(No Model.) 3 Sheets—Sheet 1.

H. LEARNED.

ORANGE CLEANING MACHINE.

No. 503,210. Patented Aug. 15, 1893.

Fig. 1

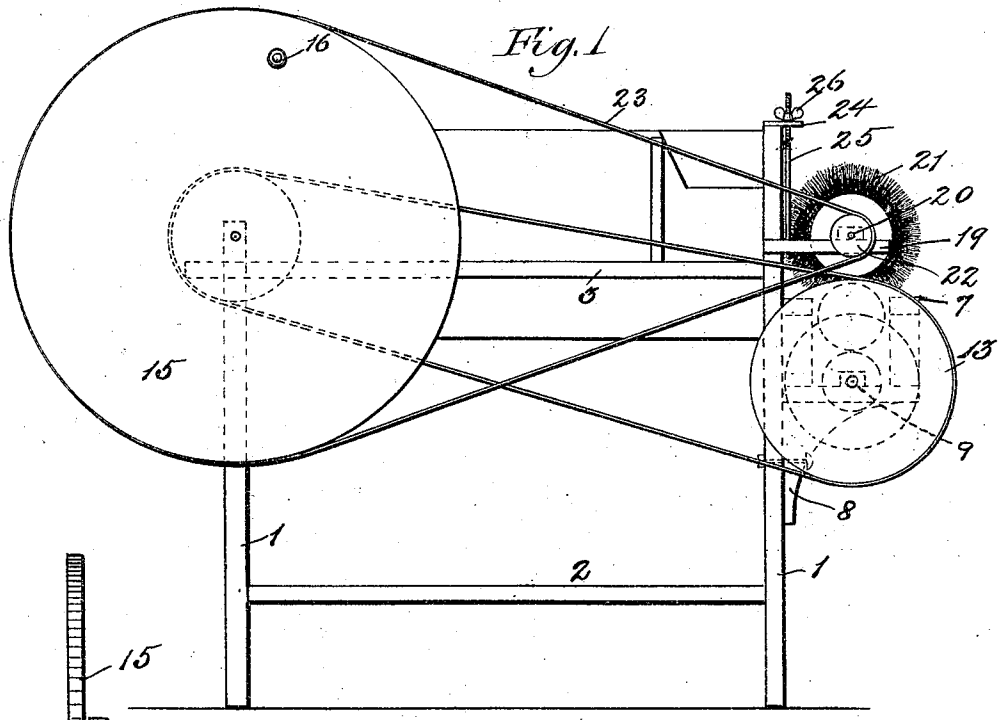
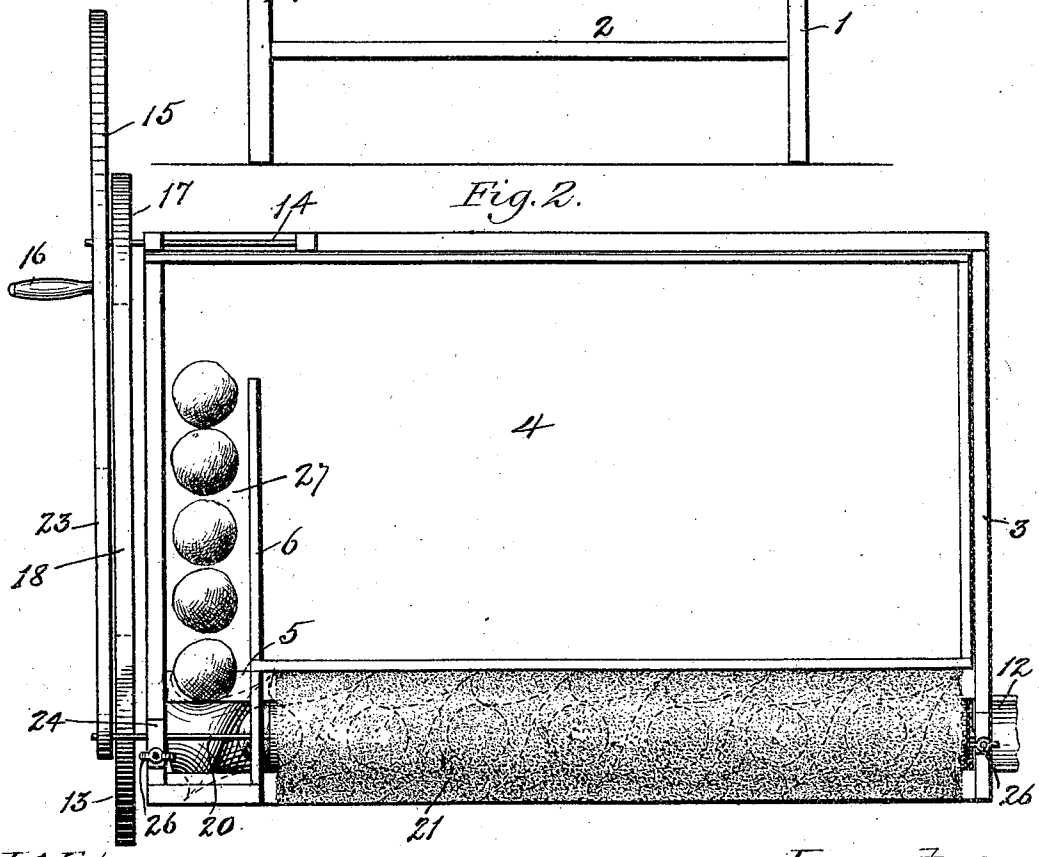


