

(No Model.)

W. H. ARMSTRONG.
AIR MOISTENER.

No. 545,440.

Patented Sept. 3, 1895.

Fig. 1.

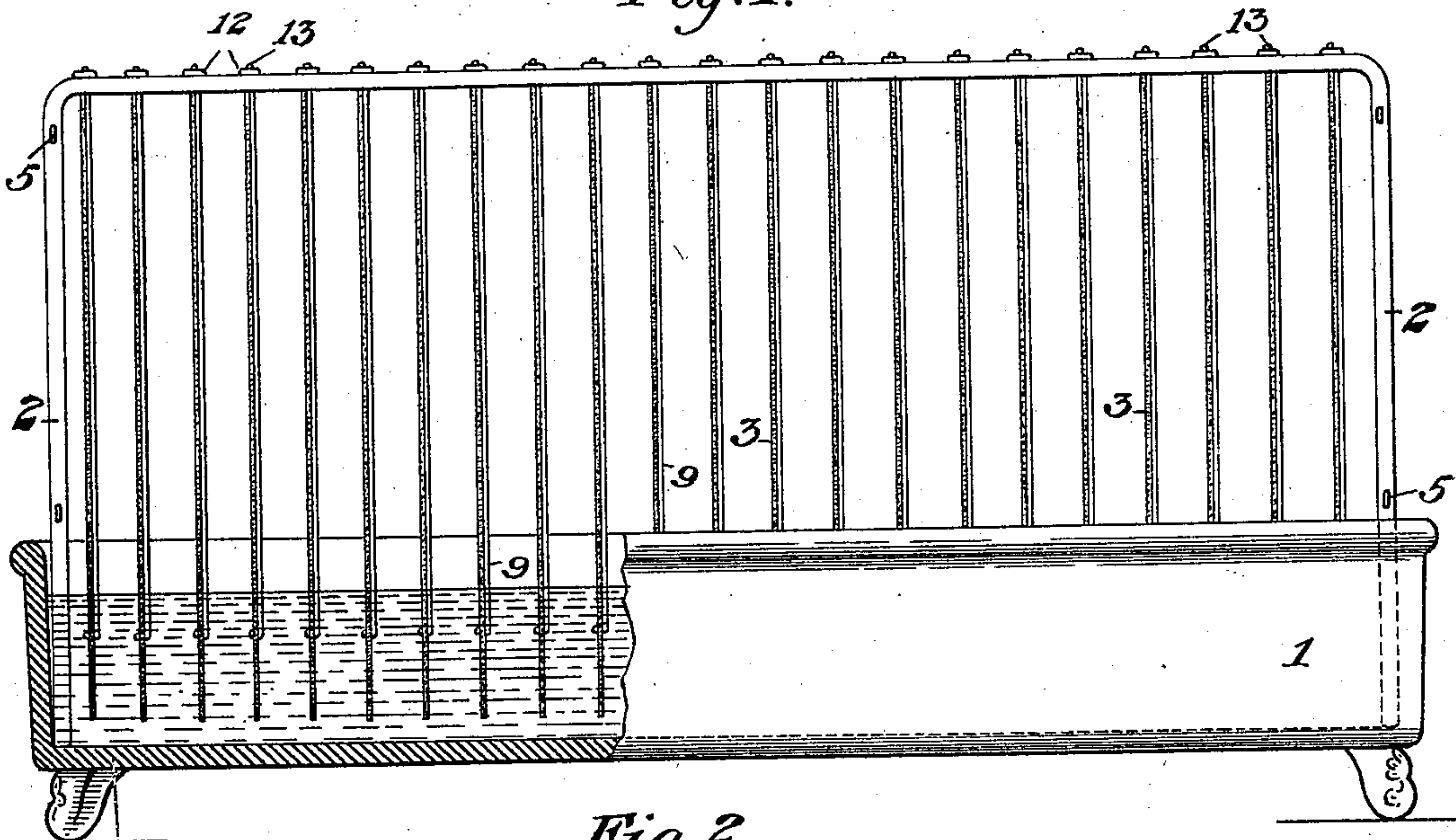


Fig. 2.

