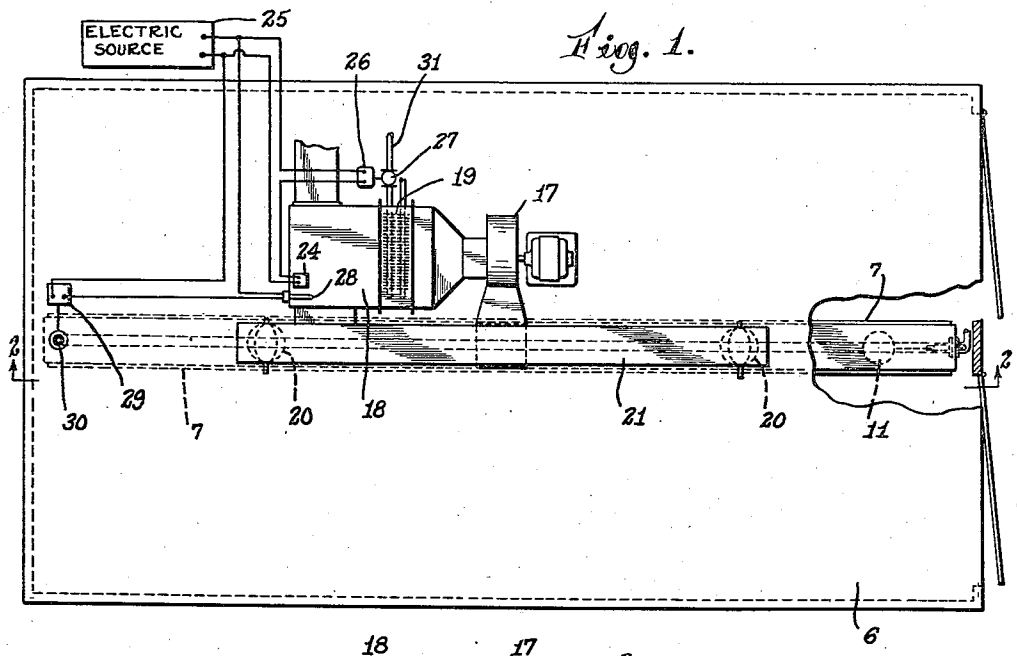
Dec. 5, 1939. V. CANO 2,182,620

HUMIDIFYING SYSTEM

Filed May 18, 1938 2 Sheets-Sheet 1

Fig. 1.



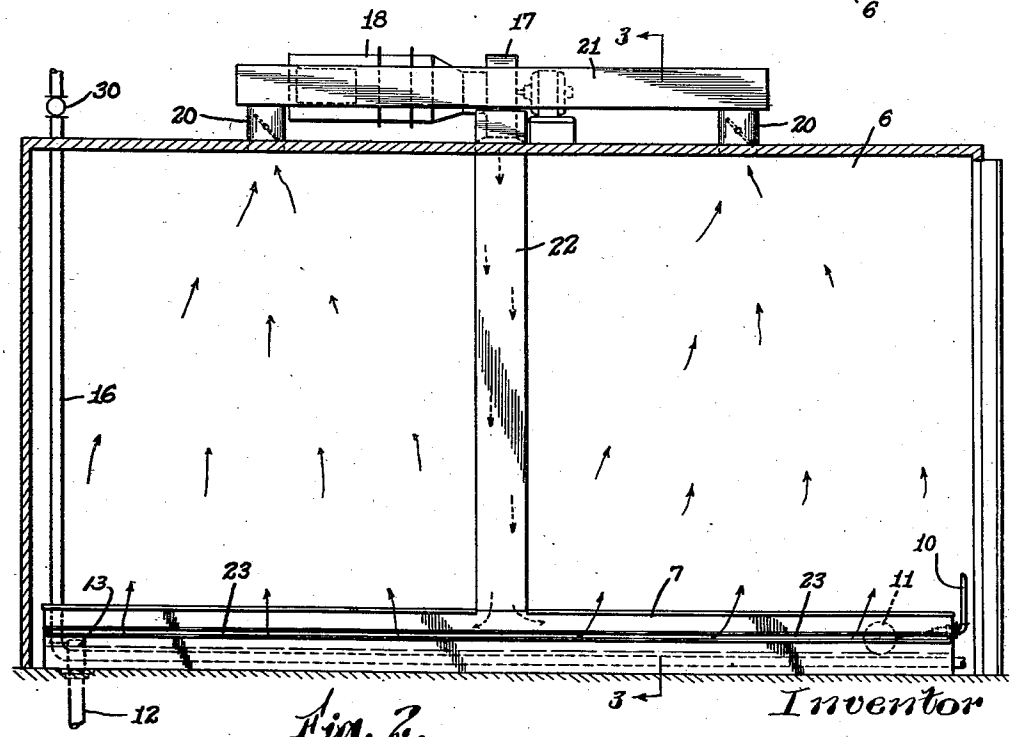


Fig. 2.

