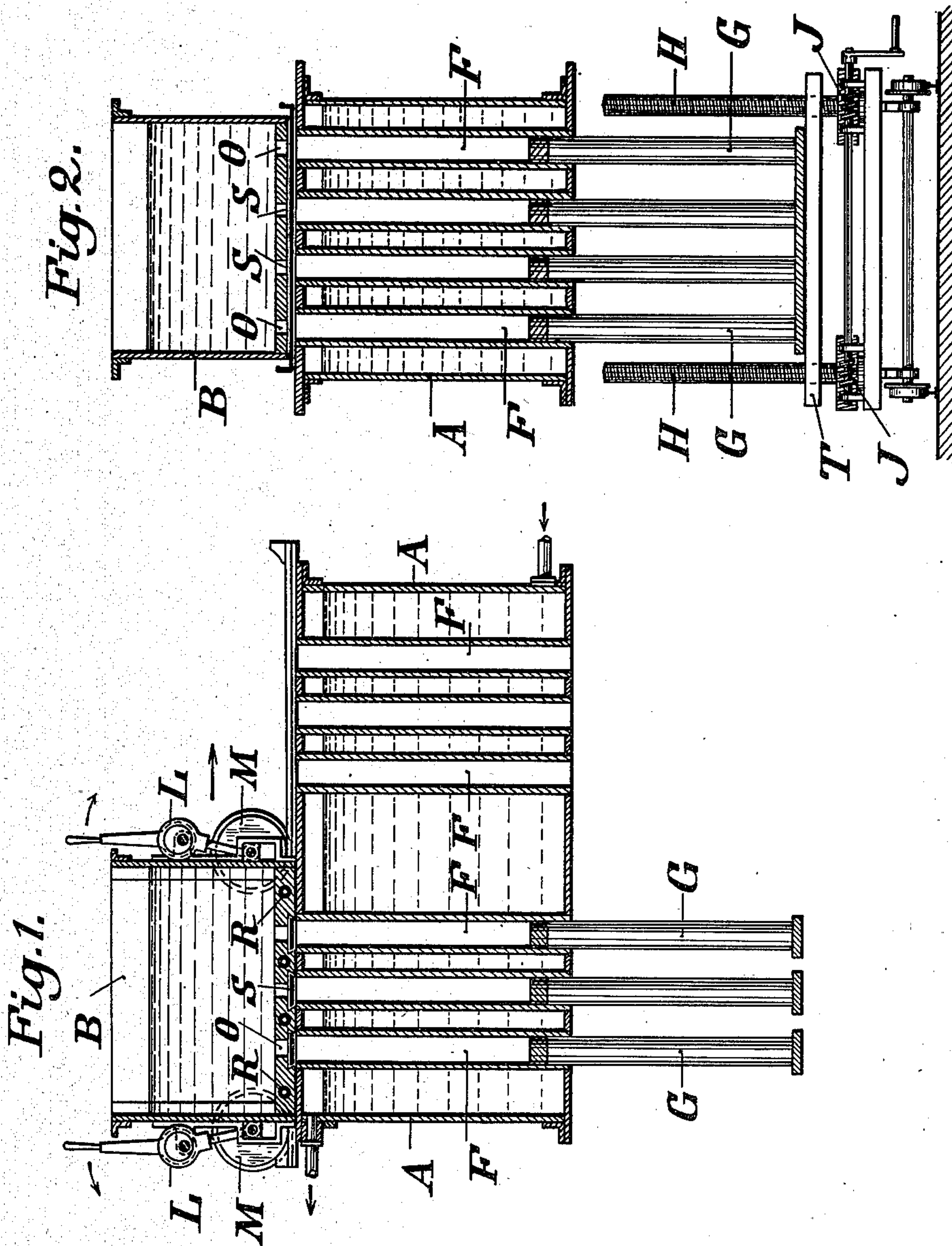


No. 735,304.

PATENTED AUG. 4, 1903.

K. SCHNETZER.
SOAP MOLDING MACHINE.
APPLICATION FILED OCT. 15, 1902.

NO MODEL.



WITNESSES

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KARL SCHNETZER, OF AUSSIG, AUSTRIA-HUNGARY.

SOAP-MOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 735,304, dated August 4, 1903.

Application filed October 15, 1902. Serial No. 127,417. (No model.)

