

(No Model.)

S. WHEELER.  
TOILET OR WRAPPING PAPER ROLL.

No. 401,233.

Patented Apr. 9, 1889.

Fig 1.

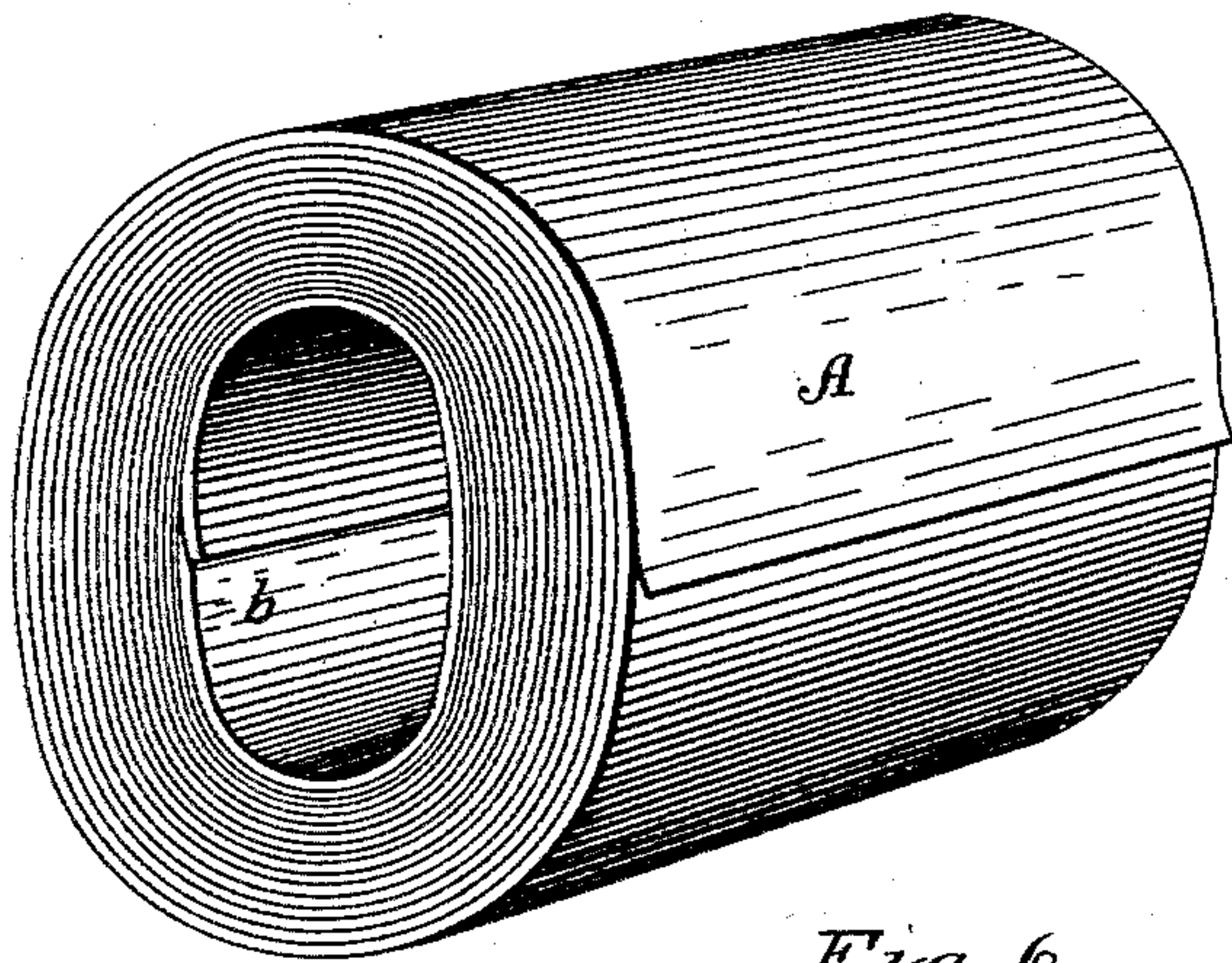


Fig. 2.

