

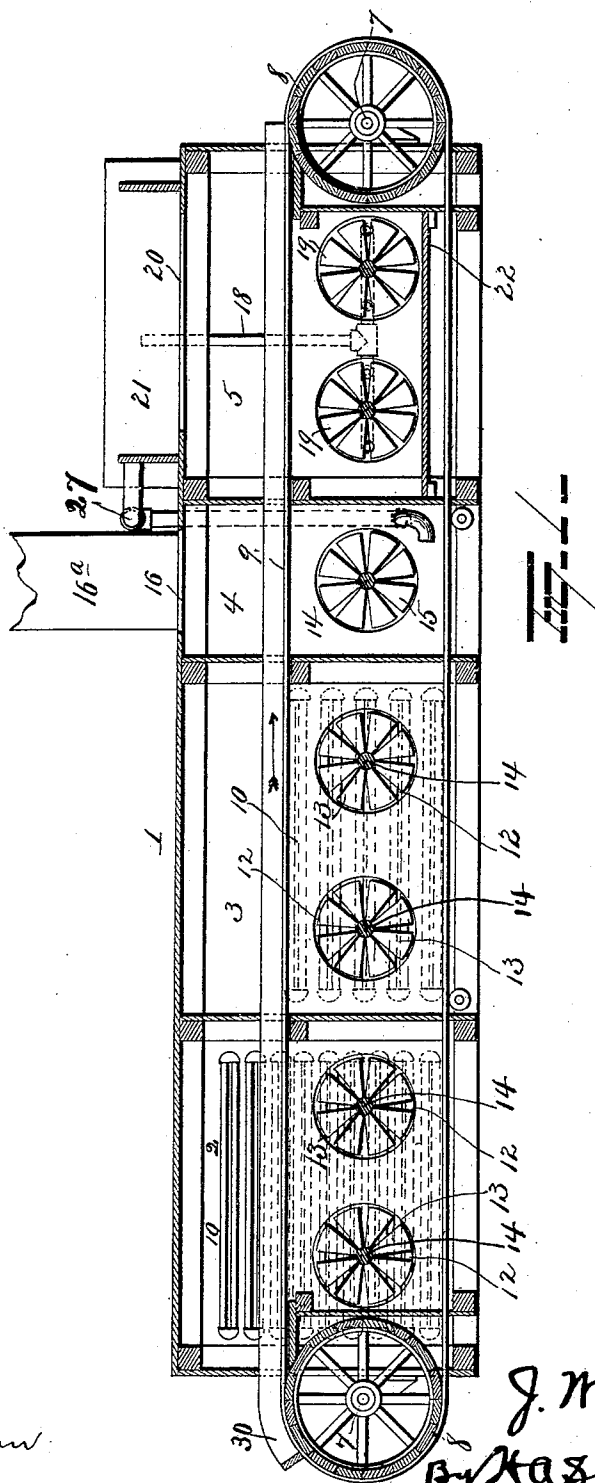
(No Model.)

3 Sheets—Sheet 1.

J. WRIGHT.
APPARATUS FOR TREATING TOBACCO.

No. 569,313.

Patented Oct. 13, 1896.



