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2,643,777

SMOKE TREE

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2 Sheets-Sheet 1

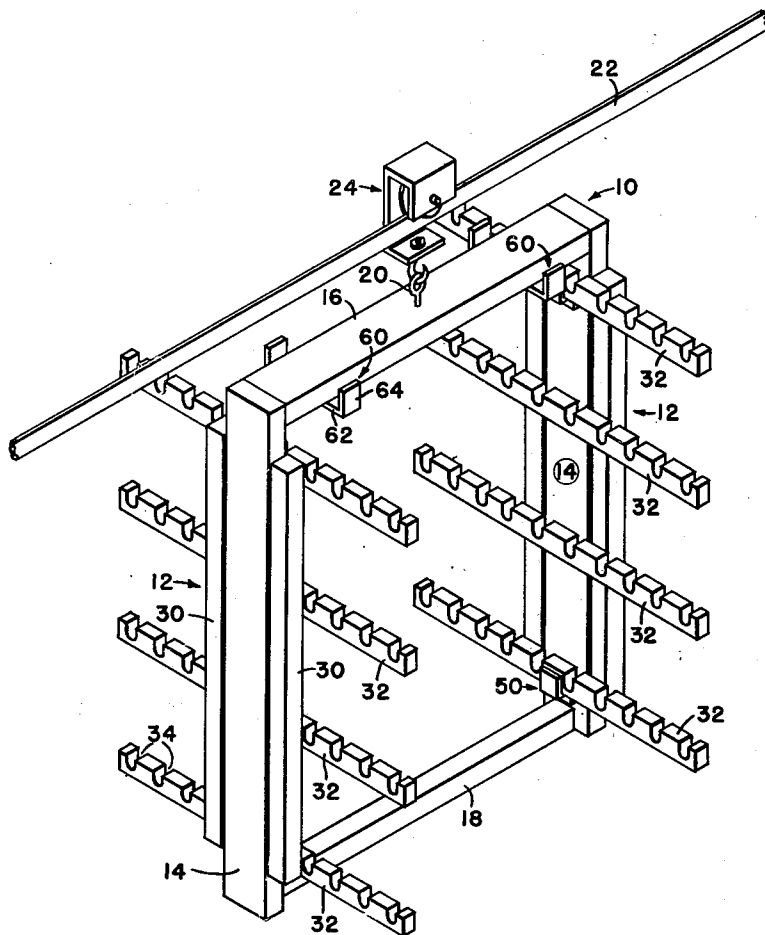


FIG. 1

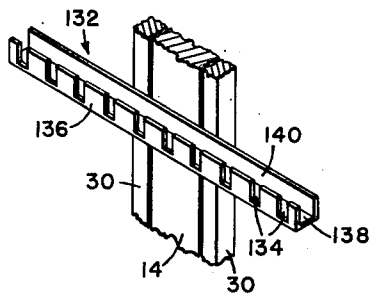


FIG. 6

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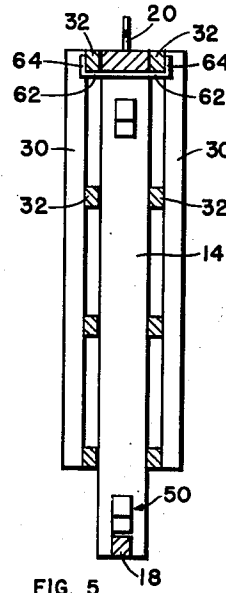
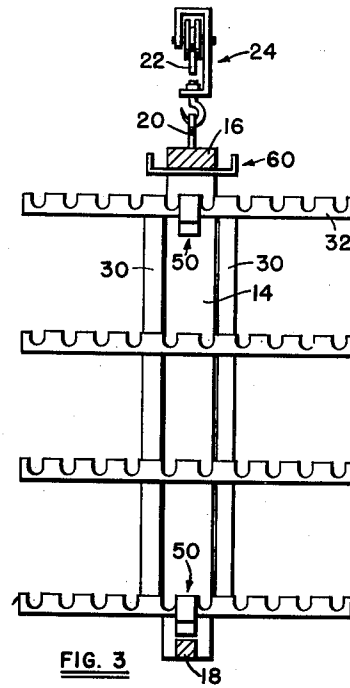
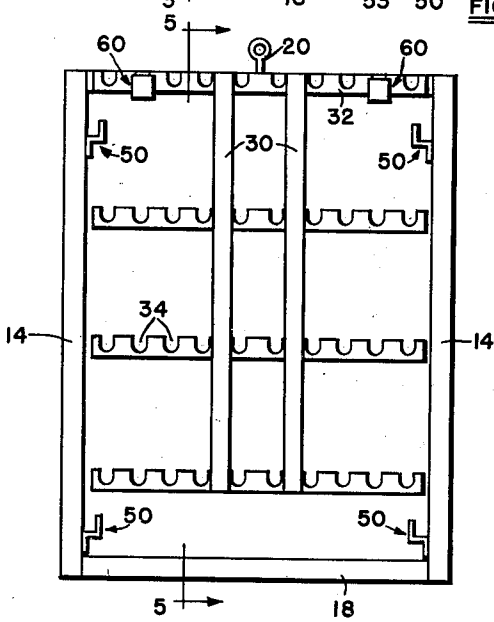
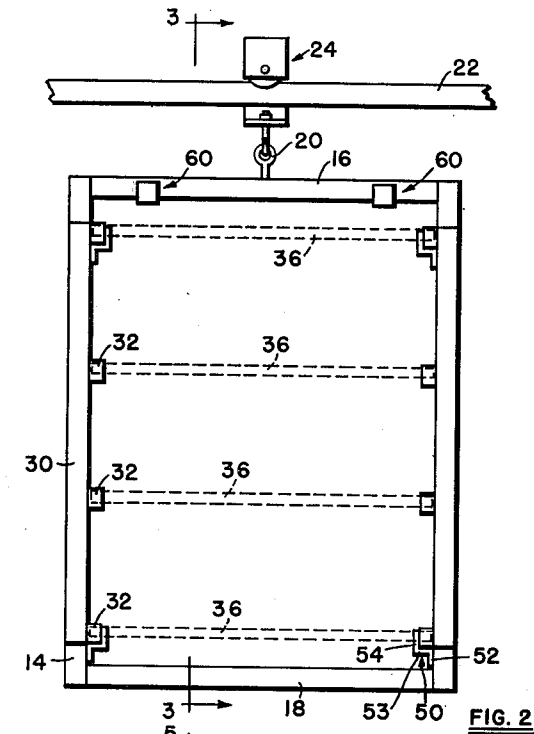
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SMOKE TREE

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2 Sheets-Sheet 2



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SMOKE TREE

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3 Claims. (Cl. 211-118)

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This invention relates to a so-called smoke rack or tree.

An object of the invention is to provide a smoke rack which comprises a frame capable of being moved from place to place and on which a pair of support assemblies may be mounted in one or the other of two normal positions, either in an operative transversely extending position with reference to the plane of the rack, or to an inoperative storage position in substantial parallelism with the plane of the rack.

Another object of the invention is to provide a smoke rack which is particularly adapted for ease of maintenance, assemblage, storage and cleaning.

A further object of the invention is to provide a smoke tree for supporting a large number of pieces of meat, such as sausage, ham, bacon or the like, during the smoking or other processes to which such items are usually subjected.

Still a further object of the invention is to provide a smoke rack having the hereinabove described characteristics which is constructed and arranged to facilitate ease of mounting and removing the rods from which the various meat items are suspended.

These and other objects are attained by the means described herein and as disclosed in the accompanying drawings in which

Fig. 1 is a perspective view of a rack embodying the teachings of the present invention in a fully erected, operative position.

