

No. 771,913.

PATENTED OCT. 11, 1904.

E. C. LEE.

ROLL PAPER HOLDER AND CUTTER.

APPLICATION FILED NOV. 25, 1903.

NO MODEL

2 SHEETS—SHEET 1.

Fig. 1.

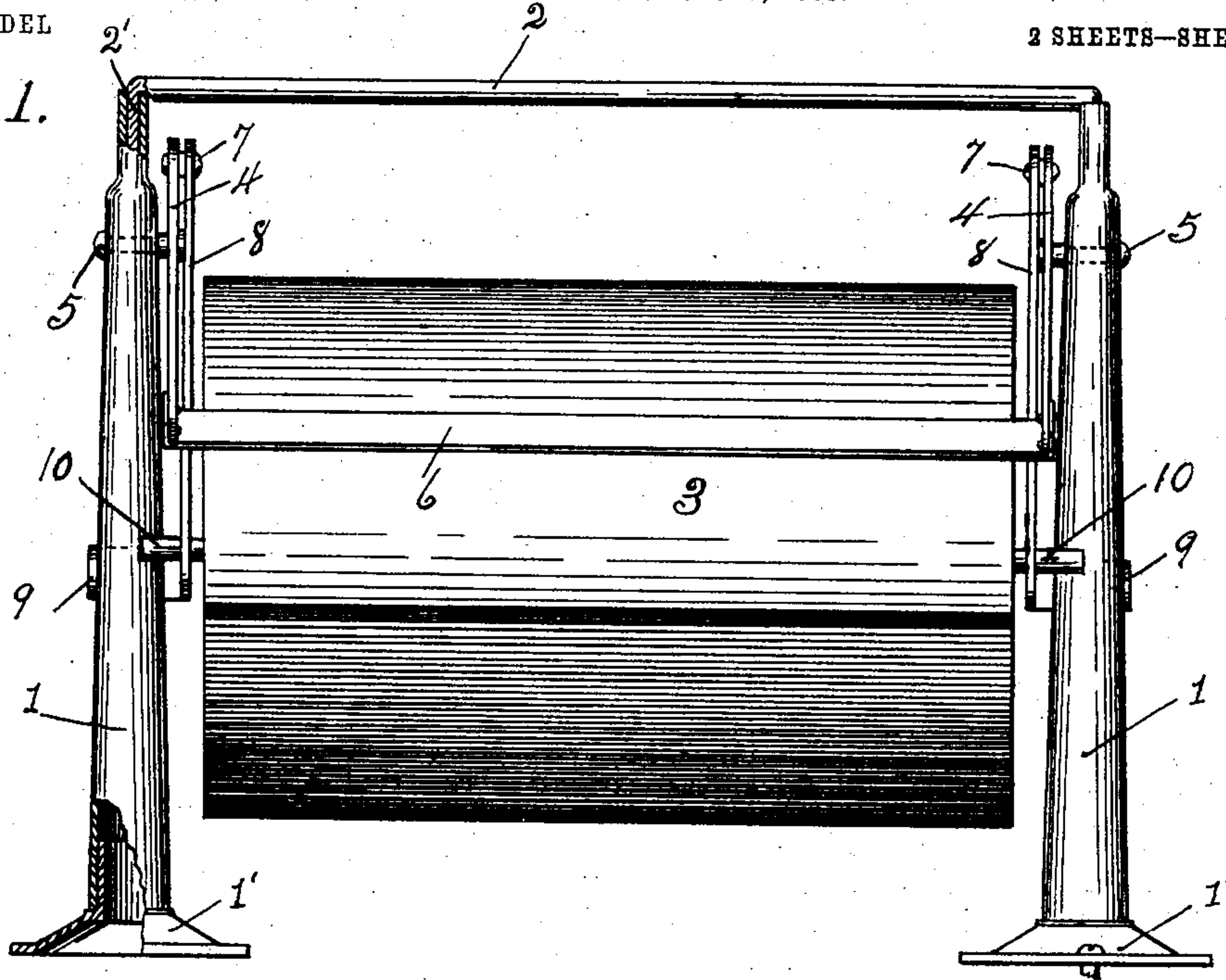


Fig. 2.

