S. GISSINGER.

Rotary Churn.

No. 39,225. Patented July 14, 1863.

Fig. 2.

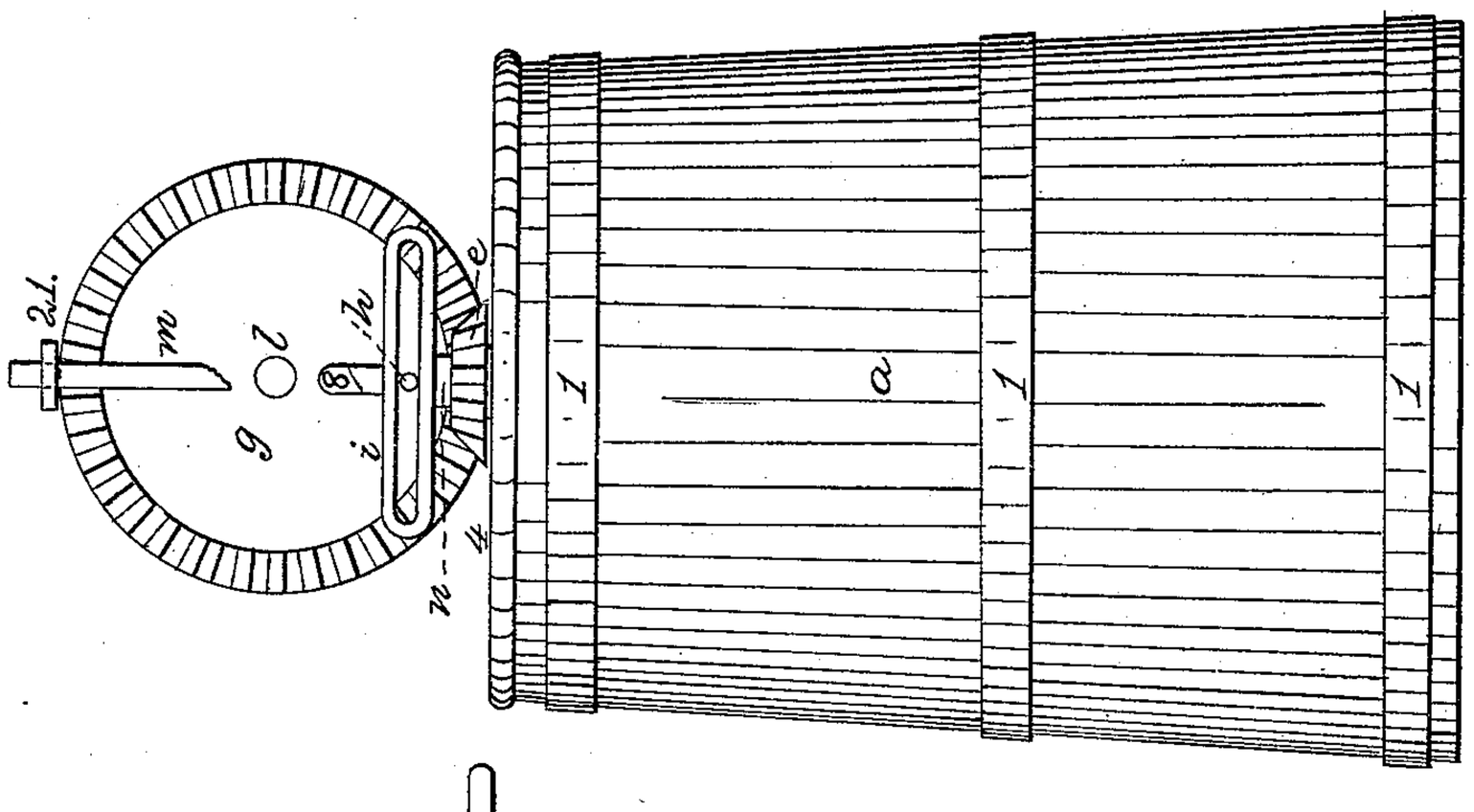
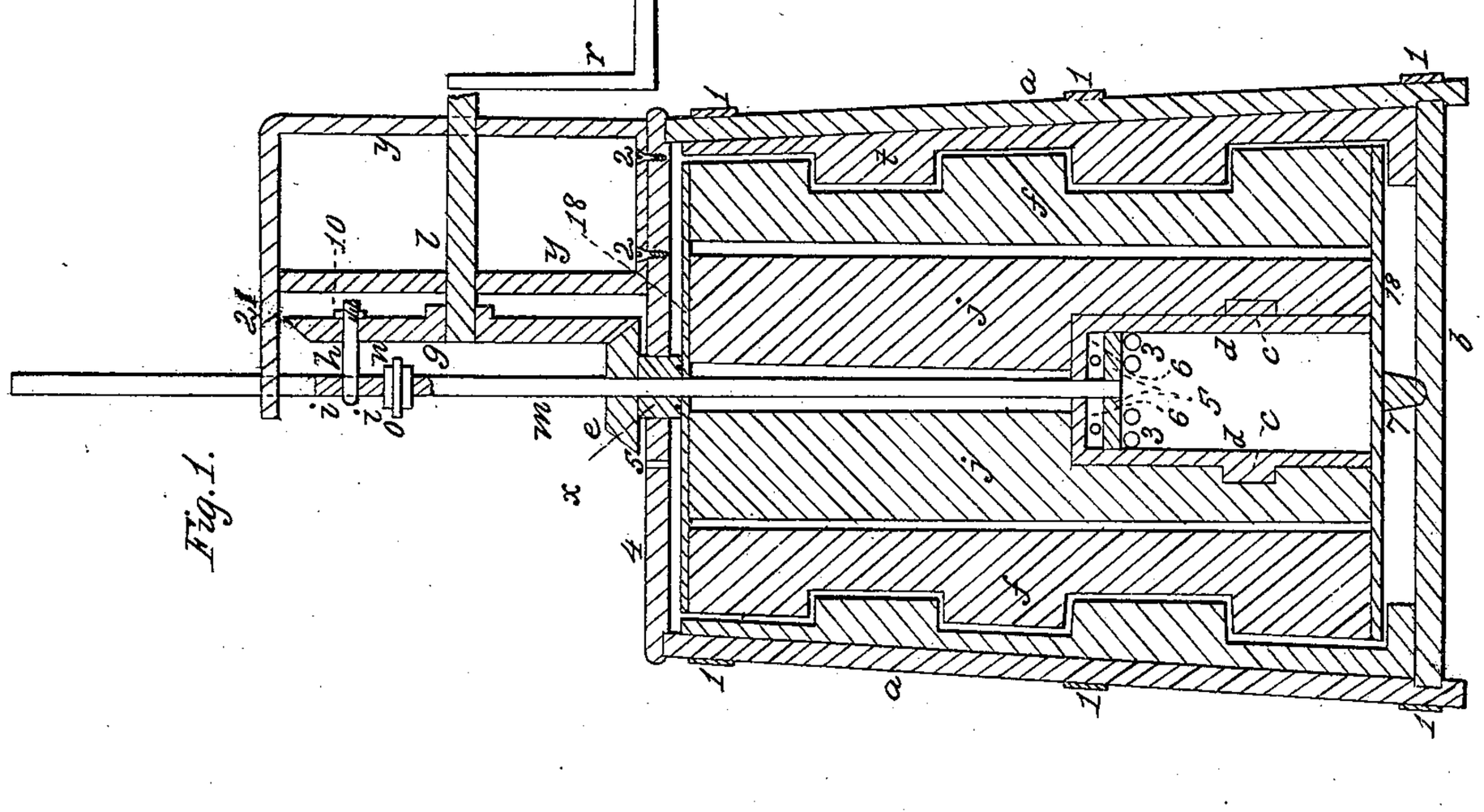


