

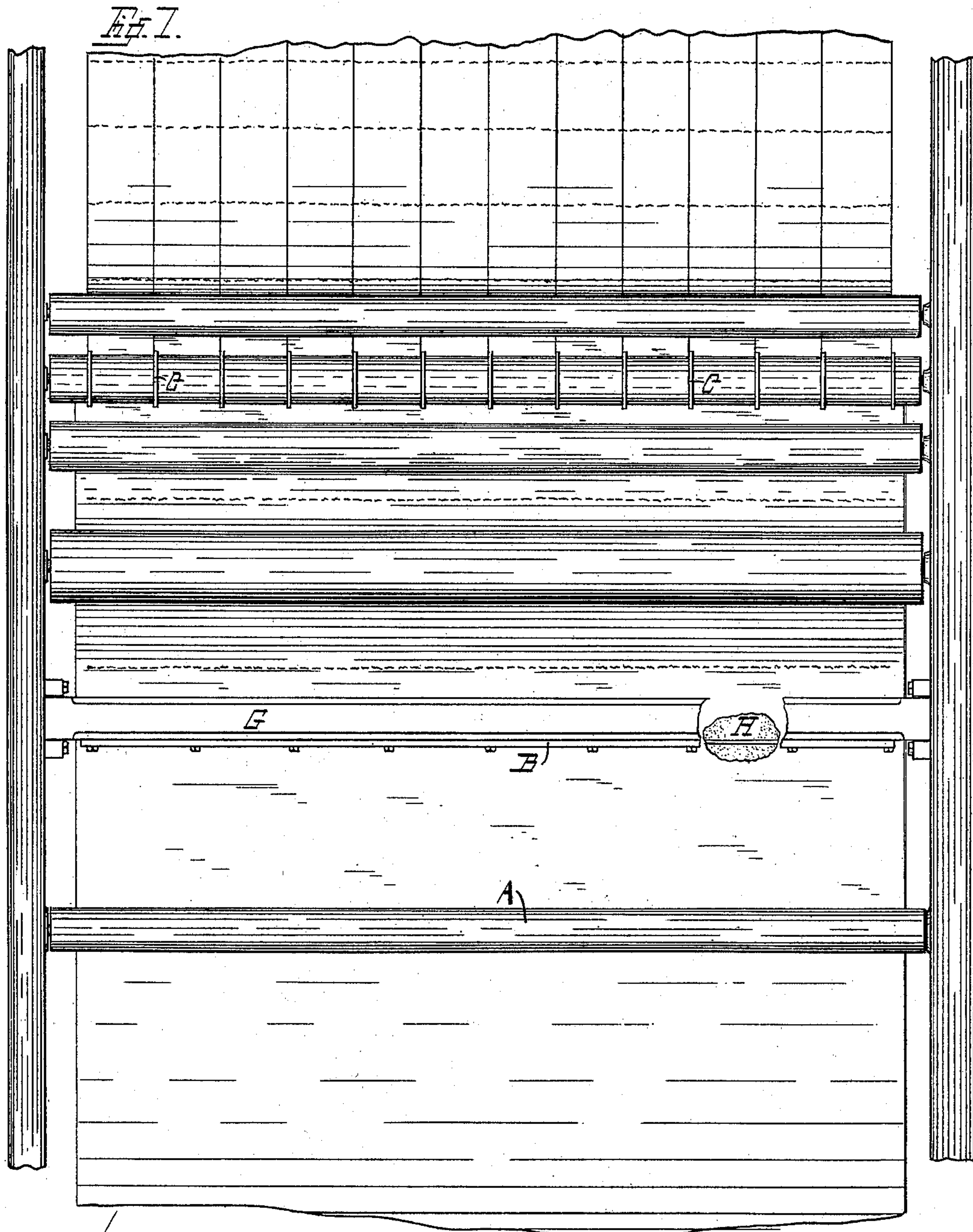
(No Model.)

3 Sheets—Sheet 1.

J. HOBERG, Sr.
TOILET PAPER CUTTER.

No. 604,150.

Patented May 17, 1898.



Witnesses:

F. A. Otto

Samuel Timlin

Inventor

John Hoberg Sr.

By

Erwin Wheeler & Wheeler

ATTORNEYS

(No Model.)

3 Sheets—Sheet 2.

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Fig. 2.

