

J. B. LAPLACE.
DISH WASHING MACHINE.
APPLICATION FILED JUNE 28, 1911.

1,031,186.

Patented July 2, 1912.

4 SHEETS—SHEET 1.

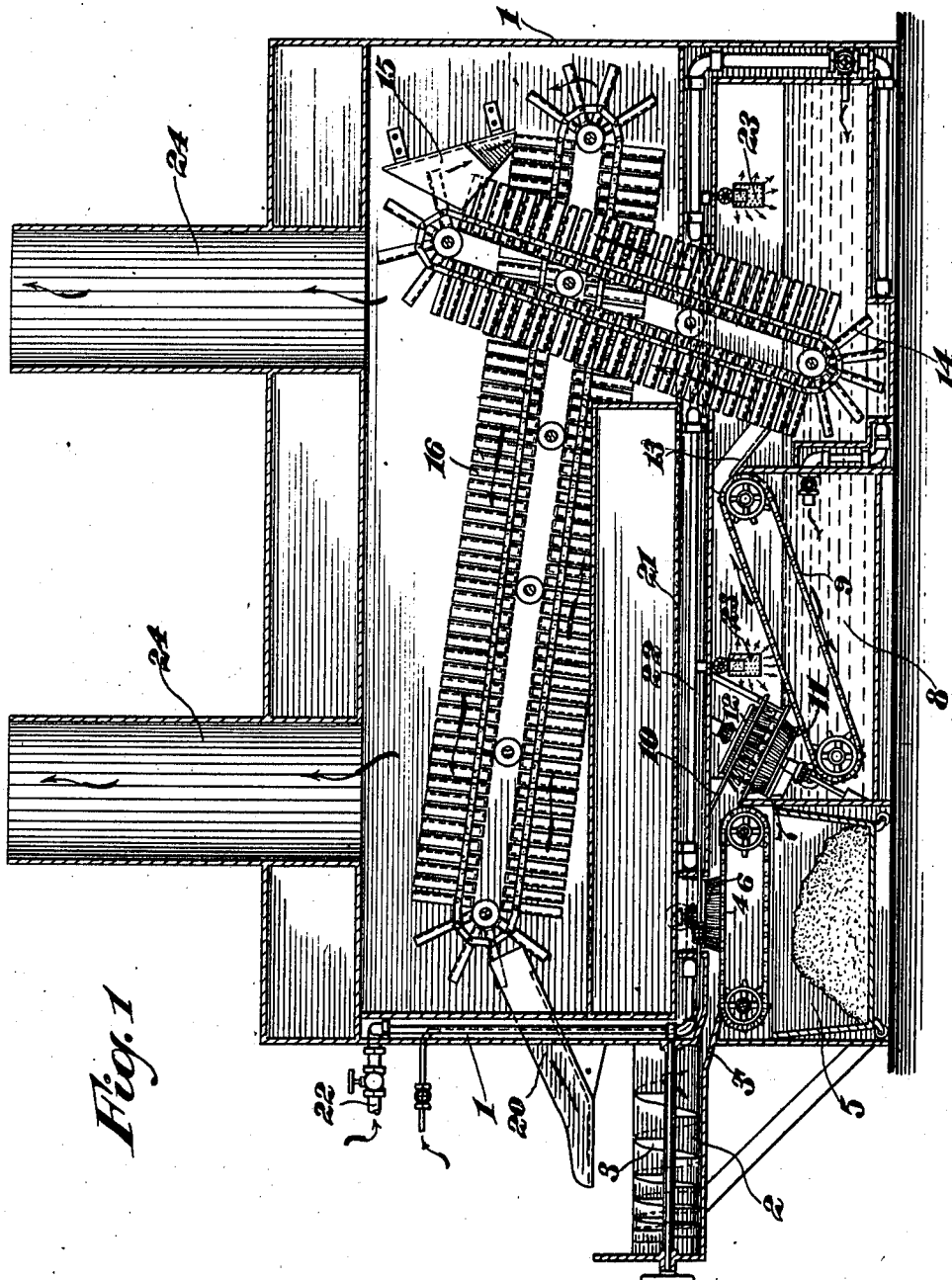


Fig. 1

Witnesses:

