

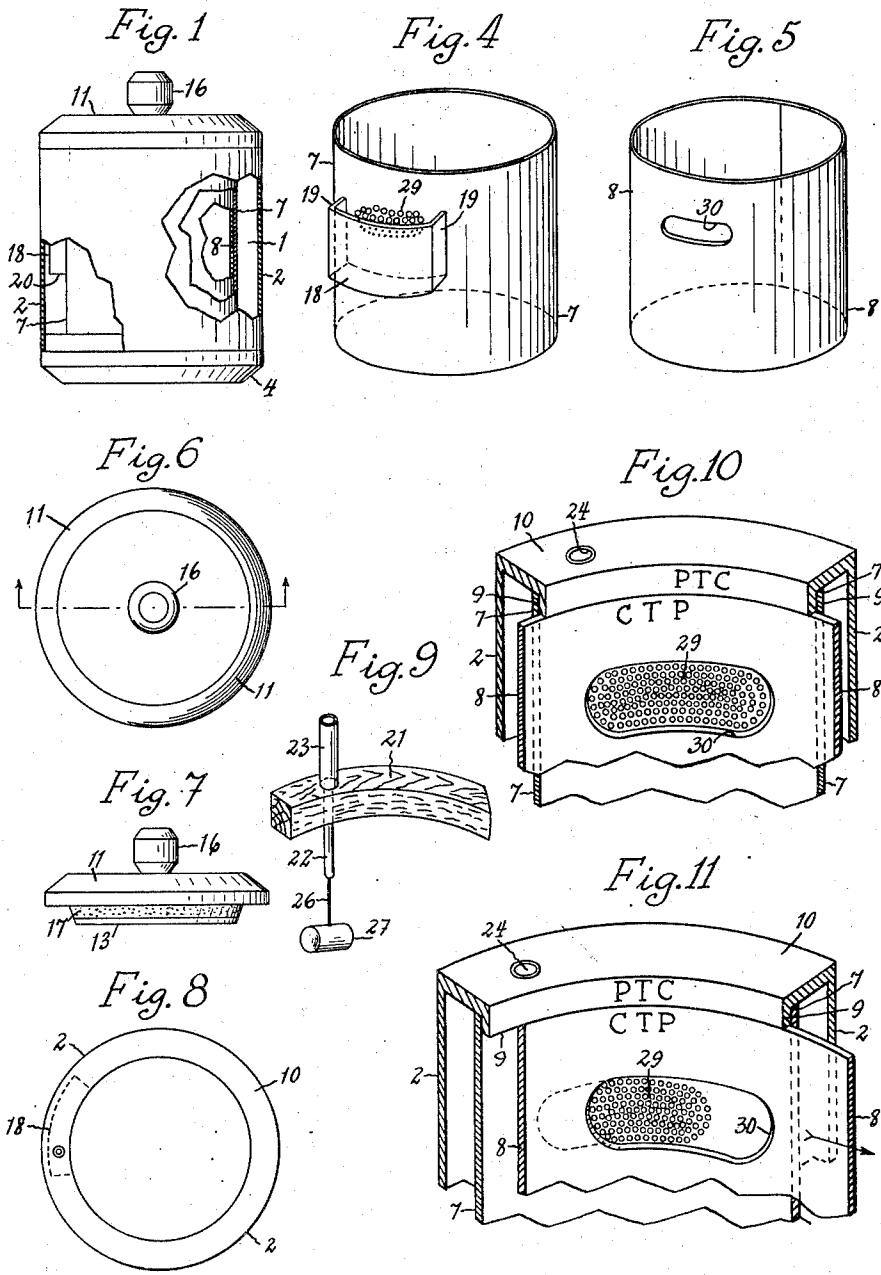
July 24, 1951

J. S. LOMBARD
HUMIDIFIER

2,561,805

Filed April 10, 1945

3 Sheets-Sheet 1



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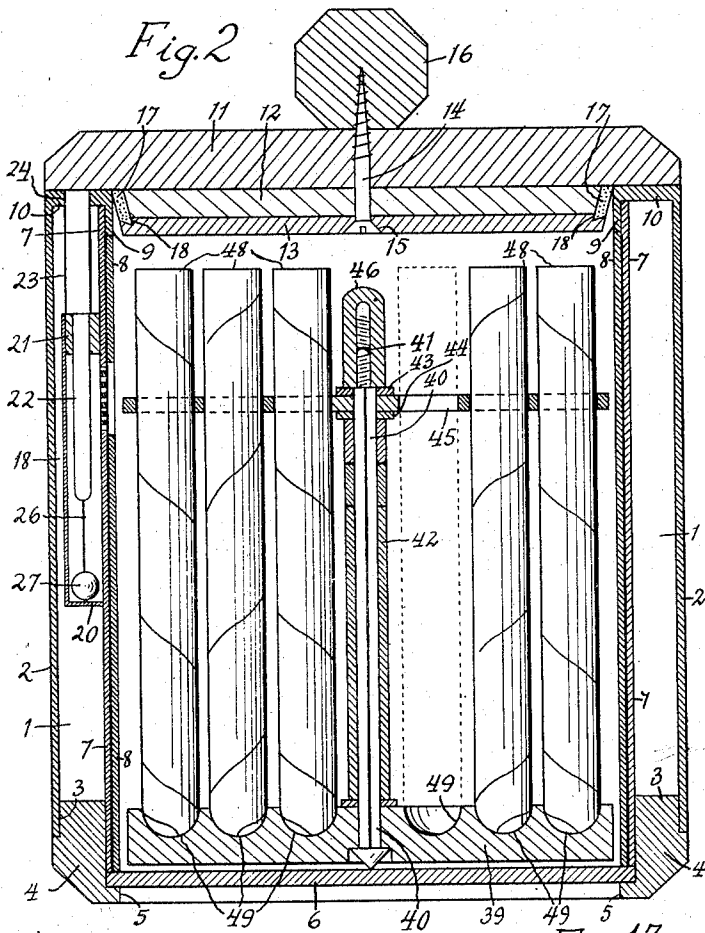
