

C. VOLKMANN.
 BUTTER MAKING AND MOLDING MACHINE.
 APPLICATION FILED OCT. 23, 1911.

1,065,284.

Patented June 17, 1913.

2 SHEETS—SHEET 1.

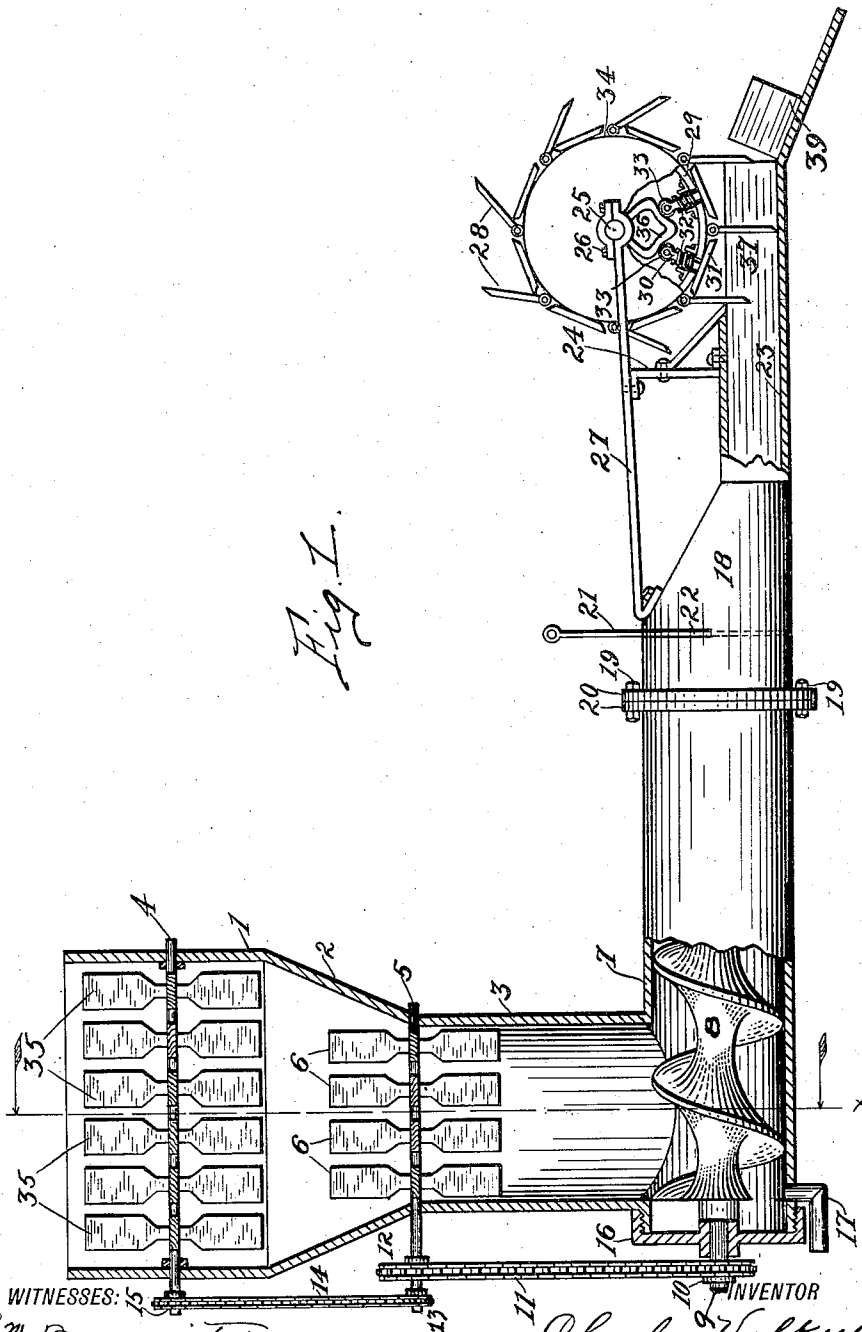


Fig. 1.

