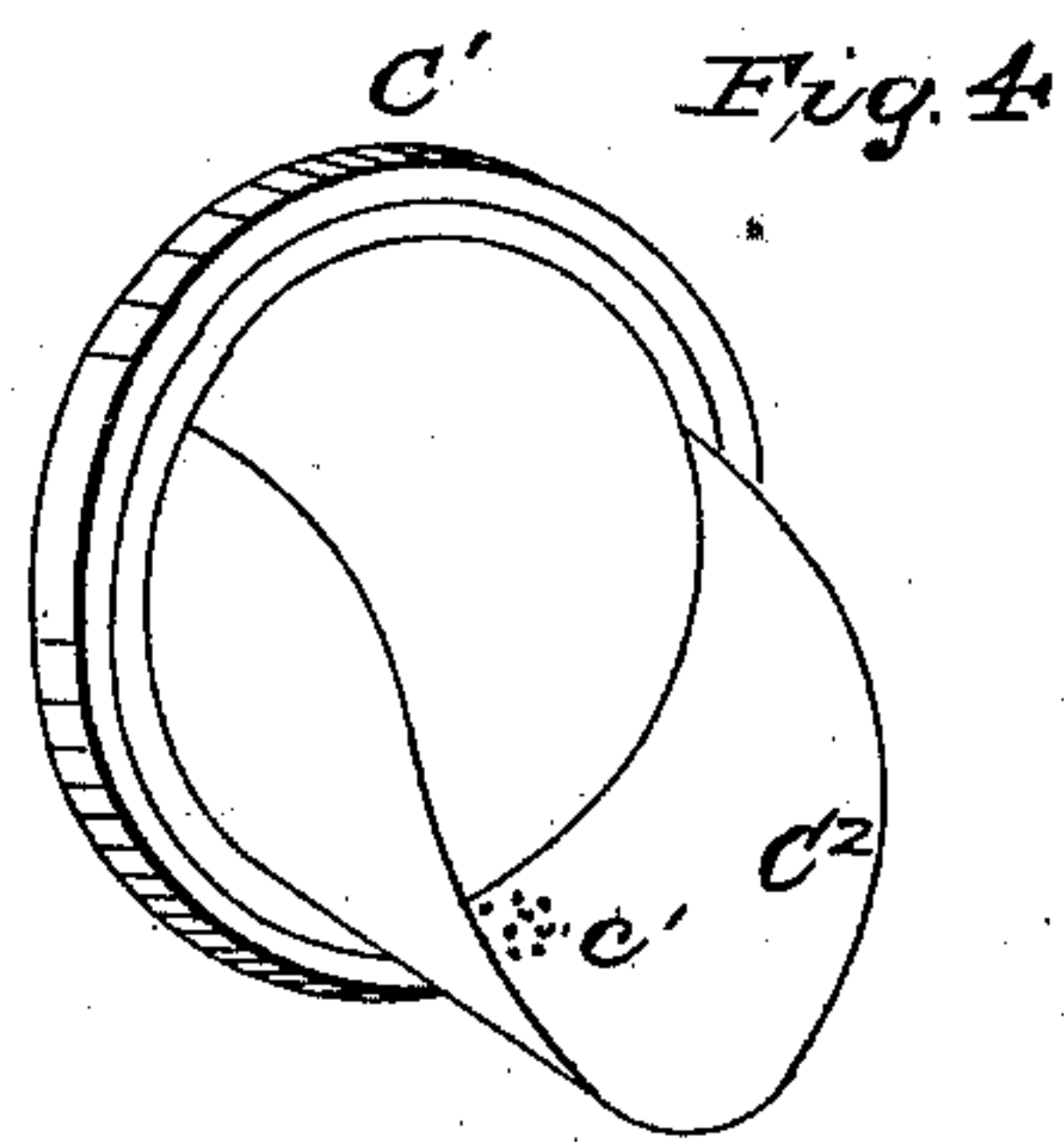
