

W. C. SMITH.

Churn.

No. 66,646.

Patented July 9, 1867.

FIG. 1

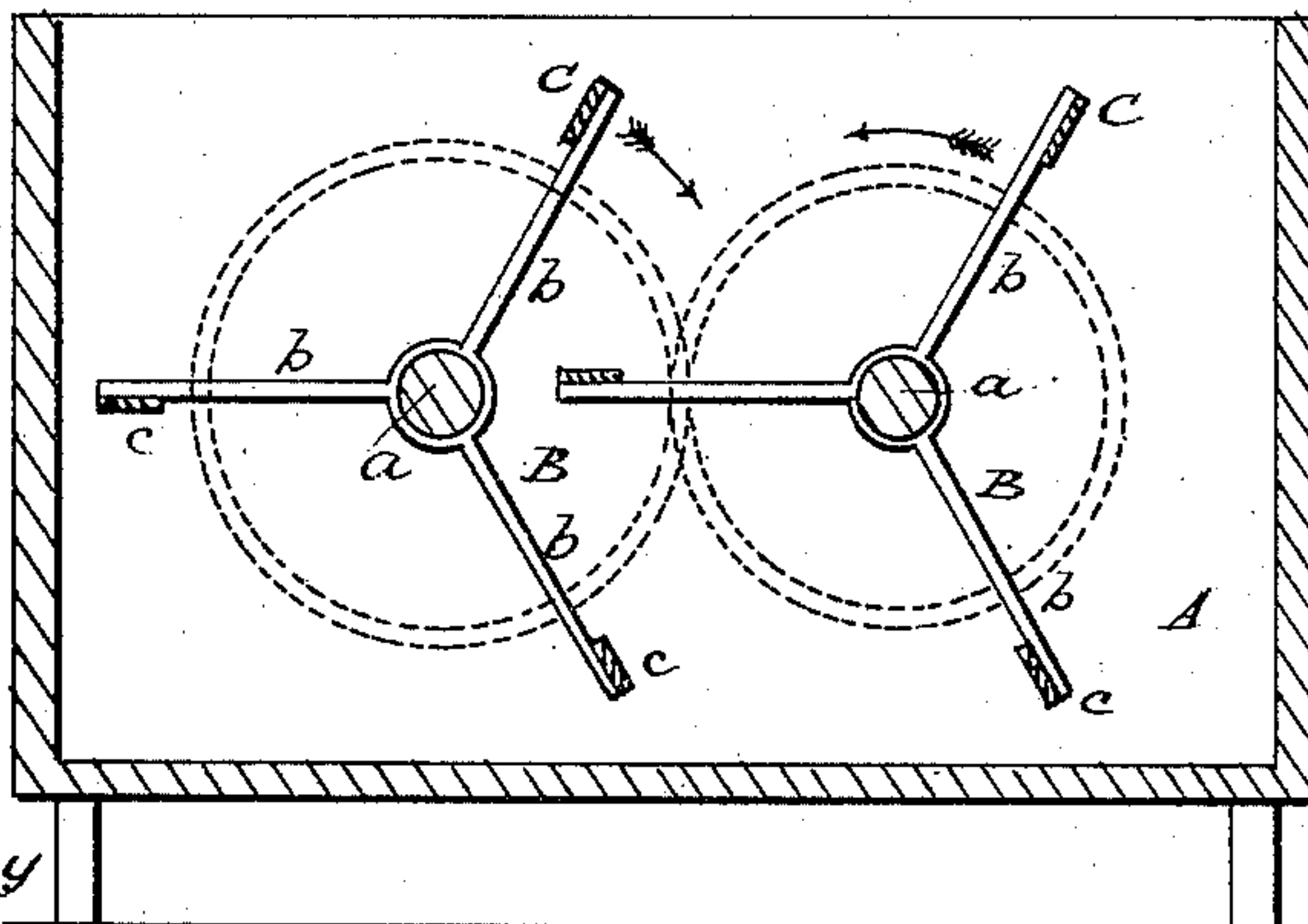


FIG. 4

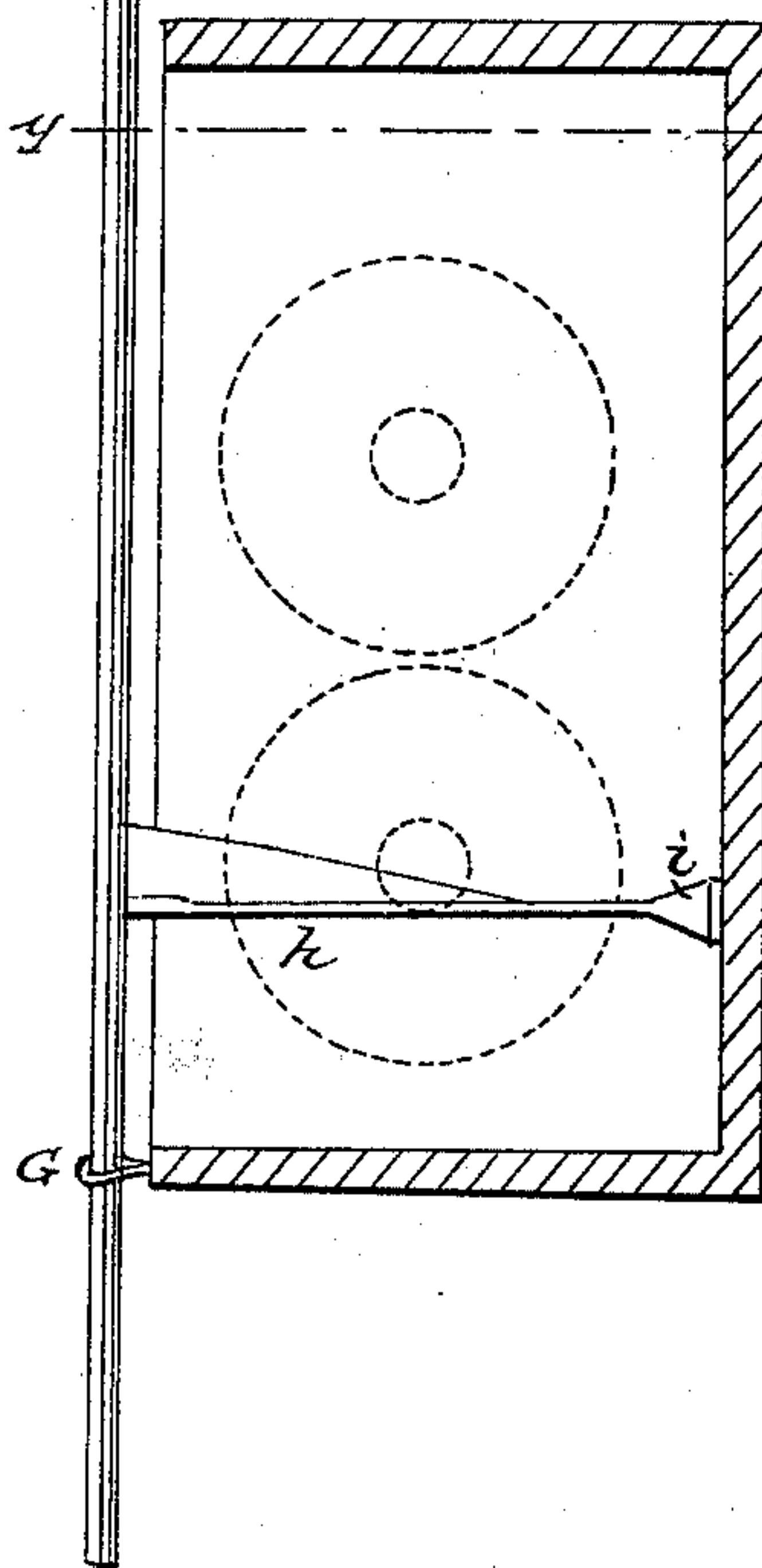


FIG. 2

