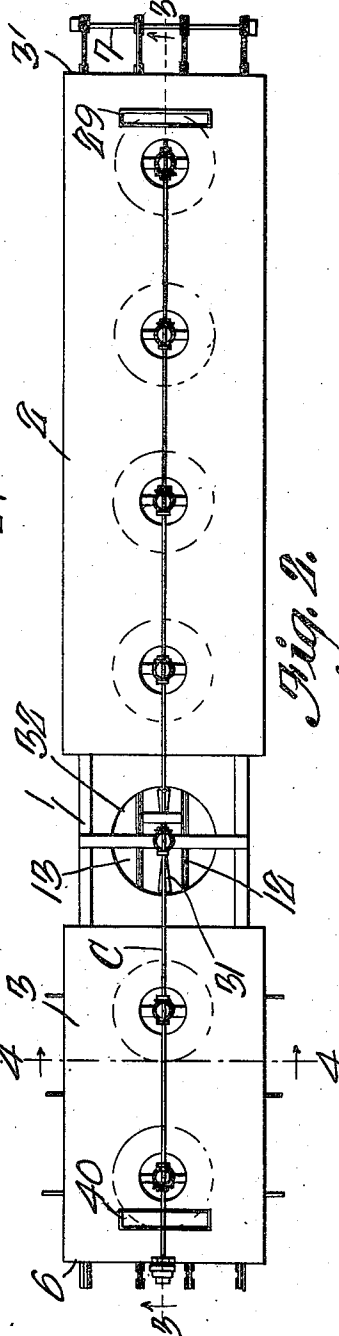
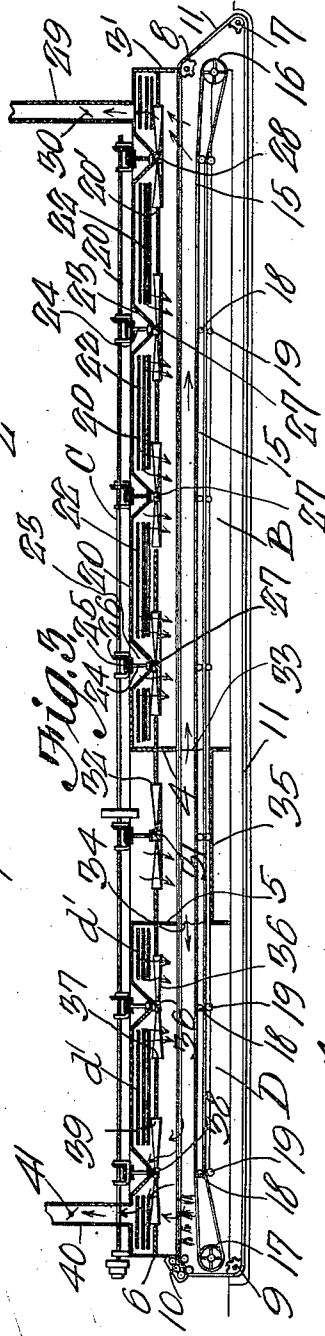
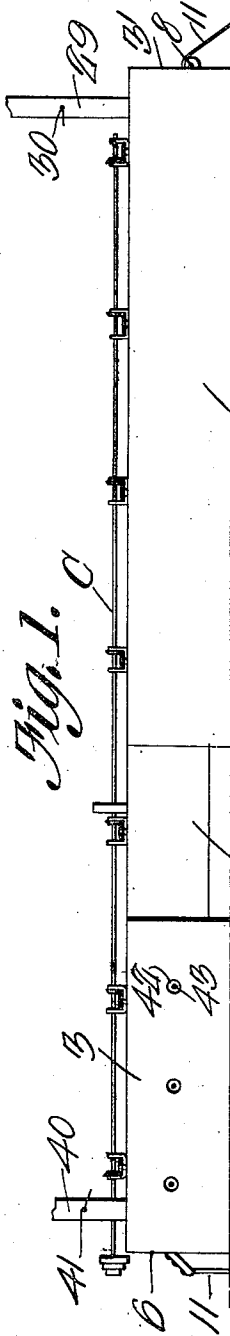


C. D. BROWN.
TOBACCO DRYING APPARATUS.
APPLICATION FILED JULY 8, 1911.

1,017,951.

Patented Feb. 20, 1912.

