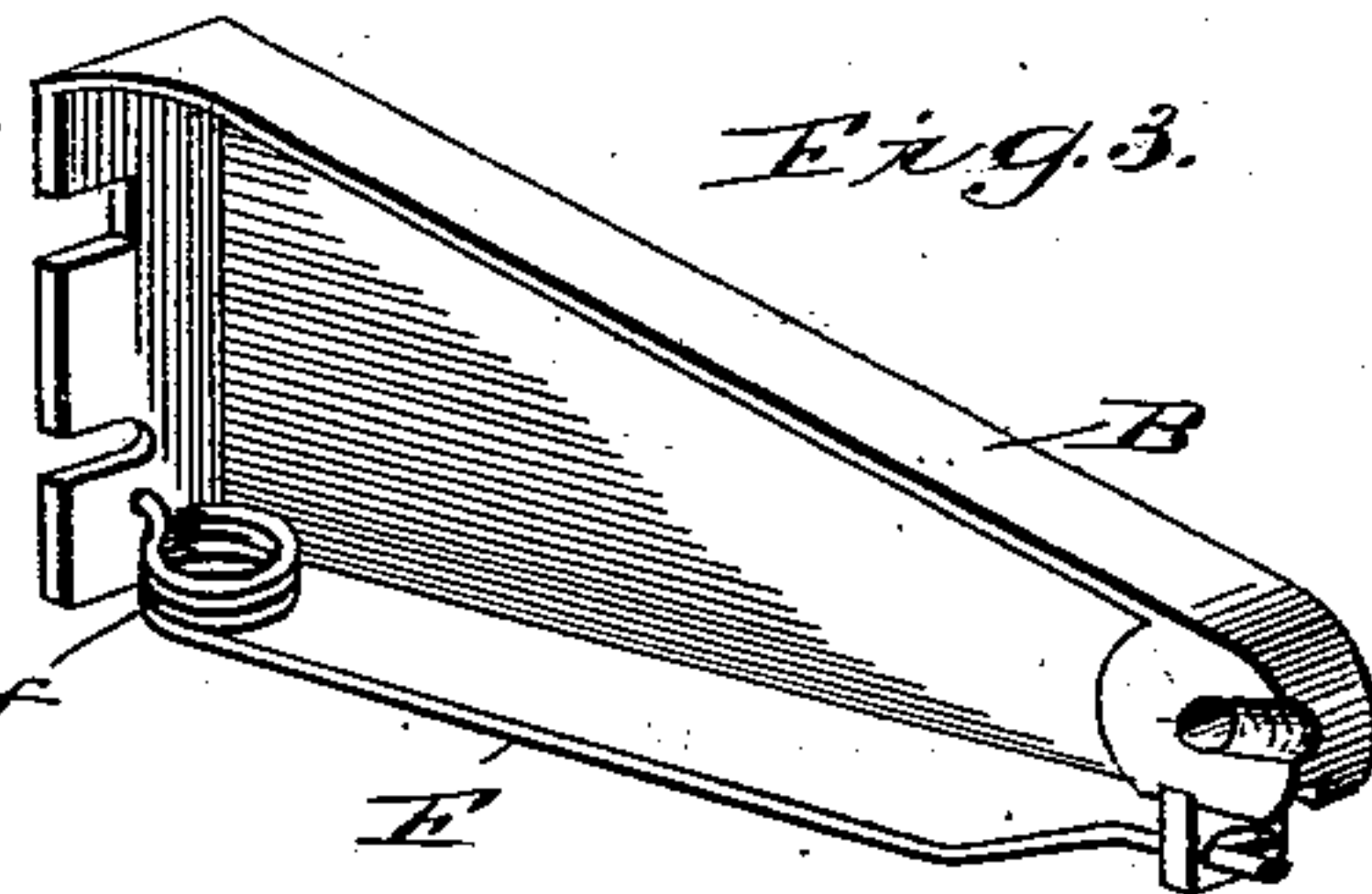
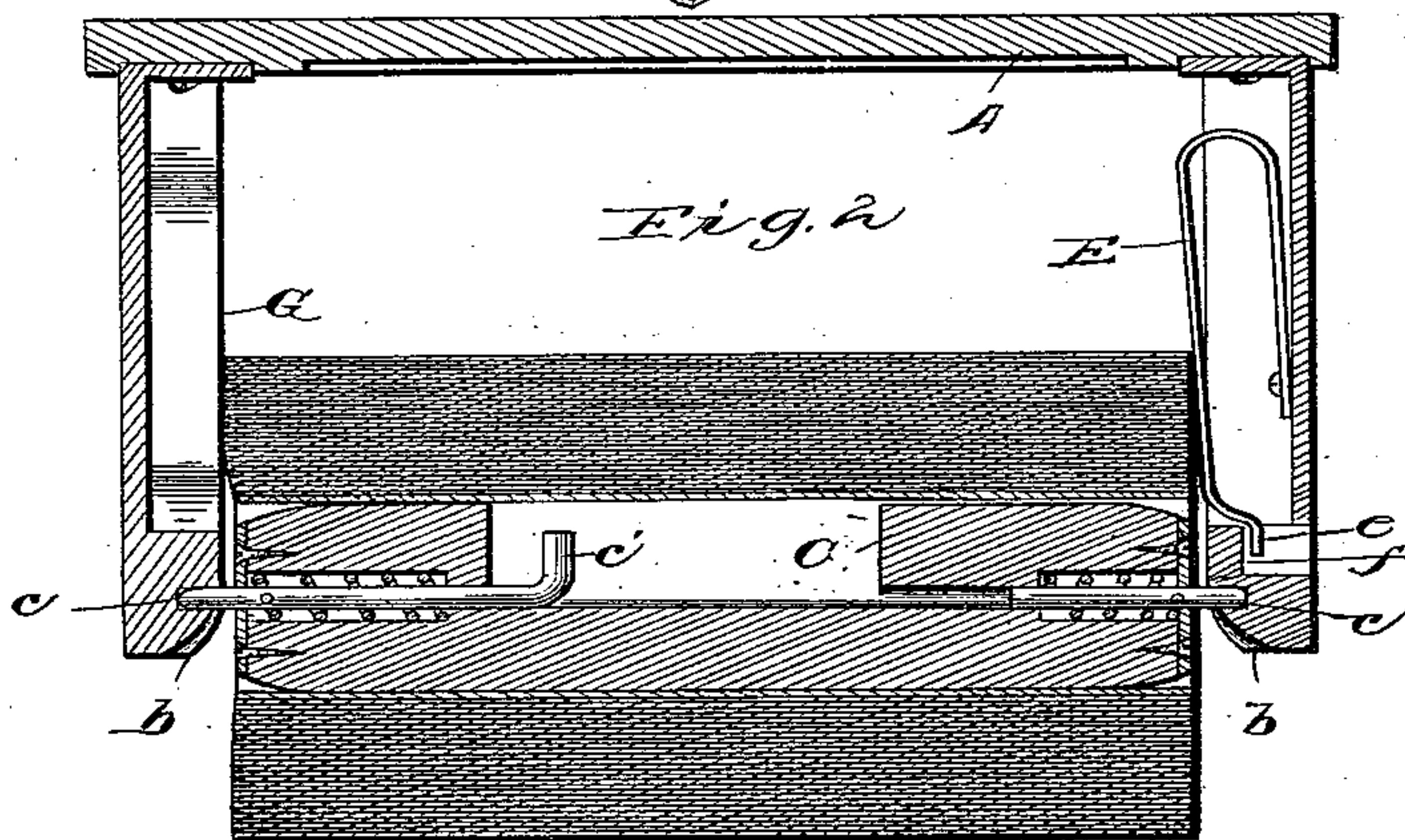
