(No Model.)

3 Sheets—Sheet 1.

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ROLL PAPER HOLDER AND CUTTER.

No. 432,384. Patented July 15, 1890.

Fig. 1.

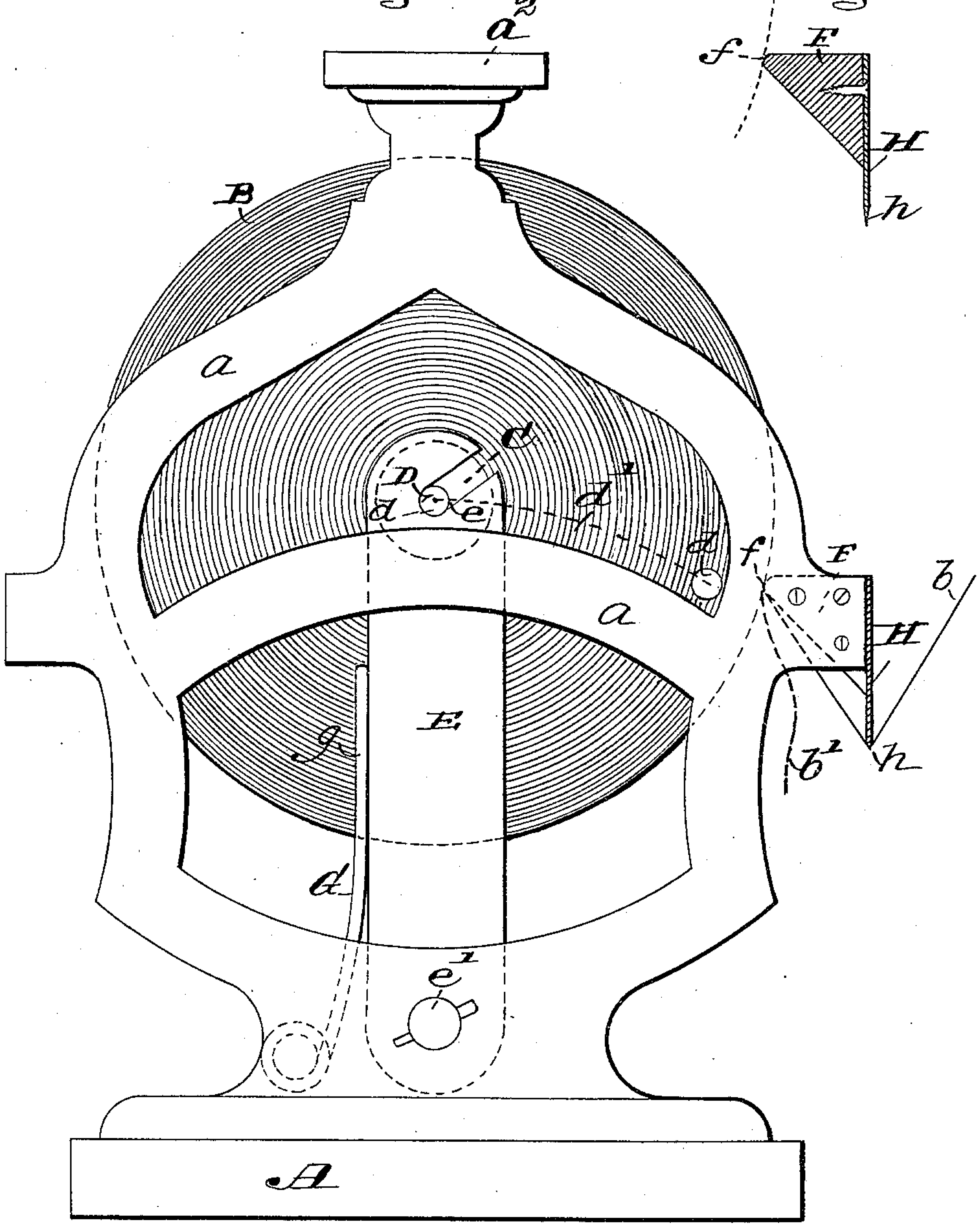

Fig. 2.

