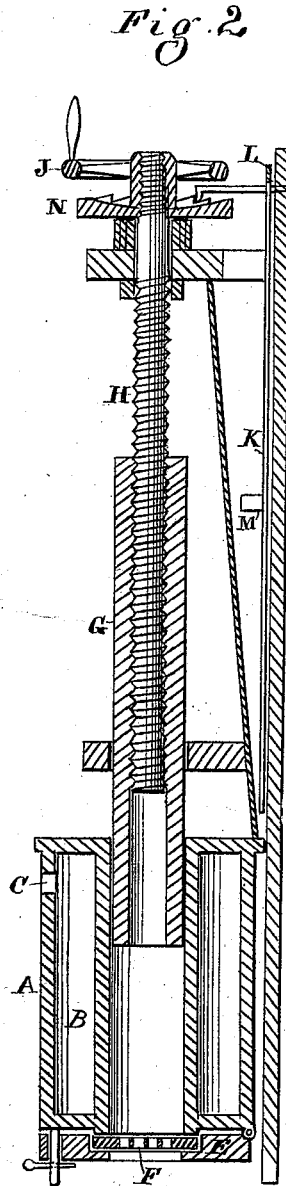
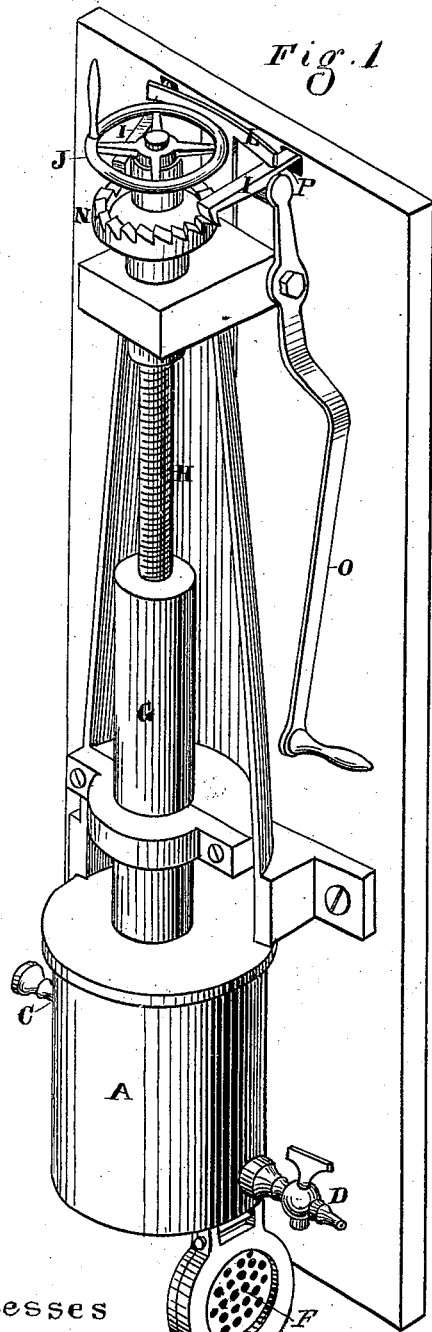


G. GRONDONA.
Macaroni-Machine.

No. 210,199.

Patented Nov. 26, 1878.



Witnesses

Geo. H. Strong.
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UNITED STATES PATENT OFFICE.

GIACOMO GRONDONA, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN MACARONI-MACHINES.

Specification forming part of Letters Patent No. **210,199**, dated November 26, 1878; application filed April 1, 1878.

To all whom it may concern:

Be it known that I, GIACOMO GRONDONA, of the city and county of San Francisco, State of California, have invented a Machine for Making Macaroni and other articles from Flour-Paste; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to an improved machine for making macaroni and other articles from flour-paste.

