

(No Model.)

V. R. GORDON & H. M. COX.
CHURN.

No. 583,572.

Patented June 1, 1897.

Fig. 1.

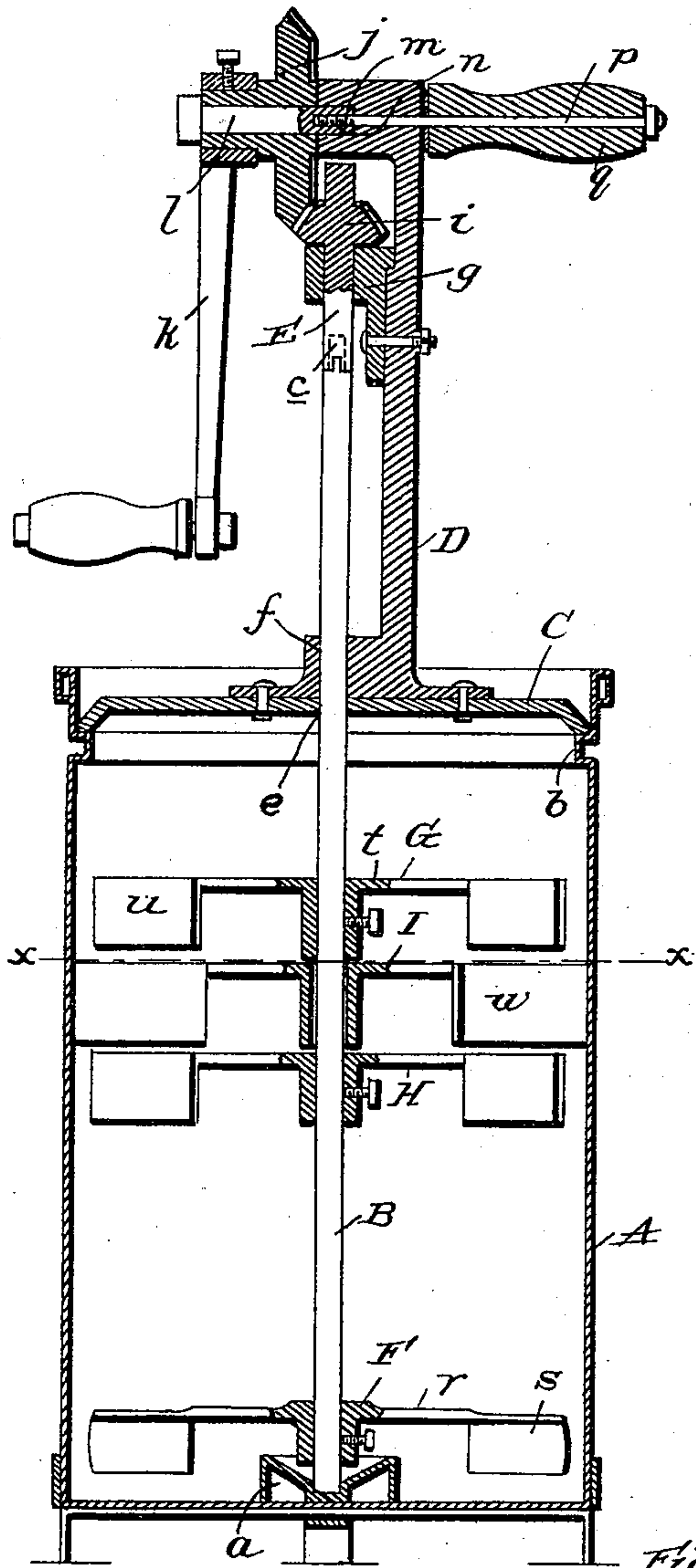


Fig. 2.

