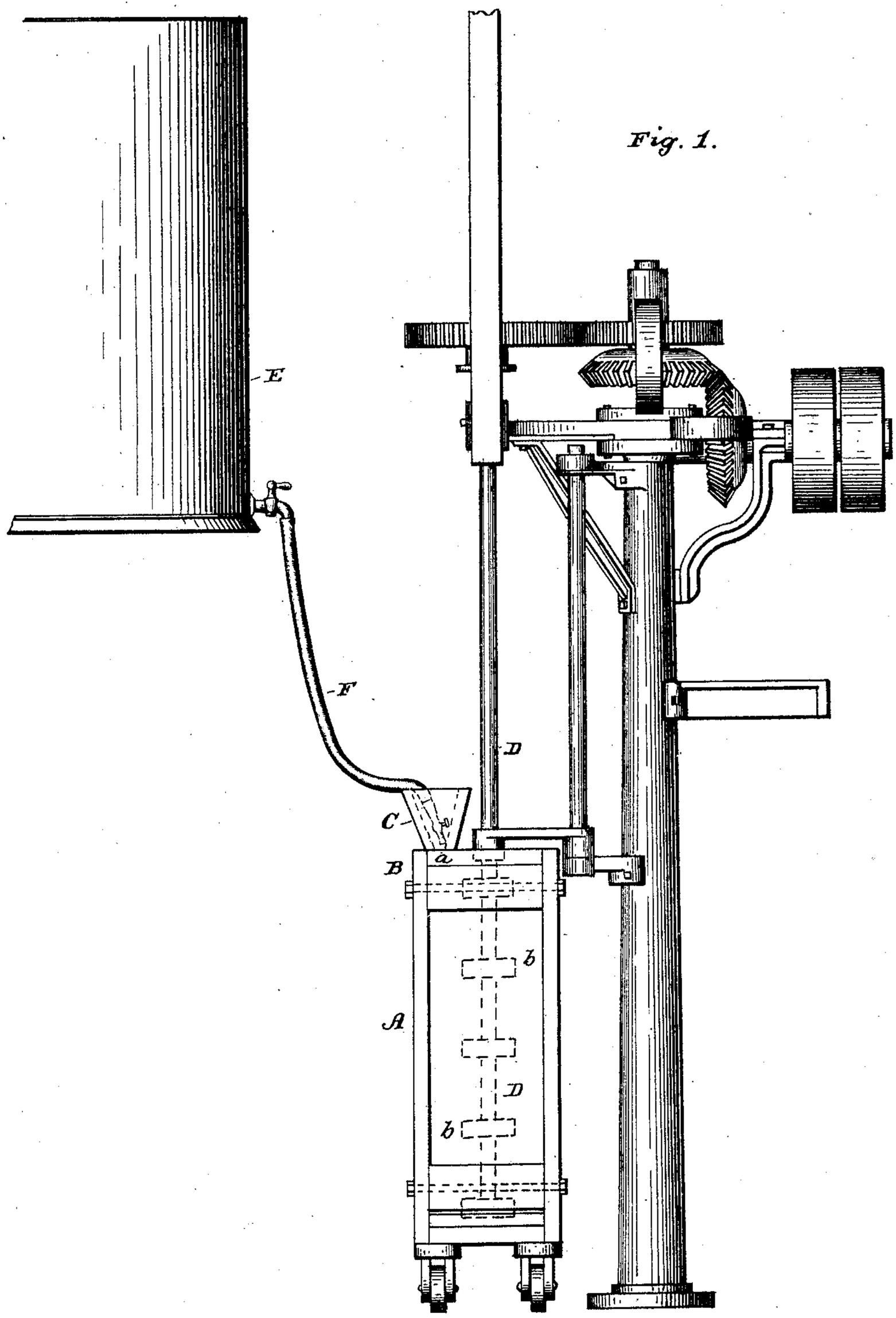
(No Model.) 2 Sheets—Sheet 1.

