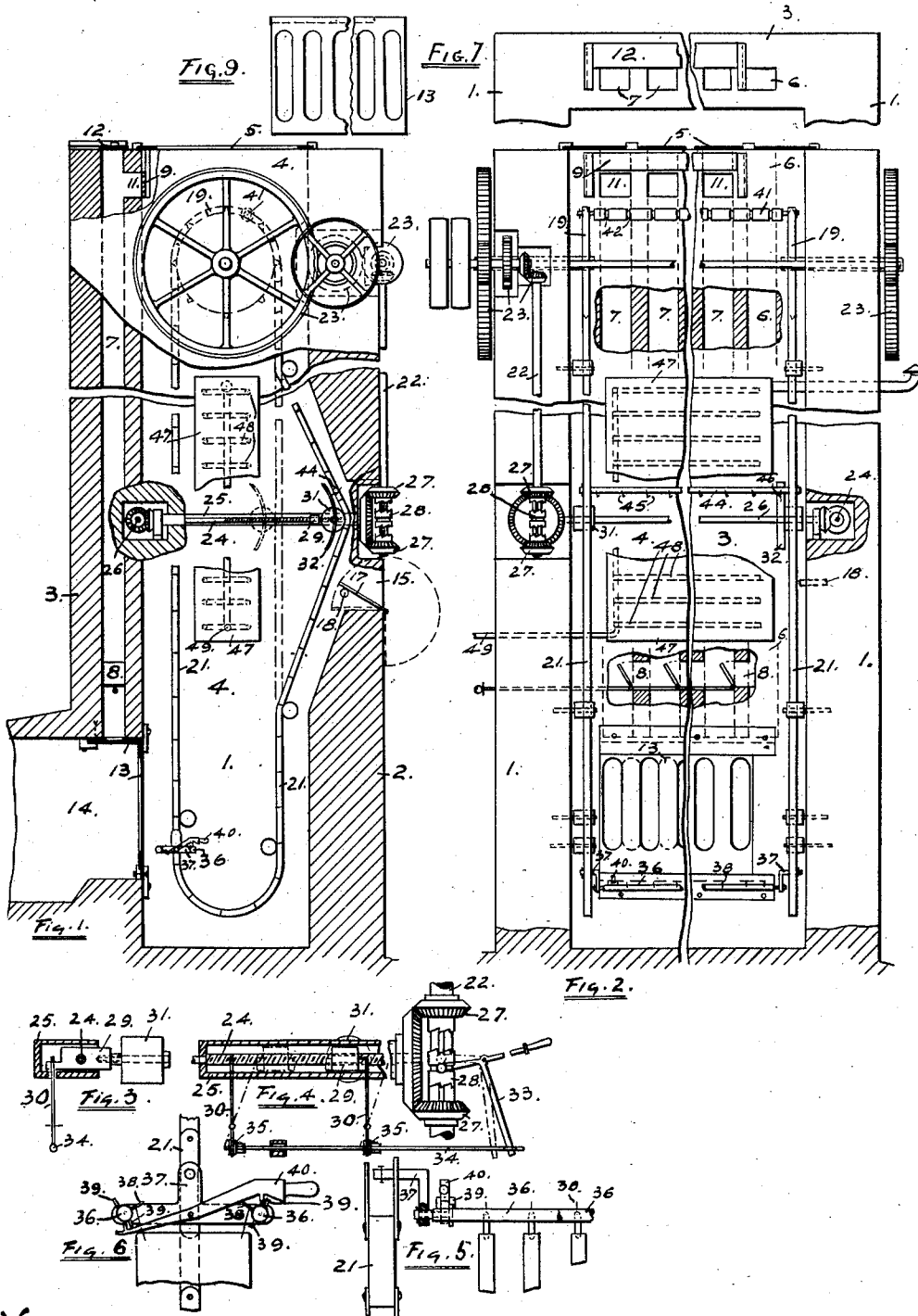


E. T. MALLOY.
SMOKE HOUSE.
APPLICATION FILED APR. 1, 1908.

1,016,698.

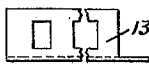
Patented Feb. 6, 1912.



WITNESSES:

Frank Sauer.
Samuel S. Carr.

FIG. 8.



Edward Thomas Malloy, INVENTOR.

By: Robert S. Carr. ATT'Y.

UNITED STATES PATENT OFFICE.

EDWARD T. MALLOY, OF HAMILTON, OHIO.

SMOKE-HOUSE.

1,016,698.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed April 1, 1908. Serial No. 424,504.

To all whom it may concern:

Be it known that I, EDWARD T. MALLOY, a citizen of the United States, residing at Hamilton, Ohio, have invented a new and useful Improvement in Smoke-Houses, of which the following is a specification.

This application covers an apparatus of the general character of that shown in my Patent No. 882,727, granted March 24, 1908.

My invention relates to improvements in smoke houses of the class adapted to use for the drying or curing of meat, fish or other substances, and the objects of my improvements are to economize floor space; to provide means for moving and exposing the substances evenly to the action of the heat and smoke for obtaining uniform results; to provide ventilator controlled passages for changing the course of the smoke as desired, and for heating the walls of the curing chamber; to provide means for attaching the substances to the endless carrier; to provide means for automatically disengaging the driving mechanism from the chain shifter; to provide a supplemental heating chamber, and to provide a compact and durable construction and assemblage of parts for securing facility of operation and efficiency of action. These objects are attained in the following described manner, as illustrated in the accompanying drawings, in which:—

Figure 1 is a longitudinal section of a smoke house embodying my improvements; Fig. 2, a front interior view with portions broken away; Fig. 3, a transverse section and Fig. 4 a longitudinal section of the chain shifter with an automatic clutch actuating device; Figs. 5 and 6 a side and an end elevation respectively of a double supporting bar; Fig. 7, a plan with parts broken away; Figs. 8 and 9 a plan and front elevation respectively of the angular ventilator plate.