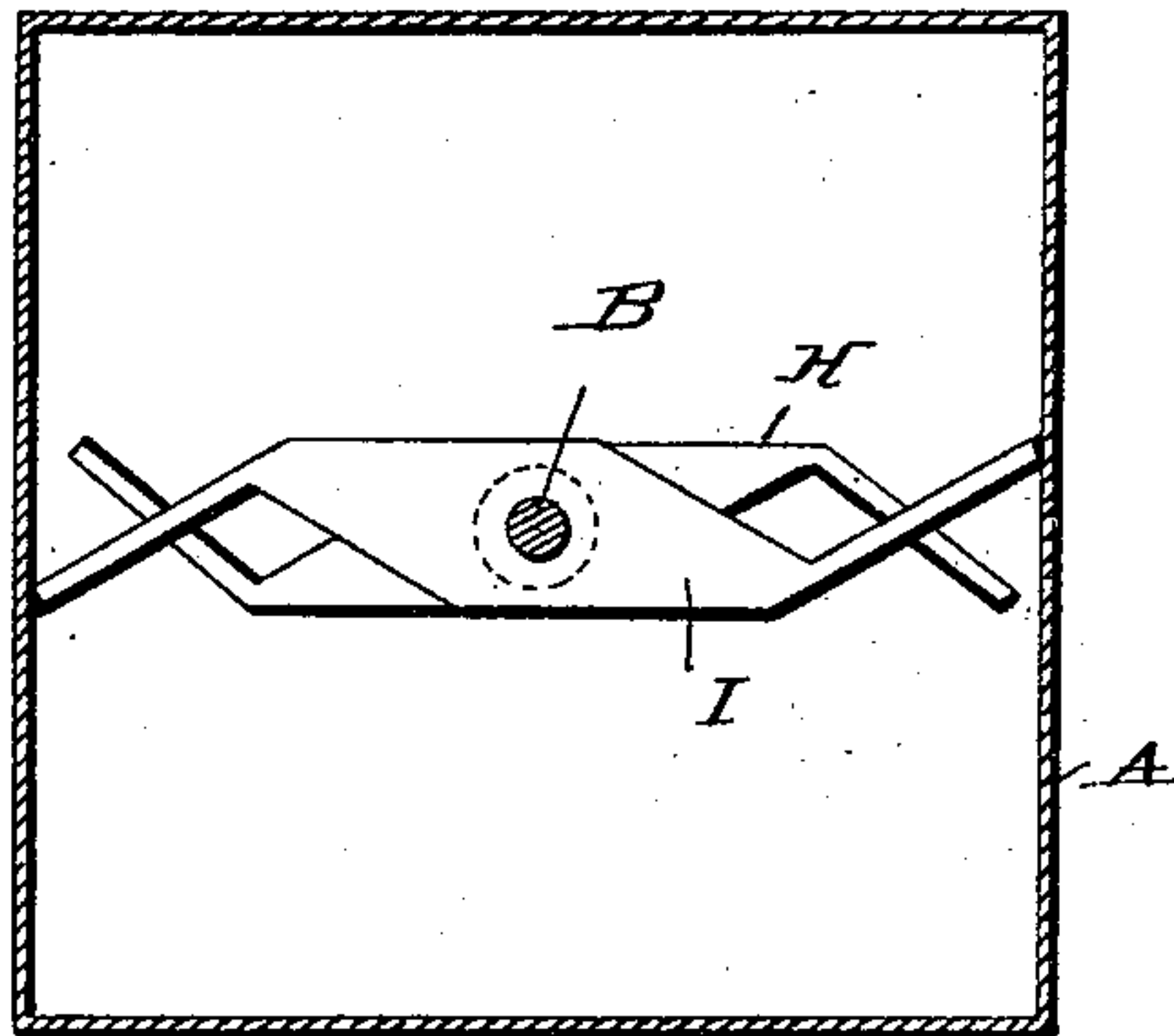


Fig. 3.

