

(No Model.)

A. A. MCGINNIS.  
CHURN.

No. 365,445.

Patented June 28, 1887.

Fig. 1.

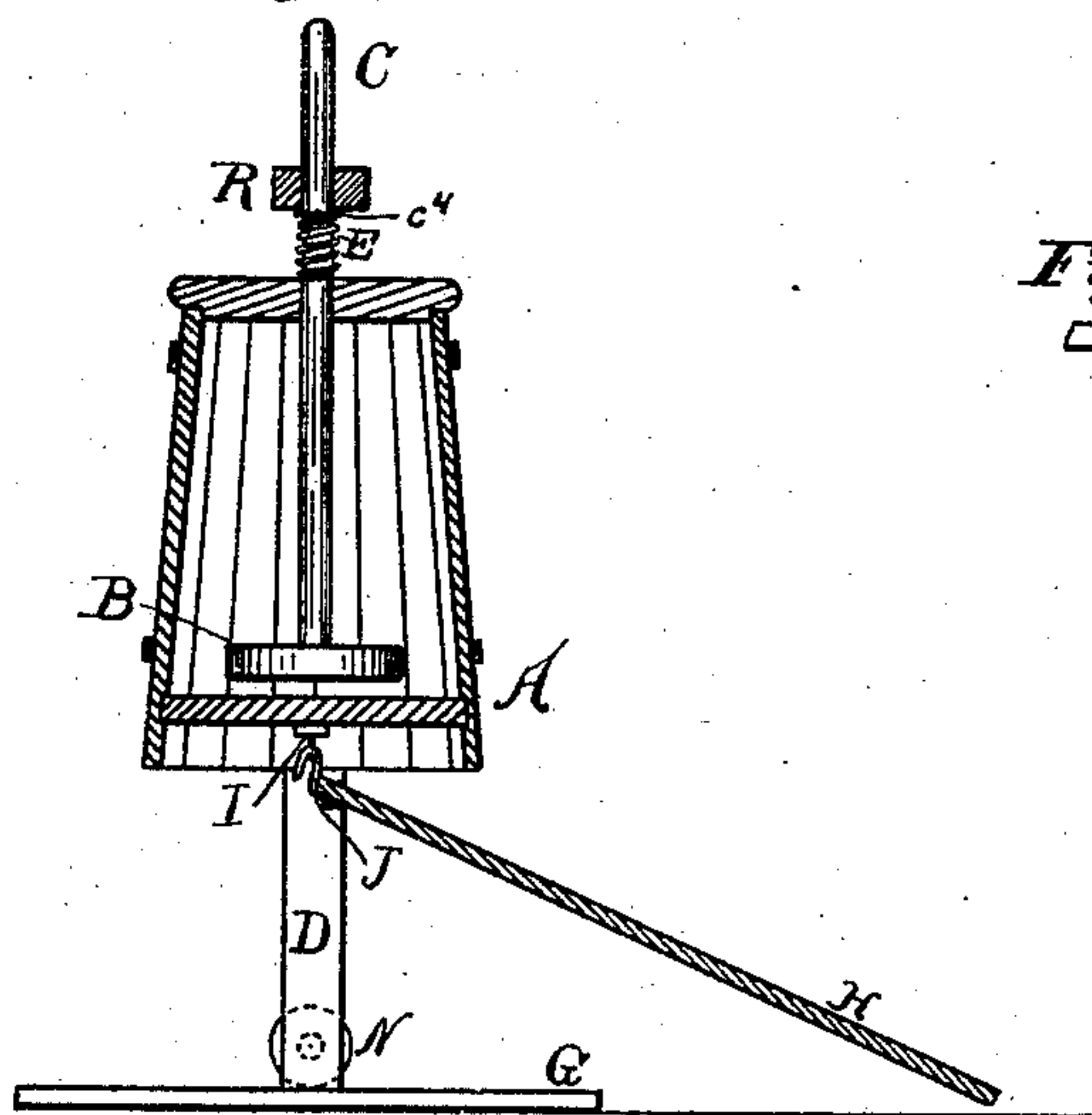


Fig. 2.