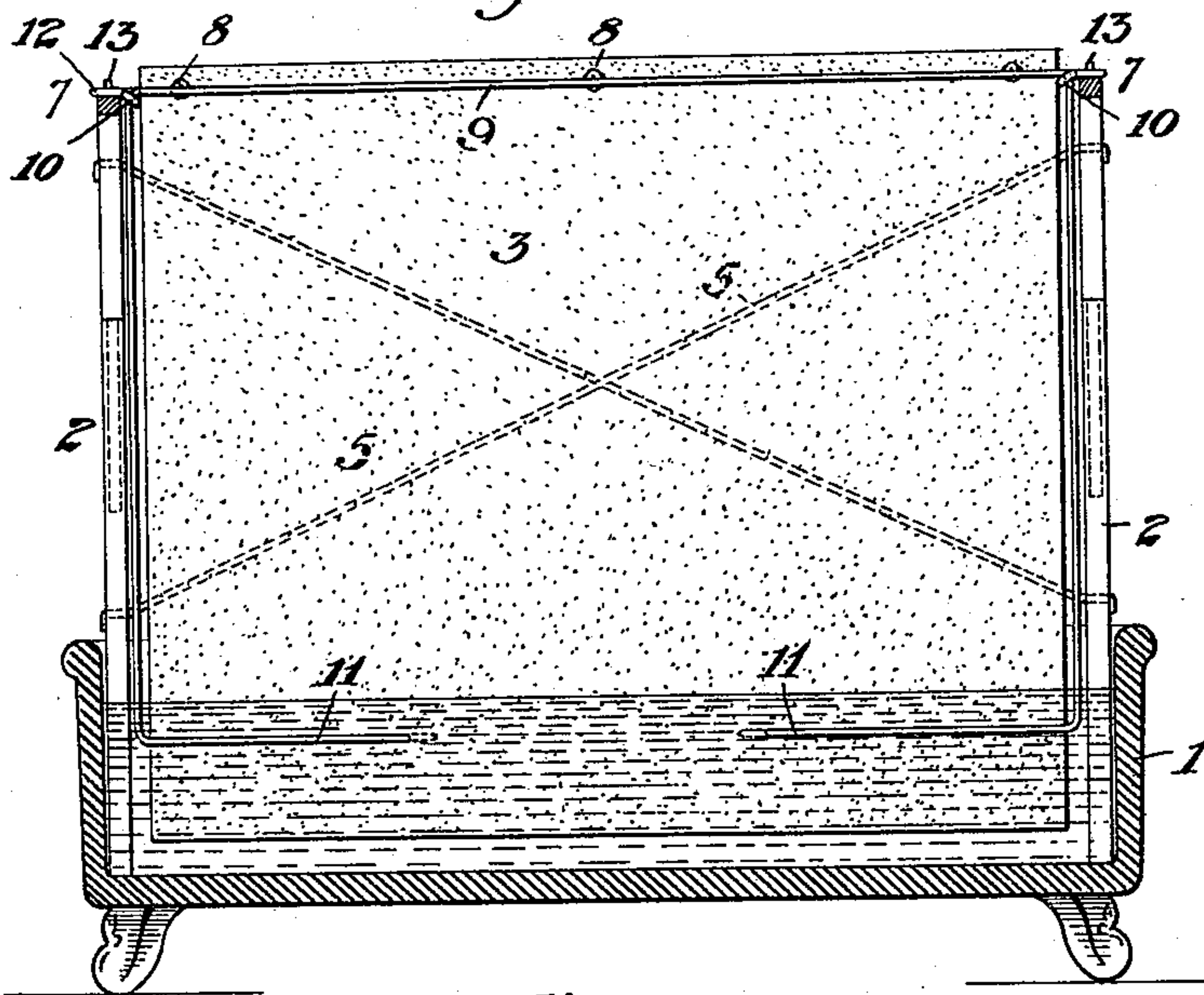
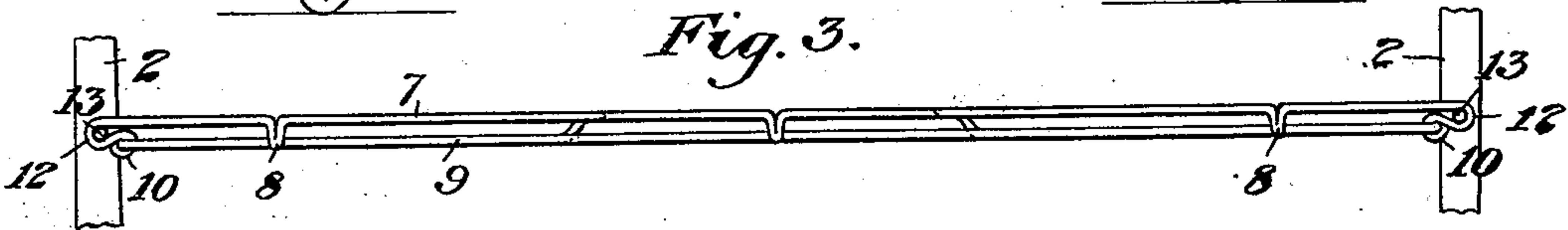


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM HAMMOND ARMSTRONG, OF HAGERSTOWN, MARYLAND.

AIR-MOISTENER.

SPECIFICATION forming part of Letters Patent No. 545,440, dated September 3, 1895.

Application filed December 13, 1894. Serial No. 531,686. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HAMMOND ARMSTRONG, a citizen of the United States of America, residing at Hagerstown, in the
5 county of Washington and State of Maryland, have invented certain new and useful Improvements in Air-Moisteners, of which the following is a specification, reference being had therein to the accompanying drawings.

