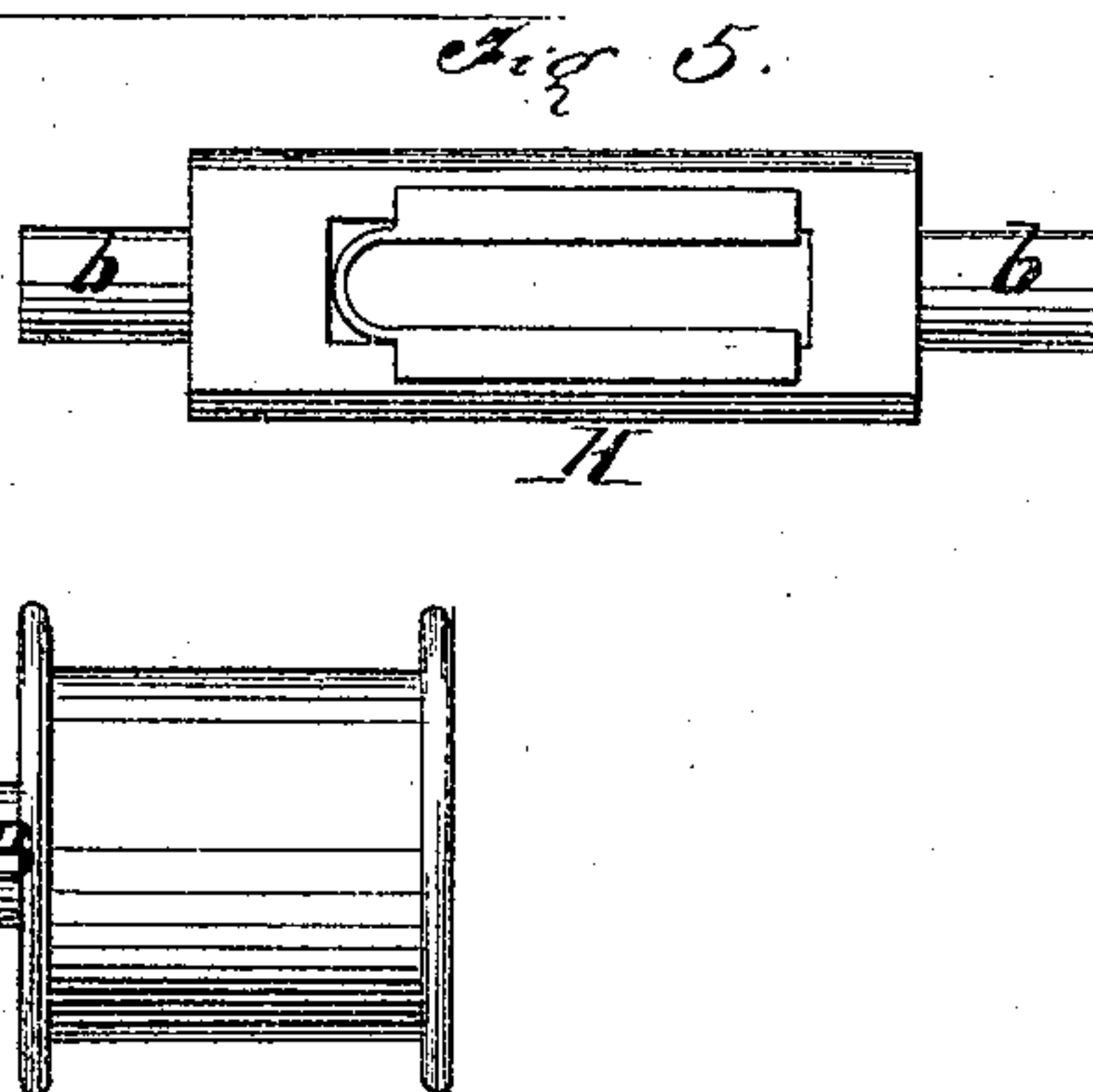