2 SHEETS—SHEET 1.



Witnesses

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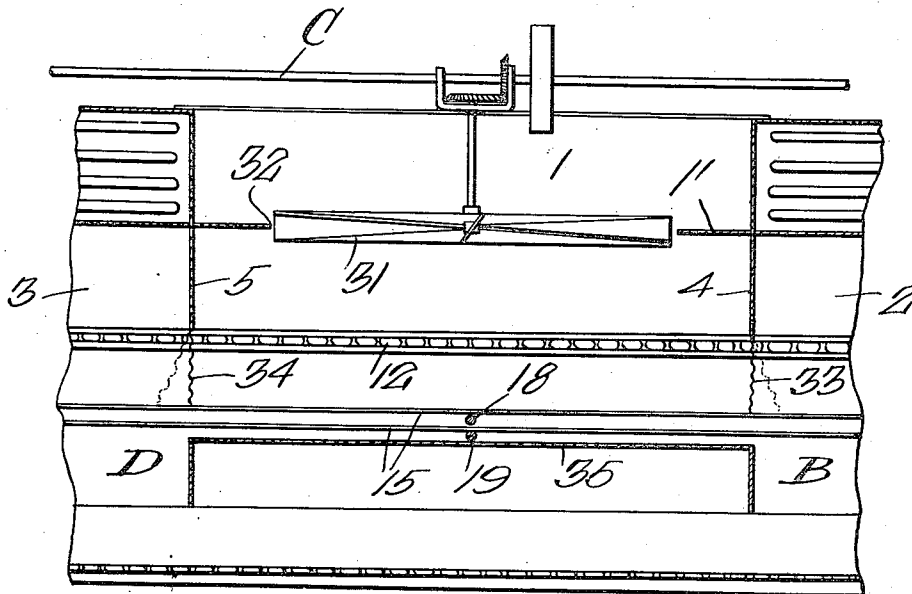
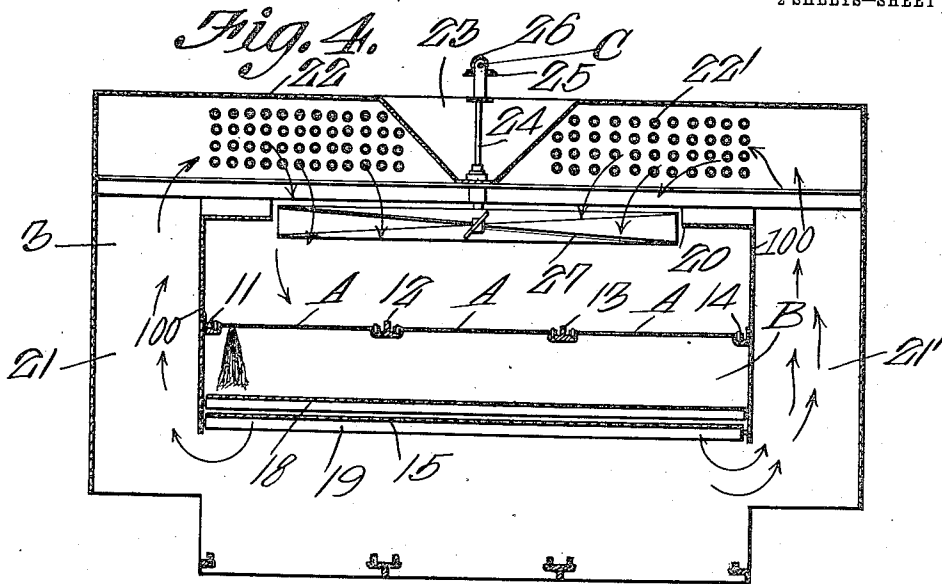


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

CLARENCE D. BROWN, OF OWENSBORO, KENTUCKY.

TOBACCO-DRYING APPARATUS.

1,017,951.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed July 8, 1911. Serial No. 637,443.

To all whom it may concern:

Be it known that I, CLARENCE D. BROWN, a citizen of the United States, residing at Owensboro, in the county of Daviess and State of Kentucky, have invented a new and useful Tobacco-Drying Apparatus, of which the following is a specification.