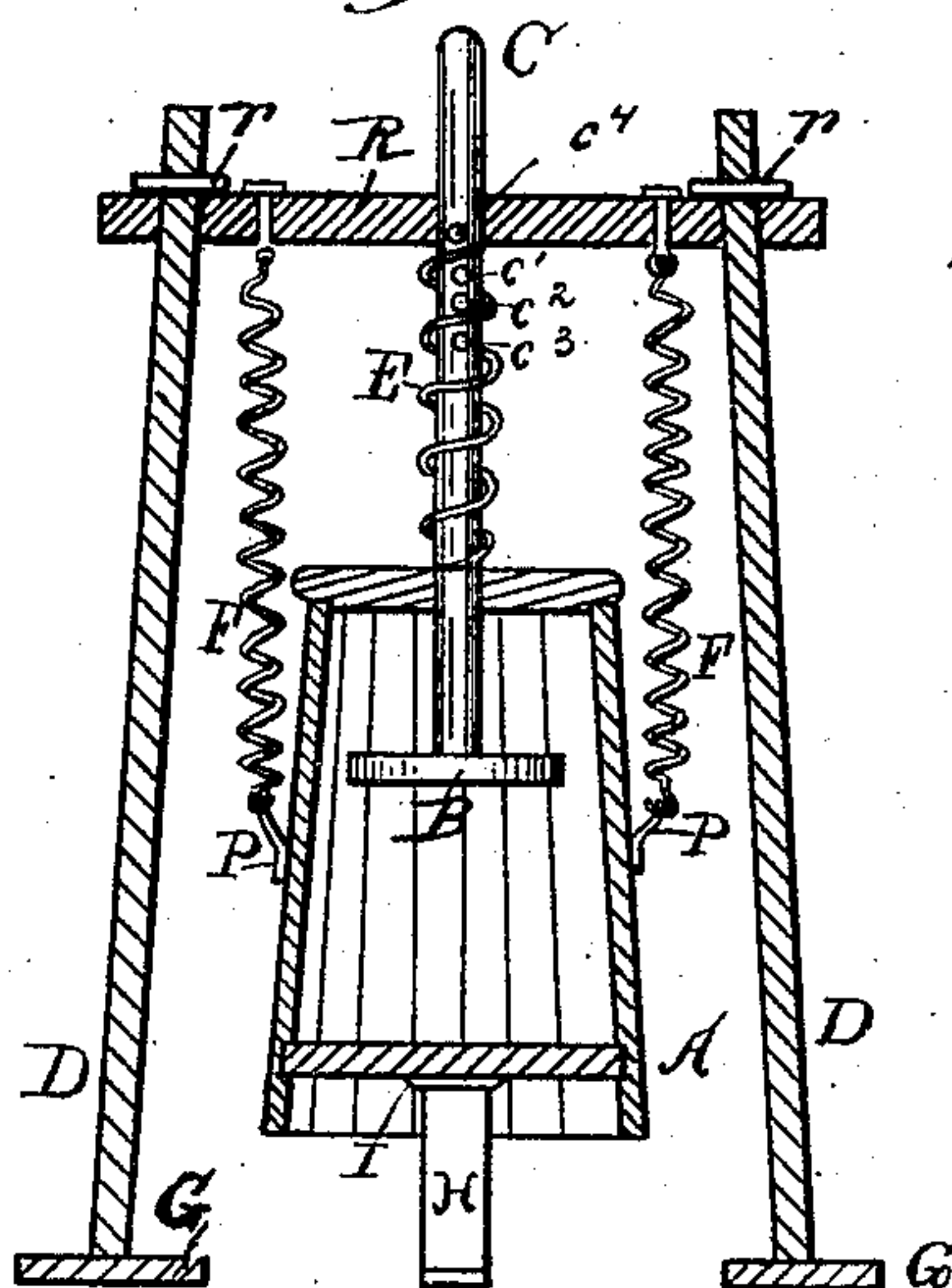


Fig. 6.