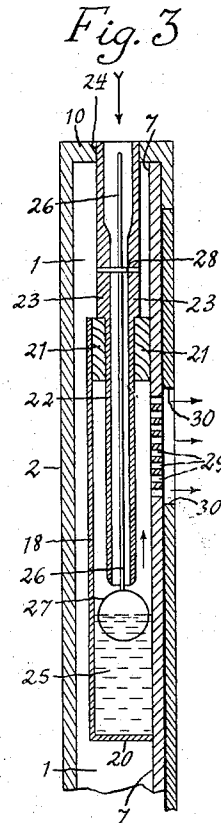
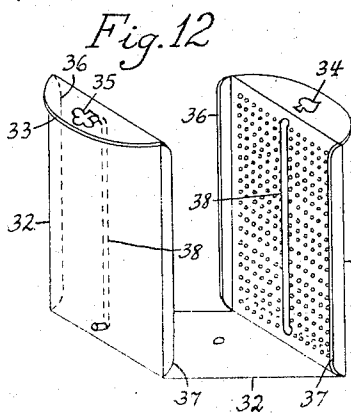
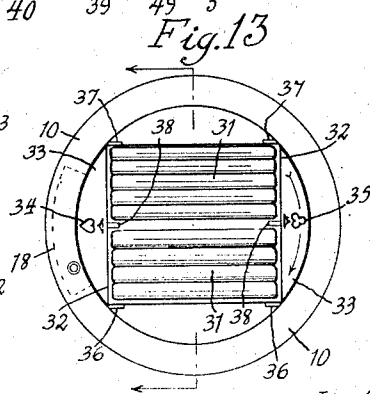
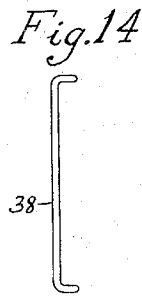
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3 Sheets-Sheet 3