Inventor

VERNON CANO

by Robert J. Palmer

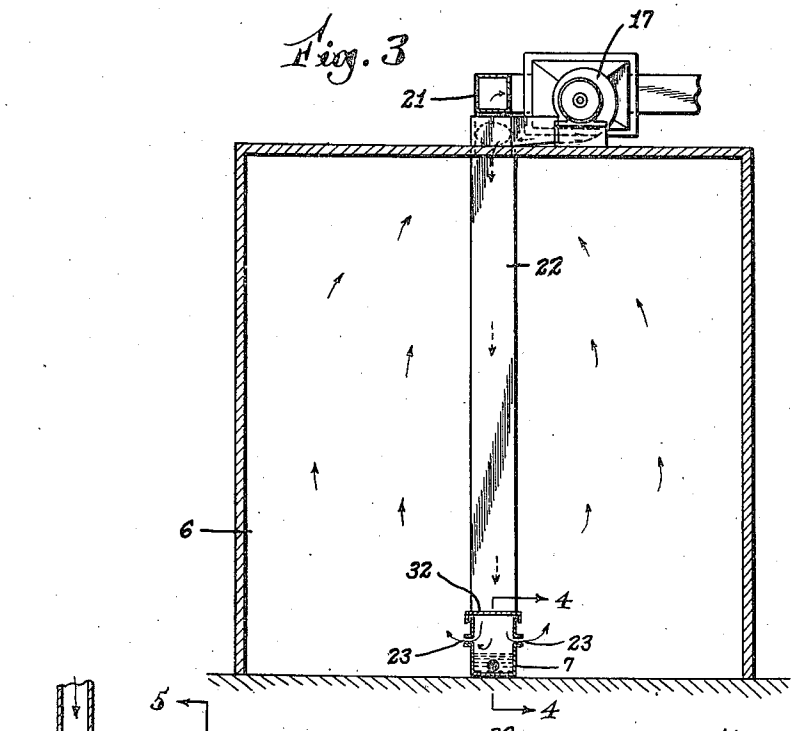
Attorney

Dec. 5, 1939. V. CANO 2,182,620

HUMIDIFYING SYSTEM

Filed May 18, 1938 2 Sheets-Sheet 2

Fig. 3



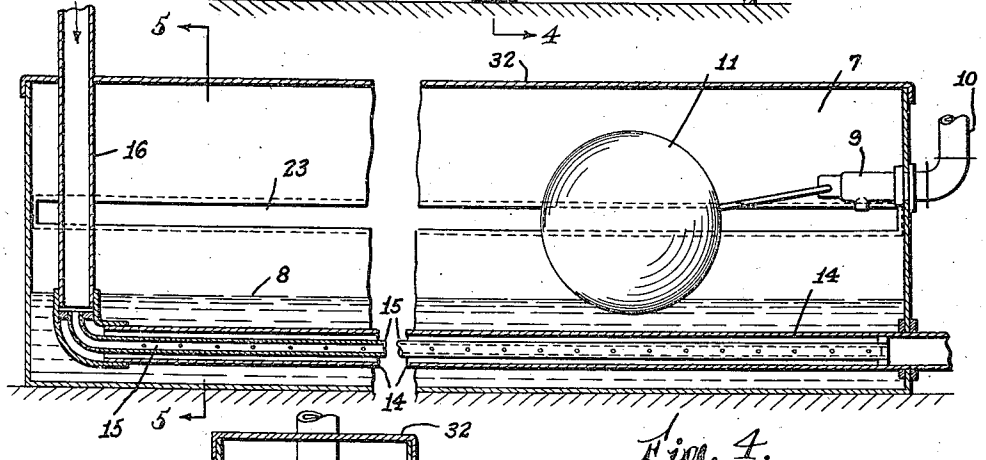


Fig. 4.

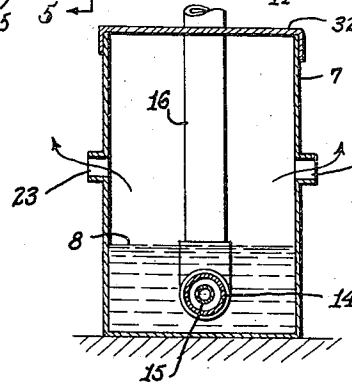


Fig. 5.

Inventor
VERNON CANO
by Robert J. Palmer
Attorney

Patented Dec. 5, 1939

2,182,620

UNITED STATES PATENT OFFICE

2,182,620

HUMIDIFYING SYSTEM

Vernon Cano, Elizabeth, N. J., assignor to B. F. Sturtevant Company, Boston, Mass.

