

Nov. 1, 1927.

1,647,872

J. Q. LEAVITT

PEELER

Filed Oct. 6, 1925

2 Sheets-Sheet 1

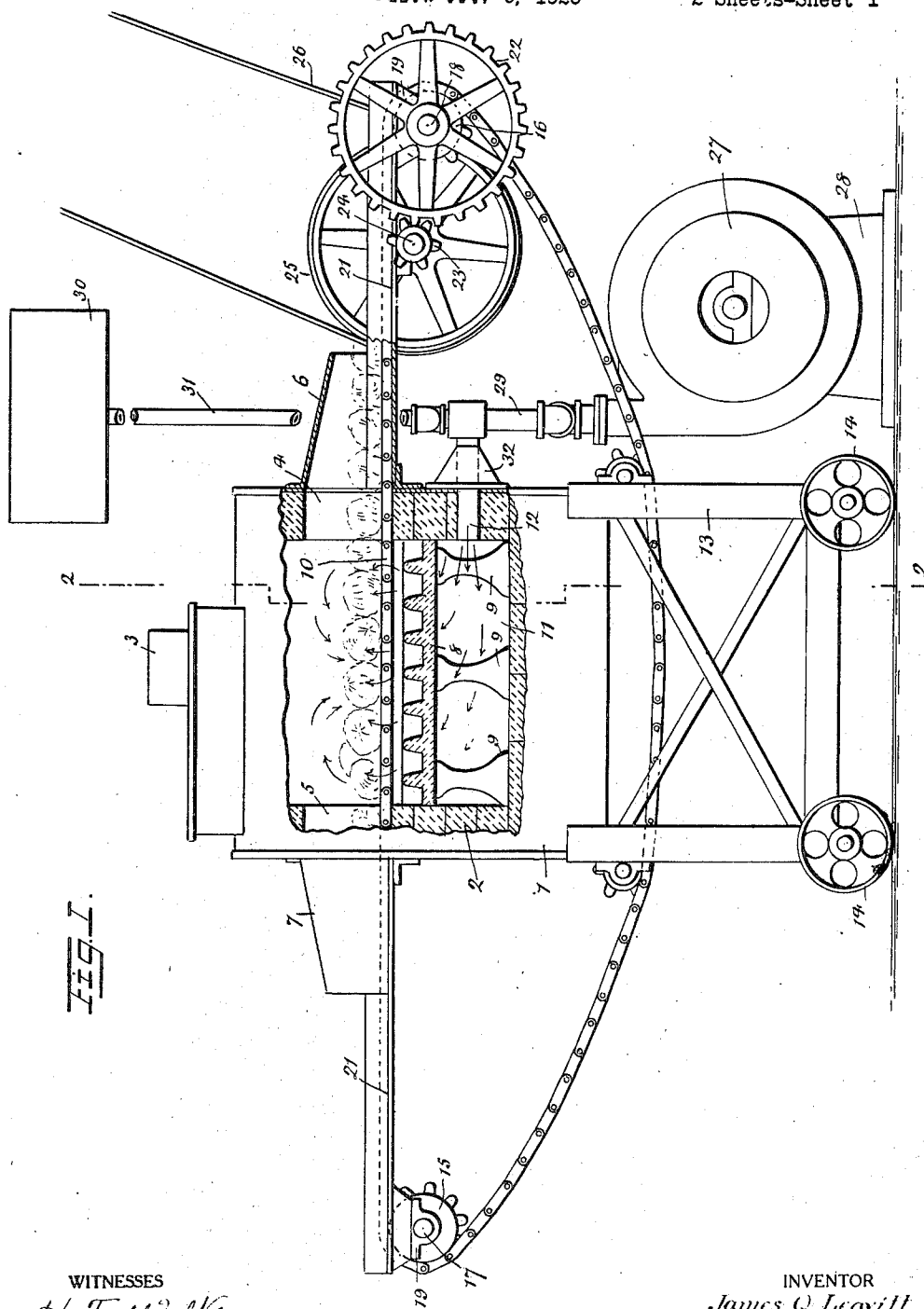


FIG. 1.