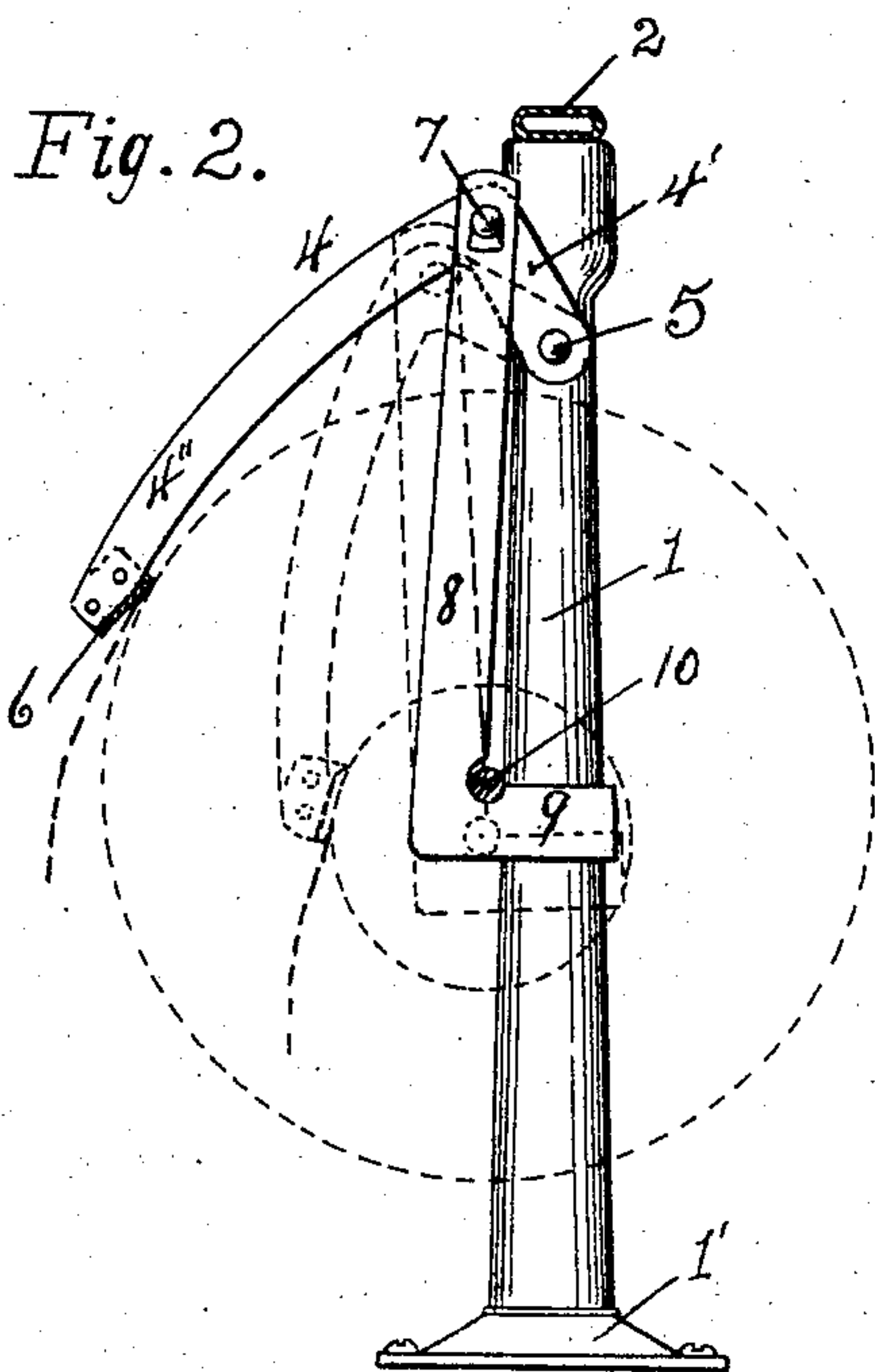
