

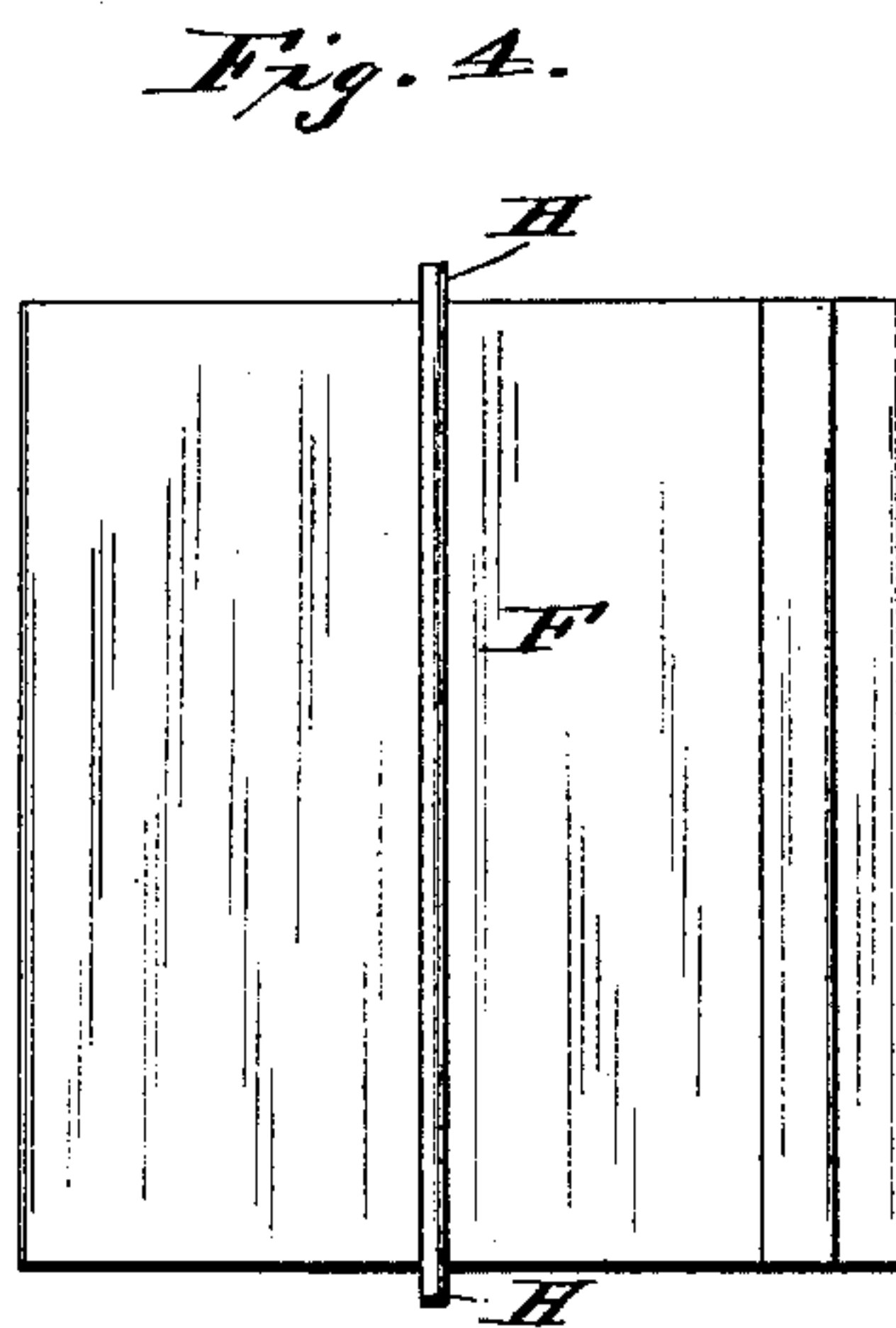
