

(Model.)

M. G. DAVIS & J. W. MISTER.
Cover Fastening for Churns, &c.

No. 241,310.

Patented May 10, 1881.

Fig. 1.

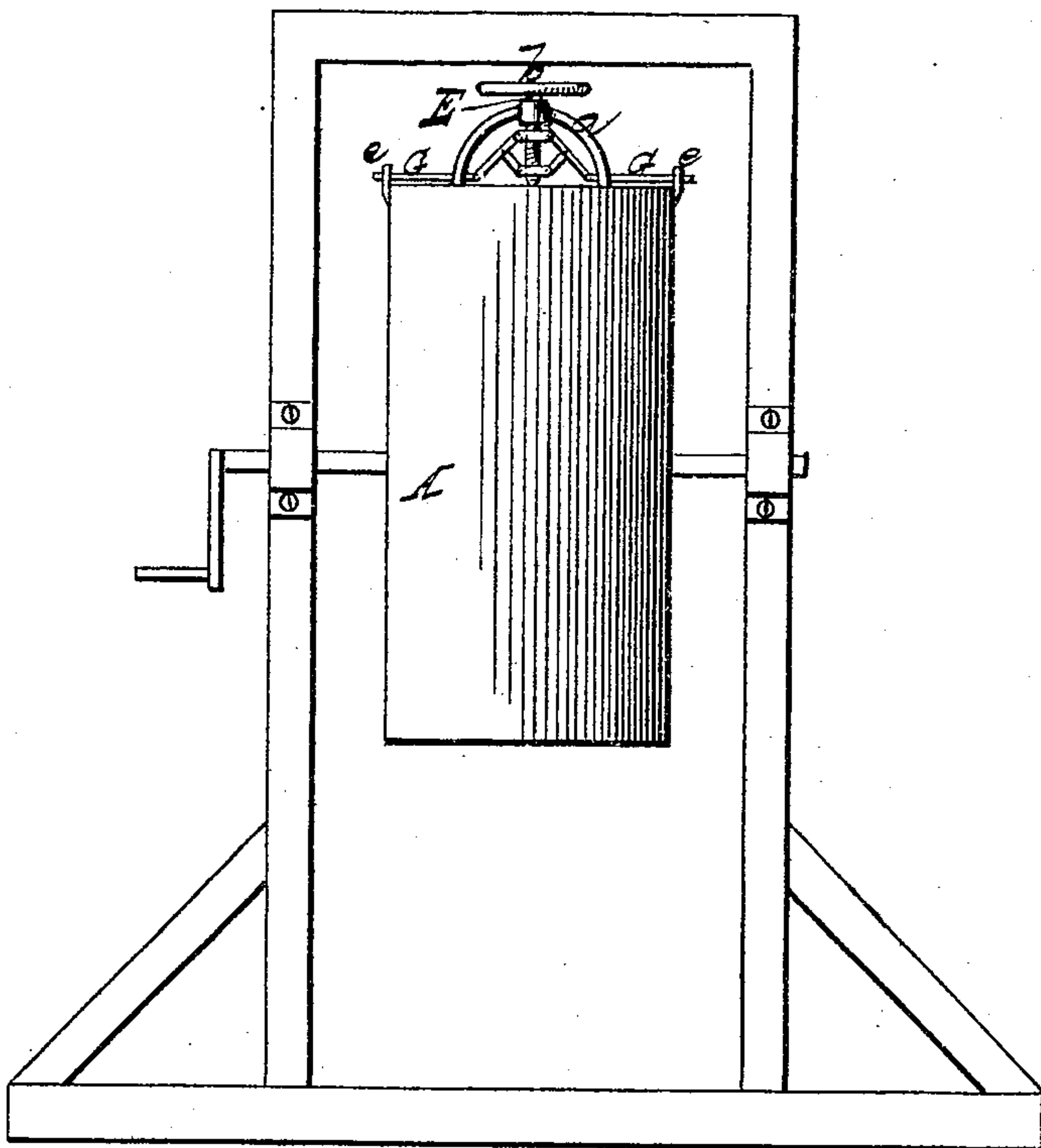


Fig. 2.