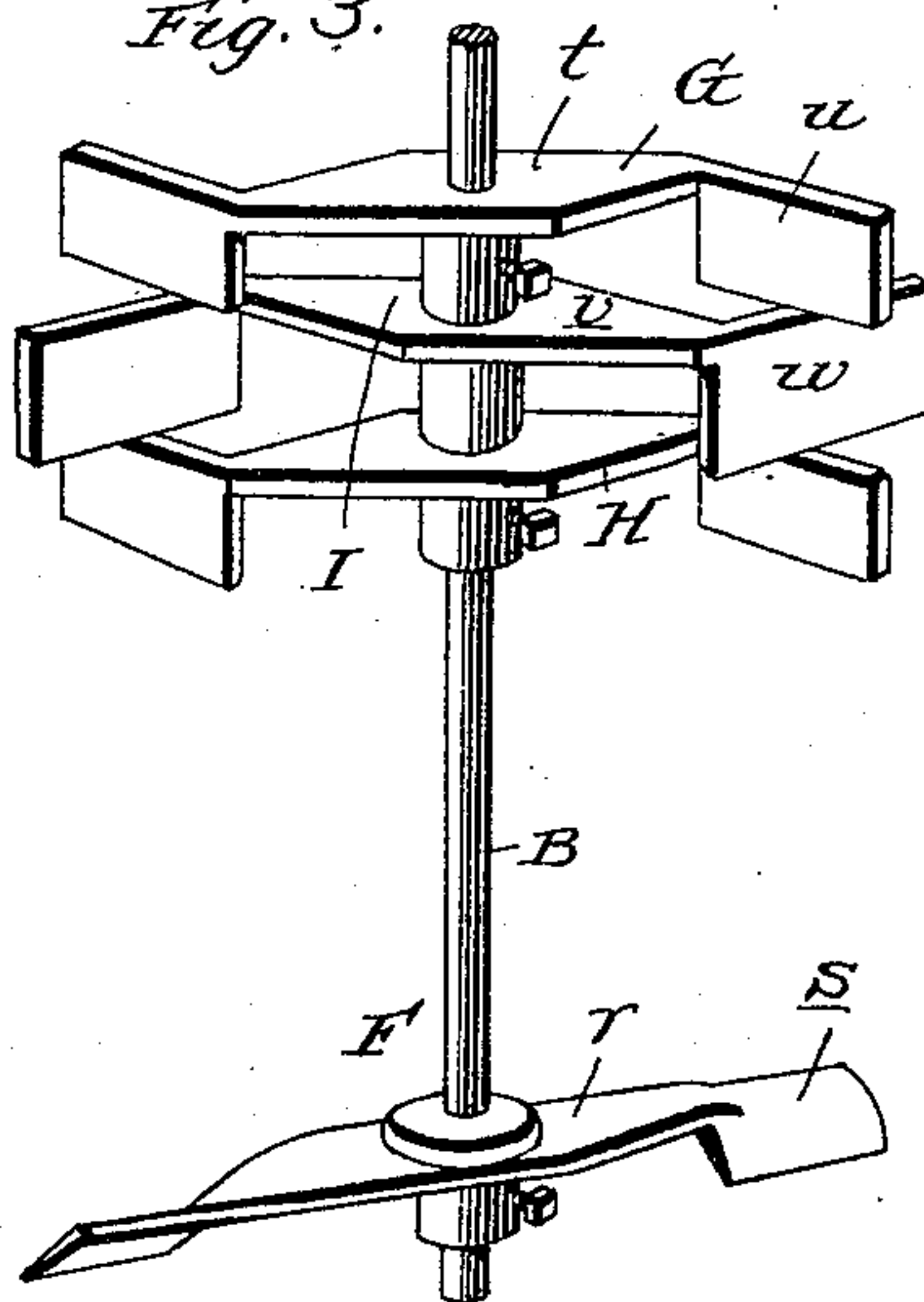


Fig. 4.

