

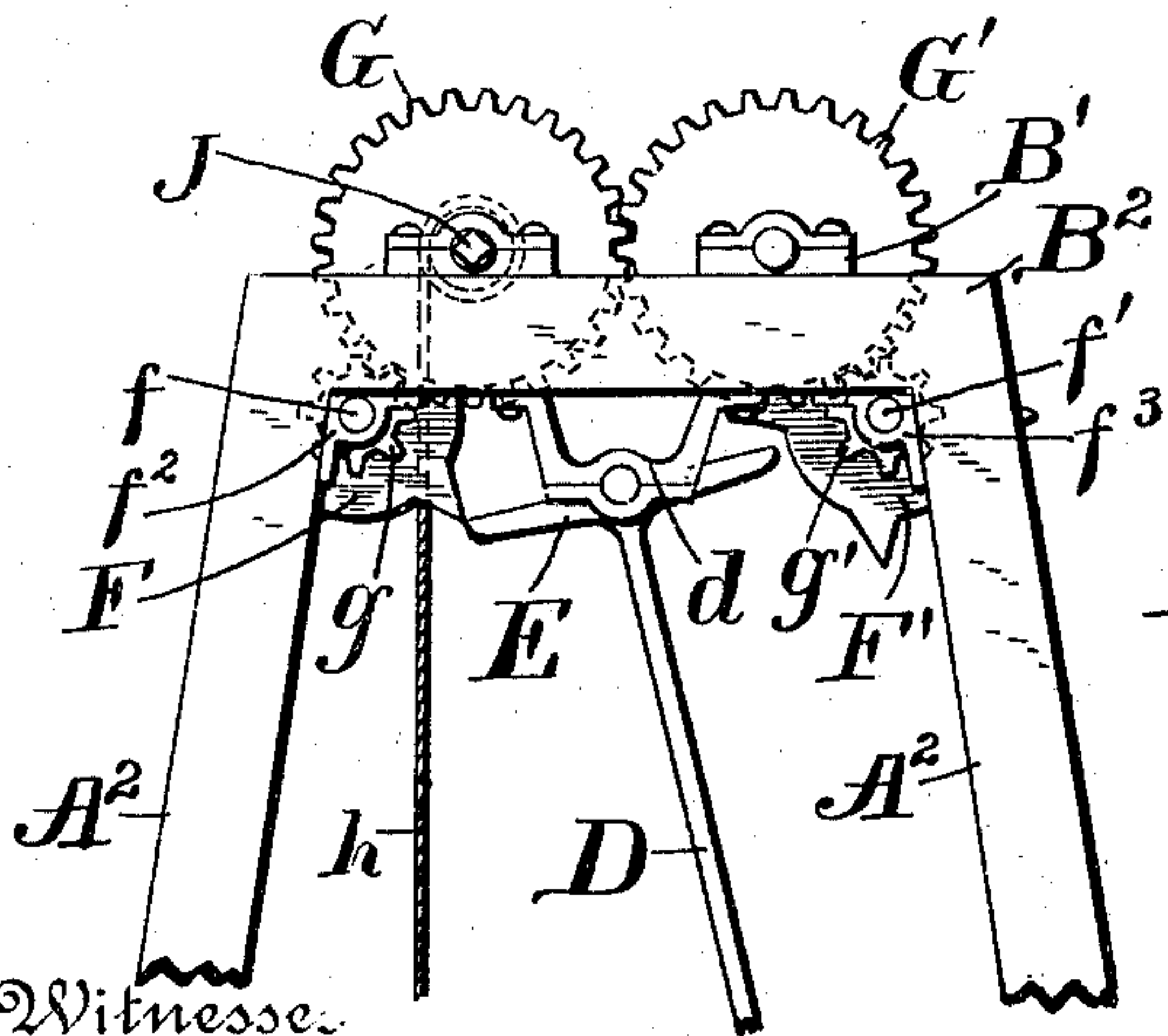