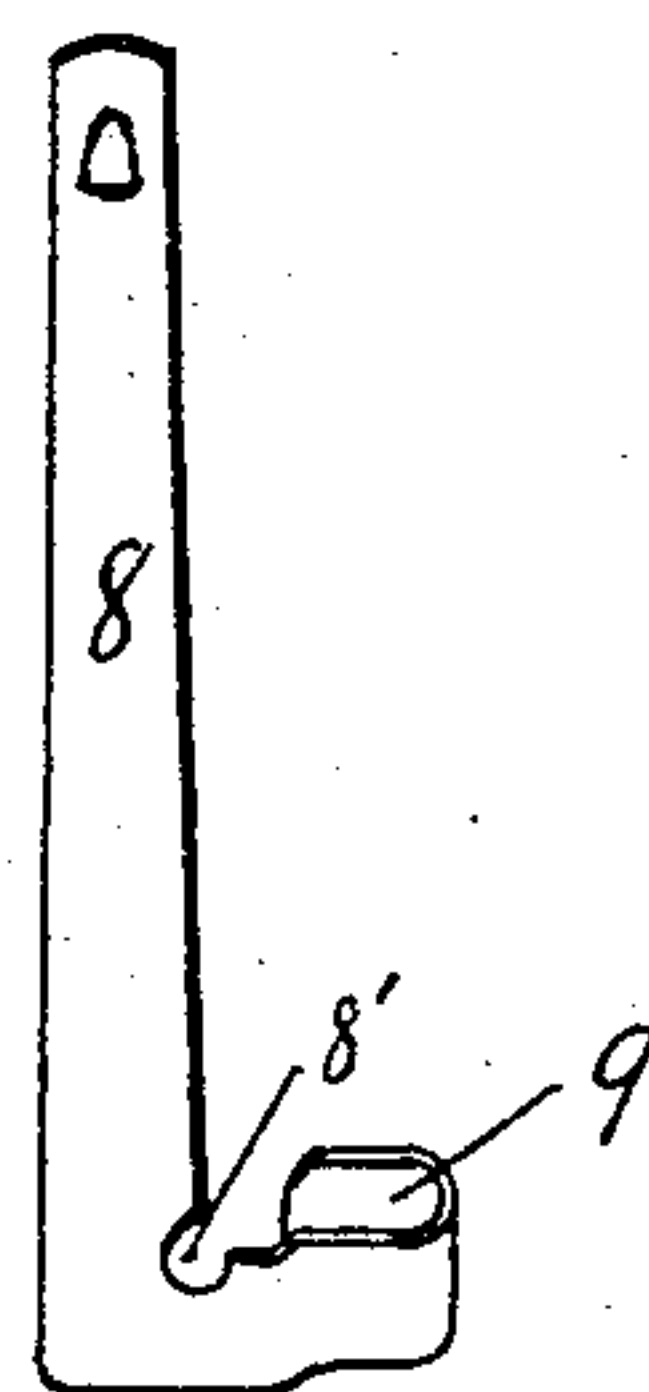


