

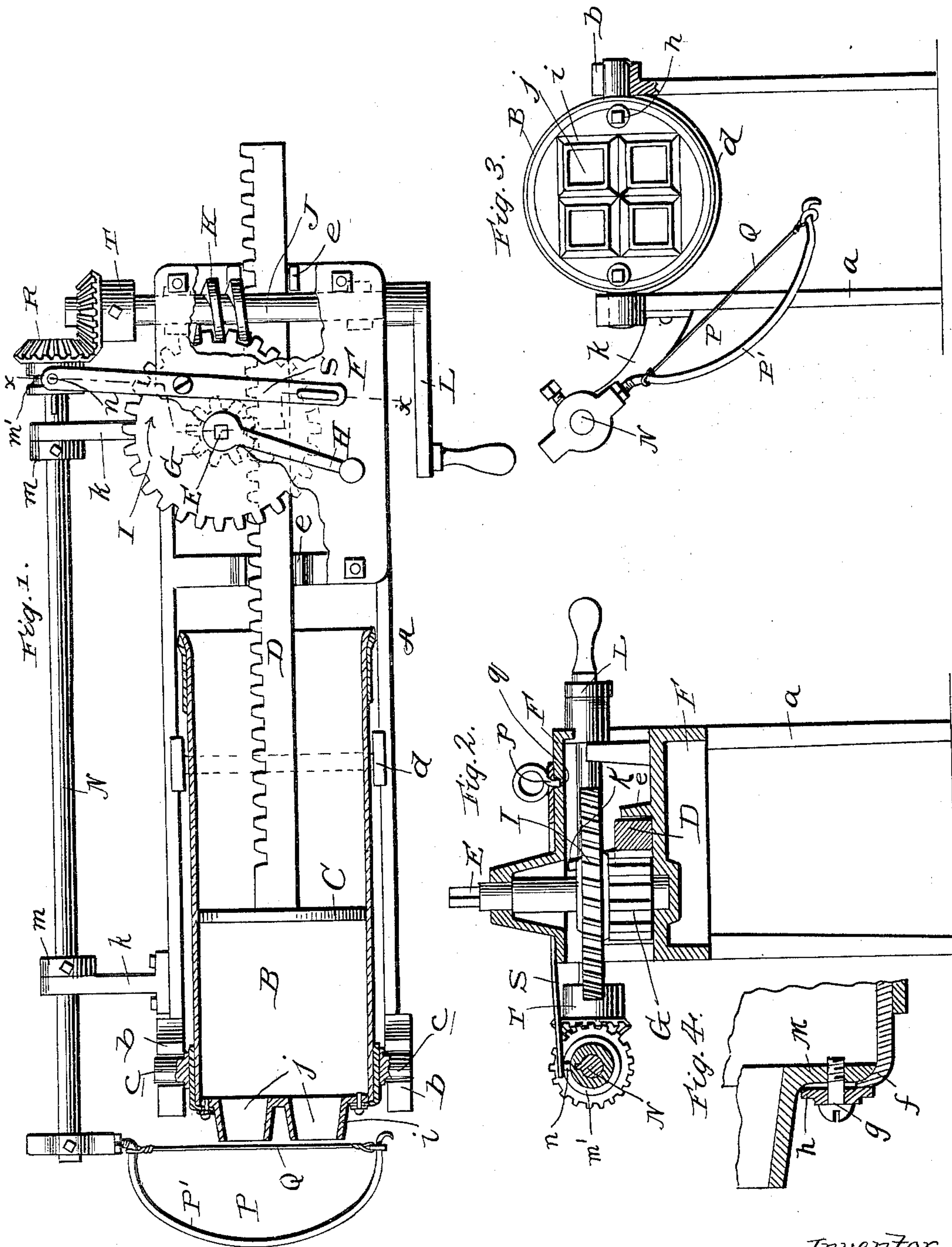
(No Model.)

C. A. GLOEKLER.

MACHINE FOR PRESSING AND MOLDING BUTTER.

No. 557,505.

Patented Mar. 31, 1896.



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MACHINE FOR PRESSING AND MOLDING BUTTER.

SPECIFICATION forming part of Letters Patent No. 557,505, dated March 31, 1896.

