

(No Model.)

H. A. TURNER, Jr.
APPARATUS FOR TREATING DRIED FRUITS.

No. 571,100.

Patented Nov. 10, 1896.

Fig. 1.

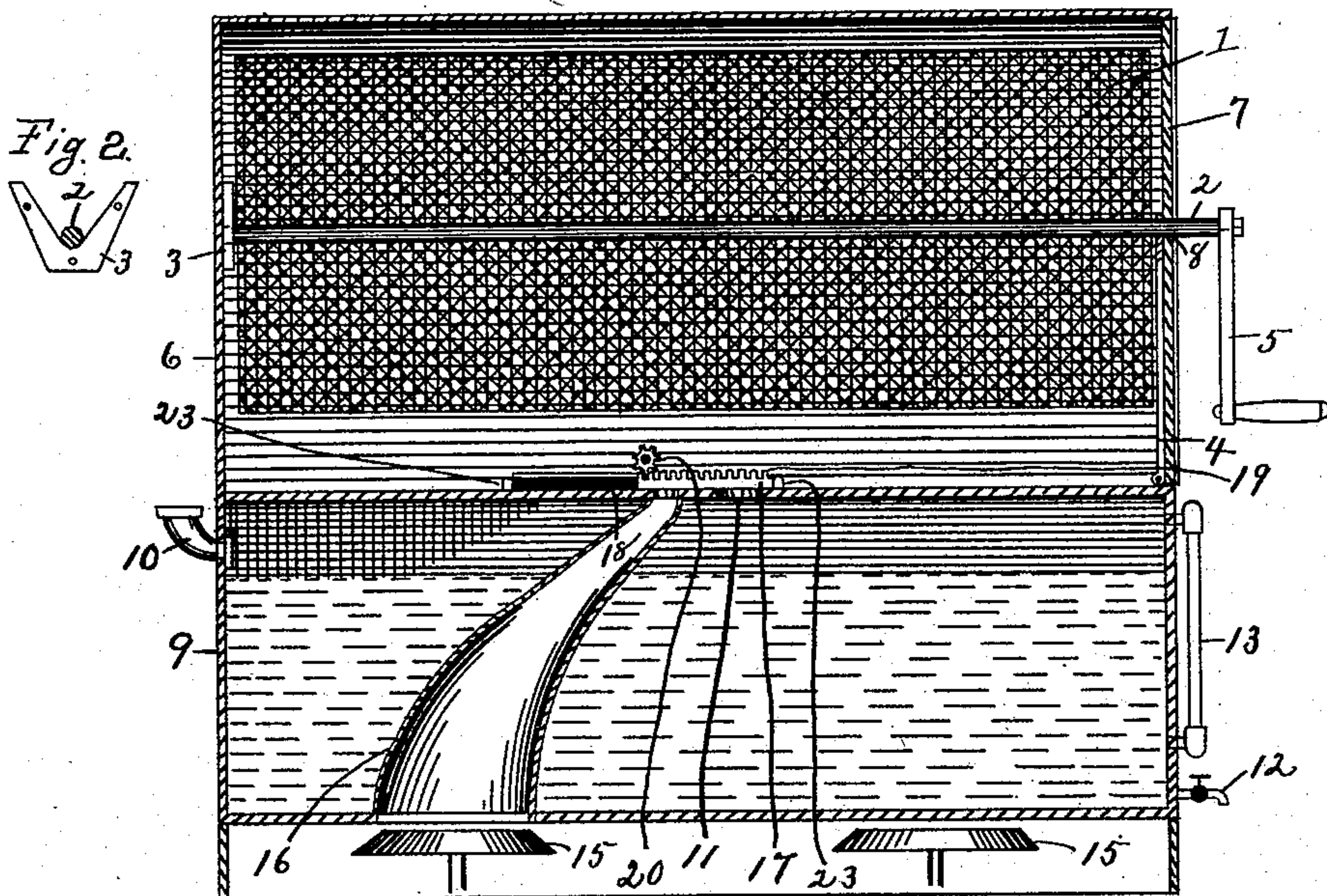


Fig. 3.

