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R. E. MAYO

2,223,696

MEANS FOR CURING TOBACCO AND THE LIKE

Filed Dec. 5, 1938

2 Sheets-Sheet 1

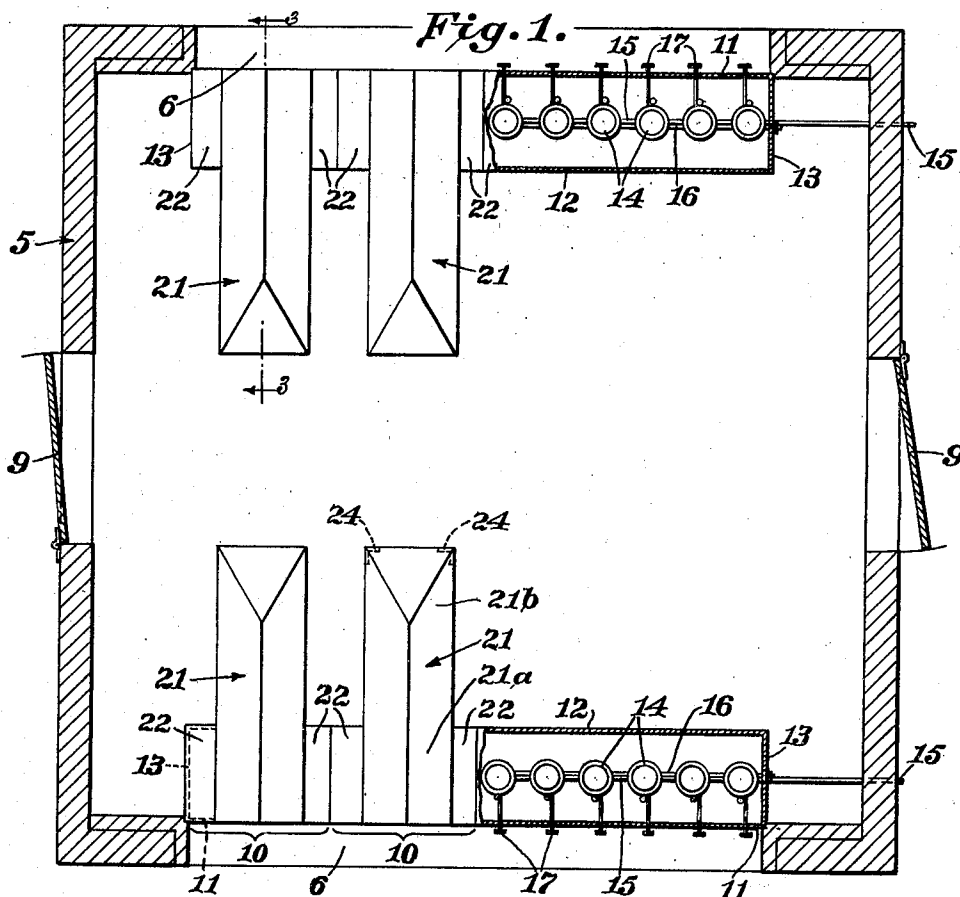
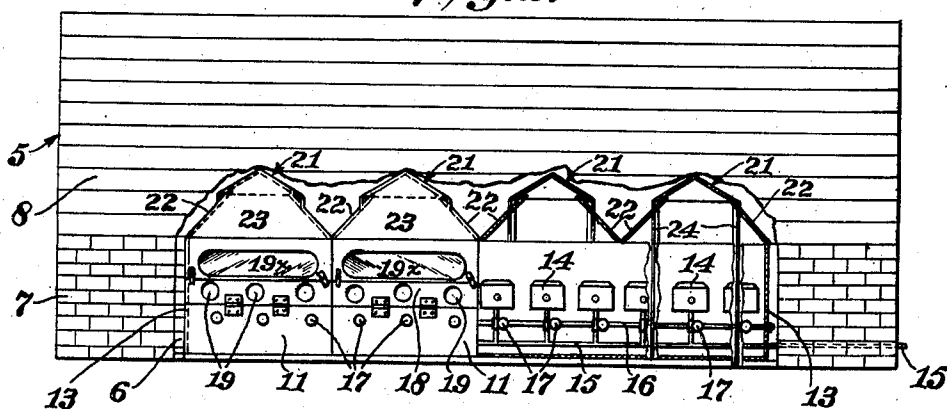