Witnesses:
D. W. C. Sanford
B. F. Rex

Inventor:
John A. Eastin
by C. D. Moody atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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J. A. EASTIN.

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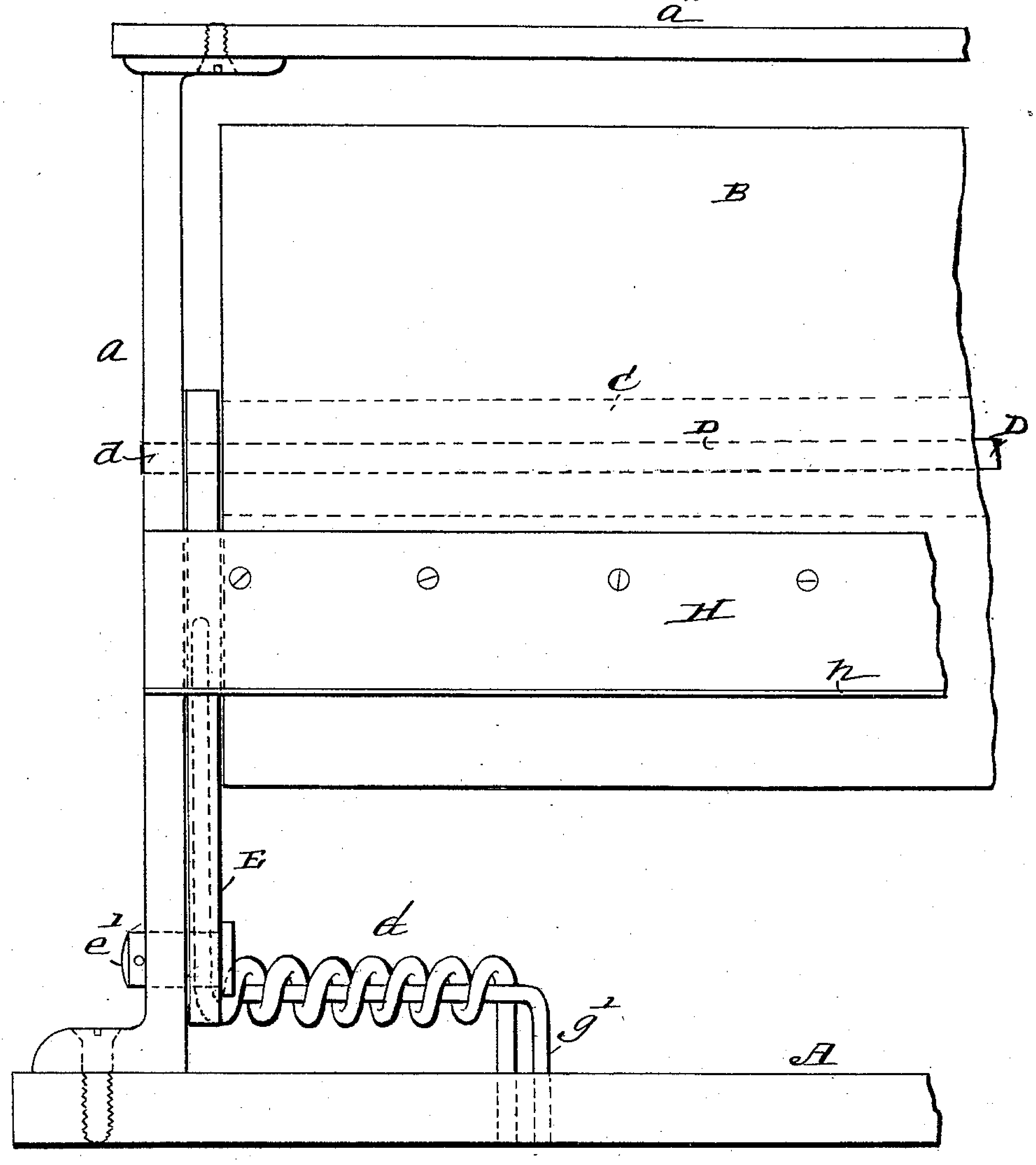
Fig. 3.



