

G. D. BURTON.

PROCESS OF MANUFACTURING ICE CREAM, SHERBET, &c.

APPLICATION FILED OCT. 9, 1906. RENEWED APR. 7, 1910.

976,780.

Patented Nov. 22, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

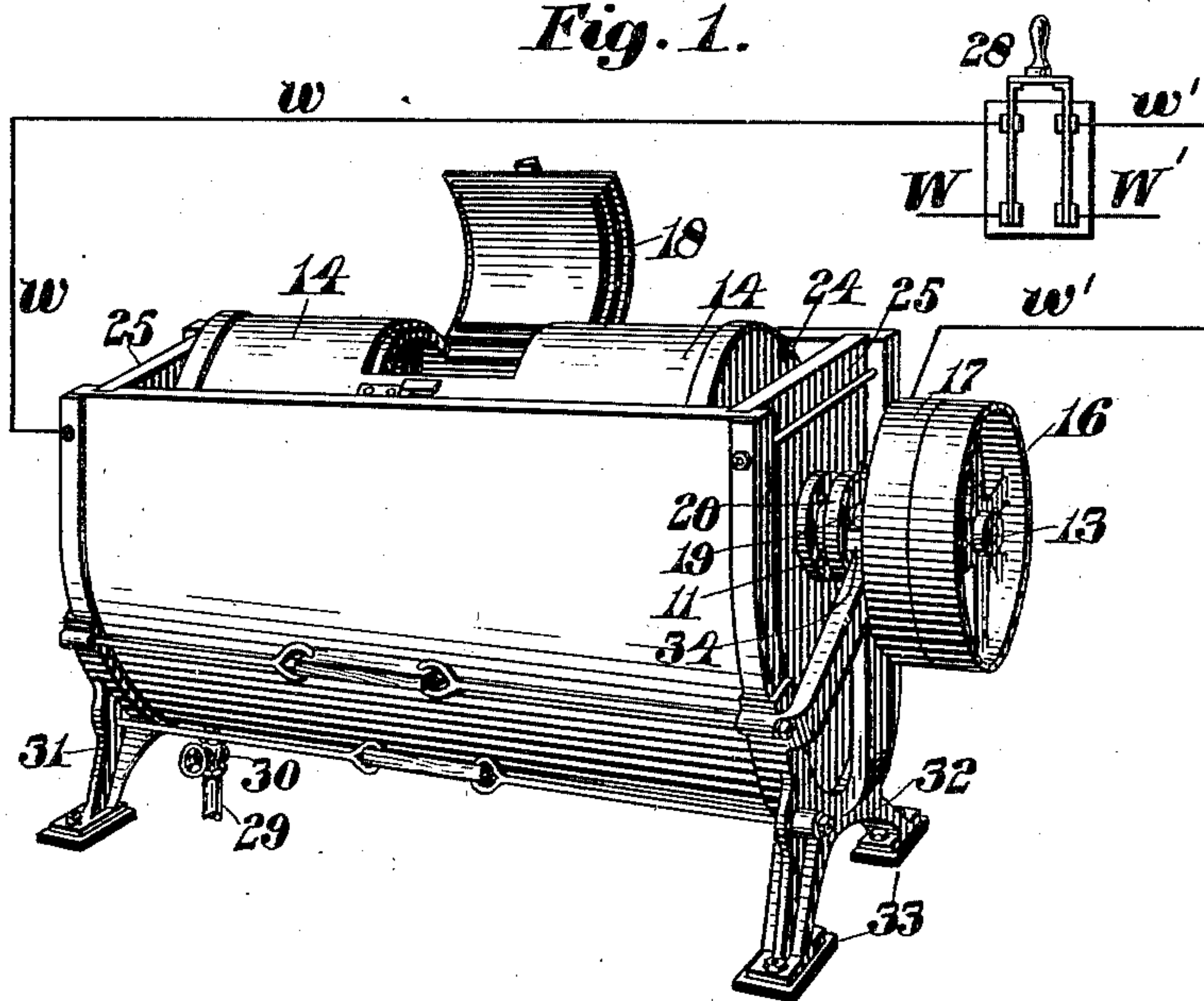
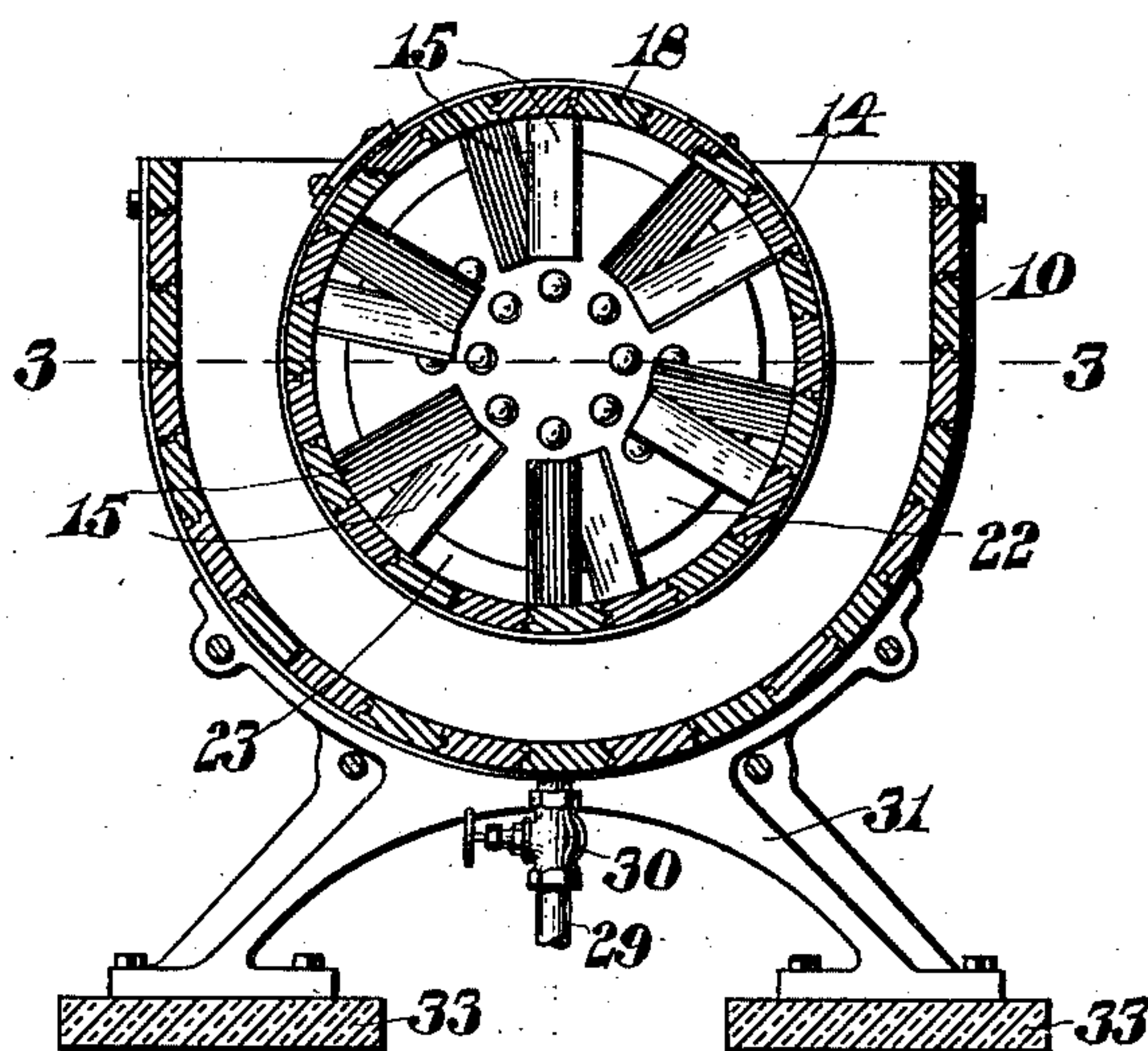