In the drawings, 1 represents the end walls and 2 and 3 the front and rear walls of a rectangular structure of any desirable dimensions, inclosing a curing chamber 4 which may be closed at the top by means of an ordinary sliding ventilator plate 5. The rear wall contains the chimney 6 and also a series of vertical smoke flues 7 which communicate therewith near their lower ends through a dampered passage 8. A sliding plate 9 serves to close the openings 11 formed near the top of the rear wall between the

flues 7 and the curing chamber, and a sliding plate 12 serves to close the top of said flues when desired. A sliding angular ventilator plate 13 serves to alternately close the passages from the furnace 14 to the curing chamber and to the lower end of the flues 7 in the ordinary manner. The front wall is formed with a transverse opening 15. A swinging shelf 17 hinged near the bottom of said opening may be supported therein on a fixed stop 18 as shown in Fig. 1. Sprocket wheels 19 provided with depending endless chains 21 are mounted within the top portion of the curing chamber, and a vertical shaft 22 mounted on the front wall may be driven simultaneously therewith by means of driven gear connections 23. Shafts 24 mounted within the end walls adjacent to the opening 15 by means of open casings 25 are geared to a transverse shaft 26 which is journaled in the rear wall. One of said shafts 24 is geared to clutch faced pinions 27 which are idly mounted on shaft 22 on opposite sides of a double clutch member 28 which is splined thereon. Nuts 29 provided with idle rollers 31 and threaded on the respective shafts 24 are thereby movable longitudinally within the casings 25. A bell crank lever 33 pivotally secured at a fixed point movably engages at its respective ends with the clutch member 28 and with a sliding rod 34 by means of washers 35 adjustably secured thereon. Pivoted tripping levers 30 by contact with nuts 29 are actuated in opposite directions alternately with the corresponding stop 35 for automatically moving the rod 34 and the bell crank lever 33 with the clutch member 28 out of engagement with the corresponding idle pinion 27 whereby the rotation of the shafts 24 is discontinued. Double supporting rods 36 are journaled at their ends in depending housings 37 which are swiveled at opposite points on the respective chains 21. Each of said rods is provided with a corresponding series of projecting pins or meat hooks 38 and with projecting catches 39 near one end, adapted to detachably engage with the latch lever 40 for preventing said rods from turning.

In operation, the lever 33 serves to actuate the clutch member 28 to engage the shafts 24 with the driven vertical shaft 22 for moving the idlers 31 with the front portion of the carrier adjacent to the opening 15 in a

forward direction. When the chain reaches a predetermined position, said lever is automatically actuated by contact of the nut with one of the tripping levers 30 for disengaging the clutch member 28. In this position of the carrier, the supporting rods are more conveniently accessible for loading or unloading, after which the chain may be permitted to resume its normal depending position by reversing the direction of rotation of the shafts 24 by means of the engagement of the clutch member 28 with the opposite idle pinion 27. By means of the latch lever 40, the double supporting bars may be released and permitted to turn for automatically disengaging the meat from the pins thereon when it is over the table. The open chimney 6 is in continuous communication with the furnace 14. The angular sliding plate 13 serves to admit the gases alternately as desired from the furnace 14 directly within the lower portion of the curing chamber 4 or to the flues 7. The dampered passage 8 when open serves to admit the gases from the flues 7 to the chimney for preventing the over-heating of the rear wall 3. When said dampered passage 8 to the chimney is closed the gases are permitted to ascend the flues 7 for heating the rear wall and thence escape when the top of said flues are opened by the sliding of plate 12 from thereover. By closing the top of said flues with the sliding plate 12 and moving sliding plate 9 to uncover the passages 11 in the rear wall the heat from said flues may be admitted therethrough to the upper portion of the interior of the curing chamber 4. In this manner the gases or heat from the furnace may be directed as desired for controlling the temperature of the rear wall and also for heating either the top or bottom portion of the curing chamber. After the curing of the contents of said chamber is completed ventilator plate 5 serves to uncover the top of the curing chamber for rapidly cooling and ventilating its interior before the removal of its contents.

Having fully described my improvements,

what I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. A smoke house comprising a curing chamber, a supplemental heating chamber supported within the curing chamber, and separate means for heating said respective chambers.

2. A smoke house comprising a curing chamber, a furnace communicating therewith, a heating chamber inclosed within the curing chamber, gas burners therein, and pipe connections therewith from a source of fuel without the curing chamber.

3. A smoke house comprising a curing chamber, an endless carrier therein, a heating chamber supported within the curing chamber, gas burners therein and pipe connections for supplying gas to said burners from without the curing chamber.

4. A smoke house comprising a depending endless carrier, rotative supporting bars mounted thereon in pairs, and means for simultaneously locking or unlocking each pair of bars in relation to their rotative movement.

5. The combination of driven wheels mounted at fixed points, an endless carrier depending therefrom, rotative supporting bars suspended in pairs from the carrier and provided with radial pins, and lever mechanism for locking each pair of bars from rotating.

6. The combination of a driven endless carrier comprising rotative supporting bars depending in pairs therefrom, and means for preventing the rotation of the bars.

7. A smoke house comprising a depending endless carrier, a screw adapted to move a portion of the carrier laterally, clutch mechanism arranged to actuate the screw, and lever mechanism actuated by the screw for automatically disengaging the clutch therefrom at predetermined intervals in its movement.

EDWARD T. MALLOY.

Witnesses:

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R. S. CARR.