(No Model.)

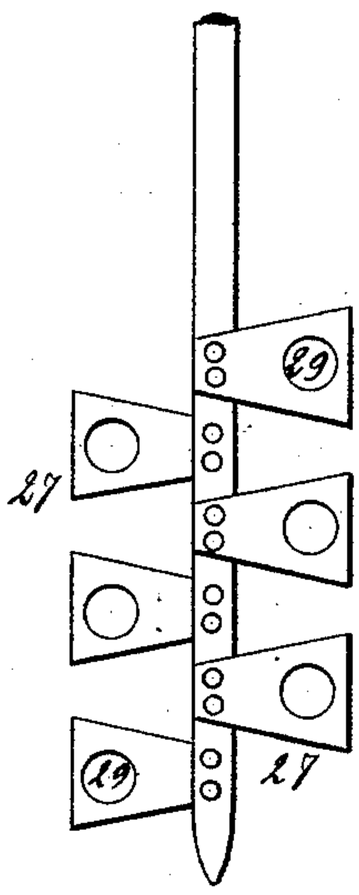
W. S. SMITH.

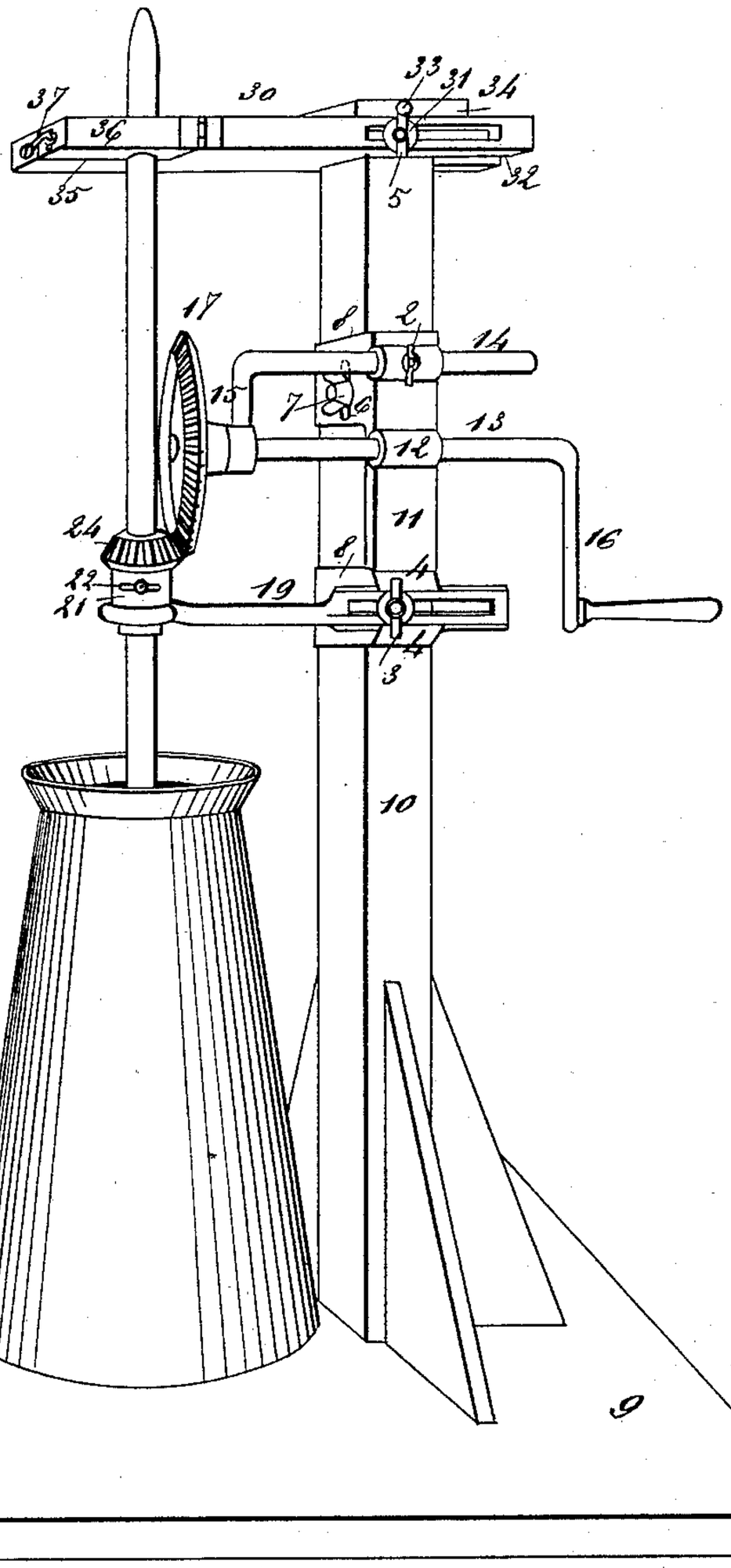
CchurN.

