Aug. 12, 1958 W. H. JONES 2,846,937

COOKING APPARATUS

Filed Aug. 19, 1955 2 Sheets-Sheet 1

Fig. 1.

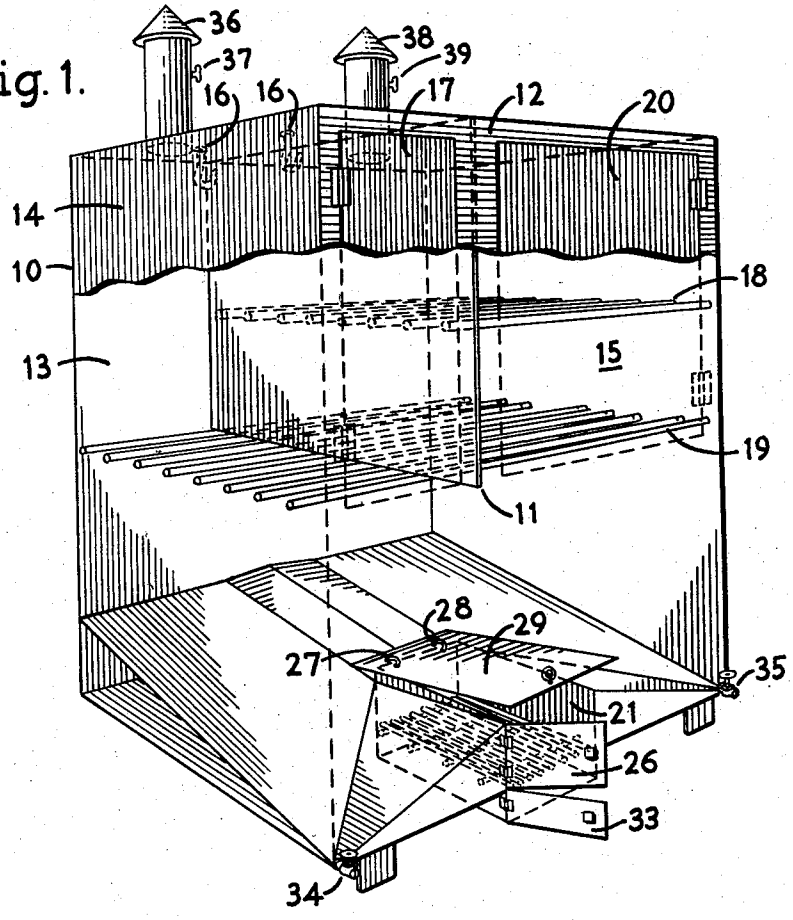
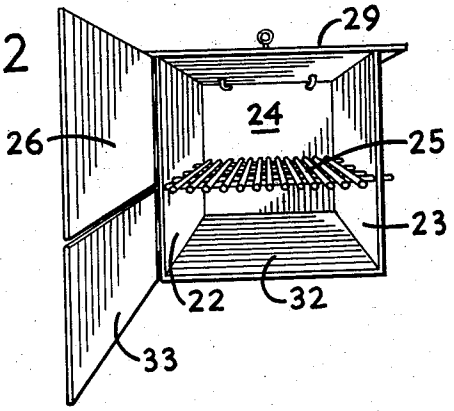


Fig. 2



Wilbur H. Jones
INVENTOR.

BY Mark R. Potter
ATTORNEY.

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Filed Aug. 19, 1955 2 Sheets-Sheet 2

Fig. 3.

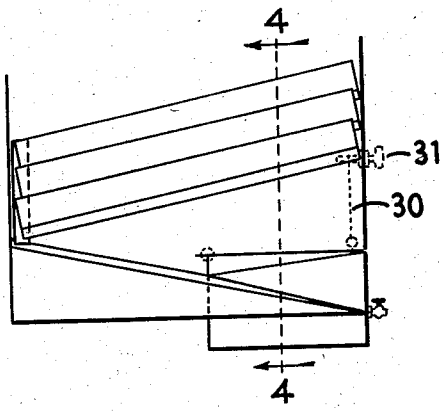


Fig. 4.

