

(No Model.)

B. MARTIN.

TOBACCO RESWEATING DEVICE.

No. 278,029.

Patented May 22, 1883.

Fig. 1

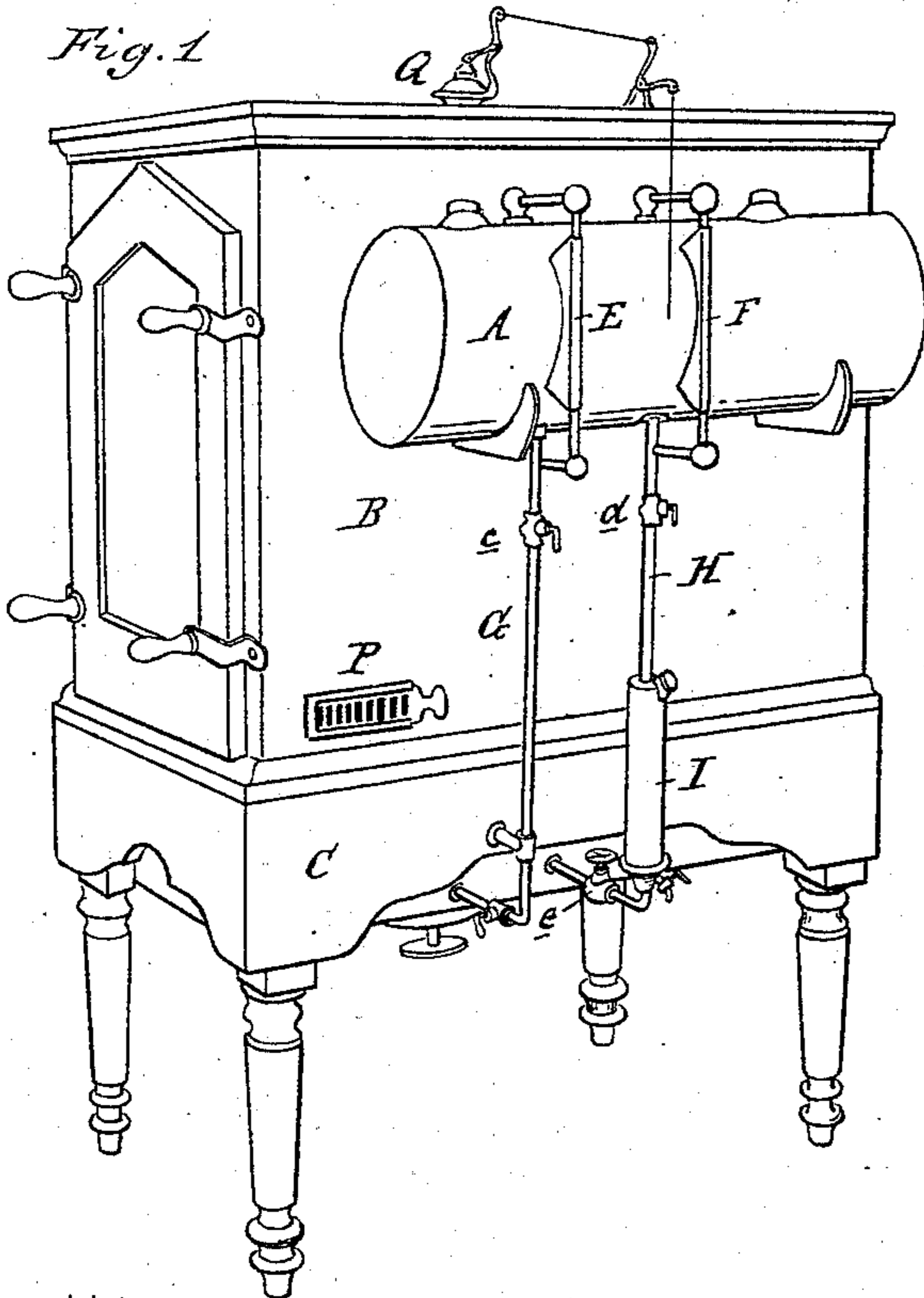


Fig. 3

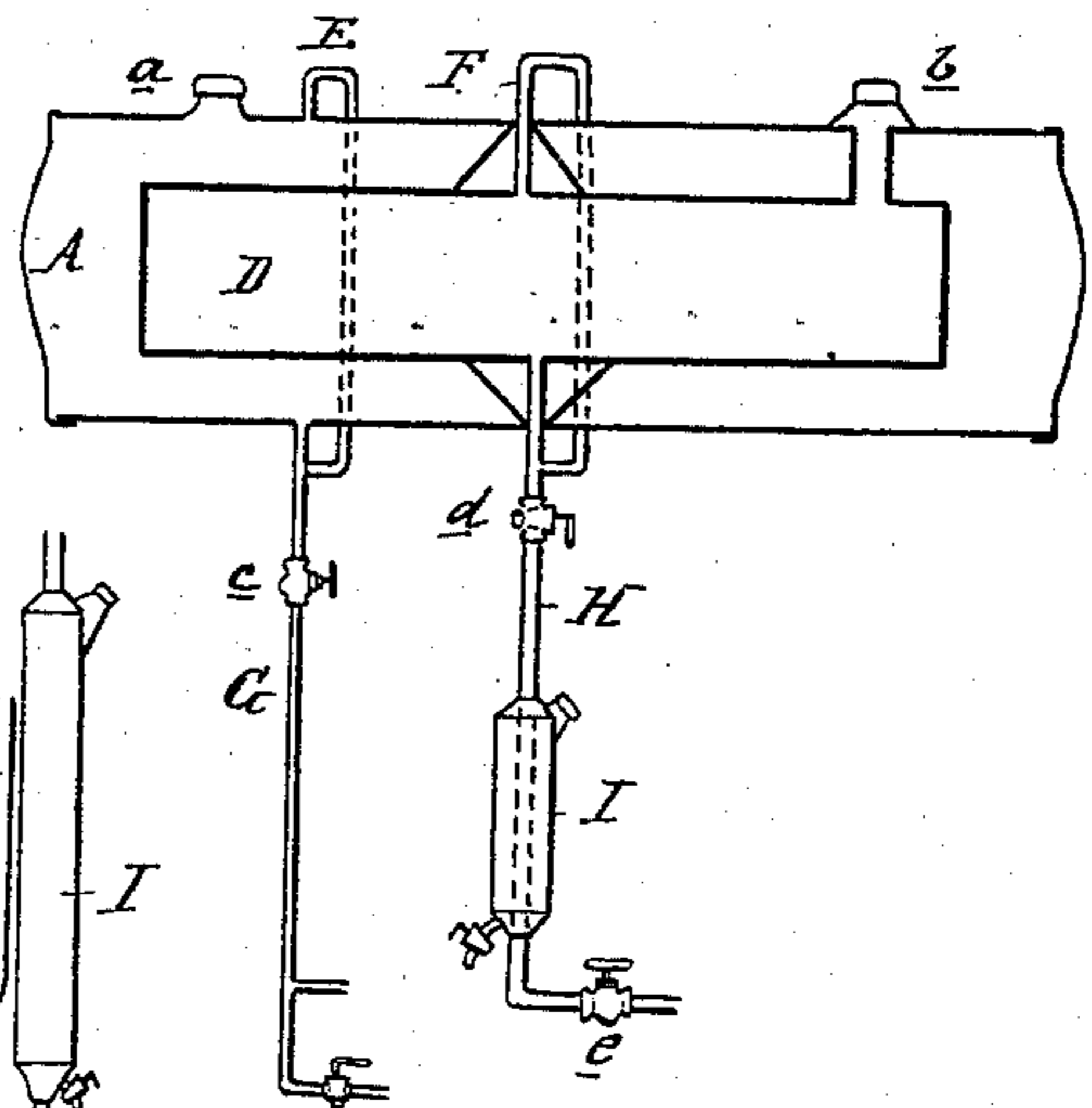
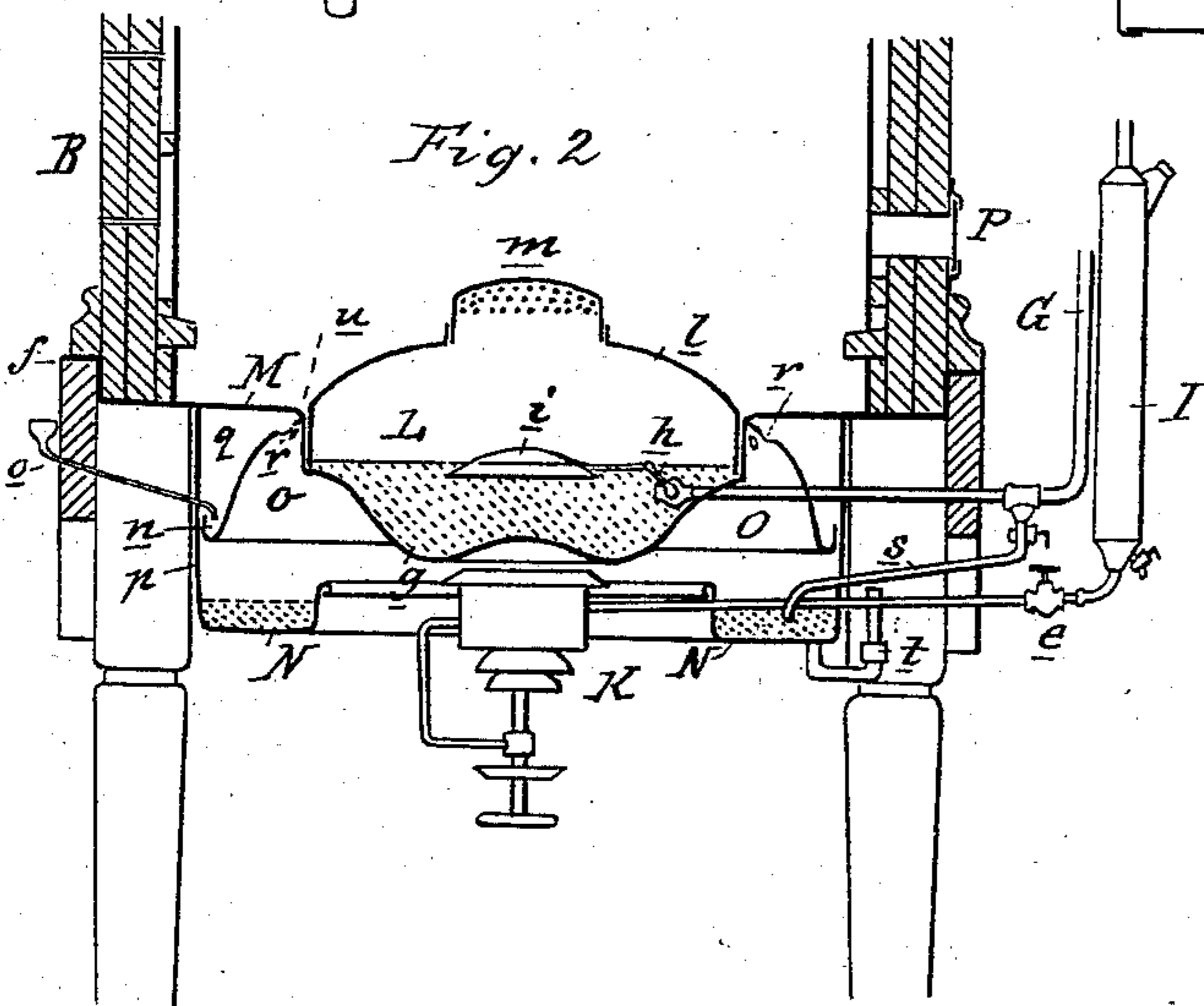