WITNESSES:
E. M. Baumeister
H. Solberg

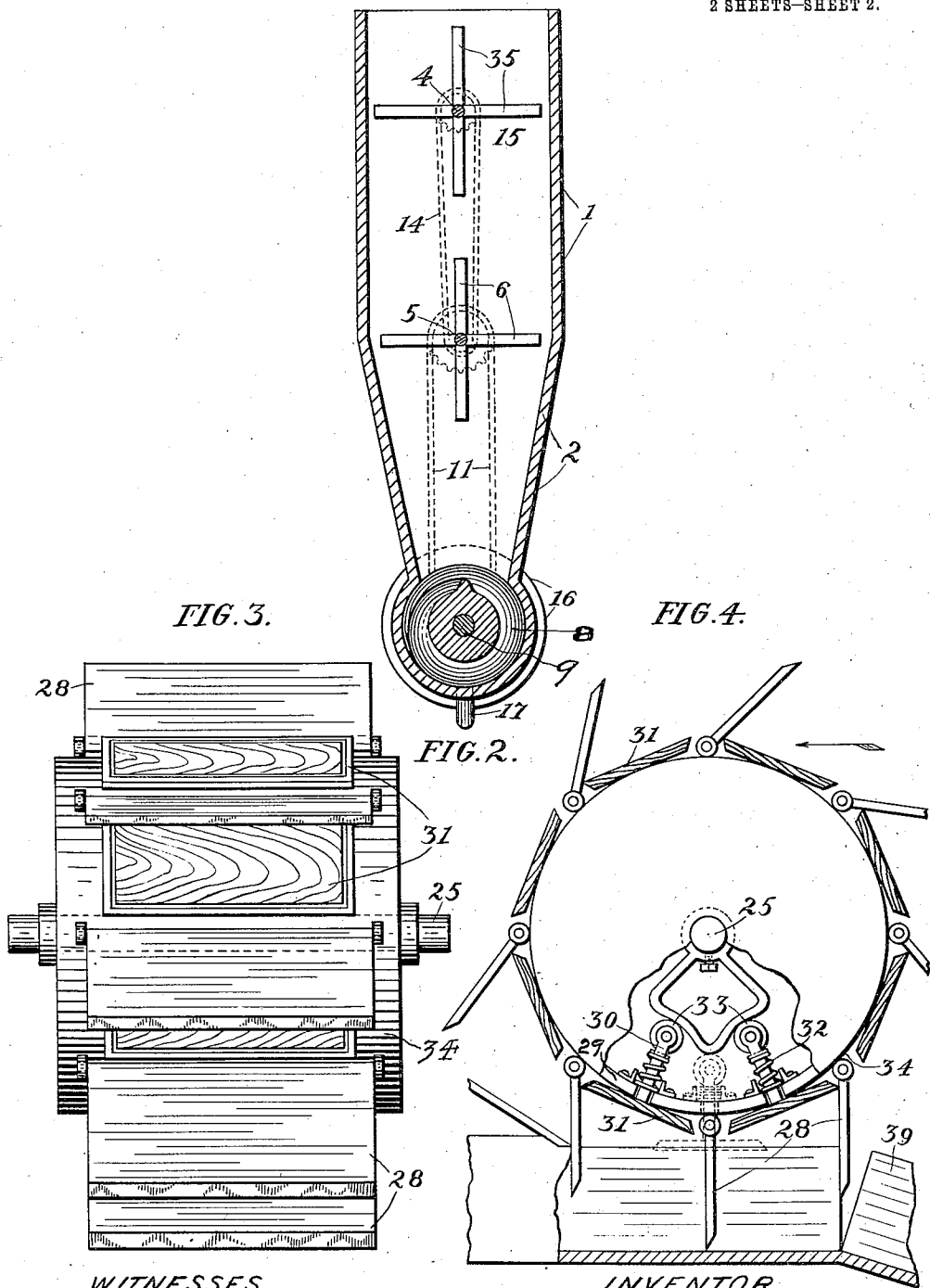
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 C. M. Baummeister
 K. Solbey.

INVENTOR
 Charles Volkmann
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UNITED STATES PATENT OFFICE.