This invention relates to improvements in tobacco drying apparatus, the primary object of the invention being the provision of an apparatus whereby the tobacco leaves while mounted upon their regular drying sticks are passed longitudinally through a drying compartment, in which the current of air supplied thereto is supplied from the opposite end through a cooling compartment, a series of heat supplying means being disposed at the dome of the upper portion of the drying compartment with fans interposed therebetween for causing the current of air to be blown downwardly upon the tobacco as it passes from the inlet to the outlet end of the drying compartment and circulated around the sides thereof up to the heating apparatus and finally out through an exhaust chute or flue which is regulated by a damper, the cooling compartment being interposed between the drying compartment and what is known as a moistening or "ordering" compartment in which is mounted similarly constructed heat conveying means and air accelerating means as in the drying compartment, the cooling compartment supplying the air thereto and a flue being disposed with a damper for conveying the air thereaway from, the said drying, cooling and ordering compartment being so arranged that the tobacco is properly dried at a low temperature without in any way affecting the flavor thereof, the said ordering compartment being provided with auxiliary means for supplying steam and air simultaneously thereto in the desired quantity for producing the proper moistening or ordering effect and not deteriorating the flavor of the tobacco.

A further object of this invention is the provision of an apparatus for drying, cooling and ordering tobacco in which the cooling compartment is arranged intermediately between the drying and ordering compartments and is so disposed as to supply the air thereto, that is to the drying compartment in the opposite direction of the movement of the tobacco therethrough and into the ordering compartment in the direction of

the movement of the tobacco therethrough, thus providing a means whereby the temperature may be regulated to an exactness that will prevent the too brittle drying of the tobacco and at the same time not affect the flavor of the natural leaf.

A still further object of this invention is the provision of communicating drying, cooling and ordering compartments provided each with their respective fans, bearings of said fans being arranged longitudinally and exteriorly of the compartments, whereby the heat within the compartments or the grit contained upon the leaves of the tobacco in no way affect the bearings thereof, and thus at all times place said bearings in a position to be readily accessible to the operator and at the same time preventing any undue heating of the bearings that may cause fires or accidents.

A still further object of this invention is the provision of a centrally disposed cooling compartment having a fan mounted therein adapted to draw the air in from the outside, where the same is divided and dispelled in oppositely disposed directions into a forward drying compartment and to a rearwardly arranged or oppositely arranged ordering compartment, combined with a series of conveying means for receiving the ordinary sticks containing the tobacco leaves to permit the same to be passed through the drying compartment, cooling compartment and ordering compartment in the order stated.

By means of this form of apparatus, the heating apparatus in both the drying and ordering compartments is so disposed as not to come in direct contact with the tobacco leaves, the fans being disposed between the heating apparatus and the conveying means for the said leaves, thus permitting, when it is desired to stop the machine at lunch hour, or closing hour, the tobacco to remain within the various compartments without being unduly affected by the heating of the radiation therein as the radiators are so disposed that at such time the air within the compartments is conveyed by the expansion and heat thereof through the outlet chutes or flues and thus will not affect the tobacco suspended upon the various conveyer chains therein.

It is also the object of this present invention to provide a series of parallel conveying chains, whereby a series of sticks carrying

the tobacco leaves as is usual in warehouses and factories, are placed in transverse arrangement so that a series of three may be carried from the inlet end of the drying compartment to the outlet end of the ordering compartment and be acted upon simultaneously throughout the various compartments of the apparatus.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a side elevation of the complete tobacco drying apparatus. Fig. 2 is a top plan view thereof. Fig. 3 is a longitudinal central sectional view taken on the line 3—3 of Fig. 2. Fig. 4 is a section taken on line 4—4 of Fig. 2. Fig. 5 is an enlarged detail sectional view of the cooling compartment and the adjacent or adjoining ends of the respective drying and ordering compartments.

Referring to the drawings, the apparatus consists of the central cooling compartment 1, the forward drying compartment 2 and the oppositely disposed ordering or moistening compartment 3. These compartments are connected together for continuous operation, the said compartments being provided respectively, with the front wall 3, intermediate partition walls 4 and 5 separating the respective drying compartment and ordering compartment from the cooling compartment, and with the rear wall 6 of the ordering compartment.

Mounted in and disposed longitudinally of the respective drying and ordering compartments of the apparatus are side walls or partitions 100 which provide the respective auxiliary chambers B and D centrally of the respective drying and ordering compartments, while upon each side of the partitions and adjacent the outer walls of the respective compartments are formed the oppositely disposed air conducting spaces or passages 21 and 21'.