Fig. 16

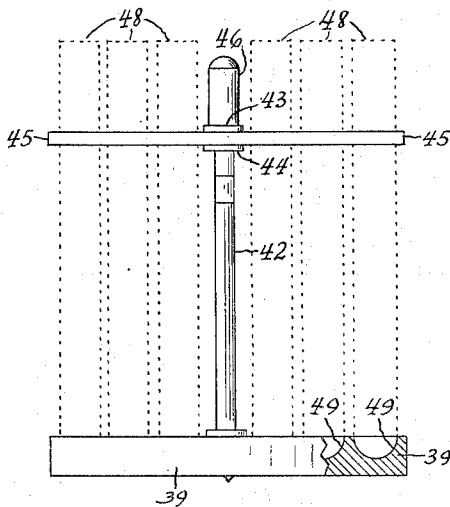


Fig.17

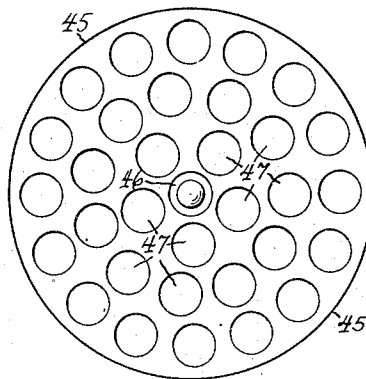
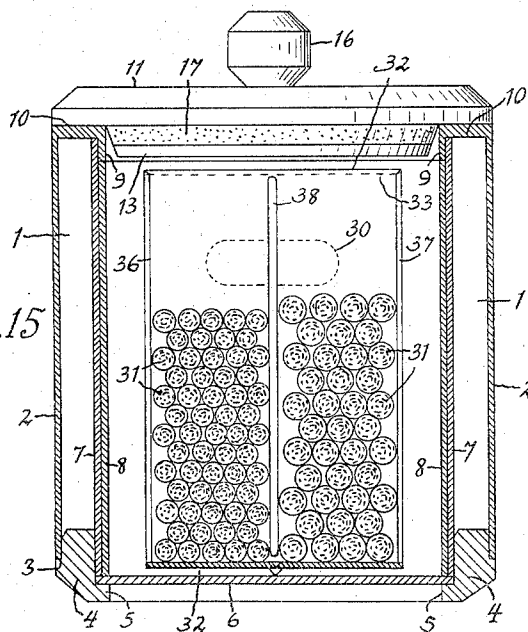


Fig.15



UNITED STATES PATENT OFFICE

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HUMIDIFIER

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Application April 10, 1945, Serial No. 587,510
In Cuba April 14, 1944

4 Claims. (Cl. 312—31)

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This invention relates to a humidifier for tobacco and is adapted for the storage and humidifying of tobacco in its three smoking forms, namely, cigars, cigarettes and pipe mixtures.

It is an object of the invention to provide a device in which the tobacco may be stored and during its storage may be supplied with the desired and varying amount of moisture in the optimum amount for the particular tobacco within the humidifier.

It is a further object of the invention to so construct the device that cigars, cigarettes and smoking tobacco may readily be placed in, and removed therefrom, without disturbing the humidifying element of the device.

A still further object of the invention is to provide a device which includes a tray into which cigarettes may be placed and which, when it is placed within the body of the humidifier, will permit the tobacco within the cigarettes to directly absorb moisture through the ends of the cigarettes, rather than through the paper jackets thereof.

A still further object of the invention resides in incorporating in the device a removable tray which will support cigars in such position that moisture will be supplied not only to the wrappers of the cigars but also to the ends of the fillers thereof.

A still further object of the invention resides in so constructing the cigarette supporting tray that a group of cigarettes may be simply dropped into the tray and they will arrange themselves in parallelism in such manner that they may be easily and individually removed from the tray without the removal of the tray from the body of the humidifier.

It is still another object of the invention so to construct the cigarette tray and to so mount it within the body of the humidifier that its position with respect of the humidifying element of the device may be varied.

A still further object of the invention is so to construct the humidifying element that the presence or absence of the humidifying water, and also the level of the same, will be readily visible to the user.

Other objects of the invention will appear as the description progresses, and it is thought unnecessary to here point them out in detail.