Fig. 3.



Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

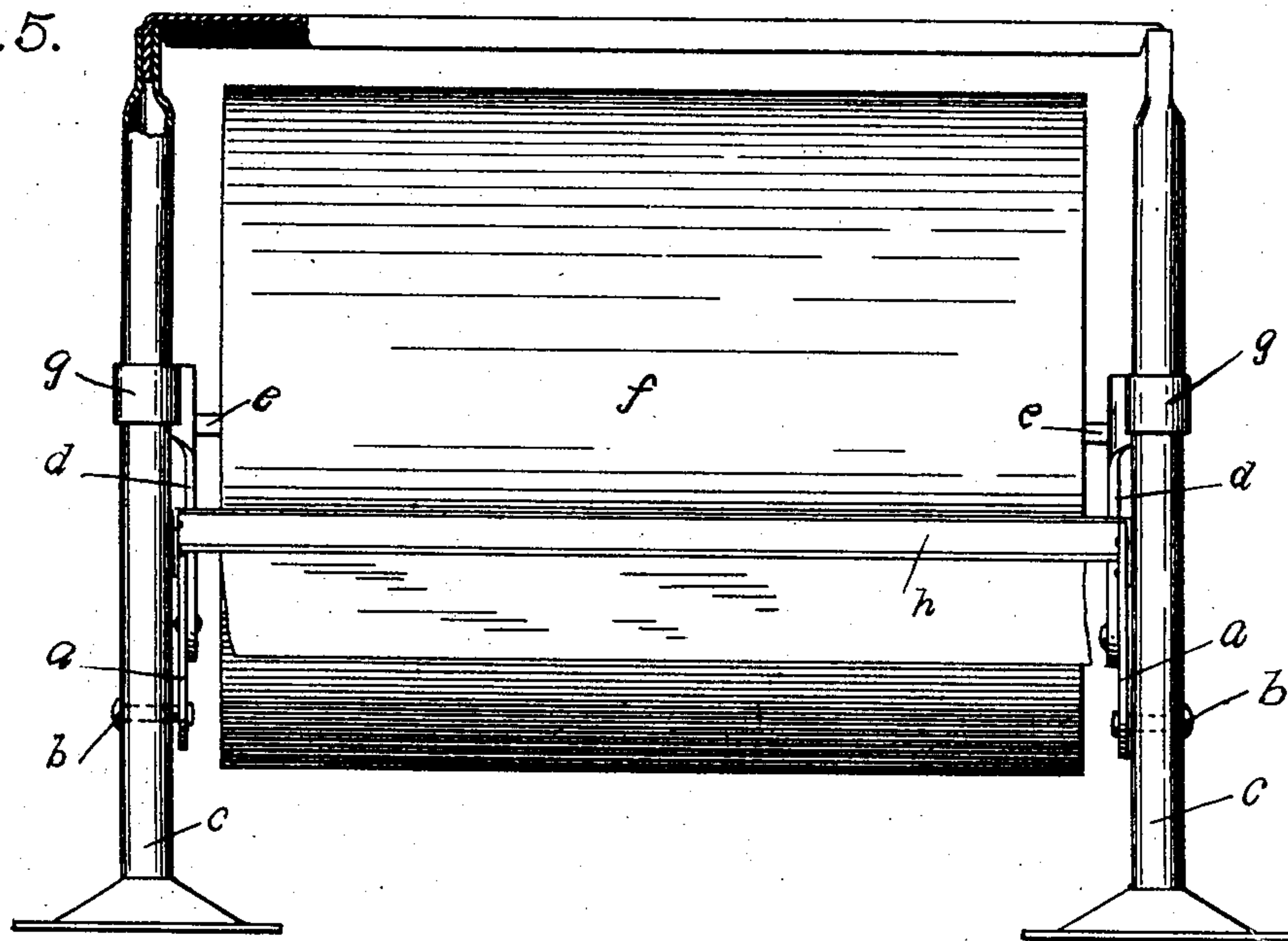


Fig. 6.

