

May 5, 1925.

1,536,741

E. G. ALDEN

HUMIDIFIER

Filed April 7, 1923

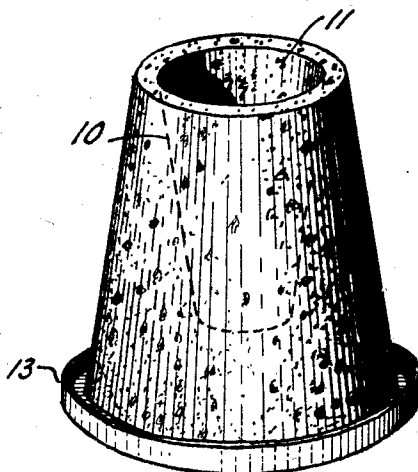
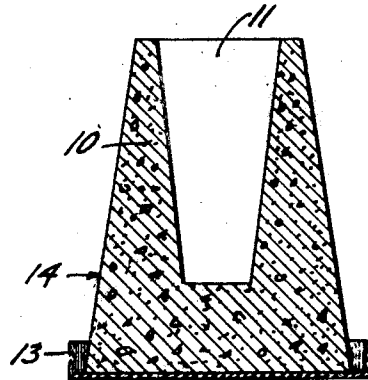
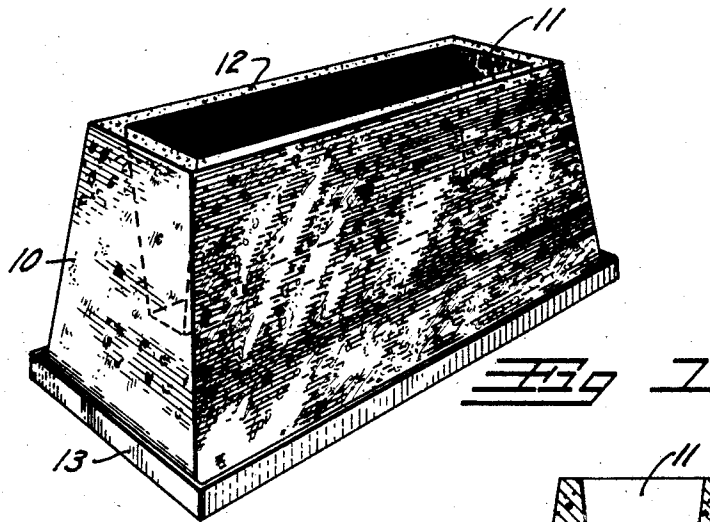


Fig 2

Fig 3

INVENTOR.
EARLE G. ALDEN
BY
R. H. Gallbreath
ATTORNEY.

UNITED STATES PATENT OFFICE.

EARLE G. ALDEN, OF DENVER, COLORADO.

HUMIDIFIER.

Application filed April 7, 1923. Serial No. 630,523.

To all whom it may concern:

Be it known that I, EARLE G. ALDEN, a citizen of the United States of America, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Humidifiers, of which the following is a specification.

This invention relates to humidifiers or air moisteners, more particularly of the type adapted to be placed in tobacco show cases, wall cases and storage containers for tobacco.

The usual type of humidifier at present in use in tobacco cases consists of a brick of porous clay, shaped in convenient forms, which must be removed from the cases at regular intervals and soaked in water. The task of removing, soaking and replacing these bricks is quite arduous in a large sales-room since it necessitates the removal of a portion of the stock from the cases and in addition it is a messy and disagreeable job. For this reason, the task is usually avoided as long as possible by the clerks and as a result the tobacco suffers from the lack of humidity.

The principal object of this invention is to so construct the humidifier or moistener that its removal from the case will not be necessary when it is desired to supply the water.

A further object of the invention is to provide a porous container having a recess for the reception of water, the walls of said recess being shaped in such relation to the said recess as to cause the water to become uniformly distributed throughout the cellular spaces of the container material.