WITNESSES

H. T. Walker
S. W. Foster

INVENTOR

James Q. Leavitt

BY

Mumford
ATTORNEYS

Nov. 1, 1927.

1,647,872

J. Q. LEAVITT

PEELER

Filed Oct. 6, 1925

2 Sheets-Sheet 2

Fig. 2.

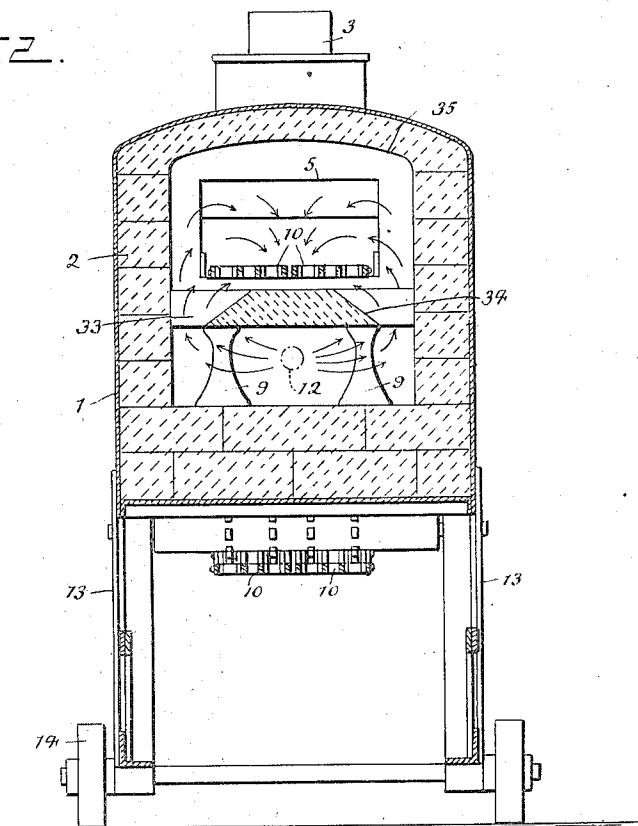
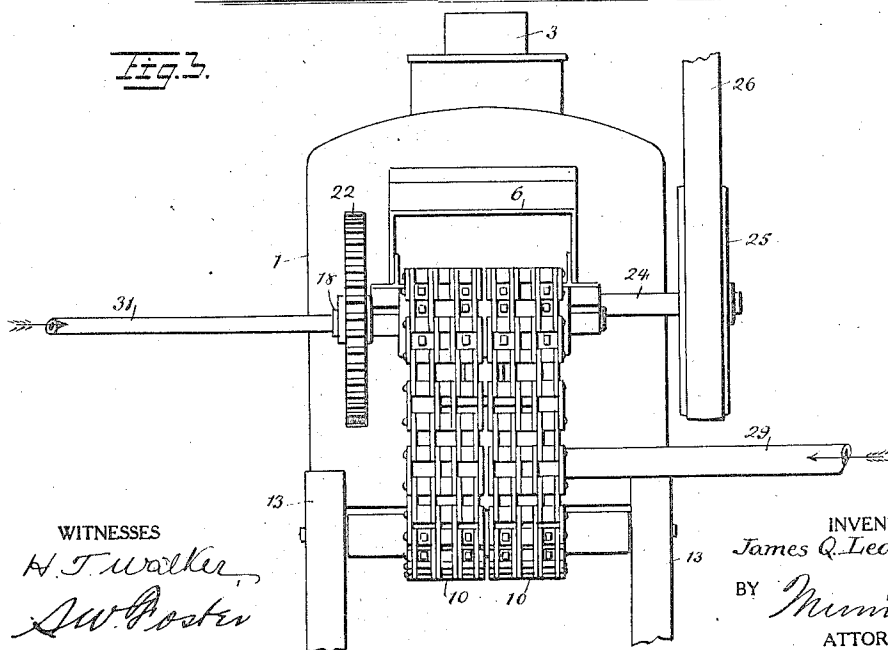


Fig. 3.



