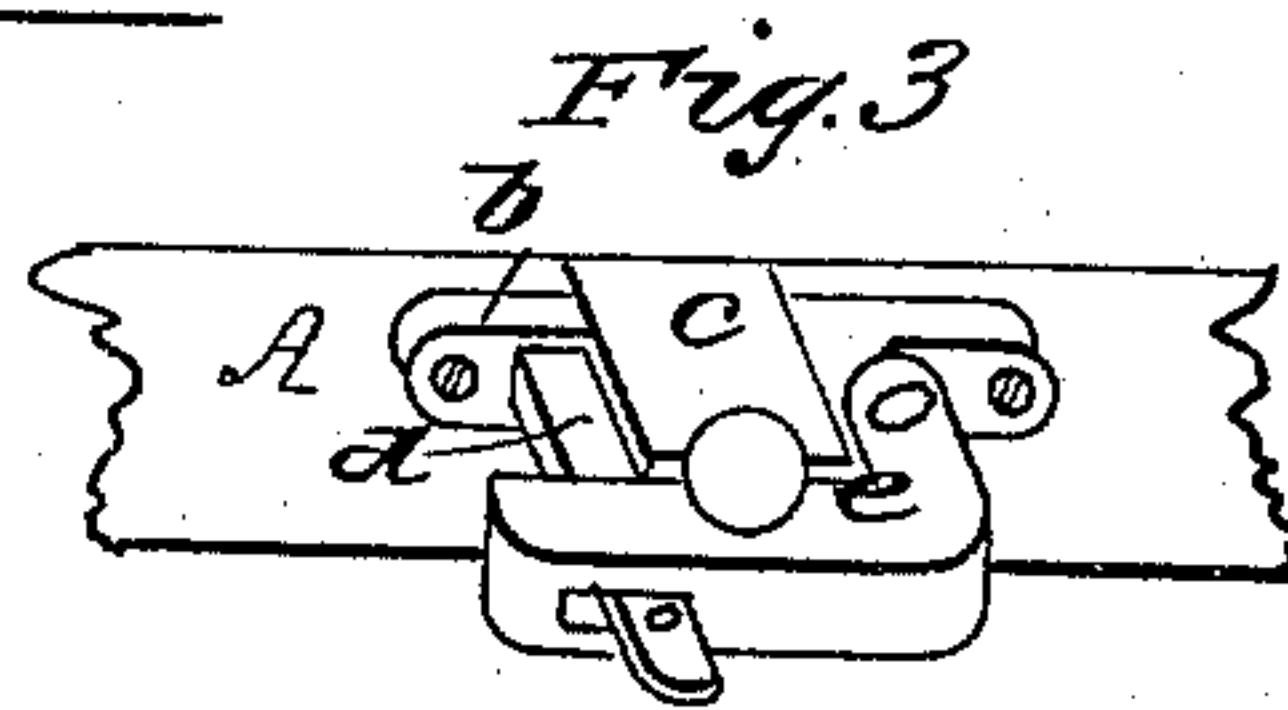