W. A. GRANT.

PROCESS OF MANUFACTURING SOAP.

No. 471,668. Patented Mar. 29, 1892.

Fig. 1.



Attest.
Victor J. Evans.
C. C. Williams

Inventor.
Wm. A. Grant
by his Attorney
Robt Aitow.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

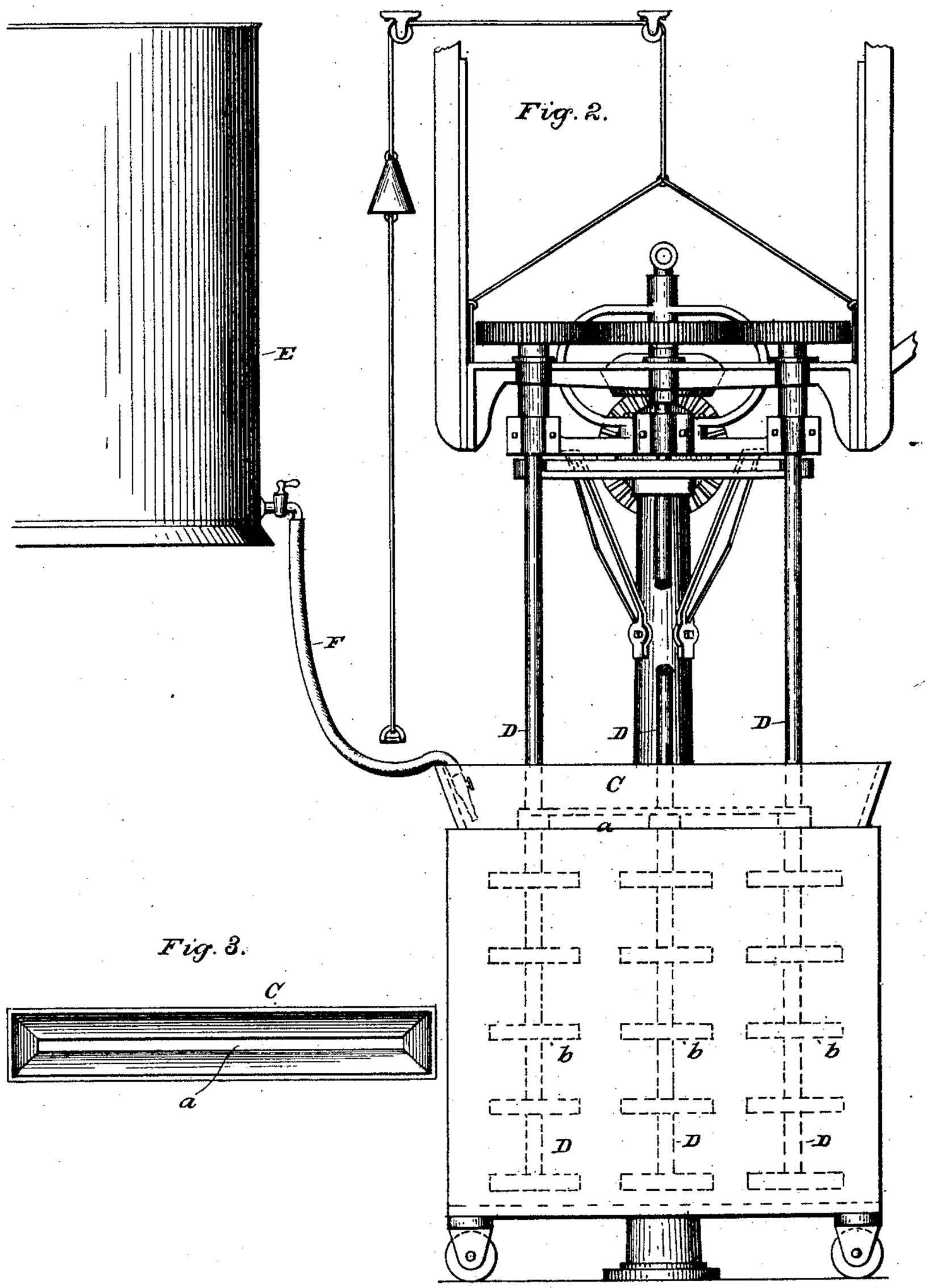

Fig. 3.

