No. 709,938. Patented Sept. 30, 1902.

J. M. TALIAFERRO.

TOBACCO ORDERING CHAMBER.

(Application filed July 1, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

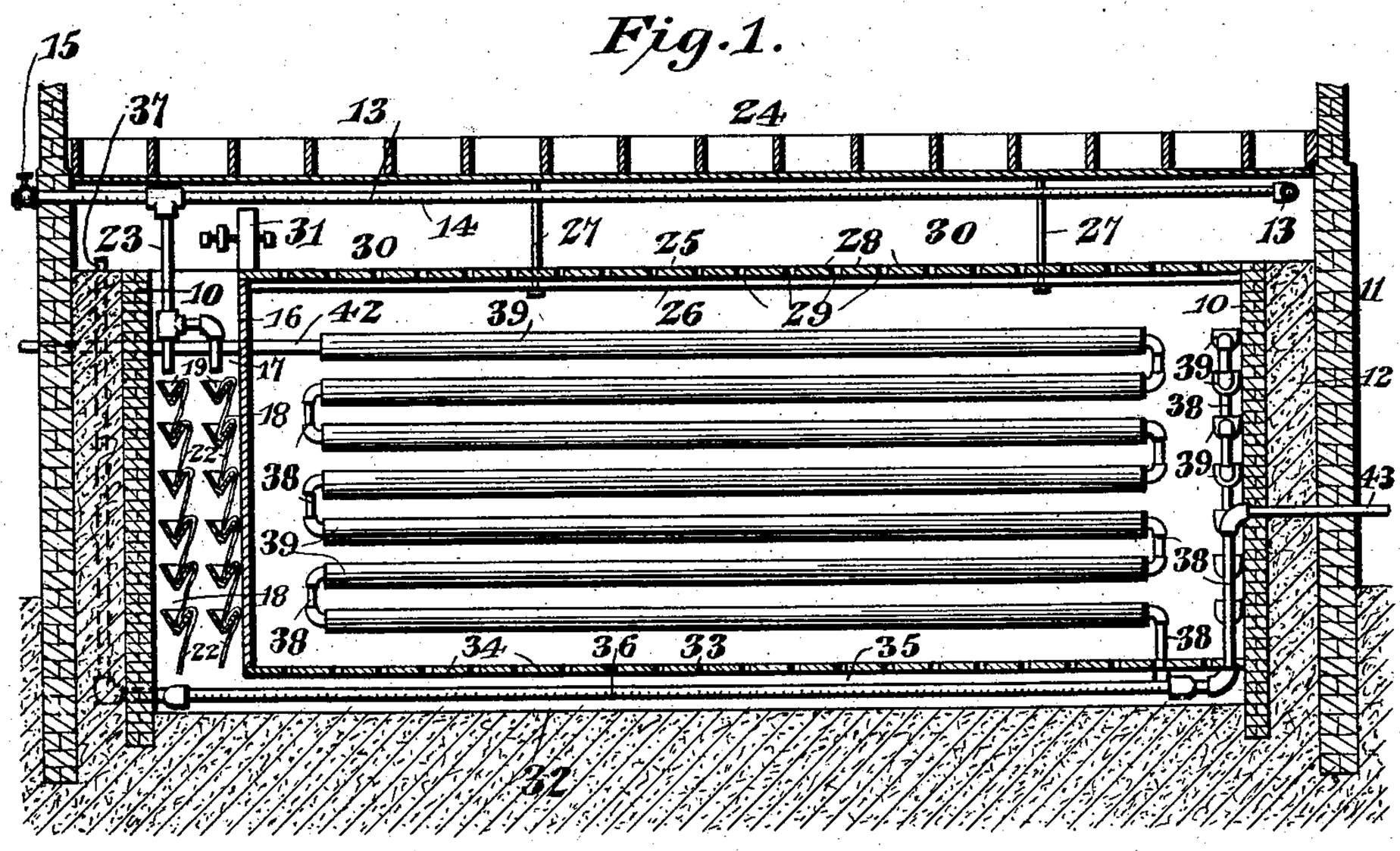
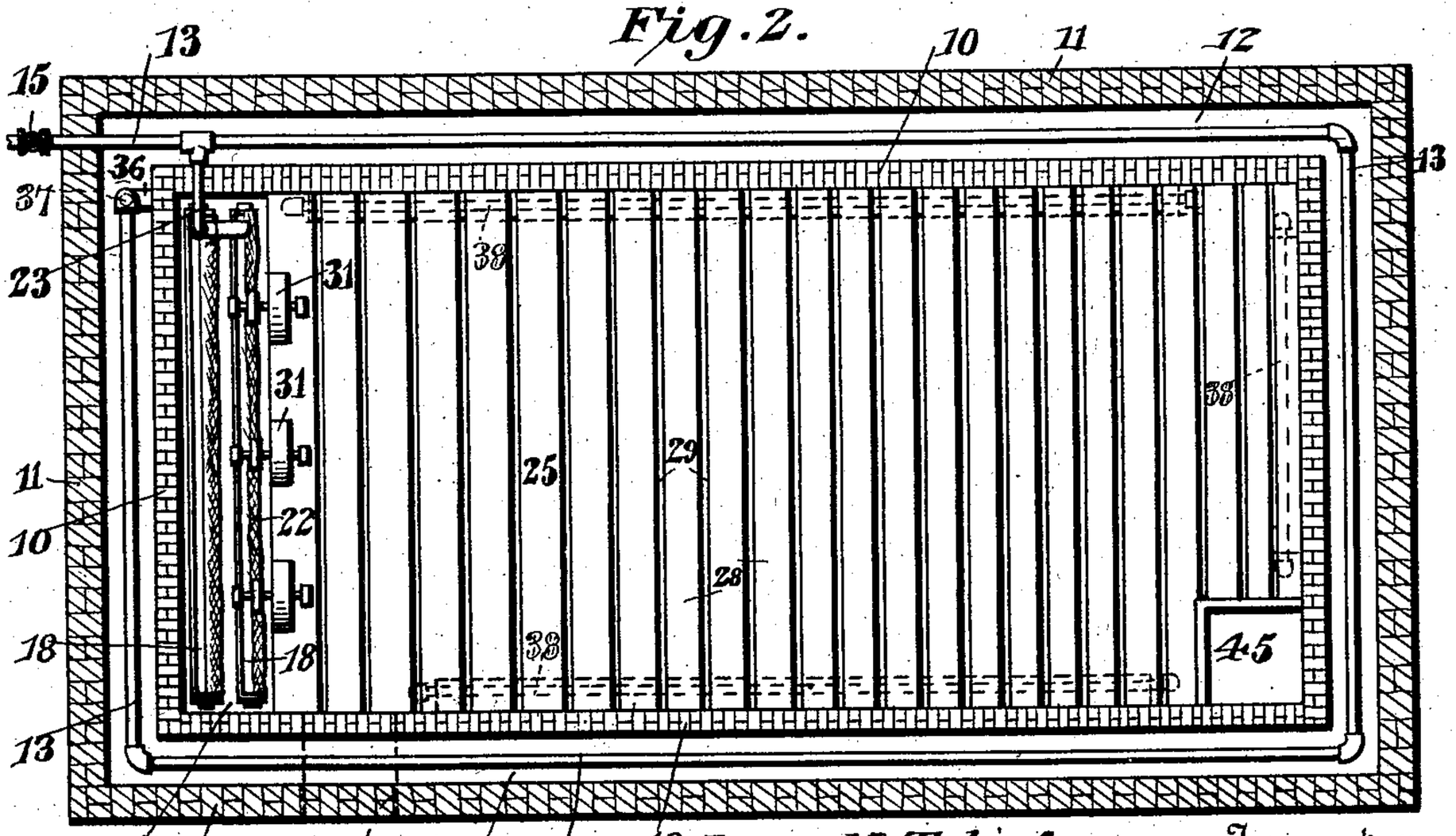