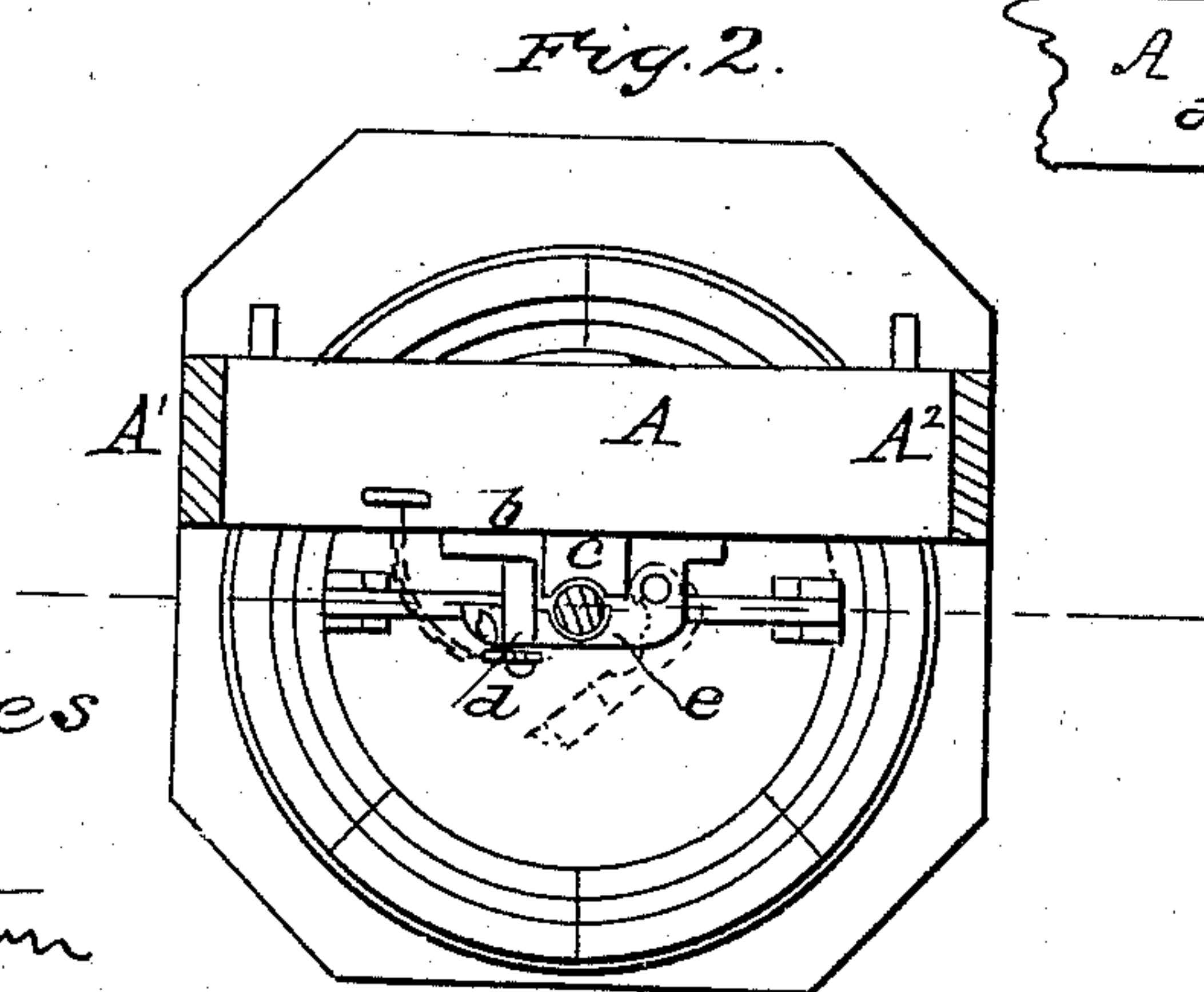