Application May 18, 1938, Serial No. 208,610

2 Claims. (Cl. 261—14)

This invention relates to the humidifying of air and relates more particularly to a humidifying system particularly adapted for use with bakery proof boxes.

Many bakeries have been equipped with galvanized air washers which corrode and have to be replaced after a period of time. The present invention provides a simple, effective humidifying system particularly suitable for installation for proof boxes, the washers of which are ready for replacement. The invention also provides a simple, effective humidifying system for new proof boxes.

An object of the invention is humidifying air for enclosures such as bakery proof boxes.

Another object of the invention is to provide a replacement humidifying system for bakery proof boxes.

Other objects of the invention will be apparent from the following description taken with the drawings.

The invention will now be explained with reference to the drawings of which:

Fig. 1 is a plan view looking downwardly upon one embodiment of a humidifying system according to this invention;

Fig. 2 is a sectional view along the lines 2—2 of Fig. 1;

Fig. 3 is a sectional view along the lines 3—3 of Fig. 2;

Fig. 4 is a sectional view along the lines 4—4 of Fig. 3, and

Fig. 5 is a sectional view along the lines 5—5 of Fig. 4.

The humidifying tank 7 is placed on the floor between the racks (not shown) of the proof box 6. The tank 7 is relatively long and relatively narrow and contains water which is maintained at the level 8 by the valve 9 in the supply line 10. The float 11 controls the valve. At the opposite end of the tank from the valve 9 is the drain and overflow pipe 12 with valve 13.

The tank 7 contains below the water level 8, the heater pipe 14 in which is arranged the smaller perforated pipe 15. Steam from the steam supply pipe 16 enters the pipe 15 and passes through the perforations in same to heat uniformly the water heating pipe 14.

Mounted on the roof of the proof box 6 is the fan 17 and reheater chamber 18 which contains the heating coil 19. The fan draws recirculated air from the proof box 6 through the vertical ducts 20 and horizontal duct 21, and forces the air over the heating coil 19 and then through the vertical discharge duct 22 which discharges into the humidifying tank 7.

The tank 7 has in its opposite longitudinal sides, the longitudinal slots 23 through which the air humidified by contact with the water in the tank is discharged into the proof box 6.

The thermostat 24 in the heating compartment 18, is in circuit with the electric source 25 and the solenoid 26 of the valve 27 and controls the temperature of the air supplied to the proof box by adjustment of the valve 27 to control the supply of steam through the pipe 31 to the heating coils 19.

The humidostat 28 in the compartment 18, is in circuit with the electric source 25 and the solenoid 29 of the valve 30, and controls the humidity of the air supplied to the proof box by adjusting the valve 30 in the steam line 16. This controls the temperature of the water in the humidifying tank 7, and its ability to humidify the air passing in contact with it.

The tank 17 is provided with the removable cover 32, the removal of which provides ready access to the interior of the tank for cleaning purposes. With the covers 32 removed, the inside of the tank and the heater pipe 14 can readily be scrubbed with a brush. By removing the overflow connection 13, the water in the tank 7 may be drained out through the pipe 12 and is replaced by fresh water through the valve 9 from the opposite end of the tank.

While one embodiment of the invention has been explained for the purpose of illustration, it should be understood that other apparatus and arrangement of apparatus may be utilized by those skilled in the art without departing from the spirit of the invention.

What is claimed is:

1. In a bakery proof box, a combined humidifying and air distributing system comprising a relatively long, relatively narrow, longitudinal air distributing duct containing water, extending along the longitudinal center of and substantially completely cross-wise said box in the floor zone thereof, air discharge outlets extending along the length of said duct above the water line thereof, means forming recirculated air inlets in the ceiling zone of said box, and means including a fan heater unit above said ceiling for supplying heated air into said duct for humidification and distribution and for drawing the air discharged from said outlets through said inlets for recirculation, said last mentioned means including a horizontal duct above said ceiling connecting said inlets and said unit and a vertical duct connected to said

distributing duct and to said unit for isolating in said box, the air supplied to said distributing duct and the air drawn through said inlets.

2. In a bakery proof box, a combined humidifying and air distributing system comprising a relatively long, relatively narrow, longitudinal air distributing duct containing water, extending along the longitudinal center of and substantially completely cross-wise said box in the floor zone thereof, air discharge slots extending the length of said duct in opposite sides thereof and above the water line thereof, means forming recirculated air inlets in the ceiling zone of said box, and means including a fan heater unit above said ceiling for supplying heated air into said duct for humidification and distribution and for drawing the air discharged from said outlets through said inlets for recirculation, said last mentioned means including a central, vertically extending supply duct connecting said unit and said distributing duct for isolating in said box, the air supplied to said duct and the air drawn through said inlets.

VERNON CANO.