

No. 814,196.

PATENTED MAR. 6, 1906.

J. D. FORSYTH.  
CHURN.

APPLICATION FILED OCT. 28, 1906.

FIG. 1

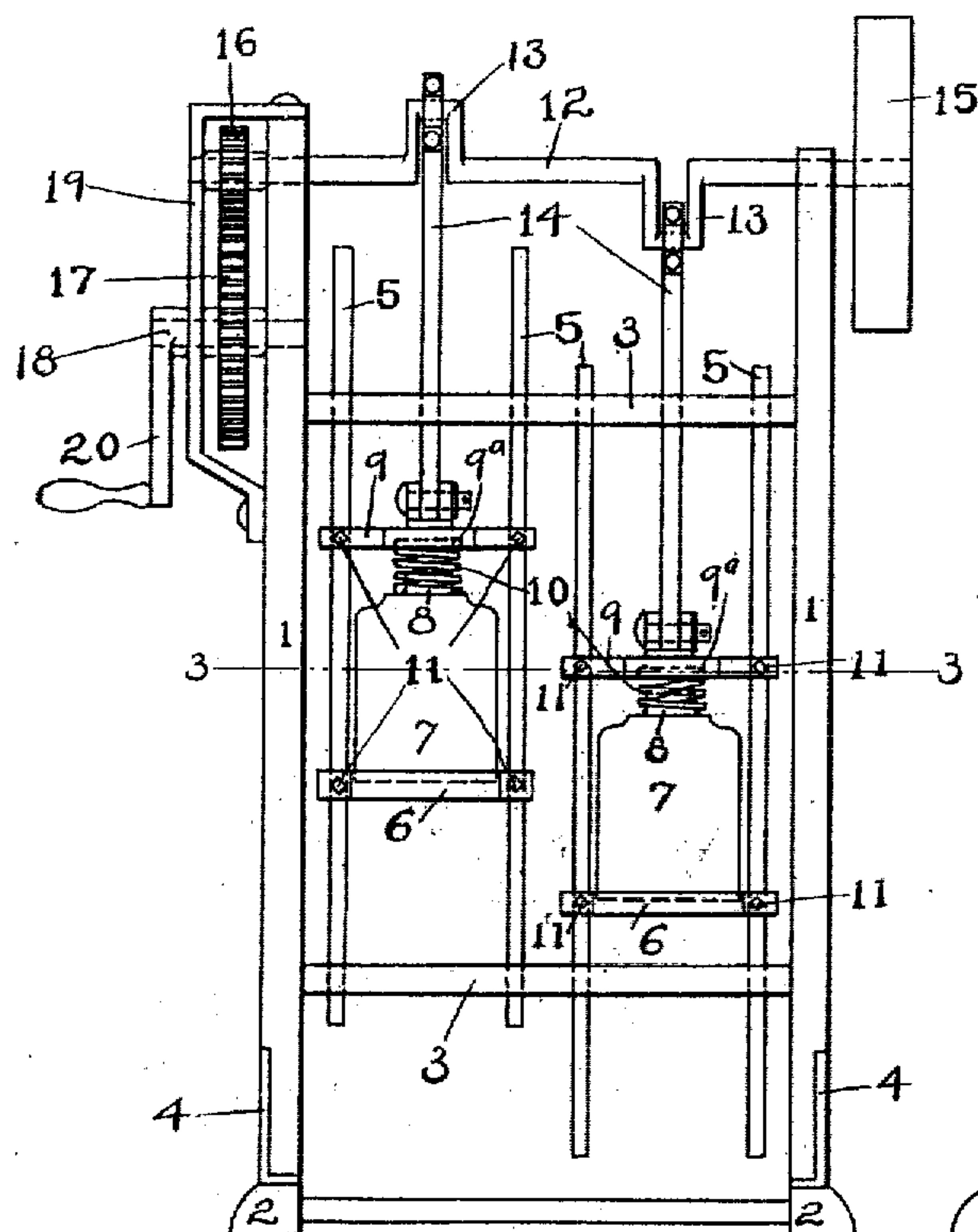


FIG. 2