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

Fig. 3.

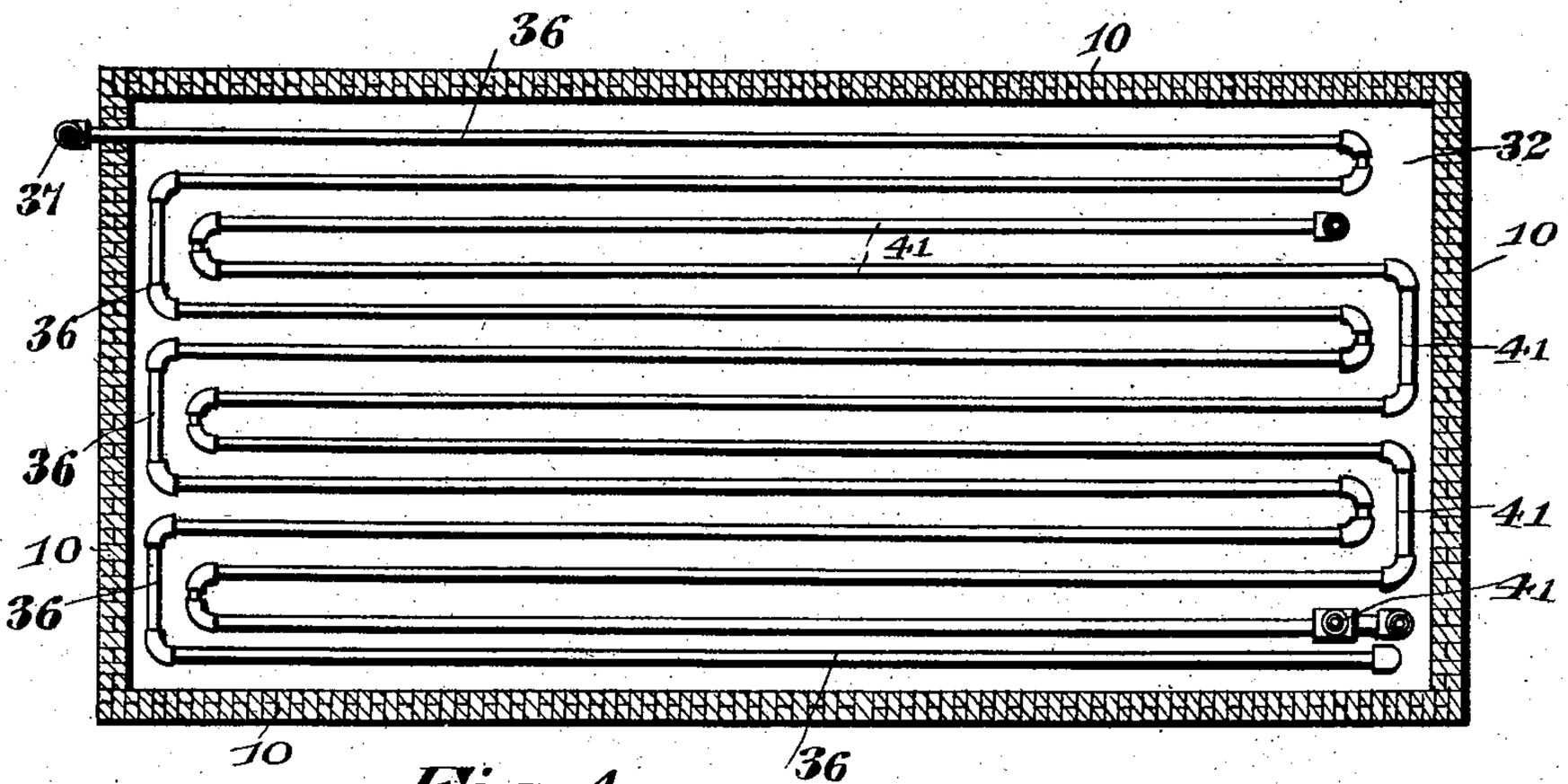


Fig. 4.