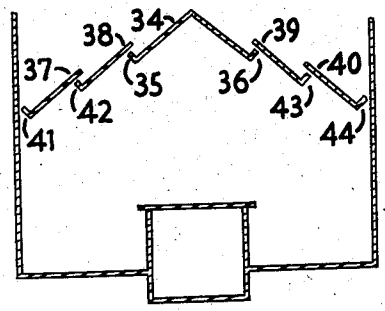
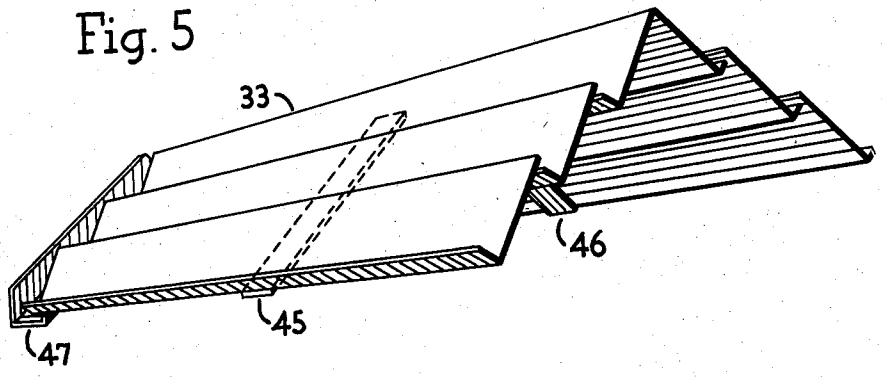


Fig. 5



Wilbur H. Jones
INVENTOR.

BY Mark R Porter
ATTORNEY.

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2,846,937

COOKING APPARATUS

Wilbur H. Jones, Hendersonville, N. C.

Application August 19, 1955, Serial No. 529,434

2 Claims. (Cl. 99—259)

This invention relates to cooking apparatus and more particularly to an apparatus for simultaneously smoking and cooking meat, including poultry, fish, etc.

It is an object of the present invention to provide an improved apparatus for smoking and curing meats.

A further object is to provide an improved apparatus for smoking and cooking meats which is economical to construct and operate.

A still further object is to provide an apparatus for smoking and cooking meats which has improved odor, safety and control features.

Further objects will appear from the following description when taken in conjunction with the annexed drawings wherein:

Figure 1 is a perspective view with parts of the walls removed of one form of an apparatus embodying some of the features of the present invention;

Figure 2 is a view in front elevation of the fire box assembly used in the apparatus of Figure 1;

Figure 3 is a view in elevation of the lower part of the apparatus of Figure 1 with side wall removed and showing a special deflector assembly of the present invention;

Figure 4 is a section view taken on the lines 4—4 of Figure 3; and

Figure 5 is an enlarged perspective view of the deflector assembly shown in Figures 3 and 4.

The smoking and cooking apparatus of the present invention is characterized by a fireproof chamber having disposed near the bottom thereof a fire box. Disposed between the fire box and the upper portion of the chamber where the meat being processed is contained is a deflector member which permits smoke to pass upward but which traps downwardly falling fluids and diverts them away from the fire box. In a preferred form the fire box is provided with an adjustable cover pivotally mounted at the back of the box and extending an appreciable distance beyond the sides and the back of the fire box in overhanging relation. Preferably, the fire box occupies the center portion of the bottom of the chamber and the floor on either side of the fire box slopes away from the fire box toward the front and side of the chamber.

Referring now to the drawings, the smoking and cooking chamber is indicated generally with the reference numeral **10**. Chamber **10**, all of the parts of which are constructed of a fireproof material such as concrete or steel, is provided in its upper portion with a vertical partition **11** which extends from the face **12** of chamber **10** to the rear wall **13** thereof. It will be seen then that partition **11** divides the upper portion of chamber **10** into two bottomless compartments **14, 15**.