**Fig. 2.**



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*Fig. 3.*

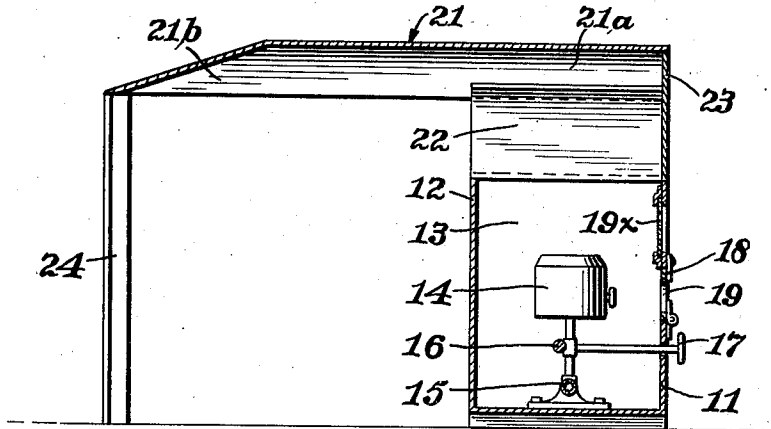
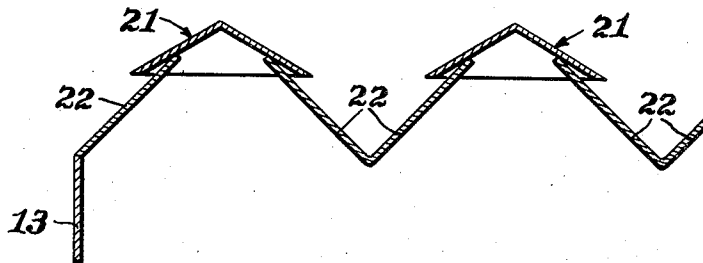


*Fig. 4.*



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## UNITED STATES PATENT OFFICE

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MEANS FOR CURING TOBACCO AND THE  
LIKE

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Application December 5, 1938, Serial No. 244,072

7 Claims. (Cl. 34—19)

This invention relates to the curing of tobacco, and more particularly concerns the construction of a burner unit and its arrangement within a tobacco storage building, so that the individual burners may be controlled from the exterior of the building, and so that heated air is distributed uniformly throughout the building.

The proper curing of tobacco requires an initial heating of the tobacco at a low temperature and a final heating at a relatively high temperature. For best results, it is necessary that each of these temperatures be fairly uniformly maintained. To obtain the low temperature, only a few of the available burners ordinarily are ignited, and to obtain the high temperature, the remaining burners may be ignited. This has made it necessary for the attendant to enter the building at the time these remaining burners are to be ignited. Also, in order to inspect the burners to make sure that they are in operation has required that the attendant enter the building.

Such entry by an attendant into the building has been very objectionable because of the high temperature within the building. Since the tobacco must be cured during the hot summer months, the temperature within the building is excessive. Furthermore, the bad character of the air, due to the presence of the large number of flames, makes entry into the building a highly hazardous duty.

The present invention, by making it possible to ignite, regulate, and inspect the burners from the exterior of the building, eliminates the necessity for actual entry into the building during the curing period.

In the accompanying drawings, in which a preferred embodiment of the invention is illustrated:

Figure 1 is a plan view of the tobacco storage building, the roof being removed.

Fig. 2 is an elevation of Fig. 1, a portion of the side of the building being broken away to show the interior.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a transverse section through the hood above the burners, on an enlarged scale.

The building 5 has the generally rectangular shape characteristic of tobacco curing buildings. Opposite sides of the building are formed with openings 6 which are nearly as long as the building, and which are as high as the usual base brickwork 7. The upper portion 8 of the building may be of ordinary wooden framework construction. Doors 9 enable access to the building.

Each burner unit 10 comprises a casing made

up of side panels 11 and 12 and end walls 13 to form a chamber which is open at its top. The panel 11 is of a size to fit or overlie the opening 6 of the building, and thus serve as a closure for the opening. If desired, sealing material may be applied to the crack between the panel 11 and the wall of the building.

Between the panels 11 and 12 are a plurality of burners 14 arranged in a straight line. These burners are supported by the fuel pipe 15 and by a rod 16, both of which are held in place by the end walls 13 of the casing. Fuel pipe 15 has a connection to a coupling outside the building. The control means 17 for regulating the individual burners may either admit fuel to the burners, or elevate or lower the burners with respect to a maintained oil level.

As a feature of the invention, the control means 17 for the burners extend through openings in the panel 11 so as to be accessible from outside the building. To enable access to the burners, as to ignite them, the panel 11 is formed with doors 18 at the height of the burners. Openings 19 for the supply of fresh air to the burners may be formed in doors 18. Above the doors 18 is located glass 19x, or other transparent material, through which the operation of the burners may be viewed.

It is not necessary that panels 11 and 12 be in one piece, since they may be in sections, each section including its own burners. A sectional construction has the advantage that they may readily be assembled to form a burner unit of any desired length. As here shown, each section includes three burners, and each section includes its own door 18 and viewing glass 19x.

