L. A. WILLIAMS.

HEAT DISTRIBUTING APPARATUS.

APPLICATION FILED DEC. 19, 1911.

1,077,324.

Patented Nov. 4, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

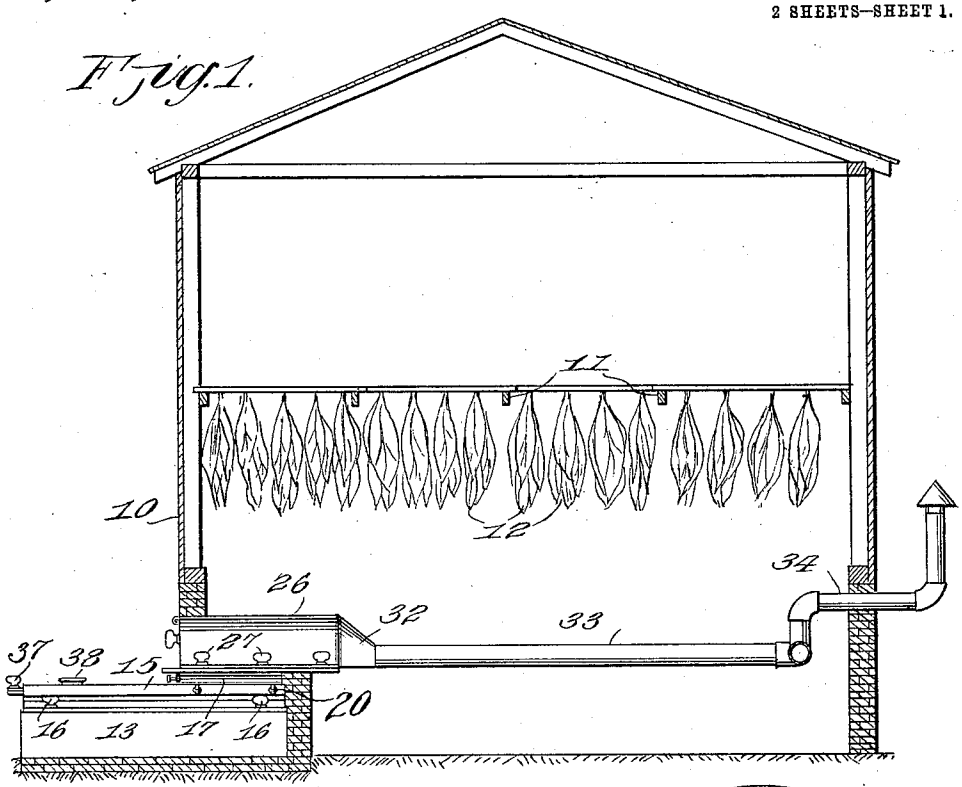


Fig. 5.

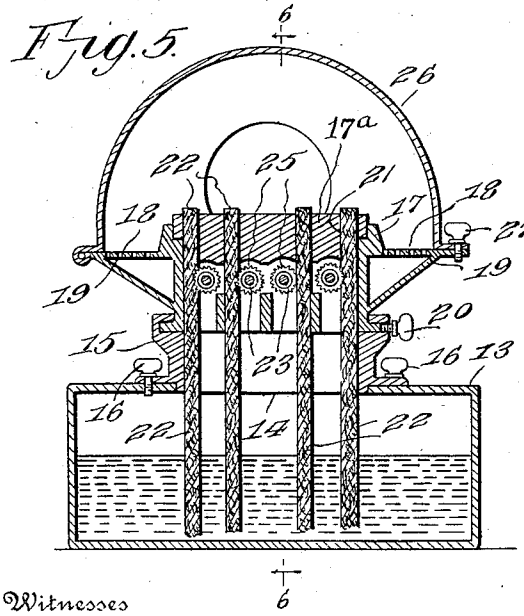
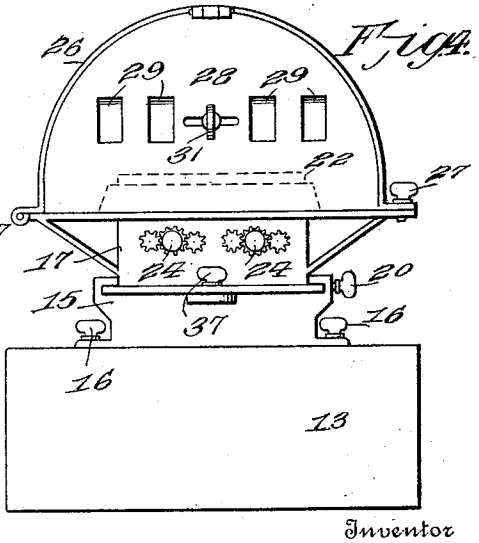


Fig. 4.