Inside compartment **14** there are provided a plurality of hooks indicated with the numeral **16** which can be used to support sections of meat to be processed such as hams, turkeys, etc. Door **17**, mounted on the face **12** of compartment **10**, provides access to compartment **14** for placing meat therein or removing it therefrom. Compartment **15** is provided with a plurality of spaced perforated shelves **18, 19**. Shelves **18, 19** may be used to support metal cooking trays or other utensils holding smaller pieces of meat to be processed. Door **20**, mounted over an opening in face **12** of chamber **10**, provides access to compartment **15**.

In the central part of the bottom of chamber **10** there is disposed a fire box **21**. Fire box **21** is provided with vertical metal sides **22, 23** and back **24** and a pervious metal bottom **25**. Access to fire box **21** is provided by means of hinged door **26** mounted flush with the face **12** of chamber **10**. Two hinge members **27, 28** are mounted on the back **24** of fire box **21**. Extending over the top of fire box **21** is a metal fire box cover **29**. Hinge members **27, 28** extend through small apertures in cover member **29** in such a manner that cover **29** may be considered as hinged to the vertical back wall **24** of fire box **21**. The extent to which cover **29** is raised or lowered may be adjusted by means of chain **30** and knob **31** rotatably mounted on face **12** of chamber **10** and extending therethrough (Fig. 3). Any other suitable means may, of course, be used for adjusting cover **29**.

It will be noted that cover **29** extends in overlapping relation well beyond the interior of vertical walls **22, 23, 24**. This type fire box structure has been found to be particularly beneficial in that the overhanging cover **29** serves as a baffle to deflect the flames in the fire box and overcome their tendency to rise upwardly toward the meat being processed. At the same time, a fire of substantial proportions may be maintained in fire box **21** so that the meat in compartments **14, 15** may be expeditiously processed. Situated underneath fire box **21** is ash chamber **32**. Ashes which pass through previous bottom **25** are removed from chamber **32** via door **33**. The draft through fire box **21** may be regulated by opening or closing door **33**. As shown in Figure 2, the fire box **21** and ash chamber **32** may be constructed as a unitary structure.

Inasmuch as compartments **14, 15** have no bottom, it will be apparent that any juices or greases melted from the meat being processed will tend to fall toward the bottom of chamber **10**. To reduce the concomitant fire hazard and provide means for handling these fluids, a special deflector assembly is provided.

Referring now to Figures 3–5, there is situated above the fire box a gable-like deflector assembly indicated with the numeral **33**. As shown in Figure 4, assembly **33** comprises an uppermost member **34** extending from the front to the rear of chamber **10** and having in section the shape of an inverted V with each leg of the V provided with an upwardly extending longitudinal lip or trough **35—36**. Members **37, 38, 39** and **40**, provided with longitudinal lips **41, 42, 43, 44**, respectively, are interconnected with member **34** by means of stabilizing bars **45, 46**. It will be noted that member **38** overlaps and is spaced apart from lip **35** throughout its length. This structure makes it possible for smoke to readily pass upwardly through the deflector assembly. At the same time, any grease or juices falling downward upon member **38** will be caught in its lip **42** and conducted toward the rear of chamber **10** by virtue of the slanted disposition of deflector assembly **33** (Figure 3). A slope of around 10 to 15 degrees operates satisfactorily. Members **37, 39**, and **40** similarly overlap and are spaced apart from lips **42, 36** and **43**, respectively, all as more clearly shown in Figures 4 and 5.

At the rear of deflector **33** the troughs formed by lips **35, 36, 41** and **42** empty into a common trough **47**, shown in Figure 5. The troughs formed by lips **36, 43** and **44** empty into a similar trough (not shown) on the opposite side of assembly **33**. Trough **47** serves the purpose of

conducting any fluids emptying therein downwardly toward the floor of chamber **10** and outwardly toward the sides thereof.

