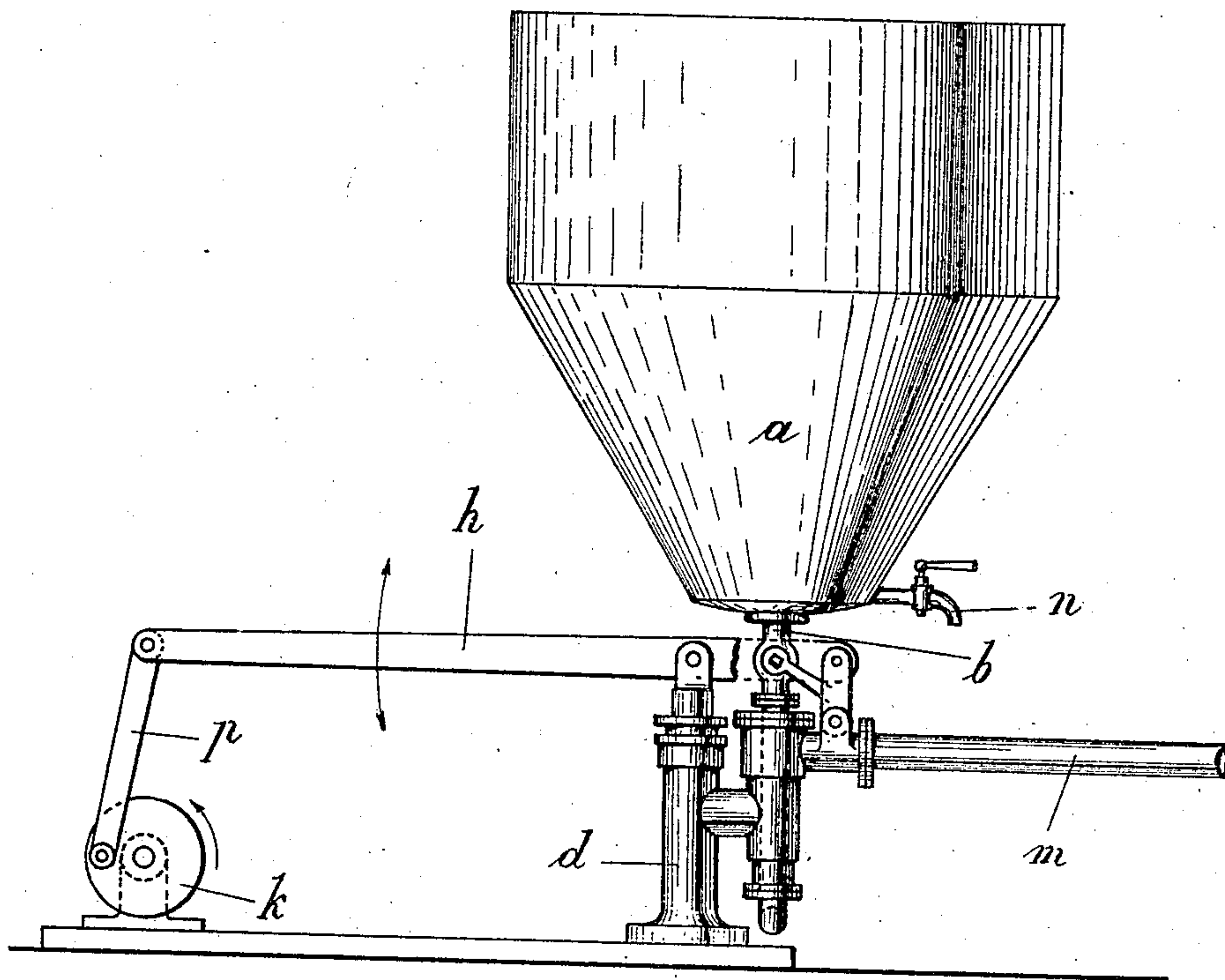


No. 848,179.

PATENTED MAR. 26, 1907.

