(No Model.)

2 Sheets—Sheet 1.

O. C. & W. A. FRAME.

Meal Chest.

No. 241,347. Patented May 10, 1881.

Fig. 1.

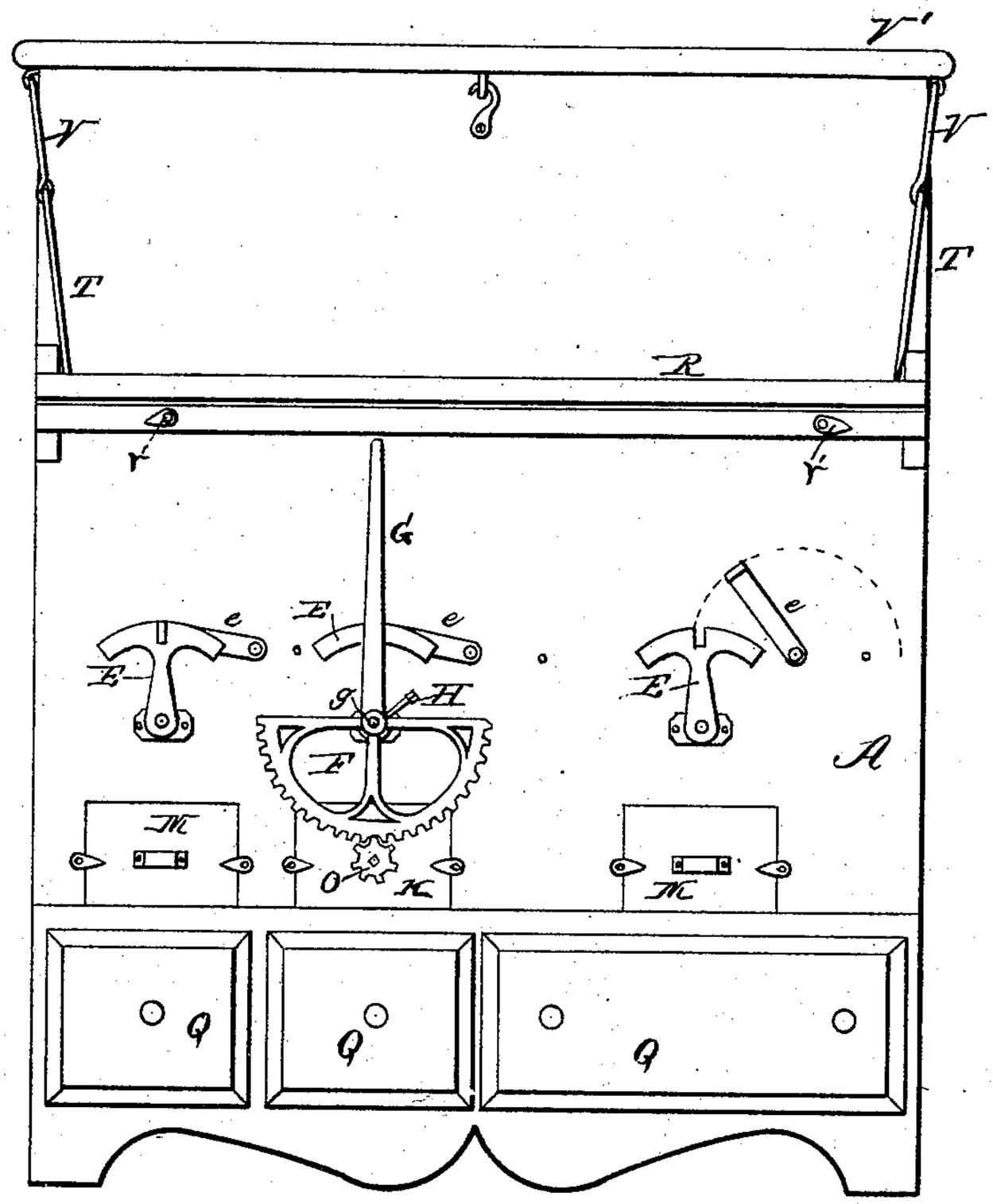
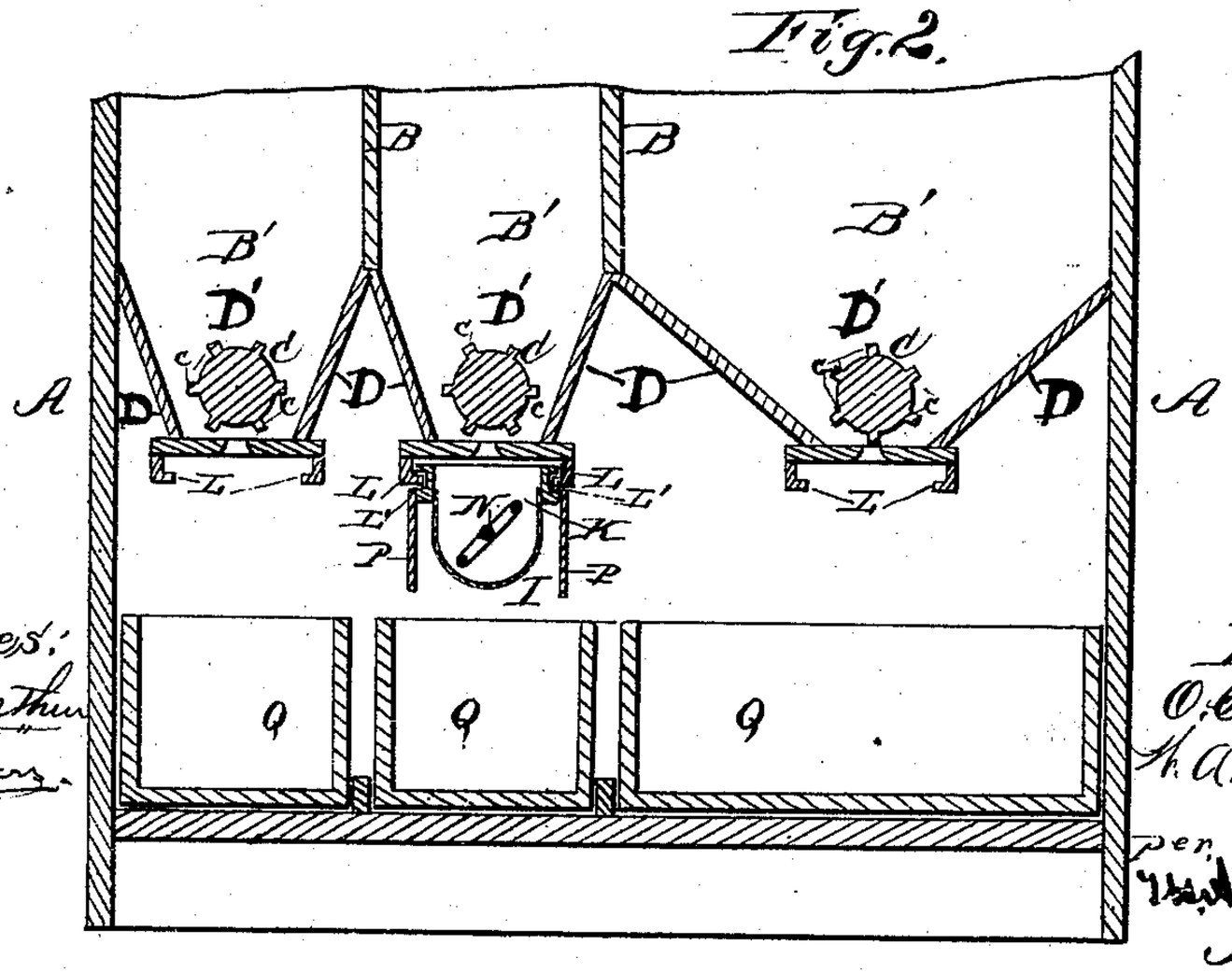