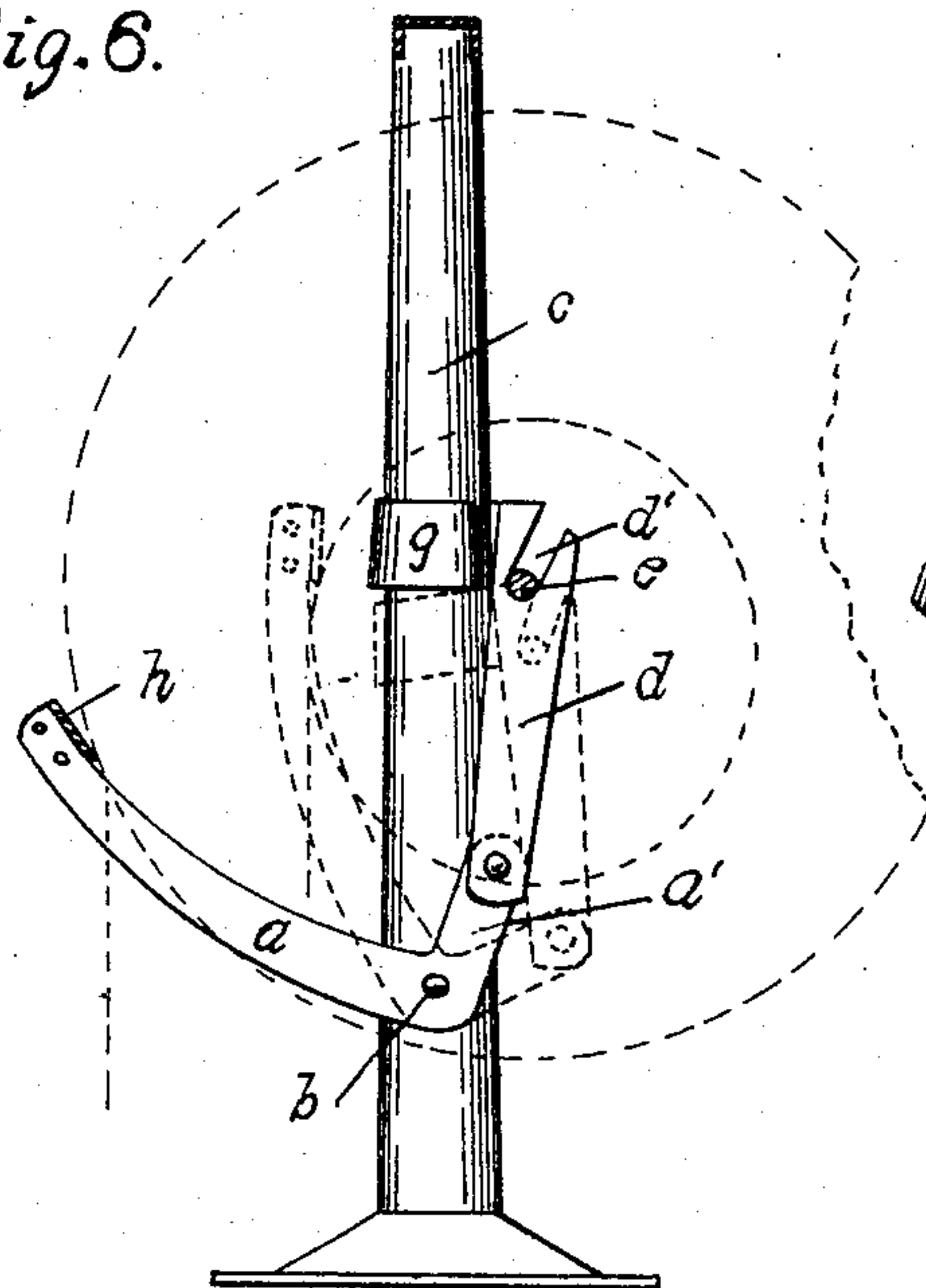
