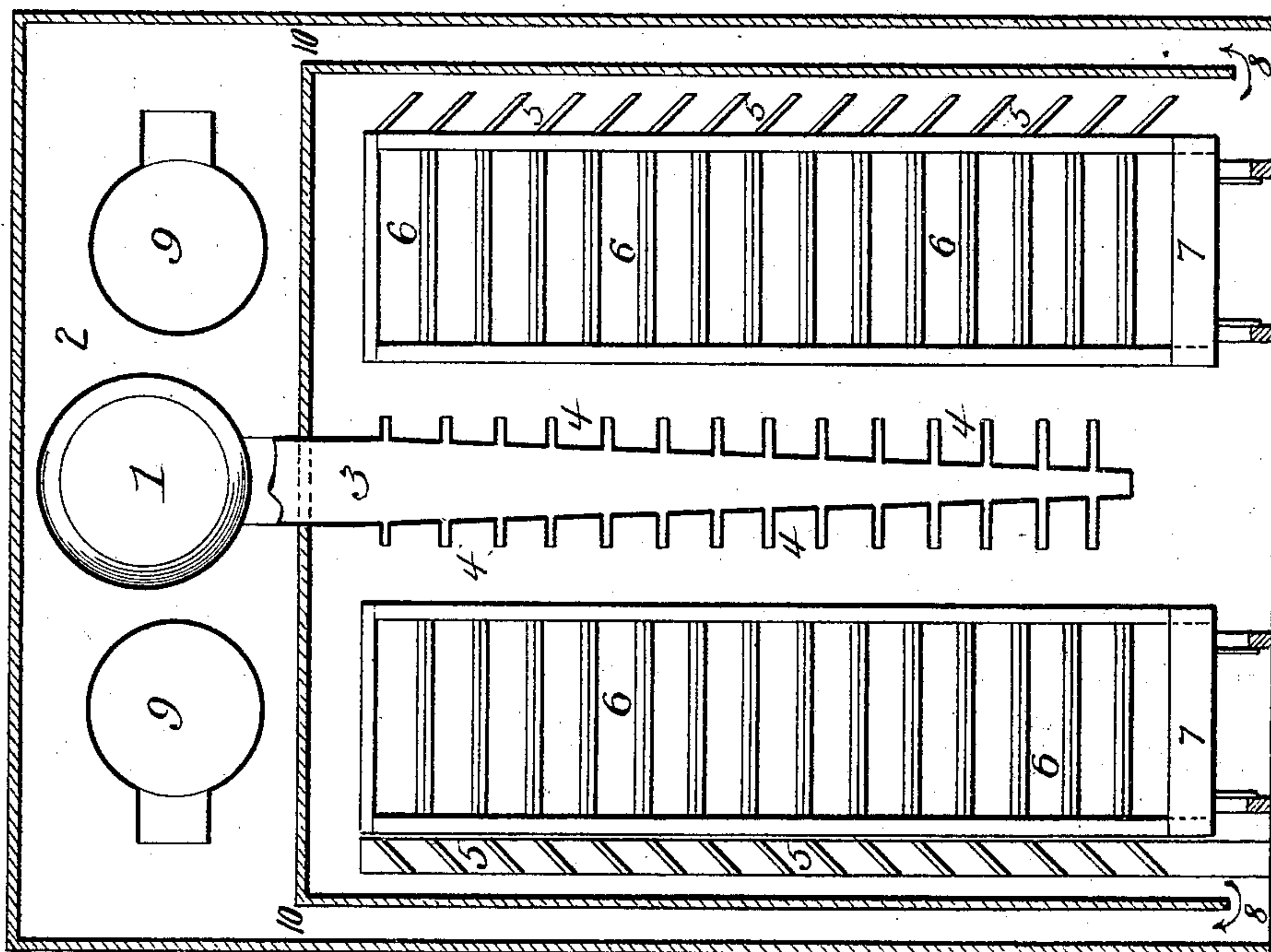


(No Model.)

S. P. MAYO & C. A. PEPLE.
TOBACCO DRIER.

No. 539,874.

Patented May 28, 1895.



Witnesses
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G. F. Downing

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UNITED STATES PATENT OFFICE.

SAMUEL P. MAYO AND CHARLES ANTHONY PEPLE, OF RICHMOND, VIRGINIA, ASSIGNORS TO THE MAYO TOBACCO DRYING AND ORDERING COMPANY, OF SAME PLACE.