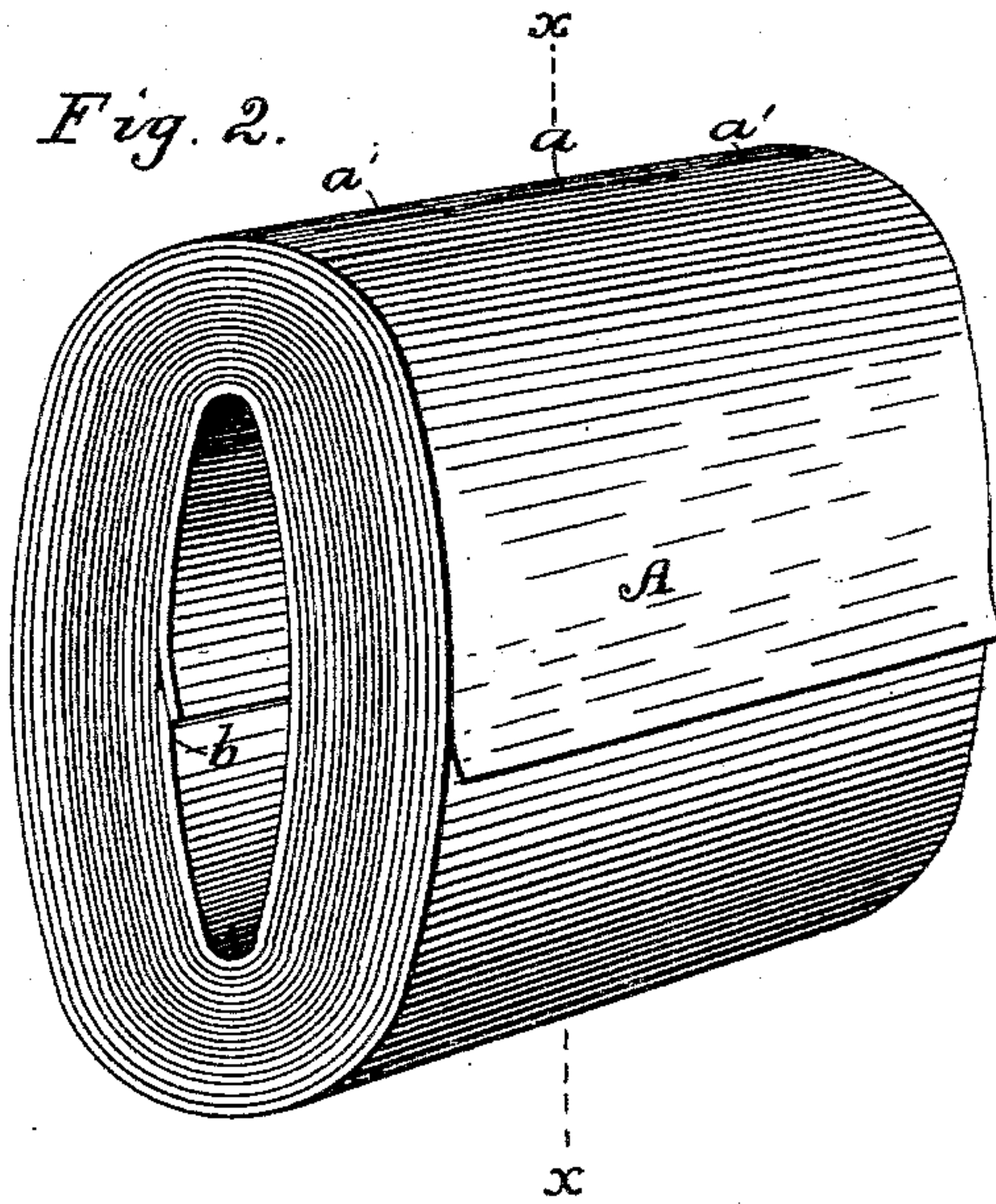


Fig. 3.