Disposed between the walls of the chambers B and D transversely thereof are the shafts 7 and 8 and 9 and 10 respectively providing a power means and also a guiding means for the respective stick conveyer belts or chains 11, 12, 13 and 14 as clearly illustrated in Fig. 4, these belts or chains being so disposed and having means mounted thereon for the reception of the ends of the sticks A which carry the leaf tobacco as clearly shown in Fig. 4. It will thus be seen by this arrangement that three sticks A are disposed transversely of the chambers

B and D, the said sticks being placed upon the respective chains at the end 3' of the drying compartment and the said shafts thereof are operated to move the belts inwardly through the drying compartment, the said sticks with the leaves of tobacco being carried therethrough to the cooling compartment 1 and finally out through the ordering compartment 3. In order to convey any leaves that may fall during their movement through the various compartments, the endless conveyer belt 15 with the power pulleys 16 and 17 is disposed throughout the length of the compartments and is held relatively by means of pairs of rollers 18 and 19.

In the top of the chamber B at equal distance therein, are the fan openings 20 and disposed above the tops thereof, as clearly shown in Figs. 3 and 4, are the two series of radiators or coils 22 and 22'. Formed in the top of the respective compartments 1 and 3 are the conical depressions 23 through which pass the shafts 24 carrying in the drying compartment the three air circulating fans 27 which are disposed in the openings 20 in the chamber B, the gears 25 and 26 being operably connected to the shaft 24 and the main shaft C, whereby all of the fans of the apparatus are rotated in unison. It will also be noted that the bearings of the respective fans are exterior of the apparatus so that the heat from the radiators, and also any grit that may be circulated by the currents of air therein from the leaves of the tobacco will not affect the bearings, thus preventing the heating thereof and in many cases the fires occasioned thereby.

All of the respective fans 27 are so disposed as to convey the currents of air which enter from the cooling compartment at 33 downwardly upon the tobacco carried by the conveyers around the end of the walls of the chamber B and up through the channels 21 and 21', through the radiators or coils 22 and 22', as clearly illustrated in Fig. 4, and downwardly again upon the tobacco into the chamber B. By this means it will be seen that the air coming in cool from the cooling compartment 1 is acted upon by the first fan 27 in this way and as the continued action of the air throughout the drying compartment is given a downward and upward divided action and, in fact a spiral action throughout the compartment, until it arrives at the point of the fan 28, which is rotated in an opposite direction from the fan 27 and has a tendency to draw the air upwardly and through the opening 20' into the mouth of the flue 29, which is controlled by a damper 30 so that the desired quantity of air may be allowed to pass therethrough according as the circumstances require. By this means the temperature and the amount of air passing through the drying compartment is limited, as desired, and furthermore the air

may be retained therein to a greater degree so that the same is acted upon continually or as long as may be desired by the respective fans 27.

5 As the tobacco is carried through the drying compartment, the same being of a sufficient length to cause the same to be dried to the proper degree without affecting the flavor thereof, it is next passed below the
10 flexible aprons 33 into the cooling compartment 1, whose upper wall 1' is provided with an aperture 32 in which is rotatably mounted the fan 31 operably connected to the shaft C, so disposed as to draw the air into said
15 opening 32 as indicated by the arrows in Fig. 3 upon the leaves carried by the respective conveying chains where the currents of air will follow the arrows shown in Fig. 3 into the rear end of the drying compartment
20 and into the forward end of the ordering compartment, an apron 34 being disposed at the junction between the cooling compartment and ordering compartment.

Mounted within the cooling compartment
25 is the fan 36 disposed to draw the air downwardly after being acted upon by the radiators *d'*, through the opening 37 to the chamber D where the same acts upon the tobacco conveyed therethrough and is circulated as shown in Fig. 4, thus providing a
30 circulating means whereby the air is forced downwardly upon the tobacco and conveyed upwardly through the outer channels at 21 and 21' to the radiators *d'* and finally drawn
35 out by the fan 38 through the opening 39, into the flue 40, controlled by the damper 41 as clearly shown in Fig. 3, the current of air following in the line shown by arrows therein.

40 It will thus be seen that in the ordering or softening of the tobacco, the ventilation is secured by the same arrangement as that of the drying, and by reason of the fan in the cooling or the central compartment forcing a portion
45 of the cool air into and throughout the ordering or softening compartment, and being exhausted through the flue 40, the outer fan 38 handling its air in an upward direction and exhausting it directly into the
50 opening of the flue 40 outside, said flue being provided with a damper as indicated. The amount that is permitted to flow outwardly from the softening or ordering compartment is automatically supplied by the
55 fan in the cooling compartment, and in order to accelerate the action of ordering and softening, the apertures 42 are provided in the side walls of the compartment 3 and mounted concentrically thereof are the
60 steam jets 43, by means of which the tobacco is remoistened, or is ordered, the several jets of steam being placed concentrically of an equal number of sufficiently large openings as shown, whereby the action or
65 flow of the steam through the jets will carry

with it by means of suction, the desired amount of air and with the steam is thoroughly mixed to produce the proper moisture in the atmosphere within channels 21 and 21' and the ordering compartment. By
70 this means it will be seen that the ordering compartment is not only provided with the heating and radiating devices as in the drying compartment, but is provided with the auxiliary means for supplying thereto steam
75 at the proper temperature and admixture of air to facilitate the softening, remoistening or ordering of the tobacco as desired. By this means it will also be noted that the temperature may be so regulated as not to in
80 any way affect the flavor of the tobacco but to properly remoisten and order it as desired.

