Sept. 25, 1951 J. H. WHITE 2,569,084

TOBACCO CURING STOVE WITH AIR HEATING HOOD

Filed Jan. 21, 1949 2 Sheets-Sheet 1

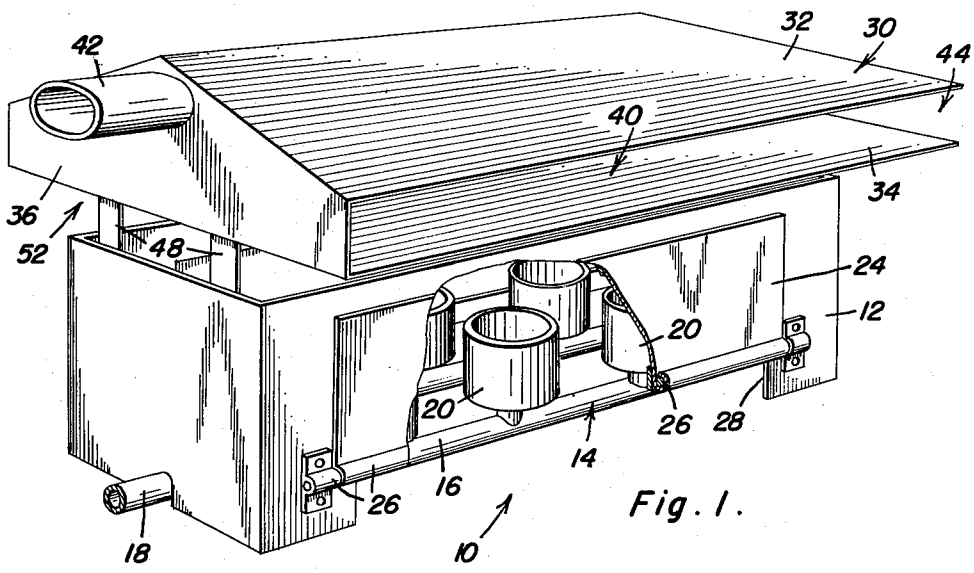


Fig. 1.

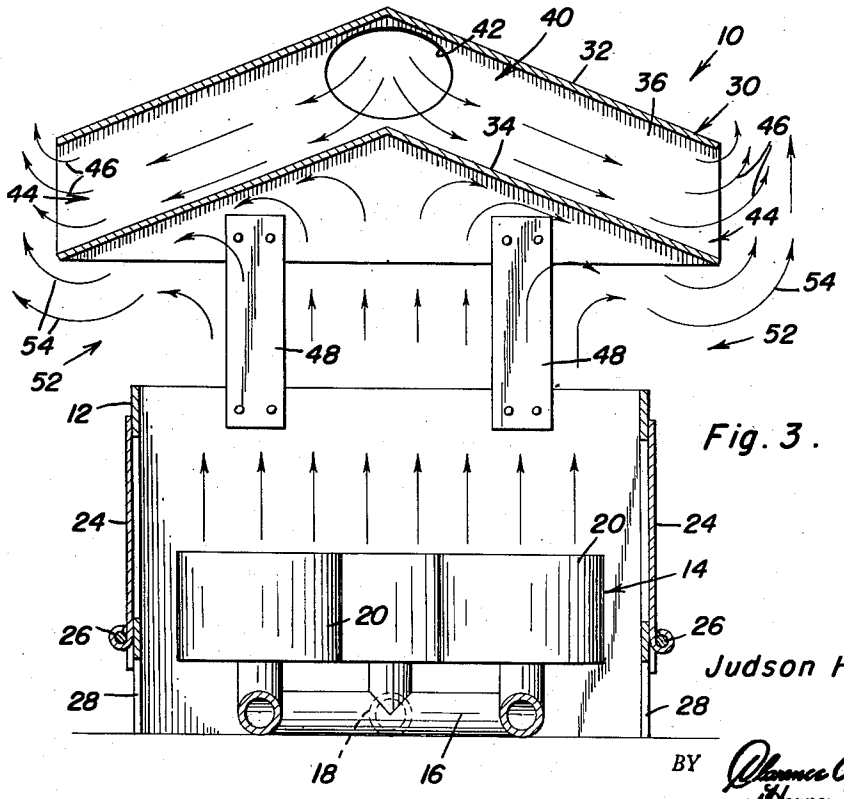


Fig. 3.

