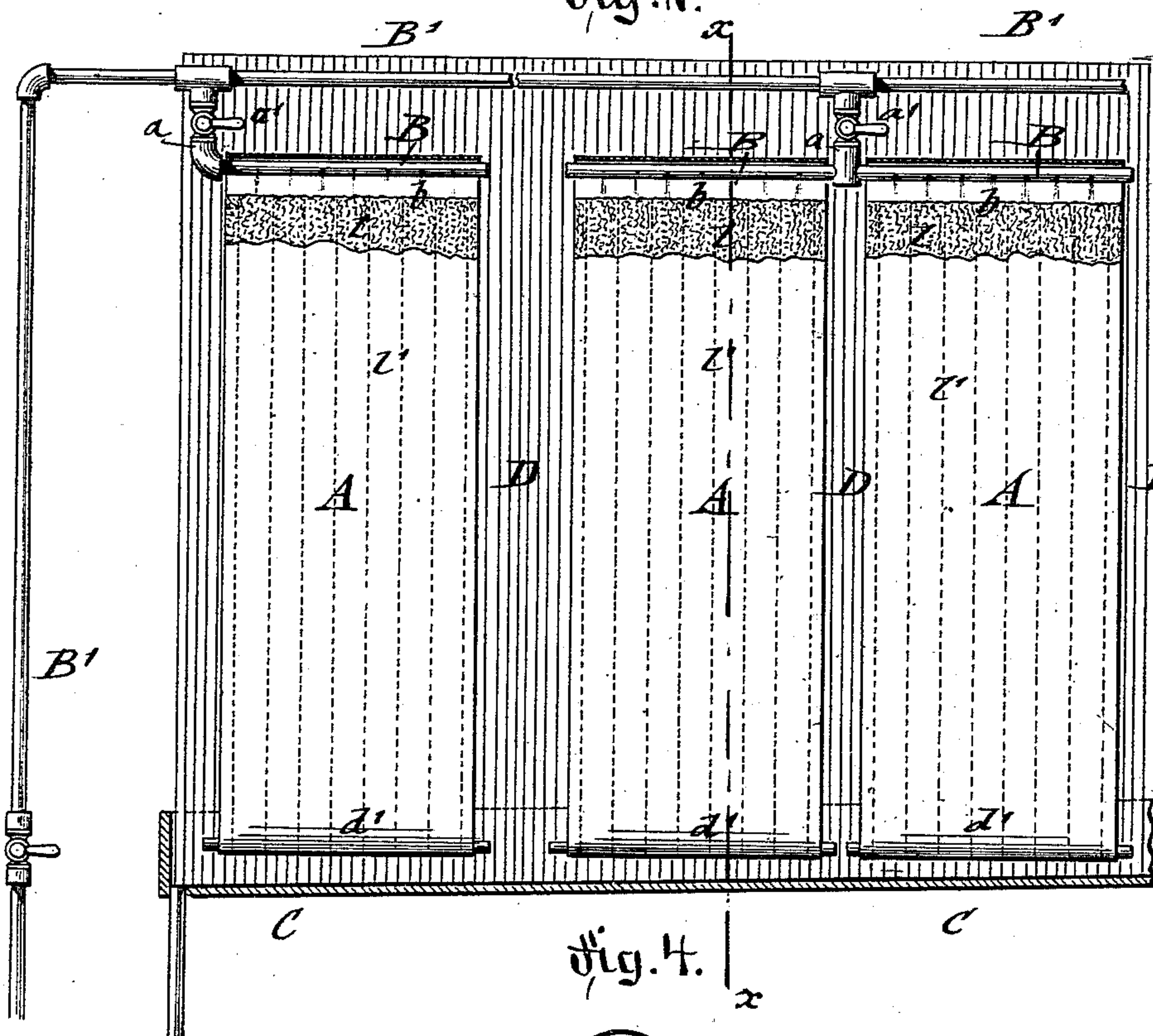


Fig. 3.