L. A. Gauvin
E. J. Gauvin

JEAN BAPTISTE LAPLACE
Inventor

By

Marion & Marion

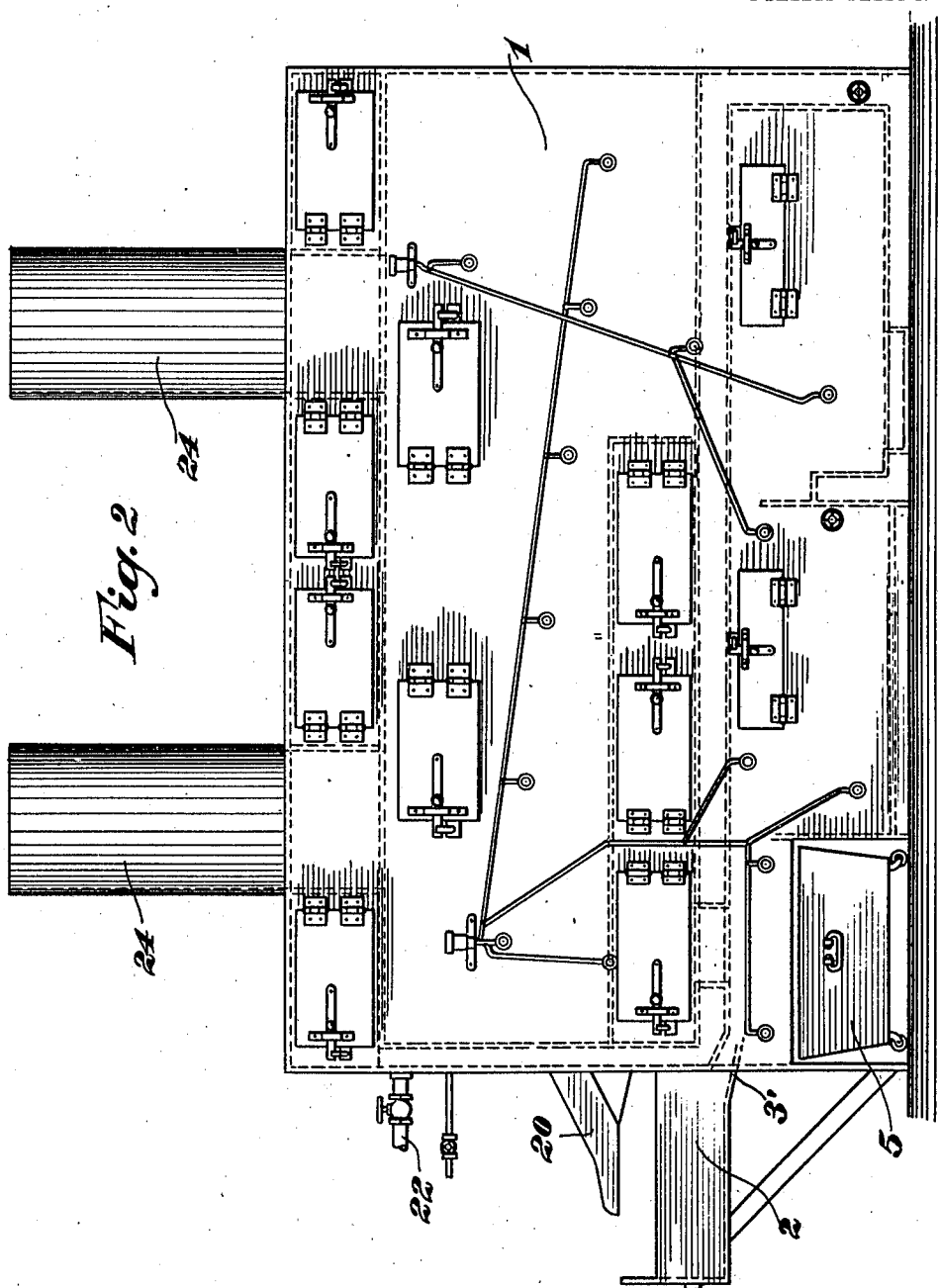
Attorney:

1,031,186.

J. B. LAPLACE.
DISH WASHING MACHINE.
APPLICATION FILED JUNE 28, 1911.

Patented July 2, 1912.