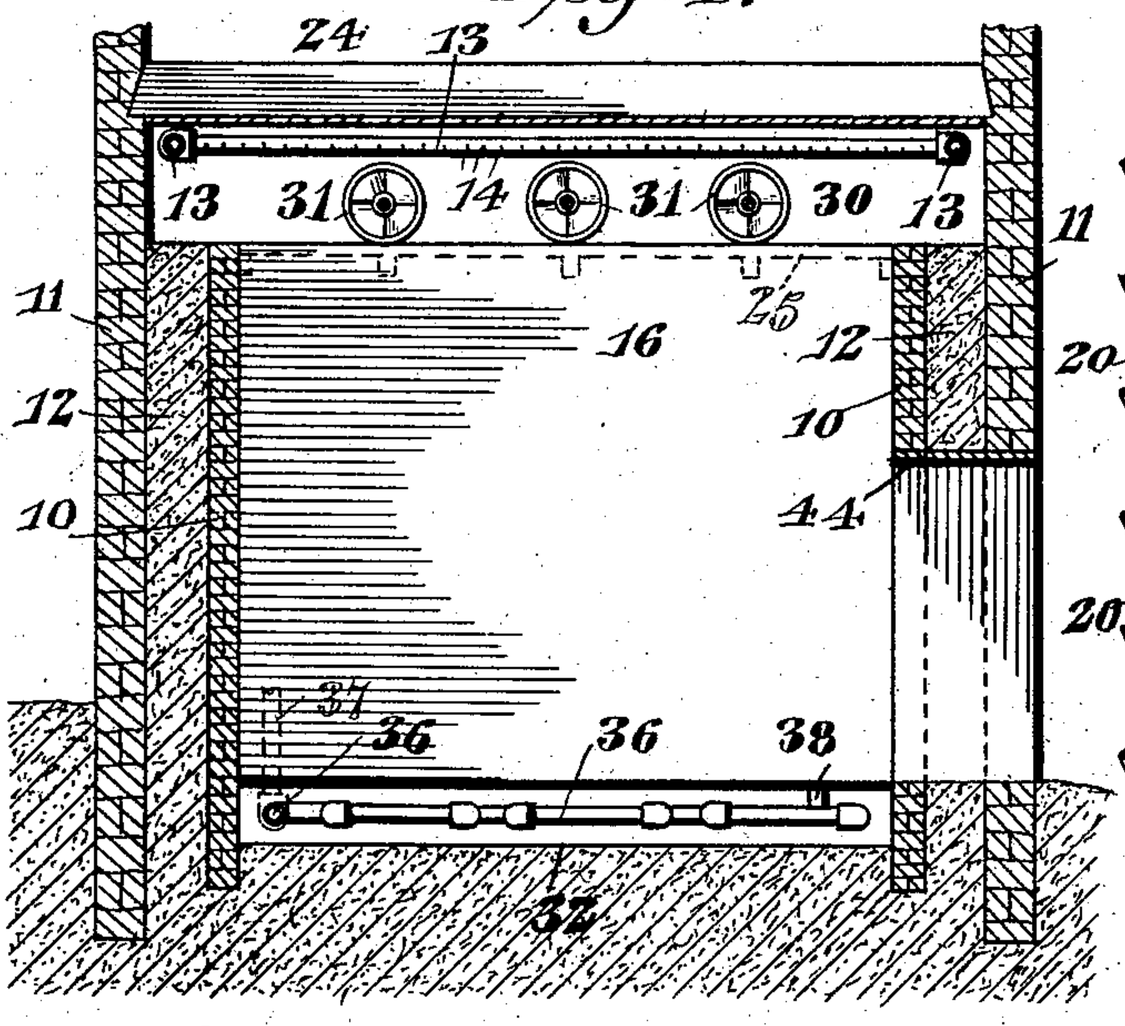


Fig. 5.