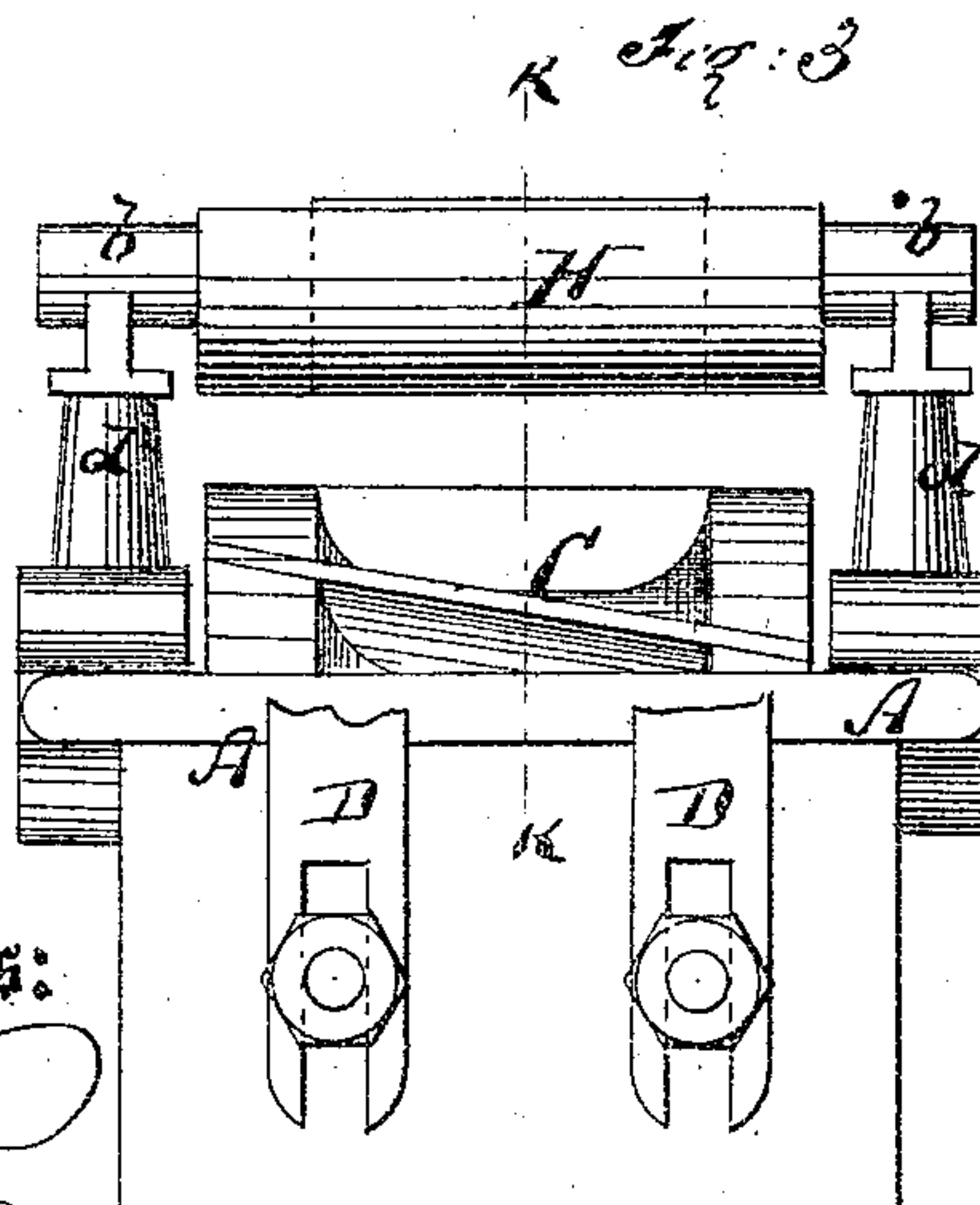
