

(No Model.)

J. ZERR.

ROLL PAPER HOLDER AND CUTTER.

No. 393,956.

Patented Dec. 4, 1888.

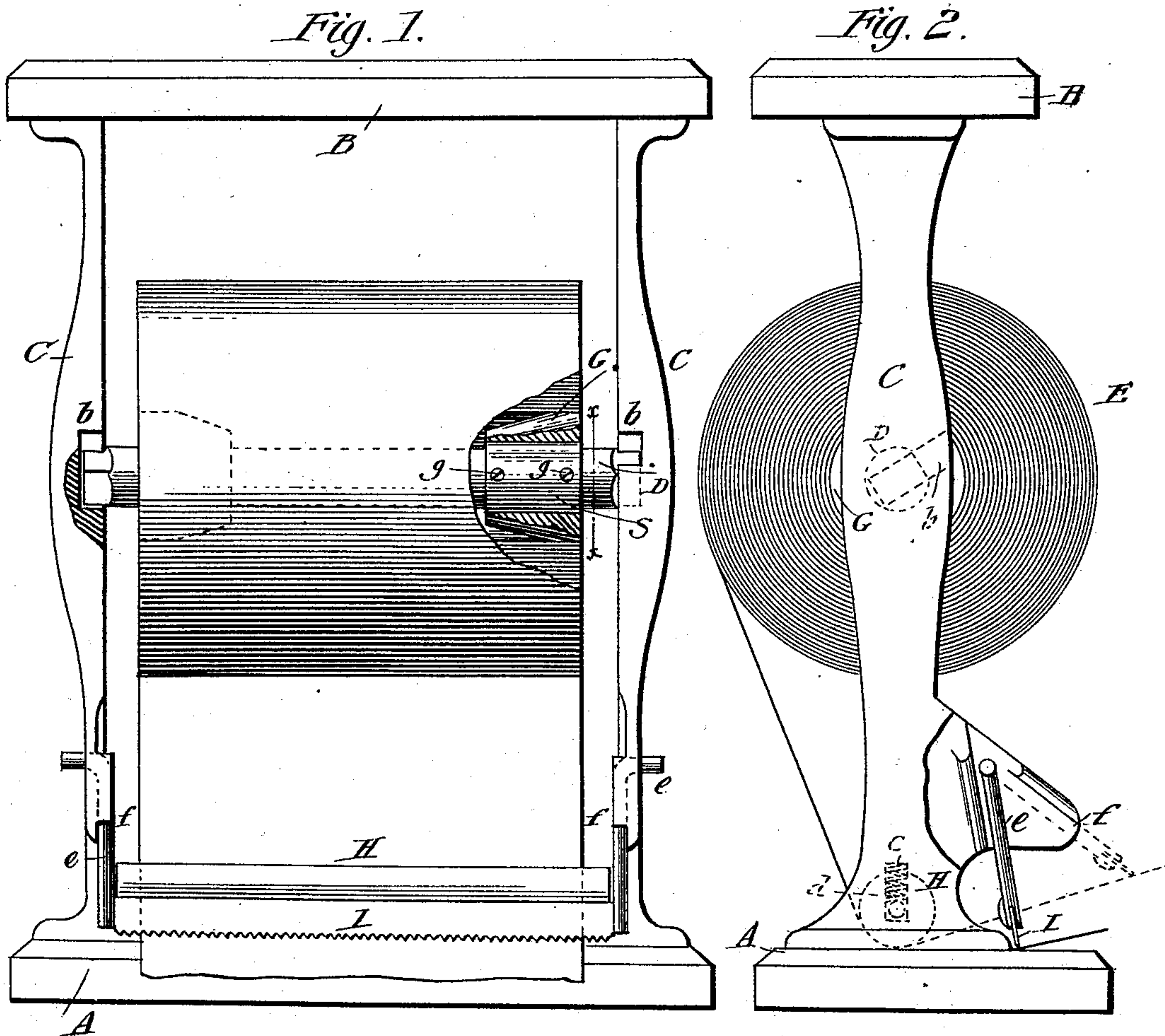


Fig. 3.