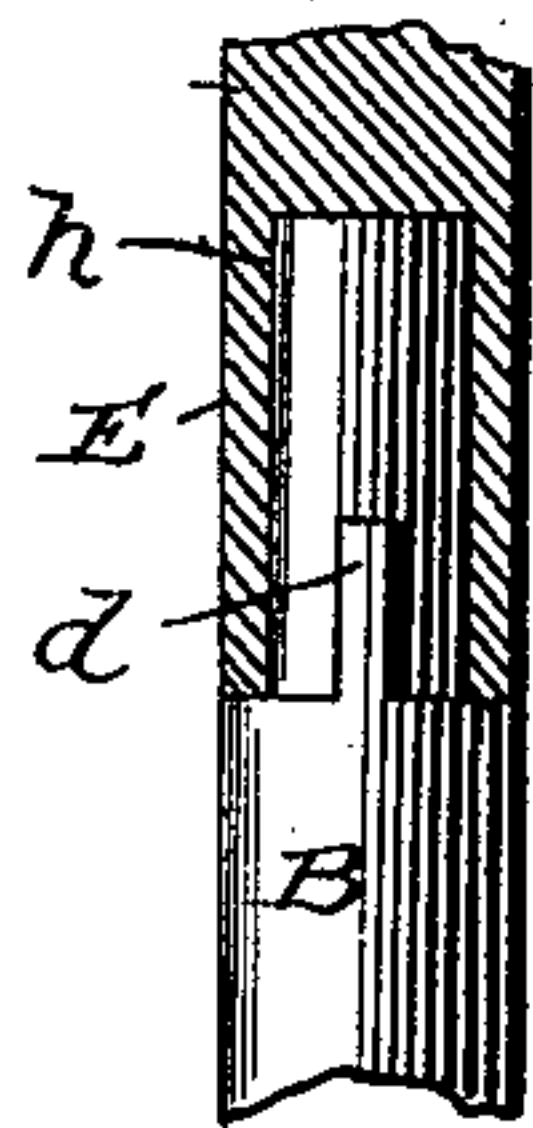
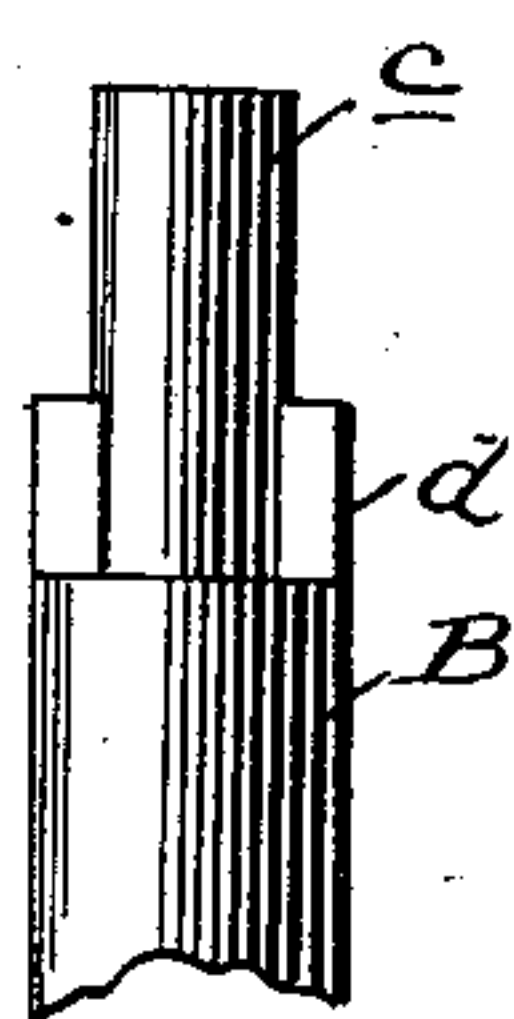


Fig. 5.



Witnesses:

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VIRGIL R. GORDON, OF STOCKTON, AND HENRY M. COX, OF LINDEN,
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CHURN.

SPECIFICATION forming part of Letters Patent No. 583,572, dated June 1, 1897.

Application filed February 26, 1897. Serial No. 625,117. (No model.)

To all whom it may concern:

Be it known that we, VIRGIL R. GORDON, residing at Stockton, and HENRY M. COX, residing at Linden, in the county of San Joaquin and State of California, citizens of the United States, have invented certain new and useful Improvements in Churns; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in churns; and its novelty and advantages will be fully understood from the following description and claims when taken in conjunction with the annexed drawings, in which—

Figure 1 is a vertical central section of our improved churn with some of the parts in section. Fig. 2 is a transverse section taken in the plane indicated by the line *xx* of Fig. 1. Fig. 3 is a perspective view of the shaft and the blades thereon removed from the body. Fig. 4 is an enlarged detail view illustrating the manner in which the shaft-sections are connected, and Fig. 5 is an elevation of the upper end of the lower shaft-section.

In the said drawings similar letters designate corresponding parts in all of the several views, referring to which—

A indicates the body of the churn, which is of a rectangular form in cross-section for a purpose presently described and is provided upon the upper side of its bottom with a central journal-bearing *a* and is also provided adjacent to its upper end with an interior ledge or flange *b*.

B indicates a shaft-section which is stepped at its lower end in the bearing *a* and is provided at its upper end with a reduced portion *c* and key-lugs *d* on opposite sides of the same, and C indicates the cover, which is provided with a central opening *e* for the loose passage of the shaft-section B and is designed to rest upon the ledge or flange *b* of the body, as shown in Fig. 1. Fixedly connected to and rising from the cover C is an upright D, which has an opening *f* in alinement with the opening *e* for the loose passage of the shaft-section B and also has a boxing *g*, in which is journaled the upper shaft-section E, as shown. This shaft-section E has a socket *h* and off-

sets communicating therewith at its lower end for the reception of the reduced end *c* and key-lugs *d* of the lower shaft-section B, and it is also provided above the boxing *g* with a beveled pinion *i*, which meshes with and is rotated through the medium of a beveled gear *j*. The said gear *j* has a crank *k* fixed to it, and it is provided with a central bore for the passage of the headed pin *l*, which extends into a laterally-disposed smooth-bore socket *m* in one side of the upright D and is provided with a threaded bore *n* in its inner end for the reception of the threaded end of the rod *p*, which passes into the upright D from the opposite side and serves the additional function of attaching a handle *q* to the upright, as shown.

