(Model.)

C. E. DOYLE.

TOBACCO CURING APPARATUS.

No. 264,141. Patented Sept. 12, 1882.

Fig 1.

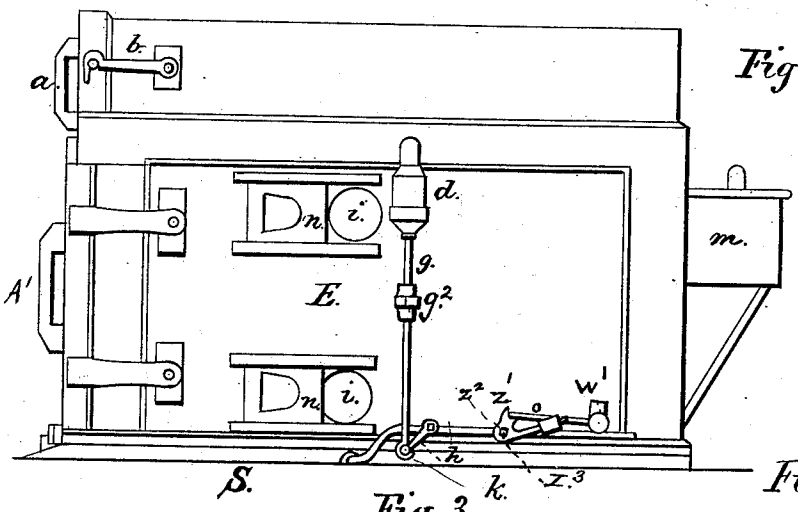


Fig 2.

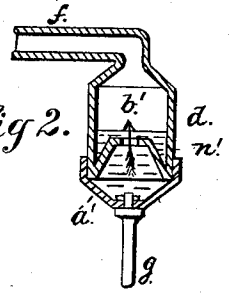


Fig 3.

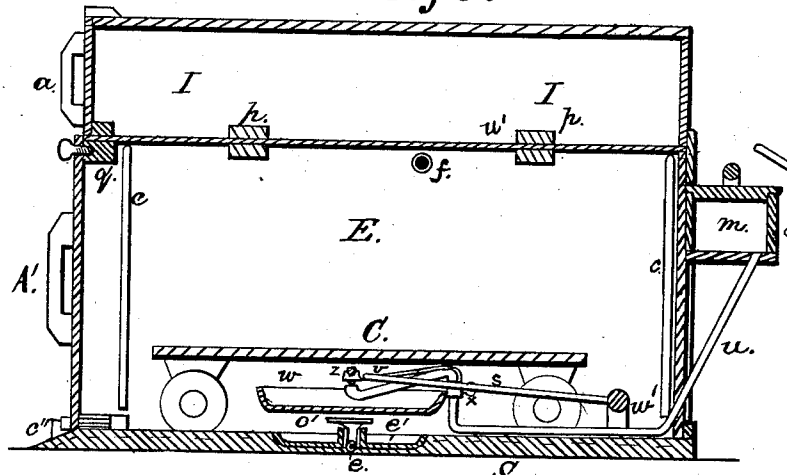


Fig 5.



Fig 6.

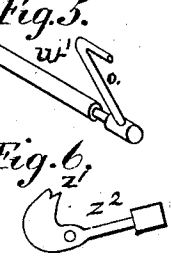


Fig 4.

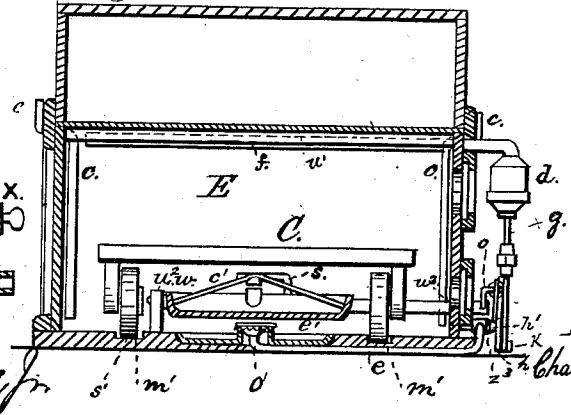
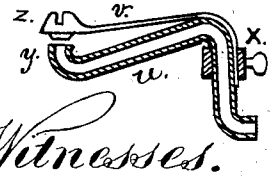


Fig 7.



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UNITED STATES PATENT OFFICE.

CHARLES E. DOYLE, OF PHILADELPHIA, PENNSYLVANIA.

TOBACCO-CURING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 264,141, dated September 12, 1882.

Application filed January 3, 1881. (Model.)

To all whom it may concern:

Be it known that I, CHARLES E. DOYLE, a citizen of the United States, residing at No. 335 South street, in the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Sweat-House for Sweating, Coloring, and Curing Tobacco, of which the following is a specification.

My invention relates to sweating, coloring, and curing tobacco; and the nature thereof is in providing certain construction in and to sweat-houses for the purpose of sweating, curing, and coloring tobacco; also, in a certain construction for the purpose of economy in the heat used in the operation of curing tobacco.

