

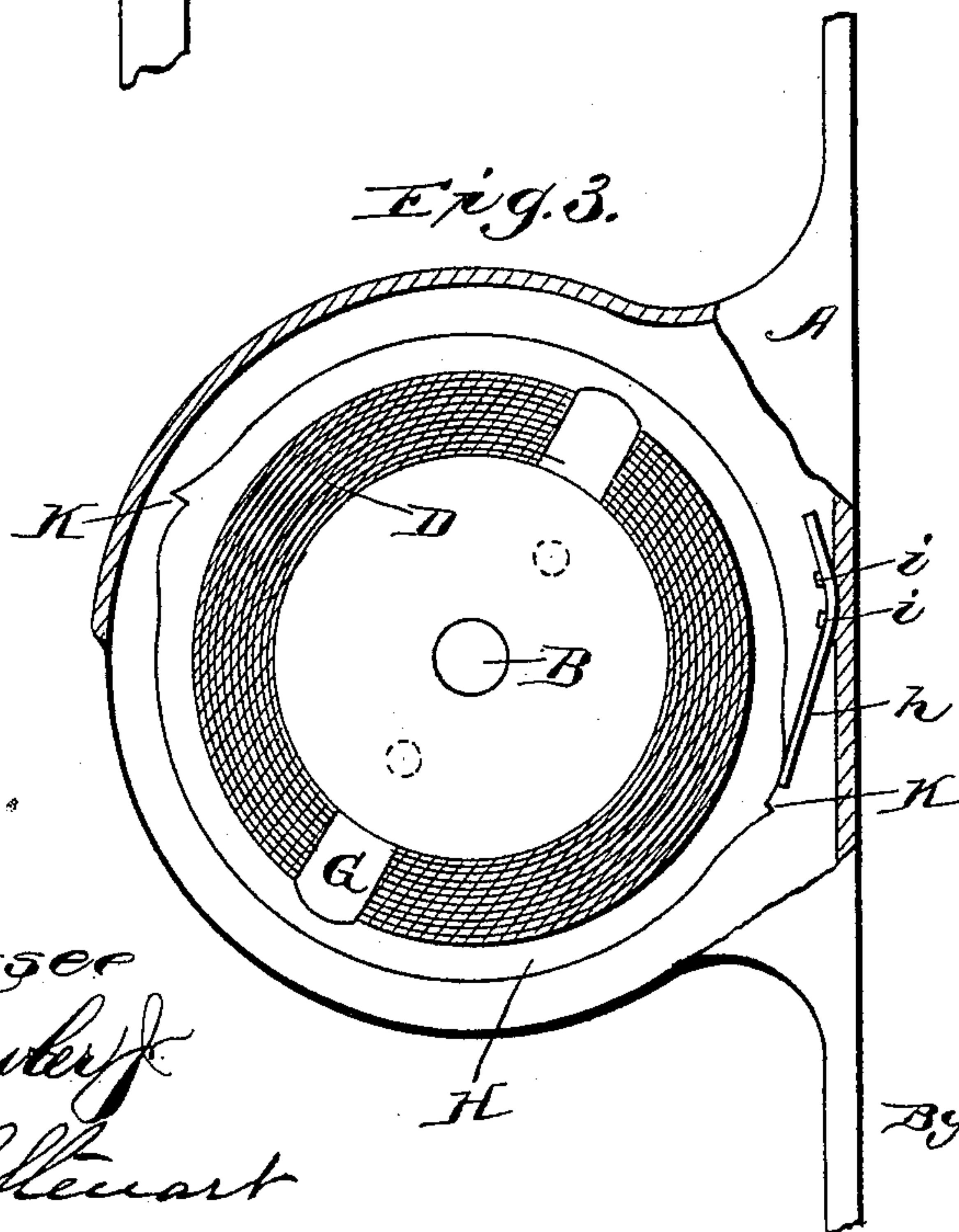