From the foregoing description, it is evident that an apparatus constructed according to this invention having the central cooling
85 compartment and the oppositely disposed drying and ordering compartments and arranged with the respective fans which are all simultaneously operated through a central power shaft, will permit the adjust-
90 ment or regulation of the admittance of air thereto and the heating of such air to properly dry, cool and finally order the tobacco so that the same will in no way be impaired and will retain its natural flavor. By this
95 construction and arrangement of the cooling compartment and oppositely disposed drying and ordering compartments, the current of air drawn into said cooling compartments is split or divided and enters both the drying
100 and ordering compartments, moving from the rear to the forward end of the drying compartment, and from the forward to the rear end of the ordering compartment, the circulating fans in the drying and ordering
105 compartments, causing the air to be circulated as desired without being forced to retain an over-supply of moisture, and yet may be regulated to properly act upon the tobacco and produce the desired results.
110

In producing the present form of apparatus, the various forms heretofore, and at present in use, have been carefully studied, and this form, in which all of the air to act upon the leaf tobacco in the drying, cooling
115 and ordering compartments, is fed into the cooling compartment and divided and delivered in reverse direction to the passage of the leaves through the drying compartment, and in the same direction in the ordering
120 compartment, this particular delivery of the air from the cooling compartment producing a leaf properly dried and ordered and in a much improved state over the present forms of apparatus.
125

By causing the air to enter the outlet end of the drying compartment, instead of the inlet end or from above as is the general practice, the cooler air surrounds the leaves after they have been subjected to the heated
130

air, which at the inlet end of the drying compartment is greatest, and is gradually cooled as it nears the outlet end, due to the admission of the cool air from the cooling compartment. By the present arrangement the full length of the tobacco leaf is subjected to the blast of air entering from the cooling compartment, the longitudinal direction of such blast being changed, due to the action of the fans 27 in the drying compartment and the fan 37 in the ordering compartment, to a spiral action, said fans, as heretofore set forth, forcing the admitted blast of air downwardly and around the aprons of the auxiliary chambers B and D, to be divided and forced upwardly through the radiators before again being acted upon by said fans, the dispositioning of the fans between the radiators and the leaf conveyers and from above, being a decided improvement upon the disposing of the radiators above the conveyer or between the conveyer and fans, or to the side of the conveyer, either between the conveyer and fans or with the fans interposed.

In the present form of apparatus, the conveyer can be halted during the process without the heat from the radiators injuring the tobacco leaves in transit, while when the radiators are placed directly above the conveyer, or below, or to the side, the heat therefrom, should the conveyer be halted has a deleterious effect upon the tobacco and often ruins the same for future use.

What is claimed is:

1. In a tobacco drying apparatus, the compartment of a centrally disposed cooling compartment, a drying compartment in communication at the forward end thereof, an ordering compartment oppositely disposed to the drying compartment and in communication with the cooling compartment, heating means disposed in the upper portion of the drying and ordering compartments respectively, and a series of circulating fans disposed below the heating means between the heating means and the lower portion of the respective drying and ordering compartments, for forcing air after passage through the heating means to the lower portion of said compartment, all air for the cooling, drying and ordering being admitted through the cooling compartment.

2. In a tobacco drying apparatus, the combination of a centrally disposed cooling compartment, a drying compartment having an air admission aperture for the complete apparatus in communication therewith, an ordering compartment oppositely disposed to the drying compartment and in communication with the cooling compartment, a series of tobacco leaf receiving conveyers disposed for travel through the drying, cooling and ordering compartments in train, a series of radiators disposed in the dome of

the drying and ordering compartments respectively, and circulating fans disposed between the radiators and conveyers in the said respective drying and ordering compartments for exhausting the air from the cooling compartment and directing it after passage through the radiators downwardly upon the conveyer.

