Nov. 10, 1936. E. L. BRINKLEY 2,060,002

TOBACCO BARN

Filed Dec. 27, 1935

Fig. 1.

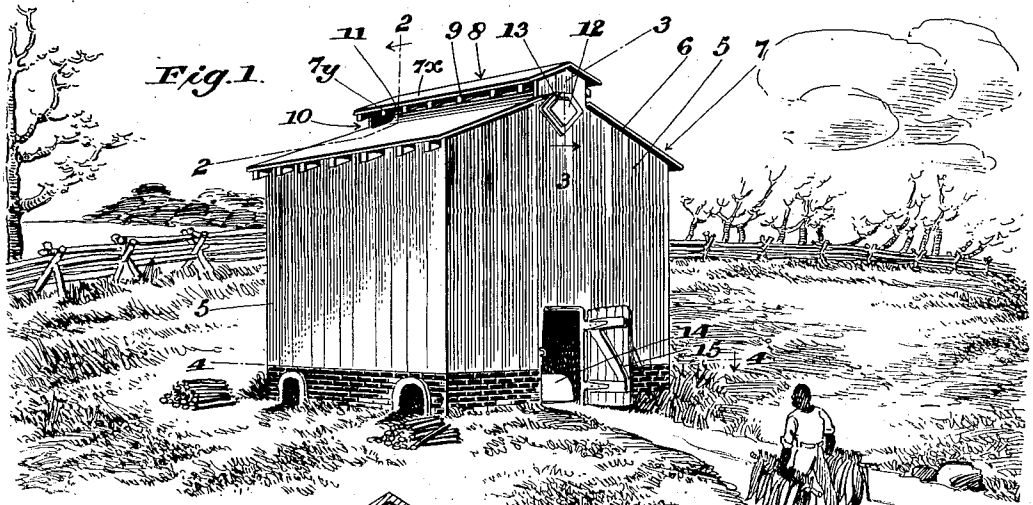


Fig. 2.

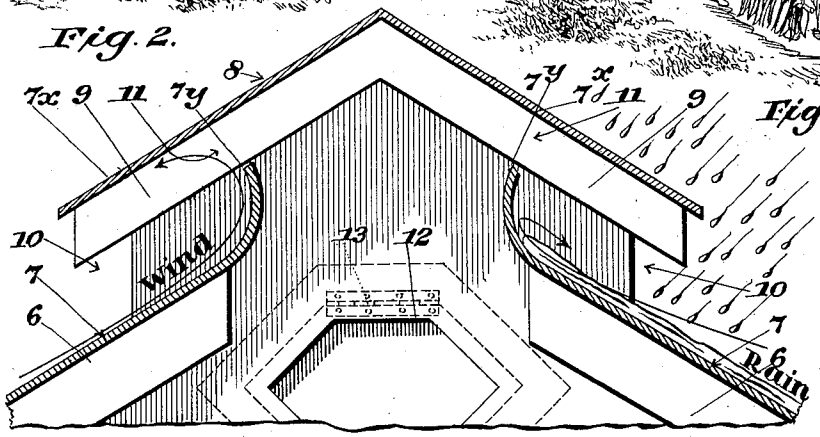


Fig. 3.

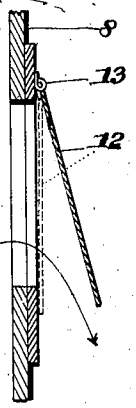
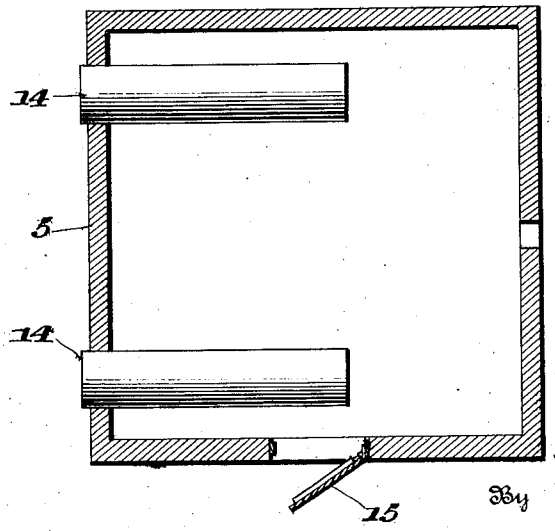


Fig. 4.



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2,060,002

TOBACCO BARN

Edward L. Brinkley, Dover, N. C.