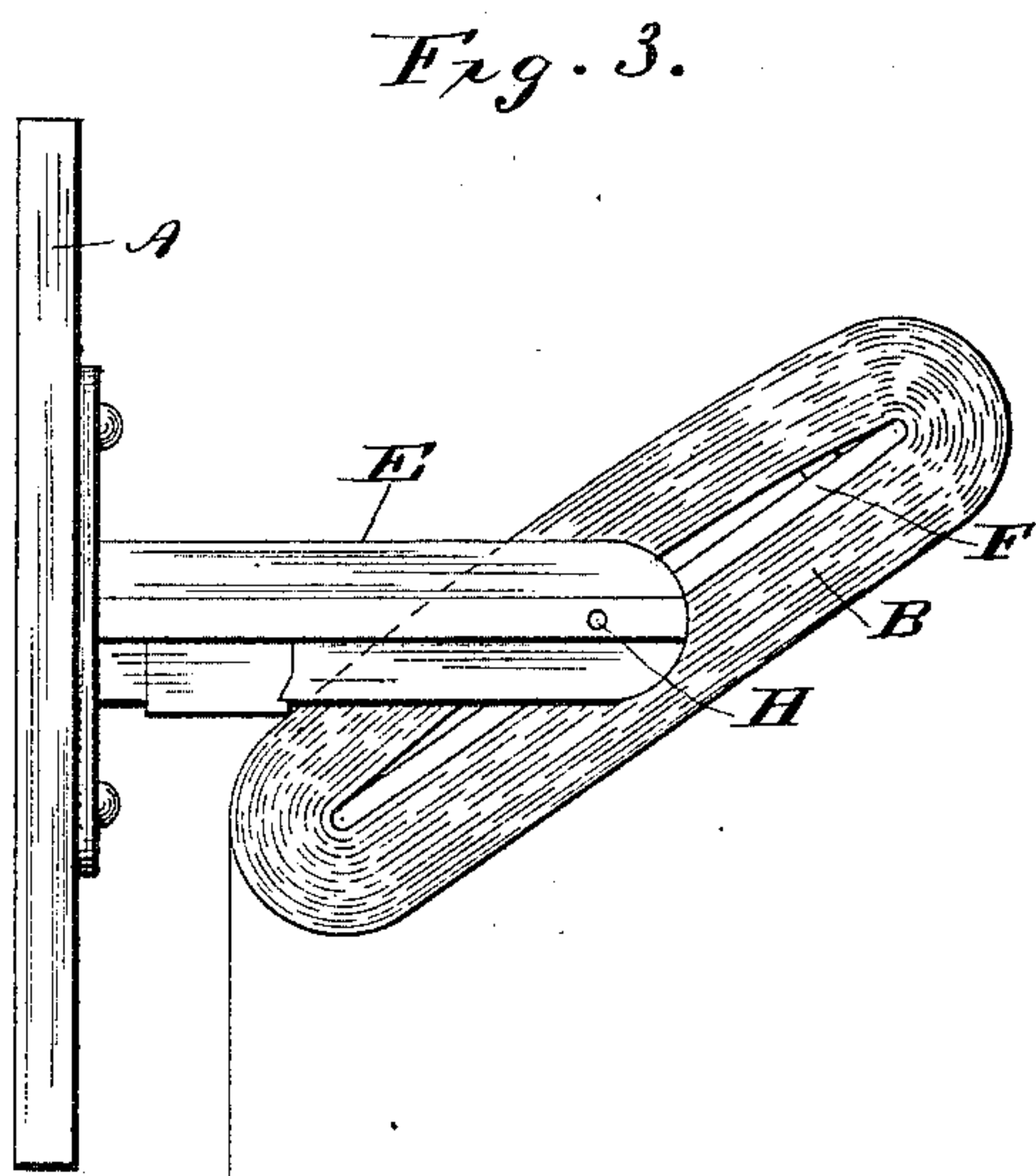
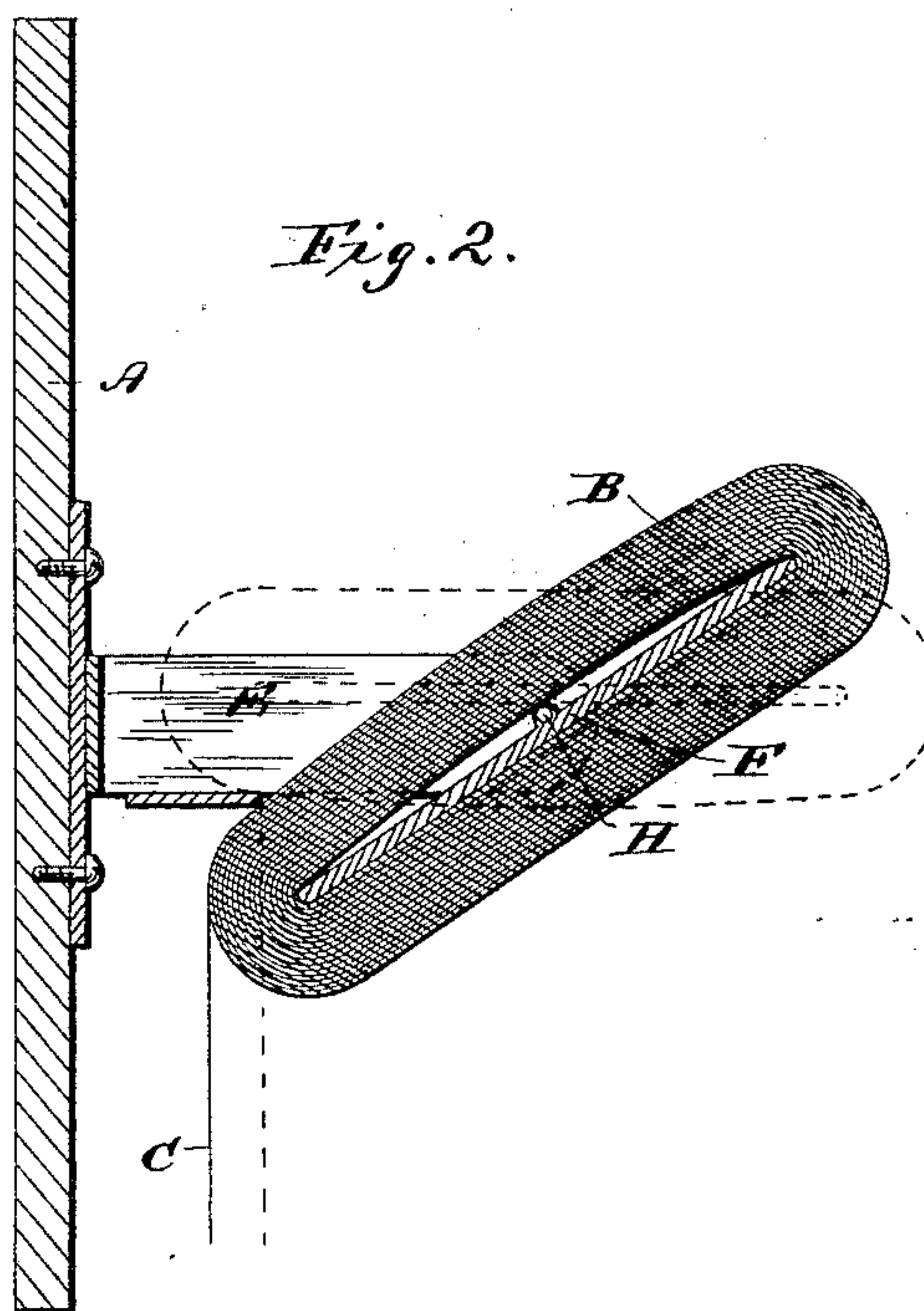
