No. 788,843. PATENTED MAY 2, 1905.

W. H. & A. Y. NOACK.

MACHINE FOR FORMING BUTTER INTO BRICKS.

APPLICATION FILED DEC. 7, 1903.

FIG. 1.

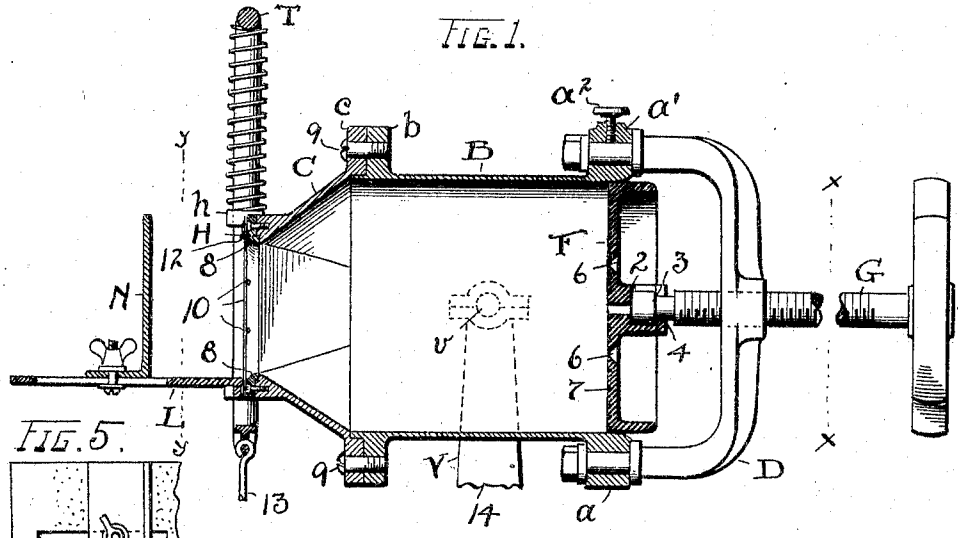


FIG. 5.

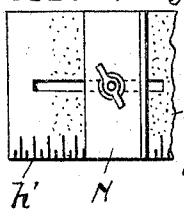


FIG. 2.

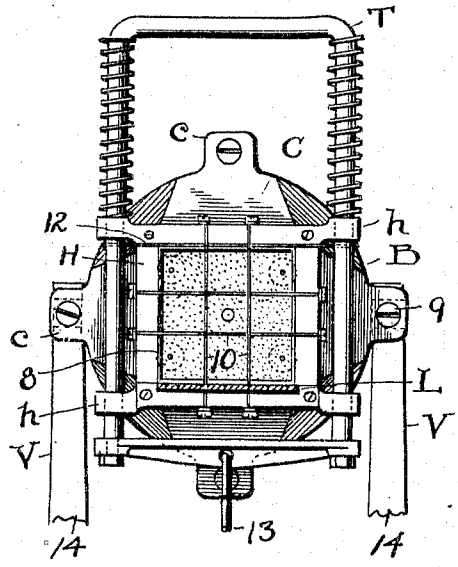


FIG. 3.

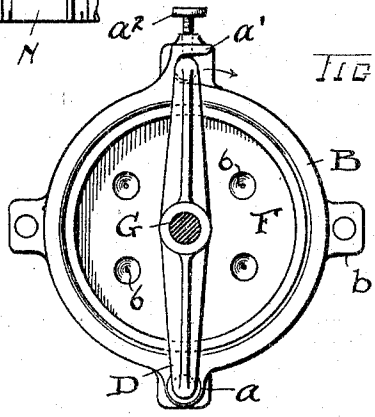
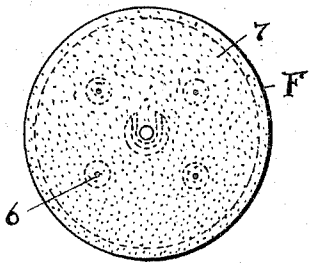


FIG. 4



WITNESSES:

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No. 788,843. Patented May 2, 1905.

UNITED STATES PATENT OFFICE.

WILLIAM H. NOACK AND ADOLPH Y. NOACK, OF CLEVELAND, OHIO.

MACHINE FOR FORMING BUTTER INTO BRICKS.

SPECIFICATION forming part of Letters Patent No. 788,843, dated May 2, 1905.

Application filed December 7, 1903. Serial No. 184,062.

To all whom it may concern:

Be it known that we, WILLIAM H. NOACK and ADOLPH Y. NOACK, citizens of the United States, residing at Cleveland, State of Ohio, have invented certain new and useful Improvements in Machines for Forming Butter into Bricks; and we do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to a machine for forming butter into bricks, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a substantially central sectional elevation of the machine front to rear. Fig. 2 is a front elevation of the machine or as it appears looking in from the left of Fig. 1. Fig. 3 is a cross-sectional view on line x x, Fig. 1. Fig. 4 is a plan elevation or face view of the follower. Fig. 5 is a plan view of the plate and gage.

As thus shown the machine comprises a cylindrical body B and a tapered part C, referred to also as the "nose" of the machine, and corresponding ears b and c on said parts, with bolts or screws which serve to bind said parts separably together. At its other end the said body is equipped with a bail D, which is pivoted in ear a on body B and adapted to swing into and out of engagement with ear a' on the opposite side of said body, the ear or projection a' having a lip through which screw a^2 enters and fastens the bail therein when the machine is at work. This makes the bail rigid with the said body when in use, but leaves it free to be swung aside and out of the way when butter is to be replenished in the cylinder. It is obvious from this construction that the butter is introduced at this end and in any condition as to shape or bulk, provided it be in quantity small enough to enter the cylinder. Ordinarily it is found best to have the butter fairly hard.