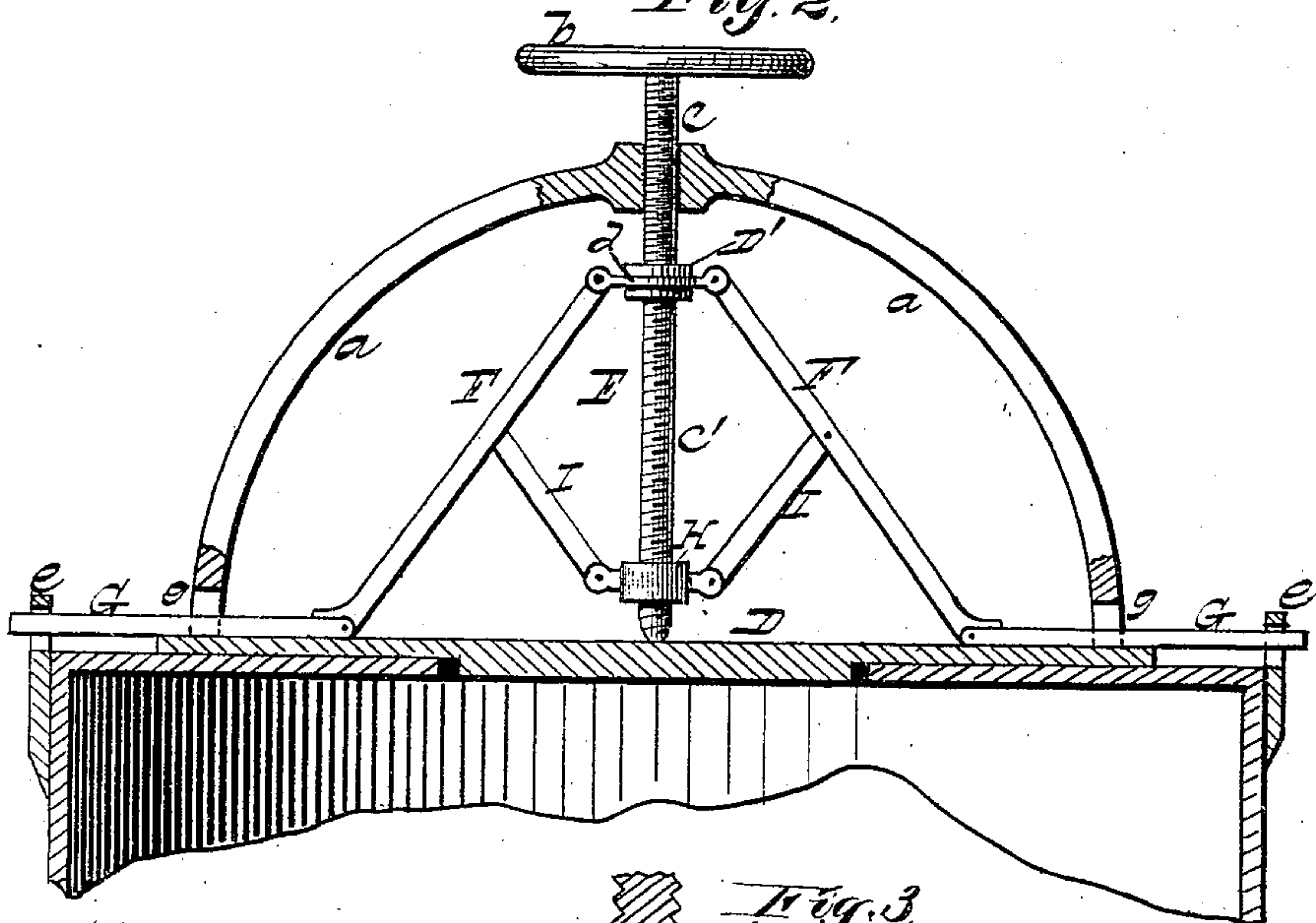
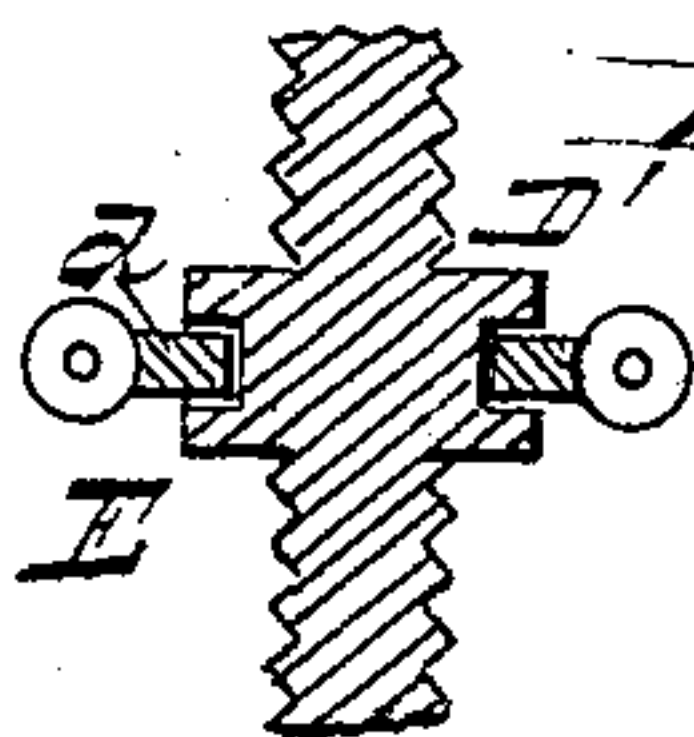


Fig. 3.