Fig. 2.



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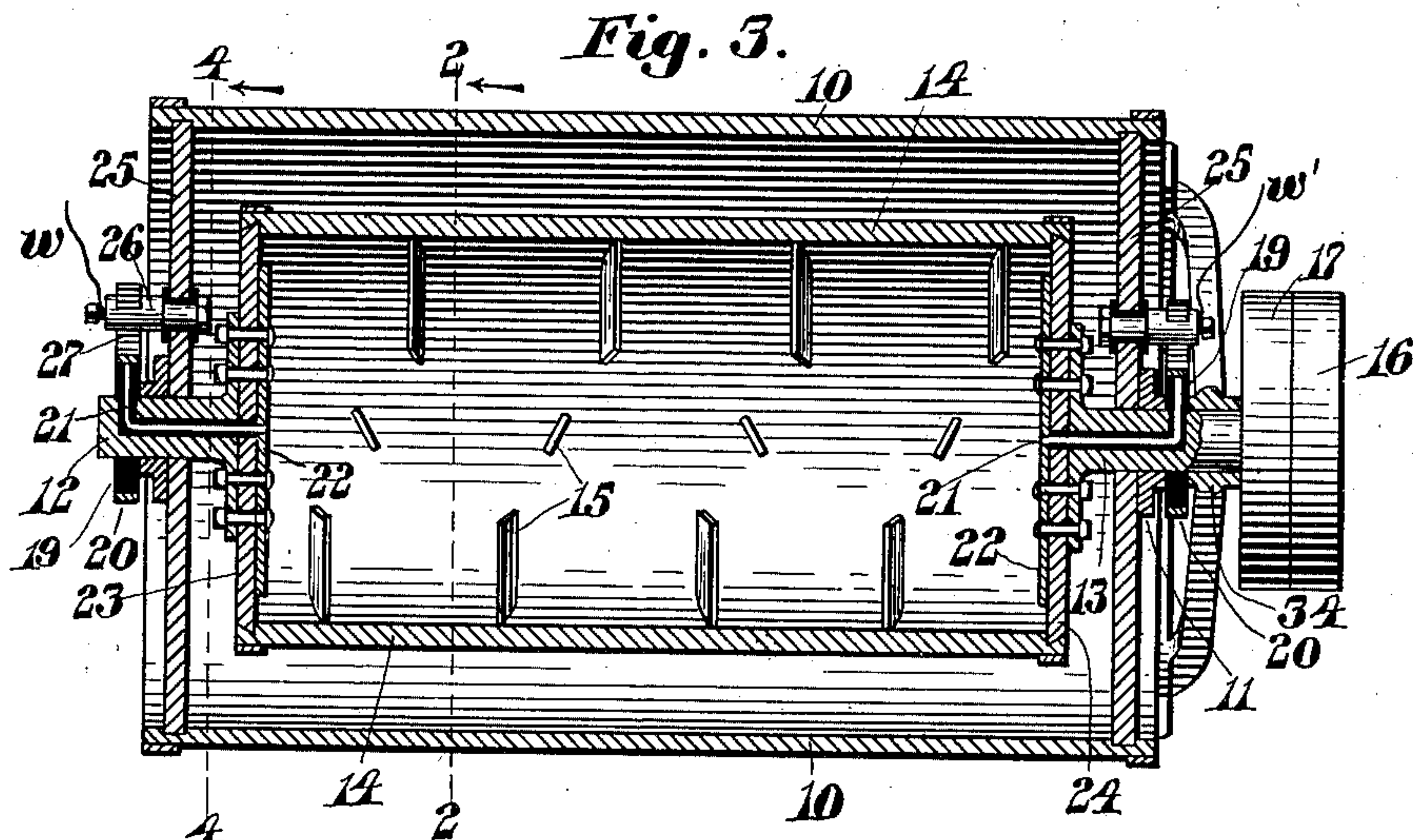
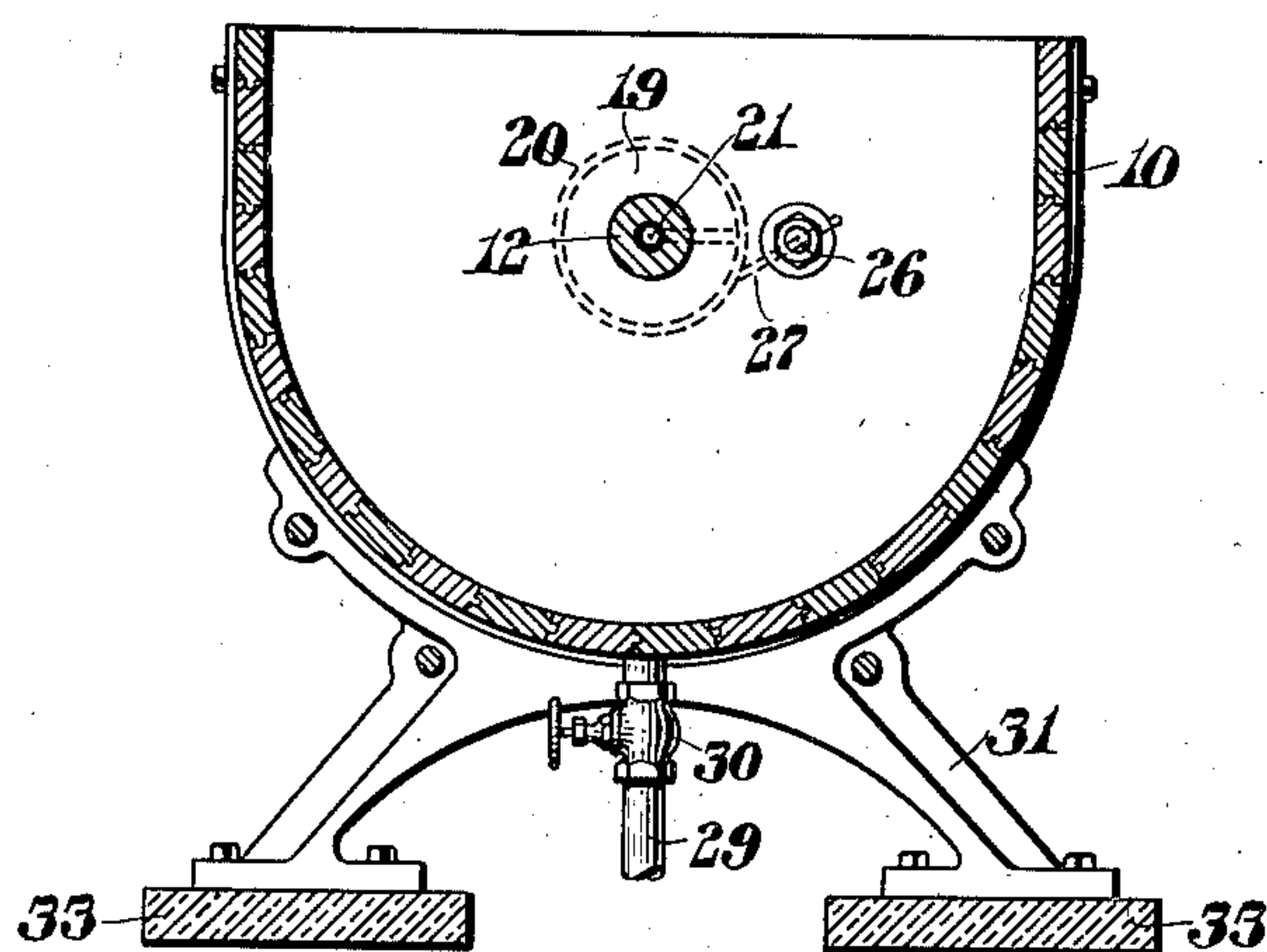


