(No Model.)

B. MARTIN.

TOBACCO RESWEATER.

No. 302,011. Patented July 15, 1884.

Fig. 1

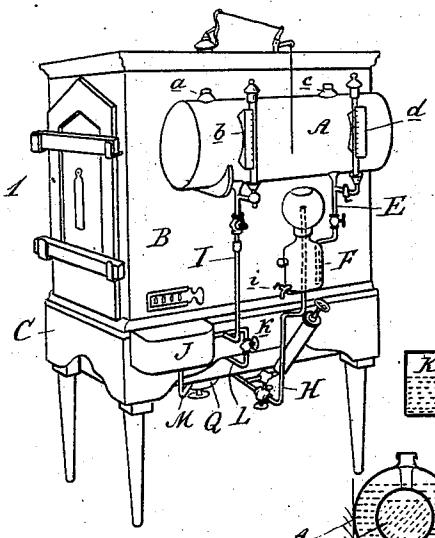


Fig. 3

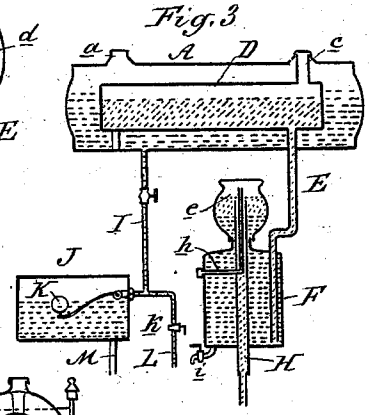
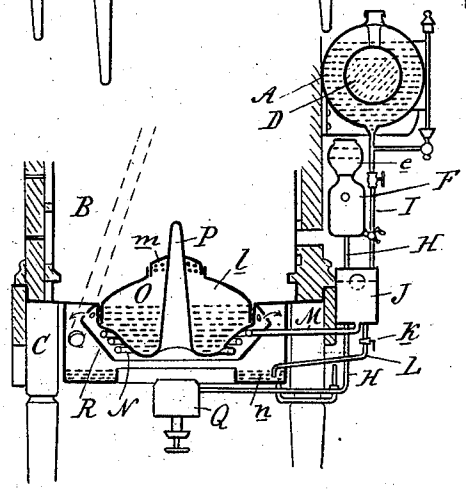


Fig. 2



Attest:
A. Barthel
W. J. Magee

Inventor:
Bruno Martin
by his Att'y Wm. A. Spraque

UNITED STATES PATENT OFFICE.

BRUNO MARTIN, OF EAST SAGINAW, MICHIGAN.

TOBACCO-RESWEATER.

SPECIFICATION forming part of Letters Patent No. 302,011, dated July 15, 1884.

Application filed October 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, BRUNO MARTIN, of East Saginaw, in the county of Saginaw and State of Michigan, have invented new and useful Improvements in Tobacco-Resweaters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in devices for resweating tobacco, and is especially designed as an improvement upon the invention described in Letters Patent issued to me May 22, 1883, and numbered 278,029.

The invention consists in the peculiar construction, combination, and operation of the various parts, as more fully hereinafter described.

Figure 1 is a perspective view of my completed device. Fig. 2 is a vertical central cross-section. Fig. 3 is a detached and vertical longitudinal section of the oil and water reservoirs and their attachments.

In the accompanying drawings, which form a part of this specification, A represents a closed water-tank supported upon suitable brackets upon the side of the sweat-box B, which in turn is supported upon the table C.

D is an oil-tank, which is suspended within the water-tank so as to be surrounded with water on all sides. The water-tank is filled through an orifice, *a*, and is provided with a water-gage, *b*, and the oil-tank is filled through the pipe *c*, and this in turn is provided with an indicating-gage, *d*, these gages affording at all times knowledge of the height of water or oil in their respective tanks. A pipe, E, conducts oil from this tank to the bottom of the tank F, as shown in Fig. 3. This tank is provided upon its top with an air-chamber, *e*, and has a central pipe, H, extending through the bottom of the tank up into the air-chamber.

h is a pipe running through the side of the tank nearly to the top of the oil-chamber, and this pipe at its outwardly-projecting end is provided with a valve or plug, by means of which it may be closed. This tank is partially filled with water strongly impregnated with sal-ammoniac and soda, and the hydrocarbon from the tank D being conducted to the bottom of such tank, and being of lighter gravity, rises through such impregnated liquid and enters the air-chamber, compressing the air therein, which forms a cushion to force the carbon down through the pipe H to the burner. The hydrocarbon, in passing through the liquid in the tank, becomes chemically purified from such impurities as cause it, when carried to the burner, to spit or sputter, thereby supplying a pure hydrocarbon to the vapor-burner which burns without sputtering or making perceptible noise. This tank is supplied with a waste-cock, *i*, to enable the same to be emptied when desired.

I is a pipe leading from the water-tank A to the tank J, which is provided with the float-valve K, by means of which the height of water in this tank and its outflow therefrom are regulated; and the branch pipe L is provided with a cock, *k*, which governs the flow of water through such pipe to a tank which surrounds the burner.

M is an outflow-pipe from the tank J, conducting water through the coil N, which surrounds the boiler O, and discharges the same into such boiler at any convenient point below the water-level in the tank J. Through this boiler, and opened at its lower end and closed at its upper one, passes the conical tube P, its lower end being presented immediately above the burner Q, which is of any of the known constructions of hydrocarbon-vapor burners.

l is the top part of the boiler, removable from the lower part, and forming, when in place, a steam-tight joint, its lower edge reaching below the water-line to form a seal. The steam generated in the boiler is made to escape through a removable rose, *m*, situated in the top of the boiler.

Surrounding the boiler on all sides is a sheet-metal shield, R, which forms a chamber between its inner and outer walls, and which serves the double purpose of confining the flames from the burner to the sides of the boiler, and also to protect the wood-work of the table; and to still more insure the safety of the device, an annular tank or trough, *n*, is formed in its bottom, which is filled with water through the pipe L, which forms a branch of the pipe I.

The sweat-box is constructed as described in my aforesaid Letters Patent, and the op-

eration of the device will be readily understood from the description of its construction.

One of the objects of this improvement is to prevent the "sputtering," as it is ordinarily termed, and disagreeable noise attending the use of such devices employing hydrocarbon-vapors for heating purposes, and furnish a device which delivers the hydrocarbon to the burner so thoroughly purified as to avoid these obnoxious features.

What I claim as my invention is—

1. In a device for resweating tobacco, and in combination with the water-tank A, surrounding the oil-supply tank D, the tank J, provided with a float-valve receiving water from the tank A and delivering the same to the boiler O, such tank J, with its float, at all times regulating the height of water in the boiler, and being situated outside thereof, substantially as and for the purposes set forth.

2. A boiler for a tobacco-resweating device, projecting into the chamber thereof, provided with the removable top *l* and removable rose *m*, and having through the same the conical tube P, immediately over the burner Q, substantially as specified.

3. In a tobacco-resweating device, the shield R, located within the table surrounding the boiler, and adapted to direct the flames of the burner against and around such boiler and the coil of feed-pipe surrounding the same, and provided in its bottom with an annular water-tank fed from the tank A, substantially as and for the purposes described.

4. In combination with a resweating device, its boiler and hydrocarbon-vapor burner, the tanks A, D, F, and J, with their connecting-pipes to the boiler and burner, arranged and operating substantially as specified.

BRUNO MARTIN.

Witnesses:
H. S. SPRAGUE,
E. W. ANDREWS.