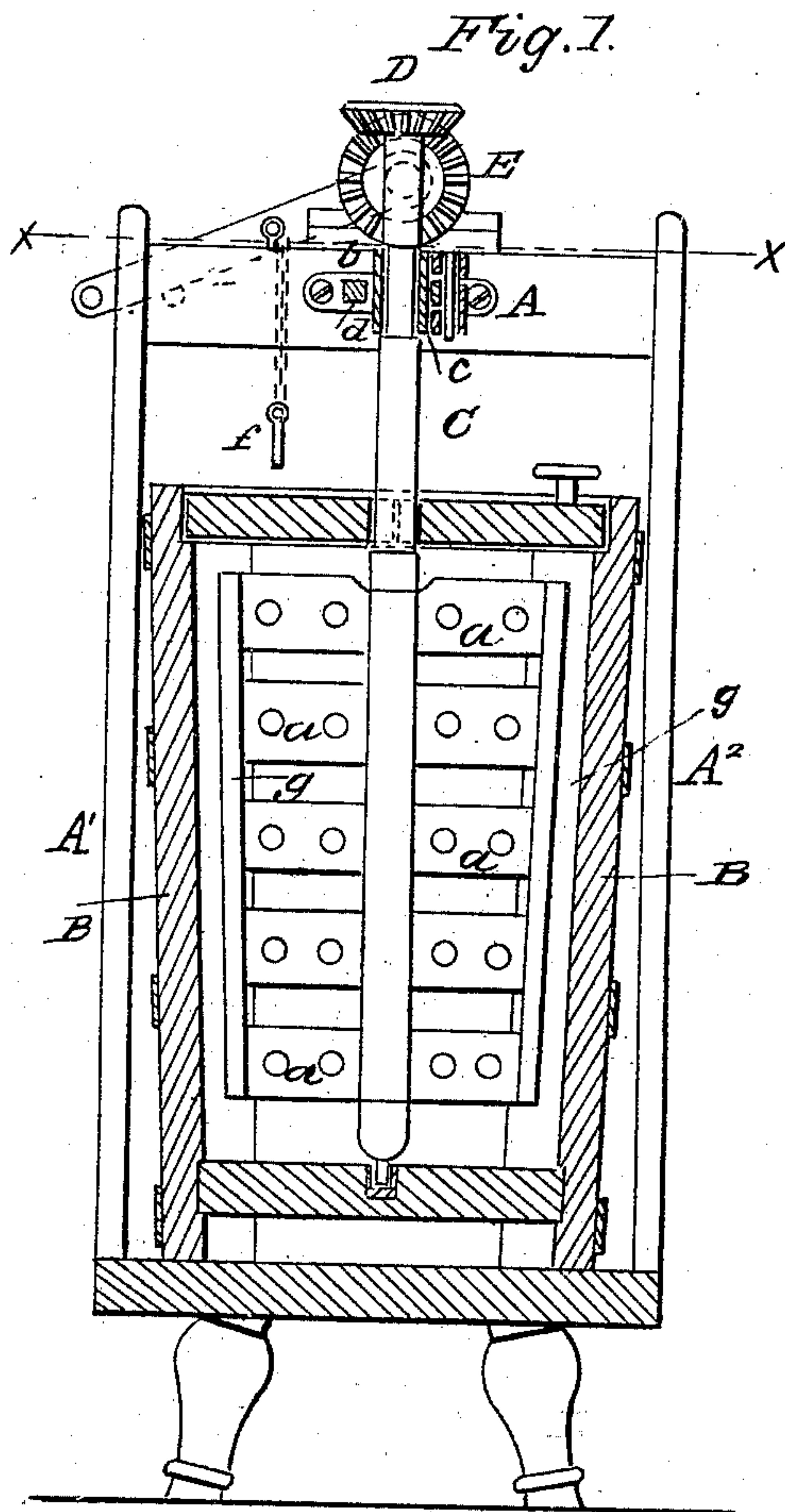