Judson H. White
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

Sept. 25, 1951 J. H. WHITE 2,569,084

TOBACCO CURING STOVE WITH AIR HEATING HOOD

Filed Jan. 21, 1949 2 Sheets-Sheet 2

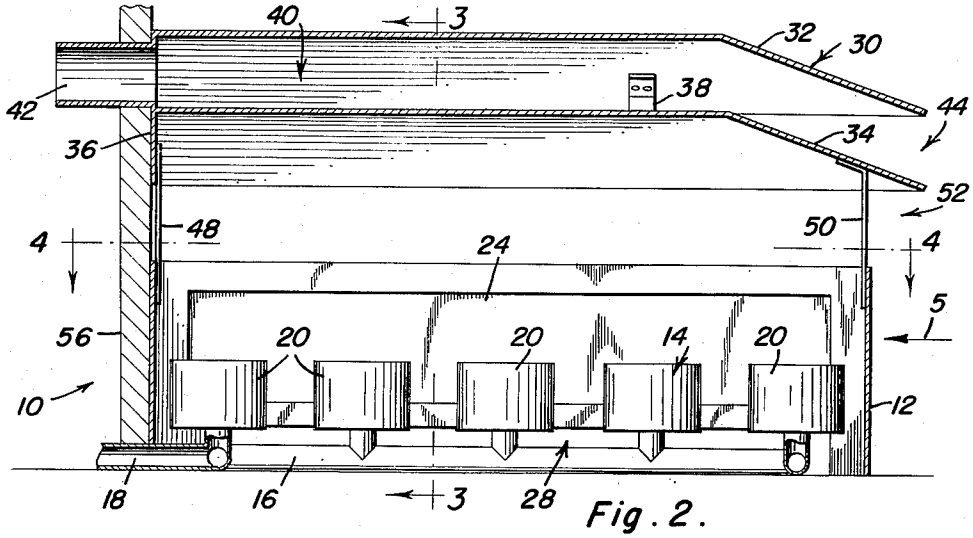


Fig. 2.

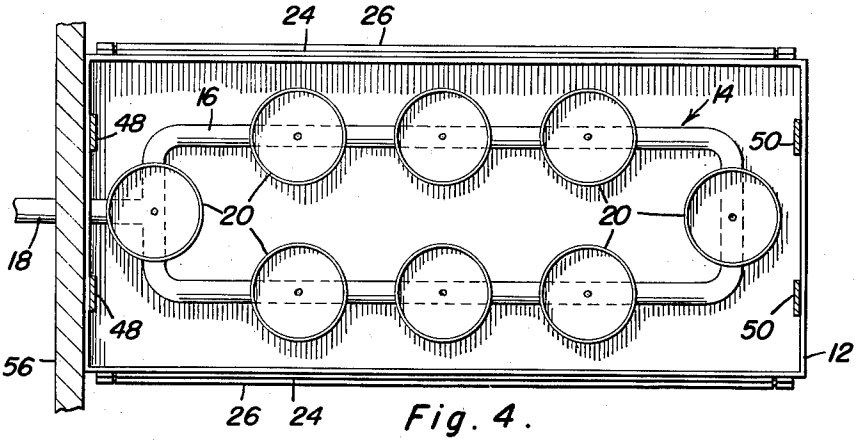


Fig. 4.

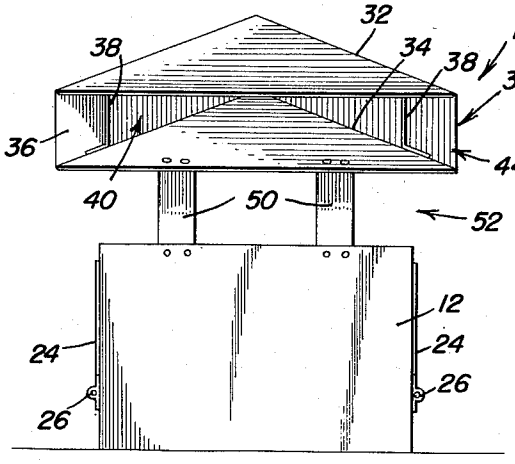


Fig. 5.

Judson H. White

INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

Patented Sept. 25, 1951 2,569,084

UNITED STATES PATENT OFFICE

2,569,084

TOBACCO CURING STOVE WITH AIR-HEATING HOOD

Judson H. White, Whiteville, N. C.

Application January 21, 1949, Serial No. 71,914

1 Claim. (Cl. 126—93)

1

This invention relates to new and useful improvements and structural refinements in tobacco curers, and the principal object of the invention is to provide a tobacco curing apparatus which is very simple in construction and highly efficient in operation, since it assures proper circulation of air in the curing bin.

In particular, the invention involves the provision of a heating chamber containing a burner unit, and the essence of novelty in the invention resides in the provision of a cover assembly on the heating chamber, together with means for admitting cold air into the cover assembly in such manner that the air, after becoming heated, is permitted to disperse itself in the curing bin by the outward passage of the products of combustion from the burner unit.

