G. E. GOLDSTEIN.

APPARATUS FOR CURING OR ARTIFICIALLY AGING CIGARS.

APPLICATION FILED JUNE 20, 1914.

1,137,752. Patented May 4, 1915.

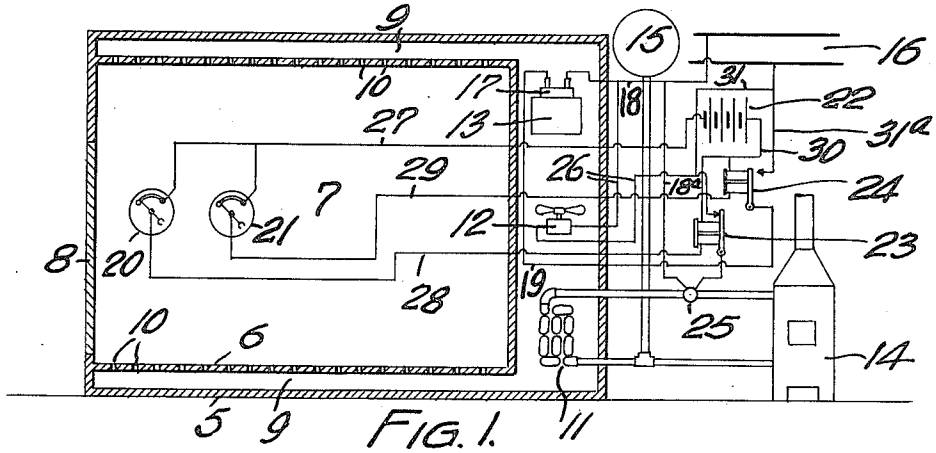

FIG. 1.

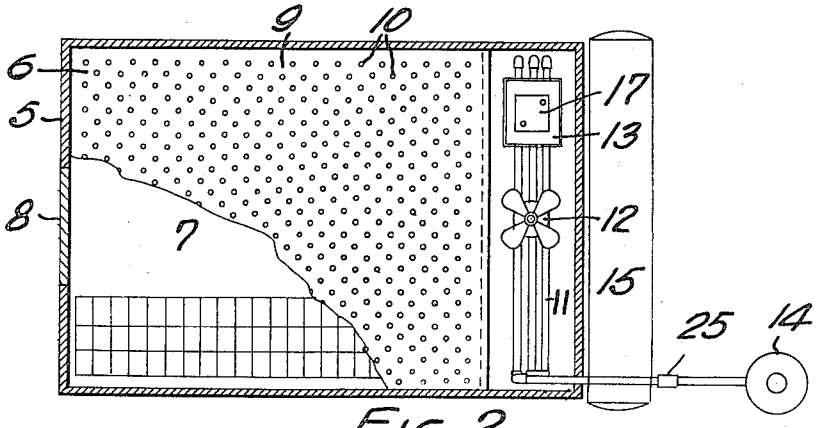

FIG. 2.

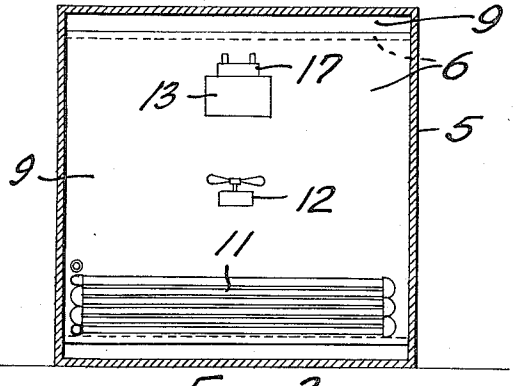

FIG. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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APPARATUS FOR CURING OR ARTIFICIALLY AGING CIGARS.

1,137,752. Specification of Letters Patent. Patented May 4, 1915.

Application filed June 20, 1914. Serial No. 846,294.

To all whom it may concern:

Be it known that I, GEORGE E. GOLDSTEIN, of the city of Montreal, in the Province of Quebec and Dominion of Canada, a citizen of the Dominion of Canada, have invented certain new and useful Improvements in Apparatus for Curing or Artificially Aging Cigars, of which the following is a full, clear, and exact description.

This invention relates to improvements in apparatus for curing or artificially aging cigars or other forms of manufactured tobacco, and the object of the invention is to provide an apparatus which will operate automatically to maintain the proper temperature, humidity and circulation of the air coming in contact with the cigars.

The device consists essentially of a double walled chamber within which the cigars are stored. The inner wall is perforated, and air heating, humidifying and circulating means are provided in the space between the inner and outer walls of the chamber, so that the air is drawn from within the inner wall into the space between the inner and outer walls, brought to proper temperature and moisture, and redelivered within the inner wall. An electric thermometer and hygrometer are provided within the inner wall and automatically regulate the humidifying and heating apparatus to maintain as nearly as possible uniform conditions.