CHARLES VOLKMANN, OF CHICAGO, ILLINOIS, ASSIGNOR TO UNIVERSAL BUTTER MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BUTTER MAKING AND MOLDING MACHINE.

1,065,284.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed October 23, 1911. Serial No. 656,161.

To all whom it may concern:

Be it known that I, CHARLES VOLKMANN, a citizen of the United States, residing in the city of Chicago, county of Cook, and State of Illinois, have invented a certain new and useful Improvement in Butter Making and Molding Machines, of which the following is the specification.

My invention is designed to produce a machine which will churn the butter from the cream, wash and work it and then mold it into bricks of one pound each, means being provided to stamp any desired design upon the face of the brick.

My means of accomplishing the foregoing may be more readily understood by having reference to the accompanying drawings, which are hereunto annexed and are a part of this specification, in which:

Figure 1 is a side view of my machine, portions of the exterior being broken away to show the interior construction. Fig. 2 is a cross section taken on the line $x-x$ in Fig. 1. Figs. 3 and 4 are enlarged detail views of the cutting off and stamping mechanism.

As shown in the drawings, my machine consists of a vertical receptacle 1, which is mounted upon a conoidal portion 2, which is fitted to a vertical cylinder 3 of smaller diameter than the receptacle 1.

4 is a shaft which is mounted in the receptacle 1 and has secured thereto a plurality of paddles 35.

5 is a shaft mounted in the vertical cylinder 3 which has secured to it a plurality of paddles 6.

7 is a cylinder which extends horizontally from the vertical cylinder 3 and has mounted therein a screw conveyer 8, which is secured to a shaft 9, which may be driven by a suitable power (not shown).

10 is a sprocket mounted upon a shaft 9, which carries a chain 11 to a sprocket 12 mounted upon the shaft 5.

13 is a sprocket mounted upon the shaft 5, which carries a chain 14 to a sprocket 15 mounted upon the shaft 4.

16 is a cap to permit the insertion of the screw conveyer 8. A drain pipe 17 is provided at the lower corner of the cylinder 7.

18 is a spout or nozzle, which is secured to the cylinder 7 by means of bolts 19 passing through the flanges 20.

21 is a cut off located in a slot 22 formed in the nozzle 18.

23 is a spout which is of the desired size in which the butter is to be molded.

34 is a wheel mounted upon a shaft 25, the said shaft being mounted in bearings 26, which are carried by braces 24 and 27, the periphery of the wheel 34 being provided with a plurality of cutting off knives 28.

31 is a stamp for impressing the desired mark on the brick of butter. The stamp 31 is formed with an inwardly extending stem 30 which is mounted in a rim 29, the stamp being held in a retracted position by means of a coil spring 32. A roller 33 is provided in the bifurcated end of the stem 30, which is acted on by a cam 36, the face of which is adapted to contact with the roller 33, operating to extend the stamp 31 at the desired time to print its impress upon the butter, and also to prevent the butter issuing from the spout 23 from swinging the knife 28 on its pivot. When desired the wheel 34 may be inclosed in any suitable manner to protect the cams and the operating mechanism from moisture.

The operation of my improved device is as follows: Power is applied to the shaft 9 so as to rotate the conveyer screw 8 in a reverse direction. The cream is then poured into the upright part of the machine and the shafts 4 and 5 being rotated through the medium of the chains 11 and 14 and the sprockets 10, 12, 13 and 15, respectively, whirl the paddles 35 and 6 about rapidly, while the reverse movement of the conveyer screw 8 constantly passes up the liquid, which is in the cylinder 7, so that it is agitated all of the time in every part of the machine. The cutoff is lowered into position so as to prevent the liquid passing out through the nozzle 18. As soon as the butter has come, the drain pipe 17 is opened and the butter milk drained off. Salty water is then put in and the machine rotated again. When it has been sufficiently washed the drain 17 is opened and the salty water is drained off. The shutoff 21 is then raised and the shaft 9 is rotated in the opposite direction so that the conveyer screw operates to expel the butter, which is in the machine through the nozzle 18, the taper of which serves to compress it. It passes out through the spout 23 where it is engaged by the cutoff knives 28

