

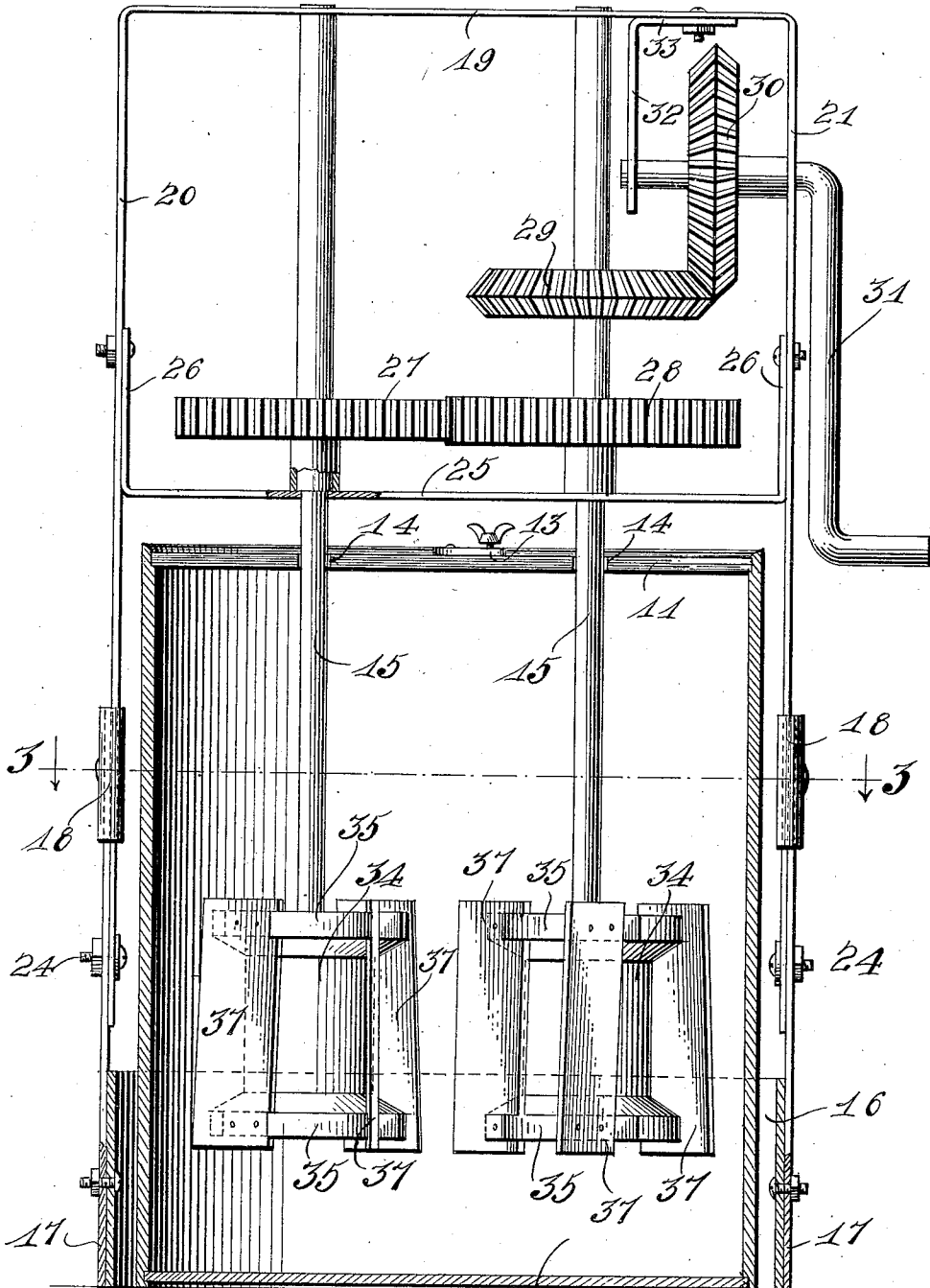
E. L. COLLINS.
CHURN.

APPLICATION FILED JUNE 24, 1912.

1,056,778.

Patented Mar. 25, 1913.