Fig. 2.



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(No Model.) 3 Sheets—Sheet 2.

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Fig. 3.

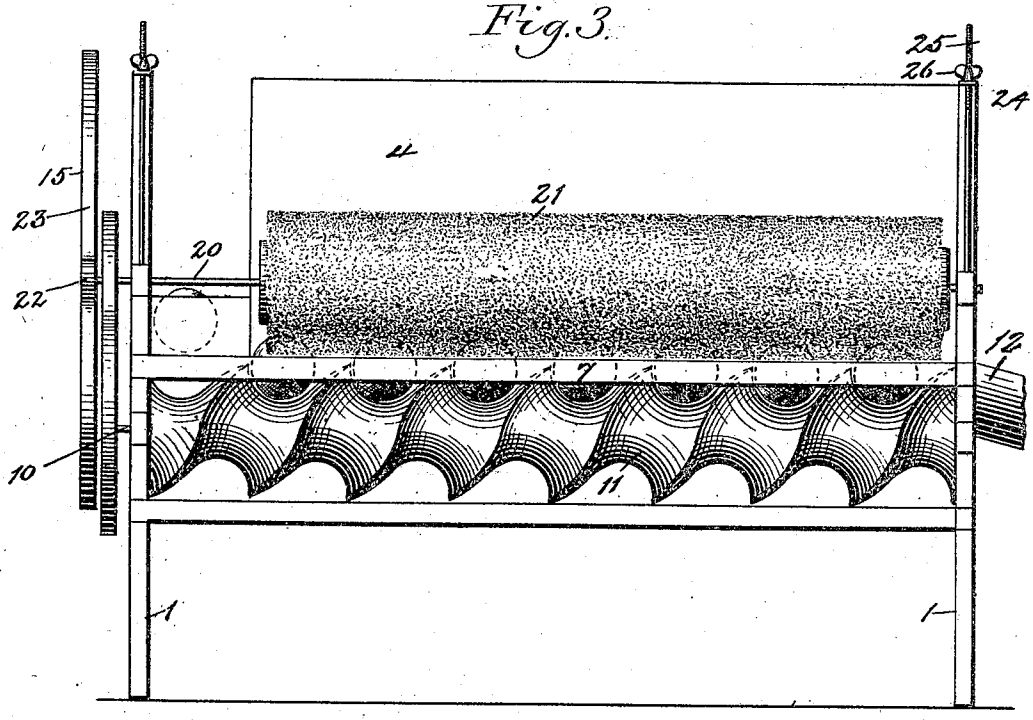
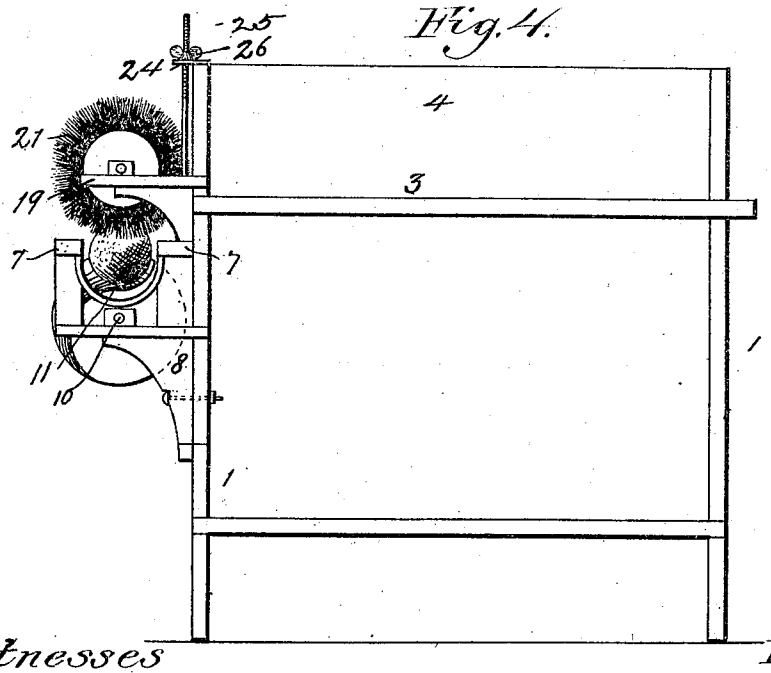