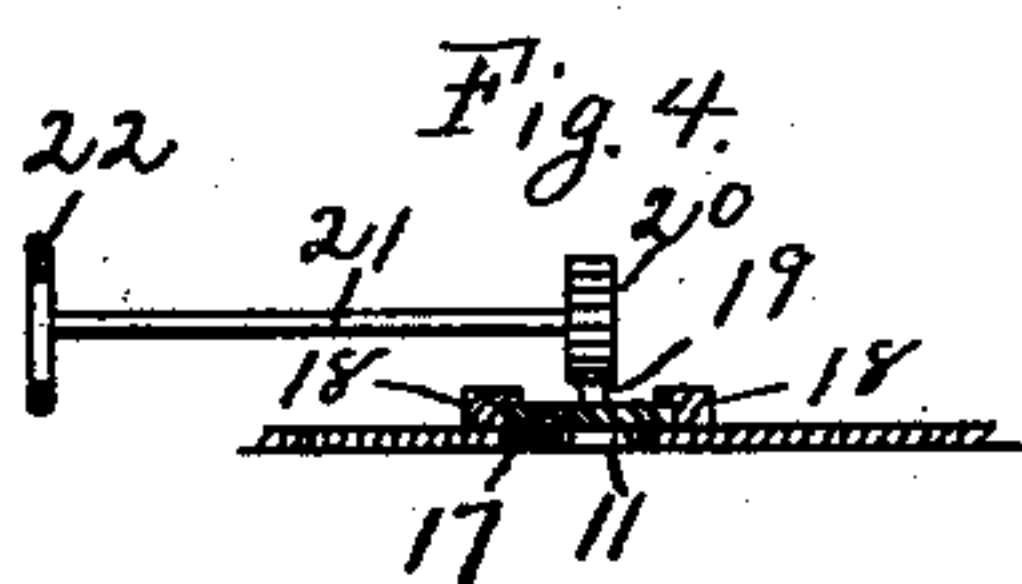
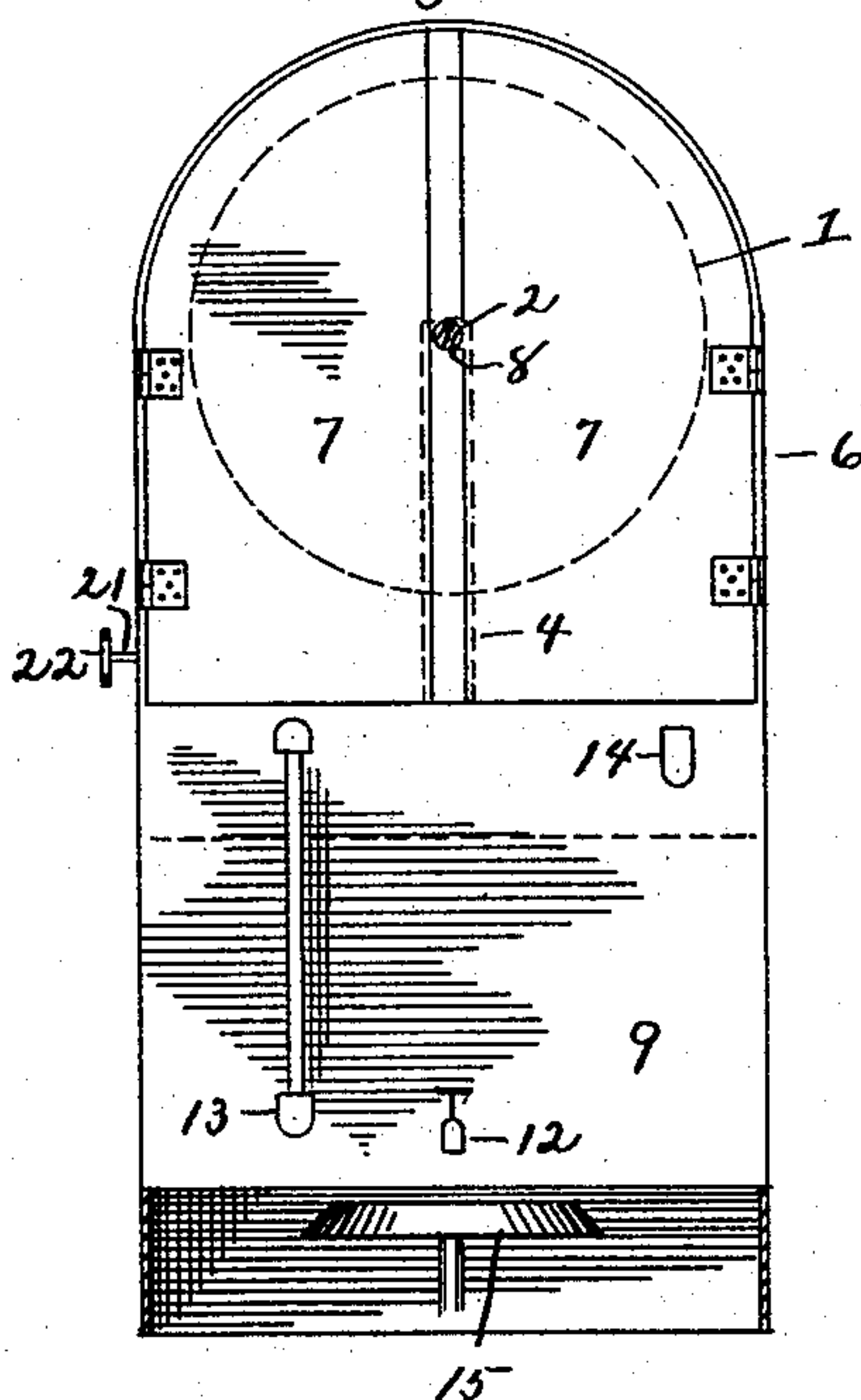
