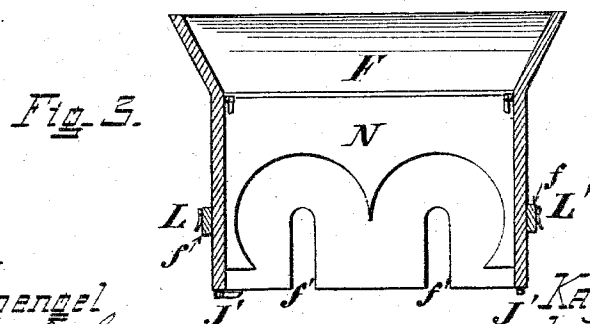
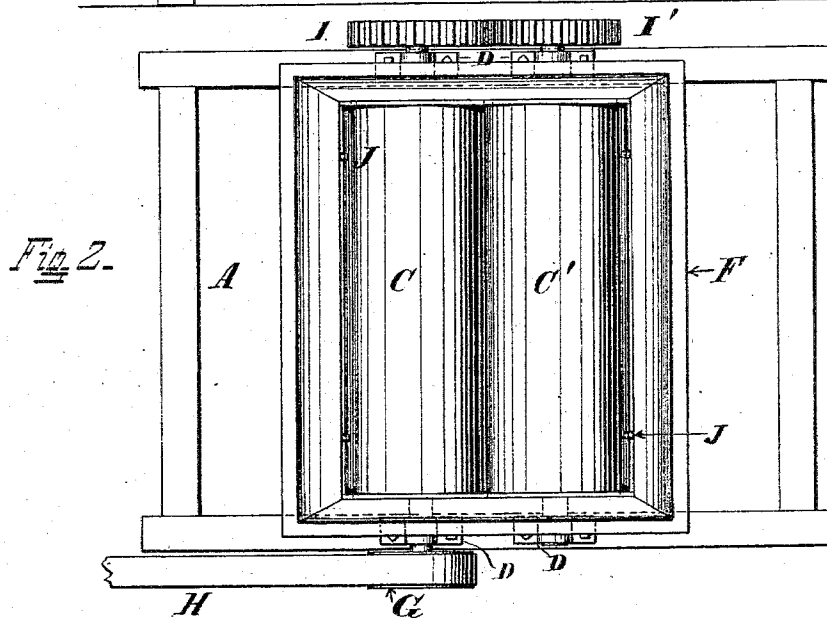
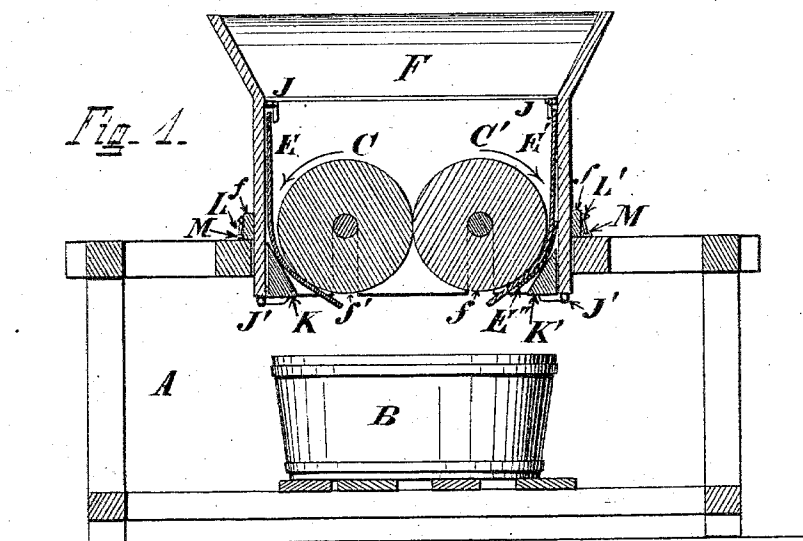


(No Model.)

K. SEIFERT.
DEGRANULATING MACHINE.

No. 290,485.

Patented Dec. 18, 1883.



Attest
Carl Spengel
Geo. Wheelock

Inventor
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UNITED STATES PATENT OFFICE.

KATHARINA SEIFERT, OF CINCINNATI, OHIO.

DEGRANULATING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 290,485, dated December 18, 1883.

Application filed July 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, KATHARINA SEIFERT, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Degranulating-Machine, of which the following is a specification.

