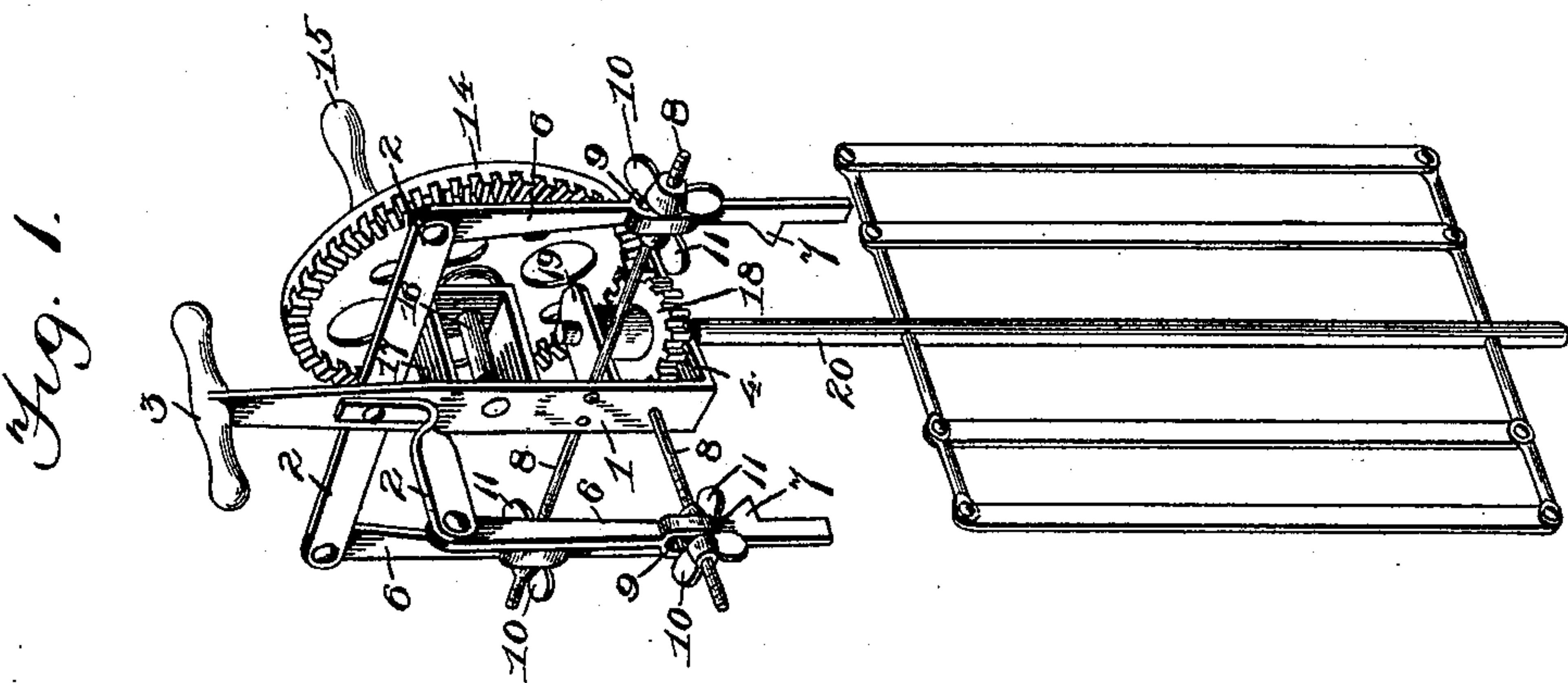


Patented May 11, 1897.



Chas. Knowlton.

UNITED STATES PATENT OFFICE.

GENERAL L. GRAY, OF MONT, KENTUCKY.

CHURN.

SPECIFICATION forming part of Letters Patent No. 582,198, dated May 11, 1897.

Application filed October 20, 1896. Serial No. 609,432. (No model.)