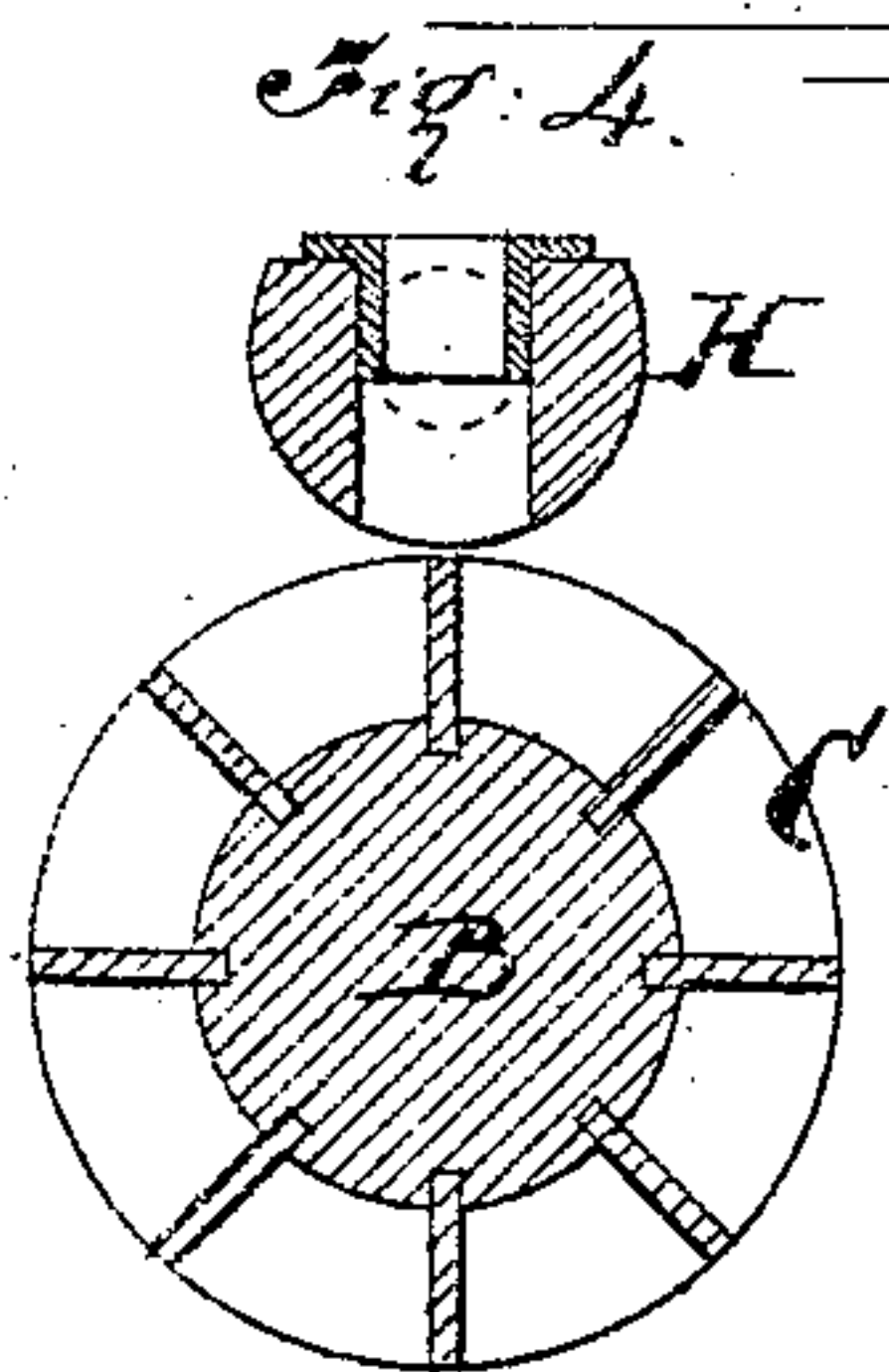
