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J. C. RORICK.
Butter-Workers.

2 Sheets--Sheet 2.

No. 151,917.

Patented June 9, 1874.

Fig. 3

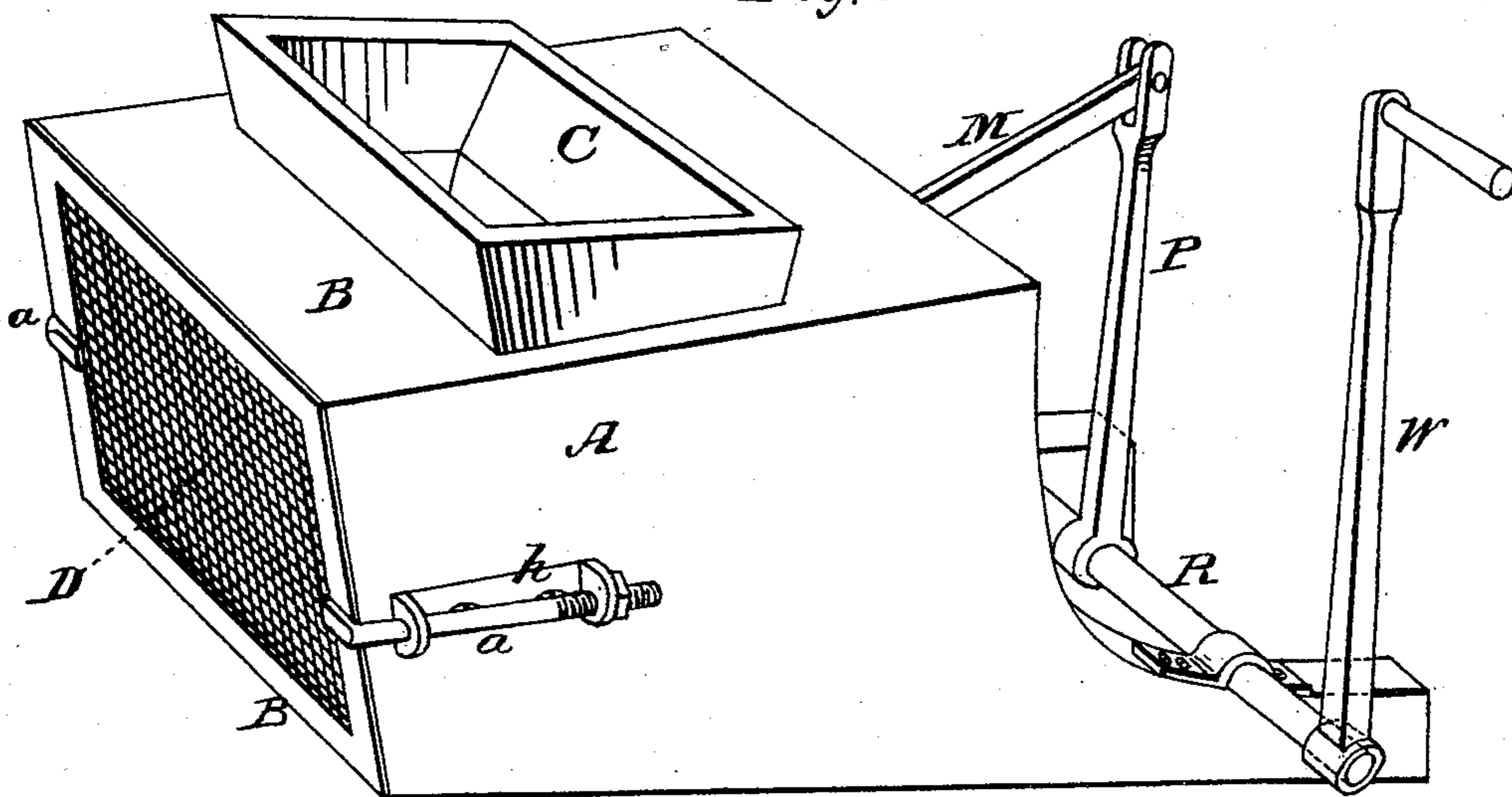