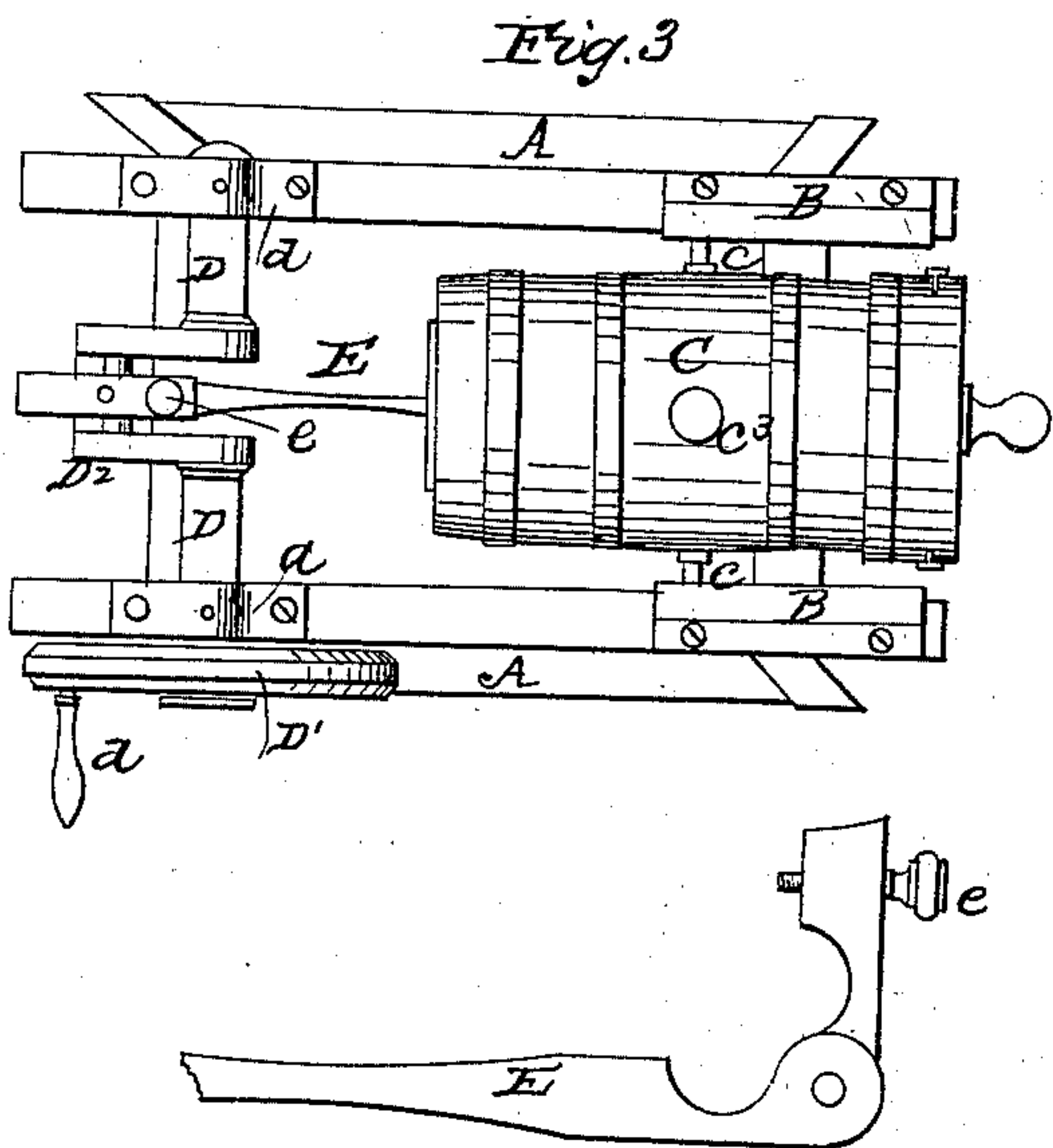
