

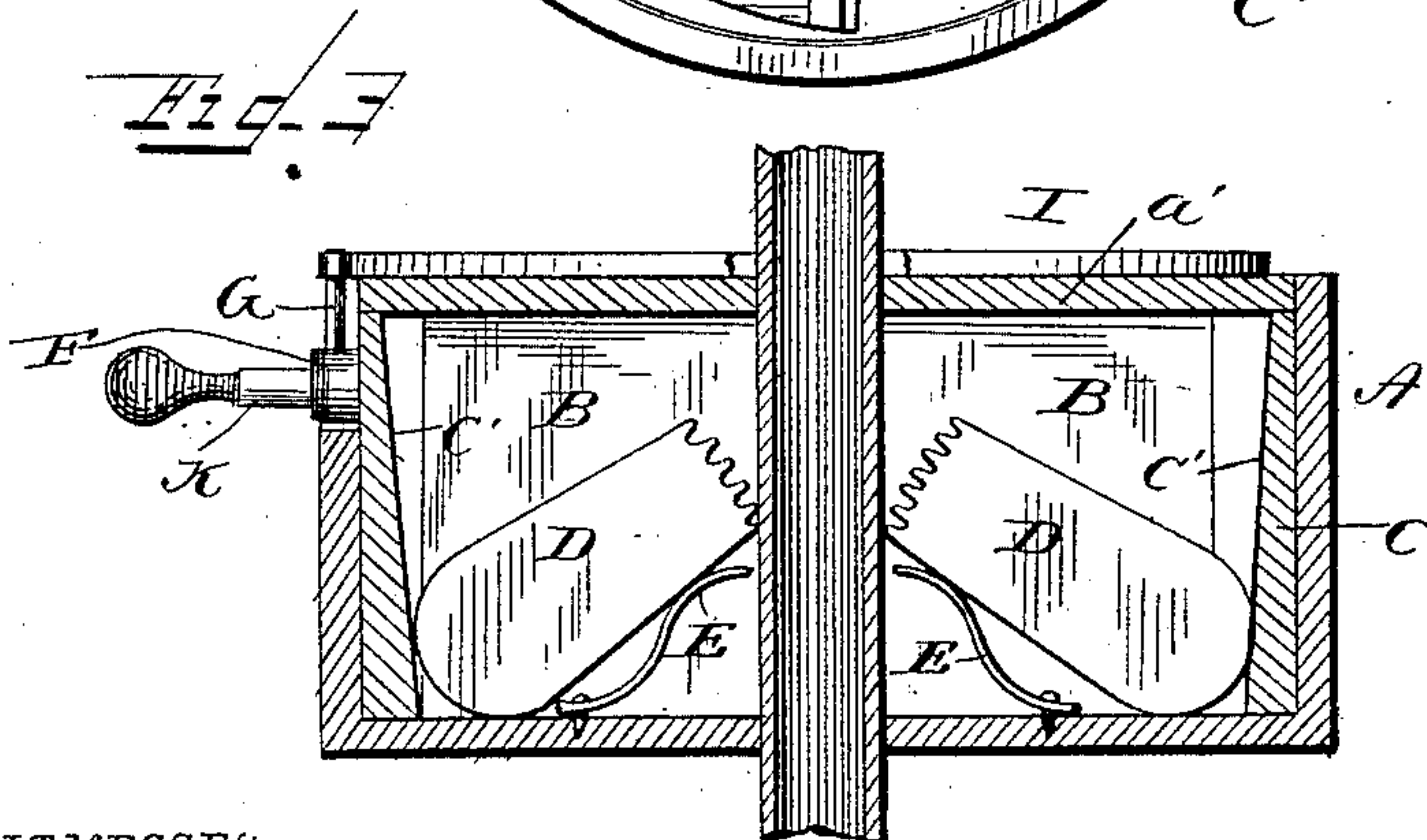