A still further object of the invention is to provide a humidifier consisting of a porous container provided with a recess for the reception of liquid, the cubic capacity of said recess being practically equal to the cellular capacity of said container.

With these and other objects, which will become more apparent from the following description, in view, the invention will now be described in detail reference being had to the accompanying drawing which forms a part hereof. Like numbers refer to like parts throughout the description and in all views of the drawing.

In the drawing:

Fig. 1 is a perspective view of the preferred form of the invention.

Fig. 2 is a perspective view of another form which differs from the preferred form only in shape.

Fig. 3 is cross sectional view showing how a cross section taken through either of the forms would appear.

The invention comprises a block of porous clay or similar absorbent material 10. Block 10 may be formed in any desired shape, provided the to be described relations are maintained. It is preferred to have the block 10 rectangular as to plan, as shown in Fig. 1, it might, however, be formed circular as to plan, as shown in Fig. 2.

Block 10 rests in a pan 13, of proper shape to conform to the bottom of the block 10.

The width or diameter, as the case may be, of block 10 is less at the top than at the bottom. A recess 11 is formed in the upper face of block 10, the width or diameter of which is less at the bottom than at the top.

Recess 11 terminates above the bottom of the block 10 a distance practically equal to the thickness of the side walls at this point. It will be noted that the sides of the recess 11 increase appreciably in thickness as they approach the bottom. The reasons for this are best explained as follows:

It was found that, when the humidifier was formed as a simple porous water container with walls and bottom of equal thickness throughout, for instance equal to the present top thickness (indicated at 12), and the recess 11 filled with water, the water would soon seep through the bottom and lower parts of the walls. The only part which would become properly saturated and retain its moisture would be the upper part of the sides for the water would have receded from here before it seeped through the walls. When the container was made with walls of even and greater thickness, as for instance of a thickness equal to the thickness at 14, Fig. 3, the lower portions of the walls would become properly saturated but the moisture would not come through to the outer faces at the upper portions of the walls owing to the fact that it had receded from here before saturation had been reached.

The walls were then made, as embodied

in this invention, of increasing thickness as the bottom was approached, the contour of the cross section closely following the line of maximum saturation from one filling of the recess 11.

Owing to the porosity of the material of the block 10, water could not be retained in the recess 11 but would seep through into the pan 13 after the saturation point was reached. The block 10 and the recess 11 are therefore so proportioned that one filling of the recess 11 will practically fill the cellular space of the block 10. The inner faces of the walls of the recess then become evaporation surfaces similar to the outside faces thereof. This is one of the important features of the invention since it enables the use of a smaller humidifier than at present in use without sacrificing any of the evaporation surface.

When in use, water is simply poured into the recesses 11 of the various humidifiers in the cases at regular intervals. Any excess of water supplied will be retained in the pans 13 and drawn into the lower portion of the blocks 10 as the water therein evaporates. It is not necessary to disturb the humidifiers.

It is desired understood that the object of the invention could also be accomplished by having the block 10 of even width or diameter throughout its height and increasing the angle of the recess sides, or by having the recess 11 of even width throughout

its depth and increasing the angle of the sides of the block 10. These forms, however, have not been found as satisfactory as the one disclosed.

While a specific form of the improvement has been described and illustrated herein it is desired understood that the same may be varied, within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:—

1. A humidifier comprising a block of porous material having a recess formed in the top thereof, the cubical contents of said recess being substantially equal to the cubical capacity of the cellular spaces in said porous material.

2. In a humidifier comprising a liquid container, the combination of porous walls for said container which increase in thickness from the top to the bottom thereof.

3. In a humidifier comprising a liquid container, the combination of porous walls for said container which increase in thickness from the top to the bottom thereof, and a porous bottom therefor of thickness substantially equal to that of the walls at their thickest point.

In testimony whereof I affix my signature.

EARLE G. ALDEN.