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UNITED STATES PATENT OFFICE.

MATH G. DAVIS, OF McCUNE, KANSAS, AND J. WILLIAM MISTER, OF WASHINGTON, DISTRICT OF COLUMBIA.

COVER-FASTENING FOR CHURNS, &c.

SPECIFICATION forming part of Letters Patent No. 241,310, dated May 10, 1881.

Application filed March 9, 1881. (Model.)

To all whom it may concern:

Be it known that we, MATH G. DAVIS, a citizen of the United States, residing at McCune, in the county of Crawford and State of Kansas, and J. WILLIAM MISTER, of Washington, District of Columbia, also a citizen of the United States, have invented certain new and useful Improvements in Cover-Fastenings for Churns and other Vessels; and we do hereby 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, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side elevation of our invention, and Figs. 2 and 3 are detail sectional views thereof.

This invention appertains to fastenings for covers of that class of churns termed "body-churns," the action of the body itself, without the aid of a dasher, performing the operation of churning; and it consists in details of construction appertaining more particularly to the method of connecting the cover to and disconnecting it from the vessel or body of the churn, hung by trunnions upon and between uprights, or in an upright frame, with an axle adapted to be revolved by a crank, substantially as hereinafter more fully set forth.

Referring to the accompanying drawings, A indicates the body or vessel, preferably of barrel shape, hung by trunnions at or about its middle in bearings attached to the uprights of an upright frame, B, fastened to and supported upon a horizontal or base frame, C, suitably braced to the upright frame.

D is the cover, preferably fitted with rubber or other packing to prevent the accidental escape around its edges of the cream or milk while the vessel or body is in motion. This cover, which is fitted to close an opening in the end or rest upon a flange around the inner surface of one end or head of the body or barrel, has an arch or bow, *a*, which, in addition to

other purposes, serves as a means for removing the cover.

Within a screw-threaded aperture (preferably surmounted by a similar collar) in the arch *a* works a screw, E, with its upper end provided with a hand wheel or lever, *b*, for its manipulation. The lower end of the screw is adapted to bear upon the cover D. The end or portion of the screw which works in the bow *a* has a fine or slow-working screw-thread, *c*, while its lower portion has a coarse or fast-working screw-thread, *c'*. Upon this screw is a fixed collar, D', which, by the downward movement of the screw E, is carried downward at such a speed as that, when the lower end of the screw has reached the cover, the horizontal levers, presently described, will be projected through or into the eyes or staples upon the churn-body.

Within an annular groove in the collar D' fits a ring or annulus, *d*, between and to ears upon opposite sides of which are articulated the upper ends of toggle-levers F. The lower ends of these levers are articulated to the horizontal bolts G, which are adapted to project into or through eyes *e* upon the churn-body upon the descent of the screw E and its sleeve or collar D', as above set forth. Upon the screw-thread *c'*, at the lower end of the screw E, is a screw-threaded collar, H, to opposite sides of which are articulated the lower ends of toggle-levers I I, in turn articulated at their upper ends to the levers F. The levers I serve to support and act as fulcrums for the levers F. The lower collar, H, finally reaches a position as much higher as the upper collar, D', sinks lower than its original point, which insures the forcing of the lower end of the screw E down upon the cover simultaneously with the projecting of the bolts G into the eyes or staples *e* of the churn body or receptacle, to effect the twofold function of packing the cover into the receptacle-opening and of securing it to the receptacle.

The levers G are guided in slots *g* in the arch or bearing *a*. This arrangement further permits of the removal of the cover-fastening mechanism simultaneously with the removal of

the cover when it is desired to remove the contents of the churn.

Having thus fully described our invention, we claim and desire to secure by Letters Patent—

5 The combination, with the body or vessel A, having eyes or staples *e*, of the cover D, having the bearing or handle *a*, having a screw-threaded aperture through it, screw E, provided with the fine and coarse screw-threads
10 *cc'*, and a fixed collar, D', with a ring, *d*, thereon, and a movable threaded collar, H, levers F I, and bolts G, adapted for joint operation substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MATH G. DAVIS.

Witnesses:

HENRY GADDIS,

JAMES F. McCUNE.

In testimony whereof I affix my signature in presence of two witnesses.

J. WILLIAM MISTER.

Witnesses:

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JOSEPH FORREST.