Fig. 2



Attest:

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by his Atty. Thos. L. Sprague

# UNITED STATES PATENT OFFICE.

BRUNO MARTIN, OF EAST SAGINAW, MICHIGAN.

## TOBACCO-RESWEATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 278,029, dated May 22, 1883.

Application filed October 18, 1882. (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-Resweating Devices; 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.

The nature of this invention relates to certain new and useful improvements in devices for resweating tobacco, by means of which the desired result is produced very rapidly, perfectly, and with a minimum of expense.

The invention consists in the peculiar construction, combinations, and operation of the various parts, by means of which hydrocarbons are employed for the generation of steam, such hydrocarbons being burned, through the medium of a vaporizer, with perfect safety, and the process is carried on, after being commenced, in such manner as to require very little attention.

Figure 1 is a perspective view of my complete device. Fig. 2 is a vertical cross-section of the same. Fig. 3 is longitudinal vertical central section of the combined oil and water reservoir.

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 allow the water in said tank to surround the oil-tank on all sides. The water-tank is filled through the opening *a* and the oil-reservoir through the opening *b*, both openings being provided with screw-caps or other analogous devices for closing them.

E is a gage for indicating the height or quantity of water in the water-tank, and F is a similar gage to indicate the condition of the oil-reservoir.

A pipe, G, conveys the water from the tank A to the boiler or steam-generator L under the table, its flow being controlled by a cock, *c*.

H is the pipe which conducts the oil to the burner K under the boiler, its flow being con-

trolled by the stop-cock *d* and graduating-cock *e*.

I is a water-jacket inclosing the tube H at a point near the table, so as to protect it from possible danger arising from too close proximity to the heat of the flame.

K is a vapor-burner, of any of the known constructions for vaporizing and burning hydrocarbons, and it is suspended below the center of the steam-generator and connected to the supply-pipe H. Situated directly over this burner is the steam-generator L. This is riveted or otherwise secured to the galvanized iron pan M, which covers the whole table, and is provided with a raised ledge or off-set, *f*, which is destined to hold the sweat-box B in place and form a steam-tight joint therewith.