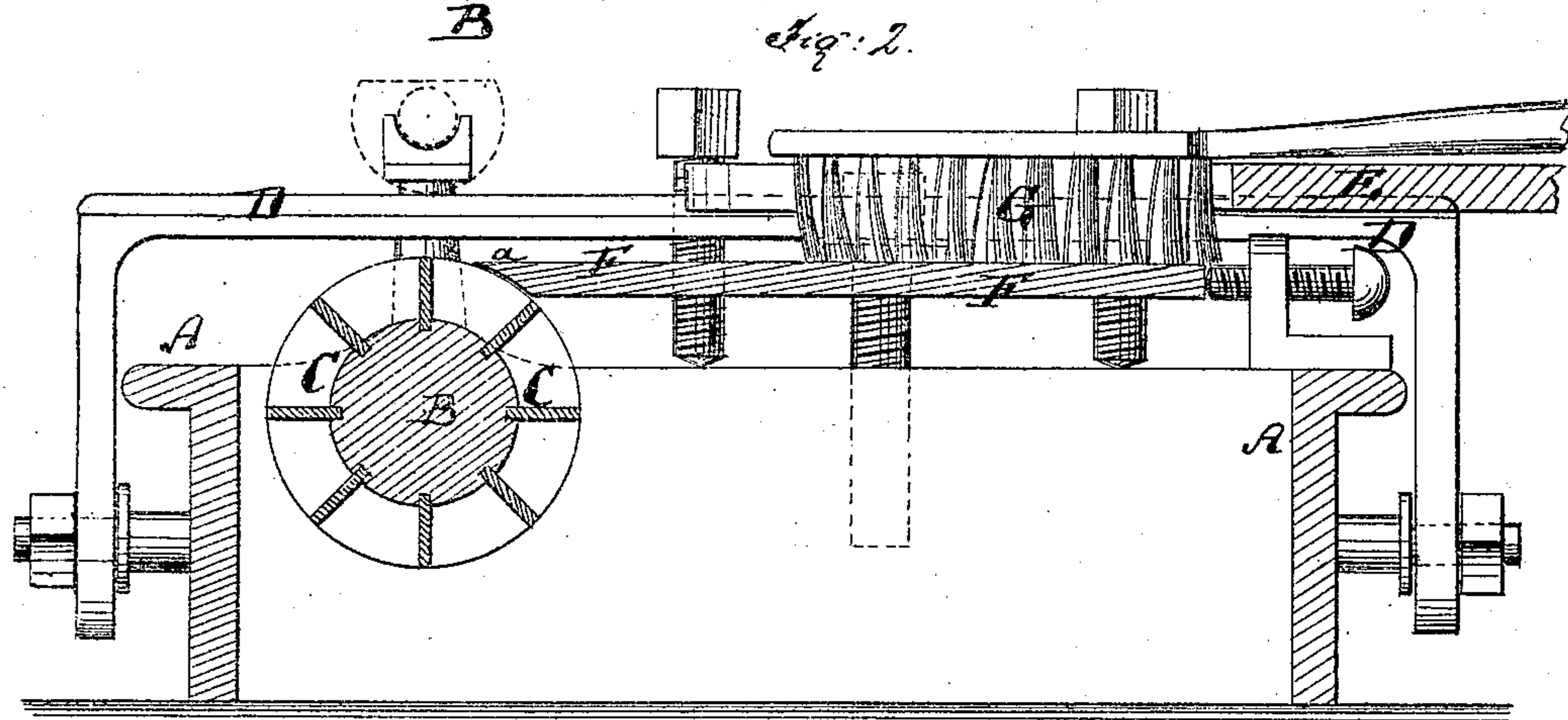