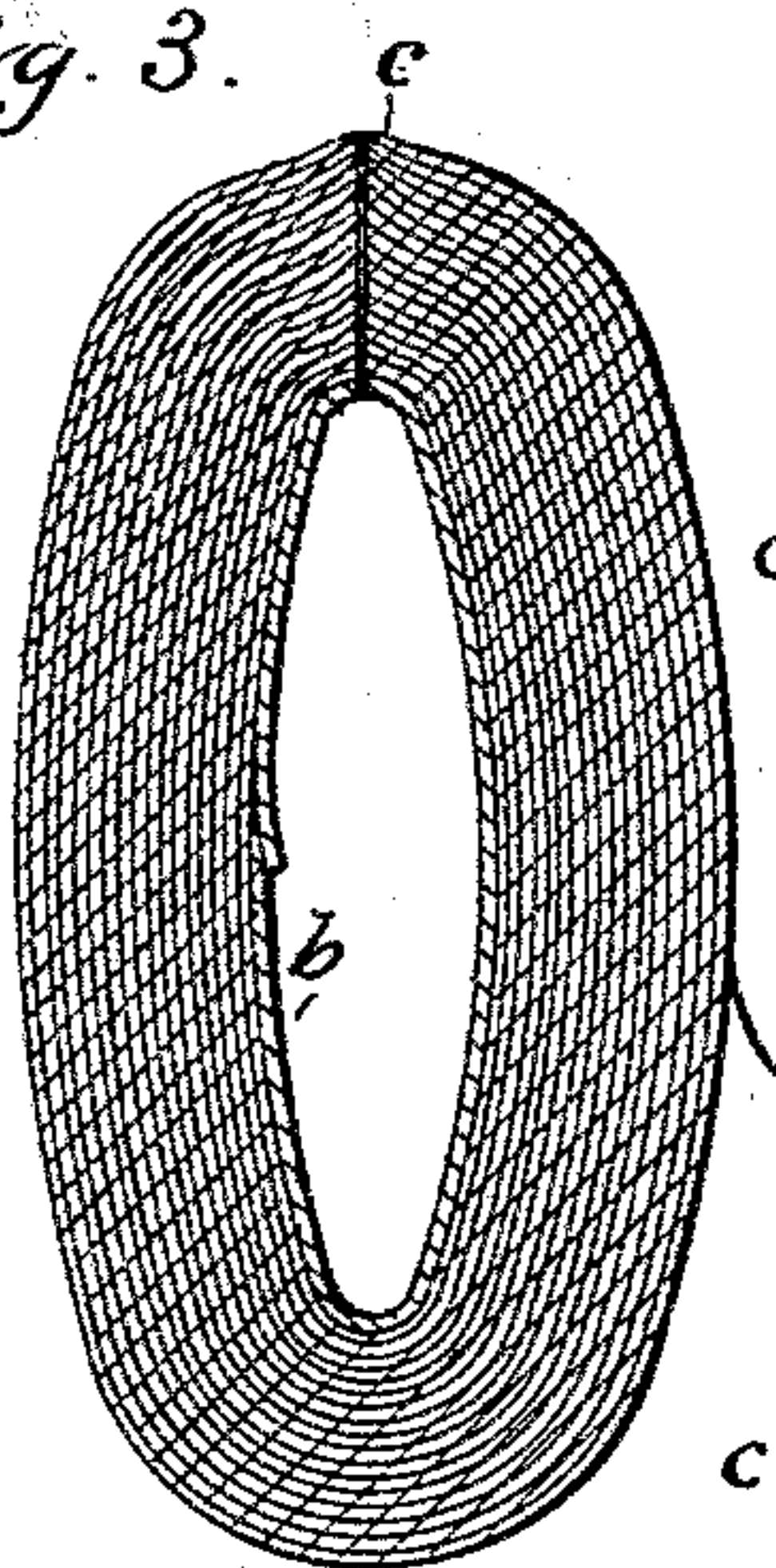


Fig 6

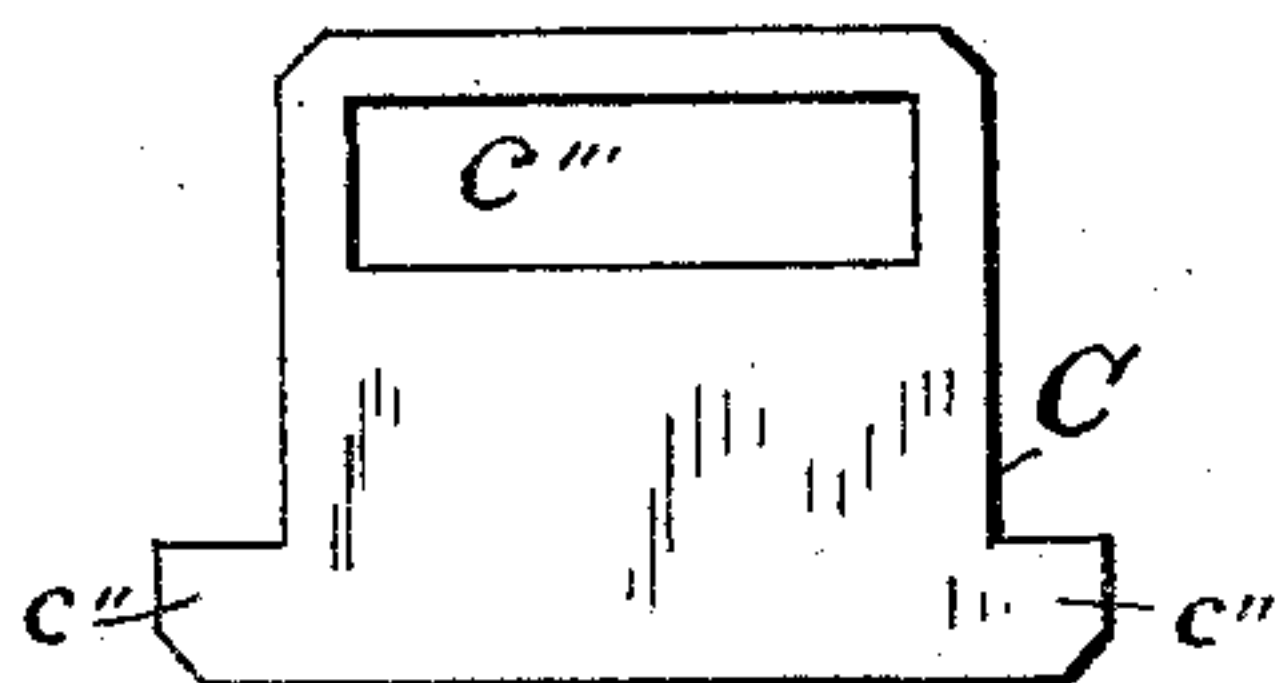


Fig. 4.