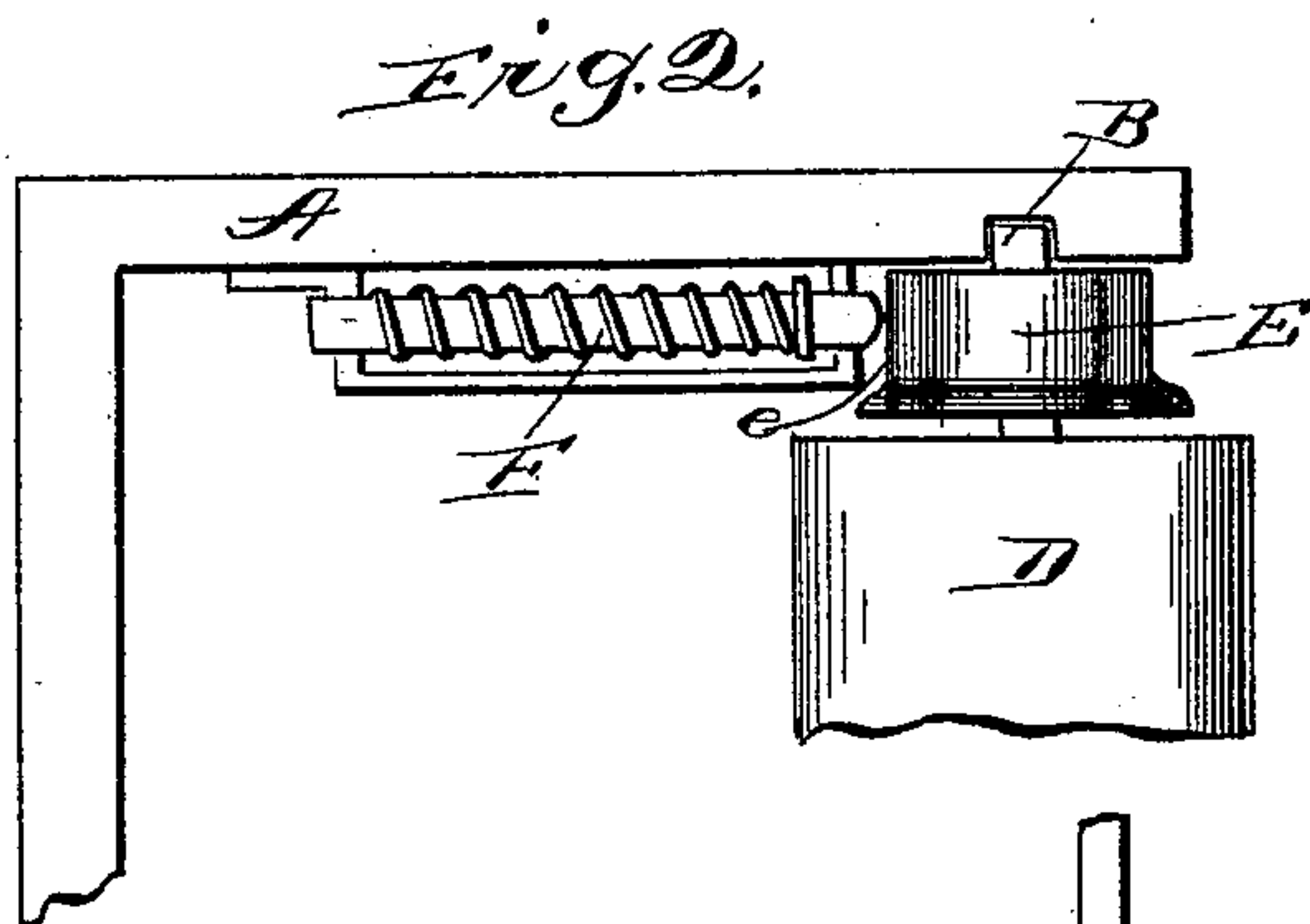
