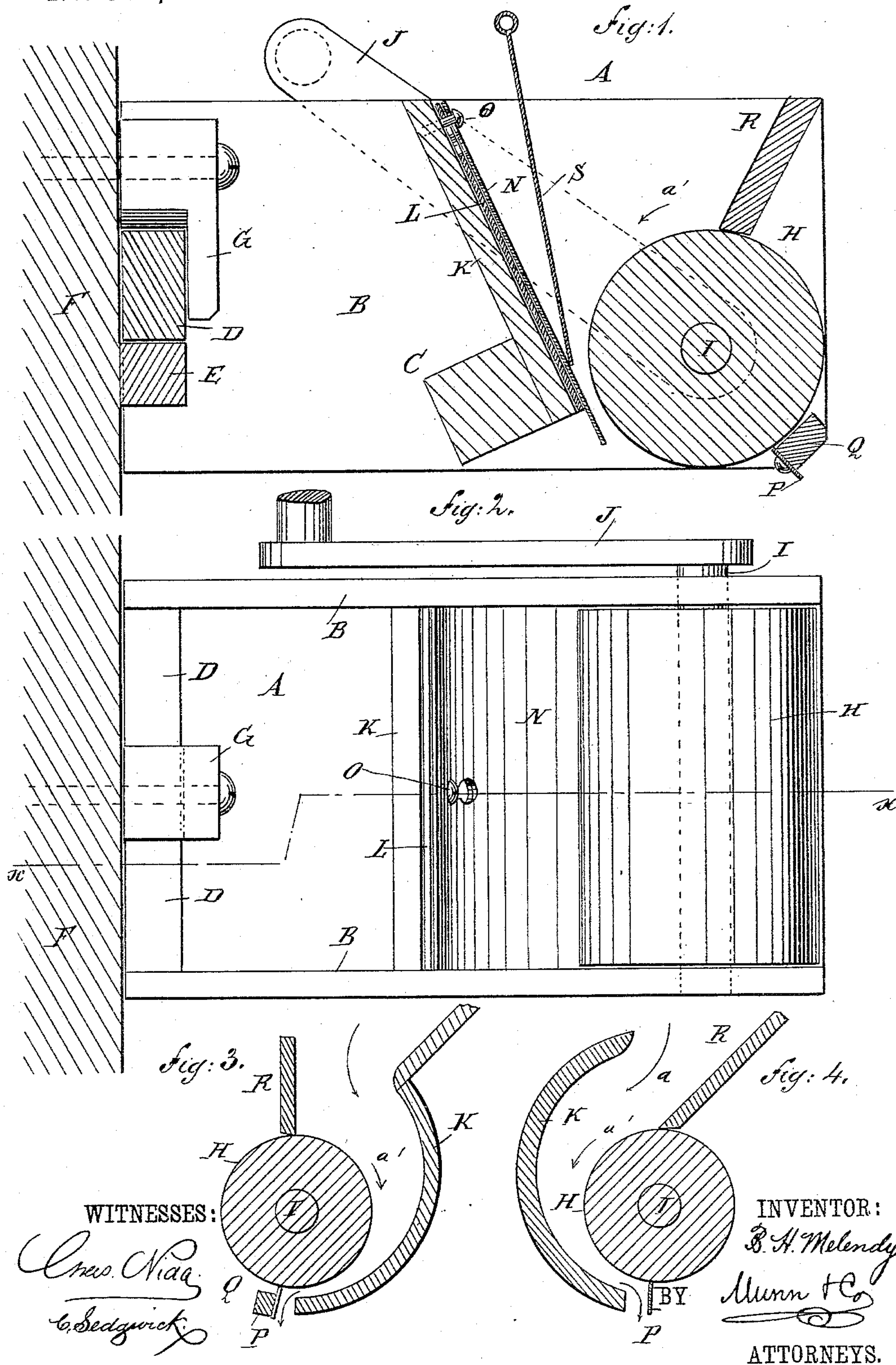


(No Model.)

B. H. MELENDY.  
DOUGH KNEADING MACHINE.

No. 381,631.

Patented Apr. 24, 1888.





# UNITED STATES PATENT OFFICE.

BRYANT H. MELENDY, OF BATTLE CREEK, MICHIGAN.

## DOUGH-KNEADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 381,631, dated April 24, 1888.

Application filed October 10, 1887. Serial No. 251,924. (No model.)

*To all whom it may concern:*

Be it known that I, BRYANT H. MELENDY, of Battle Creek, in the county of Calhoun and State of Michigan, have invented a new and Improved Dough-Kneading Machine, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved machine for kneading dough, for all kinds of bread, crackers, pastry, &c.