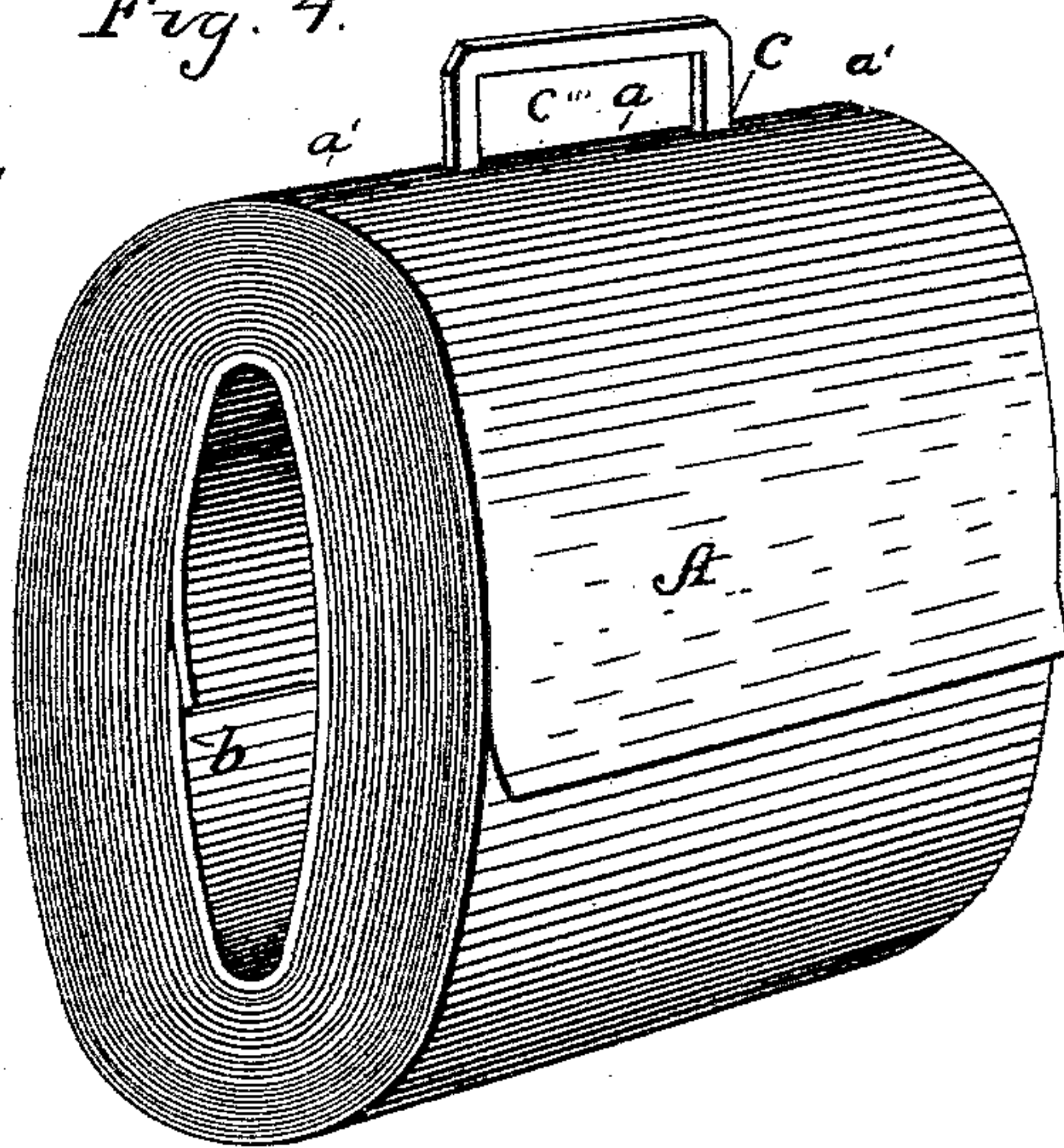


Fig. 7.