Above the burner unit are a plurality of hoods 21 which are disposed transverse to the length of the burner unit, and which each have a portion 21a above the burner and a portion 21b extending laterally from the burner unit toward the center of the building. In the illustrated embodiment, each section of the burner unit includes its own hood. The hood is less wide than the section, and deflector plates 22 extend from the ends of each section upwardly to the edges of the hood to direct the heated air into the hood.

An end wall 23 closes the end of the hood, and deflector plates 22, and rests upon panel 11 to support these parts. At the other end of the hood are standards 24 which rest upon the floor.

With the arrangement illustrated, in which burner units are arranged on opposite walls of the building, and the hoods extend toward the center of the building, the heated air is distributed

evenly throughout the building. The heated air from the burners is directed into the hoods from which it escapes around the entire free edge thereof. In this manner, the entire area of the building is uniformly heated, and this is true whether only a single burner is ignited in each section for the low initial temperature, or whether all of the burners are in flame to obtain the final high temperature.

Since all the burners can be lighted, regulated, and inspected from the exterior of the building, and it therefore is not necessary for an attendant to enter the building during the curing process, a closer control over the temperature is made possible with consequent improved curing of the tobacco.

While a specific embodiment of the invention has been illustrated and described, the invention is not limited thereto, since modification of the details are contemplated. For example, whereas burners of the blue-flame circular type have been illustrated, the burners may be straight, as disclosed in my application Serial No. 256,373 filed February 14, 1939, or the burners may be of a type other than the blue-flame.

I claim:

1. The combination with a tobacco curing storage building having an opening in a side wall thereof, of a burner unit for heating the interior of the building comprising a panel which serves as a closure for said opening when the burner unit is in position against said wall, a plurality of burners arranged in a line lengthwise of and each substantially equidistant from said panel, control means for the burners extending through said side panel, and means having a portion above the burners to receive the heated air from the burners and having a portion extending laterally from the line of burners to convey the heated air toward the center of the building.

2. The combination with a tobacco curing storage building having an opening in a side wall thereof, of a burner unit for heating the interior of the building comprising a pair of parallel panels, one of which serves as a closure for said opening when the burner unit is in position against said wall, a plurality of burners between and arranged in a line lengthwise of said panels, and a hood having a portion above the burner unit and a portion projecting perpendicularly beyond the other end of said panels the lower edge of the projecting portion of the hood being free to permit the escape of heated air, said hood receiving heated air from the burners and conveying it to the center of the building.

3. The combination with a tobacco curing storage building having an opening in a side wall thereof, of a burner unit for heating the interior of the building comprising a pair of

parallel panels, one of which serves as a closure for said opening when the burner unit is in position against said wall, a plurality of burners between and arranged lengthwise of said panels, and a plurality of spaced apart hoods above the burner unit, and each having a portion above the space between said panels to receive the heated air, and having a portion projecting laterally beyond the other one of said panels, the lower edge of said projecting portion being free to distribute the heated air in the building.

4. A burner unit for heating the interior of a tobacco curing storage building comprising a plurality of burners arranged in a line, upright panels on opposite sides of and co-extensive with said burners serving to direct the heated air upwardly, and a plurality of generally parallel, spaced apart hoods above and transverse to said panels and each having a portion projecting beyond the side thereof and having its lower edge free, said hood serving to receive heated air from between said panels and distribute it laterally from the burners.

5. A burner unit for heating the interior of a tobacco curing storage building comprising a plurality of burners arranged in a line, a plurality of hoods arranged transverse to the line of burners, and each having a portion above the burners and a portion laterally from the burners, the portions which are laterally from the burners being spaced from each other and having their lower edges free and means directing the heated air from the burners into the hoods.

6. A burner unit for heating the interior of a tobacco curing storage building comprising a plurality of burners arranged in a line, a plurality of hoods parallel to but spaced from each other, said hoods being arranged transverse to the line of burners and each having a portion above the line of burners and a portion laterally from the burners the lower edge of which is free, and means directing the heated air from the burners into the hoods including deflectors between the hoods above the line of burners.

7. A burner unit for heating the interior of a tobacco curing storage building comprising a plurality of burners arranged in a line, upright panels on opposite sides of and co-extensive with said burners serving to direct the heated air upwardly, a plurality of hoods each having a portion above the space between the panels and having a portion projecting beyond one of said side panels, the projecting portions of the hoods being spaced apart and free around their lower edges, and means joining the portions of the hoods above the space between the panels with the panels, whereby the heated air from the burners must all be directed into the hoods and can escape from the hoods only around the edges of their projecting portions.

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