Fig. 2.



Witnesses:
H. C. McArthur
John C. Rogers.

Inventors
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(No Model.)

2 Sheets—Sheet 2.

O. C. & W. A. FRAME.

Meal Chest.

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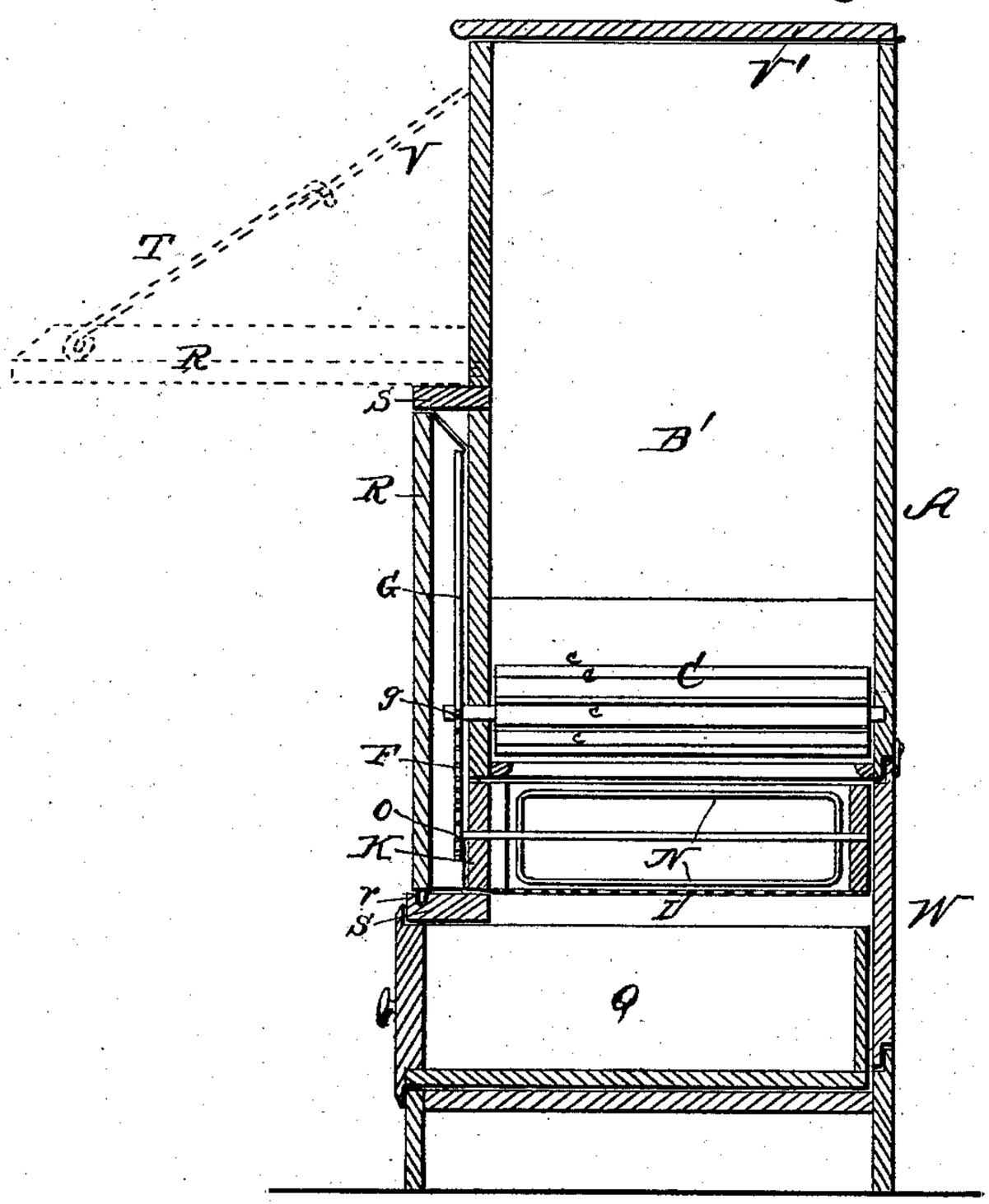
Fig. 3.



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UNITED STATES PATENT OFFICE.

OLIVER C. FRAME AND WILLIAM A. FRAME, OF BARNESVILLE, OHIO.

MEAL-CHEST.

SPECIFICATION forming part of Letters Patent No. 241,347, dated May 10, 1881.

Application filed February 23, 1881. (No model.)

To all whom it may concern:

Be it known that we, OLIVER C. FRAME and WILLIAM A. FRAME, of Barnesville, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Meal-Chests; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a front elevation, Fig. 2 a longitudinal section, and Fig. 3 a vertical cross-section, of our meal-chest.

The nature of our invention consists in the combination and arrangement of parts, hereinafter to be more fully described, and specifically set forth in the claims.

The letter A indicates the chest, the upper portion of which is divided by vertical partitions B into a series of bins or compartments, B′, for the reception of meal or flour. The bottoms of these bins are formed by the inclined boards D D, with a space, D′, between them for the passage of the meal. At the bottom of each bin is arranged a roller, C, provided with longitudinal flanges *c c*, or the roller can be corrugated so as to subserve a similar purpose, the object of said flanges being to force or feed the meal from the bin through the passage in the bottom thereof during the rotary movement of the roller. These flanges are formed of such width that when the roller is turned so as to bring two of its flanges which are upon opposite sides in a horizontal plane the said flanges will entirely close the opening at the bottom of the bin, whereby each flanged roller acts as a cut-off for the bin in which it is arranged. It will be obvious, however, that when the roller is rotated its flanges will feed the meal down through the opening in the bin-bottom.

