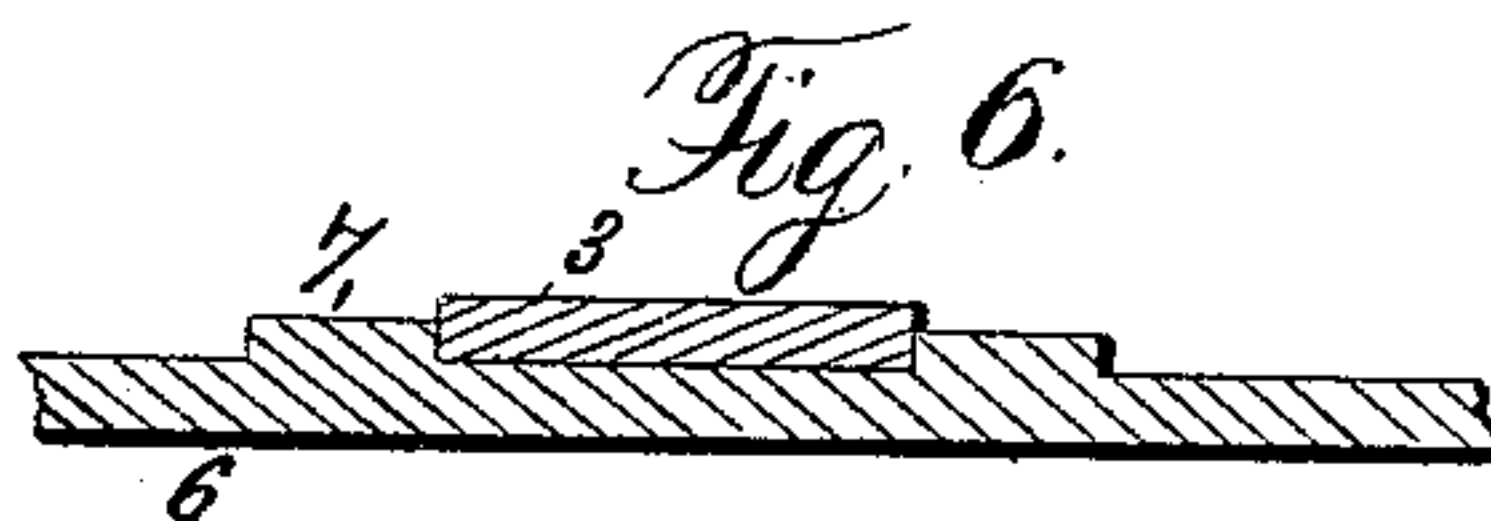