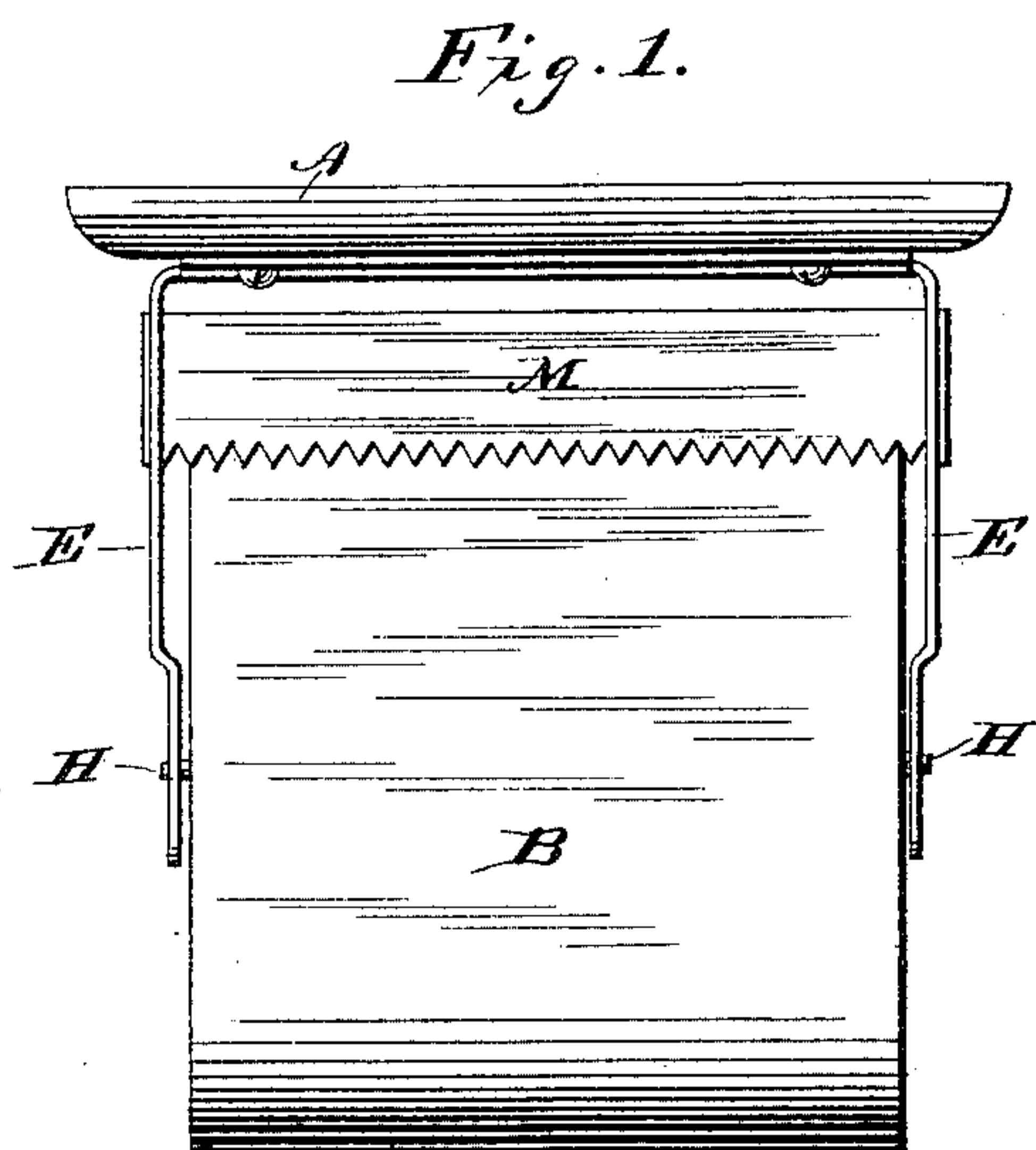
(No Model.)