Witnesses:
J. W. C. Sanford
B. J. Rex

Inventor:
John A. Eastin
by C. D. Moody
atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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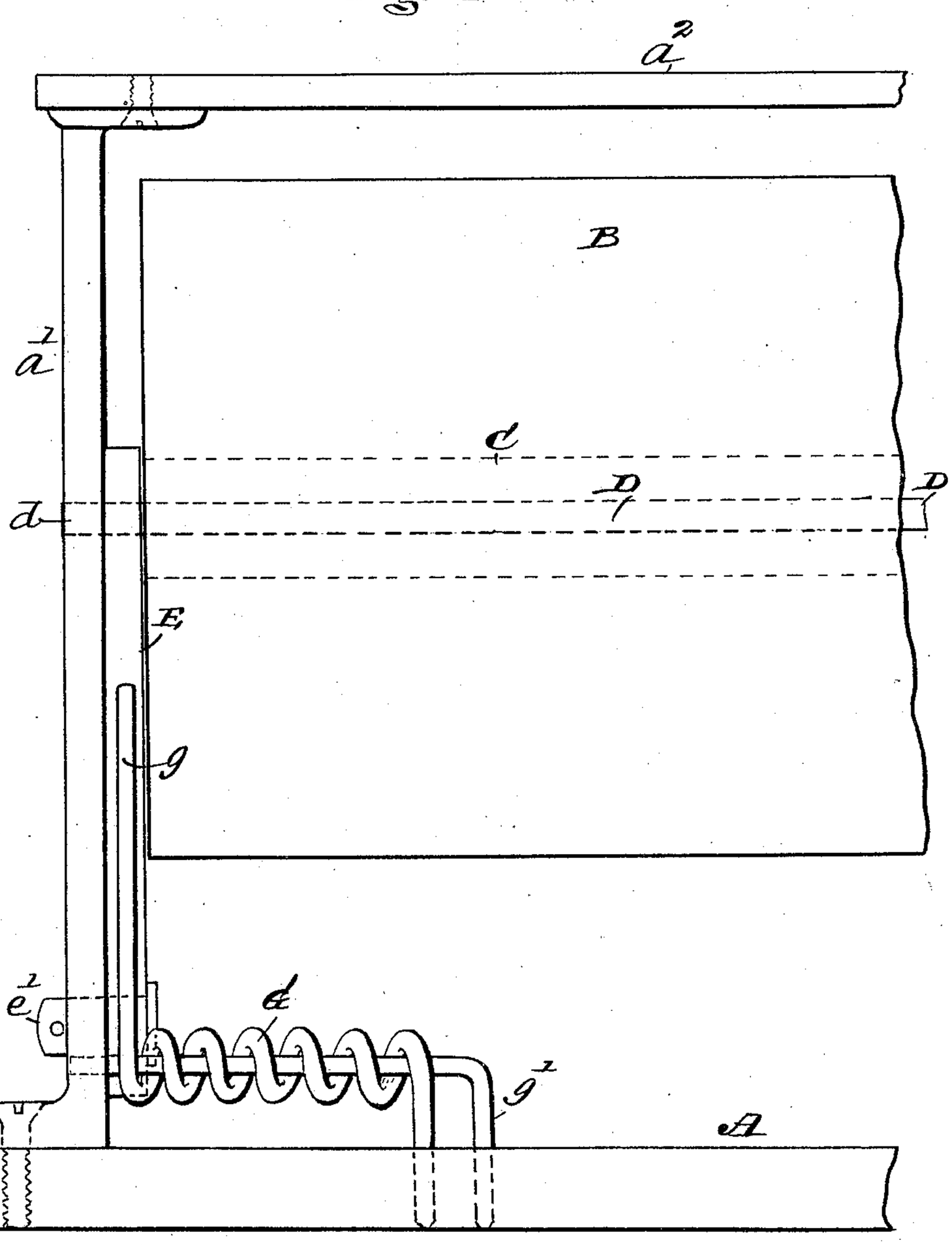
Fig. 4



Witnesses
G. W. Crawford
A. D. Rix

Inventor:
John A. Eastin
by Connoy
atty

UNITED STATES PATENT OFFICE.

JOHN A. EASTIN, OF ST. LOUIS, MISSOURI.

ROLL-PAPER HOLDER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 432,384, dated July 15, 1890.