In the drawings which illustrate the invention:—Figure 1 is a vertical longitudinal section of the chamber showing the various elements of the apparatus diagrammatically. Fig. 2 is a plan view of the apparatus, the electrical equipment being omitted. Fig. 3 is a rear elevation of the device, the back outer wall being removed.

Referring more particularly to the drawings, 5 designates the outer and 6 the inner wall inclosing a chamber 7 for the storage of cigars. At the front of the chamber, in which is provided a door 8, and at the sides, the inner and outer walls may coincide, but it is essential that at back, top and bottom, a passage 9 be left for the circulation of air. At top and bottom, the inner wall 6 is provided with apertures 10 through which the air passes from the circulation passages into the chamber.

At the rear of the chamber, a heating coil 11, air circulating fan 12 and humidifying tank 13 are provided in the passage 9, as clearly shown in the drawings. The heating coil is connected to a heater 14 provided with a feed tank 15 for supplying water and maintaining pressure for circulation. The fan 12 is operated preferably by electric current drawn from the mains 16. The humidifying tank 13 contains an electric heating element 17 operated by current drawn from one of the mains 16 through wire 18 and returned to the opposite main through wire 19.

Within the chamber 7, an electric thermometer or thermostat 20 and an electric hygrometer 21 are provided, each having a fixed and a moving contact. The thermometer and hygrometer are electrified by current from a battery 22, and according as they make or break the battery circuits operate relay 23 and 24 respectively. The relay 23 is arranged to open and close the circuit of the heater 17, and the relay 24 is arranged to open and close the circuit of an electrically operated valve 25 located between the heater 14 and coil 11. The fan 12 is operated by current flowing from and to the mains through wires 26. Current flows from the battery through the wire 27 to both thermometer and hygrometer, and from the thermometer through wire 28 to the relay 23, and from the hygrometer through wire 29 to the relay 24, and from the relays back to the battery through wire 30. Current flows from the main 16 through wires 18 and 18ª to the heater 17 and valve 25, and returns through the armatures of the relays and wires 31 and 31ª.

The operation of the device is extremely simple. If the humidity rises above the set limit of variation, the instrument 21 makes contact, which energizes the magnet of the relay to draw up its armature, and thus break the circuit of the heater 17. When the humidity drops below a certain point, the battery circuit through the relay is broken and the relay armature drops, closing the heater circuit. It the temperature rises beyond the set limit of variation, the battery circuit through the relay 23 is made and the armature is drawn up, making the circuit of the valve 23, which closes and cuts off the supply of heat to the coil 11. When the temperature drops sufficiently, the circuit through the relay is broken by the thermostat, and when the relay releases its armature, the valve circuit is opened and the

valve opens, admitting heat to the coil. The fan operates continuously, forcing the warm humid air up and allowing it to enter at the top of the chamber 7, and work downwardly through the cigars, escaping at the bottom into the passage 9 to be again drawn up by the fan through the coil 11 and reheated and rehumidified.

While the invention has been shown in its simplest form, it is obvious that a number of changes may be made in the apparatus as required to meet special conditions. If electricity or fluid fuel are used for the heater 14, the valve 25 will be arranged to control the supply of the heating agent.

Having thus described my invention, what I claim is:—

1. A device of the character described, comprising a double walled chamber having the inner wall thereof formed imperforate at opposite sides, an air heating coil, a water tank, and an air circulating fan located between the inner and outer walls, means for heating and circulating fluid through said coil, a heating apparatus located in the tank, a thermometer and a hygrometer located within the chamber, electrically actuated means controlled by said thermometer governing the circulation of the heating fluid through said coil, and electrically actuated means controlled by the hygrometer governing the operation of the heater in said tank.

2. A device of the character described, comprising a double walled chamber having opposite inner walls thereof formed perforate, a water tank, an air circulating fan and a radiator located between the inner and outer walls, a fluid heating and circulating apparatus connected to said radiator, an electric water heating means within the tank, a thermometer and a hygrometer located within the chamber, means for controlling the temperature and supply of fluid through said radiator, a source of electric energy for said heater, said fan and said controlling means, a battery, a relay in circuit with the battery and thermometer arranged to govern the connection of said heating fluid controlling means with the source of energy, and a second relay in circuit with the battery and hygrometer arranged to govern the connection of said electric water heater with the source of energy.

In witness whereof, I have hereunto set my hand in the presence of two witnesses.

GEORGE E. GOLDSTEIN.

Witnesses:
S. R. W. ALLEN,
G. M. MORELAND.