Application December 27, 1935, Serial No. 56,381

1 Claim. (Cl. 98—42)

My invention relates to improvements in tobacco barns, and particularly in the means of ventilating the same, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a barn in which the tobacco may be cured by the means of heat without the necessity of opening and closing ventilators that are usually necessary in barns of this type.

A further object is to provide a ventilation system for tobacco barns in which there is always ventilation, no matter which way the wind is coming from, and at the same time the contents of the barn is protected from rain.

A further object is to provide a tobacco barn ventilation system which will prevent the driving of the heat downwardly, but which at all times provides a substantially uniform draft so as to evenly cure the tobacco.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claim.

My invention is illustrated in the accompanying drawing forming part of this application, in which:

Figure 1 is a perspective view of a tobacco barn constructed in accordance with my invention.

Figure 2 is an enlarged sectional view substantially along the line 2—2 of Fig. 1.

Figure 3 is an enlarged view on the line 3—3 of Fig. 1, and,

Figure 4 is a horizontal sectional view along the line 4—4 of Fig. 1.

In carrying out my invention I provide a barn having vertical walls 5 and a sloping roof 6. The walls may be made of any suitable material such as wooden planks. The roof 6 is preferably covered with a metal sheathing 7.

As will be seen from Fig. 1, the barn is provided with a cupola 8 extending longitudinally thereof along the ridge. The cupola is also sheathed with a metallic covering 7*x* which may be tin or the like. The roof of the cupola is spaced from the main roof of the barn by means of supporting strips or blocks 9 to provide air spaces 10 for ventilation. The upper ends of the metal sheathing 7 are curved upwardly and outwardly as shown at 7*y*. This provides an air passageway 11 between the upper curved ends 7*y* of the sheathing and the metal portion 7*x*, which covers the cupola.

At each end of the barn is a thin metal flap valve 12 which is hinged at 13 on its upper edge. As will be seen from Fig. 3, the normal position of this valve, when no wind is blowing or when there is not any upward current of air within the barn, is vertical, that is to say, the valve is in its closed position shown in dotted lines in Fig. 3.

At the bottom of the barn are heating devices such as those shown at 14. These heating devices may be of any suitable nature such as those used commonly in tobacco barns and may have exit flues, not shown. In the present instance these heating devices are shown as extending to the outer side of the barn for charging the heaters, without the necessity of entering the barn, but it will be understood that this is for the purpose of illustration only, and that any suitable form of heater might be used without departing from the spirit of the invention.

A door 15 is provided for permitting the barn to be filled with tobacco which may be placed on drying sticks, not shown, or arranged in the usual manner.

From the foregoing description of the various parts of the device the operation thereof may be readily understood. Let us assume that the barn is facing due south, and that a driving rain is coming from the east, as shown in Fig. 2. The heated current of air from the heating devices may find its exit through the space 11 on the west side of the barn, and if the wind is not blowing against the flap valves at each end, these also will be opened by the heated current of air, so that ventilation is carried on automatically.

If the wind should veer and blow toward one end of the barn, then that flap valve at the end facing the wind will be closed so that no rain can enter. The valve on the other side, in the meantime will be opened by the heated current of air and ventilation will continue there and also through the spaces 11 of the cupola.

No rain can come in from the sides because of the curved portions of the sheathing. Furthermore, these curved portions tend to deflect the wind toward the cupola roof portion 7*x* so as to stop the force of the wind.

It will thus be seen that I have provided a ventilation system for tobacco barns which requires a minimum of care. There is no possibility of the wind blowing the heat back and there is no necessity of manually closing or opening of shutters or valves since the flap valves operate automatically.

I am aware of the use of shutters which are heavy and cannot be operated automatically by the heated air within the barn. Such shutters must be operated manually and these shutters

require the attedance of someone who must be present when the wind or rain demands the closing of the shutters. The present invention is substantially automatic so that the only thing necessary is to maintain the heat, and the curing of the tobacco will be carried on without any danger of ruining the crop from rain or through the retention of the heated moist air.

I claim:—

A tobacco barn comprising side and end walls, a gable roof having a longitudinal ventilating passage at the ridge, a cupola disposed above the apex of the roof, said cupola having a gable roof extending over the main roof and being spaced therefrom, said main roof having a protective sheathing provided with upwardly and outwardly curved edges adjacent the longitudinal ventilating passage, said curved edges being spaced from the cupola roof to provide air passageways, each end of the barn having a ventilating opening near the cupola, and a flap valve of light weight hinged at its upper edge and normally covering said ventilating opening and movable by a current of heated air within the barn to permit the discharge of the heated air.

EDWARD L. BRINKLEY.