G. KLINGER.
METHOD OF MOLDING SOAP.
APPLICATION FILED OCT. 12, 1906.



Witnesses
A. J. Haddan
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UNITED STATES PATENT OFFICE.

GEORG KLINGER, OF LEIPZIG, GERMANY.

METHOD OF MOLDING SOAP.

No. 848,179.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed October 12, 1906. Serial No. 338,654.

To all whom it may concern:

Be it known that I, GEORG KLINGER, a subject of the German Emperor, residing at Leipzig, Germany, have invented certain new and useful Improvements in the Method of Molding Soap, of which the following is a specification.

This invention relates to an improved method of forming bars of soap from liquid saponaceous masses in such a manner that the work in the boiler-house is considerably reduced and the molding operation facilitated.

In similar operations hitherto known the liquid mass is pumped from the boiler or "copper" into a pressure vessel, from which it is let at intervals into an artificially-cooled molding-pipe. Changes of temperature take place during this operation and reduce the binding properties of the mass to an extent which either renders the forming of soap bars impracticable or causes the bars when formed to be brittle and cracked. I have found that to obtain solid homogeneous bars it is essential that no change of temperature should take place before the mass enters the molding-pipe, and the solidifying and hardening process should take place very gradually in said pipe.

According to the present invention the saponaceous mass is directly conducted from the boiler to the molding-pipe, the latter being preferably connected to the bottom of the boiler, and in the manufacture of hard soap the spent lye is run off first, so that the saponaceous mass gradually follows without sudden changes of temperature, such as are unavoidable if the mass is first conducted to an intermediate receptacle. To avoid injurious changes of temperature, the molding-conduit must not be artificially cooled. A pump is placed between the boiler and the molding-pipe to draw the fluid soap from the boiler and force it directly into the molding-pipe.

The pump may be run continuously at a suitable rate.

Apparatus suitable for carrying out the improved method is illustrated in the annexed drawing.

a is a soap-boiler, which is connected by a pipe *b* to a pump *d*, the piston of which is adapted to be operated by means of a lever *h*. For actuating the latter a wheel *k* and connecting-rod *p* are provided. The fluid soap is drawn by the pump and forced into the molding-pipe *m*, which must be of considerable length and to which artificial means of cooling must not be applied.

n is a cock through which the spent lye is run off.

Soaps manufactured by the so-called "cold process," such as cocoanut-soaps and toilet soaps, can also be molded by the improved method hereinbefore described. In the case of these soaps it is essential that there should be no preliminary removal of the soap or agitation of the liquid soap after the stirring thereof and that no sudden change of temperature should take place in the molding-pipe. It has been found in practice that if the transference of the soap to the molding-pipe is unduly delayed and that if artificial cooling is resorted to fissures are produced in the bars and reduce or destroy the marketable value of the latter, whereas if the soap is transferred to the molding-pipe directly and immediately after the stirring operation and the pipe is not artificially cooled no fissures are produced even if the molding operation is begun before the mass has reached that state which has hitherto been considered essential for the purpose.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The method of molding soap consisting in forcing the fluid soap from the boiler directly into a long molding-pipe not artificially cooled and causing the soap mass to move continuously through the same.

2. The method of molding soap consisting in drawing the fluid soap directly from the boiler by means of a pump and forcing it into a long molding-pipe not artificially cooled and causing the soap mass to move continuously through the same.

3. The method of molding soap consisting in drawing the fluid soap directly from the

boiler by means of a continuously-operative pump and forcing it into a long molding-pipe not artificially cooled and causing the soap mass to move continuously through the
5 same.

4. The method of molding soap consisting in forcing the fluid soap from the vessel in which the soap has been made directly into a long molding-pipe not artificially cooled and

causing the soap mass to move continuously through the same.

In witness whereof I have signed this specification in the presence of two witnesses.

GEORG KLINGER

Witnesses:

HERM. LAUK,

RUDOLPH FRICKE.