Application filed July 20, 1888. Serial No. 280,484. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. EASTIN, of St. Louis, Missouri, have made a new and useful Improvement in Roll-Paper Holders and Cutters, of which the following is a full, clear, and exact description.

The improvement relates mainly to the method of supporting the paper roll and obtaining the tension upon its web, and to the knife and its construction and relation to the paper roll, substantially as is hereinafter more fully set forth and claimed, aided by a reference to the annexed drawings, making part of this specification, in which—

Figure 1 is an end elevation of the improved construction; Fig. 2, a cross-section of the knife and tension-bar therewith connected; Fig. 3, a front elevation of an end portion of the construction, and Fig. 4 a rear elevation of an end portion of the construction.

The same letters of reference denote the same parts.

The frame of the construction consists of a suitable base A, uprights a a', and top plate a^2. The special shape of any of these parts is not a matter of moment so long as it answers the purpose of the improvement.

The paper roll B is wound in the usual manner upon a roller C, which in turn is strung upon a shaft D, whose ends d project to form journals which are held and adapted to be rotated in bearings e in the upper end of the arms E. There is an arm E at each end of the roll B, and it is arranged, preferably, between the roll and the upright of the frame. The arms E, at or toward the lower end thereof, are pivoted, say, upon the pin e', which passes through the arm and the upright, substantially as is shown in the drawings, to enable the arms to be turned to carry the roll B as it diminishes in size in the direction of a bearing, which may be termed the "tension-bar" F. The two positions of the journal d shown in Fig. 1 and the broken line d' indicate the movement of the roll B. The arms E may be so pivoted, as by locating the pin e' so as to cause the arm E to incline in that direction, as to enable its weight to press the roll B from the start against the tension-bar; but it is better to employ an auxiliary, such as the springs G, which are arranged to exert their force upon the arms E, respectively, and thereby cause the roll B at its periphery to bear sufficiently against the bar F to produce a proper tension upon the roll as its web b is unwound.

The construction and operation of the springs are apparent from the drawings, the free end g of the spring bearing against the arm E and the other g' being secured in the base A. As the roll B in use diminishes in size, the arms E E incline more and more toward the bar F, and the tension thereby is maintained until the roll is exhausted.

Another leading feature of the improvement is the knife H, across which the paper web b is cut. In itself the knife is any suitable blade or edge adapted for cutting the web b when it is drawn across the knife. Its improved character is mainly in this, in its being so placed with relation to the roll that after a sheet has been separated from the web the web end can hang free of both the knife and the roll and in position to be readily grasped when it is desired to separate another sheet from the web. To this end the knife is spaced apart from the roll, and it is also so arranged that the web end, when released, shall not drop upon the roll, but shall swing clear of it. The best position for the knife is shown in the drawings—namely, somewhat below the level of the center of the roll and removed therefrom an inch or two. The position of the web b when it is being drawn across the knife is shown in the full lines in Fig. 1, and the position of the web end when released is indicated by the broken lines b', Fig. 1. The knife is conveniently held in position by attaching it to the outer face of the tension-bar F, as shown, by which combination the bar is made also to brace the knife laterally, for a paper-roll cutter, as in the present instance, is usually a thin blade, and when a long blade is being used it is apt to spring under the action of the web, and the web in consequence is liable to be torn unevenly; but when braced as described the difficulty is obviated. At the moment the web is being torn a tension is being exerted at both the knife-edge h and the bearing f upon the bar F, where the web is turned away from the roll. The paper is pulled downward from the roll and then upward against the

edge of the knife, which edge is a considerable distance below the center of the roll to give sufficient clearance.

I claim—

The combination, with the frame of the paper-support, the bars pivoted at their lower ends to said support, the springs secured to the base of the support and with their upper ends pressing against said bars, and the paper-shaft journaled in the upper ends of said bars, of the tension-bar secured to the support with its outer surface far enough from the roll to give sufficient clearance to the paper and bearing against the roll slightly below its center, and the knife secured to the outer surface of the tension-bar, substantially as specified.

Witness my hand.

JOHN A. EASTIN.

Witnesses:

C. D. MOODY,

C. C. LOGAN.