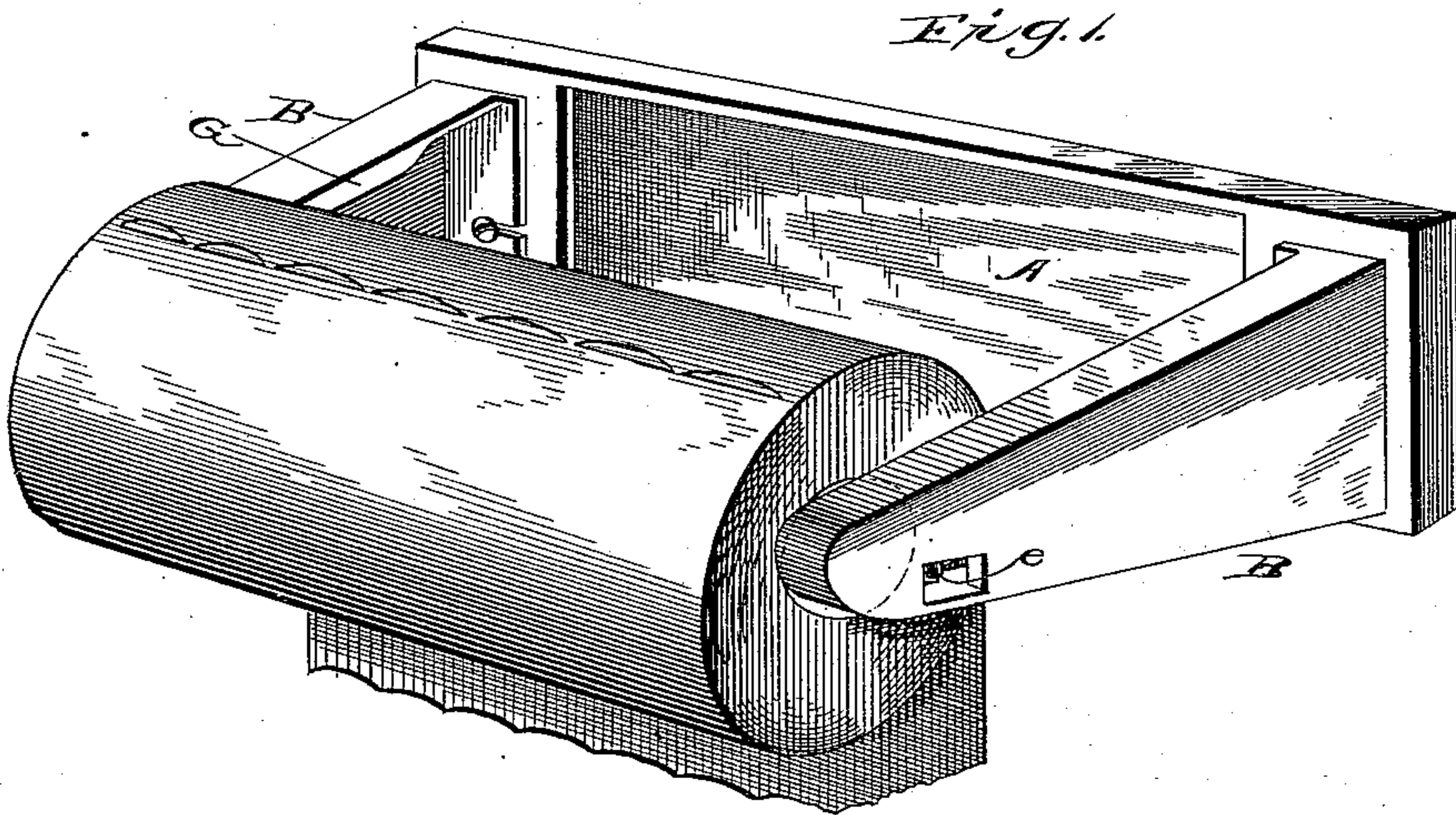