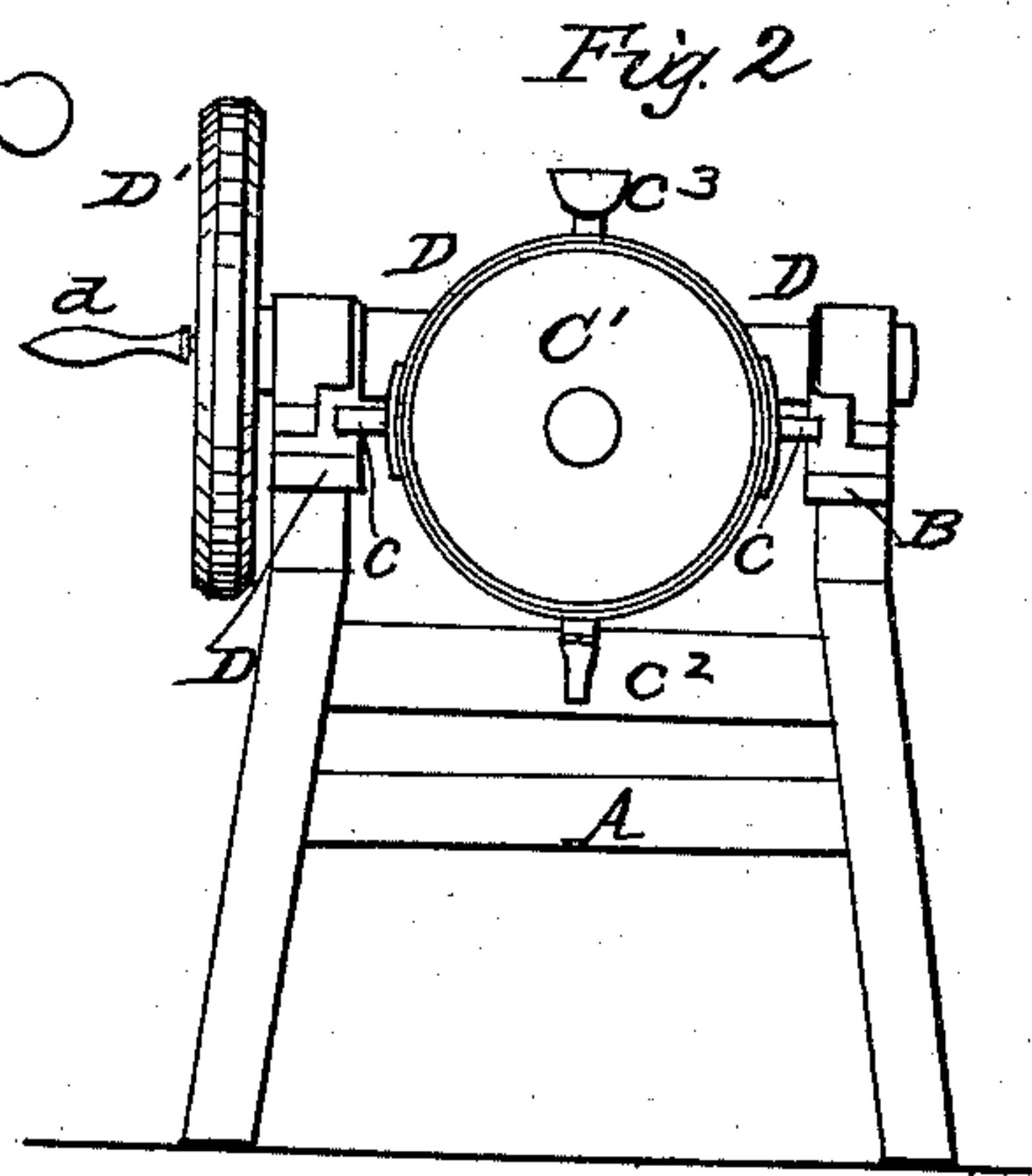