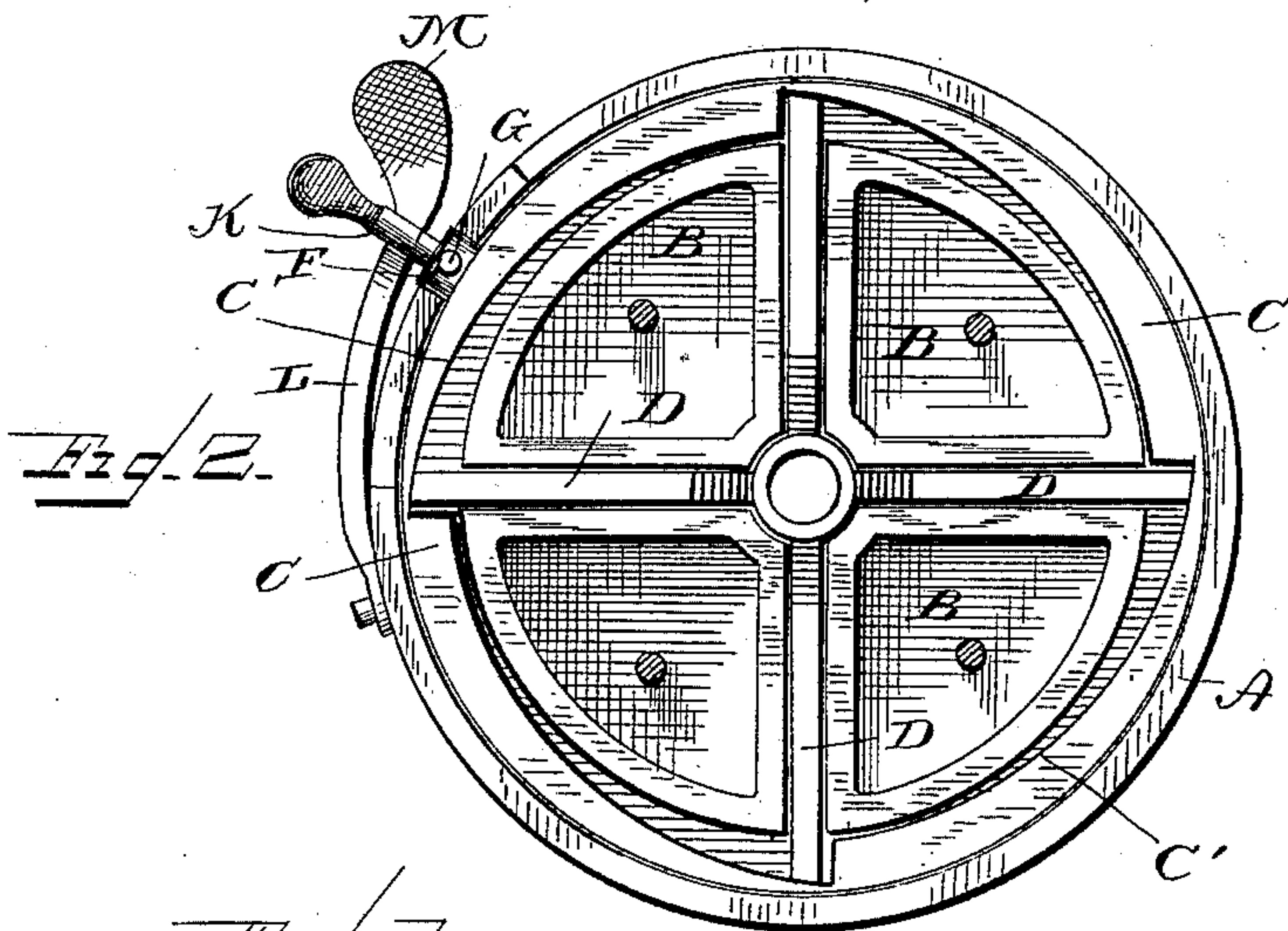