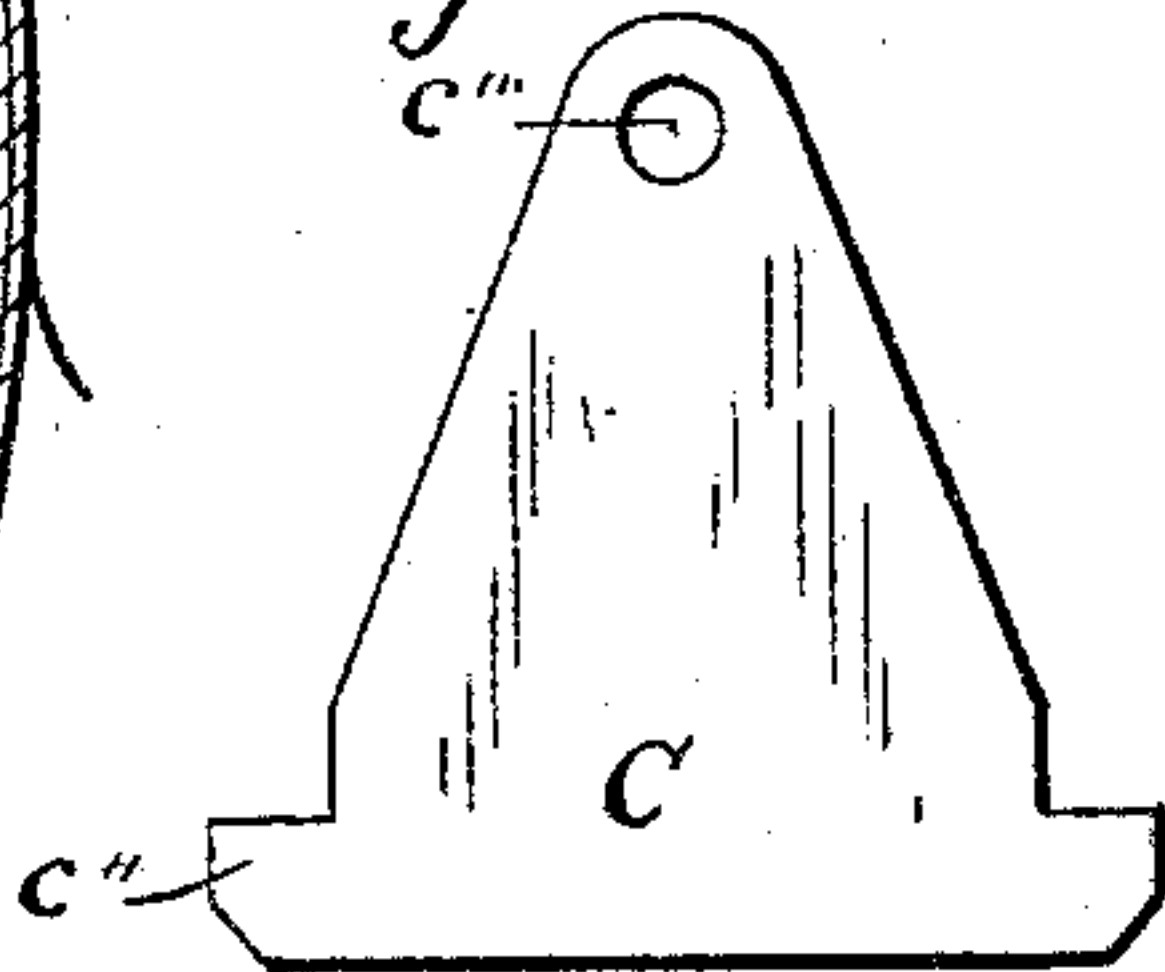