WITNESSES

H. T. Walker

Sw. Foster

INVENTOR

INVENTOR
James Q. Leavitt

BY

Merritt
ATTORNEYS

ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES QUINCY LEAVITT, OF OGDEN, UTAH.

PEELER.

Application filed October 6, 1925. Serial No. 60,852.

The invention relates to peelers and more particularly to an apparatus for removing by heat or direct contact of flame the outer skin of fruits, vegetables and the like, and while I shall hereinafter refer to the articles as tomatoes in order to avoid constant repetition it is to be distinctly understood that I desire to cover the apparatus for any use to which it can be put.

An object of the invention is to provide a furnace open at both ends for the passage therethrough of an endless chain, grate, draper or other form of conveyor and on which the tomatoes rest and are subjected to the direct contact of flame or heat throughout their outer surface without the necessity of turning the tomatoes in their passage through the furnace.

The primary object therefore of the invention is to pass the tomatoes through the furnace while they remain stationary on the conveyor and so subject their outer surface to heat that the skin will be burned or charred herefrom.

It is then my purpose to deposit said tomatoes in a washer of standard type in which the friction of the tomatoes rubbing together and against the outer drum and spiral of the washer together with the continual spray of water will completely remove the charred or burned skins.

I have not illustrated nor shall I describe in detail this washer more than to say that I may employ any washer which will give the desired results as my invention relates more specifically to the manner of burning or charring the skins from the tomatoes and utilize standard equipment for the other steps in the complete process of removing the skins.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a view, mainly in side elevation but partly in longitudinal section, illustrating my improved apparatus;

Figure 2 is a view in transverse section on the line 2—2 of Figure 1;

Figure 3 is a view in end elevation of Figure 1.

1 represents my improved furnace, which may be made of any size and shape desired

and which is lined with fire brick, a fire clay or other fireproof lining 2, and has an outlet stack for the escape of products of combustion.

This furnace 1 is provided at opposite sides or ends with aligned openings 4 and 5, and the furnace has chutes 6 and 7 secured to its outer wall and communicating with the openings 4 and 5, respectively.

A fire clay baffle 8 is located horizontally in the furnace and is preferably supported on pillars 9. This baffle plate has its upper face in a plane below the bottom walls of the openings 4 and 5 so that the upper run of a conveyor 10 supported on the bottom wall of the opening 4 will be spaced slightly above the upper face of baffle 8 for a purpose which will more fully hereinafter appear.

The space between the baffle plate 8 and the lower portion of the furnace 1 constitutes a combustion chamber 11 into which flame is directed from a burner 12 which projects into the furnace through the wall thereof, as clearly shown in Figure 1.

The furnace 1 is supported on a frame 13, the latter being supported by wheels 14 so as to permit the furnace to be conveniently moved as may be desired.

The conveyor 10, above referred to, which may constitute an endless chain or draper, as it is generally known in the trade, is mounted on sprocket wheels 15 and 16, respectively, which latter are secured to shafts 17 and 18, respectively, and said shafts are mounted in suitable bearing brackets 19 depending from platforms 20 and 21, respectively.

These platforms 20 and 21 project in opposite directions from the furnace, are secured to the furnace and constitute the bottoms of the chutes 6 and 7 and extend beyond said chutes the desired distance to form platforms one of which may constitute a receiving platform and the other a discharge platform for the tomatoes or other articles. It is to be understood that the upper run of the conveyor 10 moves over these platforms 21 through the chutes 6 and 7 and through the furnace 1, as clearly indicated in Figure 1.

One of these shafts 17 or 18 may constitute a drive shaft and has a gear wheel 22 thereon meshing with a pinion 23 on a shaft 24 supported by platform 21, and on this shaft 24 a pulley 25 may be secured and receive motion from a belt 26 from any suit-

able source of power. It is of course to be understood that the invention is not limited to any particular driving means, but the above described means constitutes one which may be conveniently employed.