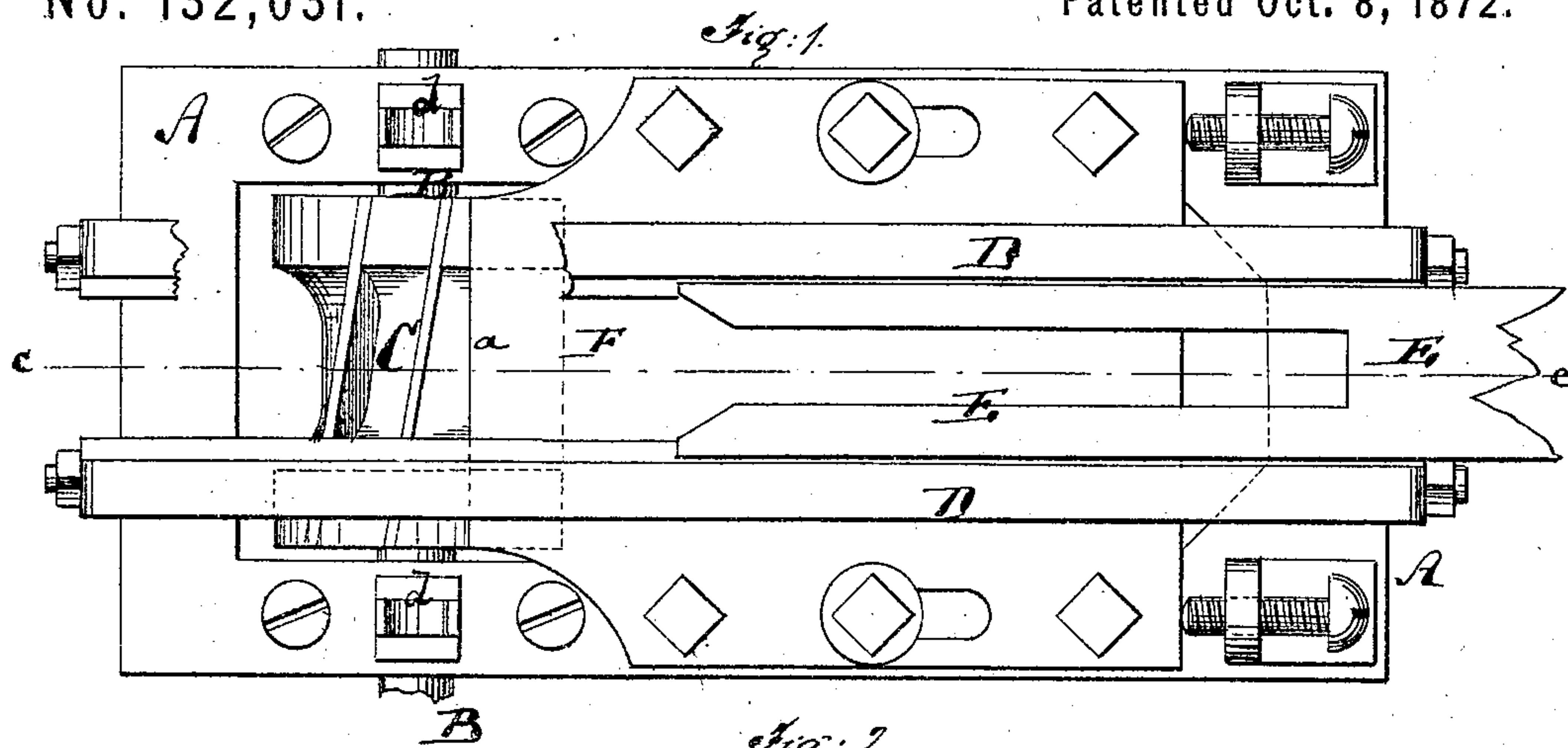


