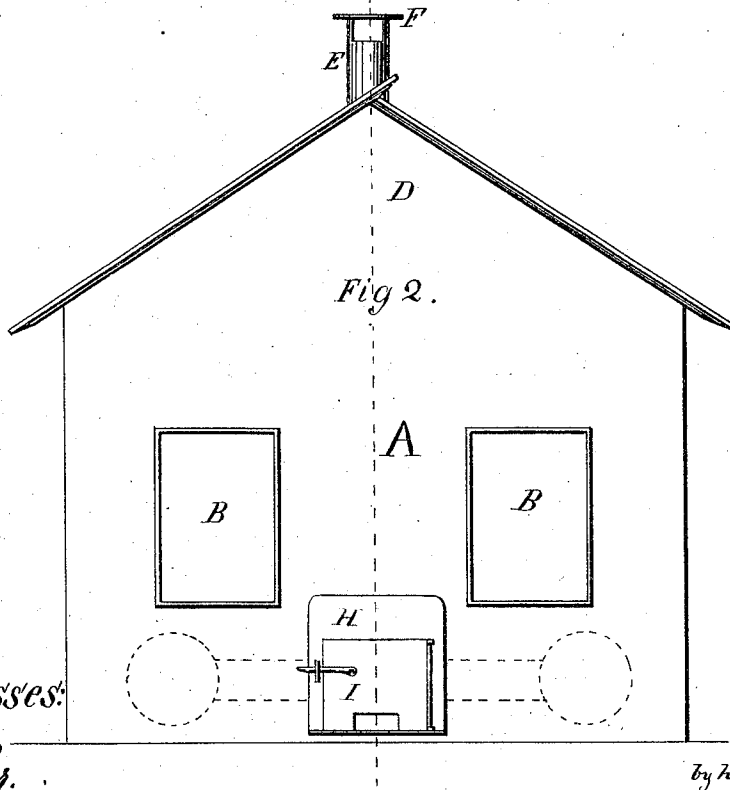
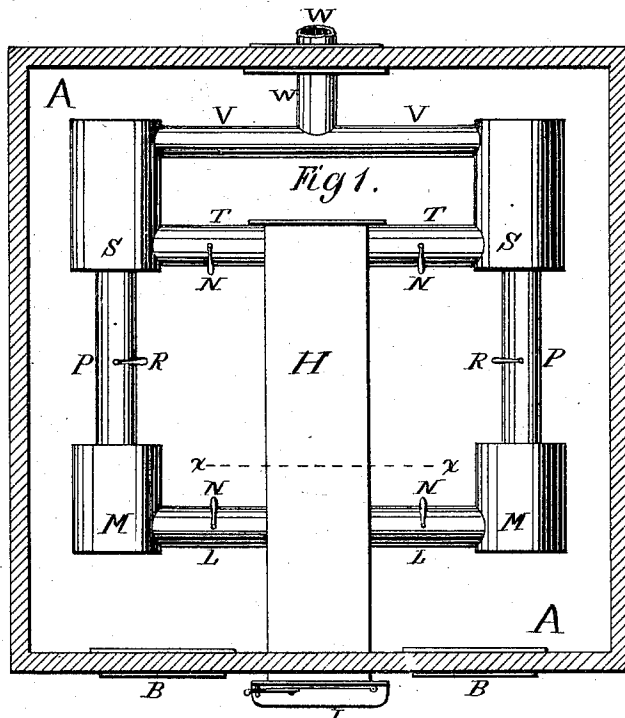


T. B. LYON, Jr.
Tobacco Driers.

2 Sheets--Sheet 1.

No. 155,619.

Patented Oct. 6, 1874.



Witnesses:

E. Hoyer.
J. P. Spamer

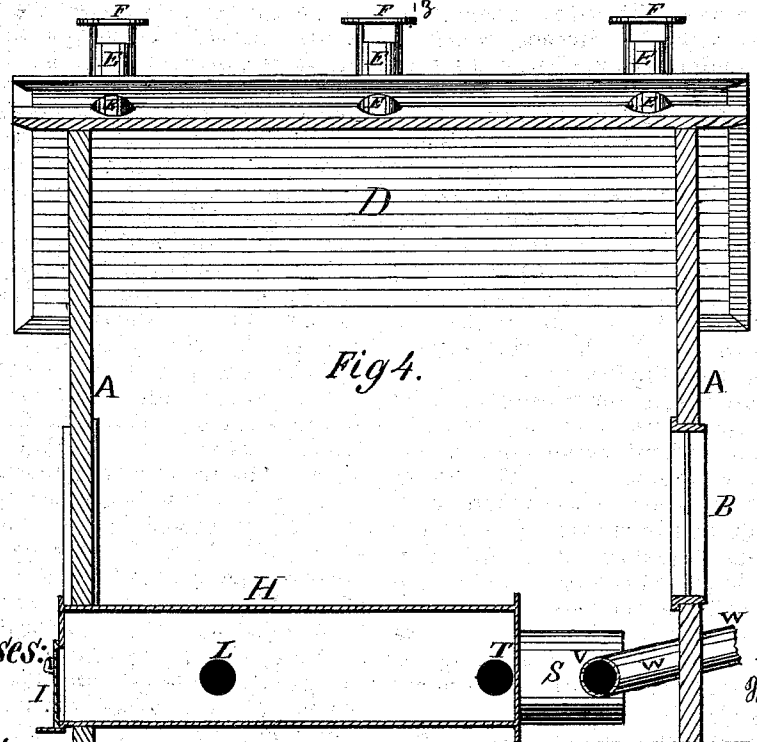
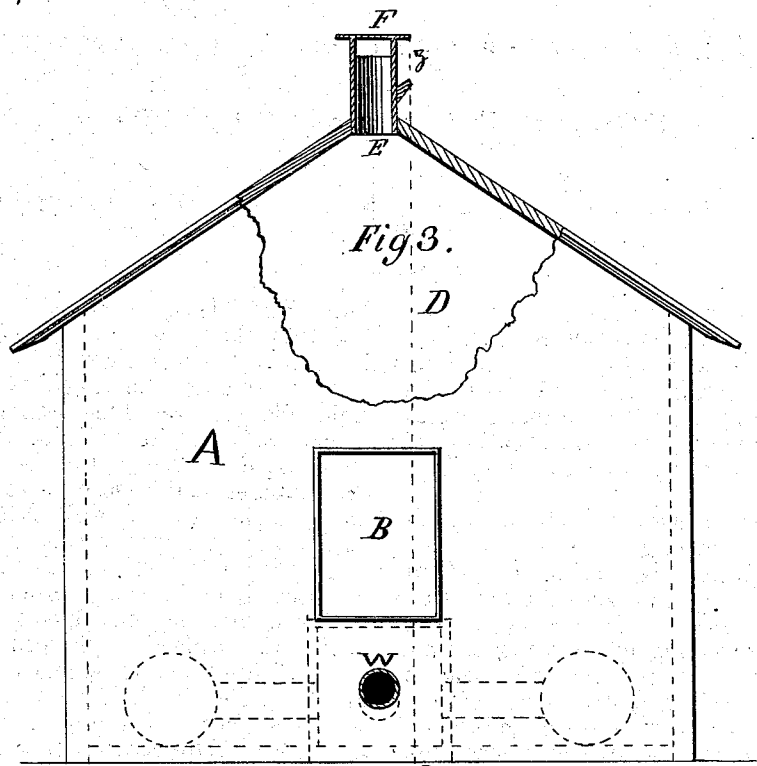
Inventor:

Thomas B. Lyon, Jr.
by his attys
Cox & Cox

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UNITED STATES PATENT OFFICE.

THOMAS B. LYON, JR., OF ORANGE, NORTH CAROLINA.

IMPROVEMENT IN TOBACCO-DRIERS.

Specification forming part of Letters Patent No. **155,619**, dated October 6, 1874; application filed August 29, 1874.

To all whom it may concern:

Be it known that I, THOMAS B. LYON, JR., of Orange, Orange county, North Carolina, have invented certain new and useful Improvements in Processes for Treating Tobacco, of which the following is a specification, reference being had to the accompanying drawings.

The invention consists in providing an air-tight chamber having windows, through which the operation may be noted, and furnished upon its ridges or central parts with a series of ventilators. A furnace is placed in the chamber, consisting of an elongated box or cylinder, provided on each side near its door with flues leading to drums placed near the two adjacent corners of the chamber, and connected by flues with drums placed near the opposite corners, the latter being connected by flues with the furnace, which is placed directly under and parallel to the ventilators aforesaid. The flues are all supplied with dampers. The ends of the drums last above mentioned are of larger dimensions than the other two, and are connected by pipes with the exit smoke-pipe leading from the chamber. By this arrangement the heat is gradually and evenly disseminated through the chamber; it is confined partially in the drums at regular intervals and thus equalized; it can be confined to any one drum to heat the adjacent parts of the chamber; the noxious vapor resulting from the drying is carried off immediately, preventing the possibility of its impregnating the leaves; and the operation can be inspected without admitting cold air, and thereby damaging the leaf. The object of the invention is to cure tobacco thoroughly in a yellow color, and by means of an evenly disseminated and equalized heat, operating in conjunction with ventilators arranged to speedily carry off the noxious vapors, thus improving the value of the product, as well as developing the natural aroma of the leaf, and thus obviating the use of flavoring-substances in its manufacture.

