

No. 714,652.

Patented Nov. 25, 1902.

W. M. DAVIS.  
TOILET PAPER.

(Application filed May 27, 1902.)

(No Model.)

2 Sheets—Sheet 1.

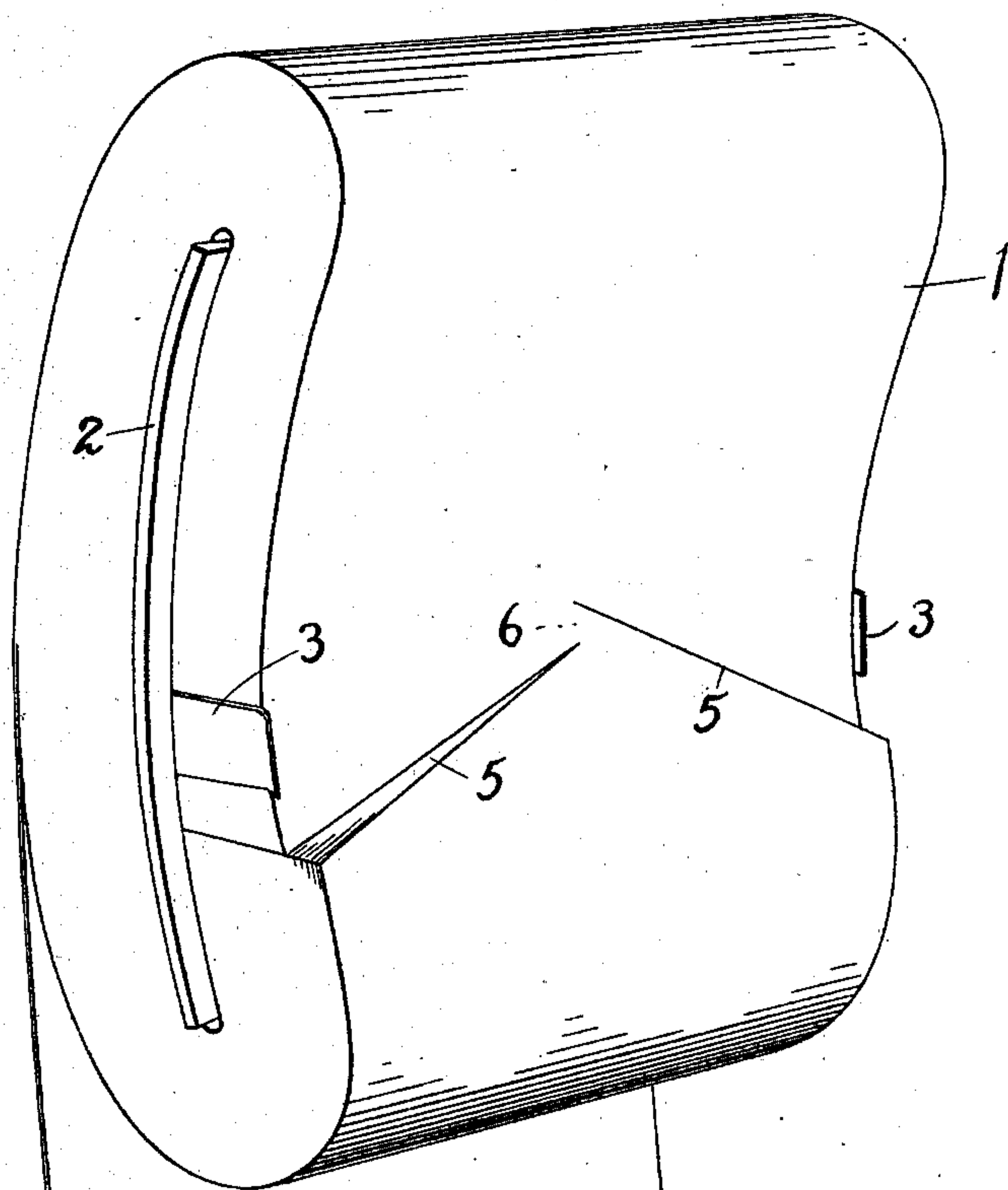


Fig. 1

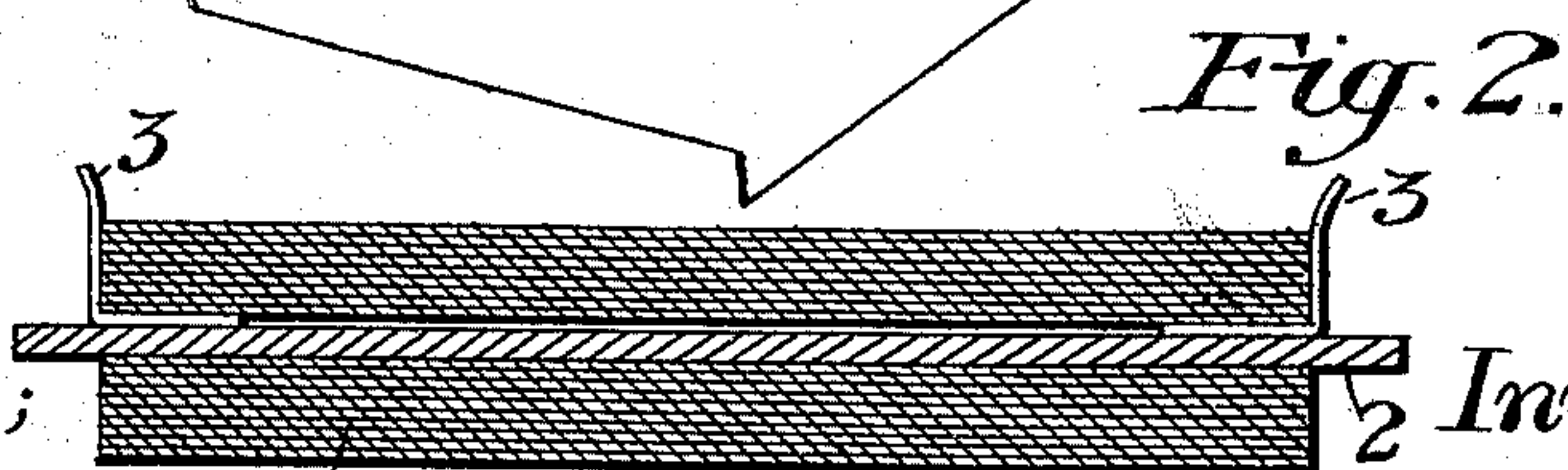


Fig. 2.

Witnesses;

E. H. Haite

E. R. Scott

Inventor,

Wilbur M. Davis;