In the drawings:

Figure 1 is an elevation, partly broken away, of a humidifier constructed in accordance with my invention and which is particularly useful for cut tobacco such as pipe tobacco;

Figure 2 is a vertical sectional view of a humidifier constructed in accordance with my in-

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vention and which humidifier is particularly adapted for use in connection with cigars;

Figure 3 is an enlarged partial vertical sectional view showing the humidifying element used in connection with the form of invention that is adapted for both cigars and cigarettes;

Figure 4 is an elevation of the fixed wall of the tobacco container of the form of the invention disclosed in Figure 1;

Figure 5 is a view similar to Figure 4 of the revoluble wall of the device shown in Figure 1;

Figure 6 is a top elevation of the form of the invention shown in Figure 1;

Figure 7 is a side elevation of the form of cover that is used in the various forms of the invention;

Figure 8 is a top view of the form of the invention shown in Figure 1 with the cover removed;

Figure 9 is a fragmental detail perspective view of a portion of the construction shown in Figure 1;

Figure 10 is a fragmental perspective view showing the relation between the fixed and movable walls of the tobacco container in the form of the invention shown in Figure 1 where the humidifying openings are completely uncovered by the movable wall;

Figure 11 is a view similar to Figure 10 but showing an adjustment of the movable wall;

Figure 12 is a perspective view of the cigarette tray of the form of the invention shown in Figure 15 of the drawings;

Figure 13 is a plan view with the cigarette tray in place and with the cover removed of the form of the invention shown in Figure 15 of the drawings;

Figure 14 is a detail of the partition shown in Figure 12 of the drawings;

Figure 15 is a vertical sectional view of the form of the invention for use with cigarettes;

Figure 16 is a side elevation partly in section of the cigar rack of the form of the invention shown in Figure 2; and

Figure 17 is a top plan view of the cigar support of the rack of Figure 16.

Referring now to the features of the invention that are common to the forms shown in Figures 1, 2 and 15, the body or container, which is preferably but not necessarily cylindrical in form, includes a double wall with a sealed dead air space 1 between the walls, the outside wall 2 being secured and sealed at its lower edge in a groove 3 of an annular base member 4, which member is provided with an inwardly extending flange 5 on which is supported a bottom 6 which is slightly spaced above the lowermost extent of the flange 5. The fixed interior wall 7 is supported on the bottom 6 and within a

downwardly extending flange 9 of the top portion 10 of the outer wall 2.

The inner or movable wall 8 is revolvably mounted on the bottom 6 and abuts against the lower edge of the flange 9. The bottom is preferably, though not necessarily, formed of wood and the walls 2, 7 and 8 may be formed of plastic, metal or other desirable material. I preferably form the bottom 6 of plywood in which the grain of contiguous plies run in angular relation to each other.

The top or cover is preferably formed of three wooden disclike members 11, 12 and 13, with the grain of the contiguous plies running at angles to each other. These discs are held together by suitable means, such as a screw 15, to which is attached a finger knob 16.

The upper disc 11 is relatively larger than the lower discs 12 and 13 in diameter and rests flush over the upper face of the portion 10 of the double wall. The disc 12 is provided with a compressible band 17, such as cork, which is preferably of inverse frusto-conical form, and is of such diameter as to tightly engage the flange 9 heretofore described, and is provided with a dovetail joint at 18' with the disc 13 to insure the retention of the band in position during use, thus providing an airtight closure for the interior of the container.

Inside of the space 1, between the double walls of the container, a water tank, which is preferably circular in cross section and is made either of metal or plastic or some other desirable material, is located. This tank is made up of a lateral wall 18, side walls 19 and a bottom wall 20 which has watertight securement to the inner fixed wall 7 of the container.

The cover 21 of the tank may, if desired, be made of wood or plastic and is provided with an opening through which extends downwardly a tube 22 that may be made of plastic, metal or other desired material, and from which extends a funnel shaped member 23 which projects through, and is sealed in, an opening 24 in the portion 10 of the outer wall 2 so that water may be fed into the tank through the funnel by means of a dropper or other similar injector. A gauge is provided which indicates the level of the water at 25 and which includes an indicator 26, of aluminum, plastic or other suitable material, and a float 27 which rises and falls with the level of the water 25. The extreme upper part of the gauge 26 is visible through the upper end of the funnel 23 as long as the tank is provided with water and will thus indicate to the observer the water level. When the water disappears from the tank, however, the upper end of the gauge will disappear from view, thus indicating the necessity for refilling the tank.