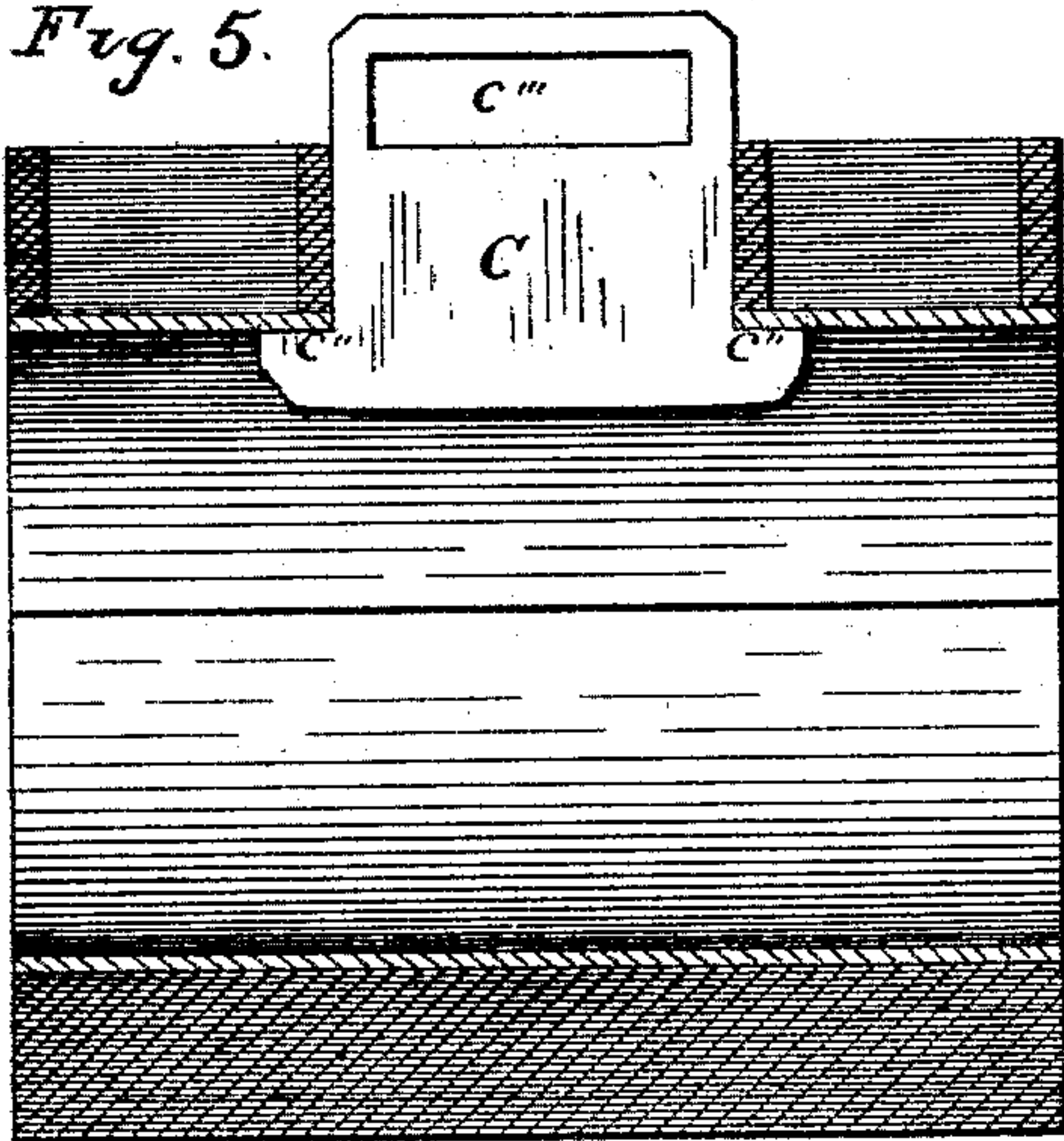