2 Sheets—Sheet 1.

O. H. HICKS.
TOILET PAPER FIXTURE.

No. 325,174.

Patented Aug. 25, 1885.



Witnesses.
Chas. R. Burr.
A. J. Stewart

Inventor.
Olive Hewlett Hicks.
By Church & Church
His Attorneys.

(No Model.)

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Fig. 6.

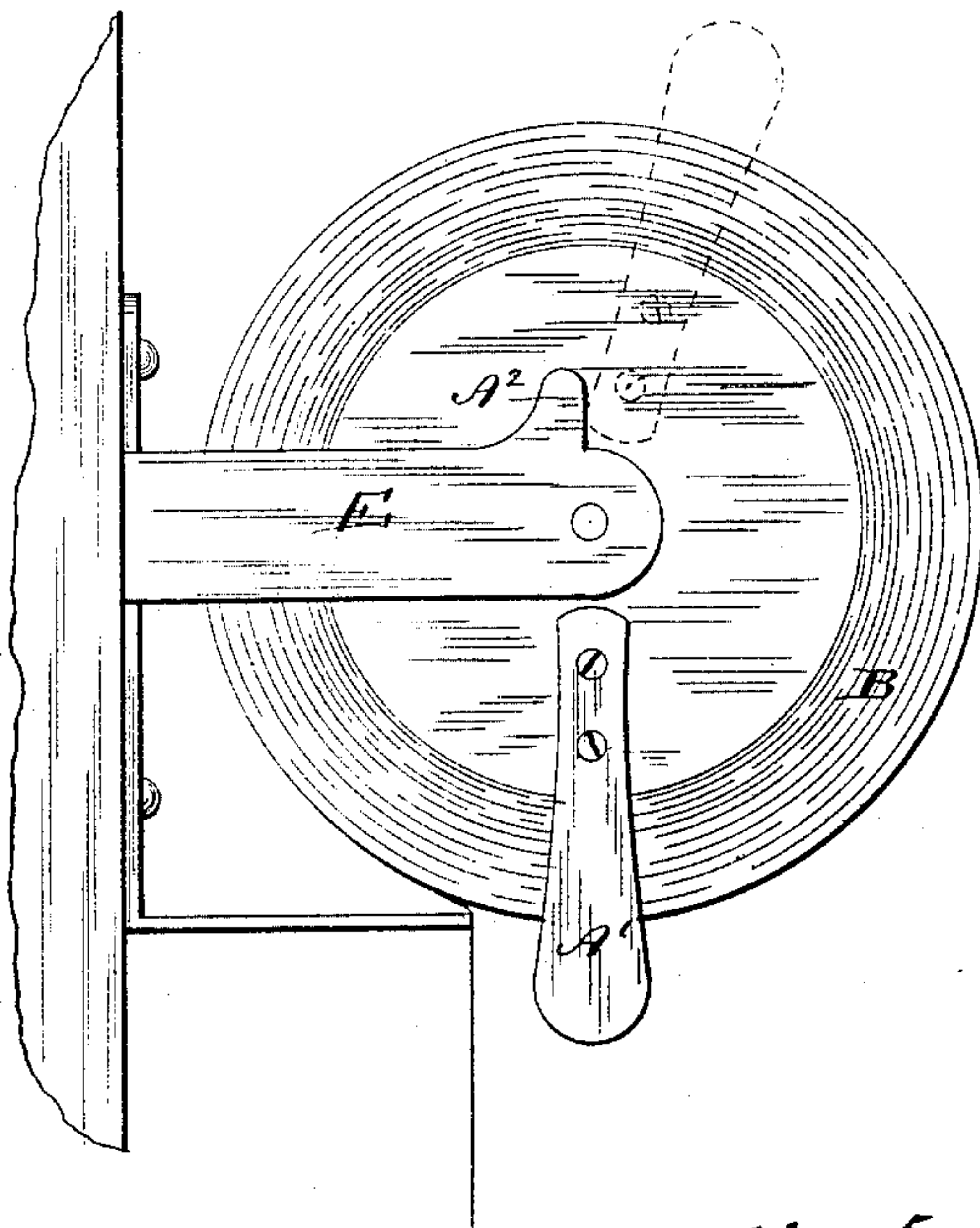
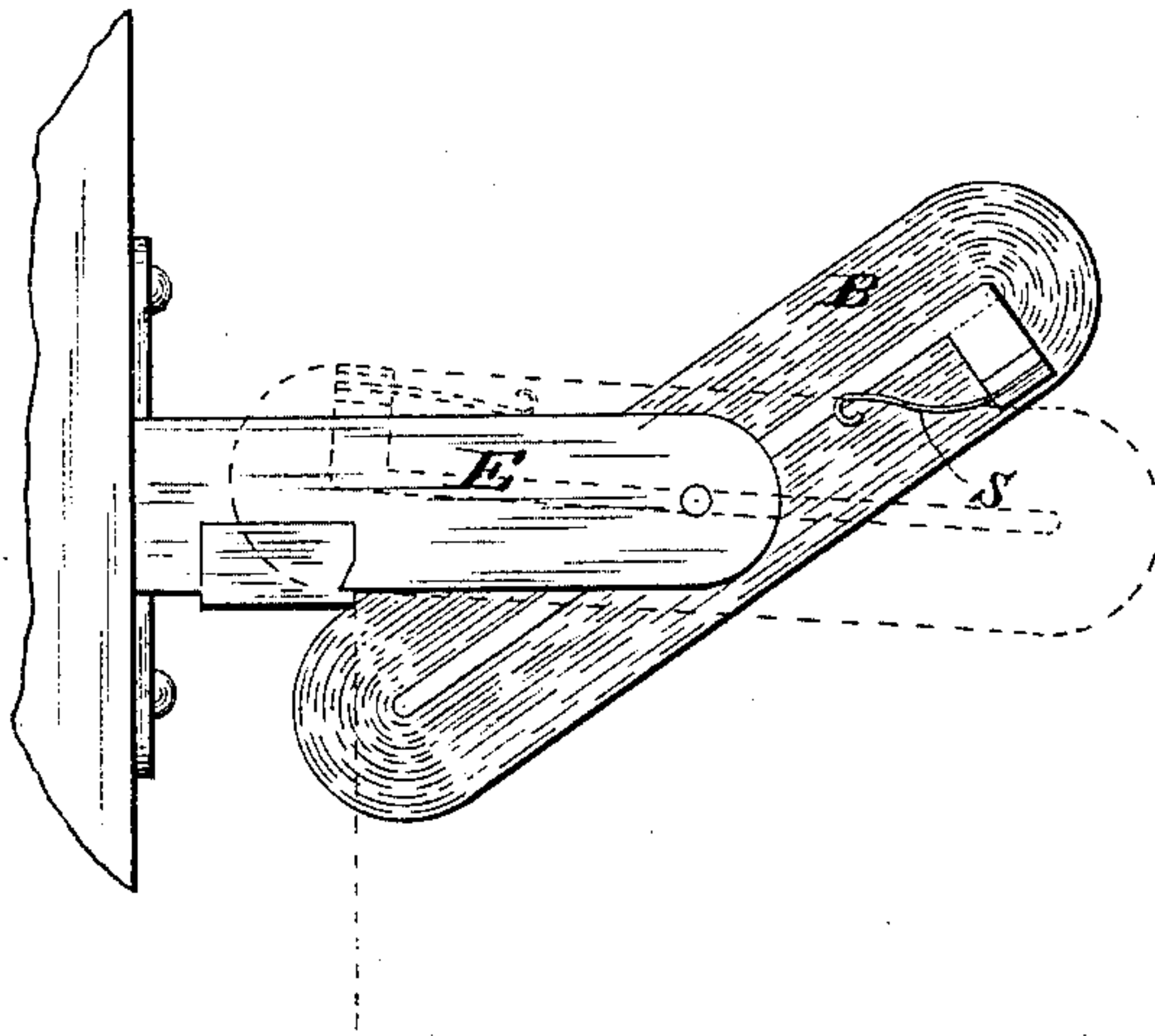