In order to make the gauge plainly visible it may be painted white or a color and the inside of the funnel 23 may be colored in contrast. The indicator 26 may also be provided with a contrasting color strip close to its extreme upper end to indicate to the user that the proper water level within the tank has been reached when the tank is being filled. The funnel 23 is also provided with a transverse horizontal pin 28 which permits freedom of movement of the gauge 26 so as to prevent any solid matter entering the tube 22 and consequently the water tank or from interfering with the movement of the water gauge.

The fixed wall 7 of the container is provided

with perforations 29 which are well above the permissible water level in the tank and which perforations establish communication between the tank and the interior of the container to permit the humidifying water vapor to enter the interior of the container from the humidifying tank.

The revoluble or interior wall 8 of the container is provided with an opening 30 which is arranged to cover the perforations 29 to a greater or lesser extent to control the amount of humidity that reaches the interior of the container, the adjustment of this interior wall being indicated in Figures 10 and 11 of the drawings.

In these figures it will be noted that the stationary flange 9 is provided with an indicator "PTC," while the revoluble wall 8 is provided with a similar indicator "CTP," the "P" being the Spanish equivalent for mixture, the "T" being the Spanish equivalent for cigars and the "C" being the Spanish equivalent for cigarettes. The registering of the corresponding letters will indicate to the user of the humidifier the extent to which the perforations should be opened to supply the proper amount of moisture to the tobacco within the container. For instance, when, as shown in Figure 10, the two letters "P" coincide, it will indicate to the user that the proper amount of moisture for pipe tobacco will be admitted, or when the letters "T" coincide as in Figure 11, it will indicate to the user that a proper amount of moisture will be admitted for cigars, and likewise when the letters "C" coincide it will indicate that the proper amount of moisture for cigarettes will be admitted to the interior of the container. Thus the adjustment of the movable wall and the covering to a greater or lesser extent of the perforations 29 will make it possible for the user to nicely control the admission of moisture to the interior of the container or the proper humidifying for the particular form of tobacco that is stored within the container.

Now referring to the form of the invention illustrated in Figures 15, 12 and 13, a rack 32 for cigarettes 31 is provided. This rack is made preferably of one piece of metal, plastic or other material, and is substantially of U form. The vertical walls of the rack are perforated as will be seen in Figure 12 of the drawings, and are provided with vertical side flanges 36 and 37 which extend inwardly substantially at right angles to the side walls, the distance of the walls apart being substantially equal to the length of the cigarettes to be stored and the perforations being for the purpose of permitting the moisture to enter the tobacco at the ends of the cigarettes.

These vertical walls of the rack may be divided by partitions 38, for instance, which are preferably wires, circular in cross section, and secured to the walls in the manner illustrated which will permit the storage of one or more brands of cigarettes, it being understood that the number of partitions may be varied at will. These partitions 38 may be colored in contrasting colors for easy identification.

It will be noted in Figures 12 and 13, for instance, that the upper end of each of the side walls of the rack is provided with a curved edge flange 33 which snugly fits within the inner wall 8 of the container so as to maintain the rack in proper position and yet to permit it to revolve within the revolving inner wall of the container. Moreover, it will be observed that each of these flanges 33 is provided with an indicator such as

34—35 which may be of any desired form and which will indicate to the user when this portion of the perforated wall lies adjacent the perforations 29 and the opening 30 in the inner walls 7 and 8.

It will be further observed that when the rack is in place as shown in Figure 13 there is a space at each side of the rack between the rack and the inner wall 8 of the container so that one may insert his fingers within this space to remove a cigarette. These spaces in Figure 13 are shown at the upper and lower portions of the figure.