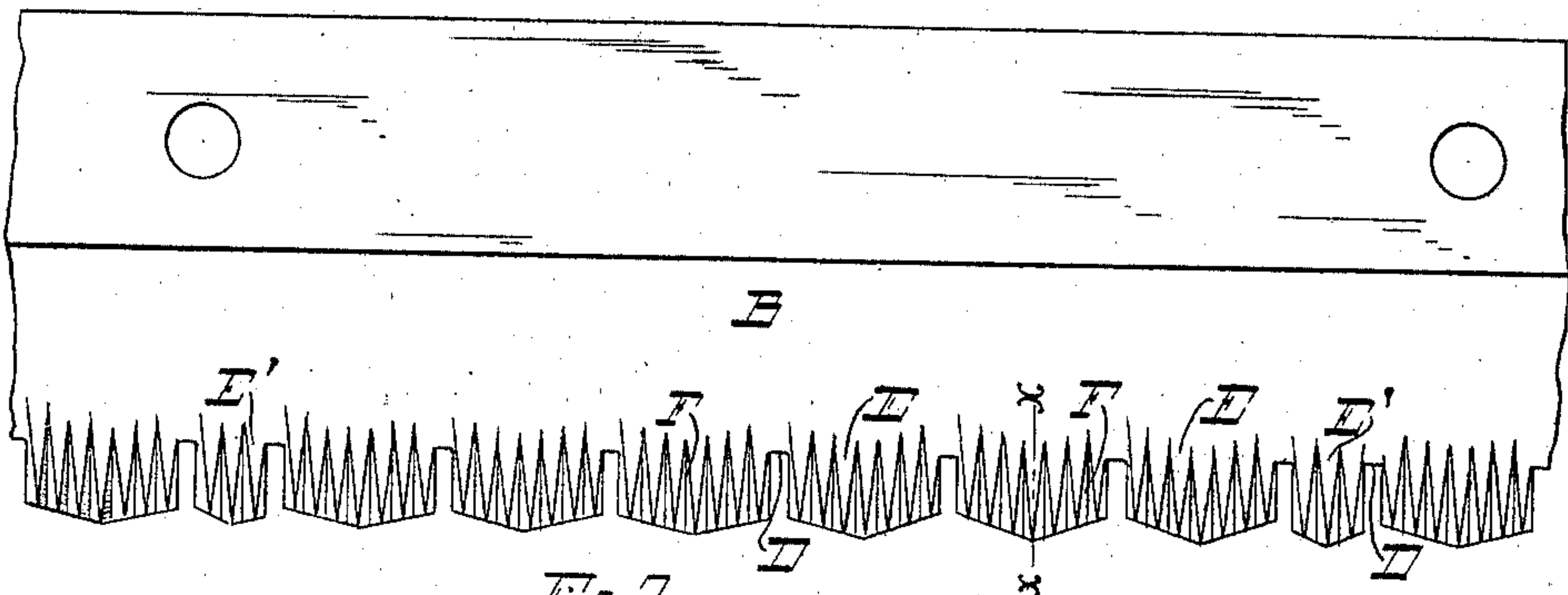


Fig. 3.