Fig. 4.



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3 Sheets—Sheet 3.

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ORANGE CLEANING MACHINE.

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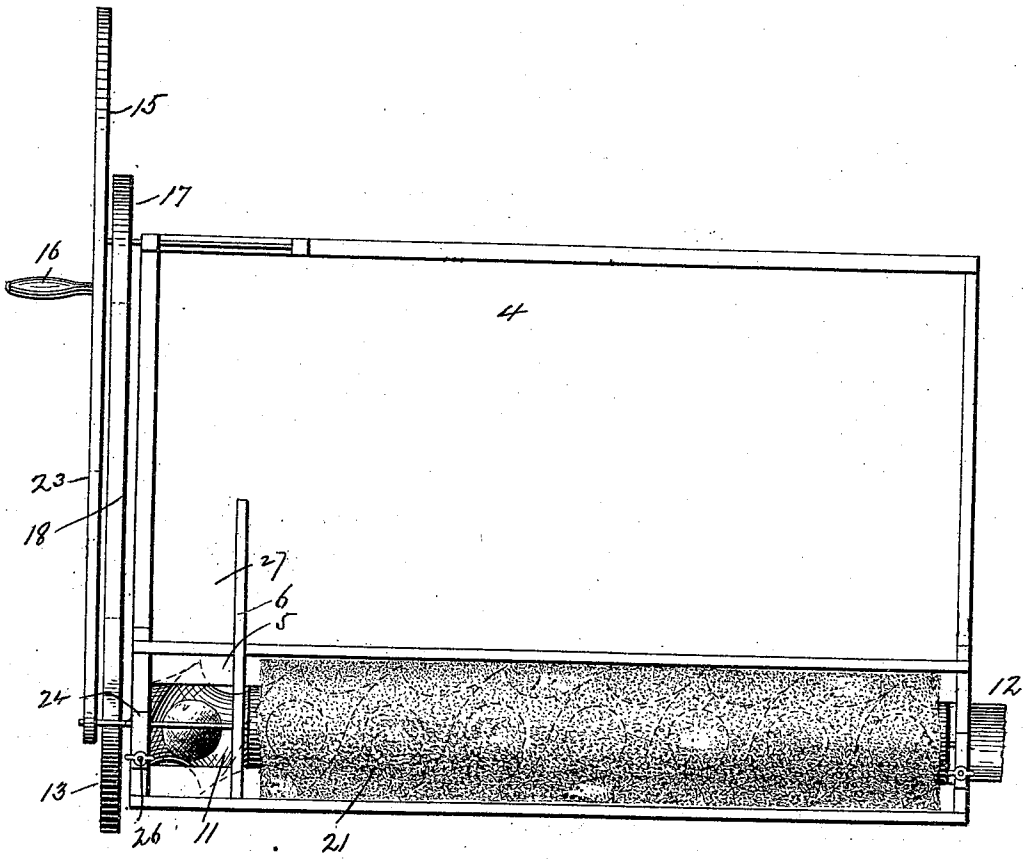
Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY LEARNED, OF POMONA, FLORIDA.

ORANGE-CLEANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 503,210, dated August 15, 1893.

Application filed October 23, 1890. Serial No. 369,138. (No model.)

To all whom it may concern:

Be it known that I, HENRY LEARNED, a citizen of the United States, residing at Pomona, Putnam county, State of Florida, have invented a new and useful Orange-Cleaning Machine, of which the following is a specification.

My invention relates to that class of machines adapted for cleaning fruit, and more particularly is it intended for cleaning oranges.