To all whom it may concern:

Be it known that I, GENERAL L. GRAY, a citizen of the United States, residing at Mont, in the county of Lyon and State of Kentucky, have invented a new and useful Churn, of which the following is a specification.

My invention relates to churns, and particularly to means for attaching the dasher-operating mechanism to the churn tub or receptacle; and the object in view is to provide a supporting-frame for dasher-operating mechanism having means adapted for attachment to a churn-receptacle of different sizes, the same being adapted to be removed with facility to release the dasher.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a dasher-operating mechanism having a supporting-frame constructed in accordance with my invention. Fig. 2 is a vertical central section of the same.

Similar numerals of reference indicate corresponding parts in both the figures of the drawings.

1 designates an upright which supports a spider having radial arms 2, said upright terminating at its upper end in a hand hold or grip 3 and at its lower end in a horizontal foot 4, which is adapted to be arranged contiguous to the top or cover of the churn-receptacle 5.

Pivotally connected to and depending from the extremities of the arms of the spider are clamp-arms 6, adapted to be arranged at their free lower ends outside of the churn-receptacle and provided at their inner sides with heels or shoulders 7 to bear upon the upper edge thereof. Attached at their inner ends to the upright 1 are tie-rods 8, which extend through vertical slots 9 in the clamp-arms and are engaged in contact with the outer sides of said arms with adjusting-nuts 10, preferably thumb-nuts. Also threaded upon the tie-rods are lock-nuts 11, which bear against the inner sides of the arms.

The foot 4 of the upright is also provided, preferably, with an extension 12, having a terminal depending stud 13 to engage a socket

in the top of the churn-receptacle and thereby insure the steadiness of the upright, while the under surface of the foot 4 is held out of contact with the receptacle-top.

The driving-gear 14, which is provided with a handle 15 or similar means for communicating motion thereto, is mounted upon a spindle 16, arranged in a bracket 17 on the upright, and said driving-gear meshes with a pinion 18, which is disposed between the foot 4 and an ear 19, which projects inwardly from the upright and is attached to the dasher-staff 20.

From the above description it will be seen that by reason of the slots in the clamp-arms the latter may be adjusted toward or from the center of the machine, as required, to suit the diameter of the churn-receptacle, and that when the heels of the clamp-arms are arranged upon the upper edge of the receptacle overlapping the contiguous periphery of the lid and the adjusting devices are tightened to draw the lower extremities of the clamp-arms firmly against the exterior surface of the receptacle the operating mechanism is securely mounted and is held from vibration by the operation of the driving mechanism.

The function of the stud 13 is to cooperate with the clamp-arms to steady the upright during the operation of the device, and in order to relieve said clamp-arms as much as possible of the strain incident to the operation of the mechanism said stud is preferably arranged approximately under or in the plane of the driving-wheel 14, where it receives the direct thrust of said wheel.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. In a churn, the combination with an upright carrying dasher-operating mechanism, of a spider having arms radiating from the upright, clamp-arms pivotally mounted upon and depending from the spider-arms and provided at intermediate points of their inner sides with heels or shoulders to bear upon the upper edge of a churn-receptacle, said clamp-

arms being provided with longitudinal slots, tie-rods extending radially from the upright and projecting through the slots in the clamp-arms, and adjusting and locking nuts threaded upon the tie-rods respectively contiguous to the outer and inner surfaces of the clamp-arms, said heels being adapted to secure in place the lid of the receptacle, substantially as specified.

10 2. In a churn, the combination of an upright provided at its upper extremity with a hand hold or grip and at its lower end with a foot terminating in a depending stud to engage a socket in a receptacle top or cover,

15 dasher-operating mechanism mounted upon the upright, and including a driving-wheel

arranged in the plane of said stud, a spider having arms radiating from the upright, pivotal clamp-arms mounted upon the spider-arms and provided with heels or shoulders to bear upon the upper edge of a churn-receptacle, and means for adjusting the lower ends of the clamp-arms inwardly, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GENERAL L. GRAY.

Witnesses:

G. W. WILLIAMS,
F. A. WILSON.