By

A. B. Upsham,  
His Attorney.

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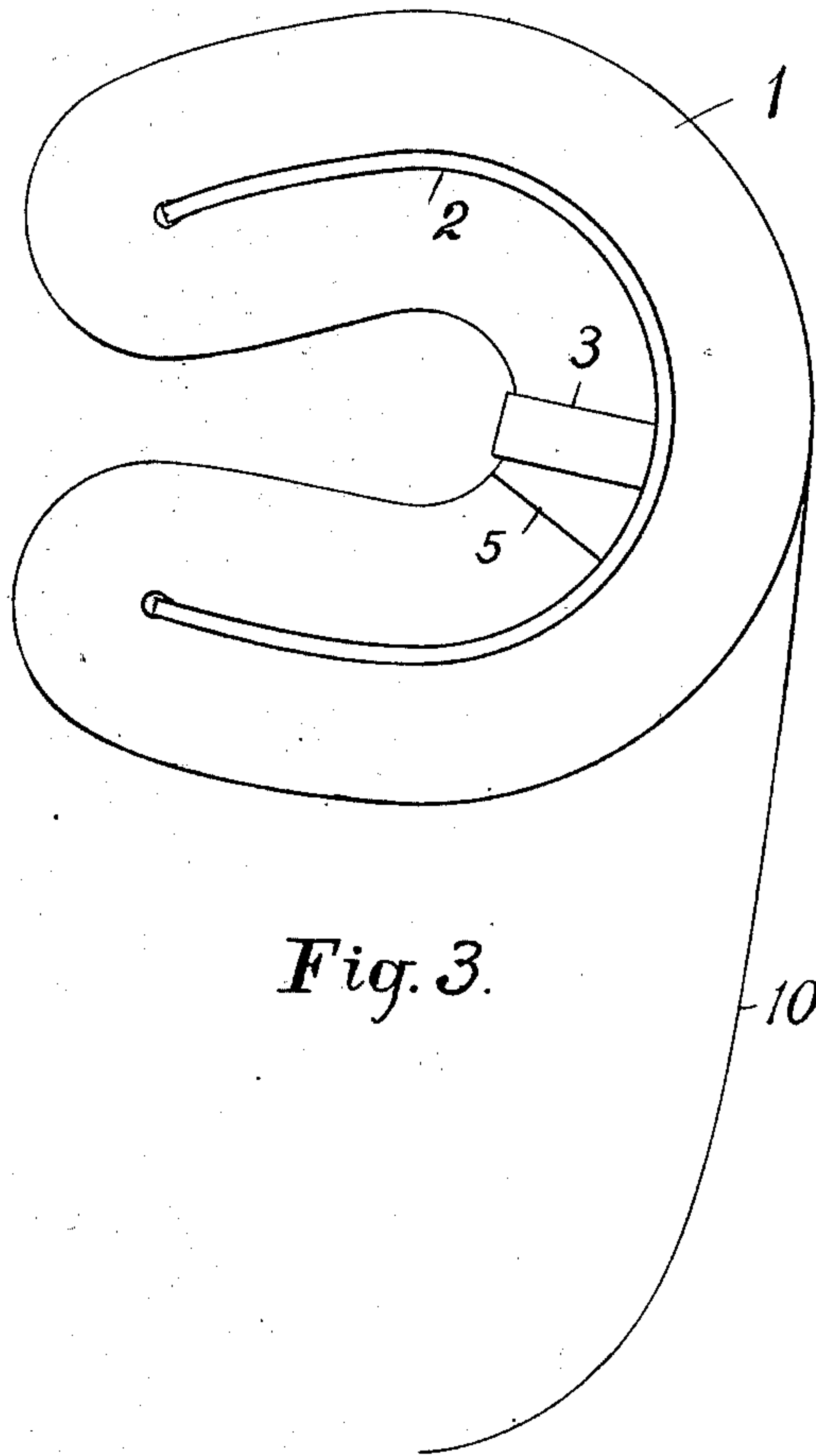


Fig. 3.

Witnesses;

E. W. Waite

Emma R. Scott,

Inventor,

Wilbur M. Davis;

By

A. B. Upham,

His Attorney.



# UNITED STATES PATENT OFFICE.

WILBUR M. DAVIS, OF CHELSEA, MASSACHUSETTS.

## TOILET-PAPER.

SPECIFICATION forming part of Letters Patent No. 714,652, dated November 25, 1902.

Application filed May 27, 1902. Serial No. 109,160. (No model.)

*To all whom it may concern:*

Be it known that I, WILBUR M. DAVIS, a citizen of the United States, and a resident of Chelsea, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Toilet-Paper, of which the following is a full, clear, and exact description.

This invention is in the line of toilet-paper in which the same is wound in a continuous roll partially severed at intervals; and its object is the construction of means whereby the points of partial severance can be made sure of separation without possibility of the tearing of the sheets being removed.

A further object is that a free end of the paper shall be removed from the balance of the roll and hang in a position to be easily taken hold of every time a section or sheet is torn off.

The other features of my invention are as hereinafter set forth.

Referring to the drawings, forming part of this specification, Figure 1 is a perspective view of a roll of toilet-paper made in accordance with my invention. Fig. 2 is a transverse sectional view of the same, and Fig. 3 is a side view of a deeply-curved form of the invention.

The toilet-paper may be wound upon a cylindrical roll in the usual manner or upon a flat board, as if wound in the first way it can be with equal readiness brought to the kidney shape illustrated in Fig. 1; but after being thus formed strips of paper, cloth, or similar material 3 are pasted or gummed to the edges of the layers lying to one side of the roll's interior. After this a square of pasteboard 2 is introduced within the roll 1, the dimensions of the pasteboard being sufficient to elongate the roll to its most elliptical form and to have the ends of the pasteboard project from the sides of the roll for an eighth or a quarter of an inch. Then with a knife or knives suitably gaged the cuts are made through one side of the roll to the pasteboard core 2. Said cuts are preferably two in number and made at an oblique angle with the sides of the roll, their inner ends terminating at the center line of the paper, but at a distance of from an eighth to a quarter of an inch apart in the direction of the paper's

length. This leaves a neck or unsevered portion 6, which can be easily torn through in the said direction, since the fibers of the paper run in such direction and can be much more readily torn apart than broken across.