Witnesses

Frank Hough

F. H. Hoster

Inventor

Luton A. Williams,

By Victor J. Evans

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

Fig. 2

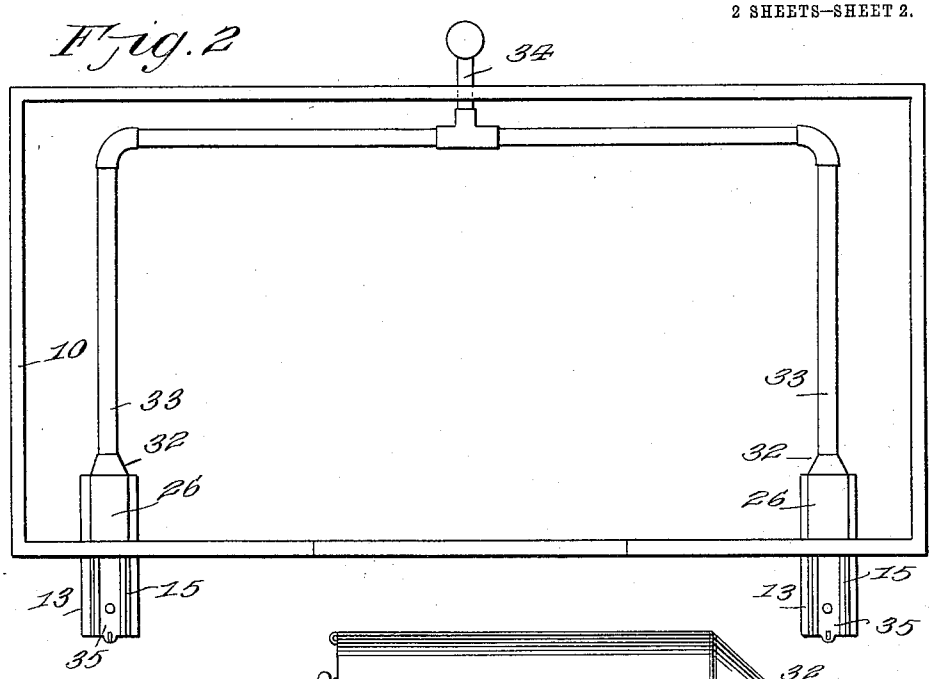


Fig. 3.

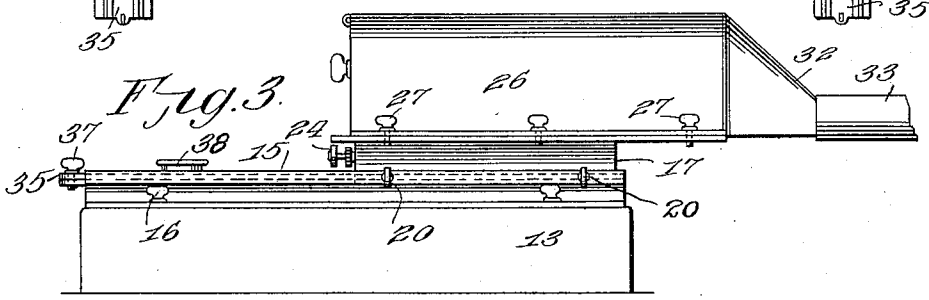
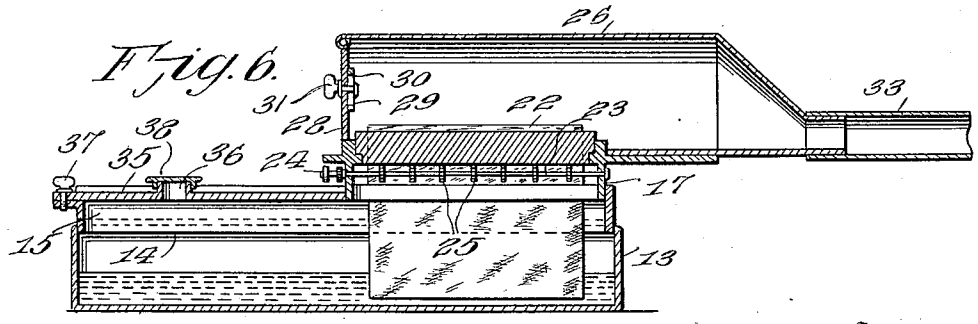


Fig. 6.