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL GISSINGER, OF ALLEGHENY CITY, PENNSYLVANIA.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **39,225**, dated July 14, 1863.

To all whom it may concern:

Be it known that I, SAMUEL GISSINGER, of Allegheny City, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Churns; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

The nature of my invention consists in providing churns with a pump, in combination with dashers and breakers, for the purpose of causing counter-currents in and through the milk or cream.

In the accompanying drawings, Figure 1 is a vertical sectional view of the churn. Fig. 2 is a side or face view of the churn.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawings, *a* represents the body of the churn.

b represents the bottom.

1 represents the hoops.

t represents the breakers, which are secured to the sides of the churn.

f and *j* represent the dashers, which are held together by the strips marked 18. The dashers *f* are notched out on their outer edge, and the breakers *t* are furnished with projections which correspond to the notches in the dashers. The notches and projections are used for the purpose of breaking the milk or cream into a number of currents as it is swept around the sides of the churn. In the center of the dashers *j*, and at their lower end, is placed a pump, *d*, which is held to its place by the lugs *c*.

m represents the piston of the pump.

s represents the piston-head.

3 and 6 represent openings made in the upper end of the pump for the escape of the milk in the upward movement of the piston-head *s*.

y represents the supports or bearings of the shaft *l*, and are secured to the lid 4 of the churn by means of screws 2. On the shaft *l* is secured a wheel, *g*, in which is made a slot, 8, in which is placed a pin, *h*, which is held to its place on the wheel and in the slot by means of the screw-nut 10. The pin *h* moves in the transverse slot *i* of the piston *m*, the upper end of which moves in the top bar, 21, of the supports *y*. The piston *m* is made in two parts and joined together by means of a socket, *n*, and pin *o*, and is made to separate, so that the pump and dashers may be removed from the churn for the purpose of cleaning it and them. The driving-wheel *g* gears into a pinion, *e*, the hub of which is fitted to an opening made in the lid 4 of the churn. The lid 4 is made in two parts and hinged at the point marked 5.

It will be observed that the dashers and pump are held in their proper position by means of the pinion *e* and the pivot marked 7; and it will also be observed that the piston *m* passes through the pinion *e*. The dashers are held to hub *x* of the pinion *e* by means of two pins in the strip 18. The slot 8 in the wheel *g* is used for setting the pin *h*, so that any desired lift of the piston head of the pump may be obtained.

The operation of my improvement is as follows: Having all things arranged as represented in the accompanying drawings, milk or cream is placed in the churn. Now, by turning the crank *r* motion is imparted to the driving-wheel *g*, which will turn the pinion *e*, which will turn the dashers. The pump-piston is worked by the pin *h*, moving in the transverse slot *i* of the piston *m*. Thus, by turning the crank *r* the pump and dashers are put in operation, producing a compound action—to wit, the dashers cause the milk to be thrown around the churn and against the breakers *t*, and the pump will force the milk down and up through the currents formed by the dashers, thereby producing a counteraction between the downward and upward current produced by the pump and the circular and broken currents produced by the dashers and the breakers *t*. Thus, by producing these counter-currents, which cause a very great amount of friction in the milk, the buttery part of the milk is completely and perfectly separated from it.

Having thus described the nature, construction, and operation of my improvement, what I claim as of my invention, and desire to secure by Letters Patent, is—

The combination of the pump, dashers, and breakers, when used in connection with a churn and operated in the manner and by the means described, and for the purpose set forth.

SAMUEL GISSINGER.

Witnesses:

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