10 I hereby declare the following specification to be a full, clear, and exact description of my invention, which will enable others skilled in the art to which it appertains to make and use the same.

15 The object of my invention is to prevent the desiccating and injurious action of high temperature in buildings artificially heated. With the rise of the temperature the capacity of air for holding moisture is greatly increased.
20 Unless adequate provision be made to supply this deficiency, the woodwork of the room is not only cracked and damaged, but the moist secretions of the respiratory mucous surfaces are quickly evaporated, often producing
25 sore throat and other kinds of inflammatory diseases.

Heretofore evaporating-pans, with other complex expensive apparatus attached to hot-air furnaces, have been used for the purpose
30 of supplying and maintaining the necessary moisture in artificially-heated rooms and buildings.

My invention is not attached in any manner to the heating apparatus.

35 It consists, among other things, of certain combinations, hereinafter more fully described and set forth, by means of which the required moisture can be maintained. I use a wire cage or frame having parallel sides
40 and ends, corners constructed at right angles and properly braced, adapted to hold suspended side by side from its upper parallel side bars sheets of blotting-paper or other
45 suitable porous material, with their lower edges standing in and slightly resting upon the bottom of a suitable pan or water-receptacle, the water being raised to the broad surface of said sheets by capillary attraction. Said cage or frame can be removed from the
50 water-receptacle, together with all the sheets, or any sheet can be removed separately and replaced without in any way interfering with

any other sheet. Thus the object of my invention is attained by means of mechanism illustrated in the accompanying drawings, in
55 which—

Figure 1 shows a side elevation of pan or water-receptacle with side cut away and a side elevation of wire cage or frame and edges of sheets of porous material. Fig. 2 shows a
60 sectional end elevation of water-receptacle, an end elevation of wire cage or frame, and a side elevation of sheets of porous material. Fig. 3 shows a plan view of a section of the upper part of the wires 7 and 9, adapted to
65 holding sheets of porous material.

In the drawings, 3 is an edge view of sheets of porous material. 5 shows end braces of wire cage or frame. 8 shows bent projections on the suspending-wire 7. 10 shows loops at
70 the end of the suspending-wire 7. 12 shows loops near the end of the suspending-wire 7. 13 shows loops or upward projections from the upper bar of the parallel sides of the cage or frame.

75 I do not confine myself strictly to a wire cage or frame structure, or that it must be constructed of wire at all. It may be constructed of any suitable material. For instance, it may be constructed of a single sheet
80 of metal, with corners bent at right angles, the parallel sides and ends being perforated, or it may be constructed of four pieces of metal, with posts, having the parallel sides and ends of the frame perforated in fancy
85 design; but I prefer the use of wire.

My device is inexpensive, neat, compact, and can be placed anywhere in an apartment, no active current of heated air being necessary to produce evaporation. The water
90 passing the porous material is filtered, thus affording purified vapors to the air. If desired, the atmosphere can be suffused with fragrant or medicated vapors by introducing the requisite materials into the water-recep-
95 tacle. The upper parallel side bars of said cage or frame may be constructed in a series of small loops bent upward a short distance asunder and exactly opposite to each other, being marked 13 in the drawings, and adapted
100 to receive the loops 12 at the end of the wire 7.

To place the sheets in position, a sheet of porous material—as, for instance, blotting-paper—is cut to the proper size, the edge slipped

between the wires 7 and 9, as shown in Fig. 3, the bent projections 8 of said wire 7 passed through the edge of the sheet, and the ends of the wire 9 being bent at right angles, are
5 passed down through the loops 10 by the side of the ends of said sheet till near the bottom, the ends of said wire 9 being again bent at right angles inwardly toward the middle to pass along the side of said sheet, being finally
10 threaded through the sheet 11, as shown in Fig. 2, the loops 12 of the wire 7 being adapted to pass over the projections 13 on the wire cage or frame, by which the wire 7 is suspended, thus suspending and holding the
15 sheet perpendicular in place with its lower edge reaching to the bottom of the water-receptacle.

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

1. In an air moistener, the combination of

the water receptacle or pan 1, the wire cage or frame 2 and the sheets of porous material 3 as and for the purpose substantially as set forth and described.

2. In an air moistener, the combination of the water receptacle, the wire cage or frame, the wires 7 and 9, and the sheets of porous material substantially as described and set forth.

3. In an air moistener, the combination of the water receptacle, 1, the wire cage or frame 2, the wire 7 with its bent projections 8 and loops 10 and 12, the wire 9, and the sheets of porous material 3, as and for the purposes sub-
stantially as described and set forth.

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

WILLIAM HAMMOND ARMSTRONG.

Witnesses:

W. H. HOWARD,

ALLEN YINGLING.