2 SHEETS—SHEET 1.



WITNESSES

C. R. Hardy

Thos J Woodward

1 10

INVENTOR

E. L. Collins

By E. C. Freeman, his Attorney

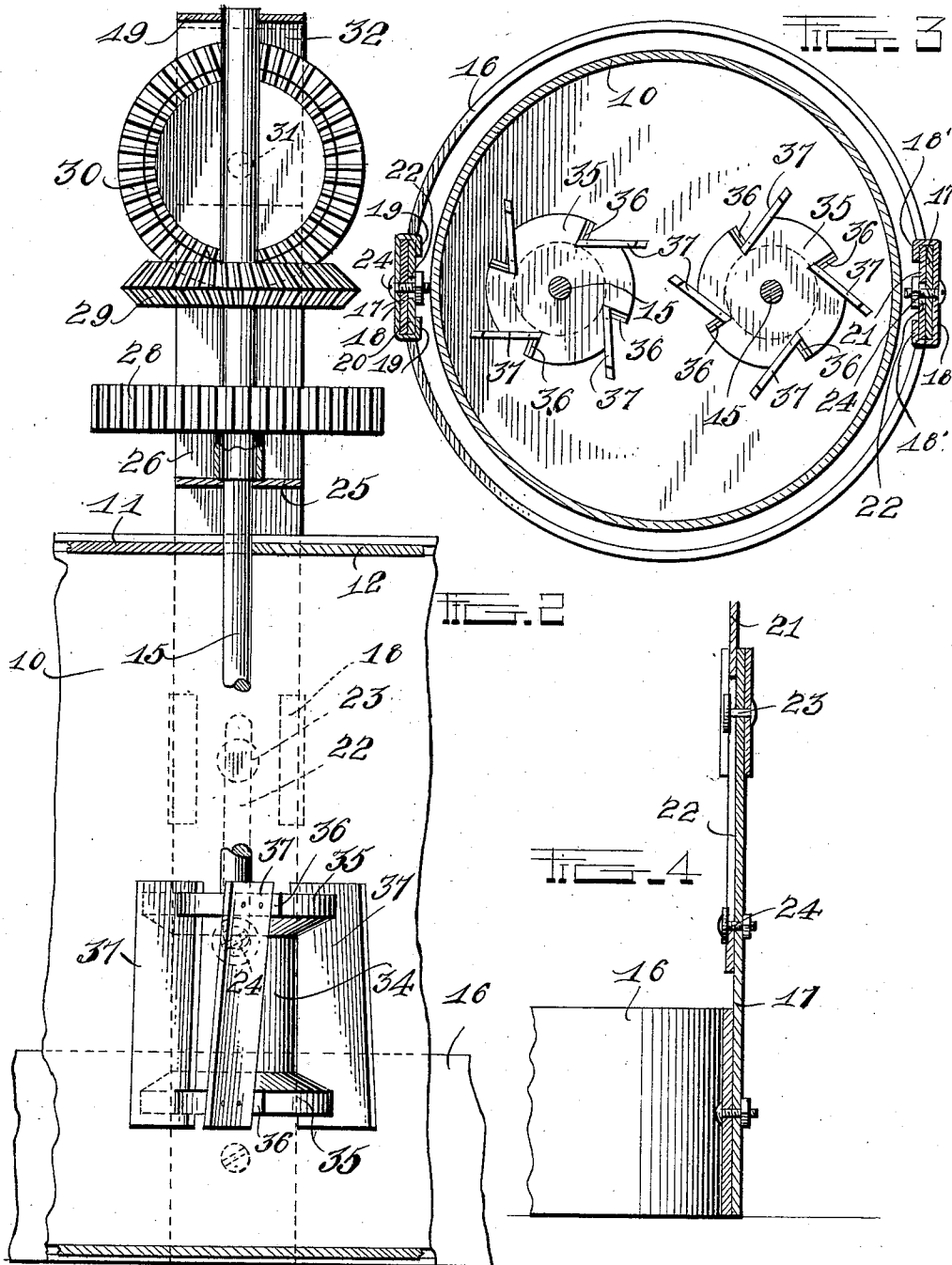
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C. R. Hardy

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UNITED STATES PATENT OFFICE.

EDWARD L. COLLINS, OF WEIR, TEXAS.

CHURN.

1,056,778.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed June 24, 1912. Serial No. 705,598.

To all whom it may concern:

Be it known that I, EDWARD L. COLLINS, citizen of the United States, residing at Weir, in the county of Williamson and State of Texas, have invented certain new and useful Improvements in Churns, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to churns of the vertical dasher type, and the principal object of the invention is to provide an improved means for mounting the dashers so that the dashers may be removed from the receptacle and the receptacle removed from the supporting frame, the dashers remaining connected with the supporting frame.

Another object of the invention is to provide an improved type of supporting frame which is provided with a base, and the upper portion slidably connected with the base so that the position of the dashers in the receptacle may be regulated.

This invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a vertical sectional view through the churn. Fig. 2 is a fragmentary vertical sectional view taken at right angles to the view shown in Fig. 1. Fig. 3 is a section along the line 3—3 in Fig. 1. Fig. 4 is a fragmentary vertical sectional view through the lower portion of the frame.