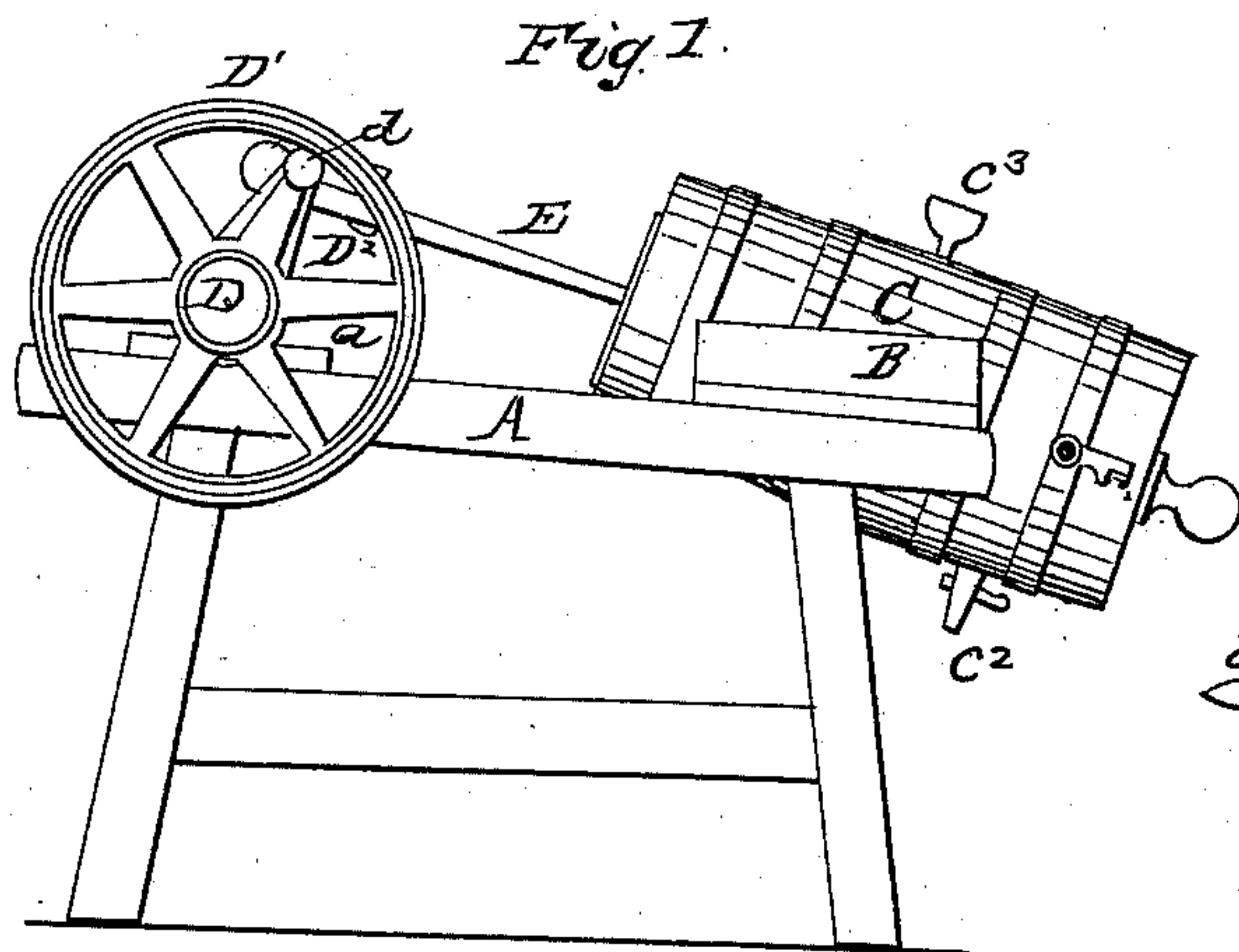