4 SHEETS—SHEET 2.



Witnesses:

L. H. Gaurin
E. J. Gaurin

JEAN-BAPTISTE LAPLACE
Inventor

By

Marion Marion

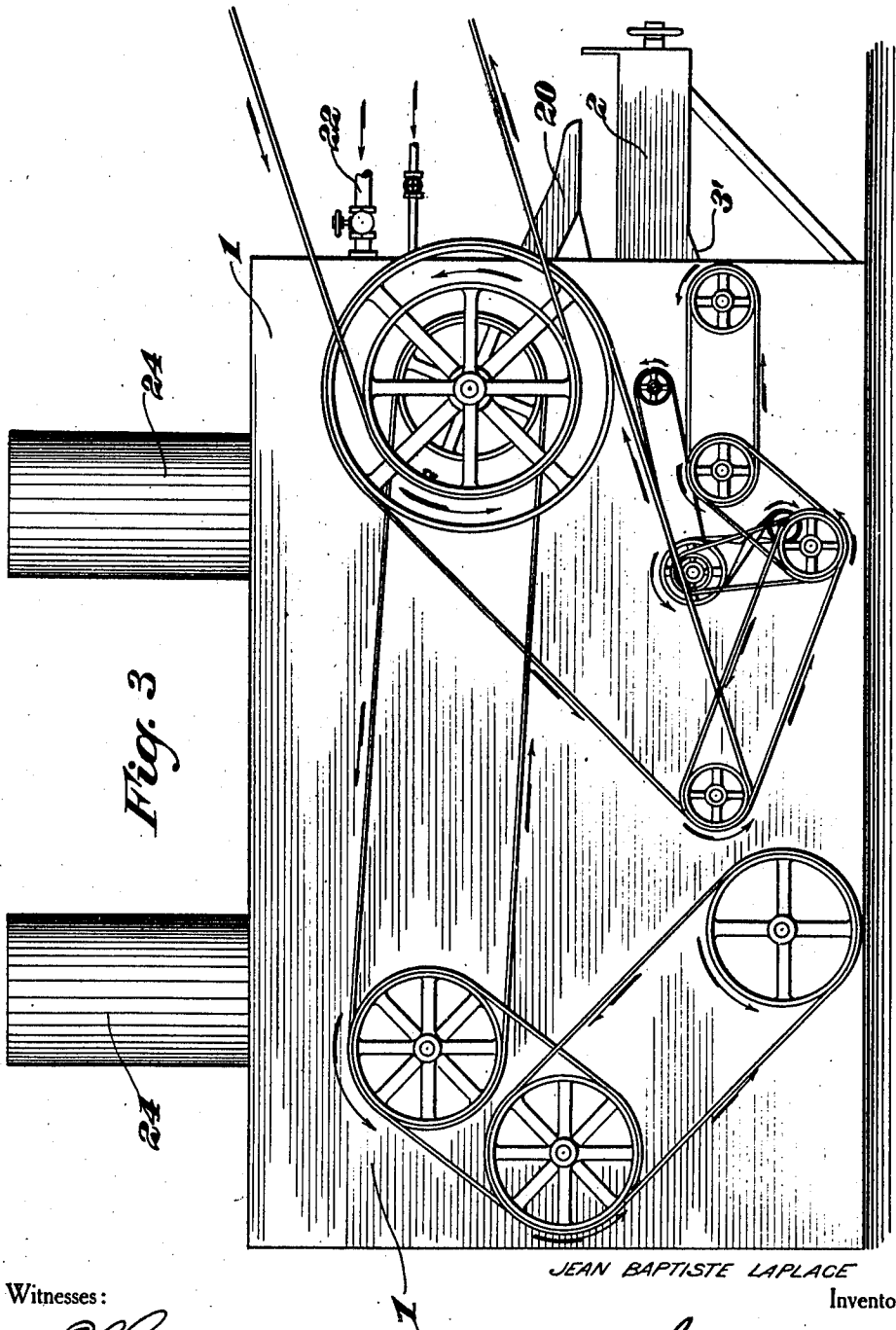
Attorneys

J. B. LAPLACE.
DISH WASHING MACHINE.
APPLICATION FILED JUNE 28, 1911.

1,031,186.

Patented July 2, 1912.

4 SHEETS—SHEET 3.



Witnesses:

L. J. Gauvin
E. J. Gauvin

JEAN BAPTISTE LAPLACE

Inventor

By

Marion & Marion

Attorneys

J. B. LAPLACE.
DISH WASHING MACHINE.
APPLICATION FILED JUNE 28, 1911.

1,031,186.

Patented July 2, 1912.