(No Model.)

E. MORGAN.  
TOILET PAPER FIXTURE.

No. 551,040.

Patented Dec. 10, 1895.



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# UNITED STATES PATENT OFFICE.

ELISHA MORGAN, OF SPRINGFIELD, MASSACHUSETTS.

## TOILET-PAPER FIXTURE.

SPECIFICATION forming part of Letters Patent No. 551,040, dated December 10, 1895.

Application filed April 19, 1893. Serial No. 470,982. (No model.)

*To all whom it may concern:*

Be it known that I, ELISHA MORGAN, of Springfield, in the county of Hampden and State of Massachusetts, have invented certain  
5 new and useful Improvements in Toilet-Paper Fixtures; 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  
10 this specification, and to the letters of reference marked thereon.

This invention relates to improvements in toilet-paper fixtures, and has for its object to provide an improved friction-brake device  
15 which will act with a regular smooth retarding influence until the roll is entirely consumed and without distorting the roll or causing the paper to become disarranged thereon in the slightest degree.

20 With these objects in view the invention consists in certain novel details of construction and combinations and arrangements of parts to be hereinafter described, and pointed out particularly in the appended claims.

25 Referring to the accompanying drawings, Figure 1 is a perspective view of a toilet-paper fixture embodying my present invention. Fig. 2 is a horizontal section taken through the same and illustrating the friction-brake  
30 more clearly. Fig. 3 is a perspective view looking at the inner side of one of the supporting-bracket arms and illustrating a modified form of spring.

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

In carrying this invention into practice a wall-bracket A, of approved form, is provided, and extending outward from this bracket are two supporting-arms B B, one or both of  
40 which are preferably hollowed out on the inner side and at or near their forward end provided with sockets or bearings adapted for the reception of spring pins or journals c, working longitudinally in the core C, upon  
45 which the roll of paper is placed. The bearings have inclined grooves b leading to them from the outer ends of the arms to facilitate the entry of the core when a roll is mounted thereon, and the center of the core is cut  
50 away, as shown in Fig. 2, for the reception of a finger-piece c' on the inner end of one of

the journal-pins to facilitate the release of the core when the paper has been consumed.