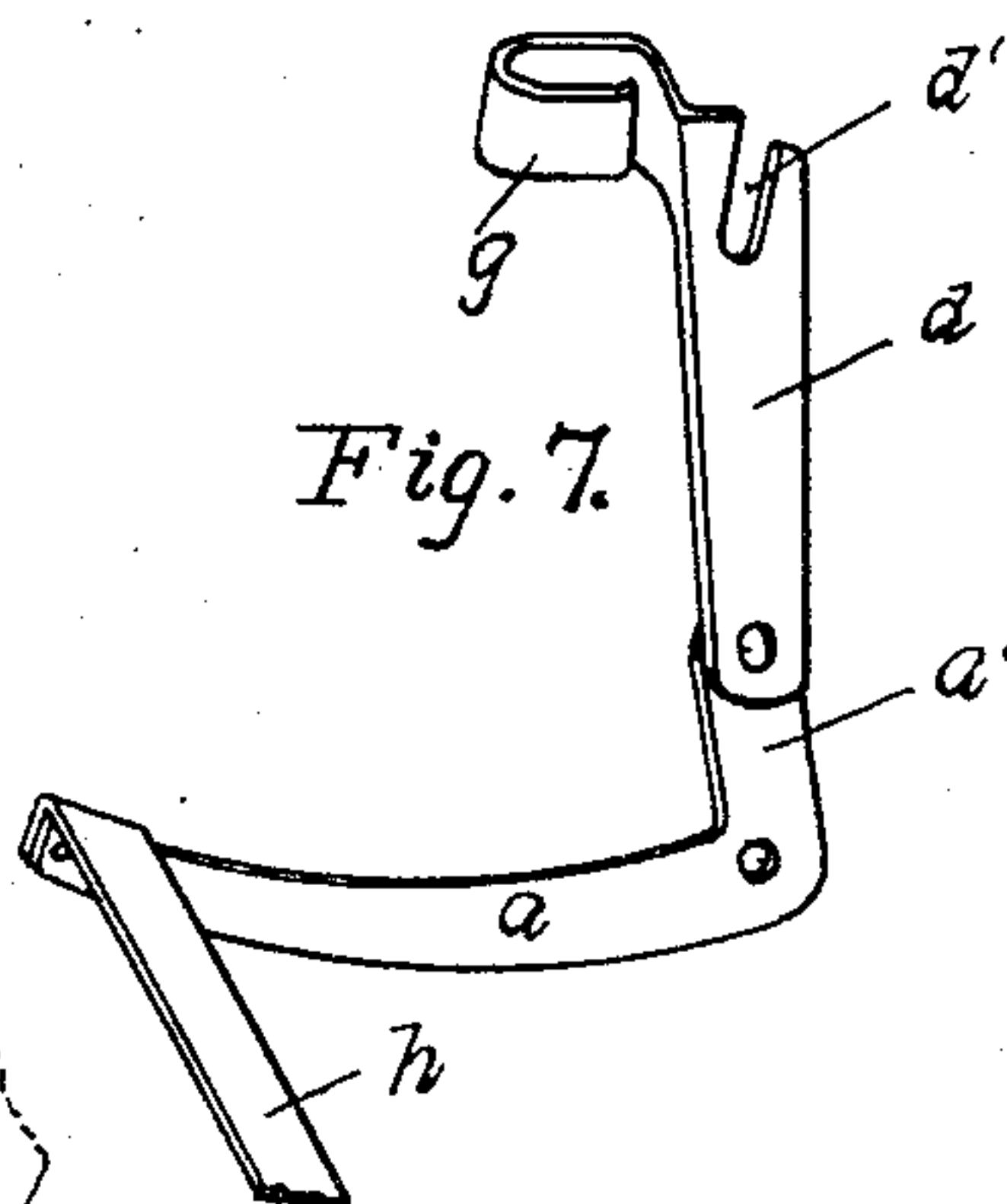