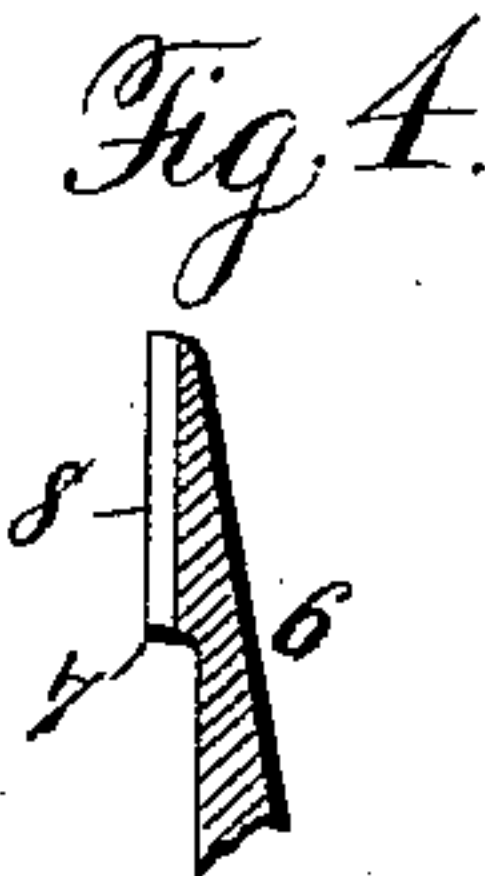
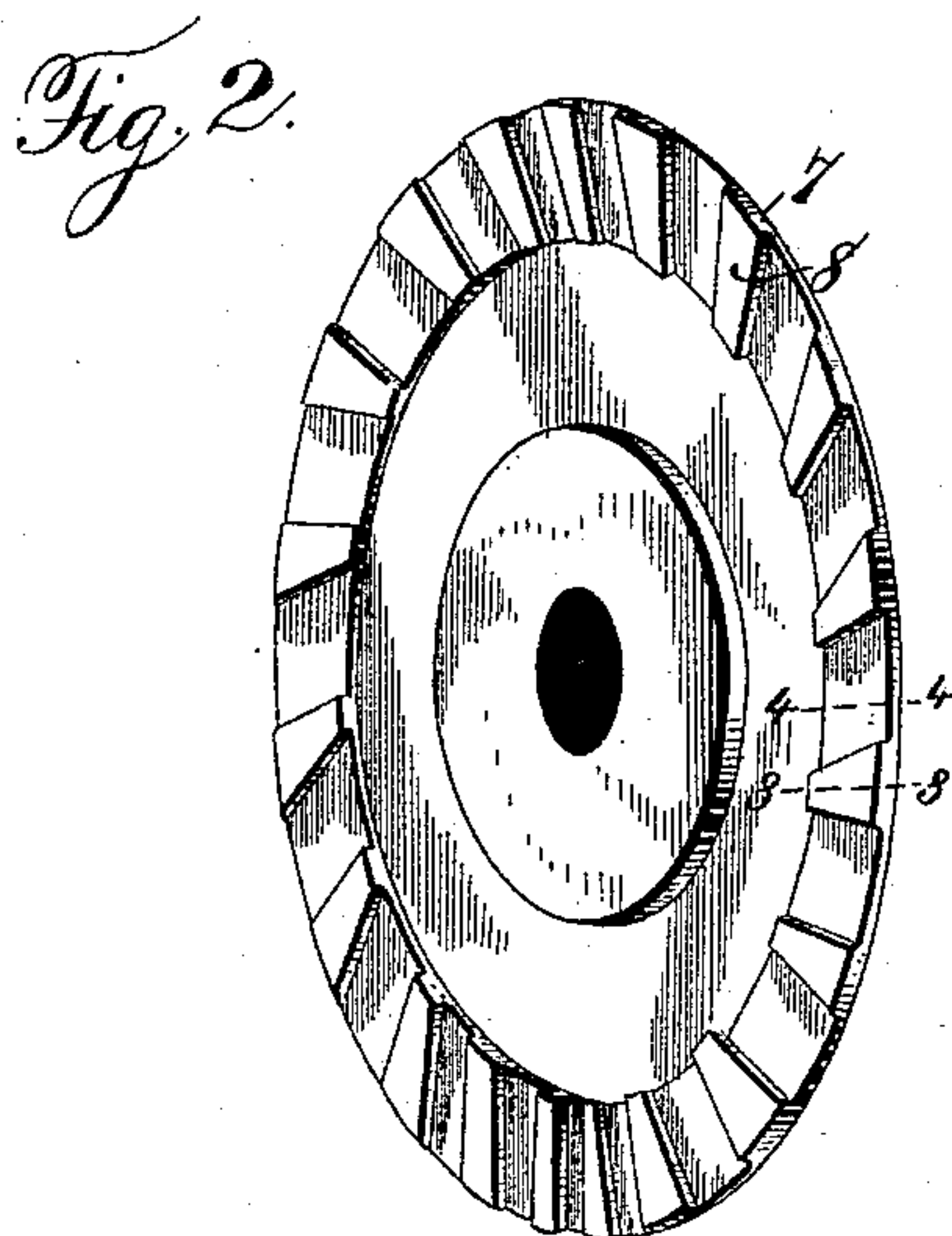