F represents the follower or plunger, a preferably metal part, having a flange about its edge fitting somewhat snugly in the cylinder, so as not to be leaky about its edge, and with its flange deep enough to cause the follower to travel back and forth without other means to guide it and keep it in right working relation.

At its center and back the follower has a tubular stud 2, open at one side to introduce the ring-shaped head 3 on actuating and controlling screws G. An inner annular rib 4 on the said stud 3 engages or is engaged by head 3 and is especially serviceable for withdrawing the follower-plunger F by means of screw G when a charge of butter has been exhausted and the plunger is at the end of its stroke. Then as the plunger is withdrawn from the cylinder by the operation of the screw to be removed the bail is released at screw a^2 and swung to one side, and the way is clear to refill the cylinder. This construction allows the screw to be separated from the plunger when the cylinder is to be filled with butter and frees the plunger for removal alone and for washing separately, and when the parts are assembled again for use the plunger is first put back and then connected up with screw G, as before.

Two peculiarities characterize the plunger—viz., the small ventilating-holes 6 and the variously-dotted indentations 7 on the face of the plunger. The said indentations prevent the butter from adhering or sticking to the said surface, as the holes fill with water and assist in clearing the surface. The vent-holes or perforations 6 prevent accumulations of air before the plunger and the unsatisfactory work which air-pockets at this point would inevitably produce in forming the bricks. The said holes likewise are of peculiar shape in that they are conical, with the point only appearing on the face of plunger. From this point they flare rearwardly, which effectually prevents the plugging of butter in said holes and makes the holes easy to cleanse. Indeed said holes are reduced to practically knife-edges or very thin edge portions at their points and which small quantities of butter will squeeze through. The objection on this account is much less than would be the plugging of cylindrical or like holes with butter.

Our construction also effectually relieves whatever air would otherwise be trapped at this point.

The nose portion C of the device converges on lines approximately forty-five degrees inclination to a square nozzle or outlet, and the said outlet is supplemented by a square frame H, which has outwardly-flared or rounded edges 8 to prevent the butter from curling inwardly, as it will with a perfectly-straight edge at this point. This makes the sides of the bricks or blocks of butter entirely smooth and even throughout and greatly improves the appearance of the bricks. The said nose portion C is removably secured on the body B in this instance by screws 9 through the lugs *c* and *b* on said parts, respectively, as above described; but it might be pivoted to rotate or swing to one side thereon after the manner of bail D or in any other desired and convenient way. This enables the said nose to be removed after use to take out the butter therein and for washing, and it provides for putting another nose thereon, according to the size of block or brick to be made.

In operation the butter is crowded forward in the cylinder to the nose C, where it strikes the straight converging flat sides running down to the outlet, and if there were no subdivision of the butter after it leaves this point it would be delivered in one continuous square or block of the cross-section of said opening and according to the quantity in the cylinder if not recharged; but at this point I provide the nose with a detachable extension or part H, the four walls of which have the outwardly-inclined portions hereinabove referred to, and upon which I fasten the four several cross-wires 10. These serve to cut the block of butter into nine bricks of equal size. The said wires are secured at their ends to the said extension of frame H, and the butter is thus subdivided into blocks of larger or smaller size, as may be preferred, and delivered upon the plate or table L. Said plate likewise is affixed to frame H preferably and is provided with a scale *h'* lengthwise and a gage N, adapted to be fixed along said scale according to the measure or weight of brick desired and whereby the weight is accurately determined.

T represents a spring-lifted treadle-frame, supported and adapted to slide up and down in ears *h* at the four corners of frame H and carrying a stretched wire 12, adapted to be drawn by said frame across the block of butter at the front of the nozzle and cut said block off at that point. This may be done as frequently as may be required, according to the size of pieces the bricks are to be divided into. A wire or rod 13 goes down to a treadle, (not shown,) and the entire machine is supported at a suitable elevation on any suitable frame or support 14.

The body or barrel B of the machine is mounted on standards or uprights V by means of trunnions *v* on its side and center and is so arranged on said trunnions that it can be tilted and inverted or reversed.

What we claim is—

1. In combination, the body of the machine and a detachable nose-piece thereon having internal flat converging sides terminating in a square outlet and flaring edges 8 about the outer portion of said outlet, and severing-wires for the butter outside said edges and extending across the same, substantially as described.

2. In combination, the body of the machine and the nose-piece thereon having flat sides converging to its outlet, a detachable frame at said outlet having outwardly-inclined sides and wires to subdivide the butter into blocks stretched across said outlet at right angles to each other, substantially as described.

3. In combination, the body of the cutter and the nose thereon, a detachable frame over the outside of said nose having outwardly-flaring sides and wires on said frame to cut the butter into subdivisions longitudinally, in combination with a horizontally-arranged plate L fixed to said frame on the same plane as the bottom of said nose and provided with a scale to indicate the size of blocks, and a gage N adjustably fixed on said plate, substantially as described.

Witness our hands to the foregoing specification this 28th day of November, 1903.

WILLIAM H. NOACK.
ADOLPH Y. NOACK.

Witnesses:
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C. A. SELL.