Witnesses
C. J. Nottingham
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Inventor
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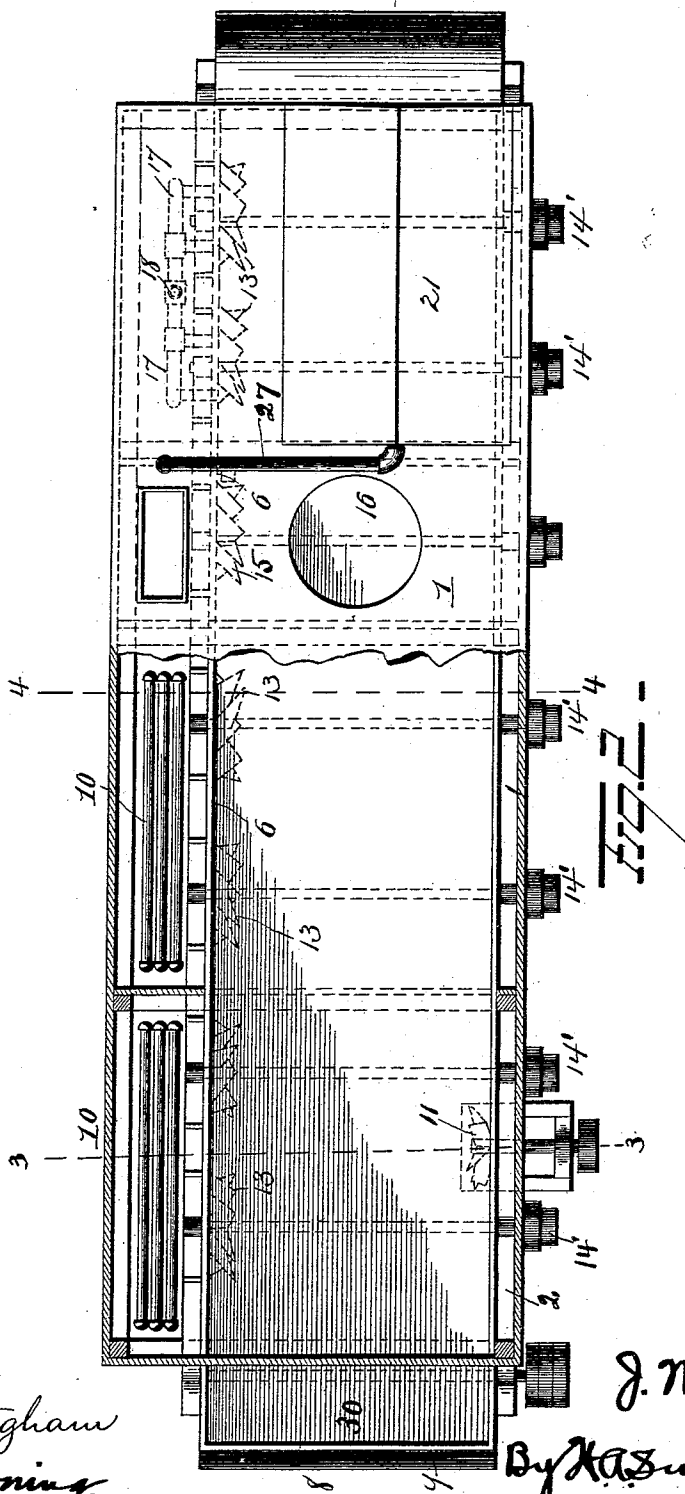
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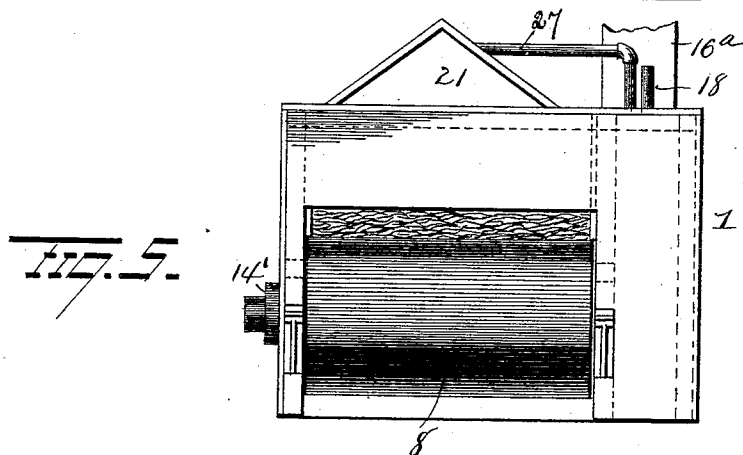
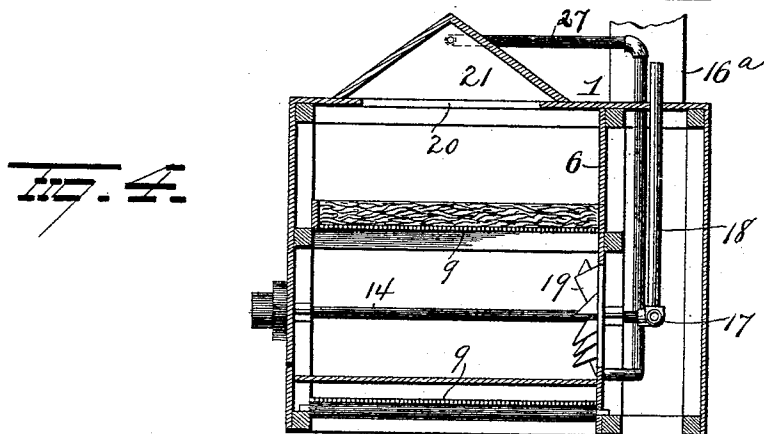
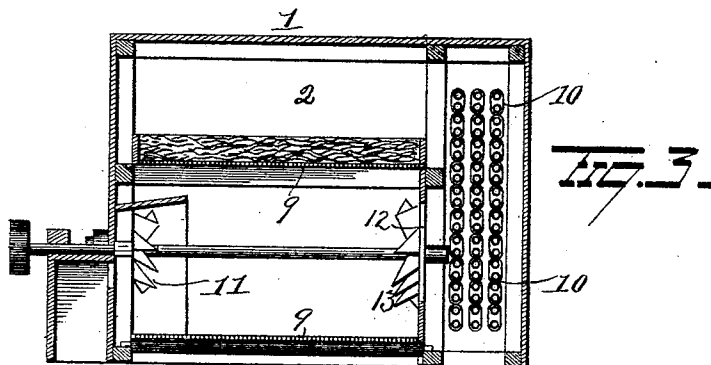
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UNITED STATES PATENT OFFICE.

