

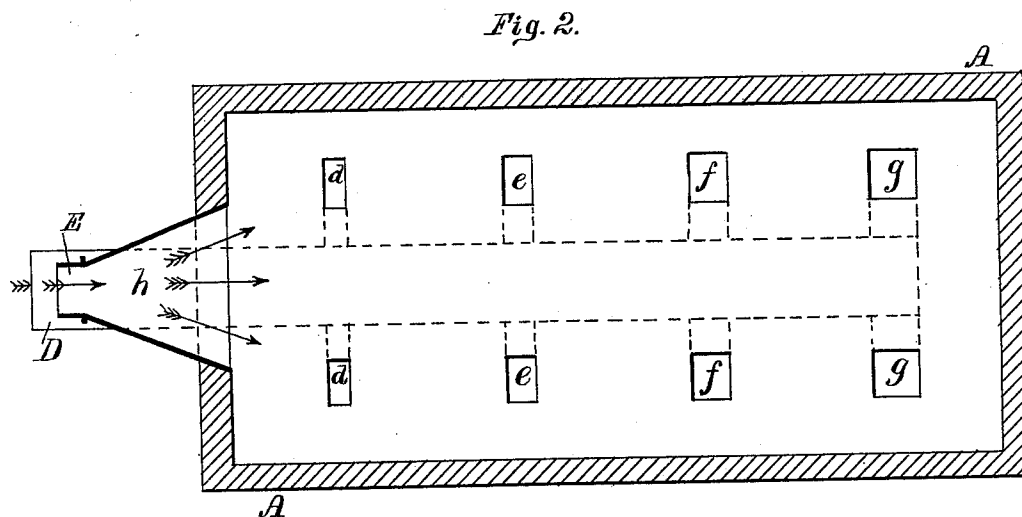
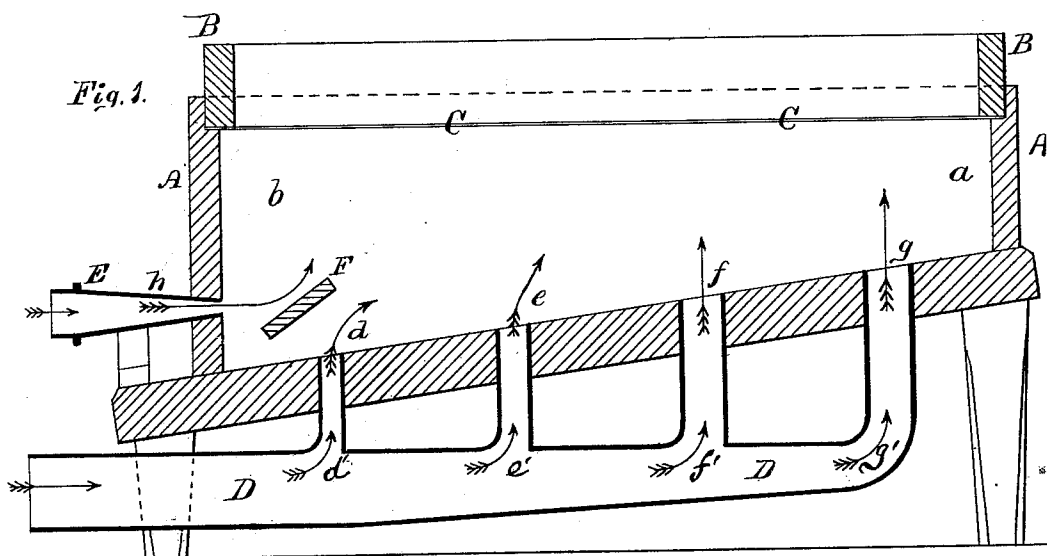
(No Model.)

L. LOTTIER & O. E. PERRIGO.

Process and Machine for Drying Tobacco.

No. 229,434.

Patented June 29, 1880.



Witnesses:

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UNITED STATES PATENT OFFICE.

LAWRENCE LOTTIER AND OSCAR E. PERRIGO, OF RICHMOND, VIRGINIA;
SAID PERRIGO ASSIGNOR TO SAID LOTTIER.

PROCESS AND MACHINE FOR DRYING TOBACCO.

SPECIFICATION forming part of Letters Patent No. 229,434, dated June 29, 1880.

Application filed March 30, 1880. (No model.)