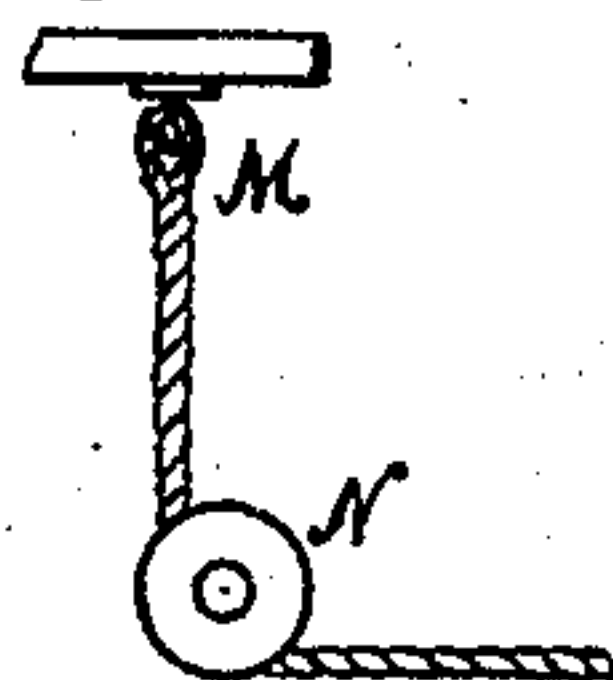


Fig. 3.

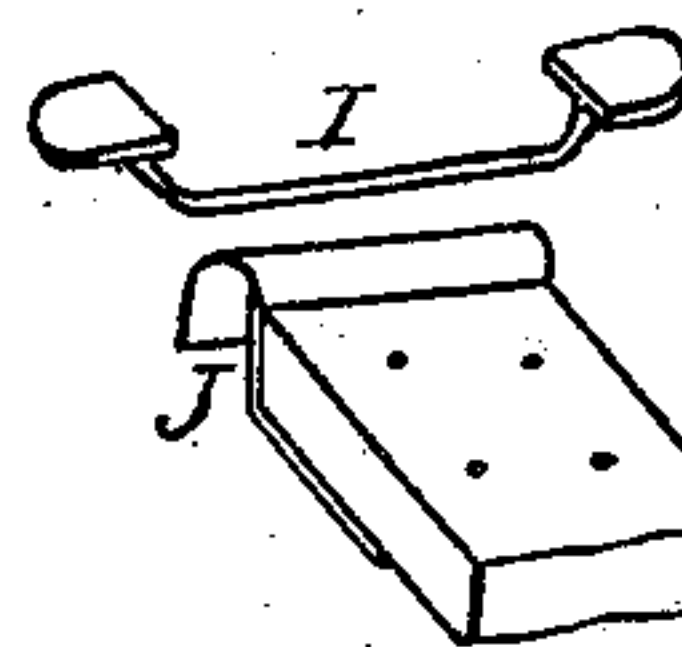
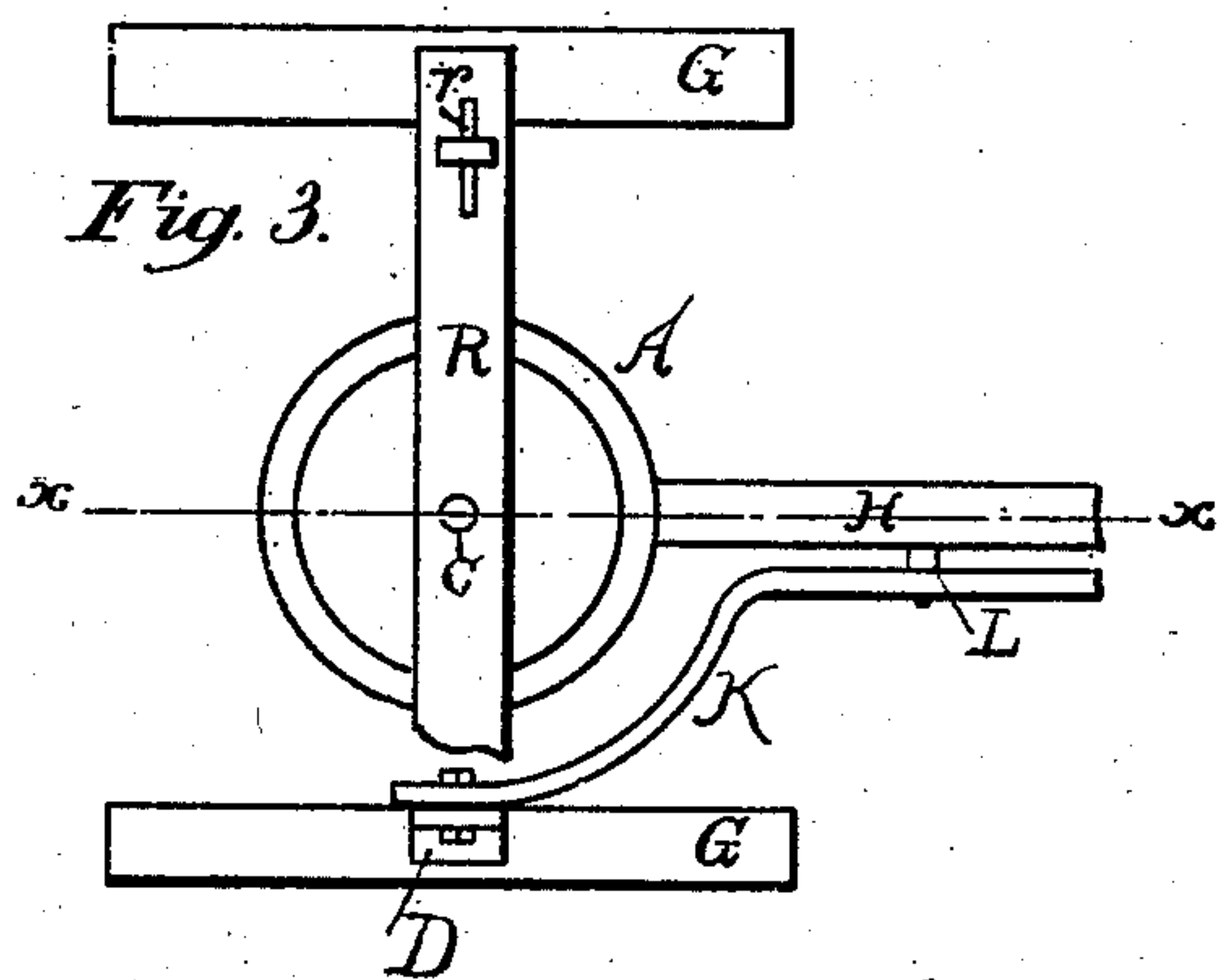