One of the great difficulties always found in connection with the feeding of sheets of paper from a pile of the same is the adhesion resulting from the accumulations of static electricity. The same difficulty is found to exist in connection with toilet-paper. The terminal edge of each succeeding sheet-section will cling so closely to the roll as to render it almost impossible to be found and seized. What I wish to do is therefore to make each sheet-terminal so fall away from the balance of the roll as to be easily grasped. This has been attempted prior to my invention, but never in a manner to be depended upon. My construction I have never found to fail in its automatic separation of each sheet-terminal, and the manner of its accomplishment is as follows:

By having the kidney-shaped roll of paper supported by the pasteboard core 2 in the position shown in Fig. 1 each terminal sheet-section 10 hangs with its lower end below the roll and with its upper end passing up over the roll and connected by its neck 6 to the balance of the paper. It is also held by means of the gummed strips 3, which are not only gummed to the edges of the roll, as described, but pasted or otherwise fastened to the pasteboard core 2, the function of the strips 3 being to bind the cut face of the roll in the concave form shown, for without the same there would be nothing to prevent the thin tissue-paper from sagging outward instead of inward. Now, the cut face of the roll being concave and a straight line being the shortest distance between two points, whenever the depending sheet 10 is pulled upon with the proper force it draws the joined ends at the neck 6 away from the balance of the roll into a straight line touching the two horns of the crescent, to use an exaggerated expression. This separation is sufficient to insure a static discharge and an absolute termination of all tendency of the straightened paper to cling to the balance. Hence when the pull is continued and withdraws the terminal sheet from the strips 3 and the neck 6



the end of the next succeeding sheet is left entirely unsupported and at once falls by gravity into the position formerly held by the sheet 10. My arrangement of the two oblique cuts is well adapted for insuring that the overhanging edges of the remaining sheet-sections shall not interfere with the end of the sheet from which the terminal section has just been separated, and thereby keep it from falling into the dependent position required.

The fixture best adapted for supporting the roll in the form and position illustrated in Fig. 1 forms the subject-matter of a companion application, filed May 27, 1902, Serial No. 109,159.

In the construction illustrated by Fig. 6 the concavity or crescent form of the paper-roll is made so deep that the separation of each sheet-section from the balance removes the freshly-severed end of the next succeeding sheet-section to a distance of fully two inches from its original position, and thereby makes the static discharge, as well as mechanical separation, absolutely certain.

What I claim as my invention, and for which I desire Letters Patent, is as follows, to wit:

1. A roll of toilet-paper in partially-severed sections, all the lines of severance being at the same part of the roll, and the face of the roll at such part being substantially concave, substantially as described.

2. A roll of toilet-paper in partially-severed

sections, all the lines of severance being at the same part of the roll, and the face of the roll at such part being substantially concave; in combination with means for removably securing in such concave position all the ends of the sheet-sections at one side of the lines of severance, substantially as described.

3. A roll of toilet-paper in partially-severed sections, all the lines of severance being at the same part of the roll, and the roll at said part being substantially concave, in combination with a supporting-core within the roll, and means held by said core for removably securing in such concave position all the ends of the sheet-sections at one side of the lines of severance, substantially as described.

4. A roll of toilet-paper in partially-severed sections, all the lines of severance being at the same part of the roll, and the roll at said part being substantially concave, in combination with a square of cardboard substantially curved for holding said roll in a crescent or kidney shape, and strips or tapes gummed to the pasteboard and to the side edges of all the ends of the sheet-sections at one side of the lines of severance, substantially as described.

In testimony that I claim the foregoing invention I have hereunto set my hand this 10th day of May, 1902.

WILBUR M. DAVIS.

Witnesses:

PERRY S. DAVIS,  
A. B. UPHAM.