27 represents a blower which may have a stationary mounting 28 and which communicates by means of a pipe 29 with the burner 12. A fuel oil supply tank 30 may feed
10 by gravity through a pipe 31 to the burner 12, and this tank, pipes 31, 29, burner 12 and blower 27 may constitute a single unit and from which the furnace may be moved as may be desired.

15 The furnace 1 is formed with a receiving nozzle 32 into which the burner 12 may be projected or removed therefrom at will.

I would call particular attention to the construction of the baffle plate 8 and its relation to the conveyor 10, as illustrated most clearly in Figures 1 and 2. This baffle plate 8 connects all walls of the furnace but is provided at the sides of the furnace with openings 33, said openings extending from the
25 wall of the furnace, and said openings having inclined inner walls 34 which serve to permit and direct the flame from under the baffle plate to a position under the conveyor 10 so as to direct a portion of said flame
30 at least through the links of the conveyor into direct contact with the under portion of the tomatoes or fruit thereon.

It will also be noticed that the shape of the interior of the furnace at its upper portion
35 is somewhat curved or dome-shaped as indicated at 35, so that the flame which passes upwardly is deflected downwardly upon the upper side portions of the tomatoes or other articles. Hence the flames are directed into
40 contact with the entire outer surfaces of the tomatoes as they are passed through the furnace, and the skins are thereby burned or charred so that when they are passed through the washer, such as above set forth,
45 they will be completely removed.

It is this idea of moving the tomatoes or other articles through the furnace and subjecting the entire outer surface of the tomatoes or other article to the direct flame or
50 heat without turning or moving the tomatoes on the conveyor which constitutes the broad idea of my invention, and I do not wish to be limited to specific details of construction but desire to cover this idea
55 broadly.

In operation the tomatoes are delivered onto the conveyor on platform 21 and are carried by the conveyor through the furnace where they receive the burning action above
60 described, and are then moved out of the furnace and deposited in the washer as above explained.

Various slight changes and alterations might be made in the general form of the parts described without departing from the invention, and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. An apparatus of the character described, including a furnace having openings in its opposite walls, platforms projecting from said openings, sprocket wheels supported by the platforms, a wheeled frame supporting the furnace, a stationary burner adapted to enter an opening in the furnace, an endless chain conveyor located on said sprocket wheels and platforms and passing
7 through the furnace, sprocket wheels on the frame receiving the lower run of the conveyor, and a perforated baffle plate in the furnace between the run of the conveyor and the discharge end of the burner.

2. An apparatus of the character described, including a furnace having openings in its opposite walls, platforms projecting from said openings, sprocket wheels supported by the platforms, a wheeled frame supporting the furnace, a stationary burner adapted to enter an opening in the furnace, an endless chain conveyor located on said sprocket wheels and platforms and passing
8 through the furnace, sprocket wheels on the frame receiving the lower run of the conveyor, a perforated baffle plate in the furnace between the run of the conveyor and the discharge end of the burner, said furnace having a dome-like upper portion whereby the heat or flame is deflected downwardly toward the conveyor, and an exhaust stack at the top of the furnace.

3. An apparatus of the character described, including a furnace having openings in its opposite walls, platforms projecting from said openings, sprocket wheels supported by the platforms, a wheeled frame supporting the furnace, a stationary burner adapted to enter an opening in the furnace, an endless chain conveyor located on said sprocket wheels and platforms and passing
9 through the furnace, sprocket wheels on the frame receiving the lower run of the conveyor, a perforated baffle plate in the furnace between the run of the conveyor and the discharge end of the burner, a fixed blower, a fixed fuel supply tank communicating with the burner, and an inlet nozzle on the furnace receiving the burner, said furnace adapted to be moved on its supporting frame toward and away from the burner.

JAMES QUINCY LEAVITT.