Fig. 2 is a side elevation of the rack of Fig. 1.

Fig. 3 is a vertical section on line 3-3 of Fig. 2.

Fig. 4 is a side elevation of the rack of Fig. 1, with the support assemblies in inoperative or storage position.

Fig. 5 is a sectional view taken on line 5-5 of Fig. 4.

Fig. 6 is a fragmentary perspective view of a modified type of support assembly embodying the teachings of the present invention.

The smoke rack or tree of the present invention comprises a substantially rectangular rigid frame denoted generally by the numeral 10 and a pair of support assemblies denoted generally by the numerals 12 which are adapted to be securely though releasably fastened to the frame in the fully extended, operative position of Fig. 1 or in the inoperative storage position of Figs. 4 and 5.

The frame comprises a pair of laterally spaced end portions or uprights 14 inter-connected at their upper ends by a top element 16 and at their lower ends by a bottom element 18 wherein the top and bottom elements spaningly engage the end portions. The frame is preferably

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self-supporting, that is, the bearing area of the bottom ends of end portions 14 are sufficient to facilitate self support of the frame upon a flat supporting surface such as a floor, particularly during those periods of time when the tree is not in use.

In the preferred embodiment of the invention suitable means such as an eye bolt 20 may be secured to and carried by the top element 16 for enabling the rack to be suspended therefrom for transportation from place to place. As a general rule smoke racks are suspended from an overhead monorail 22 by means of a pulley assembly denoted generally by the numeral 24, for movement into and through a smoke room or other processing chamber.

Each of the support assemblies 12 includes a pair of laterally spaced elongate members 30 and a plurality of spaced vertically aligned cross members 32 which are secured to, carried by and span their respective pair of elongate members.

As best disclosed in Figs. 1, 3 and 4, the overall length of cross members 32 is such as to extend equidistant on opposite sides of their respective elongate members, wherein the overall length of said members is of a dimension less than the lateral spacing between end portions 14 of the frame, see Fig. 4.

The upper surface of each cross member is provided with a plurality of laterally spaced notches 34 dimensioned to receive the ends of a rod from which the meat products are suspended and which spaningly engages corresponding cross members when mounted in the operative, fully extending position of Figs. 1, 2 and 3. Such rods have been indicated in dotted outline in Fig. 2 by the numerals 36.

The lateral spacing of the adjacent faces of the elongate members 30 of each support assembly is of a dimension at least equal to the width dimension of the end portions or uprights 14, so that the adjacent faces of the elongate members will overlappingly engage the opposite side edges of an end portion. It will be noted that when the elongate members have thus engaged their respective end portions the inner face of said end portions will be contacted by the outer face of those portions of the cross members between their respective elongate members.

In this manner I have provided a simple, yet highly effective, substantially U-shaped track member slidably engageable with the inner and opposite side edges of an end member.

Suitable means such as, by way of example, brackets 50, are provided for securely though releasably mounting a support assembly relative to an end member 14. Brackets 50 may include a

leg 52 which is secured to and carried by the inner face of end portions 14, a horizontal portion 53 and a vertical leg 54. Horizontal portion 53 is constructed and arranged to extend under those portions of a cross member intermediate its respective elongate members 30 for providing a bearing surface therefor. Vertical legs 54 are adapted to overlappingly engage the inner faces of the cross members thereby precluding accidental or unintentional disengagement of a support assembly from its respective end portion. Highly satisfactory results have been obtained when but two brackets 50 are utilized for each support assembly, one for the top and one for the bottom cross member, however such disclosure is exemplary rather than restrictive.

To erect the smoke rack or tree all an operator need do is lift a support assembly onto an upright or end portion 14, with the cross members above the respective brackets which they are to engage, for disposing elongate members 30 in overlapping relationship with the side edges of the upright and with those portions of the cross members between the elongate members in abutment with the inner face of said upright. Lowering of the assembly will seat the cross members in the brackets.