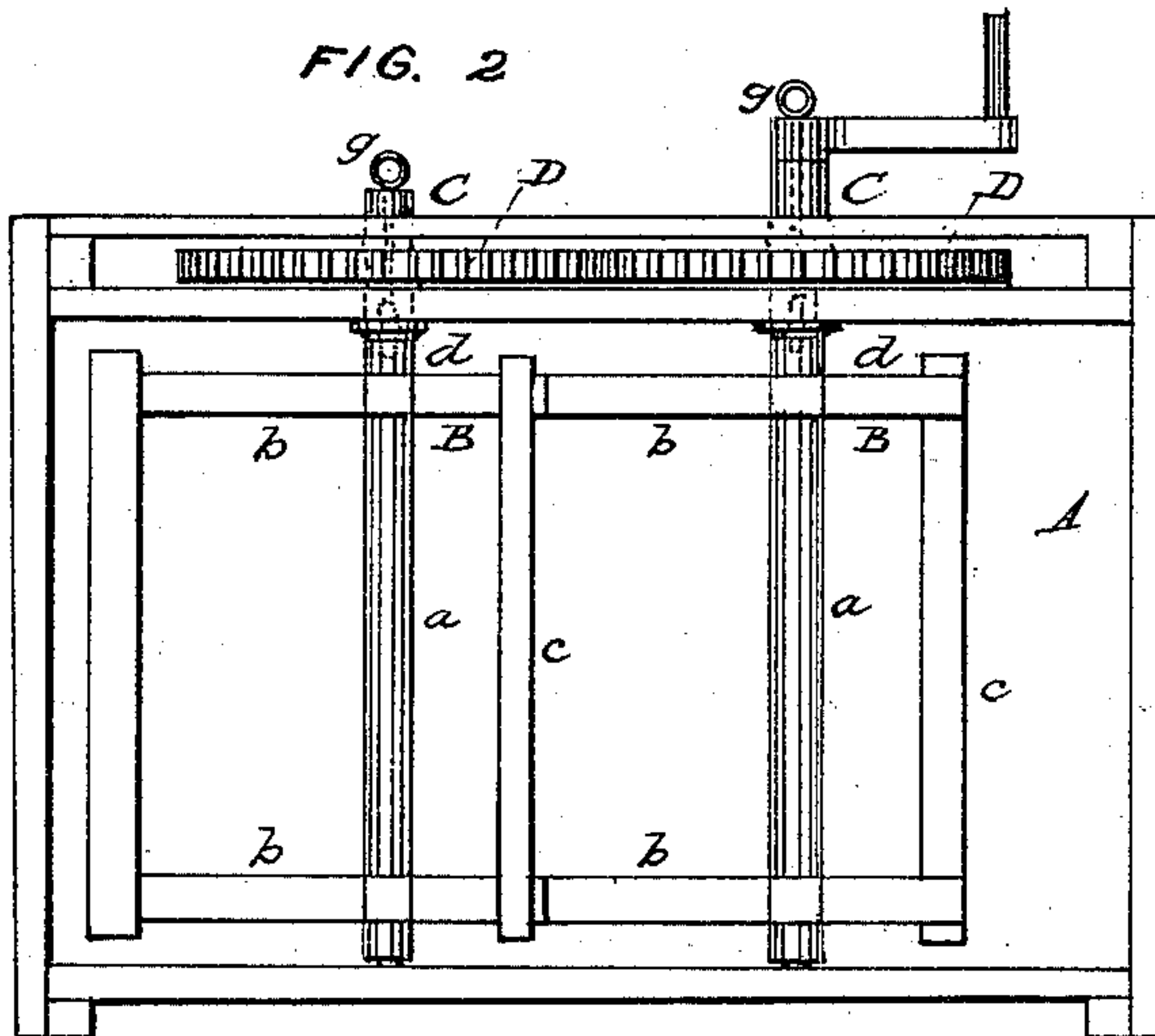
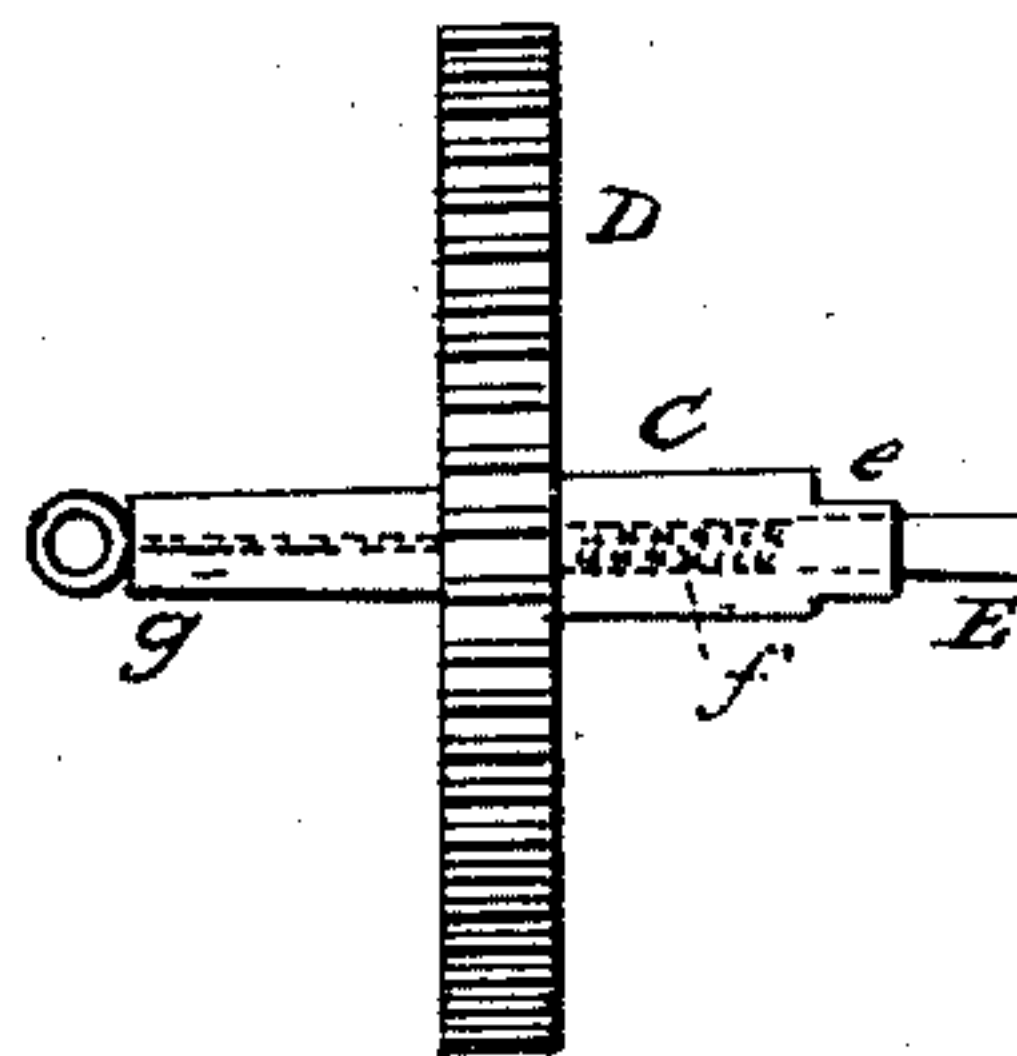