T. GILLMOR.
Churn.

No. 56,036.

Patented July 3, 1866.



Witnesses
Geo. H. H. H. Jr.
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Philippus Gillmor

UNITED STATES PATENT OFFICE.

THEOPHILUS GILLMOR, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 56,036, dated July 3, 1866.

To all whom it may concern:

Be it known that I, THEOPHILUS GILLMOR, of the city and county of St. Louis, and State of Missouri, have invented a new and useful Oscillating Churn; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 of the annexed drawings is a side elevation of the improved churn. Fig. 2 is an end elevation of the same. Fig. 3 is a plan of it. Fig. 4 is a perspective view of the rear end of the cylinder or barrel and the strainer attached to it.

This invention consists in placing two trunnions upon the opposite sides of a cylinder or barrel and then fitting the said trunnions into ways or slides, so that the barrel or cylinder resting upon those trunnions may be given a reciprocating motion by means of a connecting-rod, which is attached to one end of the barrel or cylinder, the said connecting-rod being driven by means of a crank, and the whole arrangement of the parts being such that the said barrel or cylinder will receive, in addition to a reciprocating motion, an oscillating one, which compound motion of the cylinder will act beneficially on the lacteal fluid within it to produce butter therefrom.

The invention furthermore relates to the construction of the rear end or head of the cylinder, and also to the combination of a strainer therewith, for the purpose of extracting the milk from the butter after the latter has been formed.

To enable those skilled in the art to make and use my improved oscillating churn, I will proceed to describe its construction and operation.

A represents the frame, upon which all other parts of the machine are mounted. B B are two metallic ways fastened to the two upper longitudinal beams of the frame A, and fitted to receive the trunnions *c c*, which slide easily in grooves in the inner sides of them, as shown in Fig. 2. C is a wooden cylinder or barrel, to the opposite sides of which the trunnions *c c* are firmly fixed.

D is the driving-shaft, which finds its bearings in the upper beams of the frame A at

It is provided with a fly-wheel, D', to which there is attached a crank-like handle, *d*, which the operator will seize to operate the machine. The shaft D is furthermore provided with the crank D², to which the connecting-rod E is attached at one of its ends by means of a strap-joint, (shown in the detail drawings of that part.) When the two parts of this strap-joint are together they are held in place by means of the screw *e*. The other end of the connecting-rod E is firmly fastened to the adjacent end of the cylinder or barrel C.

The cylinder-head C' has a circular groove cut in its inner face, which fits onto the ends of the staves forming the cylinder or barrel, thereby forming a water-tight joint between those parts. It is furthermore provided with a scoop-like metallic receptacle, C², which fits into the cylinder and receives the butter after it is made, and in which it may be removed from the churn. There is a strainer, *c'*, in the bottom of the scoop, through which the milk can pass from the butter by opening the faucet *c'* in the bottom of the cylinder, the said faucet being located directly beneath the said strainer when it is in the cylinder. There is a funnel, *c'*, in the top of the cylinder or barrel, through which the milk is to be poured into the churn.

The machine constructed as above described, and the churn or cylinder being filled with milk, the operator, by turning the crank *d*, will cause the cylinder C to be agitated in a reciprocating and also in an oscillating manner—a compound motion which it has been found by experiment is most conducive to the production of butter.

The arrangement of the parts should be such that the back end of the cylinder, which is closed by the head C', will be lower than any other portion of the cylinder, thereby facilitating the concentration of the butter in the scoop-receptacle C².

The head C should be held fast to the cylinder by means of the hook *c'*.

When the churn or cylinder is to be cleansed the screw *e* may be loosened, when the connecting-rod can be disconnected from its crank and the trunnions *c c* slipped out of their ways, and the cylinder can then be hung up in a vertical position to drain and dry.

Having described my invention, what I claim is—

1. The combination of the crank, connecting-rod, and cylinder, substantially as described, and for the purpose set forth.

2. The combination and use of a strap-joint on the connecting-rod E with the crank D², when used to connect the churn-cylinder C with the motive power, as set forth.

3. The combination of the cylinder C with the head C' and its scoop C², also with the inlet-funnel c³ and the outlet-faucet c², substantially as described and set forth.

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Witnesses:

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