Deflector assembly **33** preferably occupies substantially the entire cross sectional area from front to back and from side to side of chamber **10**. In this arrangement, any fluids from the upper part of chamber **10** will most likely be caught by the deflector assembly and diverted away from the fire box. It is necessary that the deflector occupy the space directly above the fire box in order to insure against fluids dropping onto the cover of the fire box with the accompanying unpleasant odors and fire hazard.

It will be noted from Figure 1 that fire box **21** is placed in the front center part of the bottom of chamber **10**. On either side and behind fire box **21** the floor of chamber **10** is constructed so as to slope toward one of the front corners of the bottom of chamber **10**. Thus, any fluid leaving trough **47** or otherwise falling in that space from the center to the left side of chamber **10** tends to flow toward the left front corner of the bottom of chamber **10**. A cock **34** or other suitable valve is mounted at this corner to permit accumulated fluids to be periodically withdrawn. The floor on the right side of chamber **10** is similarly constructed and cock **35** permits fluids accumulating on that side to be withdrawn.

In operation, a fire consuming charcoal, hickory wood, or other suitable fuel is maintained in fire box **21** by adjusting cover **29** and door **33** to obtain the desired level of heat and smoke. If desired, containers of water may be placed in the upper part of chamber **10** to vaporize and keep the meat being processed moist. Unless otherwise controlled, the heat and smoke will be about equally divided in passage through compartments **14** and **15**. Mounted above compartment **14** is a chimney **36** equipped with a suitable damper member **37**; a similar chimney **38** and damper member **39** is mounted above compartment **15**. If it is desired to cause all the heat and smoke to pass through compartment **14**, damper **39** is closed completely so as to close chimney **38**. Thus, if the meat in one compartment is more nearly cooked than the meat in the other compartment the dual chimney permits the heat and smoke to be distributed between the two compartments as needed.

For the most beneficial results in practicing this invention, the deflector assembly **33** should be kept reasonably clean. This tends to eliminate undesirable odors and may be accomplished by washing and scrubbing periodically when the cooking apparatus is not in use.

What is claimed is:

1. Apparatus for smoking and cooking comprising the combination of a chamber constructed of fireproof material, means in the upper portion of said chamber for holding meat, a door providing access to said means, a chimney in the upper portion of said chamber, a fire box in the lower portion of said chamber, a cover member hingedly connected at the back edge of said fire box and adapted to cover the top of said fire box, said cover member adapted to extend an appreciable distance beyond a vertical plane intersecting the interior sides of said fire box, means for adjusting said cover member, said fire box being situated in the central portion of said chamber, the floor of said chamber on either side of said fire box sloping away from said fire box and toward an outside wall of said chamber, and a sloping deflector assembly comprising a plurality of spaced longitudinal troughs disposed in overlapping relationship between said fire box and said upper portion and adapted to permit smoke to pass upwardly and to intercept fluids falling downwardly.

2. Apparatus for smoking and cooking comprising the combination of a chamber constructed of fireproof material, a vertical partition dividing the upper part of said chmber into two compartments, a door providing access to said compartments, means in each of said compartments for holding meat, a chimney connected to each of said compartments, a fire box in the center of the bottom of said chamber, the floor of said chamber on either side of said fire box sloping away from said fire box and toward the front corner of said chamber, an adjustable cover member hingedly connected to the back edge of said fire box and adapted to cover the top of said fire box, said cover member adapted to extend an appreciable distance beyond a vertical plane intersecting the interior sides of said fire box, a deflector assembly disposed between said fire box and said vertical partition and adapted to intercept downwardly falling fluids while permitting smoke to pass upwardly, said deflector assembly comprising a plurality of spaced longitudinal troughs extending in overlapping relationship from the front to the rear of said chamber and sloping toward the rear of said chamber, and a conduit at the rear of said chamber disposed normal to and communicating with each of said troughs, said conduit being adapted to conduct fluids flowing from said troughs downward to the floor of said chamber.

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