Fig. 7.



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UNITED STATES PATENT OFFICE.

ERI C. LEE, OF TOLEDO, OHIO.

ROLL-PAPER HOLDER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 771,913, dated October 11, 1904.

Application filed November 25, 1903. Serial No. 182,594. (No model.)

To all whom it may concern:

Be it known that I, ERI C. LEE, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have
5 invented certain new and useful Improvements in Roll-Paper Holders and Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the
10 art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

15 My invention relates to improvements in roll-paper holders and cutters of the class in which the weight of the paper-roll is utilized to maintain the pressure of the knife thereon.

The object of my invention is to provide a
20 roll-paper holder and cutter of the above class that has its several mechanical parts so supported and arranged with relation to each other as to adapt the leverage of the knife-arms to be increased in the same ratio as the
25 weight of the paper-roll is decreased by use, thus causing the knife to be at all times held against the surface of the paper-roll at an equal pressure.

A further object of my invention is to provide a roll-paper holder and cutter that has
30 its knife so mounted and connected with the operating mechanism as to adapt it to readily respond to any unevenness in the surface of the paper-roll during the rotation thereof, thereby preventing the binding of the knife
35 on the paper-roll as it comes in contact with the raised portions—a fault that is present in the gravity roll-paper holders and cutters now in use.

40 The invention is fully described and illustrated in the following specification, of which the accompanying drawings form a part, and in which—

Figure 1 is a front longitudinal vertical elevation of my invention. Fig. 2 is a transverse vertical sectional view thereof. Fig. 3
45 is a view of one of the knife-carrying arms. Fig. 4 is a perspective view of one of the roll-supporting links, and Figs. 5, 6, and 7 are

modified constructions of the parts shown in Figs. 1, 2, 3, and 4.

Referring to Figs. 1, 2, 3, and 4 of the drawings, 1 1 represent the two vertical legs of the standard employed for supporting the paper-roll and knife attachments in elevated position, the said legs having their lower portions
55 enlarged or flanged to form the bases 1' thereon, which may either be formed integral therewith or secured in any suitable manner thereto. The upper ends of said legs are
60 rigidly connected by means of the horizontal strengthening-strip 2. To enable this standard to be readily taken apart and folded into a compact form for packing or shipping, I have shown the strip 2 as being provided at
65 either end with a tongue 2', formed at right angles thereto and adapted to be inserted within a similarly-shaped socket provided in the upper ends of said legs. If desired, the
70 tongues 2' may be retained in said sockets by set-screws or other suitable means. A pair of substantially L-shaped members or levers 4, which comprise the short arms 4' and the long arms 4'', arranged at substantially
75 right angles to each other, are pivotally secured at 5 to the upper inner portions of the legs 1 1, as shown in Fig. 2, and have their outer ends rigidly connected by the horizontally-disposed knife 6, which is adapted to
80 bear against the surface of the paper-roll and act as a guide for the tearing of paper therefrom. The location of the fulcrum-point 5 of the lever 4 on the legs of the standard will of course depend upon the size of the roll to be
85 used. A pivot or stud 7 is mounted in each of the levers 4, near the juncture of the arms 4' and 4'' thereof, and has loosely suspended therefrom the roll-supporting hangers 8, which are provided at their lower ends with the U-shaped fingers or sleeves 9, formed
90 integral therewith or rigidly secured at right angles thereto, the said fingers being adapted to loosely engage and have a reciprocatory movement on the legs 1 of the standard. Suitable bearings 8' for loosely receiving the
95 ends of the shaft 10, on which the paper-roll 3 is mounted, are provided in the vertexes of the angles formed by the hangers 8 and fin-

gers 9, thus adapting the paper-roll 3 to have a reciprocatory movement with said hangers when said levers are oscillated. To prevent the oscillation of the hangers 8 with relation to the supporting-standards when the paper is being pulled from the roll, the ends of the shaft 10 may be either prolonged so as to engage the opposite side of the legs 1 to that engaged by the fingers 9, as shown in Fig. 1, or the said fingers may be looped around said legs to form sleeves, as shown in Fig. 6.

In the operation of my device the ends of the shaft 10, on which the paper-roll 3 is mounted, are placed in the bearings 8' of the hangers 8 and the weight of the paper-roll utilized to keep the knife 6 in engagement with the surface thereof. Owing to the peculiar shape of the levers 4 and the location of their fulcrum-points 5 on the legs of the standard, it will be apparent that the arms 4' of said levers will at all times be at an angle to the legs 1 of the standard and never parallel therewith, the degree of the upper angle formed thereby being increased proportionately as the size and weight of the paper-roll 3 are decreased, thus causing the leverage exerted upon the knife 6 to be increased as the roll diminishes in size and the pivotal point 7 of the hangers 8 moves away from said legs, thereby maintaining at all times an even pressure of the knife 6 against the roll.

In Figs. 5, 6, and 7, which show modified constructions of my invention, the L-shaped levers *a* are fulcrumed at *b* to the legs *c* of the standard and have their short arms *a'* extending upwardly at a slight angle to said legs, said arms *a'* being pivotally connected at their free ends to the supporting-links *d*. In the upper ends of the supporting-links *d* are provided diagonally-disposed elongated slots or bearings *d'* to receive and retain the ends of the shafts *e*, on which the paper-roll *f* is mounted, and extending from the upper ends of said links are the fingers or sleeves *g*, which loosely encircle the legs *c* and act as guides for the reciprocatory movement of said links. In this construction the knife *h* bears upwardly against the paper-roll *g*, and therefore facilitates the tearing of paper from the roll, as the pulling of the paper when being torn forces the knife more tightly against the roll and prevents the ragged tear that is very often made in roll-paper cutters in which the knife rests upon the upper portion of the roll and is lifted from the surface thereof in the tearing operation.