3. In a tobacco drying apparatus, the combination of a centrally disposed cooling compartment having an enlarged air inlet, a fan disposed therein for drawing the air through said inlet and forcing the air into the cooling compartment, a drying compartment in communication with the forward end of the cooling compartment for receiving air therefrom, an ordering compartment in communication at the opposite end of the cooling compartment to receive air therein from the cooling compartment, both drying and ordering compartments being provided with domes, heating means located in the the respective drying and ordering compartments respectively, a series of circulating fans mounted below the heating means in the respective drying and ordering compartments, and leaf conveying means disposed below said fans and for travel through the drying, cooling and ordering compartments, in train.

4. In a tobacco drying apparatus, the combination of a central cooling compartment, said cooling compartment being the air supplying compartment of the apparatus, a drying compartment extending therefrom and in communication therewith, an ordering compartment oppositely disposed to the drying compartment and in communication with the cooling compartment, both drying and ordering compartments being provided with domes, a tobacco conveyer mounted for travel through the drying, cooling and ordering compartments in train, a suction fan mounted in the cooling compartment for drawing the air thereinto and supplying air to the respective drying and ordering compartments, a heating means disposed in the domes of the respective drying and ordering compartments, and circulating fans interposed between the heating means and the tobacco conveyer in the respective drying and ordering compartments.

5. In a tobacco drying apparatus, the combination of a cooling compartment having an air inlet from above, a drying compartment in communication therewith, an ordering compartment also in communication therewith but disposed oppositely to the drying compartment, both drying and ordering compartments having each a dome, a tobacco conveyer disposed for travel through the drying, cooling and ordering compartment in train, a suction creating device mounted in the cooling compartment for drawing air into the cooling compartment

ment and supplying the air to the drying compartment in opposition to the movement of the tobacco conveyer therethrough and for simultaneously supplying air to the ordering compartment in the direction of the movement of the tobacco conveyer therethrough, and a series of circulating fans disposed in the dome of the respective drying and ordering compartments.

6. In a tobacco drying apparatus, the combination of a cooling compartment having an air inlet, of a drying compartment in communication therewith, an ordering compartment in communication also with said cooling compartment, means for conveying tobacco through the drying, cooling and ordering compartments in train, a suction creating device for simultaneously supplying air from the cooling compartment into the respective drying and ordering compartments, means for causing cross air currents and thereby circulating the air within the respective drying and ordering compartments, heating means disposed within the respective drying and ordering compartments above the circulating means therein, and a series of steam jets disposed in opposite walls of the ordering compartment for commingling therewith the outside air and supplying the same to said ordering compartment.

7. In a tobacco drying apparatus, the combination of a cooling compartment having an air inlet, of a drying compartment in communication therewith, an ordering compartment in communication also with said cooling compartment, means for conveying tobacco through the drying, cooling and ordering compartments in train, a suction creating device for simultaneously supplying air from the cooling compartment into the respective drying and ordering compartments, means for circulating the air within the respective drying and ordering compartments, heating means disposed within the respective drying and ordering compartments above the circulating means therein, a series of steam jets disposed in opposite walls of the ordering compartment for commingling therewith the outside air and supplying the same to said ordering compartment, and adjustable means for regulating the air exhaust from the respective drying and ordering compartments.

8. A tobacco drying and curing apparatus, having a cooling compartment with an enlarged air admission aperture in the top wall, a drying compartment of greater width and having its bottom below the bottom of the cooling compartment, said drying compartment having its outlet end in communication with the cooling compartment at a point slightly above the bottom of the cooling compartment, an ordering compartment of substantially the same

height and width as the drying compartment and in communication with the cooling compartment from the opposite side to the drying compartment, a suction creating device disposed in the cooling compartment to draw air in through the opening thereof and project it against the bottom of the cooling compartment to be deflected in opposite directions into the drying and ordering compartments at a point above the bottom of the cooling compartments, a leaf conveyer movable through the drying, cooling and ordering compartments, and fans located in the drying and ordering compartments above said conveyer to impart to the air entering from the cooling compartment a spiral action downwardly upon the leaf conveyer.

9. A tobacco drying and curing apparatus, having a cooling compartment with an enlarged air admission port in its top wall, a drying compartment of greater width than and having its bottom below the bottom of the cooling compartment, said drying compartment having its outlet end in communication with the cooling compartment at a point slightly above the bottom of the cooling compartment, an ordering compartment of substantially the same height and width as the drying compartment and in communication with the cooling compartment from the opposite side to the drying compartment, a suction creating device disposed in the cooling compartment to draw air in through the port thereof and project it against the bottom of the cooling compartment to be deflected in opposite directions into the drying and ordering compartments at a point above the bottom of the cooling compartment, a leaf conveyer movable through the drying, cooling and ordering compartments, a plurality of radiators disposed in the domes of the respective drying and ordering compartments for supplying heat to said compartments, and fans located in the drying and ordering compartments below the radiators and operated to draw the air through the radiators and project it downwardly upon the conveyer.