It will be observed from the foregoing that by grasping the handle *q* with one hand the operator is enabled to hold the churn steady while he rapidly rotates the shaft with his other hand through the medium of the crank *k*. It will also be observed that when it is desired to fill or discharge the churn-body or gain access to the interior of the same the cover C, with the parts thereon, may be readily lifted off said body and may as readily be replaced upon the same, the shaft-sections B E being adapted to be readily disengaged and engaged with each other, as is obvious.

F indicates a dasher which is adjustably fixed upon the shaft-section B, adjacent to the lower end thereof, preferably by a set-screw, as shown. This dasher F has the horizontally-disposed body portion *r* and the obliquely disposed or inclined blades *s* at the outer ends of the body portion, the said blades being adapted by reason of their disposition to force the cream upward, so as to subject the same to the action of the upper dashers, which will now be described.

G H indicate the upper dashers, which are adjustably fixed on the shaft-section B, preferably by set-screws, so that they can be arranged at various elevations on the same to rest beneath the surface of the cream and yet adjacent to such surface, where they will be most efficient. These dashers G H are similar in construction and respectively comprise a central horizontal body portion *t* and blades *u* at the outer ends of the body por-

tion, the said blades being disposed vertically and extending at obtuse angles in opposite directions from opposite ends of the body portion, as better shown in Fig. 2, so as to
 5 enable them to force the cream in a circular direction and also inwardly toward the center of the body, so that the butter as it forms will be worked by the body portion *t*, thus rendering it unnecessary to work it after it
 10 is removed from the churn.

I indicates a stationary bar which is loosely mounted on the shaft-section B between the dashers G H and comprises the body portion *v* and the vertically-disposed blades *w*. The
 15 blades *w* extend obliquely from the ends of the body portion *v* in directions opposite to the directions in which the blades *u* of dashers G H extend, and they impinge at their ends against the walls of the body and thereby
 20 hold the bar I against rotation. In consequence of said bar I being held stationary the cream set in motion by the dashers G H will be dashed against its blades and thrown back, which will materially accelerate the
 25 formation of the butter.

It will be observed from the foregoing that with all of its advantages our improved churn is very simple and cheap and has all its parts
 30 so arranged and connected that it may be taken apart to facilitate cleaning and may be readily adjusted to suit the quantity of cream to be placed in the body.

Having described our invention, what we claim, and desire to secure by Letters Patent,
 35 is—

1. In a churn, the combination of the body having a cover, a central dasher-shaft journaled in suitable bearings in the body and cover, the dasher F, fixed on the said shaft
 40 adjacent to the bottom of the body and having the obliquely disposed or inclined blades at its outer ends, the dashers G, H, fixed on the shaft and respectively comprising a horizontally-disposed body portion and verti-
 45 cally-disposed blades extending at obtuse angles in opposite directions from said body portion, and the stationary bar I, arranged

loose on the dasher-shaft between the dashers G, H, and having the horizontally-disposed body portion and the vertically-disposed blades at the outer ends of the body
 50 portion; said blades extending at obtuse angles to the body portion and impinging at their ends against walls of the body, substantially as specified. 55

2. In a churn, the combination of the body having the central journal-bearing on the upper side of its bottom and also having the interior flange or ledge adjacent to its upper end, the cover arranged on said flange or
 60 ledge of the body and having a central aperture, the upright fixedly connected to the cover and having the aperture registering with that of the cover and also having the bearing-box and the laterally-disposed smooth
 65 bore, the lower shaft-section journaled at its lower end in the bearing on the bottom of the body and extending through the apertures in the cover and upright and having the reduced upper end and key-lugs at opposite sides of
 70 the same, the upper shaft-section journaled in the box and having the beveled pinion above the box and also having the sockets and offsets at its lower end to receive the reduced end and key-lugs of the lower section,
 75 the beveled gear meshing with the pinion and having a crank fixed on it, the pin extending loosely through said gear and into the laterally-disposed smooth bore of the upright and
 80 having the threaded socket in its inner end and the head at its outer end, the lateral handle *q*, arranged on the opposite side of the upright with respect to the beveled gear and
 85 the rod extending through said handle and the upright and having the threaded end engaging the threaded socket of the pin, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses:

VIRGIL R. GORDON.
 HENRY M. COX.

Witnesses:

GEO. RUSHFORTH,
 C. P. HANCOCK.