Attest.

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UNITED STATES PATENT OFFICE.

WILLIAM A. GRANT, OF HOUSTON, TEXAS.

PROCESS OF MANUFACTURING SOAP.

SPECIFICATION forming part of Letters Patent No. 471,668, dated March 29, 1892.

Application filed January 28, 1890. Serial No. 338,401. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM A. GRANT, a citizen of the United States, and a resident of Houston, in the county of Harris and State of Texas, have invented a new and Improved Process of Manufacturing Soaps, of which the following is a full, clear, and exact description.

The object of my invention is to lessen the time required for the manufacture of soaps and at the same time have all portions of a mass thereof of uniform character, also to make more soap from the same amount of fat or oils than is now done by the ordinary processes.

In carrying out my invention I may make use of the mechanism shown in the drawings, in which—

Figure 1 represents a side view of the apparatus, and Fig. 2 represents a view at right angles to Fig. 1.

Similar letters represent similar parts in both figures.

The apparatus shown in the drawings is substantially that shown in an application for Letters Patent filed by me of even date herewith and bearing Serial No. 338,400, and a description thereof is not deemed necessary, other than an explanation of such parts as more immediately refer to the invention herein set forth.

A represents a mixing-box having a removable lid B, provided with an oblong funnel C, having a narrow opening in its bottom.

D represents the rotary mixer-shafts with transverse blades *b*, the side mixer-shafts having gearing meshing with a smaller gearing on the center mixer-shaft, whereby the shafts may be rotated in different directions and at different rates of speed.

E represents an elevated tank, from which the liquefied caustic soda is run by means of a flexible pipe or hose F into the funnel C.

In carrying out my process the first operation consists in running as much fat, grease, or oil as may be required into a mixing or cooling frame from a suitable melting-tank, the said fats being melted at a temperature from 100° to 125° Fahrenheit. The cooling-frame is then placed under the mixing-machine and the triple blades are then lowered into position. The top and funnel are then placed on the cooling-frame, when the mixing-machine is put into motion at a high or low rate of speed, as the case may require. Then the caustic soda is run through the hose-pipe on the fats contained in the cooling-frame through the opening in the funnel, the nozzle being moved from end to end of the funnel until a sufficient quantity is sprayed into the fats or oils, when, owing to the constant agitation of the latter by the mixing-blades, all portions of the said fats are brought into immediate contact with the caustic soda and other compounds and converted readily into soap. By spraying the liquid it is more uniformly distributed through the fats and does not, as it would if poured in or permitted to fall in a stream on the same spot, as is the usual practice, eat or cut its way to the bottom of the frame without being thoroughly brought in contact with every portion of the grease. When the proper mixing is effected, which is accomplished in a short time, (about twelve to fifteen minutes,) the mixer shafts and blades are raised out of the frame, and the frame—now a cooler-frame—is moved, so that another mixing-frame may take its place. The mixed mass or soap is then cooled in the same frame without being disturbed, thereby preventing loss or waste of material.

What I desire to claim as my invention and secure by Letters Patent is—

The herein-described process of making soap, consisting in placing oils and other fatty ingredients unitedly or individually in a melted but unboiled condition within a receptacle, incorporating the necessary compounds in said mixture, agitating the combined mass in different directions and at different speeds by regulated mechanical devices, spraying liquid caustic soda over the surface of the mass while agitating the same, removing said agitating devices, and allowing the mass to cool without removing it from the receptacle, substantially as set forth.

WM. A. GRANT.

Witnesses:
E. C. CRAWFORD,
C. W. ALSWORTH.