

(No Model.)

H. J. WILLIAMS.

DEVICE FOR FEEDING ORANGES OR SIMILAR FRUIT.

No. 550,010.

Patented Nov. 19, 1895.

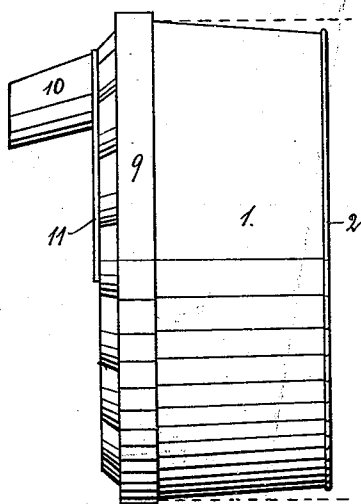


Fig. 1.

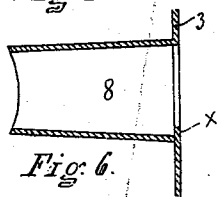


Fig. 6.

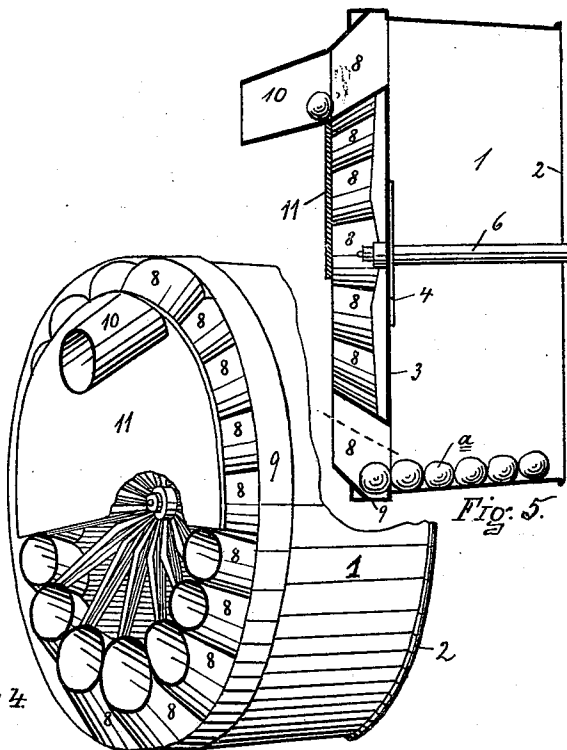


Fig. 4.

Fig. 5.

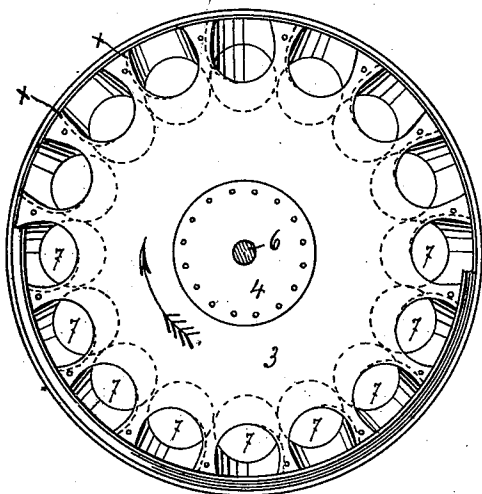


Fig. 2.

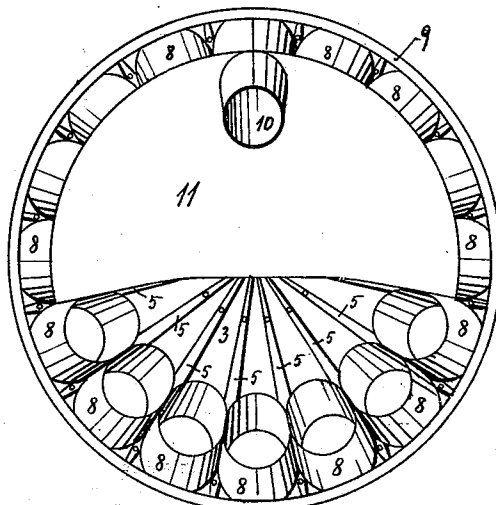


Fig. 3.

WITNESSES.

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HUMPHREY J. WILLIAMS, OF NEW YORK MILLS, NEW YORK, ASSIGNOR OF
ONE-HALF TO SAMUEL CAMPBELL WARNER, OF SAME PLACE.

DEVICE FOR FEEDING ORANGES OR SIMILAR FRUIT.

SPECIFICATION forming part of Letters Patent No. 550,010, dated November 19, 1895.

Application filed September 1, 1890. Serial No. 363,675. (No model.)

To all whom it may concern:

Be it known that I, HUMPHREY J. WILLIAMS, of New York Mills, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Devices for Feeding Oranges or Similar Fruit; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form part of this specification.

My invention relates to a device for feeding oranges or similar fruits at regular intervals, and is adapted to be used in connection with a wrapping or brushing machine or other similar mechanism.