To all whom it may concern:

Be it known that I, KARL SCHNETZER, engineer, a subject of the Emperor of Austria-Hungary, residing at 102 Krammel, Aussig, Austria-Hungary, have invented certain new and useful Improvements in Soap-Molding Machines, of which the following is a specification.

This invention has for its object a soap-molding machine having smooth metal molds which are inserted in a single molding water vessel, tightly fitting therein at both sides, the bottoms of said molds being formed as movable stamps which during the filling of the molds are gradually moved downward and after the contents of the molds have set also serve for ejecting at the top the pieces of soap which have become set.

The soap-molding machine according to this invention consists of a mold vessel closed on all sides, in which the metal molds are tightly carried. These are of any suitable form, according to the shape which the finished pieces of soap are to have, and are made of metal, with as smooth an internal surface as possible. Preferably these molds are made of brass or copper and are provided with an electroplated coating to protect them from oxidation. Another open vessel or soap-feeding tank rests above the first-named vessel, and preferably only covers half of the lower vessel—that is to say, its bottom is made only half as large. The bottom of the soap-feeding tank is formed of a strong metal plate which is provided with steam or water heating tubes and has openings corresponding with the molds. These openings are provided with suitable devices for closing them. Plungers are introduced into the molds from beneath and are provided at their upper ends with a packing and may be moved up and down by means of any suitable operating mechanism.

One form of construction of the invention is shown in the accompanying drawings, in which—

Figure 1 is a front sectional elevation, and Fig. 2 an end sectional elevation, of the apparatus.

A is a vessel closed on all sides and on which another open vessel or soap-feeding tank B

rests. Molds F, in which plungers G move up and down, pass through the vessel A. The bottom of the tank B is provided with steam or hot-water pipes R and openings O, and slides S, having corresponding holes, are arranged below the openings O as a means for closing them, which arrangement allows of the simultaneous opening of a large number of the openings O. In the present form of construction of the invention the up-and-down movement of the plungers is effected by means of screw-spindles H, which are turned by means of a worm-gear J and pass through a table T, on which the stamps or punches are located. The tank B is in practice provided with wheels M and with a device L for lifting it, so that it can be agitated and suitably displaced on the vessel A.

The method of working this improved molding-machine is as follows: All the plungers stand in their upper position, and the soap-feeding tank B is, for instance, on the left half of the mold vessel A. The soap-feeding tank B is then filled with hot liquid soap, which is constantly refilled during the continuation of the operation. The slides S are so far displaced that the openings in the same expose the openings in the bottom of the tank B, and then all the plungers are moved downward from B until they still project a little into the molds F. In consequence of this process the soap penetrates well into the molds, and after the expiration of half the time required for the setting of the soap, which enters under the action of cooling-water, the slides S are again closed, and the tank B is then raised and brought over the right-hand half of the vessel A, where a similar process is repeated. When the cooling is quite completed, the soap pieces which have set are projected at the top from the left-hand compartment by means of the plungers and removed, and then the entire process again repeated. The object of leaving the feeding-tank B over the molds during half the time occupied in cooling is to allow of a subsequent inflow of soap during the period of setting, as otherwise the upper part of the set soap piece would show recess.

The essential advantages which are attained by working with the above soap-mold-

ing machine are a considerable saving of time and labor, avoidance of waste, and the production of a more solid and uniformly-dried soap. Further, it must be mentioned that
5 the entire apparatus only occupies a comparatively small space and has a large productive capacity with a very simple working.

Having now particularly described and ascertained the nature of my said invention and
10 in what manner the same is to be performed, I declare that what I claim is--

1. In a soap-molding machine, the combination of a cooling vessel, smooth metal molds mounted therein, a soap-feeding tank provided with openings corresponding to the
15 molds and provided with closing slides, plungers forming the bottoms of the molds, and means for moving down the plungers so as to suck soap from the feeding-tank into the

molds, substantially as described and for the 20 purpose set forth.

2. In a soap-molding machine, the combination of a cooling vessel, smooth metal molds mounted therein, a movable soap-feeding tank provided with openings corresponding 25 to the molds and provided with closing slides, plungers forming the bottoms of the molds, and means for moving down the plungers so as to suck soap from the feeding-tank into the molds, substantially as described and for the 30 purpose set forth.

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

KARL SCHNETZER.

Witnesses:

ALVESTO S. HOGUE,
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