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Improvement in Tooth-Brush Trimmers.

No. 132,031.

Patented Oct. 8, 1872.



Witnesses:

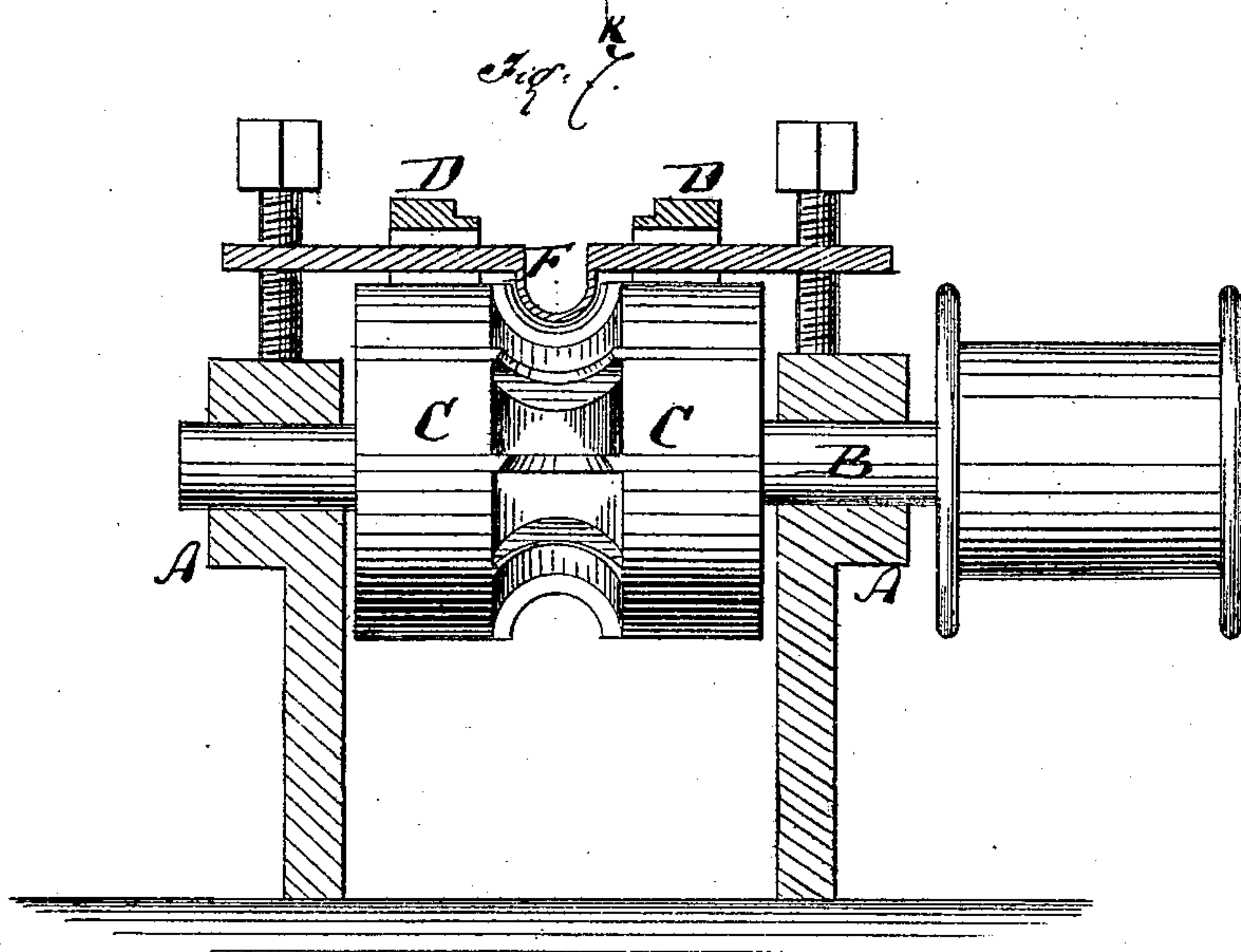
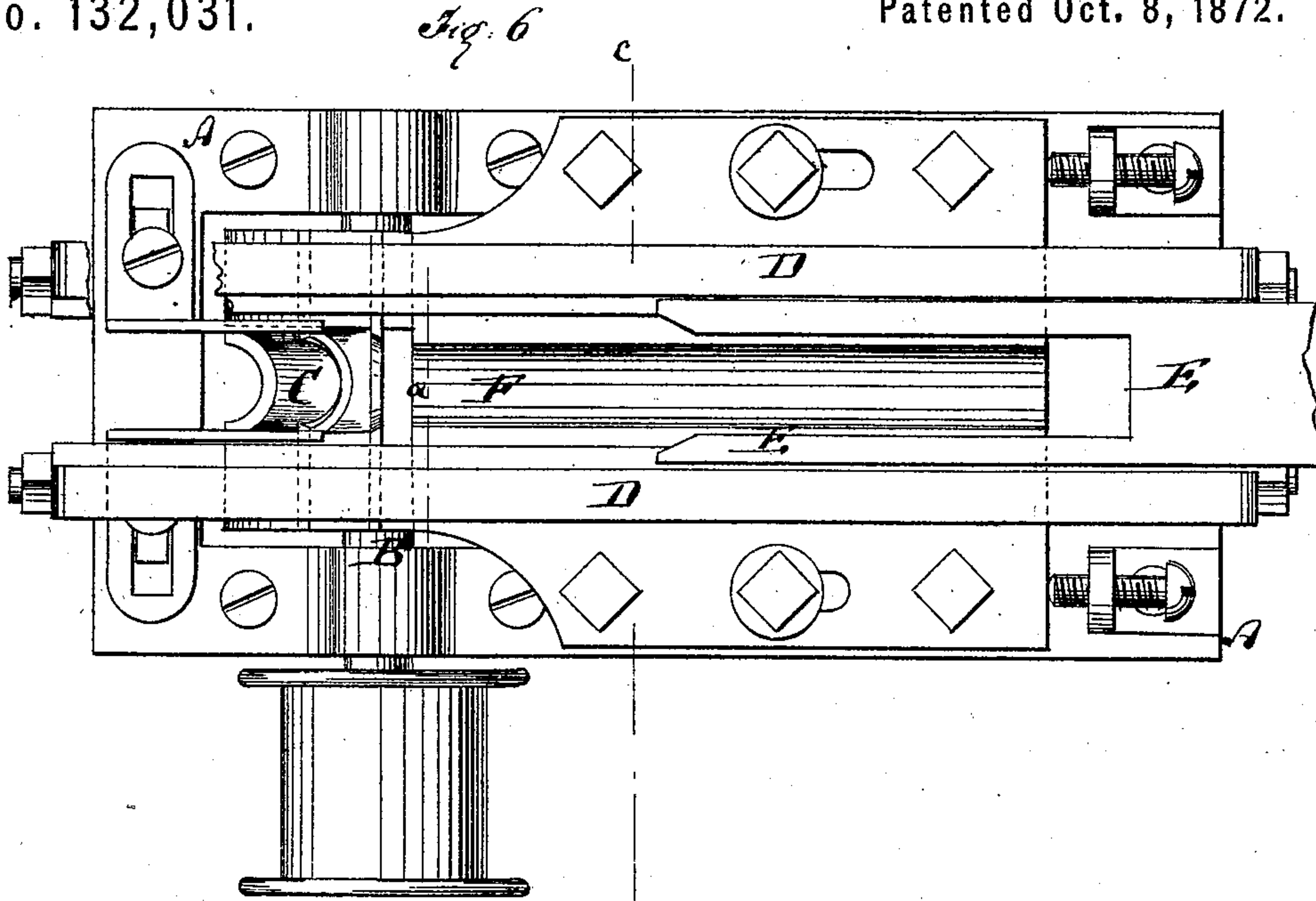
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Alex. F. Roberts