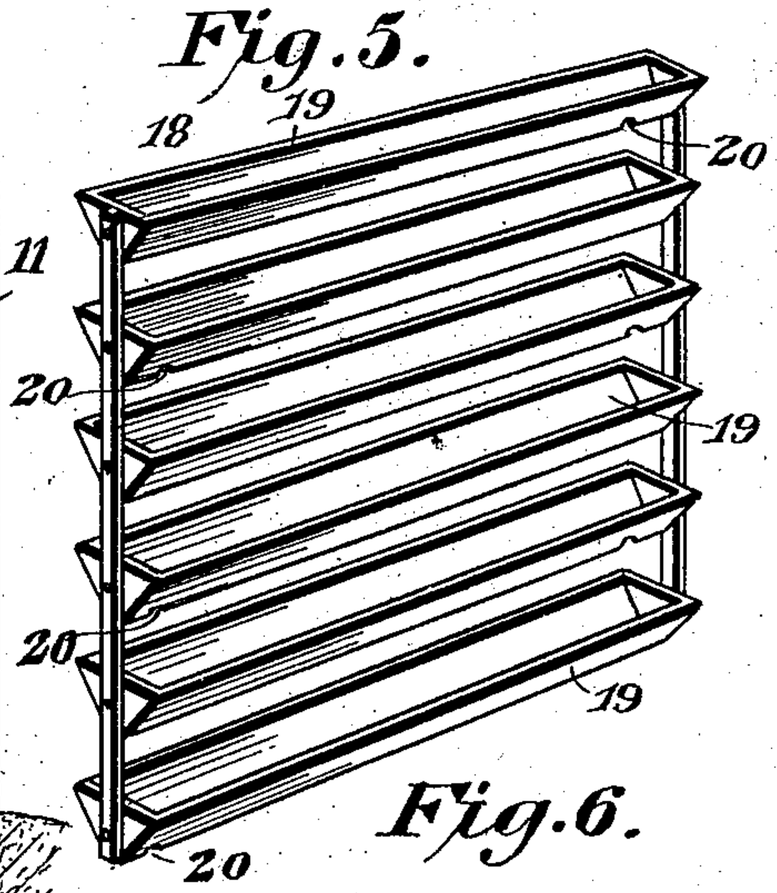


Fig. 6.

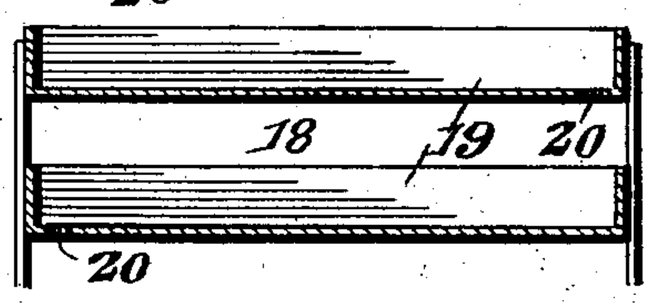


Fig. 8.

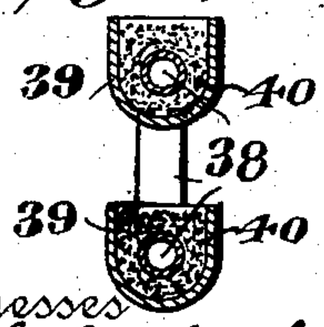
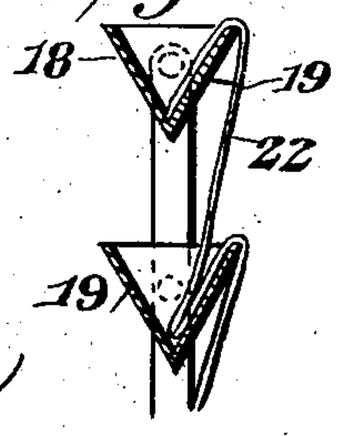


Fig. 7.



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UNITED STATES PATENT OFFICE.

JAMES MADISON TALIAFERRO, OF LYNCHBURG, VIRGINIA.

TOBACCO-ORDERING CHAMBER.

SPECIFICATION forming part of Letters Patent No. 709,938, dated September 30, 1902.

Application filed July 1, 1901. Serial No. 66,716. (No model.)

To all whom it may concern:

Be it known that I, JAMES MADISON TALIAFERRO, a citizen of the United States, residing at Lynchburg, in the county of Campbell and State of Virginia, have invented a new and useful Tobacco-Ordering Chamber, of which the following is a specification.

There are two methods of drying and ordering tobacco. The first method and the one generally employed is to dry the tobacco with hot air and order it by turning on live steam from a boiler, the leaves absorbing the moisture therefrom and becoming supple, so that it can be readily handled. This is a very expeditious method of bringing the tobacco to its proper condition and is the one generally employed. It has a very serious drawback, however, as there is a husky dry feeling about the tobacco not considered desirable by the trade. The other and much preferable method, as it does away with the above objection, is to employ what is known as "natural seasoning." A large quantity of tobacco is hung up in the factory and dried by the air. When it rains or the air is thoroughly charged with moisture, it becomes supple without the undesirable conditions above noted. It is then taken down and packed. The objections to this method will be readily apparent. The tobacco must be placed where the air has free access to it and the length of time it must hang depends upon the conditions of the climate, weather, and the like. Because of this uncertainty and the room necessary the latter method is seldom employed for the average classes of tobacco.

The present invention relates to means for ordering tobacco, and the object thereof is to construct a chamber for holding the same and to produce an atmospheric condition therein which will have all the essential and favorable qualities necessary to the latter-described method. The result is that hot-air-dried tobacco may be ordered in a very short period and have all the qualities desirable and obtainable by the second-described method.