Fig. 5.

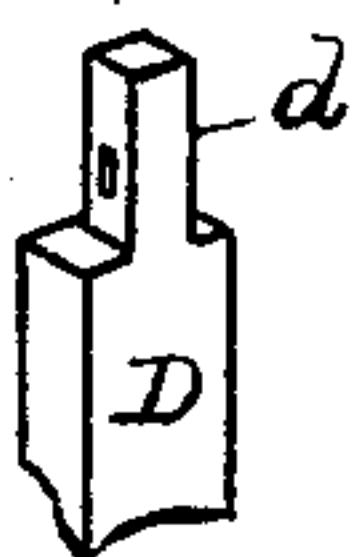
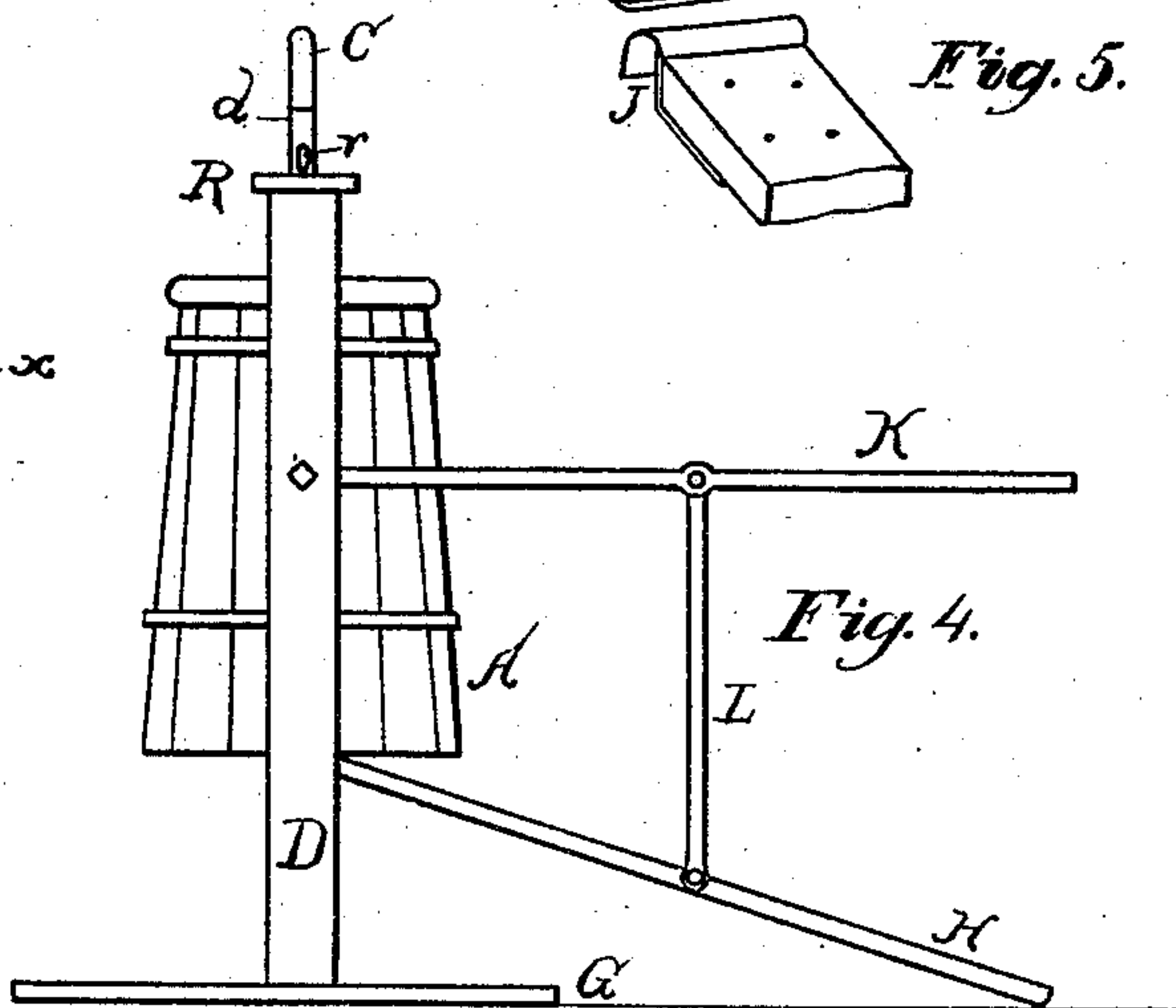
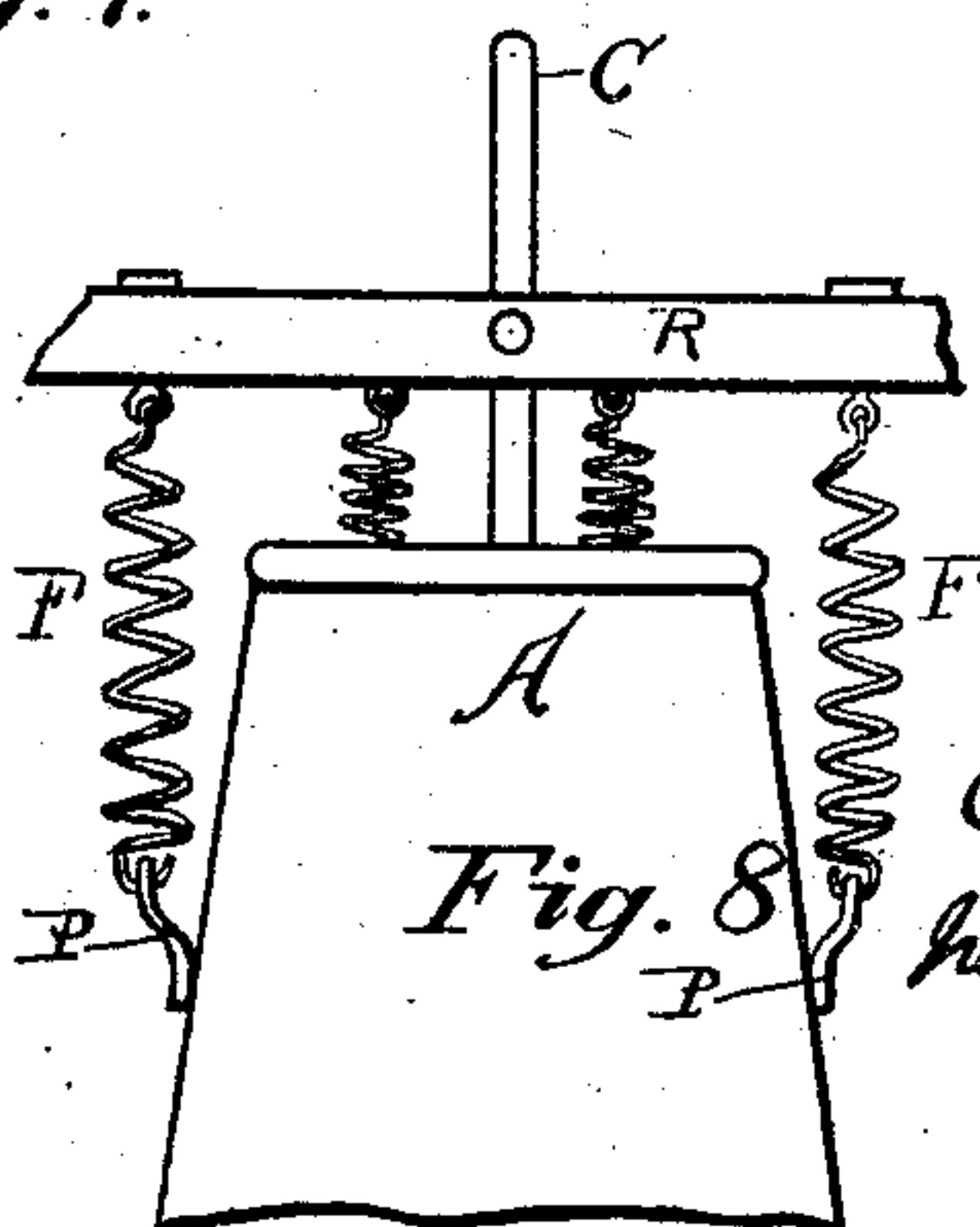