Fig. 5.



ATTEST.  
Victor J. Evans.  
James S. Smith. By

INVENTOR.  
Seth Wheeler.  
Charles L. Cooke  
Atty.



# UNITED STATES PATENT OFFICE.

SETH WHEELER, OF ALBANY, NEW YORK.

## TOILET OR WRAPPING PAPER ROLL.

SPECIFICATION forming part of Letters Patent No. 401,233, dated April 9, 1889.

Application filed July 24, 1888. Serial No. 230,914. (No model.) Patented in Canada September 13, 1888, No. 29,856.

*To all whom it may concern:*

Be it known that I, SETH WHEELER, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Toilet or Wrapping Paper Rolls, (for which I have obtained a patent in Canada, No. 29,856, bearing date September 13, 1888;) 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 art to which it appertains to make and use the same.

My invention relates to the production of incised or flattened rolls of toilet or wrapping paper, and to the means by which such rolls are suspended in upright position against a wall or other support. The object is to improve the construction of such rolls so that the lines of incision, which are made through the roll in a single plane, shall be maintained in position, one series of said incisions being adapted to admit the insertion from the interior of the roll of the device by which the roll is to be suspended in use. The construction of the roll is such that its adaptation to so receive this suspensory device will not be lessened by handling and transportation of the rolls, so that the device may be introduced by the consumer when it may be found not desirable to insert it at the time of manufacture.

To these ends the invention consists in the novel features of construction and combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a view of the roll as it is delivered from the winding machinery. Fig. 2 is a view of the roll after incising and flattening. Fig. 3 is a sectional view on the line  $x x$  of Fig. 2, showing the position assumed by the edges of the paper where cut when the roll is flattened. Fig. 4 is a perspective view of the roll with the suspension-link inserted, ready to be attached to a fixture or hung against a wall or other support for use. Fig. 5 is a longitudinal sectional view of the roll with the suspensory device inserted. Figs. 6 and 7 show two forms of suspensory devices adapted to the purposes of the invention.