Inventor

Luton A. Williams,

Witnesses

Frank Hough

F. H. Hosier

By Victor J. Evans

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LUTON A. WILLIAMS, OF MARIETTA, NORTH CAROLINA.

HEAT-DISTRIBUTING APPARATUS.

1,077,324. Specification of Letters Patent. Patented Nov. 4, 1913.

Application filed December 19, 1911. Serial No. 666,749.

To all whom it may concern:

Be it known that I, LUTON A. WILLIAMS, a citizen of the United States, residing at Marietta, in the county of Robeson and State of North Carolina, have invented new and useful Improvements in Heat-Distributing Apparatus, of which the following is a specification.

The invention relates to heat distributing apparatus and has for an object to provide an apparatus, particularly adaptable for use in connection with tobacco curing plants for distributing an even heat to the plant to cure the tobacco contained therein.

The invention embodies, among other features, a device which when used in connection with a tobacco curing plant, is arranged so that the heat producing elements of the stove will be normally disposed within the structure of the plant, the said elements being movable exteriorly to permit of cleaning various parts of the stove and adjusting the wicks.

For the purpose mentioned, use is made of a tank provided with a track on which is mounted to slide a burner provided with a draft hood, the mentioned burner being movable to slide within a structure adapted to contain tobacco, which is to be cured by the action of heat, the said hood terminating in a flue for slidable connection with a heating pipe, a series of wicks mounted on the burner and depending into a fluid contained in the said tank and means for adjusting the said wicks, a suitable damper being provided on the mentioned hood for controlling the draft to the said flue and said heating pipe.

In the further disclosure of the invention, reference is to be had to the accompanying drawings constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a vertical transverse sectional view of a superstructure for curing tobacco, my device being shown in side elevation in connection therewith. Fig. 2 is a diagrammatic plan view of the structure disclosed in Fig. 1. Fig. 3 is a side elevation of the heat distributing apparatus. Fig. 4 is an end view. Fig. 5 is a vertical transverse sectional view of the heat distributing apparatus. Fig. 6 is a vertical longitudinal sectional view taken on the line 6—6 in Fig. 5.

Referring more particularly to the views, I provide a superstructure 10, having mounted therein a series of rafters 11 on which rows of tobacco leaves 12 are mounted, the mentioned tobacco leaves being mounted in the superstructure in an uncured condition and arranged therein for the purpose of curing the same as will be hereinafter more fully disclosed. Mounted adjacent the base of the superstructure 10 is a tank 13 forming a base, having a portion thereof extending inwardly beyond one of the side walls of the superstructure the mentioned tank 13 being adapted to contain a combustible fluid, such as oil, and provided with a longitudinally extending centrally arranged opening 14. A track 15 is mounted on the tank 13, to surround the opening 14 therein, the mentioned track being secured to the tank 13 by means of suitable thumb screws 16. Mounted to slide horizontally on the track 15 is a burner frame 17 having side extension plates 18 thereof provided with draft openings 19, suitable thumb screws 20 being threadedly mounted on the track 15 to engage the burner frame 17, the said thumb screws 20 when screwed up on the track being adapted to retain the burner frame rigidly on the track. A series of openings 21 are provided in a wick casing 17^a of the burner frame 17 and mounted therein are wicks 22, the said wicks being mounted to extend through the opening 14 and depend in the fluid contained in the tank 13. Rods 23 are journaled in the burner frame 17, the said rods being provided with exterior handles 24 and rigidly mounted on the rods are toothed wheels 25, adapted to engage the wicks 22 for adjusting the wicks to increase or decrease the height of the flame, this construction and arrangement being old and well known in the ordinary oil lamps now generally used. Mounted to swing on the burner frame 17 is a hood 26, the said hood being adapted to normally inclose the upper part of the burner frame of the free end of the hood retained in engagement with the burner-frame by suitable thumb screws 27. The front or exposed end of the hood 26 has mounted to swing thereon a closure 28 provided with a series of draft openings 29 and mounted to slide in a side of the closure 28 is a damper 30, provided with an exteriorly arranged handle 31. The other end of the hood 26 terminates in a converging flue 32