In all the figures the same letters of reference refer to the same parts. By reference to the drawings and letters of reference marked thereon a full and clear understanding of this invention will be given, aided by this specification.

In the drawings, Figure 1 is a side elevation of my sweat-house. Fig. 2 is a sectional side elevation of my gas-regulator. Fig. 3 is a sectional elevation of Fig. 1. Fig. 4 is a cross-section of Fig. 1. Figs. 5, 6, and 7 are detailed parts of the heating apparatus.

The sweat-house E is divided into an upper, I, and lower, E, compartment. The upper compartment, I, is divided from the compartment E by a sheet of metal, u', forming the bottom of I, which is held up by cross-pieces p, and is provided with as many cross-pieces as will be necessary. The compartment I is closed in by the door a, fastened by the clutch or catch b. In the compartment E, at the bottom thereof, are the grooved ways m', forming a track or way for the wheels s' of the truck C to run in, guiding the said wheels s' into the compartment E. The bottom board, S, has the pan e' let into the thickness of the bottom board, S, and will hereinafter be more fully described. The compartment E is closed by the door A'. The bottom board, S, has the inclines c'' and grooved ways m', and this projecting incline c'' and grooved ways give a sloping entrance to the compartment E. The door A' rests or is screwed to the piece q'. At the back of the compartment E is the box m, from which is led the bent pipe u. This pipe u is for the purpose of conveying water from box m to the pan w. This pan w is hung upon the bail c', which passes over the spring v, so that when the pan w is light and without water the spring v lifts the pan w by the bail c' and opens up the flow of water through pipe u, filling the pan w and shutting off the flow by the stop z of spring v, closing the opening y of pipe u. The spring v is held in position on the pipe u by the band and set-screw x. Resting on the spring v is the rod s of the shaft w'. This shaft rests in journals w^2 and w^3, and is projected through the side wall of the compartment E to a second rod, o. This rod o rests in a groove, z', of a weighted rod, z^2, which operates the gas-valve z^3. It is clear that when the spring v rises the rod o also rises, turning on the gas through the action of rod s and shaft w', operating and relieving the weighted rod z^2 of valve z^3, causing the weight to drop, leaving the gas turned off. There is a check on the gas-pipe e by valve h', operated by the rod g of the regulator d. The regulator d is at the side of the sweat-house, and has a pipe, f, which is projected into the compartment E. This regulator operates as follows: When there is pressure in the compartment E of steam the rubber cover a' is forced downward and carries rod g, to which it is attached, in the downward direction. The enlargement of pipe f at regulator d faces downward, as shown at n', and has the hole denoted by the arrow, Fig. 2. Forced onto the lower end of the regulator d is a rubber cover, a', and to the center of this cover is attached the rod g. In the middle of this rod g is the regulating-nut g^2. The rod g, regulated to proper length, engages at k with the valve-rod h and valve h' of the gas-pipe e. When the steam has expelled the air from the compartment E, and, cooling, leaves a partial vacuum, the gum cover a' is drawn up and in and the rod g is drawn up, pulling up rod h and opening the valve h', turning on the gas to again make steam. The interior b' of the regulator d is partially filled with water to protect the rubber cover a' from direct contact with the hot air which is contained in the pipe f when the sweating apparatus is in operation. Four thin tubes, c, are placed at the corners of the compartment E, for the purpose of admitting near the bottom E a small quantity of air to cause a diffusion of the hot air up-

ward in the apparatus, at the same time supplying air for the burner *o'*. At the side of the compartment E are peep-holes *i*, closed by the sliding doors *n*. The pan *e'* is filled with water, and is provided with a central opening, through which passes burner *o'*.

The operation of the invention is as follows: The tobacco to be operated upon is placed on the truck C, which is run into the compartment E. The doors are closed up tightly. The pan *w* is filled with water, and the same is stopped off from the flow by its own weight, as hereinbefore described, the gas having been previously lighted at burner *o'* before closing up the compartment. The water in pan *w* is heated, giving off its steam, and as the water evaporates the pan lightens and again fills, as before set forth, and the steaming process carried out, fully curing the articles placed in the case. Rod *g*, with rod *s*, as hereinbefore stated, regulates the gas-flame.

Having thus described the construction and operation of my invention, what I claim as mine, and desire to secure by Letters Patent of the United States, is as follows:

1. The suspended pan *w*, operating the spring *v* of the water-pipe *u*, in combination with a resweating-compartment, as and for the purposes specified.

2. The pan *e'* for water, provided with the central burner, *o'*, supplied with gas to heat a compartment for resweating tobacco, substantially as set forth, and operating, in combination with the suspended pan *w*, for the purpose described.

3. The combination of the suspended pan *w* with the spring *v*, attached to the pipe *u*, connected to the reservoir *m*, substantially as and for the purposes set forth.

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Witnesses:
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