Various schemes have been heretofore tried for retarding the rotation of the roll of paper 55 held by the core, such as friction-springs applied to the core itself, &c.; but in no instance of which I am aware have these devices proved a practical success, owing to the fact that the tension is always the same, and 60 when the roll of paper is large the retarding influence amounts to very little, while, on the other hand, when the size of the roll has been reduced by use and the leverage exerted by the free outer end of the roll correspondingly 65 reduced the tension is too great and causes the paper to tear at any point around the circumference of the roll or not at all, to say nothing of the difficulty in holding the core stationary or of preventing the paper from rotating on 70 the core where the resistance to the rotation is applied through the core. With a view now to overcoming these objections and providing a friction-brake or retarding device which will act on the roll in such manner that the 75 retarding influence will be the same with relation to the tearing-point at all times, irrespective of the size of the roll, I locate on the inner side of one of the supporting bracket-arms a long friction-spring E, having a sub- 80 stantially straight bearing-surface adapted to bear against the end of the roll. In the preferred form this spring is formed of flat spring metal of substantially U shape, with one end secured by a screw or otherwise within 85 the hollowed-out portion of the supporting bracket-arm. The bend is turned toward the rear, and the substantially straight bearing-surface extending out parallel with the end of the roll terminates in a limiting projection 90 e, which enters behind a stop f on the bracket-arm. As shown, this stop f is formed by casting the arm with a recess in the outside extending in behind the solid end section, as shown clearly in Fig. 2. The forward end of 95 the spring bends inward or toward the arm upon which it is mounted close to the reduced end of the core, and thus the bearing-surface is extended up to a point where it will take a bearing against the end of the roll even 100 when the latter is reduced to the thickness of a few sheets.



In the modification instead of employing a flat spring a wire spring F is employed having a coil at the inner end, as at *f*, the contour of the bearing-surface and bend at the forward end, however, being approximately the same as that illustrated in Fig. 2. The outer end of the spring F is confined within an opening in the solid end of the arm, and it is held in place at the inner end by being thrust into or through an opening in the bracket-arm itself.

In use it will be observed that the long flat bearing-surface of the spring friction-brake takes a bearing against the end of the roll, and by locating the free end toward the center the resistance offered by the spring will be found substantially uniform at the periphery until the roll is entirely consumed.

Where the roll is pressed against the opposite bracket-arm, instead of employing a second spring, which may be used, the arm is preferably provided with bearing-surfaces G, which may be wide or narrow, as is desired, to provide increased or diminished friction, depending upon the character of the paper being used; but it is obvious that the flat surface of the arm as ordinarily constructed will answer all purposes with greater or less efficiency, and hence I do not wish to be limited to any particular form of bearing-surface at this point.

I prefer that the spring should contact with the roll, or at least exert its greatest pressure at or close to the edge of the roll, in order that the same resistance will be offered to the turning of the roll by a pull on the free end of the paper all the while. This will be more readily understood if the roll be considered as a lever, with the spring, the load, and the pull on the free end of the web the power, when it will be seen at a glance that the arms of the lever decrease in length equally as the roll is consumed.

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

1. In a toilet paper fixture, the combination with the bracket, the core held thereby for the reception of a roll of paper, of a friction spring carried by the bracket and having a bearing surface arranged to exert its greatest pressure on the end of the roll at or near its

periphery until the roll is consumed; substantially as described.

2. In a toilet paper fixture, the combination with the bracket, having the outwardly extended arm, the core held thereby and adapted for the reception of a roll of paper, of the friction retarding spring secured on the inner side of one of the bracket arms and having the long substantially straight bearing surface cooperating with the end of the roll and a limiting stop on the bracket behind which the end of the spring passes for limiting the inward movement of the spring; substantially as described.

3. In a toilet paper fixture, the combination with the bracket having the outwardly extending arm with the bearing surface on the inner side, the cooperating arm, the core held by said arm and adapted for the reception of a roll of paper, of the friction retarding spring mounted on the inner side of the arm opposite to the arm having the bearing surface on its inner side, said spring, having the long flat bearing surface for cooperation with the end of the roll; substantially as described.

4. In a toilet paper fixture, the combination with the bracket having the forwardly extending arms, one of which is recessed on its inner side, a core journaled in the end of said arms and adapted for the reception of a roll of paper, of a friction retarding spring of substantially U-shape secured within the recess on the inner side of the arm and having a long flat bearing surface adapted to cooperate with the end of the roll of paper at or near its periphery, substantially as described.

5. In a toilet paper fixture, the combination with the bracket and the core for the reception of the roll of paper held thereby, of the friction spring held by the bracket in position to bear against the end of the roll on the core and with its free end having a bearing surface equal to the radius of the roll projecting toward and lying in proximity to the core, whereby the retarding influence acts at the periphery of the roll until the latter is consumed; substantially as described.

ELISHA MORGAN.

Witnesses:

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