In the accompanying drawings there is shown an embodiment of the invention which accomplishes these objects, and the construction and operation thereof is fully described in the following specification.

It will of course be understood that the invention is not to be limited to the specific construction shown and described, but that such variations may be made therefrom as the appended claims will permit.

In the drawings, Figure 1 is a vertical longitudinal sectional view through the chamber. Fig. 2 is a top plan view with the ceiling removed. Fig. 3 is a plan view of the floor, showing the disposition of pipes thereon. Fig. 4 is a transverse vertical sectional view through the chamber. Fig. 5 is a perspective view, on an enlarged scale, of one of the moistening devices in the air-flue. Fig. 6 is a detail longitudinal vertical section through a portion of the same. Fig. 7 is a vertical transverse sectional view thereof. Fig. 8 is a detail sectional view through a portion of the heater.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

The chamber, as illustrated in the accompanying drawings, is rectangular in form, and the side and end walls thereof comprise inner and outer sheathings, designated 10 and 11. The inner sheathing is preferably made of brick or other material that is permeable to moisture, while the outer sheathing 11 may be made of stone or material which is impermeable to moisture. Located between these sheathings is a filling of absorbent material 12, preferably earth. The inner sheathing 10 terminates short of the edge of the outer sheathing and the filling is level with the upper edge of said inner sheathing. Arranged over the filling is a water-supply pipe 13, that is provided in its under side with a plurality of perforations, as 14. Said supply-pipe may be provided with a suitable controlling-valve 15 and is connected with any suitable head. It will thus be seen that the filling of earth can be kept in a dampened condition and that the moisture contained therein will permeate the inner sheathing, and thus be brought in contact with the air confined within the chamber.

Located contiguous to one end of the chamber, but spaced from the inner sheathing thereof, is a vertical partition 16, which forms an intermediate air-flue, as 17. In this air-flue are arranged moistening devices, each of

which is designated as a whole by the reference-numeral 18. The construction of these devices is clearly shown in Figs. 5 and 6. A vertically-disposed row of troughs 19 is secured upon suitable standards 20, these troughs being provided in their bottoms with discharge-openings, said openings being arranged in alternate relation. A wicking 22, made of suitable textile material, extends through the entire set, being secured by tacks or other suitable devices in the bottom of each trough. A water-pipe 23 affords means for supplying water to the upper trough, which water will gravitate through the troughs to the lower one and at the same time saturate the wicking.

The top of the chamber is closed by a suitable ceiling 24, and disposed some distance below this ceiling is a horizontal wall 25, said wall preferably comprising stringers 26, suspended by tie-bolts 27 and spaced slats 28, which form between them discharge-orifices 29. This construction affords a distributing air-chamber 30, and as the partition 16 extends only to the slatted wall 25 said distributing-chamber will be in communication with the air-flue. A plurality of rotary fans 31 are located at the point of juncture of the air-flue and distributing-chamber, these fans being operated by any suitable means, so that they will create a current of air which will be drawn through the flue 17 and driven into the distributing-chamber 30. The floor 32 of the chamber is of earth, and a grated or open deck 33, constructed of spaced slats 34, is located a slight distance above the earthen floor, thus forming therebetween an air-space 35, which is in communication with the flue 17. Extending over the earthen floor is a coiled water-pipe 36, which is perforated and is connected through a vertical pipe 37 to the main water-supply pipe.

Located upon the side walls and the end wall which is opposite the air-flue are heater-pipes 38, these pipes being preferably located in troughs 39, which are filled with sand 40 or other material that will permit the radiation of the heat. A coil of heating-pipes 41 is located upon the earthen floor, and the several pipes are connected at one end to a supply-pipe 42 and at the other with an outlet-pipe 43. Access to the chamber may be gained through a suitable doorway 44, located in one of the walls, or by means of an elevator, (indicated at 45.)