Fig. 4

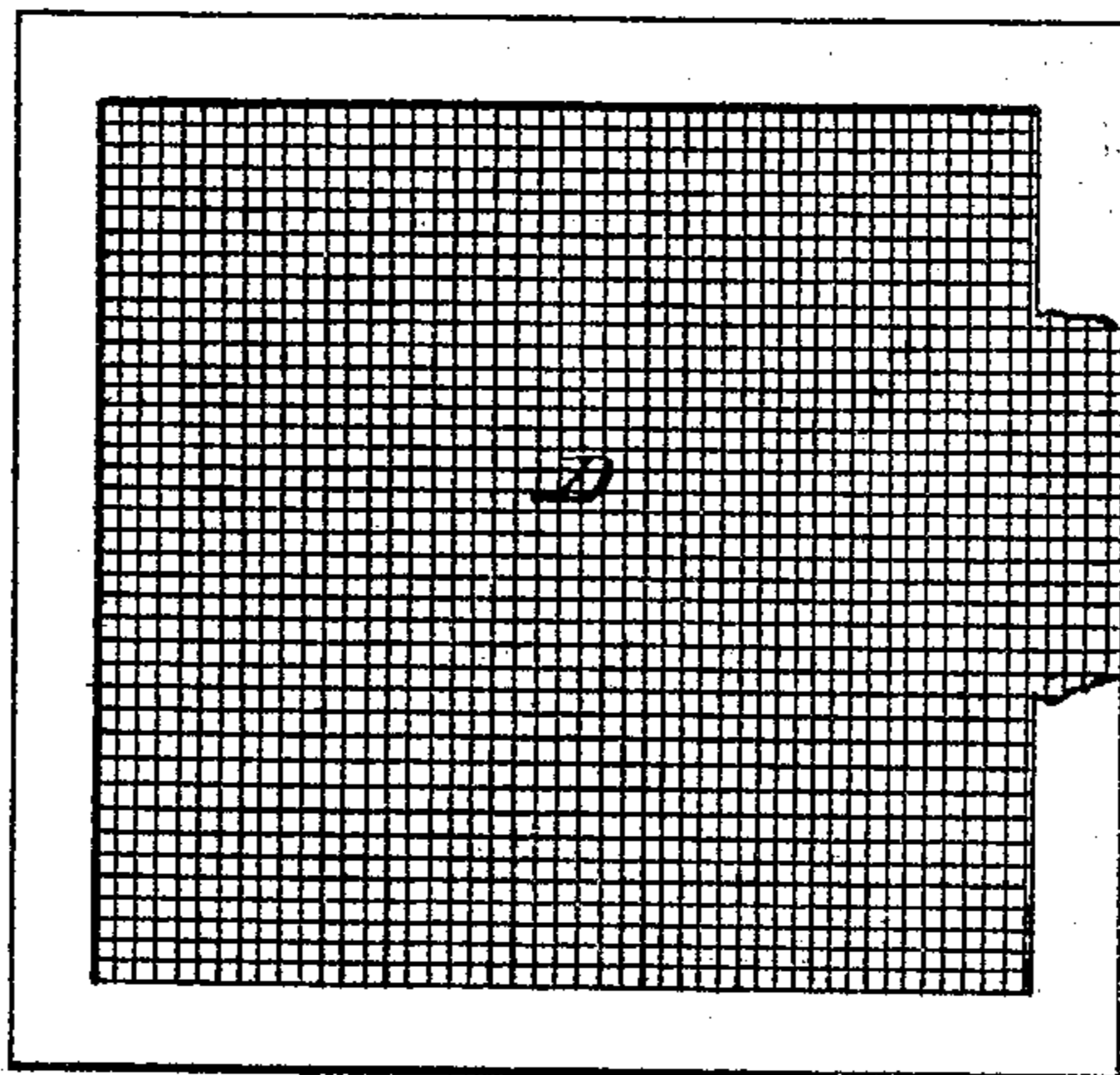


Fig. 5



Witnesses,
Robert Everett,
George E. Upkum,

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UNITED STATES PATENT OFFICE.