In the drawings which accompany and form a part of this specification, and in which similar letters and figures of reference refer to like parts in the several views, Figure 1 shows a side elevation of my device. Fig. 2 is an end view as seen from the right of Fig. 1, a portion, however, of the shell portion being removed, as clearly seen in the figure. Fig. 3 shows the opposite end view of the device. Fig. 4 shows the device in perspective, a portion being broken out to reduce the size of the figure. Fig. 5 shows a vertical central section of the device. Fig. 6 is a detailed view showing a section of a tubular pocket, the section being taken on a plane with line *y* of Fig. 5, the edge of which is parallel with the diameter of the shell of the device.

Referring more specifically to the reference-numerals marked on the drawings, 1 indicates a conical-shaped shell or carrier having one side open at 2 and the other closed by a diaphragm or end plate 3. To the diaphragm is secured on the inside a plate 4 and on the outside radiating ribs 5 5 to give strength and solidity to the structure, and the whole is mounted on a shaft or gudgeon 6.

The diaphragm or plate 3 is provided with a series of openings around its circumference, (indicated by 7 7 7, &c.,) and on the outer side of the plate 3 are secured (one for each opening) a number of short tubular pockets 8, which surround the opening and are flush

with one side of the opening and are secured at a point a little removed from the other side of the opening 7, as indicated at *x* in Fig. 6 and shown by the dotted lines in Fig. 2, also at *x*. The pockets 8 all incline inwardly toward the shaft or axial line from their point of attachment to the diaphragm or end plate. At the outside of the diaphragm or end plate 3 the shell is provided with a circumferential enlargement 9, which answers the purpose of deepening the pockets formed adjacent to the plate of the shell for purposes hereinafter set forth. At 10 is indicated the delivery-chute of this feeding device, and 11 is a retaining-wall to which it is affixed, and in close proximity to which retaining wall or surface the open ends of the tubular pockets on the upper half of the device run. The open side 2 of the device is to run against an opening in the side of a bin, preferably having an inclined bottom, inclining toward the device, so that the fruit contained in the bin will move by its own gravity into the open end of the device, as indicated at *a* in Fig. 5.

The device in operation is slowly rotated in the direction indicated by the arrow in Fig. 2. As the openings 7 are at the bottom, as the device revolves the fruit rolls into the pockets, one article in each pocket, and as the device continues to rotate they are cut off or separated from the remaining fruit by the edge (shown at *x*) of the diaphragm or plate 3 and retained in the pocket and thus carried by the carrier upward toward the delivery-chute 10. As they pass above the horizontal plane through the axis of the device, they roll to the outer end of the tubular pocket 8 and are retained therein by wall or surface 11, the fruit rolling in contact with wall 11 until it reaches the top of the machine, and when the tubular pocket 8 containing the fruit registers with the opening in the wall 11 at which the chute 10 is provided the fruit rolls out of the tube or pocket 8 and is delivered from the chute 10.

Each pocket as it travels from its lowest position to its highest position carries an article of fruit as long as they are fed to the machine, and that without injury or bruising the fruit in any wise.

The deeper portion 9 of the device deepens

the pocket just outside of the diaphragm or end plate, thus very readily retaining a single article of fruit in each pocket as it starts from its lower position to travel upward.

5 It is evident that the shell portion 1 of the device might be made cylindrical instead of conical, as shown in dotted lines in Fig. 1, and the whole device mounted on an inclined shaft or gudgeon and accomplish substantially the same result; but I prefer the construction described; and other variations in and from the construction described may be made without departing from the equivalents of my construction.

15 What I claim as new, and desire to secure by Letters Patent, is—

1. The combination in a feeding device of a circular shell mounted to be rotated about a substantially horizontal axis, a plate having 20 openings around its circumference secured to and closing one end of the shell, tubular elevator pockets secured at one end to the plate on the outer side and surrounding the openings therein and inclined inwardly toward the axial line of the shell and the wall or surface, 25 in close proximity to which the outer ends of the pockets move, substantially as set forth.

2. The combination in a feeding device having a circular shell adapted to be rotated, a 30 plate closing one end of the shell having openings around its circumference, inwardly inclined tubular pockets secured to the plate surrounding the openings and the circumfer-

ential enlargement outside of the diaphragm plate whereby the pockets are deepened, substantially as set forth. 35

3. The combination in a feeding device of a circular shell, means for rotating the circular shell on its horizontal axis, a plate secured in and closing one end of the shell and having 40 openings around its circumference, inwardly inclined tubular elevator pockets secured to the outer side of the plate surrounding the openings, substantially as set forth.

4. The combination in a feeding device of a 45 circular shell, a diaphragm plate closing one end of the shell having a series of openings around its circumference, the inwardly inclined tubular pockets secured on the outside of the diaphragm plate surrounding the open- 50 ings therein and having a portion of the plate projecting between the point where the tube engages the plate and the edge of the opening in the plate, substantially as set forth.

5. The combination in a feeding device of a 55 circular shell, inclining tubular pockets secured around the circumference of the shell and the projecting edge at the end of the pocket adjacent to the shell, substantially as set forth. 60

In witness whereof I have affixed my signature in presence of two witnesses.

HUMPHREY J. WILLIAMS.

Witnesses:

S. CAMPBELL WARNER,
LAWRENCE BLACK.