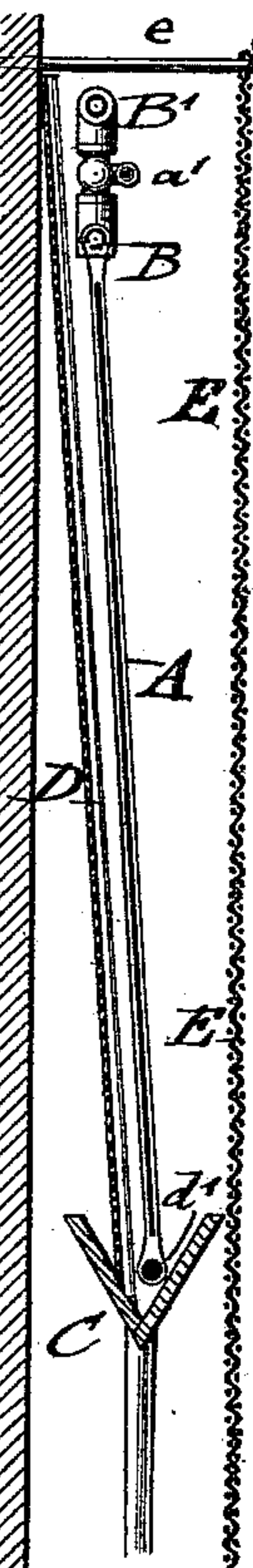
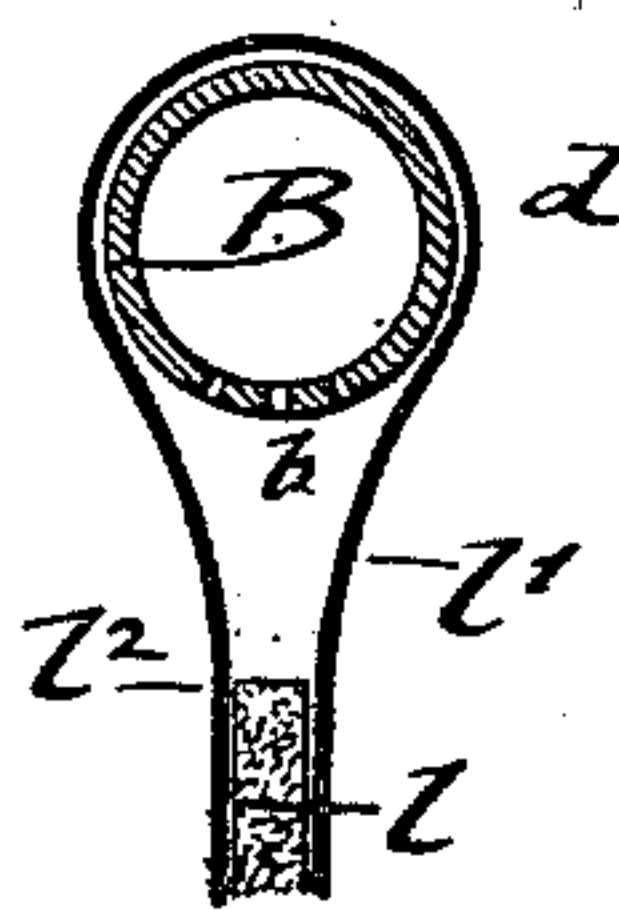


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR MOISTENING AIR.

SPECIFICATION forming part of Letters Patent No. 420,317, dated January 28, 1890.

Application filed February 28, 1889. Serial No. 301,556. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES N. SWIFT, of the city, county, and State of New York, a citizen of the United States, have invented certain new and useful Improvements in Apparatus for Moistening Air, of which the following is a specification.

This invention relates to an improved apparatus for moistening air in warerooms, cabinets, &c., in which cigars and other merchandise are stored that require a certain degree of moisture for being retained in marketable condition; and the invention consists of an apparatus for moistening air in which one or more sheets formed of absorbent material are suspended from a water-supply pipe having jet-holes by means of exterior re-enforcing layers of fabric. The absorbent sheets are arranged in front of a corrugated panel, which assists in keeping the absorbent sheet better supplied with moisture, and which conveys the surplus moisture to a trough below the sheet. In front of the absorbent sheet is arranged a screen of wire-netting, slats, or other devices, which permits the passage of moist air, but prevents the direct contact of moisture with the articles which are to be kept in moist condition.