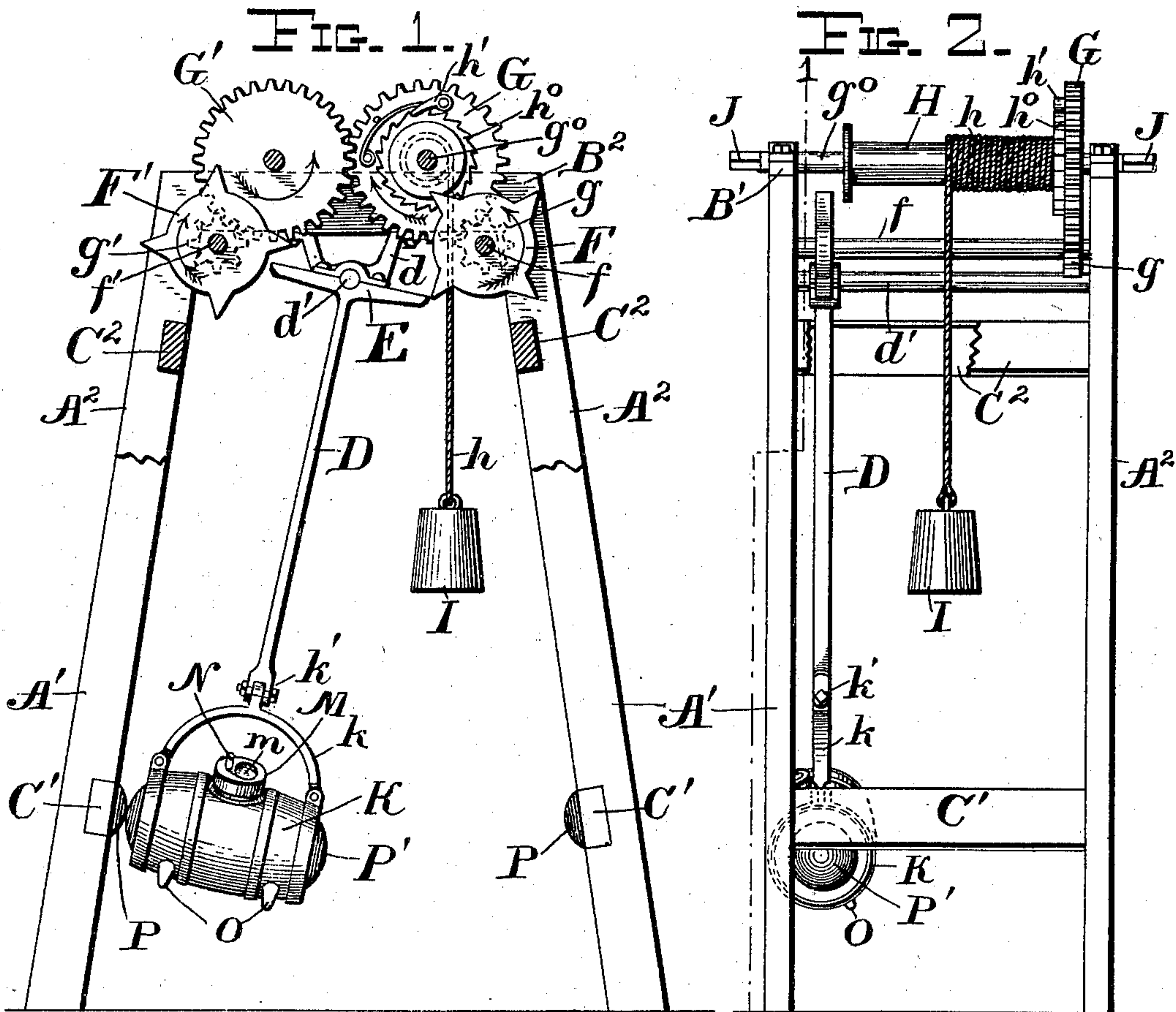
No. 692,182.