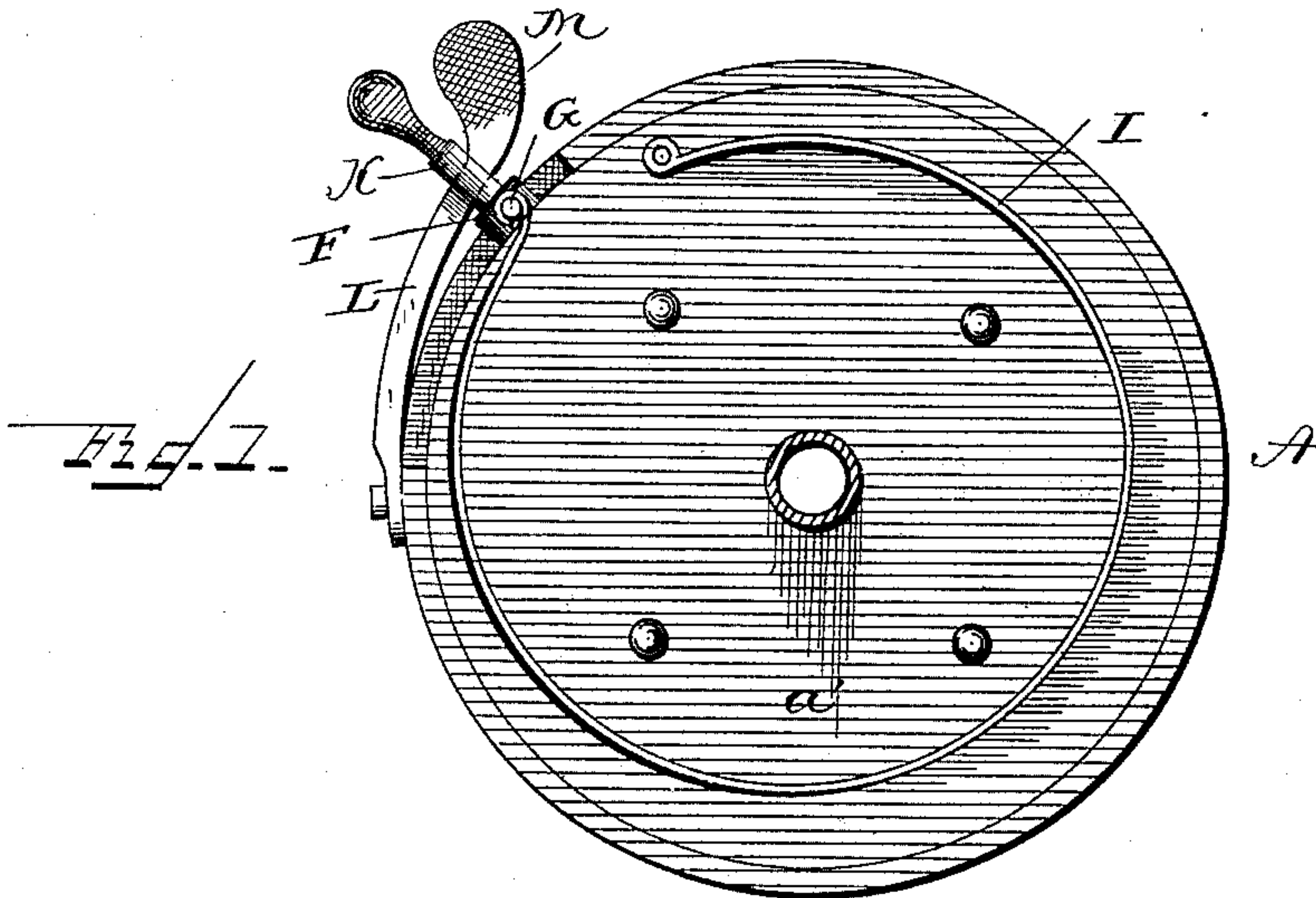
(No Model.)