In the accompanying drawings, Figure 1 represents a perspective view of a wareroom with my improved apparatus for moistening the air in the same. Fig. 2 is a side elevation, partly in section, and with other parts broken away, of my improved apparatus, showing the same on a larger scale. Fig. 3 is a vertical transverse section of the same on line *x x*, Fig. 2; and Fig. 4 is a detail vertical transverse section of the water-supply pipe and the absorbent sheet suspended from the same.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A A represent a number of absorbent sheets, which are suspended from water-supply pipes B B, that are provided with jet-holes *b*, and connected with the main supply-pipe B' by means of short pipes *a*, having stop-cocks *a'* for turning on or shutting off the water.

Each absorbent sheet A is formed of an interior layer *l*, of felt or other fibrous material, a front layer *l'* of bleached, and of a rear layer

*l''* of unbleached, muslin, which layers are stitched together by longitudinal lines of stitches, as shown in Fig. 2.

The upper end of each absorbent sheet A is made in the shape of a loop *d*, and suspended thereby from the water-supply pipe B, said loop serving to confine the water and conduct it to the absorbent layers. The lower end of the sheet A is formed with a loop *d'* for inserting a wooden or metal rod, by which the absorbent sheet is retained in stretched position.

Below the absorbent sheets A is arranged a trough C, which serves to collect the drip from the sheets A and conduct it off through a waste-pipe at the lower end of the trough.

Back of the absorbent sheets A is arranged an inclined corrugated panel or panels D, of sheet metal, against which the lower portion of the absorbent sheets rest, the upper portion of the sheets being set out from the upper portions of the panels, and which panels serve to secure the thorough soaking of the interior layers of fibrous or other absorbent material by the water supplied to the same, while still permitting the access of air to the rear of the sheets in the spaces between the corrugations.

The panels D of corrugated sheet metal having the ridges and grooves thereof in a vertical direction, rest against the wall of the room to be moistened, and are supported at their lower ends in the trough C, as shown in Fig. 3. A screen E, of wire-netting, slats, or other material, is suspended from hooks or brackets *e*, which are driven into the wall above the sheets A, as shown in Figs. 1 and 3, said screen extending in front of the absorbent sheets A and serving to prevent the contact of the merchandise in the wareroom with the absorbent sheets, said screen forming a protecting partition or guard between the moistened sheets and the goods stored in the wareroom.

Any suitable number of absorbent sheets are suspended from perforated water-pipes, according to the size of the room the air of which is to be kept in moist condition. These sheets are soaked with water once or oftener in twenty-four hours, according to the degree of moisture required, the water being then



shut off and the moisture supplied by the evaporation of the water from the absorbent sheets. Care has to be taken that the entire body of the absorbent sheets is saturated  
5 with water, which is greatly assisted by the inclined corrugated panels back of the same, by which the uniform moistening of the absorbent sheets with the water supplied from the jet-holes of the supply-pipes is produced  
10 and the partial moistening of the sheets prevented.

By my improved apparatus a wareroom or other space can be kept at a proper degree of moisture with great facility and at comparatively small expense, as no movable parts  
15 and power for driving them are required, and as the absorbent layers, when once properly soaked, give off the required moisture in a reliable and effective manner.

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

1. In an apparatus for moistening air, the combination of a perforated water-supply pipe, a sheet of absorbent material having its  
25 upper end covering said pipe and provided with a transverse rod in its lower end, an inclined corrugated-metal plate having vertical grooves, and a trough below said plate and sheet, the upper end of the sheet being  
30 free or set out from the plate and the lower end and its rod resting against said plate.

2. In an apparatus for moistening air, the absorbent sheet consisting of an inner layer of felt or fibrous material and outer layers of  
35 muslin, said layers being secured together by vertical rows of stitching.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CHAS. N. SWIFT.

Witnesses:

PAUL GOEPEL,  
JOHN A. STRALEY.