It will be understood that when the support assemblies have thus been securely though releasably mounted to the frame, the various cross members 32 will be disposed in transverse relationship with the plane of the frame with the corresponding cross members of each assembly in laterally spaced horizontal alignment.

When it is desired to store the smoke rack, or during those periods of time when the rack is not being used, the support assemblies may be quickly and easily detached from their respective end portions merely by lifting them upwardly relative to the frame, which motion is facilitated by reason of the track arrangement of the support assemblies relative to their respective end portions, for effecting disengagement of the cross members from their respective brackets 50, thereby enabling the support assemblies to be shifted inwardly away from their respective end portions.

A pair of laterally spaced hangers 60, each including a horizontal leg 62 and a vertical leg 64 are secured to and carried by opposite sides of top element 16 between end portion 14. The dimensional characteristics of legs 62 and 64 of hangers 60 are such as to receive portions of the uppermost cross member of a support assembly whereby the assembly will be securely though releasably suspended from hangers 60 for thereby disposing cross members 32 in parallel relationship with the frame and extending between end portions 14 thereof, see Fig. 4.

With particular reference now to Fig. 6, it will be noted that U-shaped cross members 132 may be utilized in lieu of cross members 32 illustrated in Fig. 1. Cross members 132 may be fabricated from channel stock comprising laterally spaced side walls 136 and 140 interconnected by bottom wall 138. A plurality of laterally spaced notches 134 are provided in inner wall 136, said notches being dimensioned to receive the ends of a rod from which the meat products are suspended.

It will be noted that when utilizing the cross members of Fig. 6 outer walls 140 effectively preclude accidental or unintentional disengagement of rods 36 (see Fig. 2) from cross members 132 incident to an endwise or axial shifting of the

rods, the ends of which will abuttingly engage end wall 140, thereby limiting its axial movement.

From the foregoing, it will be observed that I have thus provided a simple, inexpensive yet highly efficient smoke rack which includes support assemblies adapted to be associated therewith in one or the other of two normal positions. My rack lends itself to thorough and easy cleansing, and contains no complicated parts such as hinges, or the like, which could give trouble.

It should be understood that various changes and modifications in the structural details of the device may be made, such as, by way of example, fabricating the laterally spaced elongate members 30 from angle or channel stock, within the scope of the appended claims, without departing from the spirit of the invention.

What is claimed is:

1. A smokehouse rack comprising a frame including a pair of laterally spaced uprights, a support assembly for each upright including a pair of laterally spaced elongate members and a plurality of vertically spaced vertically aligned cross members secured to and carried by said elongate members, means for releasably securing a support assembly to an upright for locating a pair of such assemblies in laterally spaced relationship with corresponding cross members in substantial horizontal alignment.

2. A smokehouse rack comprising a frame including a pair of laterally spaced uprights, a support assembly for each upright including a pair of laterally spaced elongate members and a plurality of vertically spaced vertically aligned cross members secured to and carried by said elongate members wherein the adjacent faces of the elongate members are dimensioned to engage the opposite sides of an upright with the cross members spanning the upright between its sides, and means for releasably securing a support assembly to an upright for locating a pair of such assemblies in laterally spaced relationship with corresponding cross members in substantial horizontal alignment.

3. A smokehouse rack comprising a frame including a pair of laterally spaced uprights, a support assembly for each upright including a pair of laterally spaced elongate members and a plurality of vertically spaced vertically aligned cross members secured to and carried by said elongate members, wherein the adjacent faces of the elongate members are dimensioned to engage the opposite sides of an upright with the cross members spanning the upright between its sides, means on the uprights engageable by the cross members for releasably securing a support assembly to an upright for locating a pair of such assemblies in laterally spaced relationship with corresponding cross members disposed transversely of the plane of said uprights and in substantial horizontal alignment.

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