Referring to the accompanying drawings, it will be seen that this invention comprises the receptacle 10 which is mounted in the frame and provided with the sectional covers 11 and 12, the cover sections being inserted in the receptacle after the receptacle has been placed in the frame and the dashers in the receptacle, and held in place by the catch 13. It is, of course, obvious that openings 14 must be provided so that the shafts 15 of the dashers may pass through the cover.

The frame comprises the lower collar 16 which surrounds the receptacle and rests upon the floor and carries the standards 17 which are provided at their upper ends with the clips 18 having the inwardly extending lugs 18'. The upper portion of the frame comprises the bridge 19 having the depending arms 20 and 21, which passes through the clip 18 between the standards 17 and the inwardly extending lugs 18'. The arms 20 and 21 are provided with the slots 22, through which the securing bolts 23 and 24 pass so that the upper frame will

be slidably connected with the lower portion of the frame. A bar 25 is provided with the end portions 26 secured to the arms 20 and 21 and extends across the frame, the intermediate portion of the bar being provided with openings which are formed in alinement with the openings 14 formed in the receptacle cover, and with openings formed in the bridge 19.

The shafts 15 pass through the openings formed in the bridge 19 and bar 25, and carry gear wheels 27 and 28 which hold the shaft 15 in place and are intermeshed so that the rotation of the gear wheel 28 will rotate the gear wheel 27. A beveled gear wheel 29 is mounted above the gear wheel 28 and meshes with a beveled gear 30 mounted upon the crank 31. The inner end of the crank 31 is supported by the bracket 32 having its upper end portion 33 secured to the bridge 19. It will, therefore, be seen that when the crank 31 is rotated, that the gear wheel 30 will transmit rotary motion to the gear wheel 29 rigidly mounted upon one of the shafts 15, and that the gear wheel 28 which is also rigidly mounted upon the shaft will transmit rotary motion to the wheel 27 which is rigidly mounted upon the remaining shaft 15, thereby causing the shaft to rotate in the opposite direction. A head 34 is mounted upon the inner end of each of the shafts 15 and carries upper and lower flanges 35 which are provided with diagonally disposed notches 36. Paddles 37 are mounted in the notches 36, and it should be noted that the outer edges of the paddles converge toward the upper ends of the heads 34 so that the cream will be churned better.

When using this device, the receptacle is set in place where it is desired to do the churning and the cream poured into the receptacle. The frame is then placed upon the receptacle with the dashers extending down into the receptacle, and the upper portion of the frame is then vertically adjusted so that the dashers will extend into the receptacle the desired amount. The bolts 24 are then tightened to hold the frame in the adjusted position, and the cover sections 11 and 12 are then inserted and the churn is in condition for operation. By turning the crank 31 the dashers are caused to rotate, and the cream will be quickly churned into butter. It should be noted that since these paddles 37 are pitched at an angle specified, the dashers may be rotated more readily than

if they were set at a direct right angle to the vertical diameter of the head 34, and since the outer edges are sloping as shown, the cream will be still better churned since it has a tendency to force the cream down toward the bottom of the churn thereby agitating the cream a greater amount than would be the case if there were simply rotary motion. After the butter has been churned, the cover sections are removed and the frame can then be raised to withdraw the dashers from the receptacle and remove the frame from about the receptacle. The frame and dashers can then be cleaned and put away, and the butter removed from the receptacle and the receptacle cleaned and set away. It is, of course, obvious that if this churn is made large enough to require it, the crank 31 may be provided with a pulley wheel and a belt connected with the pulley in order to operate the churn.

Having thus described the invention, what is claimed as new, is:—

1. A churn comprising a receptacle, a collar surrounding the lower portion of said receptacle, standards extending above said collar and provided at their upper end portions with clips having their end portions turned inwardly to form guides, a frame

adjustably connected with said standards and passing through said guides, dashers rotatably mounted in said frame and extending into said receptacle, and means for rotating said dashers.

2. A churn comprising a receptacle, a collar surrounding the lower portion of said receptacle, standards extending above said collar and having guides at their upper end portions, a frame adjustably connected with said standards and passing through said guides, and churning means carried by said frame and passing into said receptacle.

3. A churn comprising a receptacle, a supporting frame inclosing said receptacle, vertical shafts rotatably mounted in said frame and extending into said receptacle, an enlarged head at the inner end of each of said shafts, upper and lower flanges carried by each of said heads, the flanges of each of said heads being provided with alined notches, blades secured in said notches, and means for rotating said shafts.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

EDWARD L. COLLINS.

Witnesses:

F. W. CAROTHMO,

A. DEE SIMPSON.