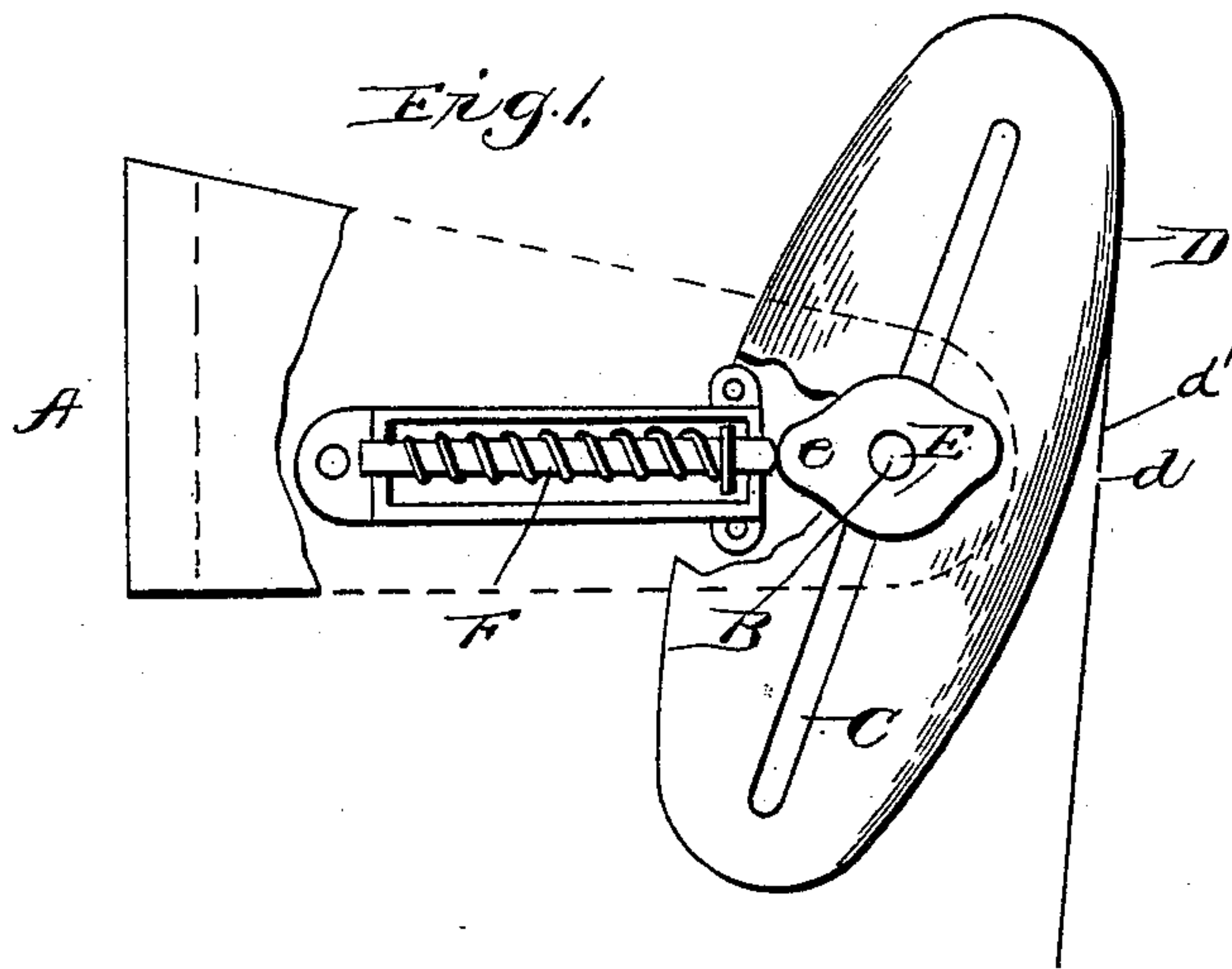
(No Model.)