JOHN WRIGHT, OF RICHMOND, VIRGINIA.

APPARATUS FOR TREATING TOBACCO.

SPECIFICATION forming part of Letters Patent No. 569,313, dated October 13, 1896.

Application filed September 26, 1895. Serial No. 563,751. (No model.)

To all whom it may concern:

Be it known that I, JOHN WRIGHT, of Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Apparatus for Treating Tobacco; and I 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.

My invention relates to an apparatus for automatically subjecting tobacco to the treatment rendered necessary before it can be utilized for manufacturing purposes.

The objects of the invention are, first, to provide means whereby tobacco may be thoroughly cleaned and freed of all impurities, aired and dried, then cooled, and finally moistened or "ordered," so as to put it in condition to be worked into a marketable article, and, second, to provide means whereby these various steps may be successively or uninterruptedly carried out while the tobacco is in transit. These objects are attained by means of the apparatus illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal sectional view of an apparatus constructed after my invention; Fig. 2, a top plan view, partly in horizontal section; Fig. 3, a transverse vertical sectional view on line 3 3 of Fig. 1; Fig. 4, a similar view on line 4 4 of Fig. 1, and Fig. 5 a rear end view.

Referring to the several figures of the drawings, the numeral 1 indicates a box or casing constructed of any suitable material and preferably oblong in shape. This box or casing is divided into four or more rooms or compartments, preferably four, which for convenience sake I will designate and hereinafter refer to under the following heads—viz., the cleaning-room 2, the airing and drying room 3, the cooling-room 4, and the ordering-room 5.

Each room is partially divided longitudinally by a vertical partition 6, thus forming two communicating chambers. As the partition does not extend to more than about two-thirds the height of the rooms it will be seen that ample communication is afforded between the chambers of each room. At each end of the apparatus is journaled a

drum 8, over which passes an endless belt 9, of wire-gauze or other foraminous material, the purpose of which belt is to convey the tobacco through the larger chambers of the several rooms or compartments of the apparatus. The end of the shaft of one drum, preferably the front one, projects beyond the side wall of the box or casing and has mounted thereon fast and loose pulleys for the reception of power-bands. The transverse vertical partitions which separate the rooms or compartments from each other are provided with the necessary openings for the passage of the endless tobacco-conveyer, as clearly shown in Fig. 1.

In the smaller chambers of the cleaning, airing, and drying rooms are arranged heating-coils 10, which may connect with any suitable heat-generator, a suitable fan 11 being employed to draw the moistened air out of said rooms. The longitudinal partitions 6 are provided with openings 12, in which are placed air-circulating devices 13, which in the present instance consist of fans mounted on transverse shafts 14, journaled in suitable bearings attached, respectively, to one of the side walls of the apparatus and to the longitudinal partitions, as shown in Fig. 2. One end of each shaft extends through the side wall and is provided with a pulley 14, over which runs a belt (not shown) to impart motion to the shafts and thereby to the fans. In the cleaning-room the tobacco is subjected to a highly-heated air, which is directed upwardly against the tobacco by the fans 13, which quickly frees it of all moisture and impurities before it reaches the airing and drying room proper, where the final airing and drying take place, while the moist air is withdrawn from the room and thus removed from the circulation by the fan 11.