My invention is more particularly designed for reducing to a homogeneous pulp or batter the familiar sour curds or coagulated milk, known in some districts of the United States as "schmier-kase." Machines heretofore devised for that purpose have failed of general adoption, in consequence, it is believed, of lack of precaution against the tendency seen in curds, in common with other unhomogeneous semi-liquids, for the more mobile or watery portions to escape down the central passage, leaving the thicker ingredients to accumulate upon its walls. This action in the case of curds has been especially objectionable, partly by the undue preponderance of whey in the product, rendering it unfit for market, but still more seriously by the contamination due to destructive fermentation of the arrested portions. Still another important objection has consisted in the inoperativeness of the apparatus arising from the more or less complete closure of the passage, except along the restricted central channel kept open by the down-rush of the more watery portions. A further defect of the expedients which, so far as known to me, have heretofore been attempted has been the failure of the mere rolling or mashing actions employed to secure proper disintegration of the caseine and its incorporation with the whey.

The machine devised by me compels passage of the entire material down the sides of the passage, and while so passing subjects it to a rubbing or triturating rather than to a mere mashing action.

In the accompanying drawings, Figure 1 is a vertical section in the plane of rotation of the triturating-rollers of a machine embodying my invention. Fig. 2 is a top view of the machine. Fig. 3 is a sectional representation of the feeding-hopper detached.

A is an open frame, of sufficient height for convenient reception of a receptacle, B, and for support at the proper elevation of the degranulating mechanism proper, in which two identical cylinders, C C', of cast-iron, are so

mounted in bearings D as to revolve nearly or quite in contact, the rotation of both cylinders being from their line of contact upward and outward toward brakes E E', attached to the sides of the feeding-hopper F, which hopper has battens f, by which it rests upon the frame in the manner shown.

The brakes E E' consist of strips of stout plate-iron or plate-steel, bent in the manner shown, and held in place by buttons J J' and cleats K K', and adjusted to the desired proximity to the cylinders by means of wedges E". Slots f' in the hopper ends enable said hopper to receive the shafts of the triturating-cylinders, while hooks L L', that depend from the supporting-battens f, and that engage in staples M M', hold the hopper to its place upon the frame.

To prevent seepage of material between the cylinder ends and the hopper-walls, I attach to the latter linings N, whose lower edges are formed, as shown, to fit the peripheries of the cylinders. Rotation of the cylinders is secured by a driving-pulley, G, upon the shaft of one of them, that takes a belt, H, from a steam-engine or other motor, and this cylinder has a spur-wheel, I, that gears into an identical wheel, I', upon the other cylinder.

The metallic surfaces that are exposed to contact with the material are preferably protected against oxidation—as, for example, by enameling of the cylinders and by tinning or zinc-plating of the brakes.

The operation is as follows: A suitable receptacle, B, being provided under the place of discharge, the hopper is supplied with material. The cylinders being then rotated, as indicated by the arrows, the material is conveyed by their peripheries from the central parts of the hopper constantly outward against the brakes E E', and, on its way out, undergoes, between the peripheries of the cylinders and the concave faces of the brakes, a prolonged rubbing or triturating action, quite equal in result to and incomparably more expeditious than that of the "braiding-paddle" ordinarily employed.

The described movement of material from the center toward the hopper-walls prevents accumulations thereon, and makes the apparatus self-scouring.

The herein-explained mode of attachment

of the brakes and cleats to the hopper, and of the latter to the frame, permits ready removal and separation of these members for cleansing or other purposes.

5 The above-described embodiment of my invention is susceptible of various modifications. For example, a handle on one of the cylinder-shafts may enable the machine to be driven by hand instead of by power, and set-
10 screws may be substituted for wedges for setting up the brakes.

I claim herein as new and of my invention—

1. In a curd-degranulator, the combination, with the brakes E E' at the hopper sides, of

the upwardly and outwardly revolved tritu- 15 rating-cylinders C C', substantially as set forth.

2. In a curd-degranulator, the combination, with the outwardly-revolved triturating-cylinders C C', journaled in the frame A, of the removable hopper F and the detachable brakes 20 E E', as and for the purposes set forth.

In testimony of which invention I hereunto set my hand.

KATHARINA SEIFERT.

Attest:

SAML. S. CARPENTER,
CARL SPENGEL.