Application filed June 10, 1895. Serial No. 552,304. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. GLOEKLER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Pressing and Molding Butter and the Like; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in that class of machines which are adapted to quickly press and cut a mass of butter into small pieces of equal size; and it consists in the peculiar construction, novel combination and adaptation of parts hereinafter described, and particularly pointed out in the claims appended.

In the accompanying drawings, Figure 1 is a plan view, partly in section, of my improved machine. Fig. 2 is a transverse section taken in the plane indicated by line *xx* of Fig. 1. Fig. 3 is a rear elevation, and Fig. 4 is a detail section.

Referring by letter to said drawings, A indicates the main frame of my improved machine, which is supported by legs *a* or other suitable means, and is provided adjacent to one end with bearings *b* for the trunnions *c* of a cylinder B, and is also provided with a saddle *d* to receive and support the forward end of the said cylinder.

C indicates a piston or follower, which is adapted to move in the cylinder B and is carried at the forward end of a rack-bar D, arranged and adapted to slide in suitable bearings *e* in the main frame.

E indicates a vertical shaft, which is journaled in the main frame and in the housing F, secured thereon, and is provided with a pinion G, meshing with the teeth of rack-bar D, and is also provided at its upper end with a crank-handle H, through the medium of which it may be turned to quickly withdraw the piston or follower C from the cylinder B, as presently described.

I indicates a gear-wheel, which is fixed on the shaft E, and J indicates a transverse drive-shaft, which is journaled in suitable bearings between the main frame A and housing F

and is provided with a worm-screw K, adapted to mesh with the teeth of gear-wheel I, and is also provided at one end with a crank L, through the medium of which it may be readily turned to slowly turn the shaft E and its gear-wheel I and pinion G and slowly move the piston or follower C forward or toward the discharge end of the cylinder B. This shaft J is adjustable endwise in its bearings, and it will therefore be seen that when the vertical shaft E is turned in the direction indicated by arrow (see Fig. 1) through the medium of the crank H, the teeth of the gear-wheel I, engaging the worm-screw K, will move the shaft J endwise, so as to disengage the worm-screw from the said gear-wheel, when the shaft E may be freely turned in the direction opposite to that indicated by arrow to quickly withdraw the plunger or follower from the cylinder B, for a purpose presently set forth. When the shaft J has been moved endwise for the purpose just stated and it is desired to move the plunger C slowly forward through the medium of the said shaft J and the intermediate gearing described, it is simply necessary to turn the crank-handle L toward the right, when the worm-screw engaging the teeth of the wheel I will draw the shaft J inwardly to its normal position, (illustrated in Fig. 1,) when the continued turning of said shaft J will turn the wheel I in the direction indicated by arrow, for the purpose stated.

The forward or receiving end of the cylinder B is open, as shown, to permit of it being readily charged with butter, and the opposite or discharge end is flanged, as indicated by *f*, and is normally closed by the head M, which rests against the inner side of the flange *f* and is removably secured in position by the screws *g*, which enter the outer side of the head and are provided with enlarged portions or washers *h*, as shown, which bear against the end of the cylinder and serve to hold the head M in position. The said head M is provided on its outer side, as better illustrated in Fig. 1, with four (more or less) protuberances *i*, and in the main portion of said head and in the protuberances *i* are formed passages *j*, which are gradually diminished in size from their inner to their outer ends, where they are shown as rectangular in shape,

and are designed, when the mass of butter is forced through them by the piston or follower C, to give shape to the butter or mold the same. In practice I contemplate furnishing with each of my improved machines two or more heads M, having passages *j* of different shapes and sizes, the said heads being designed to be used alternately, as desired. The head M being, as described, arranged against the inner side of the cylinder-flange *f*, it will be seen that all strain due to the pressure upon the butter is placed upon said flange *f* and not upon the bolts and washers *h*, which hold the head M in place, and consequently there is no liability of the head being displaced or disconnected during operation. Notwithstanding this, it will be seen that when desired the head M may be readily removed and replaced by another head when desirable.

N indicates a rotary shaft, which is journaled in brackets *k*, extending from one side of the main frame A, and is preferably provided with adjustably-fixed collars *m* for holding it against casual endwise movement.