Fig. 5.



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UNITED STATES PATENT OFFICE.

OLIVER HEWLETT HICKS, OF CHICAGO, ILLINOIS.

TOILET-PAPER FIXTURE.

SPECIFICATION forming part of Letters Patent No. 325,174, dated August 25, 1885.

Application filed July 16, 1885. (No model.)

To all whom it may concern:

Be it known that I, OLIVER HEWLETT HICKS, of Chicago, in the county of Cook and State of Illinois, have invented certain 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 this specification, and to the figures and letters of reference marked thereon.

Heretofore toilet-paper has been put up in rolls of continuous length and hung in suitable bearings, so as to be removed as needed, and in some instances the paper has been perforated transversely at regular intervals to enable the user to, with greater convenience, tear off portions of the requisite length, or in lieu of this a cutter has been arranged in proximity to the roll to enable the quantity pulled off the roll to be conveniently severed. A well-founded objection has been urged against each of these arrangements—to wit, that the employment of them entails a great waste of paper, since, in a large majority of instances, from the freedom with which the paper is unwound from the roll, a much larger quantity is withdrawn than is needed.

The object of my invention is to so arrange the paper as to prevent more than a given quantity of it from being withdrawn from the roll at a single operation, and so that in the act of withdrawing such given quantity it shall be automatically severed from the roll, leaving pendent from the roll a free end, which shall serve as a means for withdrawing a like quantity by the next user.

In order that others may acquire a full understanding of my invention, I will now proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 represents a top view of the fixture and roll; Fig. 2, a longitudinal vertical section of the same; Fig. 3, an end view, and Fig. 4 a view of the core-plate detached. Figs. 5 and 6 are views of modified forms of the invention.

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

The letter A represents a plate or backing adapted to be secured to a wall or other object, and having extending from it two spring-

arms, E E, which have near their outer ends bearings H H for the accommodation of the journals or pivots of a core-plate, F, arranged within the roll of paper. Between the arms E E, and near the inner portions, extends a plate, M, the outer edge of which may be made either plain or serrated, though I by preference make it serrated, as shown in Fig. 1. The roll of toilet-paper B has a large central opening for the accommodation of the core-plate F, and when slipped upon said core-plate assumes an elongated or oval shape, as shown.

In applying the roll of paper to the fixture the core-plate is first slipped into it, and is then connected to the arms E E by springing the latter outward sufficiently to permit the pivots or journals of said core-plate to be entered in the bearings H H of said arms, as will be readily understood. By preference the pivots or journals are located out of line with the center of gravity of the plate, in order that one side of said core-plate shall normally hang downward and tend to hold the roll of paper in substantially the position shown in Figs. 2 and 3. This result may be effected either by arranging the pivots eccentrically to the core-plate, or by attaching them centrally thereto, and having one side of the core-plate heavier than the other.