Inventor:

Jabez Stone  
Munn & Co.  
Attorneys.

PER

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*Jabez Stone.*  
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Attorneys.



# UNITED STATES PATENT OFFICE.

JABEZ STONE, OF WATERFORD, ASSIGNOR TO JULIUS KAYSER, OF NEW YORK, N. Y.

## IMPROVEMENT IN TOOTH-BRUSH TRIMMERS.

Specification forming part of Letters Patent No. 132,031, dated October 8, 1872.

### CASE A.

*To all whom it may concern:*

Be it known that I, JABEZ STONE, of Waterford, in the county of Saratoga and State of New York, have invented a new and Improved Tooth-Brush Trimmer, of which the following is a specification:

Figure 1 is a top view of my improved tooth-brush trimmer; Fig. 2 is a vertical longitudinal section of the same taken on the plane of the line *c c*, Fig. 1; Fig. 3 is an end elevation of the same, showing it provided with the "brush-cradle;" Fig. 4 is a detail longitudinal section of Fig. 3 on the line *k k*; Fig. 5, a top view of the cradle; Fig. 6 is a top view of a brush-trimmer of modified construction; and Fig. 7, a vertical transverse section of the same on the line *c k*, Fig. 6.

Similar letters of reference indicate corresponding parts.

This invention relates to a new machine for trimming the ends of the bristles in tooth-brushes, making the rubbing-edges of the brushes either quite flat or convex laterally. The invention consists principally in the arrangement of a rotary cutter in connection with longitudinal guides, on which the brush is moved toward the cutter, and with a slotted fork for holding the brush. The latter is moved at right angles to the axis of the cutter, the edges of the knives being either straight or concave, according to the shape to be imparted to the brush. The invention also consists in the arrangement on the machine having the straight cutters of a transverse rocker, in which the brush can be held and vibrated whenever it is desired to cut it convex by means of straight knives.

In the accompanying drawing, the letter A represents a frame or table of proper size, in which the shaft B, carrying the rotary cutter-head C, is hung transversely. D D are two longitudinal rails, which are fastened vertically adjustable at or near the ends of the frame A. E is a forked brush-holder, of such width as to fit upon and between the rails. F is a platform or plate, fixed rigidly to the frame, so that the knives of the cutter-head will sweep close to its edge *a*, as in Fig. 2. The edges of the knives are either straight, as in Fig. 1, or made with concave indentations, as in Figs. 6 and 7. The top of the plate F corresponds in

shape with the cutting-edges—*i. e.*, is straight in Fig. 1 and grooved in Figs. 6 and 7.

The brush G to be trimmed is placed in the fork E so that its bristles project below the fork, as is clearly shown in Fig. 2. The fork E holding the brush is then placed on the rails D, which have previously been adjusted as to height so as to leave the bristles, when cut, of the desired length. The shaft B is revolved by suitable means, and the fork then moved toward it to have the brush clipped in the desired manner. When the cutting-edges are straight the brush will be trimmed straight; but when the cutting-edges are concave the brush will be cut convex laterally.

In Figs. 3, 4, and 5 is shown an attachment to the machine having straight knives, whereby the convex lateral trimming can be produced without the use of concave cutting-edges. This attachment is in shape of a slotted cradle, H, with gudgeons *b b* at the ends. It is, after the rails D D have been detached from the machine, supported across the machine on posts *d d*, as shown in Fig. 3, so as to be directly above and parallel with the shaft B. The brush is placed on this cradle so that its bristles project through the same, and then the cradle is oscillated while the cutter revolves. This will cause the brush to be trimmed convex laterally.

The invention is applicable to all kinds and sizes of brushes besides tooth-brushes.

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

1. The rotary cutter-head C, provided with knives placed longitudinally on its periphery and at regular intervals, in combination with brush-holder E and a plate, F, having its front end corresponding in shape to the direction of knife-edges, all substantially as described.

2. The oscillating and slotted cradle H, in combination with rotary cutters on head C, as and for the purpose described.

3. The brush-holder E, combined with rails D having bent and slotted ends, adjustable as and for the purpose described.

JABEZ STONE.

Witnesses:

JNO. H. DENNIS,

EDWARD J. BURGESS.