FIG. 3



WITNESSES:

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WILLIAM C. SMITH, OF YANTIC, CONNECTICUT.

Letters Patent No. 66,646, dated July 9, 1867.

IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM C. SMITH, of Yantic, in the county of New London, and State of Connecticut, have invented a new and improved Churn; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and improved churn, of that class in which horizontal rotary beaters are employed, and to which a butter-worker is applied with the greatest facility; and it consists in the employment or use of two rotary beaters, connected by gears, which are applied to the shafts of the beaters in such a manner that they may be readily detached therefrom whenever required, in order to admit of the removal of the beaters from the cream-box for the purpose of using the butter-worker to express the buttermilk from the butter. In the accompanying sheet of drawings—

Figure 1 is a side sectional view of my invention taken in the line *x x*, fig. 1.

Figure 2, a plan or top view of the same.

Figure 3, a detached view of one of the gears pertaining to the same.

Figure 4 is a side view of the butter-worker applied to the cream-box, the latter being shown in section in red lines.

Similar letters of reference indicate like parts.

A represents a cream-box, which may be of rectangular form and of any suitable dimensions. This cream-box contains two horizontal rotary beaters, B B, composed each of a shaft, *a*, provided with radial arms *b*, having bars *c* attached to their outer ends, said bars being parallel with the shafts *a*. The shafts *a* are provided at one end with metallic sockets *d* to receive a square or dove-tail end, *e*, on one end of shafts C C, on which gears D D are keyed or otherwise secured. These shafts C C extend through one side of the cream-box, and each shaft has a pin, E, fitted longitudinally in it, said pins having spiral springs *f* bearing against them, which springs have a tendency to keep the pins forced out from the ends of the shafts and into holes in the shafts *a* of the beaters, (see fig. 3,) in which a spiral spring is shown by dotted lines. The gears D D insure an equal rotation of the two beaters when power is applied to either one of them, and said beaters are so arranged or disposed relatively with each other that they cannot, in rotating, interfere with each other. The direction of the rotation of the beaters is shown by the arrows in fig. 1. The pins E of the shafts C C have rods *g* attached, which project beyond the outer ends of the shafts C C, and admit of the pins E being readily drawn out from the shafts *a*, so that the beaters can be removed from the cream-box for the application of the butter-worker. In one end of the top of the box there is secured a dead-eye, G, which may be made either rigid or flexible, as desired. H is a rod or bar, which may be of wood, of cylindrical or other form, and of suitable length, and provided with a pendant, *h*, attached to the lower end of which is a horizontal bar, *i*, which serves as a ladle, and extending the whole width of the box A.

When it is desired to work the butter after being churned, the beaters are first removed and the bar H passed through the dead-eye G, in which it is operated loosely, the ladle *i* pressing down upon the butter in the box and forcing the buttermilk out of the butter. The bar H may be moved forward and backward, and raised and lowered, with the greatest facility, the dead-eye G serving as a guide and fulcrum.

The rotary beaters I do not claim, separately or in themselves considered; but I do claim as new, and desire to secure by Letters Patent—

The connecting of the shafts C C of the gears D D to the shafts *a* of the beaters, by means of the pins E in said shafts, arranged with the springs *f*, the sockets at the ends of the beater-shafts, and the squares or dove-tails *e* on the inner ends of the gear-shafts C, to fit into the sockets on the shafts *a*, substantially as and for the purpose specified.

I also claim the butter-worker H, constructed as described, in combination with the churn A and rigid or flexible dead-eye G, as herein set forth for the purpose specified.

WILLIAM C. SMITH.

Witnesses:

WM. F. McNAMARA,

ALEX. F. ROBERTS.