Fig. 7.



Attest:  
W. J. Christopher  
Jno. W. Frehli.

Inventor:  
Alpheous A. McGinnis,  
per Wm. Hubbell Fisher,  
Att'y.



# UNITED STATES PATENT OFFICE.

ALPHEOUS A. MCGINNIS, OF PITTSBURG, PENNSYLVANIA.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 365,445, dated June 28, 1887.

Application filed February 9, 1885. Renewed April 21, 1887. Serial No. 235,718. (No model.)

*To all whom it may concern:*

Be it known that I, ALPHEOUS A. MCGINNIS, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have  
5 invented certain new and useful Improvements in Churns, of which the following is a specification.

The various features of my invention and the advantages arising from their use will be  
10 apparent from the following description.

In the accompanying drawings, Figure 1 is a vertical sectional elevation of a churn provided with my improvements. This section is taken at line *xx* of Fig. 3. Fig. 2 is also a  
15 vertical sectional elevation of my device, but taken at right angles to the section shown in Fig. 1. Fig. 3 is a top view of one form of my improved churn. Fig. 4 is a side elevation of the device, as shown in Fig. 3. Fig. 5  
20 is a detail perspective view showing preferred means for attaching the foot-lever to the bottom of the churn. Fig. 6 shows means for operating the churn in which the foot-lever is dispensed with. Fig. 7 is a perspective view  
25 of the top of one of the standards, showing the tongue and the shoulders on which the cross-piece rests. Fig. 8 illustrates a certain modification of my device.

The churn proper, A, is the common cylindrical churn provided with the usual dasher,  
30 B, on the end of the rod C.