With this arrangement of indicators 34 and 35 the rack may be revolved within the container to expose one or the other of the ends of the cigarettes directly to the moisture that escapes through the perforations 29 and this adjustment may be made as often as is desirable.

Because of the form of the rack a group of cigarettes grasped within the hand may simply be dropped into the rack and they will arrange themselves in parallelism and in layers as indicated in Figures 13 and 15.

In the form of the invention illustrated in Figures 2, 16 and 17, for instance, which is adapted for use with cigars, a rack or carrier is provided which includes a base member 39 which is provided with a hole, preferably rectangular in cross section, to accommodate a vertically extending similarly formed rod 40 which is provided at its lower end with a conical head as illustrated in Figure 2, which conical head protrudes slightly beyond the lower face of the base 39 and rests upon the bottom 6 of the container to form a bearing for the rack. This rod 40 extends upwardly through a tube 42 which preferably is circular in cross section and is provided with an opening similar in cross section to that of the rod 40. Adjacent the upper end of this tube 42 is a disc 45 which is provided with openings 47 through which the cigars may be inserted so that their lower ends will rest within depressions 49 in the base 39. This disc 45 is secured to the upper end of the tube 42 as, for instance, between washers 43 and 44 and by means of a decorative screw head 46 which engages screw threads on the upper end of the rod 40 and exerts a clamping pressure between itself, the washers 43 and 44, the disc 45 and the upper end of the tube 42. Thus the cigar rack will permit the careful placing of cigars in spaced relation to each other so that there will be no destructive frictional engagement between them and which also permits the insertion of the cigars into their proper positions in the rack while the rack is removed from the container. Moreover it permits the cigars to be supported on the rack and within the container so that the humidity furnished to the container will keep the wrappers of the cigars in proper condition and yet will enter the open ends of the cigars to keep the fillers of the cigars in proper humidified condition.

I claim:

1. In a humidifier for tobacco and the like, which includes a container having spaced inner and outer walls, and a humidifying liquid receiving tank located in the space between said walls and sealed therefrom, said space extending substantially from the top to the bottom of said inner wall and continuously around said container, said inner wall having an area of perforations therein, establishing communication between the interior of said container and said tank, the combination of a filler tube extending into said tank

to a point below said area of perforations and to the exterior of said double wall container and having an open lower end, and a float within said tank constructed and arranged to abut against the open lower end of said tube under the influence of the liquid within said tank.

2. In a humidifier for tobacco and the like, which includes a container having spaced inner and outer walls, and a humidifying liquid receiving tank located in the space between said walls and sealed therefrom, said inner wall having an area of perforations therein, establishing communication between the interior of said container and said tank, the combination of a cigarette rack rotatably mounted in said container, said rack having a bottom and a perforated moisture admitting side wall, said bottom being constructed and arranged to support cigarettes in horizontal superimposed relation with the ends of said cigarettes located adjacent the moisture admitting perforations in said side wall, whereby said rack may be rotated to vary the proximity of the perforations in said side wall to the perforated area of the inner wall of said container and to cause the respective perforations to register to variable degrees.

3. In a humidifier for tobacco and the like, of the type having a tobacco-receiving chamber and outer and inner spaced side walls surrounding said chamber, a humidifying liquid receiving tank positioned within the space between said walls, said tank being sealed from the space between said walls and spaced from said outer wall whereby a continuous dead air space extends completely around said inner wall thereby providing an effective insulation sheath, said inner wall having perforations communicating with said tank to permit the transfer of water vapor between said tank and said chamber.

4. In a humidor for tobacco of the type having a tobacco-receiving chamber surrounded by spaced inner and outer side walls, a humidifying liquid-receiving tank secured to the outer surface of said inner wall and positioned between said inner and outer walls, and vapor communicating means extending between said tank and said tobacco receiving chamber, said tank being spaced from the upper and lower edges of said side walls and extending horizontally between said side walls for a distance substantially shorter than the horizontal periphery of said inner wall, the outer wall of said liquid receiving tank being spaced from the inner surface of said outer wall, whereby the space between said side walls is continuous completely around said tobacco receiving chamber and said liquid-receiving tank so that an effective insulating sheath is provided.

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