To all whom it may concern:

Be it known that we, LAWRENCE LOTTIER and OSCAR E. PERRIGO, of Richmond, in the county of Henrico and State of Virginia, have
5 invented a new and useful Improvement in Process and Machine for Drying Tobacco; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying draw-
10 ings, and to the letters of reference marked thereon.

Our invention relates to the manufacture of tobacco in general, and particularly to the preliminary or preparatory processes through
15 which the tobacco must be passed previous to putting it in the forms of plugs or other shapes.

The object of our invention is to provide a simple and expeditious method of evaporating the surplus moisture remaining in the tobacco
20 after having been dipped in the usual solution or at any other stage of the manufacture, and also a method by which, while these ends are attained, the leaf shall not be left in a crispy condition or its flavor in any way injured.

Heretofore leaf-tobacco has been dried in either of two ways—viz., first, in the sun, which is a slow, troublesome, and uncertain method, or, second, in air-tight boxes of wood or metal
30 by direct or indirectly radiated heat. The latter has been the more common method, and its principal defect being that it dries too much, while the exhalations are all retained in the leaf, greatly deteriorating its flavor.

In our method we dry the tobacco in an open
35 tray having a perforated bottom, through which a current of cool air passes, and also at the same time heated air, by which the surplus moisture is gradually evaporated without injury to the leaf, leaving it in a moist, pliable
40 condition for manipulating, while the flavor is retained uninjured by the exhalations resulting from the evaporation of any solutions in which the tobacco may have been dipped.

Our invention consists in the process described and in the various operative combinations of the mechanism employed.

Our method will be better understood by reference to the accompanying drawings, forming a part of this specification, and explaining

an apparatus in which our process may be employed.

In the drawings, in which similar letters refer to like parts, Figure 1 is a vertical longitudinal, and Fig. 2 a horizontal, section of our drying-machine, the deflecting-board of
55 Fig. 1 not being shown.

The case A is rectangular, having an inclined bottom, so that its depth at *a*, which is at the rear end of the machine, shall be about half that at *b* at the front end. Upon this
60 case rests the shallow tray B, the bottom of which is composed of any perforated substance, usually wire-screen, as at C O.

The bottom of the case A is perforated with a series of holes in one or more longitudinal
65 rows, as at *d d e e f f g g*, Fig. 2, beginning at *b*, Fig. 1, at the deep end of the case A, with small holes, as at *d d*, and gradually increasing in size to those at *g g* at the shallow end of the case A. Into these holes hot air is
70 forced by a blower or any other convenient means through the hot-air pipe D and branch pipes *d' e' f' g'*, Fig. 1.

In order that the tobacco may, when first put upon the drying-machine, receive a blast
75 of cool air and then be gradually warmed, it is put on at *b*, and to insure the proper temperature, a small blast of cold air is forced in at *b* by the cold-air pipe E. The blast is spread out by the fan-shaped mouth-piece *h*, and to
80 hold it to its position at the deep end of the case A it is deflected upward and diffused by the deflecting-board F.

In operation the tobacco is placed while damp upon the screen at *b*, where it receives
85 a blast of cool air. It is then turned over and gradually moved by workmen toward *a*, the heat increasing as it is passed on. By this means it is heated gradually and the surplus moisture evaporated by the time it reaches *a*,
90 where it is removed while hot, all the exhalations incident to the evaporation passing off in the open air. More tobacco is added at *b* as that in process of drying is moved toward *a*.

It is evident that while the apparatus described is a convenient and indeed a preferable one in which to employ our process, we do not wish to confine our process to the same, as it

may evidently be used with a variety of apparatus.

Having thus described our invention upon which we desire to obtain Letters Patent, we claim—

1. The process or method, substantially as described, of drying tobacco in a vessel with an open top and a perforated bottom, consisting in passing direct currents of hot air and deflected currents of cold air through the tobacco while it is being moved along from one end to the other of the vessel, as set forth.
2. The open tray B, having a bottom of wire netting or perforated metal, in combination with the hot-air case A, having cold-air pipes E, and deflecting-board F, as described, and for the purposes specified.

3. The tray B, in combination with the case A and hot-air pipes D *d e f g*, arranged as described, and for the purposes set forth.

4. The combination of the hot-air case A, hot-air pipes D *d e f g*, and cold-air pipe E, and the deflecting-board F, all constructed and arranged substantially as described, and for the purpose specified.

This specification signed and witnessed this 29th day of March, 1880.

LAWRENCE LOTTIER.
OSCAR E. PERRIGO.

Witnesses:

FRANK H. HALL,
JOHN C. SCHROEDER.