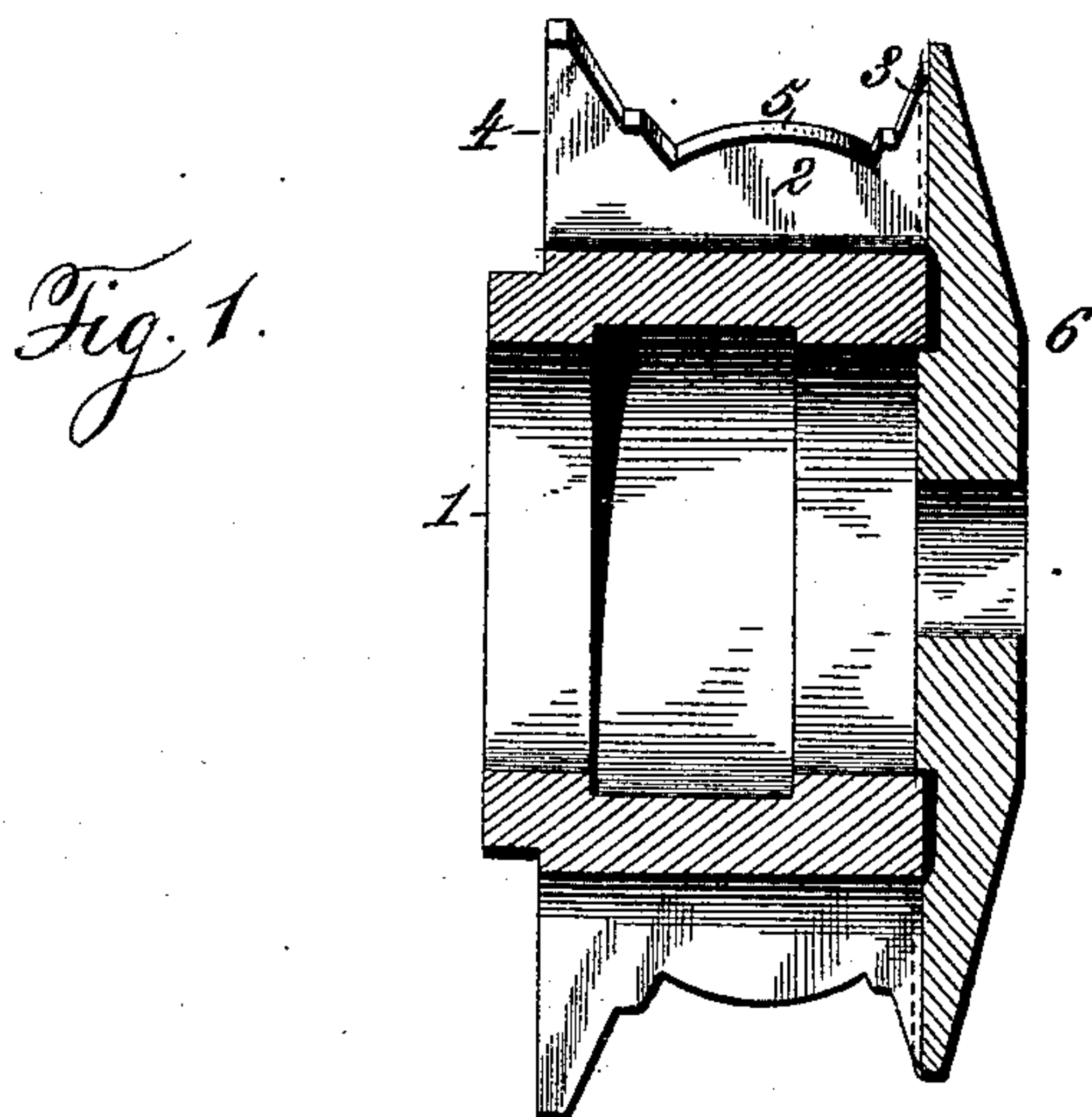