In order to lock the rollers, so as to prevent the escape of meal from the bin, we secure upon the end of each shaft an arm or rack, E, and pivot upon the chest a latch, *e*, adapted to engage said arm or rack. When it is desired to operate the roller the latch will be disengaged from the arm and swung round out of the way. It is designed to impart only partial revolutions to the rollers in reverse directions, and to this end we provide a rack-segment, F, having a handle, G, and a hub, *g*, adapted to be fitted upon any one of the projecting roller-shafts and secured thereon by a set-screw, H.

In order to effectively sift the meal which is fed down from the bins by the flanged rollers we provide a semi-cylindrical sieve, I, of wire-gauze or perforated sheet metal, which is secured in a slidable box or drawer, K, so as to constitute the bottom thereof. This box can be placed in position under any one of the bins, and in order to admit of this change of place we arrange two horizontal guides, L, below each bin and provide the drawer with grooves L′ L′, for receiving said guides. Openings are formed in the front of the chest for the entrance of said drawers, and doors M are provided for closing the openings not closed by the front of the drawer.

N indicates a reel arranged within the sieve, the ends of its shaft being journaled in the front and rear sides of the drawer. The forward end of the reel-shaft extends beyond the front of the drawer, and is provided with a pinion, O, with which the teeth of the vibratory rack-segment engage when the said segment is secured upon one of the roller-shafts above the drawer containing the sieve and reel; hence, during the operation of the roller and the consequent feed of the meal down through the opening in the bottom of the bin the sieve which has been arranged under such roller will catch the meal, and the reel actuated by the vibratory rack-segment will agitate the meal within the sieve, so as to cause the same to pass through the meshes, and also break up lumps and cause them to be thoroughly sifted.

The drawer is provided with guard-plates P at the sides of the sieve for the purpose of preventing the meal from scattering and for directing it down into one of the lower drawers, Q, designed to receive the sifted meal. We provide the chest with several of these lower drawers, Q, whereby all of said drawers can be supplied with sifted meal, if desired.

R indicates the kneading-board, which, when not in use, can be secured to the front of the chest, so as to conceal the locking devices for the rollers and the mechanism for operating the same. The means shown for holding the kneading-board in this position consist in two horizontal ledges, S, upon the front of the chest,

one being provided with recesses to receive dowel-pins *r* upon the lower edge of said board, and the other being provided with latches *r'*. To support the kneading-board in position for use it is brought to a horizontal plane with its inner edge resting upon the upper ledge, S, and its dowel-pins entering recesses in the chest. Hooks T T upon the kneading-board are then engaged with links U U, which are suspended upon the sides of the chest.

The chest is provided with a hinged cover, V', and also with a lower rear door, W, which latter can be removed so as to admit of the cleaning out of the chest, any suitable devices being employed for securing the door in a closed position.

What we claim as our invention is—

1. The combination, in a meal-chest, of a bin having a double-inclined bottom and an opening through the same for the passage of the meal, with a roller having longitudinal flanges adapted to both feed the meal through the bin-bottom and to close the feed-passages when necessary, all substantially as described.

2. The combination, in a meal-chest, of the bins, with the flanged feed and cut-off rollers C and the notched arms E, and latches for locking said rollers in position to close the openings in the bottoms of the bins, substantially as described.

3. The combination, in a meal-chest, of the bins, with an opening in each for the passage of meal through their bottoms, with the flanged feed and cut-off rollers C, the vibratory rack-segment adapted to fit upon the roller-shafts, the sieve I, provided with a rotary reel, and a pinion upon the reel-shaft adapted to engage the vibratory rack-segment, substantially in the manner and for the purpose specified.

4. A meal-chest provided with a series of bins, rollers for feeding the meal through openings in the bottoms of the bins, a drawer carrying a semi-cylindrical sieve and a reel, arranged to be supported under any one of said bins, doors for closing the openings in the chest through which said drawer is passed in and out, drawers arranged in the bottom of the chest to collect the sifted meal, mechanism for locking the feed-rolls, and a rack-segment adapted to be secured upon any one of the roller-shafts to operate the same conjointly with the reel, substantially as described.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

OLIVER C. FRAME.
WILLIAM A. FRAME.

Witnesses:
SAMUEL L. JAMES,
BENJ. MACKALL.