E. HOYT.

Churn.

No. 56,050.

Patented July 3, 1866.



Witnesses  
Wm. C. Cress  
J. W. Blount

Inventor  
E. Hoyt  
By Blount & Co  
Attys



# UNITED STATES PATENT OFFICE.

EDWIN HOYT, OF STAMFORD, CONNECTICUT.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 56,050, dated July 3, 1866.

*To all whom it may concern:*

Be it known that I, EDWIN HOYT, of Stamford, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Churns; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal vertical section of my churn, taken in the plane of the line  $x x$ , Fig. 2. Fig. 2 is a transverse section taken in the plane of the line  $y y$ , Fig. 1. Fig. 3 is a perspective view of the device for holding the dasher-rod in place during the operation of churning.

Similar letters of reference indicate corresponding parts.

This invention relates to that class of churns known as "upright" churns, where gearing is employed for imparting motion to the dasher.

My invention consists in a peculiar combination and arrangement of parts, hereinafter described, whereby I produce a churn which is adapted to act equally well upon a small or large body of cream, and, by its reciprocating motion, quickly breaks the globules without producing foam. The manner of applying the power reduces the labor of churning as much as possible, and the construction and arrangement of the parts render them effective, durable, and readily cleansable, and permit the easy removal of the butter.

To enable others to understand the nature of my improvement, I will proceed to describe the same.

A A' A<sup>2</sup> represent the framing which supports the churn, as well as the gearing for operating the same. B is the churn, which is of the upright kind, and made rather broader at the top than at the bottom.

C is the dasher-rod. It carries on its upper end a bevel-gear wheel, D, which engages with another bevel-wheel, E, which may be of larger dimensions, to give greater velocity to the wheel D. The wheel E is mounted in bearings on the cross-beam A of the frame and carries a crank for operating it.

In operating this churn it is intended not to revolve the dasher entirely round, but only half-way, and, to provide for this, two pegs or

stops are inserted in the beam A, one on each side of the crank, and arranged in such manner that the arm of the crank will strike, one on being turned in one direction and the other on being turned in an opposite direction. This gives to the dasher a semi-revolution or a reciprocating rotary motion, which insures a better agitation of the cream and prevents the same from getting heated, which is a common occurrence in all revolving-dasher churns, where the cream is whirled round and round in the churn.

The device I employ for holding the dasher-rod in place consists of a plate,  $b$ , which is secured to the beam A of the framing, and a plate or lug,  $c$ , having a groove in its face to admit the dasher-rod, and an arm,  $d$ , projecting out some distance. To the plate  $b$  the door or clamping arrangement  $e$  is hinged in such manner that it can be swung back at any time, as shown clearly in red outline in Fig. 2, to provide for the removal of the dasher. A slot is cut through this door  $e$ , which sinks over the arm  $d$ , so as to permit a bolt,  $f$ , to be inserted through a hole in the said arm for the purpose of keeping the door closed tightly. This door has also a groove on its inner face, correspondently to the groove in the plate  $c$ , so as to provide a socket in which the dasher-rod can rotate. This device is shown clearly in Fig. 3; but I will here remark that I do not limit myself to the particular construction therein represented.

The dasher consists of a series of flat strips having their outer ends secured between battens or strips  $g$ , the said flat strips or floats being carried through a slot made longitudinally through the dasher-rod.

The floats or strips are set at proper distances apart and are perforated, and they extend clear up nearly to the top of the churn and down nearly to the bottom, so that any quantity of cream, however great or small, can be operated upon in the churn with equal effect on all its parts. The dasher is rather larger at its top than at its bottom, to correspond with the shape of the interior of the churn. The dasher-rod carrying these floats rests in a journal box or bearing near the center of the churn and on the bottom thereof.

The dasher being thus constructed and supported in the holding device described in a preceding paragraph works easily, and there

is no liability of the dasher swinging or scraping against the sides of the churn or of creating any friction of any account anywhere. If the parts should become swollen by reason of the liquids placed in the churn, a perfect working arrangement will still exist, which cannot be said of a great many churns constructed on substantially the same principles now in the market.

My churn operates easily and does not heat the cream, and the form of the dasher I employ agitates the cream so thoroughly that I find I obtain more butter from a given quantity of cream than I can by any other churn I have tried.

I do not claim any of the parts of the churn separately considered, as they may be found in other churns; but

What I claim, and desire to secure by Letters Patent, is—

A churn in which all the parts described and represented are arranged in the manner set forth.

The above specification of my invention signed by me this 10th day of August, 1865.

EDWIN HOYT.

Witnesses:

M. M. LIVINGSTON,  
WM. F. MCNAMARA.