The cooling-room is provided with one or more revoluble fans 15, only one being shown, placed in an opening or openings made in the longitudinal partitions 6 and mounted similarly to those heretofore described. Air is taken through an opening 16 in the top of the box or casing and is circulated through said room to cool the tobacco and prepare it for the final operation of the apparatus, a suitable outlet 16^a being provided in the top of the smaller chamber for the escape of the air. Situated in the smaller chamber of the or-

dering-room is a spraying device 17, provided with a pipe 18, which may be connected with any suitable source of fluid supply, and fans 19 are arranged in close proximity to the spraying device, so that the vapor coming from the spraying device may be caused to commingle with the air being agitated by the fans and thereby produce in the ordering-room an atmosphere of sufficient humidity to give to the tobacco the proper degree of pliability necessary to render it in fit condition for working.

The top of the box or casing directly over the ordering-room is provided with an opening 20, which is covered by a peaked housing 21, from which the pipe 27 leads to the cooling-chamber 4. This pipe permits the moist air and excess of pressure to escape from the ordering-room, it being withdrawn from the chamber by the fan 15 in the chamber 4 and forced out through the stack or pipe 16^a, thus keeping up a constant supply of fresh moist air and relieving the ordering-room of undue pressure.

The operation of my improved apparatus is as follows: The tobacco is fed into the hopper 30 onto the conveyer-belt, which is caused to move by power applied to one of the fast pulleys on the shaft of the front drum, a band passing over the other fast pulley and over the pulleys on the several fan-shafts. The tobacco is carried through the cleaning-room, where it is subjected to highly-heated air, which, being kept in a constant state of agitation by the fans, absorbs all moisture contained in the tobacco and frees it of all impure matter. By the time the tobacco has passed through and been subjected to the heated air in the second chamber, kept in circulation by the fans in said chamber, it has become thoroughly aired and dried, and in this state it enters the cooling-chamber, where it is subjected to a contact circulation of cool air, which leaves it in a very brittle condition, unfit for handling until it passes through the ordering-chamber. In passing through the ordering-chamber the tobacco receives sufficient moisture to render it in condition to be readily handled without crushing or breaking. The treatment is effectually and economically carried out, it being continuous and without interruption, and the texture and aroma of the tobacco are not in the least impaired.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus for treating tobacco, comprising a box or case divided into a series of compartments, each compartment comprising two communicating chambers, heating-coils situated in one of the chambers of each of two compartments, devices located in openings in the partitions between the communicating chambers for forcing a current of air through the chambers, the third compartment having an air suction and forcing device

mounted in the partition between its two chambers, the fourth compartment provided with air-circulating and liquid-spraying devices, and means for conveying the tobacco through these chambers.

2. An apparatus for treating tobacco comprising a box or case containing a series of compartments, each of which compartments comprises two communicating chambers, heating devices situated in one of the chambers of each of two compartments and means for forcing a current of air through these chambers, the third compartment provided with an opening in the top of one of its chambers, an air suction and forcing device in the partition between these two chambers, the fourth compartment provided with air-circulating and fluid-spraying devices, means for preventing undue pressure of moist air in said compartment, and means for conveying the tobacco through the series of treating-chambers, substantially as set forth.

3. An apparatus for treating tobacco, comprising a box or case divided into four compartments, each of which comprises two communicating chambers, devices located in the partition between these chambers for forcing a current of air through the chambers, heating-coils located in one of the chambers of each of two compartments, the third or cooling compartment provided with an opening in the top in communication with one of its chambers, a suction and forcing fan in communication with its chambers, the fourth or ordering compartment provided with a spraying device in one of its chambers, an air-circulating device mounted in proximity to said spraying device and arranged to cause a circulation of moist air through the two chambers composing this compartment, and a device to prevent and relieve undue pressure of the moist atmosphere in the ordering-compartment, and an endless tobacco-conveyer running through the several compartments, substantially as set forth.

4. An apparatus for treating tobacco comprising a box or casing divided into four compartments, each of which is composed of two communicating chambers, heating devices situated in the smaller chamber of two of said compartments, means for forcing a current of air therethrough, means for sucking air into and forcing it out of the third compartment, a spraying device situated in the smaller chamber of the fourth compartment, means for circulating air through said compartment, and a traveling conveyer for conveying the tobacco through the several larger chambers of the several compartments, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN WRIGHT.

Witnesses:

H. B. OWEN,
G. F. DOWNING.