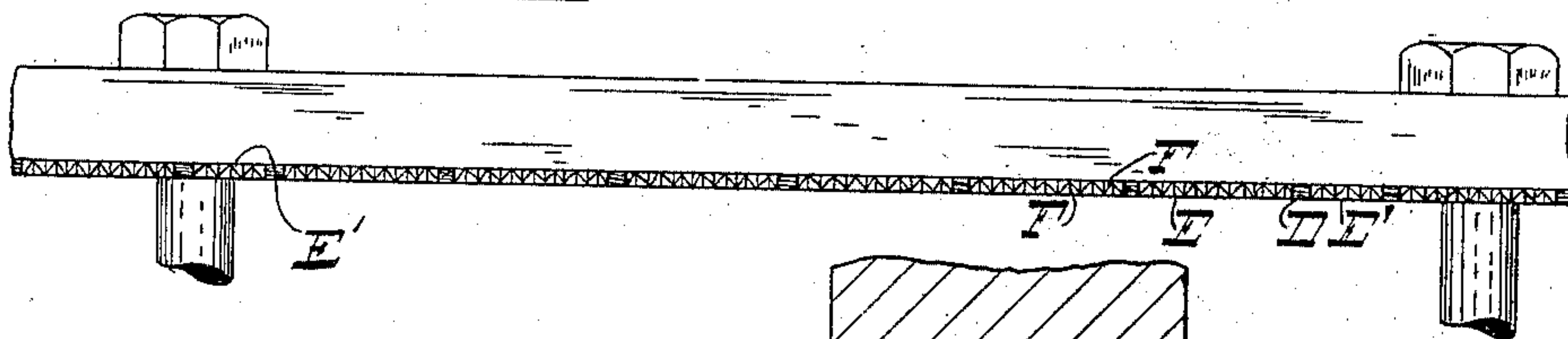
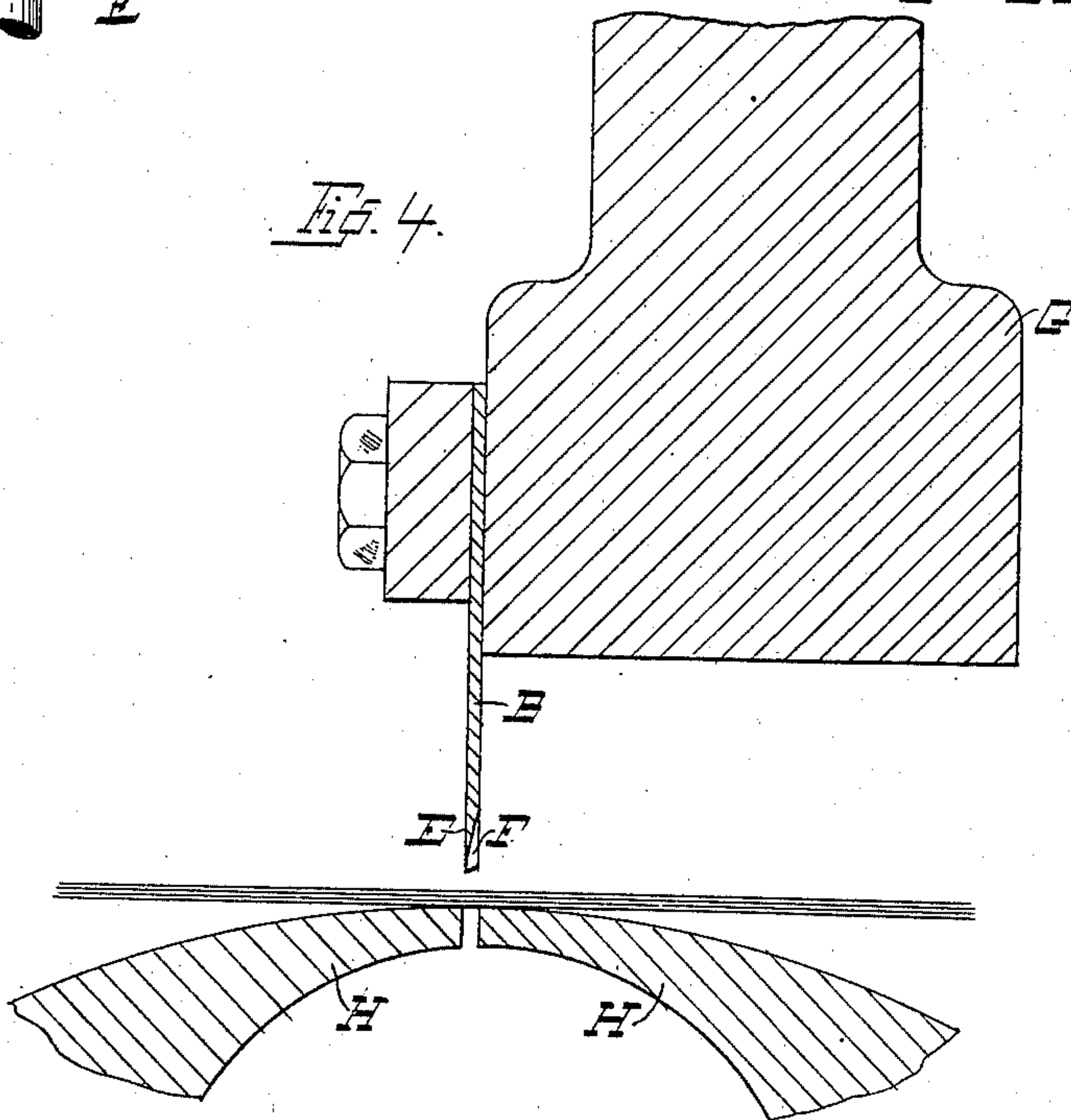


Fig. 4.