10. A tobacco drying and curing apparatus, having a cooling compartment with an enlarged air admission aperture in the top wall, a drying compartment of greater width and having its bottom below the bottom of the cooling compartment, said drying compartment having its outlet end in communication with the cooling compartment at a point slightly above the bottom of the cooling compartment, an ordering compartment of substantially the same height and width as the drying compartment and in communication with the cooling compartment from the opposite side to the drying compartment, a suction creating device disposed in the cooling compartment

to draw air in through the opening thereof and project it against the bottom of the cooling compartment to be deflected in opposite directions into the drying and ordering compartments at a point above the bottom of the cooling compartment, a leaf conveyor movable through the drying, cooling and ordering compartments, and fans located in the drying and ordering compartments above said conveyor to impart to the air entering from the cooling compartment a spiral action downwardly upon the leaf conveyor, and a series of oppositely disposed steam and air injecting means mounted in the walls of the ordering compartment throughout its length and in the path of the current of air after being acted upon by the fans therein.

11. A tobacco drying and curing apparatus, having a cooling compartment with an enlarged air admission port in its top wall, a drying compartment of greater width and having its bottom below the bottom of the cooling compartment, said drying compartment having its outlet end in communication with the cooling compartment at a point slightly above the bottom of the cooling compartment, an ordering compartment of substantially the same height and width as the drying compartment and in communication with the cooling compartment from the opposite side to the drying compartment, a suction creating device disposed in the cooling compartment to draw air in through the port thereof and project it against the bottom of the cooling compartment to be deflected in opposite directions into the drying and ordering compartments at a point above the bottom of the cooling compartment, a leaf conveyor movable through the drying compartment, cooling and ordering compartments, a plurality of radiators disposed in the domes of the respective drying and ordering compartments for supplying heat to said compartments, fans located in the drying and ordering compartments below the radiators and operated to draw the air through the radiators and project it downwardly upon the conveyor, and a series of oppositely disposed steam and air injecting means mounted in the walls of the ordering compartment throughout its length and in the path of the current of air after being acted upon by the fans therein.

12. A tobacco drying and curing apparatus, having a cooling compartment with an enlarged air admission aperture in the top wall, a drying compartment of greater width and having its bottom below the bottom of the cooling compartment, said drying compartment having its outlet end in communication with the cooling compartment at a point slightly above the bottom of the cooling compartment, an ordering

compartment of substantially the same height and width as the drying compartment and in communication with the cooling compartment from the opposite side to the drying compartment, a suction creating device disposed in the cooling compartment to draw air in through the aperture thereof and project it against the bottom of the cooling compartment to be deflected in opposite directions into the drying and ordering compartments at a point above the bottom of the cooling compartment, a leaf conveyor movable through the drying, cooling and ordering compartments, an endless belt disposed below the leaf conveyor and movable in the same direction for receiving the fragments or fallen leaves from said leaf conveyor, and fans disposed in the upper portion of the drying and ordering compartments for directing currents of air downwardly upon the conveyor.

13. A tobacco drying and curing apparatus, having a cooling compartment with an enlarged air admission port in its top wall, a drying compartment of greater width and having its bottom below the bottom of the cooling compartment, said drying compartment having its outlet end in communication with the cooling compartment at a point slightly above the bottom of the cooling compartment, an ordering compartment of substantially the same height and width as the drying compartment and in communication with the cooling compartment from the opposite side to the drying compartment, a suction creating device disposed in the cooling compartment to draw air through the port thereof and project it against the bottom of the cooling compartment to be deflected in opposite directions into the drying and ordering compartments at a point above the bottom of the cooling compartment, a leaf conveyor movable through the drying cooling and ordering compartments, an endless belt disposed below the leaf conveyor and movable in the same direction for receiving the fragments or fallen leaves from said leaf conveyor, and fans disposed in the upper portion of the drying and ordering compartments for directing currents of air downwardly upon the conveyor.