With the above more important objects and features in view and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially of the construction and arrangement of parts as shown in the accompanying drawings, in which:

Figure 1 is a perspective view of the invention, the same being partially broken away so as to reveal its construction;

Figure 2 is a longitudinal cross-sectional view of the invention in situ in a tobacco curing bin;

Figure 3 is a cross-sectional view, taken substantially in the plane of the line 3—3 in Figure 2;

Figure 4 is a cross-sectional view, taken substantially in the plane of the line 4—4 in Figure 2; and

Figure 5 is an end elevational view, taken in the direction of the arrow 5 in Figure 2.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, the invention consists of a tobacco curing apparatus designated generally by the reference character 10, the same embodying in its construction a heating chamber 12 which is preferably of an elongated, rectangular configuration and is adapted to accommodate an elongated burner unit 14.

This burner unit consists of an endless, substantially rectangular fuel conduit 16 connected to a fuel supply pipe 18 and provided with a plurality of suitable pot burners 20 thereon, as will be clearly apparent. The burners 20 are disposed at mutually spaced points on the conduit 16, and it is to be noted that the fuel supply pipe 18 projects outwardly from the heating chamber 12.

2

Suitable doors 24, mounted on horizontal hinges 26, are provided on the side walls of the heating chamber 12, these side walls also being equipped under the doors 24 with longitudinally extending recesses 28 to facilitate admittance of air to the burner box 20, particularly when the doors 24 are closed. However, the doors may be opened by being swung downwardly on their hinges, in which event the recesses 28 will be somewhat obstructed, but a substantial supply of air will, of course, enter the heating chamber 12 through the door openings. In this manner, the doors may be employed for regulating the amount of air supply to the burner unit and, in addition, the doors will facilitate convenient access to the burner unit for purposes of inspection or servicing.

The essence of novelty in the invention resides in the provision of a cover assembly 30 for the heating chamber 12, this cover assembly consisting of peaked upper and lower walls or baffles 32, 34, respectively, which are disposed in spaced, interfitting relation and are secured at one end to an end wall or gable 36. Moreover, a plurality of braces 38 may be provided between the walls 32, 34 for reinforcing purposes, as will be clearly apparent.

The space between the walls 32, 34 of the cover 30 defines what may be referred to as a hot air chamber 40 in which cold air may be admitted through a suitable duct 42 with which the end wall 36 is equipped. It is to be noted that the air in the chamber 40, after becoming heated, may escape outwardly through outlet openings 44 provided at the sides and one end of the air chamber, this being best shown by the arrows 46 in Figure 3.

The entire cover assembly 30 is supported in an elevated position above the upper edges of the heating chamber 12 by means of a plurality of straps or brackets 48, 50, this arrangement resulting in the provision of outlet passages 52 for products of combustion from the burner unit 14 in the chamber 12.

It is to be noted that the outlet passages 52 are disposed below the outlet openings 44, so that when the products of combustion escape from the chamber 12 through the passages 52, as indicated at 54, they will create an upward current of air which, passing adjacent the outlet openings 44, will tend to withdraw heated air from the chamber 40 so that the heated air as well as the products of combustion are efficiently circulated in the tobacco curing bin.

When the invention is placed in use, it is preferably installed immediately adjacent one wall

56 of the curing bin, with the air inlet duct 42 extending outwardly through this wall, so as to draw fresh, cold air into the curing apparatus, substantially as shown. The fuel supply pipe 18 may also extend outwardly through the wall 56 for connection to a fuel tank (not shown) as will be readily apparent.

It is believed that the advantages and use of the invention will be clearly understood from the foregoing disclosure, and accordingly, further description thereof at this point is deemed unnecessary.

Having described the invention, what is claimed as new is:

In a tobacco curing apparatus, the combination of a substantially rectangular housing open at the top thereof and affording a heating chamber, a burner unit provided in said chamber, a cover assembly positioned above said housing and including peaked upper and lower walls disposed in spaced interfitting relation, a set of brackets extending upwardly from said housing and secured to the lower wall of said cover assembly to position the latter in spaced relation above the housing whereby to provide outlet passages for products of combustion between the upper edges of the housing and the marginal edges of said lower wall, said upper and lower walls defining therebetween a hot air chamber and defining a hot air outlet between marginal edges of said walls disposed above said outlet passages whereby products of combustion which escape outwardly and upwardly from said passages and pass beyond said outlet openings will draw hot air out of the latter, and cold air inlet ports communicating with said heating chamber and said hot air chamber.

JUDSON H. WHITE.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,591,813	Frengle	July 6, 1926
2,051,348	Smith	Aug. 18, 1936
2,280,458	Tharrington	Apr. 21, 1942