JOHN C. RORICK, OF WAUSEON, OHIO.

IMPROVEMENT IN BUTTER-WORKERS.

Specification forming part of Letters Patent No. **151,917**, dated June 9, 1874; application filed April 9, 1874.

To all whom it may concern:

Be it known that I, JOHN C. RORICK, of Wauseon, in the county of Fulton and State of Ohio, have invented a new and valuable Improvement in Butter-Breakers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my butter-worker; and Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a perspective view, and Figs. 4 and 5 detail views, of the same.

My invention has relation to means for working butter; and consists in a novel construction and arrangement of an apparatus designed especially for carrying on the process called breaking butter, as hereinafter specified.

The letters A A of the drawings represent the sides of a rectangular box, and B B the top and bottom thereof. C represents a hopper, arranged in the top, as shown. The letter D represents a breaking-screen, of strong wire-cloth, arranged in a substantial frame, which, when on duty, is pressed and held firmly against the rear end of the rectangular box by means of the hooked screw-bolts *a*, and their nuts arranged in removable brackets *b*, in the manner illustrated in these drawings. The letter K represents a plunger, which consists in a long rectangular box, adapted to fit closely within the walls of the main rectangular box, and to be operated as hereinafter described. The lower wall of this plunger has a groove on its lower surface marked *c*, which, with the plunger, is adapted for a reciprocating movement on the stop *d*, as the plunger is actuated in the rectangular box. This stop *d* is a pin firmly fixed in the bottom of the rectangular box, and serves to prevent said plunger from being drawn too far forward. M represents an arm, pivoted to the front end of the plunger, and to the vertical arm P, as shown. R is a rock-shaft, arranged in removable brackets or boxes on the extended front portions of the

sides of the main rectangular box, and which is actuated by the crank W. The movements of this crank only describe a portion or arc of a circle, and not entire revolutions.

It is obvious that the length of the stroke given to the plunger K must depend upon the length of the arms P and M. Hence, great care should be taken in the construction of these arms; and I advise that the crank-arm be made longer than arm P, so as to secure additional leverage.

It will be observed that I arrange my main rectangular box in an inclined position. The object of this arrangement is as follows: If arranged in a horizontal position, the broken butter would pass through the screen on the same line, and, consequently, fall, in a sheet or stream, into the reservoir, thereby losing, in great part, the benefit of a full and thorough separation into small fragments. By my arrangement, however, each broken fragment is permitted to find its way into the reservoir without contact with any other.

Heretofore, in similar devices, but little care has apparently been taken to avoid holes and crevices, in which butter may find its way and become rancid, thereby endangering the purity of the charge which is to follow. In constructing my apparatus I have given especial study, and have, I think, overcome the difficulty. I have also, by attaching the screen closely to the end of this rectangular box, left no crevice through which butter may be forced from the rectangular box without passing through the wire-cloth and being broken. Such crevices must necessarily be found in rectangular box, in which the wire-frame is arranged in grooves.

The operation of the machine is as follows: Butter is thrown into the hopper C, and the crank turned so as to bring the rear end of the plunger K to the front thereof. The butter will then fall into the rectangular box. I then turn the crank toward the rectangular box, and thereby force the charge through the breaking-trough, from which it falls into a suitable receptacle in a shower, thoroughly aired and broken.

It is obvious that the long box, which constitutes the plunger, will serve to fill the space below the hopper, and prevent any butter from passing therefrom downward until the rear end

of said plunger is drawn to the front, as above described. This function could not, probably, be filled by a plunger constructed otherwise than as above described.

To remove the breaking-screen, the operator is only required to loosen the nuts on the screw-bolts *a* and turn the heads of said bolts to the proper angle.

What I claim as new, and desire to secure by Letters Patent, is—

The breaking apparatus described, arranged in an inclined position, the long plunger K,

with its operating devices attached in rear of the hopper, and the removable wire-screen D, held to duty by the clamp-bolts *a*, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in presence of two witnesses..

JNO. C. RORICK.

Witnesses:

ROBERT EVERETT,
GEORGE E. UPHAM.