adapted for slidable engagement with a heating pipe 33, mounted within the superstructure 10 and connected with an exit flue 34, extending outwardly through the rear of the superstructure 10 to carry off the waste gases. The burner frame 17 is mounted on the track 15 to extend approximately one-half its length and when the burner frame is moved to its innermost position relatively to the track, a cover plate 35, provided with a filling opening 36, is slidably mounted on the track to close that portion of the opening 14, which is not covered by the burner 17, the inner end of the cover plate being adapted to be engaged by the outer end of the burner frame, thus limiting the sliding movement of the burner frame, the said cover plate being retained in engagement with the track by a thumb screw 37, and the filling opening 36 of the said cover plate being normally closed by a cap 38.

In the use of my device, assuming that the burner frame is in the position shown in Fig. 1, the cap 38 is first removed from the cover plate 35 and a quantity of oil or other combustible fluid is poured through the filling opening 36, into the tank 13, after which the cap 38 is remounted upon the cover plate 35. The thumb screw 37 is disengaged from the track 15 and the cover plate 35 can then be slid outwardly, thus providing sufficient room on the track to permit of sliding the burner frame 17 outwardly so that the inner end of the burner frame will lie outside of the wall of the superstructure. The hood 26 can now be swung upwardly by removing the thumb screws 27 or the closure 28 can be swung upwardly for the purpose of igniting the wicks 22, which normally project upwardly a distance beyond the upper end of the burner frame 17. After this has been accomplished the wicks are adjusted by operating the handles 24 and when the hood 26 or closure 28 has been returned to its normal position, the burner frame is slid inwardly on the track, to the position shown in Fig. 1, the extreme end of the flue 32 being adapted to slidably engage the heating pipe 33 and the cover plate 35 is then returned to its normal position and rigidly held in place by the thumb screw 37. Thus it will be seen that the heat produced in the hood 26 will, by the action of the draft created by the draft openings 19 and the openings 29, pass out of the hood, through the flue 32 and into the heating pipe 33, from which the heat will radiate, while the burnt gases will pass outwardly through the exit flue 34, the heat which radiates outwardly from the hood 36 and the heating pipe 33, within the superstructure 10, being adapted to cure the tobacco leaves 12 mounted on the rafters 11, within the superstructure. It will be further seen that when it is desired to clean or repair the burner frame or end of the adjacent parts thereof, the mentioned burner frame can be slid outwardly to a position exteriorly of the superstructure and by swinging the hood 26 into open position the operator can trim the wicks 22 and clean or repair various parts of the device.

In a large number of tobacco curing plants now in general use, the tobacco contained in the superstructure is cured by heat produced by wood burning stoves and with a plant of this kind it is not only necessary to supply the stoves with new fuel at frequent intervals, but it is found difficult to properly regulate and control the supply of heat to the superstructure. With my device, when the wicks and damper have once been adjusted an even degree of heat can be produced by the stove and the stove will not require the care and attention that are required in the use of the above-mentioned wood burning stoves.

Although I have only described one of my stoves, in Figs. 1 and 2 I disclose double heating systems, arranged to accommodate two stoves, positioned at both ends of the superstructure, the inner ends of the heating pipes terminating in the common exit flue.

I claim:—

1. A heat distributing apparatus comprising a tank for containing liquid fuel, a track on the tank, a burner frame slidable on the track and having wicks depending in the tank, a hood on the burner frame, and a radiator pipe having connection with the said hood, the said hood being movable into and out of engagement with the radiator pipe.

2. A heat distributing apparatus comprising a tank adapted to contain a liquid fuel, a burner frame mounted to slide on the said tank and having wicks depending in the said tank, a hood on the burner frame, and a radiator pipe normally engaged by the said hood, the said hood being movable into and out of engagement with the radiator pipe.

In testimony whereof I affix my signature in presence of two witnesses.

LUTON A. WILLIAMS.

Witnesses:
W. G. BARNES,
M. C. SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."