The frame-work for supporting the churn is made as follows: Two broad feet, G, which give support to the whole, have rising from  
35 their centers the uprights or standards D, which are united above by the cross-piece R. The cross-piece may be secured to the standards in any way desired; but the preferred method is that shown in the drawings. Here  
40 the upper ends of the standards D are narrowed to form the shanks *d*, which pass through openings in the cross-piece R and let it rest on the shoulders formed by the narrowing of the uprights D. Two keys, *r*, hold the cross-piece  
45 R in position. Two springs, F, are hung from the cross-piece R and catch into handles P on the sides of the churn A. The rod C passes through the top of the churn, and also through the cross-piece R, in this way keeping the  
50 churn from tipping. This rod has a hole, C', but preferably a number of holes, as C' C<sup>2</sup> C<sup>3</sup>,

arranged at different points under each other, as shown in Fig. 2. The spring E is coiled around the dasher-rod C and rests on the top of the churn A and against the under surface  
55 of the pin C', which is placed in one or the other of the holes C' C<sup>2</sup> C<sup>3</sup>. Its tendency is to spread apart and keep the churn down. At the same time it lifts the dasher, or rather holds the dasher in position.

Instead of spring E, surrounding the dasher-rod, I sometimes use two springs, which extend from the cross-piece R and rest on the lid of the churn, on each side of the rod C, pressing down on the top of the churn and performing the same functions as spring E. In this  
65 case the dasher-rod is fixed in position by a pin at the cross-piece R. This modification is illustrated in Fig. 8. The springs F are strong enough to lift the churn when full  
70 against the downward pressure of the spring E and the weight of the full churn. The extent to which the dasher is lifted is determined by the position of the pin C'. The dasher is lifted higher when the pin C' is put in hole C<sup>3</sup>  
75 than when the pin is put in either of the holes above it.

It now remains to provide a means for depressing the churn to give the movement opposite to that made by the springs F. The  
80 means which I prefer to employ is that shown in Fig. 1. A loop, I, is fastened to the bottom of the churn, and the broad hook J at the end of the foot-lever H is hooked over it. The other end of this lever H rests upon the ground  
85 or floor. The sides of the churn are preferably brought some distance below the bottom, so as to project lower than the loop I, so that when desired the churn A may be detached from the frame and used as an ordinary dasher-  
90 churn without the loop touching the floor.

The operation of churning is performed by depressing the filled churn by the aid of the treadle H and then letting the springs F draw  
95 it up again. As the churn rises the dasher passes downward through the milk, and when the churn descends the dasher rises upward through the milk, making the same movements as in the ordinary dasher-churn; but as this machine is very nearly balanced little force is  
100 required to operate the treadle H.

It is sometimes desirable to operate the lever



H by hand instead of by foot, in which case the lever K and rod L are added, as illustrated in Figs. 3 and 4. The lever K is fulcrumed to one of the standards D and bent around the churn until it is nearly over the lever H. The rest of its length it projects in the same direction as the lever H. The connecting-rod L is pivoted to the lever K, and also to the lever H below.

10 In using the lever K, the operator may either stand or sit, in which latter case he can put his feet on the lever H and assist in the work. This lever K makes a very convenient addition to my device.

15 Sometimes I dispense with the levers H and K, and use a different device for depressing the churn. This latter device is shown in Fig. 6, and consists of a pulley, N, attached to a cross-piece under the churn, and having passing under it a rope, O, attached to the loop by the snap-hook M. With this modification the process of churning is effected by alternately pulling and loosening the rope O.

20 The special advantages of my device are its simplicity of structure, cheapness, durability, and reliability. It is much more easily worked than the old-fashioned churn, and at the same time has all of its advantages.

25 While the various features of my invention are preferably employed together, one or more of said features may be employed without the remainder, and in so far as applicable one or

more of said features may be employed in connection with churns of a construction other than that particularly herein specified. 35

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

1. The combination, with the supporting-frame provided with cross-piece R, the churn A, springs F F, connecting said churn and cross-piece, rod C, provided with dasher B, and the spring between the churn-lid and cross-piece, of the foot-lever H, hand-lever K, and connecting-rod L, substantially as and for the purpose specified. 45

2. The combination, with the supporting-frame, of the churn A, springs F F, rod C, carrying dasher B, spring E, surrounding said rod, and pin C', substantially as and for the purpose specified. 50

3. In combination with the supporting-frame provided with cross-piece R, the churn A, side springs, F F, connecting the churn and cross-piece, the rod C, having openings C' C' C' and carrying the pin C', dasher B, and the spring E, mounted on the dasher-rod and bearing at one end against pin C' and at the other end against the lid, substantially as and for the purpose specified. 55

ALPHEOUS A. MCGINNIS.

Witnesses:

JNO. W. STREHLI,

O. M. HILL.