With the roll hung in the manner described the operation of unwinding and severing paper from it is as follows: The depending end C is grasped by the user and pulled, and the roll is thereby rotated until arrested by its upper portion coming in contact with the plate M, as shown by the dotted lines in Fig. 2. As soon as this arrest of the motion of the roll takes place the depending portion of the paper becomes drawn tightly over the edge of the plate M, and can be severed at that point, either by a continued pull on the paper or by a lateral tearing motion. The roll is released by the severance of the end, and swings back toward first position, bringing up against the under side of the plate M, and by the jar imparted to it by contact with said plate causes the new end of paper to drop down into position to be grasped by the next user.

It will be observed that the plate M performs the function of a stop for arresting the forward rotation of the roll, and holding the

roll while the section of paper is being removed, as well as the function of severing said section of paper, and its importance as a stop is as great, if not greater, than its importance as a cutter, since the stopping of the roll, coupled with the continued movement of the free end of the paper, must necessarily cause the severance of the paper at some point at or near the point the end leaves the body of the roll.

From the preceding description it is clear that only a limited amount of paper can be removed from the roll at any one operation, and that the circumference of the roll fixes the limit of length of the portion detached.

It may be stated that to obtain the most practical and economical results the roll of paper, when in cylindrical form, and before the core-plate is applied to it, should have an internal diameter of not less than twice the thickness of its superposed layers. I prefer rolls of an interior diameter of, say, two inches and three-quarters and an external diameter of about five inches. When these proportions are not substantially followed, the last sheets severed from the roll will either be too short, or the first sheets will be too long, resulting, on the one hand, in an insufficient article, and on the other hand in an unnecessary waste of material.

Instead of weighting the core-plate to cause it to return the roll after the latter has been oscillated in one direction by the pull on the paper, a spring, *s*, may be arranged on the core-plate in such manner as to strike one of the arms *E*, and by its rebound return the roll to first position, as shown in Fig. 5.

A round roll may be substituted for the oval one, in which case an arm, *A'*, to throw the roll out of balance, and a distance-determining stop, *A''*, must be substituted for the oval roll and weighted core-plate, as shown in Fig. 6.

I do not specifically claim herein the form or construction of the oval roll, since it is made the subject-matter of a separate original application filed by me on the 10th day of July, 1885. Neither do I claim herein, broadly, the combination, with an oscillating roll of toilet-paper actuated in one direction by a pull upon its free end, of a stop for arresting the roll at the limit of its motion when so actuated, either

with or without another stop for arresting the motion of said roll at the limit of its oscillation in the opposite direction; nor do I claim herein such a combination, wherein the roll is hung upon bearings out of line with its center of gravity, so as to automatically return it to first position after being turned by the pull of the paper; but I have made all such matters the subject of a separate application filed February 7, 1885, of which this is a division.

I claim as my invention—

1. The combination, with a weighted oscillating roll of toilet-paper actuated in one direction by a pull upon its free end, of a knife or cutter co-operating with said roll to sever the unwound portion when the roll has reached the limit of its motion in one direction, and a stop for limiting the motion of said roll, substantially as described.

2. The combination, with an oscillating roll of toilet-paper having its bearings out of line with its center of gravity and actuated in one direction by a pull upon its free end, of a stop constituting a knife or cutter for co-operating with said roll to sever the unwound portion when the roll has reached the limit of its motion in one direction, the eccentric hanging of the roll returning it automatically to its normal position, substantially as described.

3. The combination, with an elongated or oval oscillating roll of toilet-paper actuated in one direction by a pull upon its free end, of a stop constituting a knife or cutter co-operating with the roll to sever the unwound portion therefrom when the roll has reached the limit of its motion when so actuated, substantially as described.

4. The combination, with the supporting-arms, of a stop-plate or cutter extending between said arms, and an oscillating core-plate having its bearings in said arms and adapted to hold a roll of paper, substantially as described.

5. The combination of the back plate, the supporting-arms, the plate forming the stop and cutter, and the oscillating core-plate, the whole arranged and operating substantially as described.

OLIVER HEWLETT HICKS.

Witnesses:

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FRED F. CHURCH.