The invention consists in the construction and arrangement of certain parts and details, and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of my improvement. Fig. 2 is a plan view of the same, and Figs. 3 and 4 are sectional side elevations of modified forms of my improvement.

A suitably-constructed frame, A, is provided, with the sides B B united with each other by the cross-pieces C and D, of which the former is placed near the middle of the bottom, and the cross-piece D is placed at the rear end, and is adapted to be held on top of a similar cross-piece, E, fastened to a board, F, secured at any convenient place to a wall. On the board F, above the cross-piece D, is pivoted a latch, G, adapted to pass over the said cross-piece D, as shown in Fig. 1, so that the frame A is fastened to the board F, and is thus suspended from the wall.

In the front part of the frame A, near its bottom, is placed, between the side boards, B, a roller, H, secured to the shaft I, mounted transversely in suitable bearings in the sides B, and provided on one outer end with a crank-arm, J, or other suitable means, for turning said shaft I, whereby the roller H is rotated in the direction of the arrow  $\alpha'$ . In the rear of the roller H is placed a transverse partition, K, held in an inclined position, and secured to the sides B and to the cross-piece C, as shown in Fig. 1. This partition K may be straight, as shown in Fig. 1, or curved, as il-

lustrated in Fig. 4; or said partition K may be placed in front of the roller and curved, as shown in Fig. 3, the latter modification being merely a reversal of the modification shown in Fig. 4.

On the front of the partition K is placed a strip, L, of pasteboard or other suitable material, and on this strip is placed a smooth metallic plate, N, which, with the strip or plate L, is secured to the partition K by a screw, O. The lower end of the plate N passes by the roller H, and forms a space between it and the said roller, which space can be increased or diminished the thickness of the intermediate plate, L. The plate N is extended below the strip L and partition K, to prevent the dough from clogging and adhering to the lower parts or ends of the strip L and partition K, as it would if the plate were of the same length as the said strip and partition.

A partition, R, is formed in the frame A between the sides B on top of the roller H, and the said partition R, with the partition K and the sides B, forms a hopper, in which the dough is kneaded. The partition R may be inclined, as shown in Figs. 1 and 4, or it may be placed vertically, as shown in Fig. 3. The lower edge, however, must rest on the rim of the roller H. On the under side of the roller is held a scraper, P, secured to a cross-piece, Q, fastened to the sides B of the frame A. Said scraper is adjustable, and is held against the rim of the roller, so as to scrape off any dough which may adhere to the roller after it leaves the hopper.

The dough is placed in the hopper, before described, and then the roller H is rotated in the direction of the arrow  $\alpha'$  by turning the crank J. The dough in the hopper, by the rotation of the roller H, is caused to revolve over and over and inward on itself, thereby tearing the most minute particles asunder, and kneading the dough thoroughly and perfectly, whereby the dough becomes very fine-grained, the bread being short and light. After the dough has been kneaded sufficiently it passes out underneath through the space between the metallic plate N and the roller H, and, according to the space, is formed into a sheet of dough. The scraper P scrapes off any dough adhering to the roller H, so that the latter al-



ways presents a smooth surface to the dough in the hopper. In order to agitate the dough in the hopper and to clean the plate N, I employ a sheet-metal plate, S, which is manipulated by the operator, who takes hold of its upper end.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

10 1. In a dough-kneading machine, the combination, with a frame open at top and bottom, of a roller journaled therein, a partition held in the frame in front of the roller, and a plate adjustably secured to the partition and having  
15 its lower end projecting below the said partition, substantially as herein shown and described.

20 2. In a dough-kneading machine, the combination, with a frame open at top and bottom, of a roller journaled therein, a partition in the frame in front of the roller, a plate adjustably secured on the partition, a partition in the frame above the roller, with its lower end a short distance from the said roller, and a

scraper on the under side of the roller, substantially as herein shown and described. 25

3. In a dough-kneading machine, the combination, with a frame open at the top and bottom and provided with sides, of a roller mounted to rotate in the said sides of the frame, 30 a partition held in front of said roller, a plate held on the front of said partition, and a metallic plate held in front of said intermediate plate, substantially as shown and described.

4. In a dough-kneading machine, the combination, with a frame provided with sides and cross-pieces, of a board provided with a cross-piece, on which rests one of the cross- 35 pieces of the frame, and a latch pivoted on said board and adapted to pass over said cross-piece on the frame, so as to lock the latter to said board, substantially as shown and described. 40

BRYANT H. MELENDY.

Witnesses:

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FRANK M. BURT.