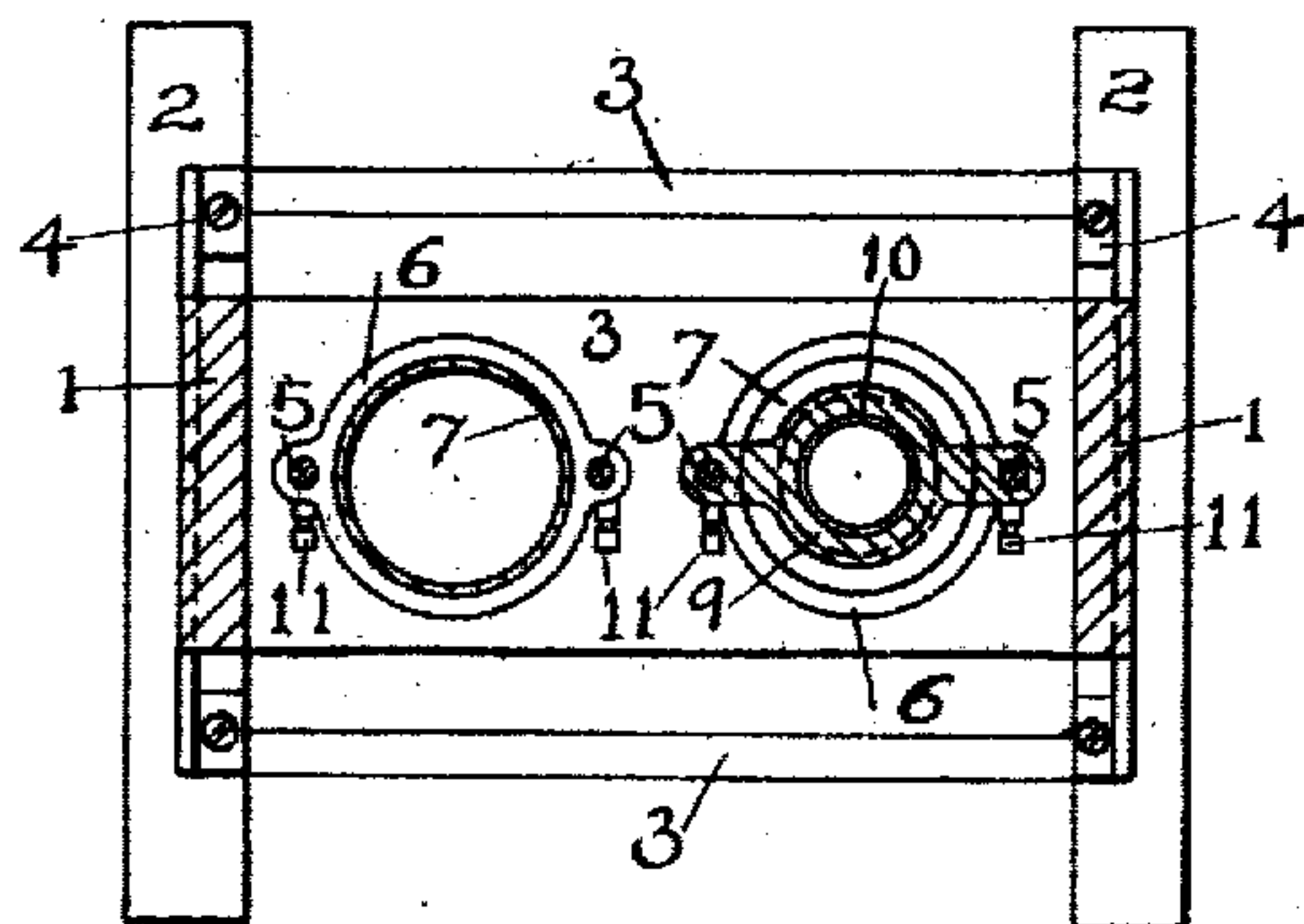
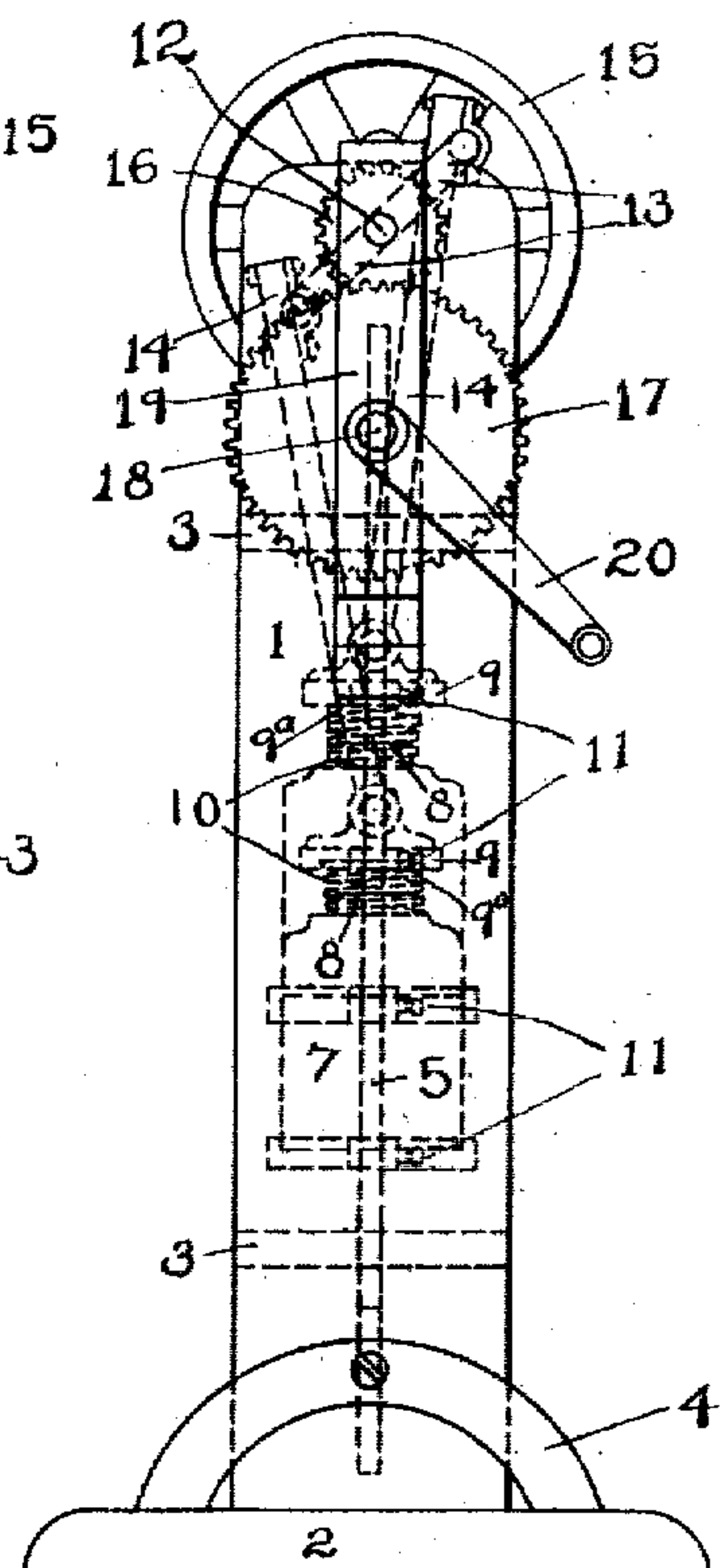