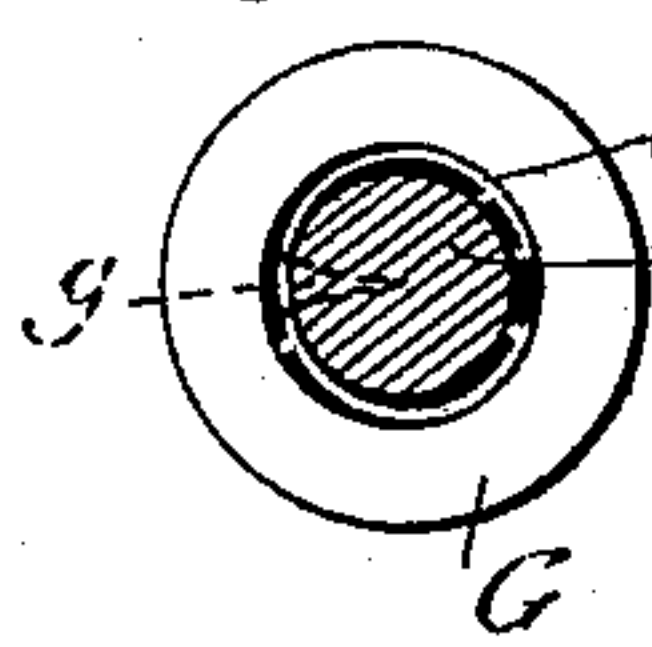
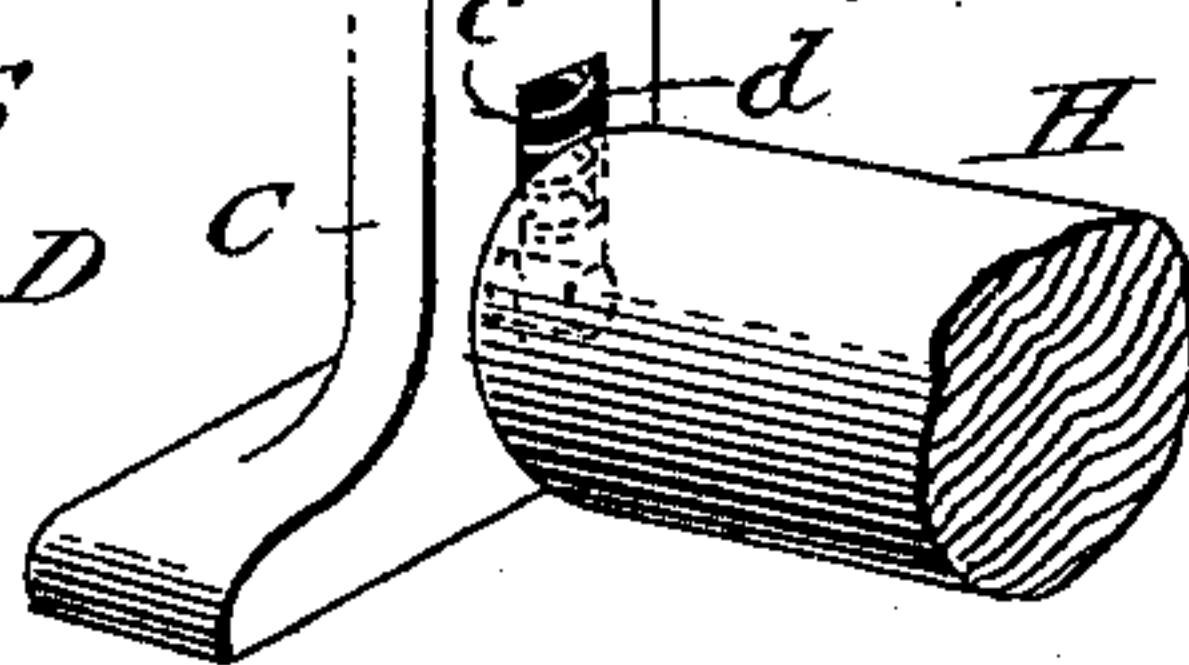


Fig. 4.



WITNESSES:

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JOHN ZERR, OF KEOKUK, IOWA, ASSIGNOR OF ONE-HALF TO EDWARD E. HAWKES, OF SAME PLACE.

ROLL-PAPER HOLDER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 393,956, dated December 4, 1888.

Application filed April 18, 1888. Serial No. 271,044. (No model.)

To all whom it may concern:

Be it known that I, JOHN ZERR, of Keokuk, in the county of Lee and State of Iowa, have invented a new and useful Improvement in Roll-Paper Holders and Cutters, of which the following is a full, clear, and exact description.

This invention relates to roll-paper holders having attached cutters, which provide for parting the paper by pulling it out sidewise across the cutter as or after a sufficient length of paper has been drawn out from or off the roll for the purpose; and the invention consists in certain novel constructions and combinations of parts, including special means for producing tension upon the roll of paper, substantially as hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a partly broken and sectional front elevation of a roll-paper holder, with attached cutter, embodying my invention. Fig. 2 is a partly broken side view of the same. Fig. 3 is a transverse section upon the line *xx* in Fig. 1, showing the devices used to carry the roll of paper and to produce tension thereon; and Fig. 4 is a detail view, in perspective, of a lower pressure and guide roller in part, with spring-support for the same.

A is the base of the roll-paper holder and cutter, and B its top, united with the base by opposite side or end standards, C C, that may be of metal. Each of these standards C is constructed on its inner face with an oblique open-ended recess, *b*, to receive down within them the flattened or square ends of a stationary shaft or "fixed roller," D, as it may be termed, upon which indirectly the roll of paper E is carried intermediately of the height of the whole fixture.