2 Sheets—Sheet 1.

O. H. HICKS.
ROLL PAPER HOLDER.

No. 583,257.

Patented May 25, 1897.



Witnesses
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Inventor
Oliver H. Hicks,
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his Attorneys,

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

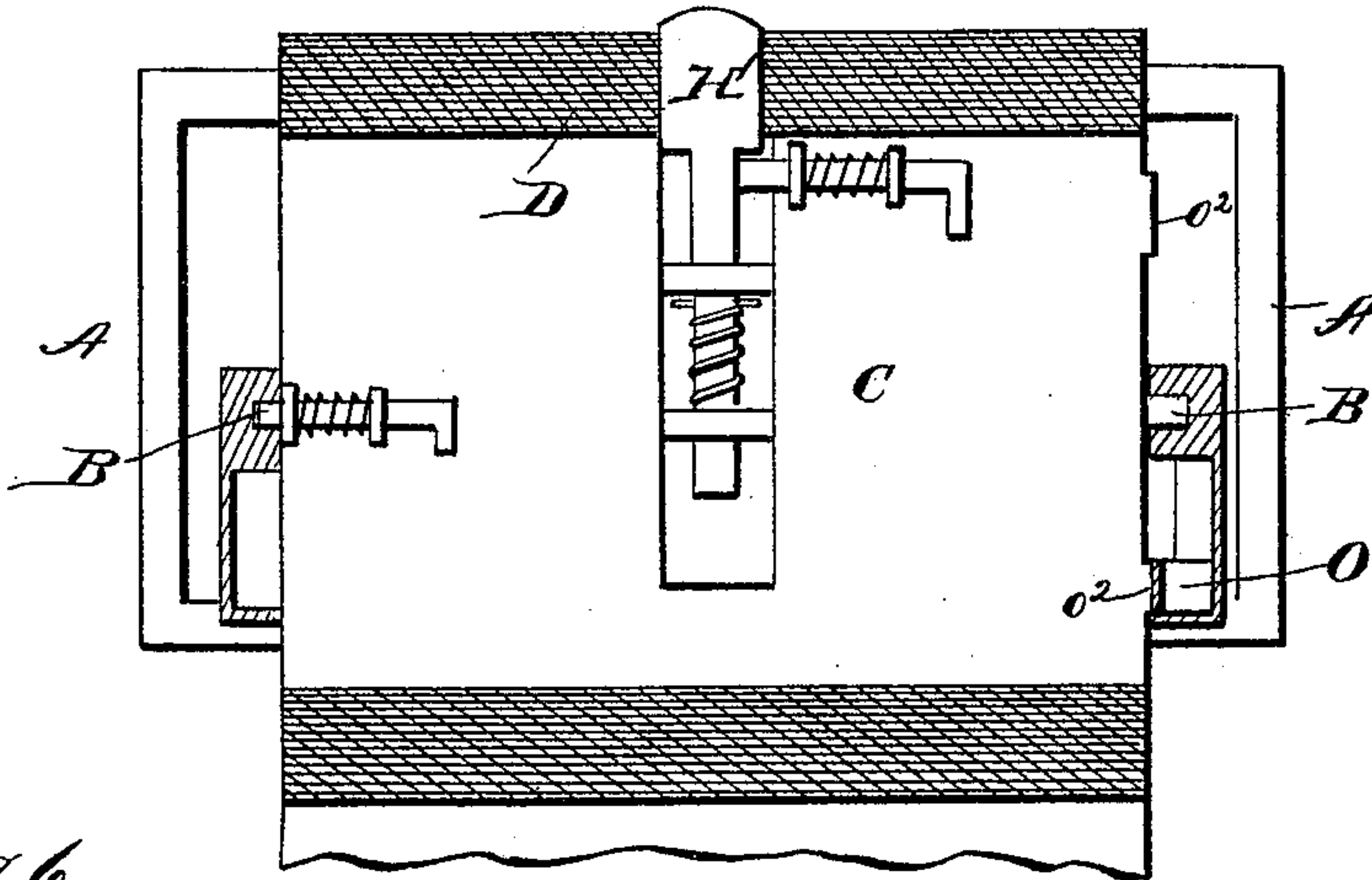


Fig. 6.