FIG. 3

Witnesses  
O. D. DuBois.  
W. L. Pollard

Inventor  
JAMES D. FORSYTH  
By Atty N. DuBois.



# UNITED STATES PATENT OFFICE.

JAMES D. FORSYTH, OF SPRINGFIELD, ILLINOIS, ASSIGNOR OF ONE-HALF  
TO CARL J. KOENIG, OF SPRINGFIELD, ILLINOIS.

## CHURN.

No. 814,196.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed October 28, 1905. Serial No. 284,861.

*To all whom it may concern:*

Be it known that I, JAMES D. FORSYTH, a citizen of the United States, residing at Springfield, Illinois, have invented certain new and useful Improvements in Churns, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use my said invention.

My invention relates to churns of that class which have rapidly-reciprocating jars or other vessels containing the cream which is to be churned.

The purposes of my invention are to provide a churn having jars which are oppositely reciprocable, to provide improved means for retaining the jars on the machine, and to provide improved means for imparting the reciprocating movement to the jars.

With these ends in view my invention consists in the novel features of construction and combinations of parts shown in the annexed drawings, to which reference is hereby made, and hereinafter particularly described, and finally recited in the claims.

Referring to the drawings, in which similar reference-numerals designate like parts in the several views, Figure 1 is a side elevation of the complete machine. Fig. 2 is an end elevation, and Fig. 3 is a horizontal section on the line 3 3 of Fig. 1.

Uprights 1 are secured in a vertical position on sills 2. Cross-pieces 3 connect the uprights 1, and braces 4 connect the uprights with the sills 2. Rods 5 pass through and slide freely in holes in the cross-pieces 3. Platforms 6 are firmly secured to the rods 5. Jars 7 rest in recesses on the platforms 6, and the recesses in the platforms prevent accidental displacement of the jars. The jars 7 have screw-caps 8, such as are in common use on fruit-jars. Plates 9 have on their under side recesses 9<sup>a</sup>, in which fit springs 10, which also fit around the caps 8. The plates 9 are pierced by holes, in which the rods 5 fit, and the plates are detachably connected with the rods by set-screws 11 or equivalent connecting devices so arranged that the plates may be quickly and conveniently moved upward or downward on the rods 5 and secured in position to accommodate jars of different sizes.

When the jars 7 are in position on the platforms 6, the springs 10 surround the caps 8 and the upper ends of the springs rest in the recesses 9<sup>a</sup>. A shaft 12, having opposite cranks 13, turns in suitable bearings on the uprights 1. A fly-wheel 15 is secured on the shaft 12. Connecting-rods 14 connect the cranks 13 with the plates 9. A cog-pinion 16 is secured on the shaft 12. A bracket 19 is secured alongside one of the uprights 1. A short shaft 18 turns in holes in the upright 1 and the bracket 19. A cog-wheel 17, secured on the shaft 18, meshes with and drives the pinion 16. A crank 20 is secured on the shaft 18.

The operation of the device is as follows: The cans being partially filled with cream and the caps 8 being screwed thereon, the caps are inserted in the springs 10 and the jars are pushed upward sufficiently to permit the bottom of the jars to enter the recesses in the platforms 6, and the springs serve to retain the jars in position on the platforms. The crank being turned turns the wheel 17, which drives the pinion 16, thereby turning the shaft 12, so as to cause the rapid reciprocation of the platforms 6 through the instrumentality of the cranks 13, the connecting-rods 14, and the plates 9, and the reciprocating movement of the platforms agitates the cream in the jars, so as to quickly produce butter.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A churn comprising sills, vertical uprights secured on said sills, braces secured to said sills, a bracket on one of said uprights, a shaft turning in said bracket and the adjacent upright, a cog-wheel and a crank secured on said shaft, a double crank-shaft turning in bearings on the uprights, a fly-wheel on the crank-shaft, a pinion on the crank-shaft meshing with said cog-wheel, cross-pieces connecting said uprights, parallel rods sliding in holes in said cross-pieces, platforms secured to said rods, plates detachably connected with said rods above said jars, springs acting to hold said jars in position on said platforms and connecting-rods connecting said cranks with said plates, as set forth.

2. In a churn the combination of reciprocating parallel rods, a platform secured on said rods, a centrally-recessed plate detachably connected with said rods, a spring fitting in the recess of said plate and a jar supported on said platform and having a cap fitting in said spring.

In witness whereof I have hereunto subscribed my name, at Springfield, Illinois, this 14th day of October, 1905.

JAMES D. FORSYTH.

Witnesses:

MARGARET McDONALD,  
R. H. DOOLING.