No. 348,793. Patented Sept. 7, 1886.

Fig. 1

Fig. 2





WITNESSES:

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CHURN.

SPECIFICATION forming part of Letters Patent No. 348,793, dated September 7, 1886.

Application filed June 2, 1886. Serial No. 203,903. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM STEPHEN SMITH, of Salem, in the county of Marion and State of Oregon, have invented a new and Improved Churn, of which the following is a full, clear, and exact description.

The object of my invention is to provide a churn-dasher-operating mechanism which will be applicable for use in connection with most any form of churn.

The invention consists of certain novel constructions and combinations of parts to be hereinafter described, and specifically pointed out in the claims.

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

Figure 1 is a perspective view of my improved form of churn-operating mechanism. Fig. 2 is a detail view illustrating the construction of the dasher.

In constructing such a mechanism as is illustrated in the drawings above referred to, I provide a vertical post or standard, 10, which may be held and braced to a suitable platform, 9. To one side of this standard there is bolted adjustably a casting, 11, by its side lugs, 8, which clasp the sides of the post and are slotted at 6 to receive the bolts 7, passing through the lugs and post. This casting is formed with a bearing, 12, in which there is mounted a horizontal shaft, 13, and this casting also serves as a support for a guiding-arm, 14, formed with a downwardly-extending end, 15, that is socketed to receive and support the inner end of the shaft 13, the arm 14 being held in any position to which it may be moved by a set-screw, 2.

Upon the inner end of the shaft 13 there is a bevel-gear, 17, and its other end is provided with a crank-arm, 16.

Below the bearing 12 of the shaft 13 there are arranged under-cut lugs or projections 4, between which lugs there is mounted a guiding-arm, 19, the inner end of which is bent to form a hook to receive the reduced lower end of a socket, 21, that is made integral with a pinion, 24, that is engaged by the gear 17, the socket and pinion 21 24 being adjustably secured to the dasher-rod by a set-screw, 22. The arm 19 is longitudinally slotted and held in place by a set-screw, 3.

Upon the top of the standard 10 there is arranged a horizontal bar, 30, that is held to place upon the standard by a bolt, 31, and a winged nut, 5. This bar serves as a guide for the upper end of the dasher-rod 20. The bar 30 is a flat bar, forked at one end, at 32, to receive the post 10, to which post is held above the bar by a screw, 33, a collar, 34, in order that the bar may be kept from sagging. The arms of the fork 32 are transversely and longitudinally slotted for the bolt 31 to permit of adjusting the length of extension of the bar 30. The other end of the bar 30 is rabbeted at 35, and a block, 36, fitting in the rabbet, is hinged at its inner end to the bar and held closed by a hook and eye, 37. In the meeting edges of the bar and block is formed the bearing for the upper end of the dasher-rod. The dasher-rod carries a number of dasher-blades, 27, that are formed with apertures 29, the parts being arranged as best shown in Fig. 2.

From the construction described it will be seen that after the dasher-rod and the parts of the support have been adjusted, the parts may be clamped and held to position by the set-screws.

In operation an exceedingly high rate of speed may be imparted to the dasher-rod owing to the arrangement of the gearing, as described.

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

1. The combination, with a churn-dasher shaft and its dasher-blades, of a socket, 21, carrying a pinion, 24, a gear, 17, carried by a shaft, 13, that is provided with a crank-arm, 16, the pinion 24 and the gear 17 meshing, a plate, 11, formed with bearings for the shaft 13, and a guiding-arm, 14, supported by the plate and engaging with the shaft 13, substantially as described.

2. The combination, with a standard, 10, of a plate, 11, shaft 13, guiding-arms 14 and 19, carried by said plate, a gear, 17, carried by the shaft 13, and a pinion, 24, engaged by said gear and made integral with a socket, 21, that is adjustably secured to the dasher-shaft, which dasher-shaft is guided and held by the arms 19 and 30, substantially as described.

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Witnesses:

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