Heretofore rolls of paper having lines of perforations or incisions in the same plane have been supported by a flattened or oblong core fitted to the interior of the roll, and having bearings outside of the roll by which it was suspended; but no means were provided to prevent the slipping of the convolutions of the paper and the consequent displacement of the lines of perforations or incisions. I have remedied this defect by an invention set forth in my patent, No. 396,675, dated January 22, 1889. In the improvement therein described I have provided rolls of paper of the character mentioned with stays, by which the convolutions are prevented from slipping and any displacement of the lines of incisions avoided. In my said invention I have also provided such rolls of paper with suspensory devices passed through one or more of the incisions from the outside of the roll and secured upon its inside. Difficulties are often met in thus inserting the suspensory devices from the outside of the roll, and I have therefore invented a roll constructed to permit the introduction of a suspensory device through the incisions outwardly.

The roll of paper A, when it leaves the winding-machine, is in cylindrical form, and may be provided on its interior with a comparatively-rigid re-enforce,  $b$ , as more particularly set forth in my patent of February 13, 1883, which serves to secure the inner end of the continuous band of paper forming the roll. The outer end is secured, as usual, by a touch of paste. It is essential that the inner end shall be thus secured when the suspensory link is to be inserted by the consumer; otherwise the band will unwind in the interior when removed from the mandrel, and make the introduction of anything impossible; but when the link is inserted by the manufacturer the re-enforce as a means of securing the inner end of the band is not essential. The re-enforce  $b$  also acts to keep the roll in the desired shape. Through the roll thus prepared is then made a line of incisions,  $a a'$ , extending in a single plane entirely through the roll and the central re-enforce. The roll is then flattened into oval form, as shown in Figs. 2 to 5, with the incisions at one of the abrupt turns. It is preferred that the plane of the



incisions shall coincide with the longer diameter of the oval, and thus be vertical when the roll is suspended, as shown in Figs. 3, 4, and 5; but the plane may be a little to one side of a vertical line, as shown in Fig. 2. In thus flattening the roll the parts of the paper at and adjacent to the incisions are caused to assume the position shown at *c* in Fig. 3, with the cut edges overlapping each other and tending slightly outward. This figure clearly illustrates a difficulty which would be met in attempting to insert a suspensory device from the outside of the roll. The inclined overlapping edges tend to obstruct its passage at each step and to lead it aside from the plane of the incisions; but on inserting the device from the inside not only do the edges not obstruct the passage, but each one acts to direct it into the plane and keep it there.

The line of incisions may consist of any desired number and length of cuts *a'*, and the central incision made of a width suitable to receive the body *c'* of the suspensory link *C*, the projecting shoulders *c''* of the link bearing against the uncut portions of the roll and supporting it when suspended, for which purpose the outer end of the link may be provided with an opening, *c'''*; or links may be introduced through other than the central incision, if desired. In making these incisions it is desirable to use a knife acting from the interior of the cylindrical roll, because in making the cut thus the knife tends to force the edges of the cut paper somewhat into the position shown in Fig. 3, even before the roll is flattened, and I have constructed a perforating-machine in which the knife acts from the interior of the roll; but it is not essential that the incisions shall be made outwardly. Proper incisions, with the aid of the stiff supporting re-enforce or core and a careful flattening of the roll, will answer the pur-

pose and fit the roll for the reception of the suspensory device or link from the inside by the manufacturer or by the consumer.

It will be seen that the peculiar position of the edges of the flattened roll favor the admission of the link from the inside, as the severed edges of the paper are pressed in the direction the suspender is inserted; and if, from handling or otherwise, the convolutions slip slightly, the device being pressed through the incision from the interior will slip over each successive severed edge, guided by the general direction of these ends, and bring the incisions back into the same plane.

In Figs. 6 and 7 are shown two forms of links used for suspending the flattened roll, the former made preferably of metal to be used with a fixture in public places, and the latter made of stiff paper for family or private use.

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

1. A roll of paper having all its incisions or perforations in the same plane, with the cut edges tending outward, substantially as described, whereby the roll is adapted to permit the introduction of a suspensory device through the incisions from the interior outwardly.

2. As a new manufacture, a roll of paper having all its incisions or perforations in the same plane, with the cut edges tending outward, and provided with a suspensory device introduced from the interior of the roll and passing outwardly through the incisions, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

SETH WHEELER.

Witnesses:

E. WHEELER,

W. A. WHEELER.