14. A tobacco drying and curing apparatus, having a series of three compartments longitudinally disposed and in communication in train, the first and last compartments each having its top wall sealed, the central compartment being the air admission compartment and provided with a centrally disposed aperture in the top thereof, the two oppositely disposed compartments in communication laterally with said central compartment, the bottom of the central compartment being above the bottom of the other two compartments, and a suction cre-

ating device disposed in the central compartment below the aperture thereof to draw air therethrough and project it against the bottom of the central compartment to be deflected in opposite directions into the remaining compartment.

15. A tobacco drying and curing apparatus, having a series of three compartments longitudinally disposed and in communication in train, the first and last compartments having its top wall sealed, the central compartment being the air admission compartment and provided with a centrally disposed aperture in the top thereof, the two oppositely disposed compartments being in communication laterally with said central compartment, the bottom of the central compartment being above the bottom of the other two compartments, a suction creating device disposed in the central compartment below the aperture thereof to draw air therethrough and project it against the bottom of the central compartment to be deflected in opposite directions into the remaining compartments, each of said last mentioned compartments being provided at the ends distant from the central compartment with air outlets in the top walls thereof.

16. A tobacco drying and curing apparatus, having a series of three compartments longitudinally disposed and in communication in train, the first and last compartments having their top walls sealed, the central compartment being the air admission compartment and provided with a centrally disposed aperture in the top thereof, the two oppositely disposed compartments being in communication laterally from said central compartment, the bottom of the central compartment being above the bottom of the other two compartments, a suction creating device disposed in the central compartment below the aperture thereof to draw air therethrough and project it against the bottom of the central compartment to be deflected in opposite directions into the remaining compartments, each of said last mentioned compartments being provided at the ends distant from the central compartment with air outlets in the top walls thereof, and means disposed in each of said outlets for regulating the exhaust of air there-through.

17. A tobacco drying and curing apparatus, having a series of three compartments longitudinally disposed and in communication in train, the first and last compartments having its top walls sealed, the central compartment being the air admission compartment and provided with a centrally disposed aperture in the top thereof, the two oppositely disposed compartments being in communication laterally with said central compartment, the bottom of the central

compartment being above the bottom of the other two compartments, a suction creating device disposed in the central compartment below the aperture thereof to draw air therethrough and project it against the bottom of the central compartment to be deflected in opposite directions into the remaining compartments, each of said last mentioned compartments being provided at the ends distant from the central compartment with air outlets in the top walls thereof, and fans disposed in said oppositely disposed compartments near the domes thereof for imparting to the currents of air entering from the central compartment a downward and spiral action throughout the respective compartments.

18. A tobacco drying and curing apparatus, having a series of three compartments longitudinally disposed and in communication in train, the first and last compartments having its top walls sealed, the central compartment being the air admission compartment and provided with a centrally disposed aperture in the top thereof, the two oppositely disposed compartments being in communication laterally with said central compartment, the bottom of the central compartment being above the bottom of the other compartments, a suction creating device disposed in the central compartment below the aperture thereof to draw air therethrough and project it against the bottom of the central compartment to be deflected in opposite directions into the remaining compartments, each of said last mentioned compartments being provided at the ends distant from the central compartment with air outlets in the top walls thereof, fans disposed in said oppositely disposed compartments near the domes thereof for imparting to the currents of air entering from the central compartment a downward and spiral action throughout the respective compartments, and radiators disposed in the domes of the oppositely disposed compartments above said fans, whereby the air is heated before being projected downwardly by said fans.

19. A tobacco drying and curing apparatus, comprising a housing divided into three communicating compartments, the central compartment being of a lesser width and having its bottom above the bottom of the other compartments, said central compartment being provided with an air admission aperture in the top thereof, the oppositely extending compartments having longitudinally disposed auxiliary compartments of substantially the same width as the central compartment, said auxiliary compartments being open at their lower ends above the bottom of their respective main compartments to provide conduits upon opposite sides thereof within the main com-

partment, said auxiliary compartments terminating at a point below the top of their respective main compartments, a suction creating device disposed in the central compartment to draw air in through the aperture thereof and project it in opposite directions into the auxiliary compartments of the remaining compartments, a tobacco conveyor disposed for longitudinal movement through the auxiliary compartments and central compartment of the apparatus, a series of heat supplying means disposed in the oppositely disposed compartments above

their respective auxiliary compartments, and air circulating means disposed throughout the length of said oppositely disposed compartments below said heat supplying means and in the domes of the auxiliary compartments. 15

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 20

CLARENCE D. BROWN.

Witnesses:

K. D. RODGERS,
W. E. WOOTON.