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE D. BURTON, OF BOSTON, MASSACHUSETTS.

PROCESS OF MANUFACTURING ICE-CREAM, SHERBET, &c.

976,780.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed October 9, 1906, Serial No. 338,123. Renewed April 7, 1910. Serial No. 554,042.

To all whom it may concern:

Be it known that I, GEORGE D. BURTON, a citizen of the United States of America, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in the Process of Manufacturing Ice-Cream, Sherbet, &c., of which the following is a specification.

The invention relates to processes of manufacturing ice cream, sherbet, etc., whereby the production of such articles of food may be greatly facilitated while at the same time a greatly improved product will be obtained, free from all impurities.

The invention consists in certain novel features and arrangement of parts in the machine whereby said novel process may be carried out.

Of the drawings: Figure 1 represents a perspective view of an apparatus embodying the features of this invention. Fig. 2 represents a vertical section of the same on line 2—2 on Fig. 3, looking in the direction of the arrow. Fig. 3 represents a horizontal section on line 3—3 on Fig. 2, and Fig. 4 represents a vertical section on line 4—4 on Fig. 3 looking in the direction of the arrow.

Similar characters designate like parts throughout the several figures of the drawings.

In the drawings, 10 represents a tank of any well-known construction, open at the top and provided with bearings 11 for the trunnions 12 and 13 secured to the revoluble receptacle 14, the interior of which is provided with a plurality of mixing blades 15 extending radially toward the axis of said receptacle. The trunnion 13 has mounted thereon a driving pulley 16 and a loose pulley 17. Motion may be imparted to the receptacle 14 through the medium of the fast pulley 16 to revolve the same at any desired speed.

The receptacle 14 is provided with a door 18 through which is inserted the ingredients from which the ice cream, sherbet, etc., is to be made. On each of the trunnions 12—13 is mounted an insulating disk 19 the outer periphery of which is provided with a copper ring 20 which is connected through the trunnions 12—13 by means of the connector 21 to the electrodes 22 secured to the inner face of the heads 23—24 of said revoluble receptacle 14. The heads 25 of

the tank 10 are each provided with a stud 26 insulated from said head and supporting a brush 27 contacting with the annular copper ring 20.

Electric conductors *w w'* connect the studs 26 in an electric circuit in which is a switch 28 of any well known construction, said switch communicating with the service wires *W W'*. The tank 10 is provided with an outlet 29 controlled by a valve 30. The tank 10 is supported upon frames 31—32 insulated from the floor by the plates 33 said frame 32 being provided with a bearing 34 for the trunnion 13.

A direct current of electricity is usually used of from seventy-five to five hundred volts more or less and varying in amperage from two to two hundred more or less, according to the size of the receptacle and the quantity of ice cream or other product to be manufactured, this current being obtained from any suitable source.

In the process of manufacturing ice cream, sherbet, and other substances by means of the apparatus described the ingredients from which said substances are to be made are inserted in the receptacle 14 through the opening closed by the door 18 and said door is then closed and securely fastened. The tank 10 is supplied with a suitable freezing compound such as ice and rock salt or other suitable material and the driving belt is shifted to the fast pulley to cause the receptacle 14 to be revolved at a high rate of speed. The switch 28 is then operated to connect the apparatus with an electrical supply and a current of electricity is thereby passed from one electrode 22 to the electrode at the opposite end of said receptacle, the electricity passing through the ingredients contained within the receptacle. Impurities, which when present might contaminate the cream and other ingredients, will in most cases, by the action of the electric current thereon, be rendered innocuous, while any germs or microbes which might possibly exist in said cream will be destroyed and further propagation prevented.

Ice cream, sherbet and other similar substances manufactured by this process are superior to similar products manufactured by the processes heretofore employed while the products obtained through this process are perfectly hygienic and free from all impurities.

It is believed that from the foregoing the

operation of the invention will be thoroughly understood.

Claims.

- 5 1. The process of manufacturing ice cream, sherbet, etc., which consists in placing the ingredients thereof in a receptacle revoluble in a tank containing a freezing compound, and subjecting said ingredients to the action of an electric current.
- 10 2. The process of manufacturing ice cream, sherbet, etc., which consists in placing the ingredients thereof in a receptacle provided with an electrode at each end, revolving said receptacle in a tank containing
- 15 a freezing compound, and passing an electric current through the ingredients by means of said electrodes.
- 20 3. The process of manufacturing ice cream, sherbet, etc., which consists in placing the ingredients thereof in a receptacle provided with an electrode at each end and

having a plurality of radially disposed mixing blades, revolving said receptacle in a tank containing a freezing compound, and passing an electric current through the ingredients by means of said electrodes. 25

4. The process of manufacturing ice cream, sherbet, etc., which consists in placing the ingredients thereof in a receptacle having electrodes and a plurality of radially 30 disposed mixing blades, revolving said receptacle in a tank containing a freezing compound, and passing an electric current through the ingredients by means of said electrodes. 35

Signed by me at Boston, Massachusetts,
this 25th day of January, 1906.

GEO. D. BURTON.

Witnesses:

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EDNA C. CLEVELAND.