mounted upon the wheel 34. These knives come down in turn, the distance between them as 37 being the right distance to measure off one pound of butter. This insures a full pound every time as the wheel is rotated by the pressure on the cutoff knives 28 and will not move until the butter moves it, so that each space 37 must be completely filled. When the butter has moved a sufficient distance to be directly beneath the shaft 25, the cam 36 operates to press the stamp 31 still further outwardly, imprinting whatever may be upon the stamp upon the surface of the butter. The continued motion of the wheel brings the roller 33 to the lower part of the cam 36 and the spring 32 operates to return the stamp to its normal position. The continued rotation of the wheel 34 withdraws the cutting off knives 28 from the butter, which then moves down a slide 39 where it may be wrapped and packed as desired.

Although I have shown a concrete form of illustrating my improvement, it will be apparent to persons skilled in the art that many changes in the form of construction may be made without departing from the spirit of my invention and I do not wish to be understood as limiting myself to the precise form of construction shown and described except as such limitation shall appear in the claims.

Having described my invention what I regard as new and desire to secure by Letters Patent is:

1. A device of the character described comprising the combination with a cylinder having an expression screw therein, means to rotate said screw, a wheel rotatably mounted on suitable bearings having cut-off knives pivotally attached to the periphery thereof, which operate to divide the material forced out of the cylinder into predetermined sizes, said wheel being rotated by the outcoming material, a plurality of stamps intermediate the cutoff knives, said stamps having a stem extending inwardly, a roller mounted in the end thereof, a cam which coacts with said roller to project the stamp outwardly, at a predetermined time, a coil spring which holds the stamp normally in a retracted position.

2. A device of the character described comprising the combination with a cylinder having an expression screw therein, means to rotate said screw, a wheel rotatably mounted on suitable bearings having cutoff knives pivotally attached to the periphery thereof, which operate to divide the material forced out of the cylinder into predetermined sizes, said wheel being operated by the outcoming material.

3. The combination with a churn of a cylinder extending laterally therefrom, a screw conveyer in said cylinder, means to rotate said conveyer, a nozzle on said cylinder, a wheel rotatably mounted on a shaft, bearings for said shaft, supports for said bearings, cutoff knives pivotally attached to the periphery of said wheel, a plurality of stamps intermediate each of the cutoff knives normally held in a retracted position, means to project said stamps outwardly at a predetermined time.

4. The combination with a churn of a cylinder extending laterally therefrom, a screw conveyer, a nozzle on said cylinder, a wheel rotatably mounted on a shaft, bearings for said shaft, supports for said bearings, cutoff knives pivotally attached to the periphery of said wheel, a plurality of stamps intermediate each of the cutoff knives normally held in a retracted position, means to project said stamps outwardly at a predetermined time, said means comprising a cam suitably secured to the axle of the wheel, said cam operating to project the stamp before any pressure is exerted on the cutoff knife.

5. A butter molding machine comprising the combination with a churn, of a cylinder, a screw conveyer in said cylinder, means to rotate said conveyer, a nozzle on said cylinder, means operated by the butter as it leaves the nozzle to cut it into a predetermined size, means operated by the movement of said cutting means to imprint characters upon the surface of the cut-off portion of butter.

6. A butter molding machine comprising the combination with a churn, of a cylinder, extending laterally therefrom, a screw conveyer in said cylinder, means to rotate said conveyer, a nozzle secured to said cylinder, cutting means operated by the butter as it leaves the nozzle to cut it into a predetermined size.

7. A butter molding machine comprising the combination with a churn, of a cylinder extending laterally therefrom, a screw conveyer in said cylinder, means to rotate said conveyer, a nozzle secured to said cylinder, cutting means operated by the butter as it leaves the nozzle to cut it into a predetermined size, said means comprising a wheel rotatably mounted on a shaft, bearings for said shaft, supports for said bearings, knives pivotally attached to the periphery of said wheel.

In witness whereof I have signed the foregoing specification.

CHARLES VOLKMANN.

Witnesses:

C. M. BAUMEISTER,
K. SOLBEY.