P indicates a cutter, which preferably comprises a curvilinear arm P', which is fixed (preferably removably) on the forward end of the shaft N, and Q indicates a fine wire, which is connected to the arm P' at or adjacent to the ends thereof, and is designed as the shaft N is rotated to swing past the discharge ends of the passages *j* and cut off the butter as it is forced through the said passages by the piston C. At its end adjacent to the transverse shaft J the shaft N has keyed upon it an adjustable and removable beveled gear-wheel R, which is provided with a peripheral groove *m'* for the engagement of a stud *n* at one end of a lever S, which is fulcrumed on the housing F, and is provided at its opposite end with stud *p*, designed to engage an aperture *q* in the housing, so as to hold the gear-wheel R in one position, as presently described.

T indicates a beveled gear-wheel, which is adjustably fixed upon the shaft J, and is designed to mesh with and transmit motion to the gear-wheel R, when said shaft J is rotated as described.

In using my improved machine the piston C is drawn out of the cylinder B through the medium of the crank H and the intermediate mechanism, as before described, and the cylinder is then raised on its trunnions *c* and charged with a suitable quantity of butter, after which it is lowered so as to rest in the horizontal position illustrated in the saddle *d*. The shaft J is now turned toward the right, and after it reaches its normal position (illustrated) it will be seen that through the medium of the mechanism described it will slowly drive the piston C forwardly, so as to force the butter out through the passages *j* in the cylinder head M and at the same time will rotate the shaft N, so as to swing the arm P' and its wire Q and enable the latter to cut the butter off in pieces. As the plunger C

and the wire-carrying arm P' are moved at a corresponding speed, it will be observed that the pieces of butter forced through the head passages *j* will be cut in equal lengths, which is desirable; and it will also be observed that the length of the pieces of butter may be increased or diminished by replacing the gear-wheel R by a larger or smaller gear-wheel and adjusting the gear-wheel T to suit the same. After the butter has been entirely exhausted from the cylinder B the gear-wheel R is adjusted away from the gear-wheel T through the medium of the lever S, and the crank H is then turned in the direction indicated by arrow to move the shaft J endwise, as before described, and is then turned in the direction opposite to that indicated by arrow to quickly withdraw the piston C from the cylinder B, so as to permit of said cylinder being raised and refilled.

It will be appreciated from the foregoing that my improved machine is highly desirable for use in hotels and restaurants, where it is necessary to divide the butter into small portions to be placed upon individual dishes. It will also be appreciated that my improved machine is very simple and may therefore be cheaply manufactured and placed upon the market to be sold for a comparatively small price, which is a desideratum.

Having described my invention, what I claim is—

1. The herein-described machine for pressing and cutting butter consisting essentially of the main frame, the cylinder having trunnions adjacent to one end journaled in the main frame and also having a perforated head at one end and its opposite end open, the piston or follower arranged in said cylinder and having the rack-bar, the rotary shaft N, arranged in bearings at the side of the cylinder, the cutter fixed on said shaft and extending at right angles thereto and adapted to swing past the cylinder-head, the beveled gear R, adjustably keyed on the shaft N, and having a peripheral groove, the vertical shaft E, adapted to be turned by a crank and carrying the pinion G, engaging the rack-bar and also carrying the gear-wheel I, the endwise-movable drive-shaft J, having a crank at one end and also having the worm-screw K, meshing with the gear-wheel I, the beveled gear T, fixed on the shaft J, and meshing with the gear-wheel R, and the lever S, fulcrumed at an intermediate point of its length on the frame and having the stud at one end engaging the peripheral groove in gear-wheel R, and a stud at its opposite end adapted to engage a socket in the frame, substantially as and for the purpose set forth.

2. In a machine for pressing butter, the cylinder B, having the inwardly-directed flange *f*, at one end, the head M, arranged in the cylinder against the inner side of the flange *f*, and having the outwardly-extending protuberances *i*, and the passages *j*, formed in said protuberances, and also having a series

of threaded perforations adjacent to its edge,
the threaded bolts taking into threaded aper-
tures in the head and having heads at their
outer ends and washers or rings *h*, on said
5 bolts engaging the outer side of the flange *f*,
of the cylinder, all substantially as and for
the purpose set forth.

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

CHARLES A. GLOEKLER.

Witnesses:

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