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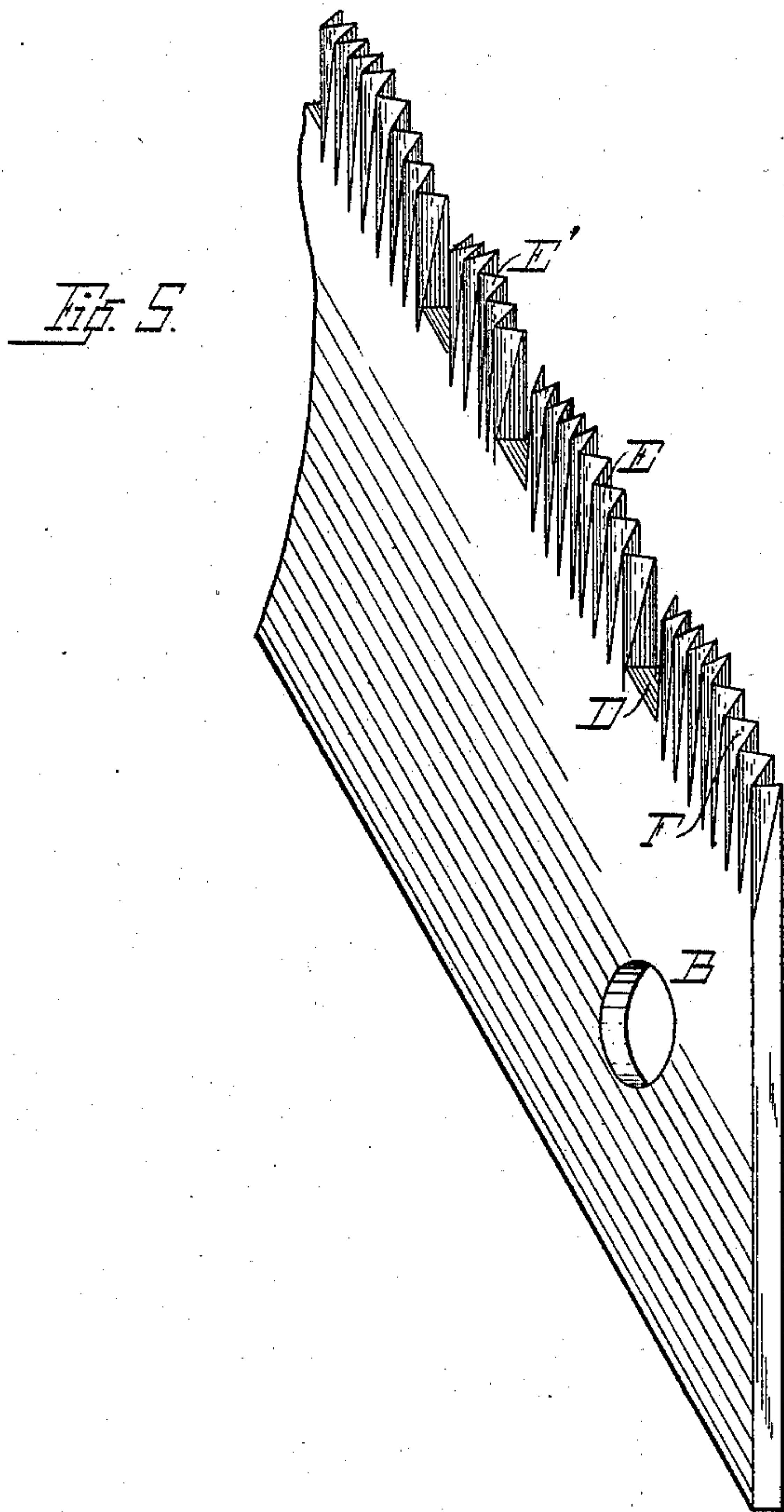
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UNITED STATES PATENT OFFICE.

JOHN HOBERG, SR., OF GREEN BAY, WISCONSIN.

TOILET-PAPER CUTTER.