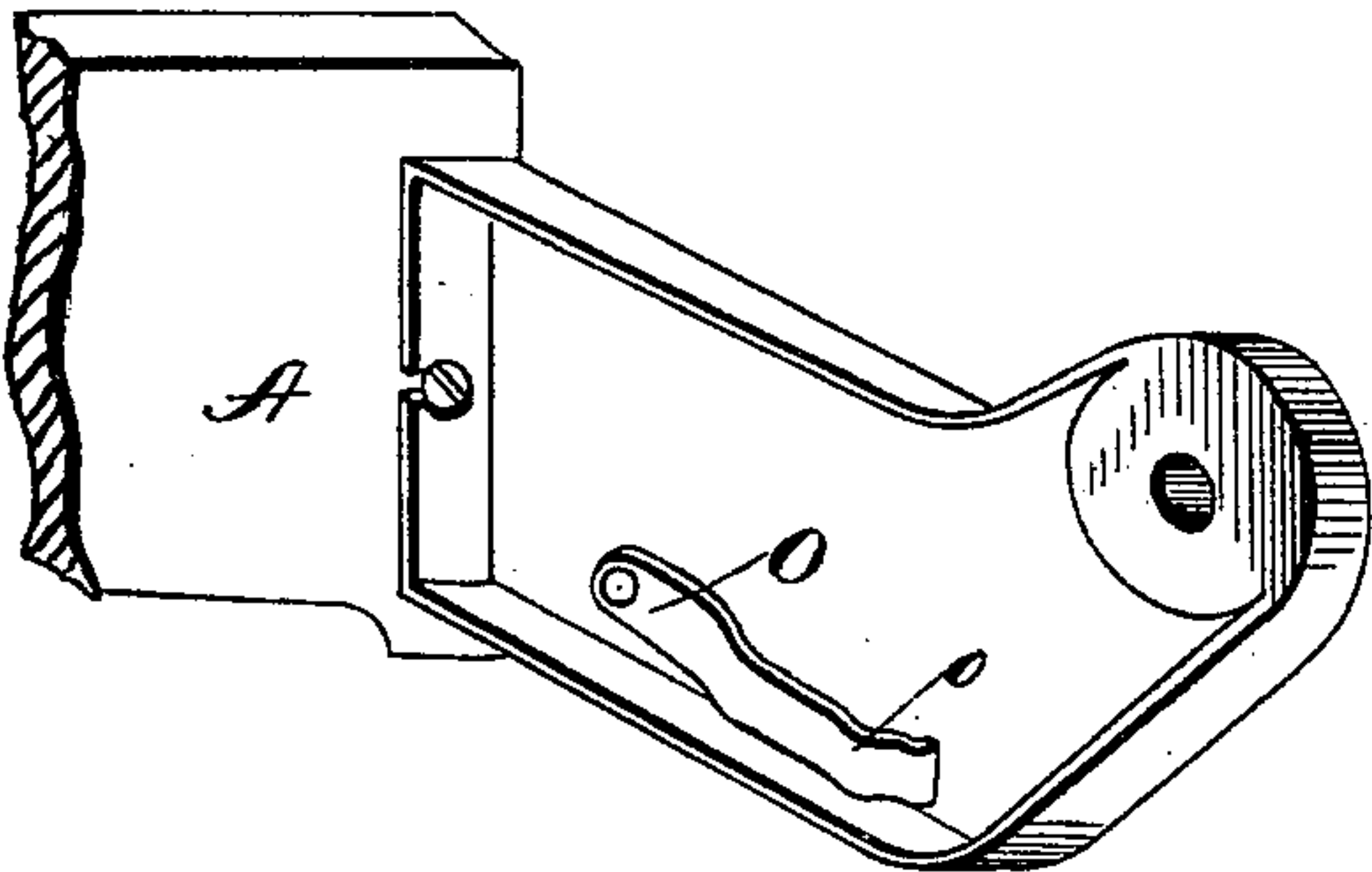