In use the tobacco is introduced into the chamber and suspended therein in any suitable manner. The filling between the wall-sheathings is thoroughly dampened by supplying water to the sprinkler-pipes, and the floor is also moistened. The fans are then rotated, whereupon a current of air will be generated in the flue 17, which current will pass into the distributing-chamber 30 and be forced through the escape-orifices downwardly into the ordering-chamber. At the same time the vacuum created by the fans will cause the air in the lower part of the chamber to pass through the deck 33 and over the earthen floor, where it will absorb the moisture contained therein and pass into the flue. Here it will come into contact with the moisteners 18, located therein, and also with the inner sheathing of the wall. In this manner the air will become thoroughly saturated and be passed into the distributing-chamber, as above described. The side walls will in like manner be covered with moisture, so that no matter what portion of the chamber the air strikes, with the exception of the ceiling, it will absorb moisture. In winter-time, or when the temperature falls below a degree suited to the evaporation of the water, the chamber may be heated through the medium of the pipes, and these pipes are only necessary to keep said temperature at about 80° or 90° Fahrenheit, as this is considered preferable to the ready absorption of the water by the atmosphere. By this means it will be seen that a chamber is provided in which the air is thoroughly saturated, and a circulation is maintained which will evenly and thoroughly distribute the air to all portions of said chamber, so that it will continuously be brought into contact with the tobacco contained therein. The temperature may be regulated as desired, and the tobacco can thus be ordered in an exceedingly short space of time, said tobacco thus having all the desirable features of natural seasoning.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a tobacco-ordering chamber, a wall permeable to moisture, means for supplying a liquid to the rear face of the wall, and a heater located adjacent to the exposed face of the wall.

2. In a tobacco-ordering chamber, a wall permeable to moisture, means for supplying a liquid to the rear face of the wall, and heating-pipes secured to the exposed face of the wall.

3. In a tobacco-ordering chamber, a wall permeable to moisture, absorbent material located against the rear face of the wall, means for supplying water to the absorbent material, and a heating device located adjacent to the exposed face of the wall.

4. In a tobacco-ordering chamber, a tobacco-receiving chamber, an air-flue having an air-inlet, one wall of said flue being permeable to moisture, an absorbent filling located against the rear face of the wall, means for

supplying water to the filling, a distributing air-chamber having a communication with the air-flue and provided with an escape-orifice communicating with the tobacco-receiving chamber, and a fan for creating and driving a current of air through the flue and into the distributing-chamber.

5. In a tobacco-ordering chamber, an upright air-flue having an air-inlet, one wall of said flue being permeable to moisture, an absorbent filling located against the rear face of the wall, means for supplying water to the filling, a distributing air-chamber located in the upper portion of the ordering-chamber and having communication with the air-flue, said chamber being provided with escape-orifices that communicate with the chamber, and a fan for creating and driving a current of air through the flue and into the distributing-chamber.

6. In a tobacco-ordering chamber, side walls comprising an outer moisture-proof sheathing, an inner sheathing permeable to moisture, a filling of earth located between and resting against the inner faces of the sheathings, and a perforated water-supply pipe arranged longitudinally above the earth.

7. In a tobacco-ordering chamber, side walls comprising an outer moisture-proof sheathing, an inner sheathing of brick spaced from the outer moisture-proof sheathing, a filling of earth located between the sheathings and resting against the inner face of the brick, and means for supplying water to the earthen filling.

8. In a tobacco-ordering chamber, a floor made of absorbent material, a deck located over and spaced from the floor forming an intermediate air-space, said deck being provided with an air-inlet, an air-conducting flue leading from the air-space to the upper portion of the chamber, an air-distributing chamber located in the upper portion of the ordering-chamber, said distributing-chamber having a communication with the air-flue and provided with discharge-orifices, and means for creating a current of air and driving it from the lower air-space through the flue into the distributing-chamber.

9. In a tobacco-ordering chamber, an earthen floor, a deck comprising spaced slats located over said floor and forming an intermediate air-space, an air-conducting flue leading from the air-space to the upper portion of the ordering-chamber, an air-distributing chamber communicating with the air-flue and having its lower wall consisting of spaced slats, and a fan for creating a current of air and driving it from the lower air-space through the flue and into the distributing-chamber.

10. In a tobacco-ordering chamber, a floor made of absorbent material, a deck located above the floor whereby an air-space is formed between the deck and floor, said deck having an air-inlet and an air-outlet that are in communication with the chamber, means for supplying water to the floor, and means for passing a current of air over the floor and through the outlet.