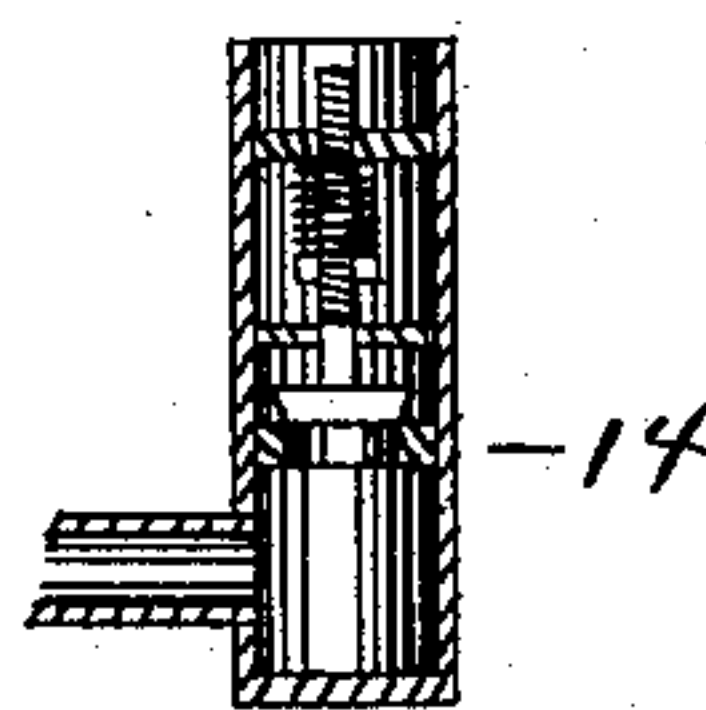