4 SHEETS—SHEET 4.

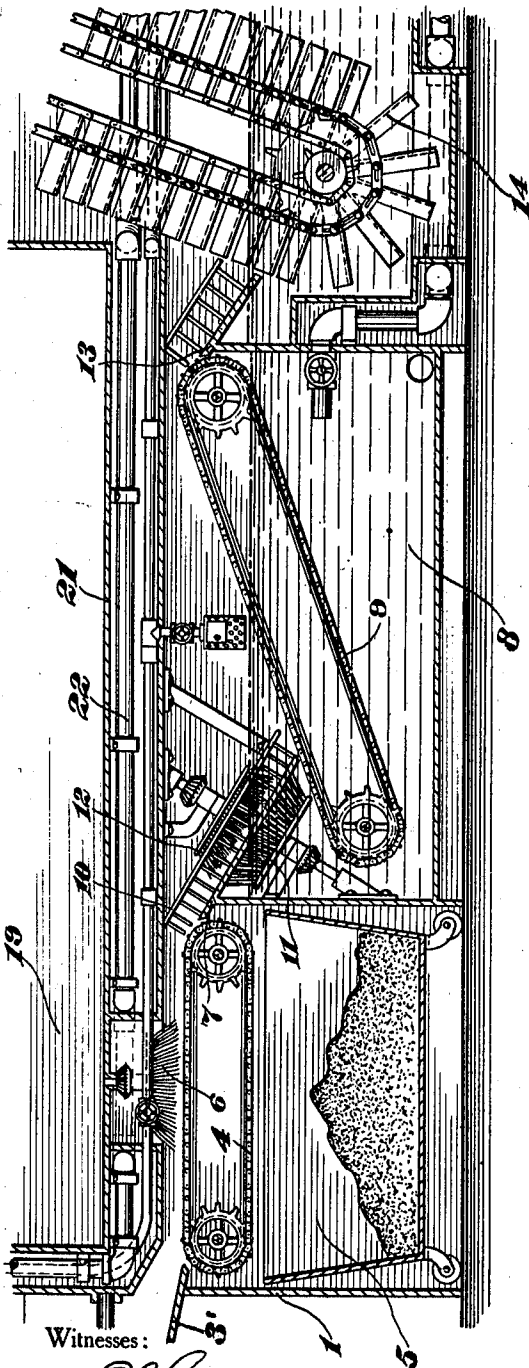


Fig. 4

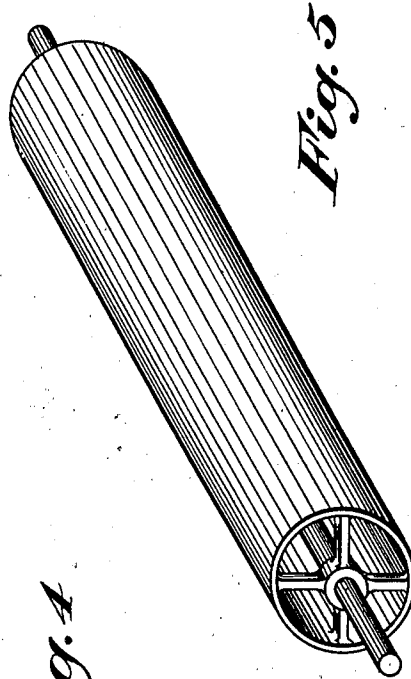


Fig. 5

Witnesses:

L. J. Gaurin
E. J. Gaurin

JEAN BAPTISTE LAPLACE
Inventor

By

Marion Maria

Attorneys

UNITED STATES PATENT OFFICE.

JEAN BAPTISTE LAPLACE, OF SPOKANE, WASHINGTON.

DISH-WASHING MACHINE.

1,031,186.

Specification of Letters Patent.

Patented July 2, 1912.

Application filed June 28, 1911. Serial No. 635,857.

To all whom it may concern:

Be it known that I, JEAN BAPTISTE LAPLACE, a citizen of the Republic of France, residing at Spokane, Washington, United States of America, have invented certain new and useful Improvements in Dish-Washing Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention to be hereinafter described relates to dish washing machines.

In order to more clearly disclose the construction, operation, and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings like reference characters designate the same parts.

In the drawings: Figure 1 is a vertical, longitudinal, cross section through the complete machine; Fig. 2 is a side elevation of the same; Fig. 3 is a view similar to Fig. 2, showing the opposite side; Fig. 4 is an enlarged sectional view through the lower rear part of the machine; and Fig. 5 is a perspective view of one of the guide rollers.