Patented Jan. 28, 1902.

J. S. FITZHUGH.
CHURN.

(Application filed Apr. 11, 1901.)

(No Model.)



Witnesses:

Percy C. Bowen.
Stephen G. Linsley.

FIG. 3.

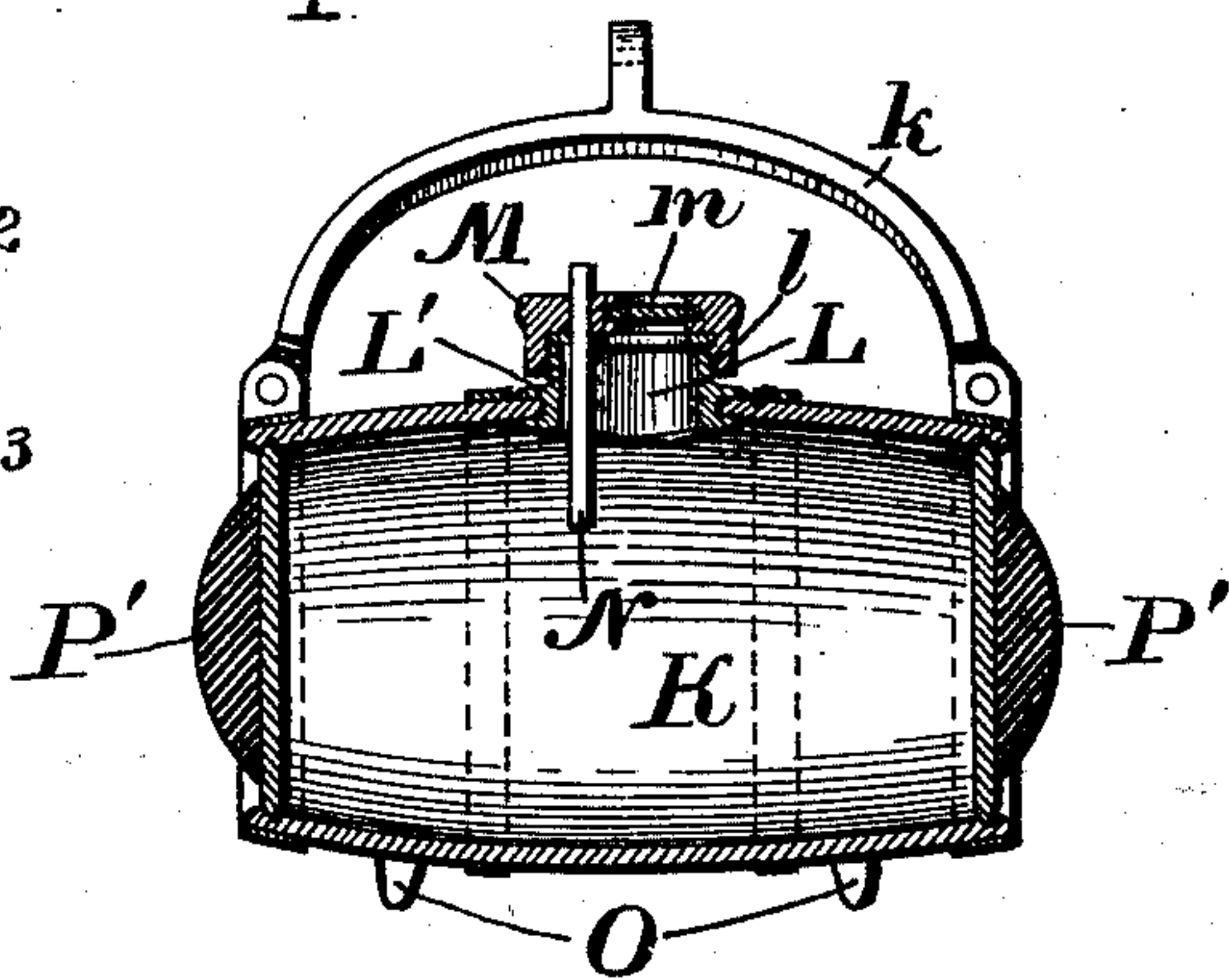


FIG. 4. Inventor

J. S. Fitzhugh
by Wilkinson & Fisher
Attorneys.

UNITED STATES PATENT OFFICE.

JAMES S. FITZHUGH, OF WACO, TEXAS.

CHURN.

SPECIFICATION forming part of Letters Patent No. 692,182, dated January 28, 1902.

Application filed April 11, 1901. Serial No. 55,392. (No model.)

To all whom it may concern:

Be it known that I, JAMES S. FITZHUGH, a citizen of the United States, residing at Waco, in the county of McLennan and State of Texas, have invented certain new and useful Improvements in Churns; and I 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.

My invention relates to improvements in churns and provides especially for a churn which is automatic in its action, requiring no further attention during the churning process other than to stop or start the operation of the device when it is desired to inspect the progress of formation of the butter.