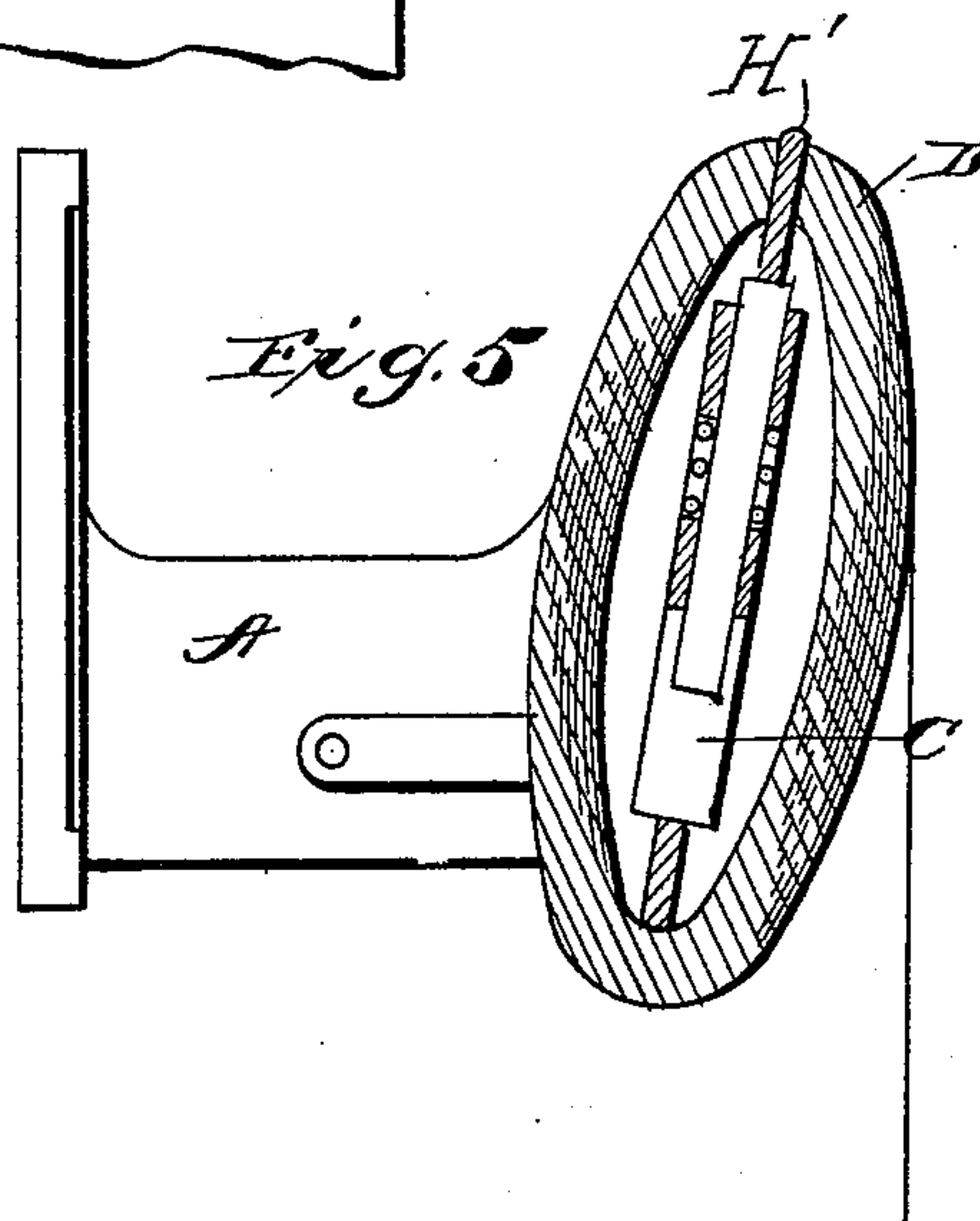