(No Model.)

T. A. BRESNAHAN.
ROTARY CUTTER FOR BOOTS OR SHOES.

No. 452,540.

Patented May 19, 1891.



Witnesses:
Jas. E. Hutchinson.
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Inventor.
Timothy A. Bresnahan,
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Attorney.

UNITED STATES PATENT OFFICE.

TIMOTHY A. BRESNAHAN, OF BOSTON, MASSACHUSETTS.

ROTARY CUTTER FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 452,540, dated May 19, 1891.

Application filed September 12, 1888. Serial No. 285,335. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY A. BRESNAHAN, of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Rotary Cutters for Trimming Edges of Boot or Shoe Soles, of which the following is a full, clear, and exact description.

To enable others skilled in the art to make and use my said invention, I will proceed to describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical section of the cutter with the shield or plate attached thereto. Fig. 2 is a perspective view upon an enlarged scale, showing the shield detached from the cutter. Fig. 3 is a detail section taken upon the line 3 3, Fig. 2, drawn radially from the axis of the plate outward and passing through one of the projections on the flat face of the plate. Fig. 4 is a detail section taken in a line drawn radially from the axis of the shield outward and passing between two adjacent projections on the flat face of the shield. Fig. 5 is a detail section taken in a circumferential line described from the axial center of the shield and passing through a part of the series of projections shown in Fig. 2, the parts being shown as if arranged in a straight line instead of lying in the arc of a circle. Fig. 6 is a similar section showing one of the points of the rand-cutters arranged between two of the projections on the shield.

In the said drawings, the reference-numeral 1 indicates the hub of the cutter, from which the cutting-blades 2 project in lines forming angles with the radii of the hub. These blades are formed at equal intervals and extend from end to end of the hub, or nearly so. The exterior faces or ends of the cutters are perfectly flat and form a right angle with the axis of rotation. At one end of each blade is an extended edge 3, which constitutes the rand-cutter, and at the other end of each blade is a somewhat greater extension 4, the cutting-edge of the blade between these extended edges being provided with a "fancy" or "molded" surface 5. The special construction of these parts being well known and forming no part of the present invention requires no further description.

The reference-numeral 6 denotes the shield, which consists of a circular plate of metal having a flat inner face which lies next to the rand-cutters 3. Upon this face and within an annular marginal flange of suitable width is formed a series of projections 7 of similar form, each having a substantially trapezoidal shape, the two parallel sides being formed by the outer and inner margins of the annular marginal flange within which the projections lie, while the two remaining sides converge toward a point which is eccentric with relation to the axis of the cutter. These projections are arranged at equal intervals throughout the annular marginal flange upon the face of the shield, and the faces of said projections are flat throughout, whereby the peripheral edges of the rand-cutter are so guarded and removed from action that they cannot cut the upper or shoulder the sole, and the trimming-edges are also shielded for a distance from their outer points, the edges of the guarding projections forming, practically, continuations of the trimming-edges of the rand-cutter and operating to wipe and polish the same, while effectually shielding the upper and stitching, as set forth.

The interval between the several projections may be varied and the form of the projections may be changed to bring into action a greater or less portion of the edges of the rand-cutter. For example, in Fig. 2 the projections are of such dimensions as to lie between the rand-cutters, while the intervals between them are of such extent as to admit the flat end faces of said cutters. When thus formed, they act as guards to the outer periphery or edge of the rand-cutter and prevent the latter from shouldering the sole-face, while one of their converging edges lying immediately in rear of each rand-cutter forms, practically, a continuation of the guarded or shielded edge of the rand-cutter. The flat working-face 8 of each projection also acts as a wiper to smooth off the face of the sole as it is beveled by the lips of the rand-cutter. By the construction set forth the projections are continued to the periphery of the shield, and the intervals or spaces between are of equal depth throughout. Thus the peripheral edges of the rand-cutters will be wholly shielded and the edges of the projections will form,

practically, continuations of the trimming-lips of the rand-cutters, while at the same time they effectually guard the sole-face from being shouldered by the edges of the rand-cut-

5 ters.

What I claim is—

The combination, with a rotary cutter consisting of a hub having a series of blades provided at one end with rand-cutters, of an at-
10 tachable shield provided with a flat inner face having an annular marginal flange, upon which are formed a series of similar projections of substantially trapezoidal shape, their parallel sides being coincident with the up-
15 per and lower boundary of the margin in which said projections are arranged and their remaining sides converging toward points eccentric to the axis of the shield, said projec-

tions being arranged at equal intervals and being separated by recesses which extend at 20 an equal depth entirely across the annular marginal flange, their inner faces being parallel to the plane of rotation, whereby the peripheral edges and faces of the projections form, respectively, continuations of the trim- 25 ming-lips of the rand-cutters and wipers for the sole-face and protect the latter from shouldering, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing 30 witnesses.

TIMOTHY A. BRESNAHAN.

Witnesses:

ALBERT W. BROWN,
MICHAEL J. CREED.