To this end I have devised a churn which operates substantially in the manner of a pendulum, and to more fully describe my invention reference is had to the accompanying drawings, in which like parts are designated by the same letters throughout the several views.

Figure 1 represents a sectional elevation of my device on the line 1 1 of Fig. 2. Fig. 2 is a side elevation looking at the right-hand side of the device as shown in Fig. 1. Fig. 3 is a back view of the device, the lower portions being broken away; and Fig. 4 is a sectional view taken longitudinally through the churn.

A represents a framework composed of the front uprights A^1 and the rear uprights A^2 , provided at their upper ends with the cross-pieces $B^1 B^2$ and connected together by the transverse pieces $C^1 C^2$. To these top pieces $B^1 B^2$, I suspend a laterally-swinging arm D in any suitable manner, but preferably as shown in the drawings, where the arm D is mounted on a spindle d^1 , pivotally supported by the depending bearing-brackets d . The arm D is provided with a suitable escapement device E, which alternately engages with the teeth of a pair of escapement-wheels $F F'$, suitably mounted on a pair of shafts $f f'$, supported by the bearings $f^2 f^3$, secured to the front and rear uprights of the frame A. The escapement-wheels $F F'$ are driven in any suitable manner—as, for instance, by the ordinary clockwork mechanism. In the drawings, however, I have shown a pair of cog-wheels $G G'$, the cogs of which mesh with each

other and engage with the teeth of a pair of smaller cogs $g g'$, carried by the shafts $f f'$ at the opposite end from the escapement-wheels. One of these cog-wheels G is mounted on the shaft g^0 , which also carries a drum H, adapted to receive a coil of rope or chain h , suspending a weight I. The drum H is provided with the ratchet-wheel h^0 , which is in engagement with the usual pawl h^1 on the cog-wheel G for locking the roller or drum from backward movement while the rope or chain is being wound up on same. The ordinary means J to receive a crank is provided on the end of the shaft g^0 for winding up the weight. By the above construction the necessary means for imparting motion to the working parts is procured; but it is evident that instead of using the weight and drum any other suitable mechanical means may be applied, as before suggested.

To the lower end of the arm D, I suspend the churn K, preferably of the barrel shape, as shown, and provided with the handle k , which handle is suitably connected, as at k^1 , to the arm D. On the upper surface of the churn I provide a circular orifice L, and in said orifice is snugly fitted the annular rim portion L^1 , provided on its exterior surface with screw-threads l to receive the screw-threaded cap M. In the cap M, I have shown a glass peep-hole m , through which the contents of the churn can easily be inspected. In order that any gases which might accumulate will readily be carried off, I have provided the tube N, of glass or other suitable material. I have also provided the exterior surface of the churn with the short legs O, upon which the churn sets when detached from the pendulum-arm. The transverse cross-pieces C^1 of the frame are so situated in relation to the churn as to be in the path of the lateral swing of the churn, and upon these cross-pieces I provide the buffers P, of rubber or other suitable resilient material. These buffers serve the twofold purpose of jolting the churn at the end of its stroke, thereby sloshing the contents for creating the necessary churning action, and forming a rebounding cushion for assisting in overcoming the effect of gravity on the swinging churn.

Instead of placing the buffer-blocks on the transverse cross-pieces it is evident that I

might locate the same on the end faces of the churn, as shown at P', or I may use them both on the churn and cross-pieces as may be desired.

5 I do not wish to limit myself to the precise construction as described above, as it is obvious that various changes might be made in the above device without departing from the spirit of my invention.

10 Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In a pendulum-churn, the combination with the frame, of a bracket mounted in the upper
15 portion of said frame, a depending arm pivotally mounted in said bracket, escapement-

points provided on said depending arm, an escapement-wheel mounted in said frame engaging with said escapement-points, means for imparting motion to said wheels, a vessel 20 suspended by said arm, a stop limiting the lateral swing of said vessel, and an elastic buffer on said vessel adapted to strike said stop thereby agitating the contents of the vessel and tending to return the vessel to its normal position, substantially as described. 25

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

JAMES S. FITZHUGH.

Witnesses:

C. S. FITZ-HUGH,
J. C. EATON.