Fig. 5.



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UNITED STATES PATENT OFFICE.

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ROLL-PAPER HOLDER.

SPECIFICATION forming part of Letters Patent No. 583,257, dated May 25, 1897.

Application filed October 16, 1893. Serial No. 488,324. (No model.)

To all whom it may concern:

Be it known that I, OLIVER H. HICKS, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Roll-Paper Holders; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention relates to improvements in roll-paper and fixtures or holders therefor, particularly such as is designed for toilet purposes, the principal object being to provide a fixture which will, by means of an intermittingly-operating friction-brake, retard the rotation of the roll periodically and cause the separation of the web along lines of weakness which are brought to the proper point by the rotation of the roll.

Referring to the accompanying drawings, Figure 1 is a side elevation of a fixture and roll embodying my invention with the near supporting-arm broken away and shown in dotted lines. Fig. 2 is a top plan view of one side of the fixture, showing the friction-brake. Fig. 3 is a view similar to Fig. 1, showing a round roll and core with intermittingly-operating friction-brake. Fig. 4 is a transverse view and Fig. 5 a section at right angles thereto of a modified form of device. Fig. 6 is a detail view showing the friction-brake on the inner side of one of the arms.

Similar letters of reference in the several figures indicate the same parts.

A indicates a bracket or base of any ordinary or preferred construction or material and having the usual bearings for the pintles or journals B of the roll-supporting core or plate C. This plate or support, as shown in Fig. 1, is flat or elongated transversely of its axis for the accommodation of an oval or flattened roll D, whereby the roll is caused to rotate with the core under all circumstances.

At some point, preferably about midway of the flat sides of the roll, it is provided with coincident tearing-lines, or lines of weakness, usually made by perforations *d*, and it is obvious that if a friction-brake be applied to retard the rotation of the roll at the moment

when a line of weakness or perforations is subjected to a direct pull on the outer or free end of the web the web will part at the lines of weakness. Now in the form shown in Figs. 1 and 2 the lines of weakness are about midway between the oval ends or edges of the roll, and if the rotation of the roll be retarded when it is in apparent vertical position or slightly inclined forward while the depending end is pulled upon the strain will fall directly upon the line of weakness and the web will separate, leaving the end *d'* depending ready to be grasped. When this end is grasped and pulled upon, the strain does not fall directly upon the next line of weakness, but is partially taken up by the friction of the web against the roll, and hence the resistance of the friction-brake may be overcome and the roll rotated until the said next line of weakness comes to the front and is exposed to the direct strain, then the brake becomes operative to resist the rotation of the roll, when the separation will take place.

An intermittingly-operating friction-brake is employed and may be arranged in a variety of ways. For instance, as shown in Figs. 1 and 2, a hub or equivalent E, having a projection thereon, is mounted on the core or rotary support to rotate therewith, these parts being preferably made integral, and a spring-pressed pin F, working in bearings on one of the bracket-arms or base, is adapted to bear against this hub or to engage the projection *e* thereon as the core rotates and momentarily retard the same sufficiently to cause the paper to separate on the line of weakness subjected to the direct pull. The projection on the periphery of the core and the cooperating spring-pressed member are so arranged that when in engagement the roll will be inclined slightly forward of the perpendicular and the end of the web left will hang out in position to be readily grasped for another operation.

Obviously the roll and core may be round, if desired, as shown, for instance, in Fig. 3, where the core is relatively large and provided with stay projections G for entering stay recesses or slots in the roll itself to prevent any displacement or creeping of the roll.

Instead of the relatively small hub and projection, as in Fig. 1, I have shown the core as having an enlarged flange H, provided on its edge with a projection or projections *h*, rounded, as in the former instance, and adapted for coöperation with a spring-pressed friction-brake I, adjustably mounted on the bracket or support by screws *i i*.