Figure 1 is a plan view of a device embodying certain of the elements of the invention. Fig. 2 is an end elevation of a device embodying the elements of the invention, showing the relative positions of the furnace and ventila-

tors. Fig. 3 is an elevation of the end opposite that above shown. Fig. 4 is a vertical longitudinal section through the line *zz*, Fig. 3.

A, in the accompanying drawings, is an air-tight chamber, provided with the windows B, which are set in the walls of the chamber in an air-tight manner. D is the upper part of the chamber, and is secured to the part A in an air-tight manner, although the parts A and D may readily be made as one chamber. The upper part D of the chamber is arched or pitched, as in the present instance, and provided with the exit-pipes or ventilators E, having the cowls F to prevent the ingress of rain. The tobacco to be cured is placed in the part D, preferably being hung in bunches of the usual form, with the tips of the leaves downward. Directly under and in line with the ventilators E is placed the furnace H, extending through the side of the chamber A, and there provided with the door I. On the inside of the chamber it extends a suitable distance toward the side opposite that adjacent to which the door I is placed. At a proper distance within the chamber, and adjacent the door end thereof, are provided the flues L, connecting with the drums M, and having between the drums and furnace the dampers N. The drums are placed adjacent the corners of the chamber, and are connected at their ends by the flues P, wherein are provided the dampers R, with the ends of the drums S placed in the opposite corners of the chamber, and connected with the furnace H by the flues T, wherein are provided the dampers N. The drums are about equally distanced from each other. The drums S are larger than the drums M, so as to contain a greater amount of heat, and are connected by the flues V with the smoke-conduit W. This arrangement is for the purpose of equalizing the heat in the lower part of the chamber, since, the heat being more intense adjacent the flues L, the drums M would evolve more heat than the drums S; therefore the latter are enlarged, and also provided with the flues V to increase the surface evolving heat, and thus equalize it throughout the chamber. This result may also be accomplished by constructing the drums of similar size and increasing the relative size of the flues adjacent the drums S, the object being

to make the surface evolving heat so much larger in the rear than the front portion of the chamber that the excess shall compensate for the intenser degree adjacent the door of the furnace, and thus produce an equality of caloric evolved from the heating apparatus.

The tobacco being suspended, as aforesaid, a fire is started in the furnace H, and the dampers being thrown open the whole device is soon heated. The hot air rising from the furnace, drums, pipes, and flues passes through the tobacco, and thence directly out of the ventilators E, which, being directly over the furnace, the noxious gas and vapor are carried off at once, and before they have time to impregnate the tobacco, which would not be the case were the furnace and ventilators otherwise disposed, as their passage would be arrested or delayed, and the tobacco rendered very liable to impregnation by the same. The drums M and S, with the flues N and V and smoke-exit W, arranged as aforesaid, evolve an equal amount of heat over the lower portion of the chamber, which affects the tobacco alike, operating with the ventilators to cure it in a bright yellow color and retain its fragrance. But as in many cases the tobacco varies in character, one part yielding to the treatment much more readily than another, it sometimes becomes necessary to give to a part a longer treatment than to the remainder. Under such circumstances all the dampers N are closed, except that in the flue con-

necting the drum below that part of the tobacco to be additionally treated with the furnace. This causes the drum to heat speedily, and effects the desired result without materially heating the other parts of the chamber or necessitating the removal of the other leaf. Should the tobacco to be additionally treated be situated over either of the drums S the dampers R are also closed. The fire is made near the door end of the furnace, and should not extend beyond the line *xx*. Tobacco that has been cured in a dark-brown color may be materially improved by the above process.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a tobacco-drier the air-tight chamber A, provided with the ventilators F placed directly above the furnace H, in combination with the drums M and S, placed as shown, the latter being larger than the former, and the drums respectively connected with the furnace H and each other by means of the flues L, T, and P, provided with the dampers N, substantially as set forth.

In testimony that I claim the foregoing improvement in processes for treating tobacco, as above described, I have hereunto set my hand and seal this 27th day of August, 1874.

T. B. LYON, JR. [L. s.]

Witnesses:

J. E. LYON,

R. W. THOMAS.