G G are the usual bobbins or plugs introduced within the ends of the roll of paper and free to turn in common with the roll of paper upon the stationary shaft D, subject to a spring-tension, as hereinafter described, said plugs or bobbins fitting loosely upon the shaft D.

H is the lower roller, arranged centrally or thereabout beneath the roll of paper and fitted at each of its ends to turn and work up and down within a recess, *c*, in the inner face of each standard C, subject, if desired, to the downward pressure or action of springs *d*, applied to the bearings of said roller, or said springs may be dispensed with and the weight of said roller alone be depended upon.

I is the knife or cutter, which may have a serrated edge, and which is hung by bent arms *e e* to rock in the standards C C as bearings, the same forming a drop-cutter, which when down rests upon the base A, preferably a little back of its front edge; but when raised, as shown by dotted lines in Fig. 2, is arrested by projections *f f* from the standards C C.

The necessary tension is given to the roll of paper to prevent it from being too freely unwound or running off more than is required when pulling on its free end by means of a rolled sheet brass or other metal double spring, S, applied to the stationary shaft D, within either of the plugs or bobbins G G, said spring consisting of a simple strip of spring metal, fastened by screws *g g* or otherwise intermediately of its width to the shaft D, and with its longitudinal edges, when the spring is inclosed by the spool or bobbin G, at a greater or less distance apart. This spring thus forms a double one, inasmuch as each portion of it on either side of its line of attachment to the stationary shaft D bears with a spring-pressure against the interior peripheral surface of the plug or bobbin, and each longitudinal edge of said spring is turned slightly inward to prevent catching, scraping, or wear and to allow of the roll of paper and its carrying plugs or bobbins rotating in reverse directions to suit different or reverse wraps of the roll of paper.

The stationary shaft D is first passed centrally through the roll of paper E, and then the plugs or bobbins G, where two are used, slipped over said shaft into the roll from its opposite ends, the double spring S being pressed close down upon the shaft D, which will allow of its entering within the plug or bobbin, against the interior of which it acts to produce the necessary tension on the roll

of paper regardless of the direction in which said roll is turned to unwind it. The roll of paper thus mounted, and having tension by the spring S indirectly applied to it, is then
 5 fitted to its place by slipping the flattened ends of said shaft down within the oblique recesses *b* in the standards C C. The double spring S is preferably the full length of the plug or bobbin it is entered within, thus dis-
 10 tributing the friction over the entire interior surface of the plug, likewise always exerting a uniform tension on the roll of paper, no matter whether it be large or small, and not injuring the paper, as do ten-
 15 sion-springs applied directly to its surface. The free end of the paper is passed under the lower roller, H, and from thence under the drop-knife or saw-blade I. Said roller H, being free to move up and down, serves a double
 20 purpose. Thus in drawing on the paper said roller is lifted by the paper and is revolved. After the paper is cut or torn off by pulling sidewise on it, said roller drops and rests upon the paper which lies upon the base A and
 25 pulls the free end of the paper from the saw-blade or knife and holds the paper from running back; and, furthermore, as the roll of paper decreases said drop-roller H always brings the sheet or free end of the paper down
 30 in the same position. Were it not for this the free end of the paper, after the roll decreased in size, would fall short and sag back of the knife. When tearing or cutting off the paper by the knife, the free or loose portion
 35 of the paper is first slightly elevated, which lifts the knife to an angle of about forty-five degrees, more or less, said lift being regulated by the projections or stops *f f* on the stand-
 40 ards C C. Then, by a side pull of the paper directly against the saw-blade or knife either to the right or left a clear straight cut of the

paper is obtained, after which the knife drops to its normal position again and with its sharp edge or teeth rests upon the paper on the base A and holds it and prevents it from slacken- 45 ing, and leaves an end portion of about one and one-half inch (more or less) in width in front of the knife, which provides for again taking hold of the free end of the paper to draw it out and sever the sheet, as before. 50

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a roll-paper holder and cutter, the combination of the stationary shaft D, the sheet-metal double spring S, secured intermediately 55 of its width to said shaft and adapted to partly encircle the latter, and a plug or bobbin, G, adapted to enter the center opening on the roll of paper to rotate upon or around 60 said shaft, and receiving the double spring S within it, substantially as and for the purposes specified.

2. In a tension-spring device for roll-paper holders, the combination, with the stationary 65 shaft D, of the sheet-metal double spring S, secured intermediately of its width to said shaft and having its longitudinal edges turned inward, essentially as and for the purpose 70 herein described.

3. In a roll-paper holder and cutter, the combination, with the base A and standards C C, of the drop-roller H, arranged beneath the roll of paper, and the rocking drop-knife I, in ad- 75 vance of said roller and free to move up and down, subject to arrest by one or more upper stops, and the base A, substantially as specified.

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Witnesses:

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