In addition to the projections the periphery of the flange is provided with notches K for preventing backward movement of the roll. The notches may be arranged to engage with the end of the friction-brake, which operates as a pawl, or a separate pawl may be provided similar to the brake shown, if so desired. With this arrangement it will be seen that when the depending free end of the web is grasped and drawn down the roll will be turned until the next line of weakness (such lines being formed from the stay-recess to the edges of the roll) is drawn down, when the projection is brought into contact with the brake and offers sufficient resistance to the rotation of the roll to cause the separation of the sheet, leaving a free end depending. When this end is grasped, the unrolled and unweakened portion of the web will be strong enough to rotate the roll past the brake and until the next line of weakness is exposed and the next projection brought into engagement with the friction-brake to cause the separation of the next sheet, and so on until the roll is consumed.

In the modification shown in Figs. 4, 5, and 6 a spring O is secured on the inner side of one of the arms of the bracket and is provided with a raised or elevated portion *o*, which is adapted to be struck by the projecting portion of the end edge of the flat core at *o*² and thereby retard its rotation sufficiently to cause an unrolled sheet of paper to separate along the transverse line of weakness, but its power is preferably such that the friction or binding of the paper against the roll will be sufficient to overcome the resistance of the brake and cause the roll to rotate until the sheet is fully unwound and the line of weakness exposed to a direct pull. This enables the fixture to be so arranged as to leave a free end exposed whenever the device comes to rest, as will be readily understood from Fig. 5, wherein the roll is weakened or provided with coincident lines of weakness along the end, and a pull upon the free end will turn the roll a complete revolution or until the line of weakness of the depending sheet moves away from the body of the roll, when the sheet, being deprived of this support, is separated at the moment when the friction-brake retards the roll.

The friction-brake, it is obvious, may or may not engage the core or support on both sides of the center, but it preferably does in order to check the tendency to race when the free end is pulled.

The creeping of the convolutions of the roll may be prevented, if desired, by a spring-bolt H' entering a stay-recess in the roll, as set forth and claimed in my Patent No. 562,533, dated June 23, 1896.

Having thus described my invention, what I claim as new is—

1. As a new article of manufacture, an elongated or oval roll of paper having coincident lines of weakness across the flat side or intermediate the rounded ends; substantially as described.

2. The combination with a rotary roll-support and an intermittingly-operating brake coöperating therewith to retard without arresting the rotation of the roll at predetermined points, of a roll of paper mounted on said support, and having lines of weakness or perforations so located relative to the point at which the rotation of the support is retarded as to leave a free imperforate end of the web exposed when the web is separated at the line of weakness next adjacent the body of the roll; substantially as described.

3. In a paper-roll fixture, the combination with the roll having lines of weakness of the rotary support for the roll having a projecting portion, and a friction-brake engaging said projecting portion to retard the rotation of the roll at a predetermined point, the power of the brake being insufficient to cause the separation of the unweakened web; substantially as described.

4. In combination, a roll of paper having lines of weakness at coincident points and a fixture for the roll having a rotary roll-support and a friction-brake coöperating with the support and roll at a predetermined interval in the rotation of the same, to retard the rotation of the roll at a predetermined interval, the strength of the brake being insufficient to cause the separation of the unweakened web whereby the web is separated at the line of weakness unwound from the roll, while the strength of the unweakened web is sufficient to overcome the resistance of the brake and cause the rotation of the roll when pulled upon; substantially as described.

5. In a roll-paper holder, the combination with the support for the roll adapted to turn over and over in one direction, of the hub carried at one end of the core and having the peripheral projection, and the friction-brake coöperating with said projection to retard the rotation of the roll at predetermined intervals; substantially as described.

6. In a roll-paper holder, the combination with the base and the support for the roll adapted to turn over and over in one direction, of the hub carried at one end of the core and having the peripheral projection and the spring-pressed sliding pin carried by the base and coöperating with the projection to retard the rotation of the roll at predetermined points, substantially as described.

7. In combination, an oval or transversely-
elongated roll of paper having coincident tear-
ing or lines of weakness and a fixture having
a rotary support for the roll and a friction-
5 brake for retarding the rotation of the sup-
port when inclined slightly forward of the ver-
tical, whereby the free end above the tearing-

line will be left pendent; substantially as de-
scribed.

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Witnesses:

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