J. HOLLY.

TUBE CLAMP FOR OIL WELLS.

No. 348,907.

Patented Sept. 7, 1886.



WITNESSES
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JOHN HOLLY, OF ROUSEVILLE, PENNSYLVANIA.

TUBE-CLAMP FOR OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 348,907, dated September 7, 1886.

Application filed June 18, 1886. Serial No. 205,555. (No model.)

To all whom it may concern:

Be it known that I, JOHN HOLLY, a citizen of the United States of America, residing at Rouseville, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Tube-Clamps for Oil-Wells, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in attachments for oil-wells, and has for its objects to provide means for automatically preventing the tubing used for extracting the oil from the well from the slipping and dropping into the well while being coupled or drawn out, incident to the methods ordinarily in use, and to provide means whereby this may be effected automatically with varying sizes of pipe. I accomplish these objects by means of the attachment illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the attachment in working order. Fig. 2 is a plan view of the same with the cover removed. Fig. 3 is a longitudinal section of the attachment as shown in Fig. 1.

My attachment consists of a circular iron casing, A, which has a perforation in the bottom for the passage of the tubing leading into the well. In this casing are hollow iron boxes B B, segmental in shape and rigidly secured to the bottom of the casing A, leaving a space between them and the casing A, in which is placed a solid iron collar, C, and spaces between each, parallel with the diameter for the reception of the clutches D. The clutches D are elongated, having a toothed end rounded to fit the tubing, and curved on its longer diameter, and a rear end curved to correspond to the toothed end. Under these clutches are placed the springs E, which are secured to the bottom of the casing A, and spring so as to hold the clutches poised at an angle. To the rear of these clutches and iron boxes B B is the collar C, moving freely against the casing A, and provided on the inner surface with cams C', corresponding in number to the clutches. These cams are slightly inclined, being larger at the bottom than at the top. Projecting through a slot made in the casing A for that purpose is a bracket, F, carrying the pin G, which projects above the

top of the casing A. Engaging the top of this pin G is a rod, H, which is connected to the spring I. The spring I is circular, extending around the top of the casing A, and is rigidly secured to the top a' of the casing A. This top a' is held in place by bolts passing down through the boxes B B and the bottom of the casing A, and is flush with the top of the casing A. Upon the bracket F is another pin, K, extending outward and provided with a handle. This pin is engaged by a spring-pawl, L, which is rigidly secured to casing A, and is provided with the foot-rest M, extending down near the ground, for convenient manipulation by the operator.

The operation of my attachment only occurs when the tubing is either being drawn out of the well or being coupled, or in case of accident. When the tubing is being let down into the well, the operator, by means of the handle on the pin K, draws the collar C around and the cams C' out of engagement with the clutches D, and allows them to fall back out of engagement with the tubing, and the tubing to pass. Now, in case of an accident at the paying-out drum or the discovery of a flaw, the operator places his foot upon the foot-rest M and releases the pin K from the pawl L, when the spring I throws the collar C around and the cams C' into engagement with the clutches D D, and presses the clutches upon the tubing. As the clutches D engage, they roll upon their rounded rear end, and because of the incline of the cam as they roll over they approach each other and fasten the tighter as the strain is greater. The shock is broken by the springs E E.

I do not confine myself to the exact construction herein set forth.

What I claim is—

1. In an attachment such as described, the combination of a collar provided with cams upon its inner surface, and clutches adapted to be moved back and forth against the tubing and held from lateral movement, substantially as set forth.

2. In an attachment such as described, the combination of a collar provided with inclined cams upon its inner surface, and clutches adapted to be moved back and forth against the tubing and held from lateral movement, said

clutches being provided with rounded ends, bearing against the collar, substantially as set forth.

3. In an attachment such as described, the
5 combination of a collar provided on its inner surface with inclined cams, clutches adapted to be moved back and forth against the tubing and held from lateral movement, the said clutches being provided with rounded ends,
10 substantially as shown, and a spring placed under said clutches and holding said clutches up in the position shown, substantially as set forth.

4. In an attachment such as described, the
15 combination of a collar provided with cams upon its inner surface, clutches adapted to be moved back and forth against the tubing and held from lateral movement, and cases placed between each two of said clutches and forming
20 slots or ways for them to operate in, substantially as set forth.

5. In an attachment such as described, the combination of clutches adapted to be moved back and forth against the tubing and held

from lateral movement, a collar encompassing
25 said clutches and provided on its inner surface with cams and on its outer surface with a pin, substantially as shown, and a spring secured to a stationary point and to said pin, substan-
30 tially as set forth.

6. In an attachment such as described, the
35 combination of clutches adapted to be moved back and forth against the tubing and held from lateral movement, a collar encompassing said clutches and provided on its inner sur-
40 face with cams and on its outer surface with two pins, substantially as shown, a spring secured to a stationary part and to one of said pins, and a spring-pawl fastened to a stationary
part and engaging the other of the said pins, substantially as set forth.

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

JOHN HOLLY.

Witnesses:

W. R. BARR,

F. W. HAYS.