The boiler L consists of the bottom part, *g*, which is connected to the water-supply pipe G, whose inlet-opening is provided with a valve, *h*, controlled by the float *i*.

*l* is the top part of the boiler, removable from the bottom part, but 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 *l* of the boiler.

Surrounding the boiler on all sides is the galvanized iron shield O, 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, the shield has its lower edge turned upwardly and outwardly, so as to form a trough, *n*, which may be filled with water through a little tube, *o*, leading to it from the outside.

Another metal trough, N, is suspended below the shield O, whose outer side, *p*, completely protects the wood-work of the table and reaches up to the under side of the pan M, to which it is riveted or otherwise secured, an open space being left between the small trough *n* and the metal covering *p*, so as to allow the heated air to pass into the space *q*, to which it also finds access through small perforations *r* at the crown of the shield O. The annular trough N is filled with water through a branch pipe, *s*, from the water-supply pipe, the height of the water in the trough being indicated on

the outside by a water-gage, *t*. Resting on top of the pan M, and forming a steam-tight joint therewith, is the sweat-box, B, which is made of two thicknesses of boards, lined on the whole inside with galvanized iron, which forms a small air-space between it and the boards, said air-space being in communication with the outer air through small perforations in the body of the box. The front side of the box contains a door, through which the tobacco is introduced in a proper package, resting upon a truck, which is supported upon rails on the sides of the box, as has been done heretofore. To control the amount of heat in the sweat-box, which is indicated by a thermometer on the outside, one or more ventilators, P, are provided in the sides and top of the box for the admission of air, while a valve, Q, on the top of the box, provides for the escape of surplus steam. The pan M is slightly inclined toward the boiler L, so as to collect the water of condensation in the box in a little depression or channel, *u*, which surrounds the boiler, bringing it thereby more within the influence of the heat from the burner, and re-evaporating it or allowing it to flow back into the boiler through a proper channel, which may be provided therefor.

The operation of the device will be readily understood from the foregoing description. After the device is once put into operation it will be seen that but little attention is needed for the continuous working, the danger from overheating the parts being effectually prevented by the various safety devices described, and as the location of the boiler is so near and central to the place where the heat is required it is clear that great economy is attained.

What I claim as my invention is—

1. In combination with the oil-reservoir D, arranged contiguous to the tobacco-holding box, to economize space, and surrounded by the water within the water-tank A, to prevent the generation of gas within the oil-reservoir from the heat of the box or arising gases from the burner K, the said burner, box, and steam-generator L, as and for the purposes set forth.

2. In combination with the boiler L and pan M, the annular shield O, having perforations *r* and trough *n* and feed-pipes *o*, as and for the purposes set forth.

3. In a tobacco-sweating device in which the steam is generated in a boiler by heat derived

from hydrocarbon fuel fed from a tank inclosed by the water-tank which supplies the boiler, the combination of said oil-tank D and water-tank A, arranged contiguous to the tobacco-holding box, the pipe H, water-pipe I, cocks *d* and *e*, burner K, and pan M, whereby the oil is protected from the heat which arises from the burner, as set forth.

4. The combination of the pan M and annular trough N, secured thereto, of the branch pipe *s*, gage *t*, and burner K, as and for the purposes set forth.

5. The combination, with the box B, provided with an escape-valve, Q, and having a lining of galvanized iron secured to studs to form an air-space connected with the outer air by perforations in the box, of the steam-generator L, arranged within the box, as set forth.

6. The combination, with the burner K and boiler L, having the part *l* sealed below the surface of the contained water, and the rose *m*, of the plate M, having annular groove *u* to receive the water of condensation, whereby said water may either flow back into the boiler or be evaporated, as set forth.

7. The plate M, forming a close bottom for the tobacco-holding device B, and a reservoir to hold the water from which the steam is generated, combined with the open-topped conical portion *l* and rose *m*, as set forth, for the purposes set forth.

8. In a device for resweating tobacco, the metal pan M, supporting the sweat-box B, and provided with a boiler, L, centrally secured thereto, and forming with its top a part of the bottom of the pan, substantially as and for the purposes described.

9. In a device for resweating tobacco, the combination of the boiler L, shield O, and pan M, constructed as described, and combined with the box B for the purpose of utilizing all the heat obtained from the vapor-burner for generating steam in the boiler and re-evaporating the water of condensation from the box, substantially as described.

In witness that I claim the foregoing as my invention I have hereunto set my hand this 24th day of August, 1882.

BRUNO MARTIN.

Witnesses:

H. S. SPRAGUE,  
CHAS. J. HUNT.