11. In a tobacco-ordering chamber, the tobacco-receiving chamber, an end wall comprising an inner sheathing permeable to moisture, an absorbent filling located in rear of the sheathing, means for supplying a liquid to the absorbent, a partition located adjacent to but spaced from the sheathing and forming an intermediate passage-way or flue which is in communication with the said chamber, and means for passing a current of air through said passage-way.

12. In a tobacco-ordering chamber, a floor made of absorbent material, a deck located over and spaced from the floor forming an air-receiving chamber, said deck being provided with an air-inlet, air-moistening means located in the air-receiving chamber, an inclosed air-flue leading from the air-space to the upper portion of the ordering-chamber, and a fan for driving the air from the air-space and into the flue.

13. In a tobacco-ordering chamber, an earthen floor, means for moistening said floor, a deck located over and spaced from the floor forming an intermediate space, said deck being provided with an air-inlet, an air-conducting flue leading from the air-space to the upper portion of the chamber, vertically-disposed rows of troughs arranged in said flue, absorbent wicks leading from one trough to the next, an air-distributing chamber arranged in the upper portion of the ordering-chamber, said distributing-chamber having a communication with the air-flue and provided with discharge-orifices, and a fan for creating a current of air and driving it from the lower air-space through the flue and into the distributing-chamber.

14. In a tobacco-ordering chamber, an end wall comprising an inner sheathing permeable to moisture, an absorbent filling located in rear of the sheathing, means for supplying a liquid to the absorbent, a partition located adjacent to but spaced from the sheathing and forming an intermediate passage-way, and a fan for creating a current of air in said passage-way.

15. In a tobacco-ordering chamber, an end wall comprising an inner sheathing permeable to moisture, an absorbent filling located in rear of the sheathing, a water-supply pipe arranged above the filling, a partition located adjacent to but spaced from the sheathing forming an intermediate air passage-way, a deck located above the floor of the chamber forming an intermediate air-space that is connected with the passage-way said deck being provided with an air-orifice, and a fan for creating a current of air in said passage-way and air-space.

16. In a tobacco-ordering chamber, an end wall comprising an inner permeable sheathing, an earthen filling located in rear of the

sheathing, a supply-pipe located above the earthen filling, a partition arranged adjacent to but spaced from the sheathing forming an intermediate passage-way, an earthen floor, a water-supply pipe arranged upon the floor, a deck disposed over the floor and forming an intermediate air-space that is connected with the passage-way, said deck being provided with an air-orifice, a ceiling, a wall arranged beneath the ceiling and forming a distributing-chamber therebetween which communicates with the air passage-way, said wall having a discharge-orifice, and a fan for moving the air from the lower air-space through the flue and into the distributing-chamber.

17. In a tobacco-ordering chamber, a wall comprising an inner sheathing permeable to moisture, an absorbent filling located against the rear face of the sheathing, means for supplying a liquid to the absorbent, and heater-pipes arranged upon the exposed face of the sheathing.

18. In a tobacco-ordering chamber, side walls comprising spaced sheathings, the inner of which is permeable to moisture, an earthen filling arranged between the sheathings, a perforate water-pipe disposed over the filling, heater-pipes mounted upon the exposed face of the inner sheathing, and casings covering the heater-pipes.

19. A tobacco-ordering chamber having an air-conducting flue, an air-moistener consisting of troughs arranged one below the other within the flue, absorbent wicks leading from one trough to the next, and means for generating and moving a current of air over said moistener.

20. In a tobacco-ordering chamber, a floor, a deck comprising spaced slats located over said floor and forming an intermediate air-space, an air-conducting flue leading from the air-space to the upper portion of the ordering-chamber, an air-distributing chamber communicating with the air-flue, and a fan for creating a current of air and driving it from the lower air-space through the flue and into the distributing-chamber.

21. In a tobacco-ordering chamber, a floor, a deck located over and spaced from the floor forming an intermediate space, provided with an air-inlet, an air-conducting flue leading from the air-space to the upper portion of the chamber, rows of troughs arranged in said flue, absorbent wicks leading from one trough to the next, an air-distributing chamber arranged in the upper portion of the ordering-chamber, said distributing-chamber having a communication with the air-flue and provided with discharge-orifices, and a fan for creating a current of air and driving it from the lower air-space through the flue and into the distributing-chamber.

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

JAMES MADISON TALIAFERRO.

Witnesses:
R. M. TALIAFERRO,
JAMES MORRISON.