TOBACCO-DRIER.

SPECIFICATION forming part of Letters Patent No. 539,874, dated May 28, 1895.

Application filed December 8, 1893. Serial No. 493,112. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL P. MAYO and CHARLES ANTHONY PEPLE, of Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Apparatus for Drying Tobacco; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in apparatus for drying tobacco or other material upon racks or trays, the object being to provide effectual means for the distribution of heated air and for maintaining uniformity of draft and temperature throughout the drying chamber, and it consists in certain novel features of constructions and combinations of parts which will be hereinafter described and pointed out in the claims.

The accompanying drawing is a transverse section through our improved apparatus.

A A', represent the outside and inside walls of the chamber in which the drying is done. These walls are suitably separated so as to allow ample air space for supply and circulation of air between them; and the space between said walls is in communication with the interior of the room at or near the bottom on each side of the room. A central pipe 1 for the supply of air is located in the space 2 between the ceilings and from this supply pipe, which is preferably graduated or tapered smaller distribution pipes, one or more in number, pass downward through the inner ceiling and terminate at or near the floor of the chamber. Pipe or pipes 3 are graduated in shape from top to bottom, and are preferably of rectangular cross-section. They have discharge nozzles 4 and 4 which extend out laterally in opposite directions as shown for the discharge of the air.

The object for tapering or graduating pipe 1 is that each of the smaller distribution pipes 3, 3, may receive the same quantity of air; and the object of tapering or graduating pipes 3, 3, is to as nearly equalize the discharge of air as possible. By this construction the same amount of air is, to all intents and pur-

poses, discharged from each of the nozzles 4, 4, in whatever part of the room they may be situated. In addition to this, one of the essential features of our present invention is to make provisions for counteracting the tendency of the hot air to rise, and consequently to cause the lower trays of tobacco to be dried as thoroughly and rapidly as the top trays. This may be done in several different ways and we have adopted the following as quite feasible for the purpose: We propose to secure inclining air deflectors 5, 5, in the interior of the drying chamber in position as nearly as possible to receive the currents of air, after they have passed through the spaces between the trays 6, 6, on the trucks 7, 7, into which spaces the currents have been discharged from the nozzles 4, 4, of pipe 3. The air which is discharged from the nozzles 4, 4, passes through the spaces between the trays, and absorbs moisture from the tobacco or other substance which has been placed upon them. It then strikes the inclined deflectors and is deflected toward the bottom of the room. It then passes through the spaces 8, 8, 10, 10, which communicate with the spaces between the outer and inner walls of the room. In this manner a uniform draft of air at a uniform temperature is kept up over all of the trays and every tray is dried thoroughly and uniformly. As a slight modification we have shown the deflectors secured to the side of the truck on one side of the drawing. The air is carried out through pipes 9, 9, by means of suitable ventilators, this air being taken from the bottom of the chamber through the openings 10, 10. Thus it will be seen that a continual circulation of air is kept up, and that a uniform temperature is maintained in all parts of the chamber.

It is evident that other slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of our invention, and hence we do not wish to limit ourselves to the exact construction herein set forth, but to make such alterations and rearrangements as may be required for the special work of each apparatus.

Having fully described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

1. The combination with a chamber having an outlet at the lower end for exhausted air, 5 of a graduated supply pipe located centrally in the chamber and discharging laterally, shelves located in the chamber on each side of the discharge orifices, and deflectors located outside of the shelves for deflecting the air 10 discharged between the shelves downward toward the exhaust opening, substantially as set forth.

2. In a drying apparatus, the combination with a chamber having double side walls and 15 ceilings, the two chambers thus formed being in communication with each other at their lower ends, a graduated supply pipe located between the ceilings, and graduated distribu-

tion pipe leading downward from the supply pipe and having nozzles for the discharge of 20 air opposite the trays, of trays located in the inner chamber on either side of the distribution pipe, deflectors at the outer ends of the trays adapted to give a downward impulse to the air from the trays and discharge it into 25 the chamber, and discharge pipes located between the ceilings for the removal of the air therethrough, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscrib- 30 ing witnesses.

SAMUEL P. MAYO.

CHAS. ANTHONY PEPLE.

Witnesses:

WM. H. CHRISTIAN,
CHAS. P. WALFORD.