The objects in view are to produce a machine of simple construction that will be readily operated and to which oranges may be successively fed, and during their passage through the machine all parts of their surfaces will be subjected to the action of a brush.

With these and other objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a side elevation of an orange cleaning machine embodying my invention. Fig. 2 is a plan view. Fig. 3 is a front elevation. Fig. 4 is a side elevation opposite to that shown in Fig. 1. Fig. 5 is a modified construction.

Like numerals of reference indicate like parts in all the figures of the drawings.

The framework of the machine comprises the four standards 1, which are connected by lower rungs 2 and upper side bars 3. Upon the frame thus constructed there is located a table or hopper 4, which is provided at one corner with an opening 5 from which leads a partition 6. In front of the hopper 4 and below the same a longitudinal trough is formed, the same consisting in the present instance of a pair of parallel bars 7, which are supported upon brackets 8 which extend from the standards 1, and are provided below and between the sides of the trough with bearings 9. Journaled in these bearings 9 is a shaft 10 and within the trough upon this shaft a screw-conveyer 11 is mounted, the distance between the threads approximating the diameter of an orange. At one end of the trough a discharge spout or chute 12 is located. The shaft 10 is extended beyond its bearing at one end, and the same is provided with a pulley 13. At the rear side of the machine a longitudinal shaft 14 is journaled, and it has mounted thereon a large drive-wheel 15 provided with a crank 16 for operating the same and a small pulley 17, the latter being connected to the pulley 13 through the medium of a belt 18. In brackets 19 located above the trough 7 a shaft 20 is journaled, and the same carries a brush 21 and at one end a small pulley 22, which is connected by a belt 23 with the drive pulley or wheel 15. Perforated ears 24 extend from the upper ends of the standards 1 over the brackets 19 and through the same depend rods 25, whose lower ends are secured to the brackets and whose upper ends are provided with a thumb-nut 26.

This completes the construction, and the operation of the device is as follows:—The fruit is poured into the hopper 4 and the oranges are successively introduced into the feed-way 27 of the hopper, which as shown in Fig. 2, terminates directly over one end of the feed-screw and trough. The oranges drop upon the screw, and the latter being set in motion carries them from one end of the trough to the other, said oranges being revolved continuously and operated upon by the brush, which is rapidly rotated thereover until finally they are discharged through the discharge spout 12 into any receptacle placed for their reception. As shown in Fig. 5 the trough may be water-tight, and the screw located therein so that the oranges are not only brushed and cleaned but are washed at the same time. This is not necessary with all oranges but is with some; hence I do not limit my invention to such details of construction that may be readily varied without departing from the spirit of the invention or sacrificing any of the advantages thereof.

From the foregoing description in connection with the accompanying drawings it will be seen that I have provided a machine adapted especially for cleaning oranges, and the same is so constructed that the oranges will be successively fed to the machine out of contact with each other, whereby their rolling will not be impeded by their proximity to each other, and that all parts of the orange will be subjected to the action of the brush; and, furthermore, that the invention is of cheap and simple construction and may be readily operated.

Having described my invention, what I claim is—

1. In an orange-cleaning machine, the combination with a feed-way, of a trough, a feed-screw arranged in the trough, a brush arranged above the screw, and means for rotating said screw, substantially as specified.

2. In an orange cleaning machine, the combination with a feed-way, of a trough arranged in front of the same and communicating therewith, a feed-screw rotatably mounted in the trough, means for revolving the screw, a superimposed rotary brush, and means for revolving the brush, substantially as specified.

3. In an orange cleaning machine, the combination with a feed-way, of a trough arranged in front of the same and communicating therewith, a feed-screw rotatably mounted in the trough, means for revolving the screw, a rotary brush arranged above the screw, and means for rotating and adjusting the same relative to the screw, substantially as specified.

4. In an orange cleaning machine, the combination with a framework, a hopper having a discharge opening at one corner thereof, a trough arranged in advance of the hopper and communicating with the opening, a feed-screw journaled in the trough, a spout at one end of the screw, the shaft of the screw being extended beyond one of its bearings, a pulley arranged on said end, a rear main shaft, a driving pulley arranged thereon, a smaller pulley arranged thereon, a belt between the latter and the pulley of the screw carrying shaft, a superimposed brush-shaft, a rotary brush arranged thereon, a small pulley arranged upon the brush-shaft, and a belt between the small pulley and the driving-pulley, substantially as specified.

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