SPECIFICATION forming part of Letters Patent No. 604,150, dated May 17, 1898.

Application filed July 20, 1896. Renewed November 2, 1897. Serial No. 657,208. (No model.)

To all whom it may concern:

Be it known that I, JOHN HOBERG, Sr., a citizen of the United States, residing at Green Bay, in the county of Brown and State of Wisconsin, have invented new and useful Improvements in Toilet-Paper Toothed Cutters, of which the following is a specification.

My invention relates to improvements in devices for cutting paper, with especial reference to the manufacture of that class of toilet-paper strips having transverse cuts or lines of weakness formed at regular intervals therein.

In the preparation of the paper for market it is desirable for obvious reasons to cut or slit it while the same is in wide sheets, these being afterward cut longitudinally to form the strips, and it is also desirable to cut a large number of sheets at a time. The knives or perforators heretofore used have proved very unsatisfactory, both on account of the form of the slit or perforation and also by reason of the fact that they would often tear and destroy the upper sheets while being withdrawn.

The object of my invention is, first, to provide a form of cutter which will weaken the paper strip in a transverse zigzag line adapted to facilitate the removal of the sheets and which will not lift or tear the upper sheets while being withdrawn after making the cut.

In the following description reference is had to the accompanying drawings, in which—

Figure 1 is a top view of the paper-cutting mechanism, showing the relation of my invention to the other portions of the machine. Fig. 2 is a detail front view of my invention removed from the head-block. Fig. 3 is a view of the cutting edge. Fig. 4 is a cross-section drawn on the line xx of Fig. 2 and showing my invention in relation to the bed-plate and paper.

Like parts are identified by the same reference-letters throughout the several views.

Referring to Fig. 1, it will be observed that the paper sheets are fed in sets or blocks between rollers A, underneath the transverse cutter B, and that the sheets so cut are then fed into the path of the disk cutters C, which divide the sheets into strips suitable for use.

Referring now to the remaining views, which show more particularly the form of my im-

proved cutter, it will be seen that the same consists in a flat strip or metal blade B, having its lower edge divided at intervals by narrow recesses or cuts D, the edge of the blade being rounded between the recesses to form a series of teeth E and E', as best shown in Fig. 2. The teeth E' are of less width than the teeth E and are located in line with the rotating cutters C, (shown in Fig. 1,) so that the teeth E' will cut across the line cut by the cutters C. It will be thus observed that the edges of the strip will be provided with a short cut, which facilitates tearing it off in the right direction. Each of the teeth E and E' is provided with V-shaped recesses or troughs F in each side, the troughs being formed to alternate from one side of the knife to the other and being cut nearly through at the edge, thus causing the edge of each tooth to appear as a zigzag line. (Best shown in Fig. 2.) It will be observed that the recesses F extend upwardly from the edge of the blade to a sufficient distance so that its smooth upper surface does not penetrate the sheets, and the recesses thus facilitate the withdrawal of the blade without lifting or tearing the paper, and the cut formed in the paper is scarcely visible, as the fiber at the sides of the cut is not disturbed. The sheets, however, will tear off more readily than they would with straight slits or perforations. The cutter so formed is bolted to a head-block G, which is given a reciprocal movement by the machine used, the knife being formed to fit between the jaws of a die H, over which the paper is passed by the rollers, as heretofore explained. The knife is driven by the movement of the head-block through the paper and between the jaws of the die with each stroke, thus cutting all the sheets simultaneously.

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

1. A cutter for toilet-paper machines, comprising a blade subdivided by recesses in its edge into a series of flat teeth and having in the sides of the teeth a series of V-shaped depressions formed to alternate with each other on opposite sides of the blade and causing the edge to appear in a zigzag line, in combination with means for causing said blade to

reciprocate vertically and a die adapted to receive the blade as it penetrates the paper, substantially as described.

2. A cutter for toilet-paper machines, comprising a blade formed with teeth E and E', each tooth having trough-shaped recesses or depressions in the sides thereof arranged to form a cutting edge in a zigzag line in combination with a reciprocating head-block, for
10 actuating the blade, and a die located beneath

the path of the paper and adapted to receive the blade as it penetrates the paper, substantially as described.

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

JOHN HOBERG, SR.

Witnesses:

JOHN P. REUTER,
HENRY TENNIS.