It consists of an upright double cylinder bolted to the lower end of a vertical frame, which also carries a piston operated by screw and lever. The cylinder is made double, so that steam or hot water may be admitted to the space between the two in order to keep the paste in the inner cylinder in proper condition. The piston is operated by a screw and a hand-lever, with ratchet-and-pawl connection, means being provided so that the piston may be moved in either direction by means of a hand-wheel independent of the pawl and ratchet. The bottom of the inner cylinder is provided with a strong hinged door or removable plate, which receives the perforated dies of any style to form the desired article.

This device is mainly intended for use in families where small quantities of macaroni or other articles from flour-paste may be made without the use of steam-power.

In order that others may understand the construction and operation of my machine, reference is had to the drawings forming part of this specification.

Figure 1 is a perspective view of my machine. Fig. 2 is a vertical section.

Let A represent the outer cylinder, through the inside of which the paste from which the macaroni or other article is made is pressed. The cylinder is made double in order that steam or hot water may be admitted to the space between the inner and outer shell, so as to keep the paste in the inner cylinder, B, in proper condition during the process of manufacture.

The hot water or steam is admitted through an opening at C, and is allowed to pass off through the faucet D when desired. Sufficient

heat only is required to keep the paste in a plastic state as it is passed through the inner cylinder.

The bottom of the inner cylinder is provided with a strong hinged door or removable plate, E, which is held in position when closed by the hinge and a pin or key. A circular groove is cut around the hole in this removable door or plate E, which forms the seat for the perforated dies F, which determine the shape or style of the article to be manufactured. By simply removing the pin and turning the removable door back upon its hinges the die F may be removed from its seat and another of a different pattern or style substituted.

To the vertical frame are attached guide-blocks, through which the plunger G moves.

The plunger is operated by a screw, H, and hand-lever O, with ratchet-and-double-pawl connections, or it may be moved in either direction by means of the hand-wheel J independent of the pawl I and ratchet N.

In order to be able to accomplish these movements independently, I attach to the back of the vertical frame an upright sliding bar, K, having at its upper end a cross-bar, L. The pawls I have their rear ends, P, extended, so as to come at right angles under the cross-bar L of this upright sliding bar. By sliding the upright bar K down by means of the handle M the cross-bar K raises the pawl I from the ratchets in the circular ratchet-wheel N, operating the screw and piston. Then, by turning the hand-wheel J, which operates the screws H, the piston G may be raised or lowered at will more quickly than by the lever and pawl-and-ratchet attachment.

The operation of my machine is as follows: The perforated die is placed in the seat in the removable door or plate at the bottom of the inner cylinder and the door closed. Steam or hot water is then admitted to the space between the cylinders, the ratchets are thrown out of gear, and the piston raised rapidly by means of the hand-wheel, leaving the top of the inner cylinder open. The paste previously made ready for the manufacture of macaroni or other substance is then put into the inner cylinder until this is filled to the top, and the piston is run down by the hand-wheel and screw until its lower end has pressed the parts compactly

into the cylinder. Then, by means of the sliding and cross bar, the pawls are dropped into the ratchets and more power is applied to the piston by means of the lever and pawl-and-ratchet connection, thus forcing the paste through the perforated die and forming it into macaroni or other similar substance, as desired.

It will thus be seen that my device forms an improved and simple method for manufacturing macaroni and similar substances, so that it can be used by families who wish to make small quantities at a time.

I am aware that removable dies are not broadly new in combination with this class of machines, and consequently I do not broadly claim a removable die in such combination; but,

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. The cylinders A and B, with their dies and pistons, and plunger G, with the operating-screw H, in combination with the ratchet-wheel N, the double actuating-pawls I, and the hand-lever O, substantially as shown, and for the purpose herein described.

2. In a macaroni-machine having a screw-shaft, plunger, and cylinder, the ratchet N and pawls I, having an extension, P, in combination with the movable arms L, for releasing the pawls from the ratchet, substantially as shown, and for the purpose herein described.

GIACOMO GRONDONA.

Witnesses:

FRANK A. BROOKS,

M. A. NEAL.