The main object of the invention is to provide a machine into which the used dishes may be successively fed, washed, and dried, and then delivered.

Referring to the drawings in detail, 1 indicates a large casing adapted to house or inclose all of the working parts. At one end of the casing is supported a trough or other receptacle 2 in which is revolubly mounted a spiral or screw conveyer 3 which may be operated either by hand or by power, and in any suitable and well known manner. This conveyer is adapted to deliver the dishes from trough 2, through a chute 3 in the rear wall of casing 1, and on to the upper run of a continuously moving belt or apron 4. This belt, preferably, consists of a number of slats flexibly connected so that solid matter either washed or brushed from the dishes may pass between the slats and drop into the removable receptacle 5, below. Directly above the upper run of the belt 4 and in line with the travel of the dishes thereon is a continuously rotating brush 6 which may be driven through any suitable shaft or

gearing connections. At the forward end of the traveling apron 4 is arranged a chute 7 leading into a middle compartment 8 and terminating directly above the upper run of a continuously moving, inclined apron 9 similar to apron 4. The chute 7 is provided with side guards 10 to prevent the dishes from slipping sidewise therefrom. The chute is formed of widely separated longitudinal slats to permit the upward passage of the bristles of a lower rotating brush 11. The upper face of the dish is, at the same time, subjected to the scrubbing action of a continuously rotating brush 12. Brushes 11 and 12 rotate in opposite directions in order to get the full cleaning effect. They may be rotated by any suitable and well known shaft and gear connections. The compartment 8 is adapted to contain water to a considerable depth, enough to cover the lower half of the apron 9 and the rotating brushes 11 and 12. From the apron 9, the dishes pass to a chute 13, and from this chute they drop into large box-like trays 14 carried by endless chains which may be driven in any suitable and well known manner. The chains, of course, are continuously traveling and endless, to provide upper and lower runs. As the trays reach the top of the upper run they discharge their dishes into a chute 15 from which they pass to trays 16 arranged and operated in the same manner as trays 14. From trays 16, the dishes pass to a delivery chute 20 and thence to the outside of the machine. All of the upper part of the casing, above the partition 21, is heated by a steam pipe 22, or the like, lying therebeneath. Both the compartment 8 and the following compartment may be supplied with a soap or soap solution from suitable holders mounted therein. The fumes from the heated portion of the casing may escape through the pipes or flues 24. Suitable doors may be provided at various points where access to the interior of the casing or the working parts of the apparatus is required. Also, the various journals and bearings of the several drive shafts of the belts and aprons, as well as the bearings of the shafts for driving the brushes, may be adequately lubricated by a well arranged system of pipes and branches. The driving mechanism, as shown in Fig. 3, is the usual belt and pulley arrangement.

It is thought that the operation and use of the invention will be clear from the preceding detailed description.

Changes may be made in the construction, arrangement, and disposition of the several parts of the invention without in any way departing from the field and scope of the same, and it is meant to include all such within this application wherein only a preferred form has been disclosed.

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

1. A machine of the character described, comprising a casing provided with a receiving chute, a trough mounted adjacent said chute, means for delivering dishes from said trough into said chute, a belt adapted to receive the dishes from said chute, an inclined apron adapted to receive the dishes from the said belt, means for guiding the dishes from the belt to the apron, a series of separate traveling belts, a plurality of dish receiving trays carried by each belt, means for guiding the dishes from the afore-said apron to the trays of one of said belts, means for guiding the dishes from the trays of one belt to the trays of the next belt, and

means for receiving and guiding the dishes from the trays of the last belt to the outside of the machine.

2. A machine of the character described, comprising a casing provided with a receiving chute, a trough mounted adjacent said chute, means for delivering dishes from said trough into said chute, a belt adapted to receive the dishes from said chute, an inclined apron adapted to receive the dishes from said belt, means for guiding the dishes from the belt to the apron, means for scrubbing the dishes as they are so guided, a series of separate traveling belts, a plurality of dish receiving trays carried by each belt, means for guiding the dishes from the afore-said apron to the trays of one of said belts, means for guiding the dishes from the trays of one belt to the trays of the next belt, and means for receiving and guiding the dishes from the trays of the last belt to the outside of the machine.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JEAN BAPTISTE LAPLACE.

Witnesses:

DONALD FITZGERALD,
LELIA FITZGERALD.