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

HOWARD A. TURNER, JR., OF URBANA, OHIO.

APPARATUS FOR TREATING DRIED FRUITS.

SPECIFICATION forming part of Letters Patent No. 571,100, dated November 10, 1896.

Application filed December 10, 1895. Serial No. 571,673. (No model.)

To all whom it may concern:

Be it known that I, HOWARD A. TURNER, Jr., a citizen of the United States, residing at Urbana, in the county of Champaign and State of Ohio, have invented a certain new, useful, and valuable Improvement in Apparatus for Treating Dried Fruits, &c., of which the following is a full, clear, and exact description.

My invention has relation to an apparatus for treating dried fruits, &c.; and it consists in the novel construction and arrangement of its parts, as hereinafter described.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of the apparatus. Fig. 3 is a front end view of the apparatus. Figs. 2, 4, and 5 are detail views that will be explained hereinafter.

The apparatus consists of a perforated receptacle 1, adapted to hold the fruit. Said receptacle may be made of wire-netting, or it may be made of a perforated plate formed into a cylinder. The receptacle is cylindrical in shape and is provided in its center with the horizontal shaft 2. The rear end of the shaft 2 is journaled in a bearing 3, and the front end of the said shaft is journaled in the bearing 4. The outer end of the shaft 2 is provided with the crank-arm 5. The inclosure 6 surrounds the receptacle 1, but the receptacle may be readily removed from the inclosure 6. The bearing 3 is fixed against the rear wall of the inclosure 6, while the bearing 4 consists of a strip of metal hinged at its lower end to the bottom of the inclosure 6 and being provided at its upper end with a suitable socket adapted to receive the shaft 2. When the receptacle 1 is to be removed from the inclosure 6, the bearing 4 can be swung to the front out of the way.

The front part of the inclosure 6 is provided with the hinged doors 7 7, which overlap each other along the middle of the inclosure, and each door is provided with a notch 8, which passes around the shaft 2 when the doors are closed.

A water-tank 9 is located beneath the inclosure 6. The perforation 10 in the bottom of the inclosure 6 affords a passage for steam from the tank 9 into the inclosure 6. The

tank is provided with a water-inlet 10, a draw-off cock 12, a water-gage 13, and a safety pop-valve 14. The water in the tank 9 is heated by means of the burners or heaters 15 15, located under the tank. A hot-air passage 16 passes through the water and leads from the bottom of the tank into the inclosure 6.

A sliding plate 17 is located between two guides 18 18 in the bottom of the inclosure 6. The plate 17 is provided on its top with a suitable rack 19. The gear-wheel 20 meshes with the said rack 19. The shaft 21 of the said gear-wheel extends through the side of the inclosure and is provided with the wheel 22, by means of which the gear-wheel 20 is turned.

The plate 17 is adapted to be passed back and forth over the perforation 11 and the outlet of the hot-air passage 16, and when over them is adapted to close them. The stops 23 prevent the plate 17 from passing beyond the ends of the guides 18 18.

Fig. 4 is a transverse sectional view of the sliding plate 17 and the guides 18 18 and the gear-wheel 20 and its attachments.

Fig. 5 is a sectional view of the pop-valve 14, used on the tank 9 to prevent the pressure of the steam from becoming too great on the tank. Any other style of valve may be used, if desired.

The fruit is placed in the receptacle 1 and the receptacle is revolved by means of the handle 5, and thus the fruit is kept in a constant state of agitation. If the fruit is hard and dry and it is desired to make it soft and refreshed, the plate 17 is passed back until it is beyond the perforation 11, and then the steam from the tank 9 will enter the inclosure 6 and will be mingled with the fruit and soften the same. Should there be any organic germ in the fruit, the plate 17 will be run back beyond the outlet of the hot-air passage 16. Thus the hot air will enter the inclosure 6 and will be mingled with the fruit, and this will kill whatever germ there is in the fruit, and at the same time the steam passing through the perforation 11 will moisten the fruit.

By subjecting the fruit to this process in this apparatus it will be freed of all organic

germ, and it will be greatly improved for commercial purposes.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus for treating dried fruits &c. the same consisting of a perforated receptacle adapted to hold the fruit, an inclosure incasing said receptacle, a heater located below the receptacle, a water-tank located above the heater, a conduit leading from the heater through the water-tank and having an outlet in the receptacle-inclosure, said conduit being surrounded by the water in the tank.

2. In an apparatus for treating dried fruits &c. the same consisting of a receptacle adapted to hold the fruit, a hot-air conduit and a steam-outlet located below the said receptacle; a valve adapted to close either or both said conduit or outlet, said valve consisting of a plate adapted to slide over the conduit or outlet, said plate having a rack, a

gear-wheel engaging said rack and adapted to operate the plate as it is turned.

3. An apparatus for treating dried fruits, &c. the same consisting of a perforated receptacle adapted to hold the fruit, an inclosure incasing said receptacle, a tank adapted to hold water, said tank having a steam-outlet leading into the receptacle-inclosure, a hot-air conduit passing through the water and having an outlet in the receptacle-inclosure, a valve common to both and adapted to close either or both outlets leading into the receptacle-inclosure, a heater adapted to heat the water in the tank and thereby generate steam, and to heat the air passing through the hot-air passage.

In testimony whereof I affix my signature in presence of two witnesses.

HOWARD A. TURNER, JR.

Witnesses:

SCOTT KENFIELD,
D. W. TODD.