I am aware that roll-paper holders and cutters of this class have been used in which the roll-supporting hangers have a sliding engagement with the knife-carrying arms, the leverage of said arms increasing as the said hangers slide outwardly thereon and the distance between the engaging part of said hangers and the fulcrum-point of said arms increases. It will be apparent that in cutters

of this class the friction generated by the contact of said parts will prevent the ready oscillation of the knife as it strikes uneven places in the surface of the paper-roll, which is one of the difficulties I have endeavored to and have overcome.

It is obvious that such changes in the form, proportion, and minor details of construction of the parts as fairly fall within the scope of my invention may be made without departing from the spirit or sacrificing any of the advantages thereof.

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, a frame having upright standards, a pair of lever-arms fulcrumed to said standards, a knife carried by said arms, a pair of roll-supporting links having fixed pivots on said lever-arms at a distance from their points of connection with said standards, means for retaining said links in sliding engagement with said standards, bearings provided in said links adjacent to their points of engagement with said standards, and a roll-carrying shaft removably mounted in said bearings.

2. In a roll-paper holder and cutter, a frame having upright standards, a pair of knife-carrying arms fulcrumed thereto, a pair of roll-supporting links having fixed pivotal connection with said arms, standard-encircling fingers provided on said links, bearings provided in said links, and a roll-supporting shaft mounted in said bearings.

3. In a roll-paper holder and cutter, a frame having vertical standards, a pair of substantially L-shaped knife-carrying arms pivoted thereto, a pair of links having fixed pivotal connection with said arms, means for retaining said links in sliding engagement with said standards, bearings provided in said links, and a roll-carrying shaft removably mounted in said bearings.

4. In a roll-paper holder and cutter, a frame comprising vertical standards having sockets provided in their upper ends, and a horizontal strip having tongues adapted to be inserted in said sockets and rigidly connect said standards, a pair of knife-carrying arms having fulcrum-points on said standards, links having fixed pivotal connection with said arms and adapted to have their free ends retained in sliding engagement with said standards, and a shaft journaled in said links.

5. In a roll-paper holder and cutter, a frame, a pair of knife-carrying arms having a fixed fulcrum-point in said frame, a pair of roll-supporting members having fixed pivotal connection with said arms and adapted to have their free ends retained in sliding engagement with said frame, and a roll-supporting shaft removably mounted in said members above the fulcrum-point of said arms.

6. In a roll-paper holder and cutter, a frame

having upright standards, a pair of substantially L-shaped knife-carrying levers pivoted to said standards, a pair of shaft-supporting members having pivotal connection with and supported above one of the arms of said levers, means for retaining the free ends of said members in sliding engagement with said standards, and a paper-roll-carrying shaft mounted in the free ends of said members, substantially as described.

7. A roll-paper holder and cutter comprising a frame having upright standards, a shaft carrying the paper-roll, a pair of levers pivoted to said standards and having outwardly-curved knife-carrying arms and short arms extending at an angle therefrom, shaft-supporting links having sliding engagement with said standards and pivotal connection with the short arms of said levers, said links adapted when weight is disposed thereon to cause said knife to come in contact with the roll

carried by said shaft and to increase its leverage as said roll diminishes in size, substantially as described.

8. In a roll-paper holder and cutter, a pair of standards, a pair of knife-carrying arms having fixed fulcrum-points on said standards, projections rigidly attached to and extending from the fulcrum-point of said knife-carrying arms, roll-paper-supporting means carried by said projections, the said arms and projections being so disposed as to cause the leverage of said arms to be equally maintained as the weight and size of the paper-roll diminish.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERI C. LEE.

Witnesses:

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