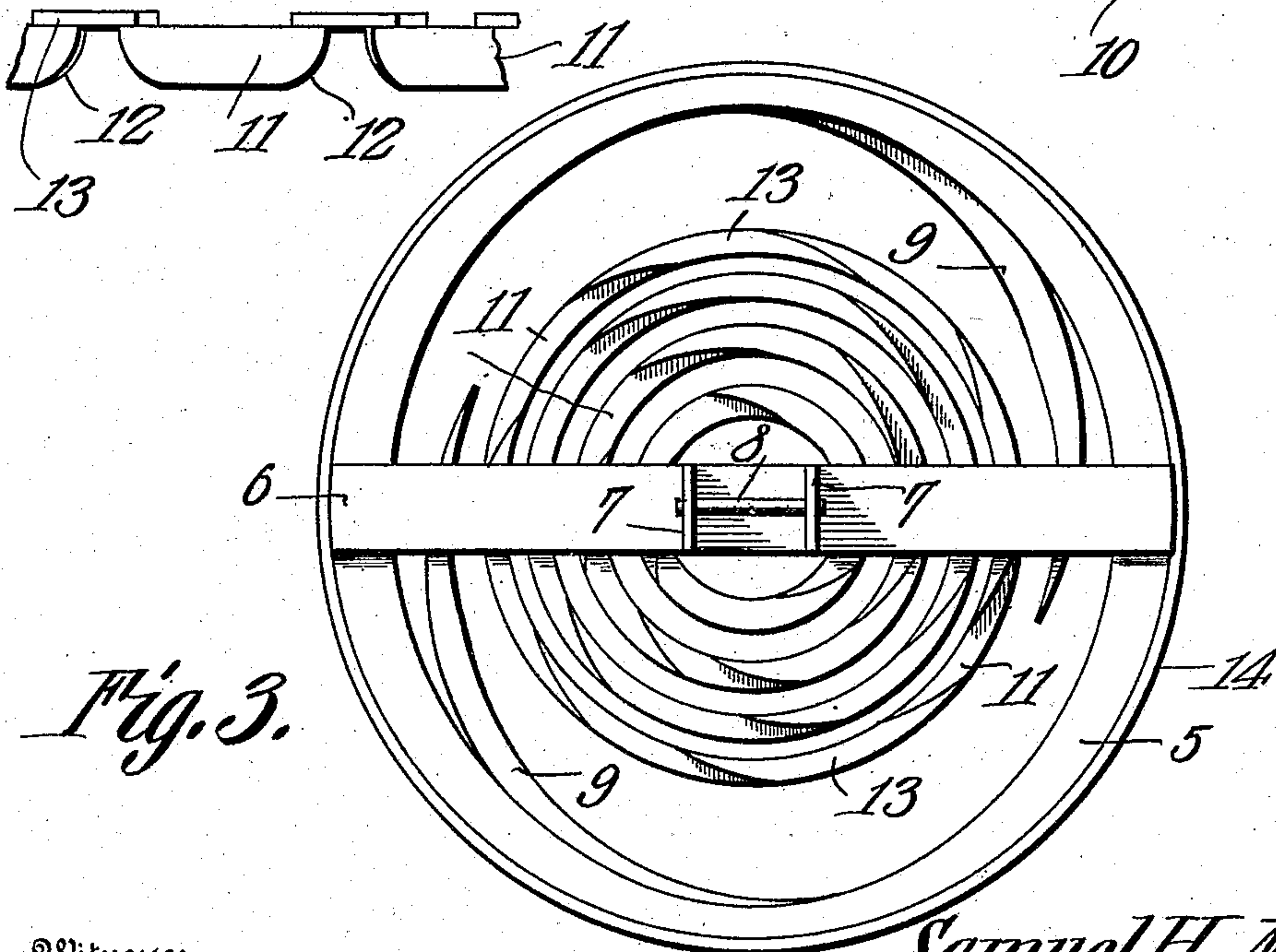
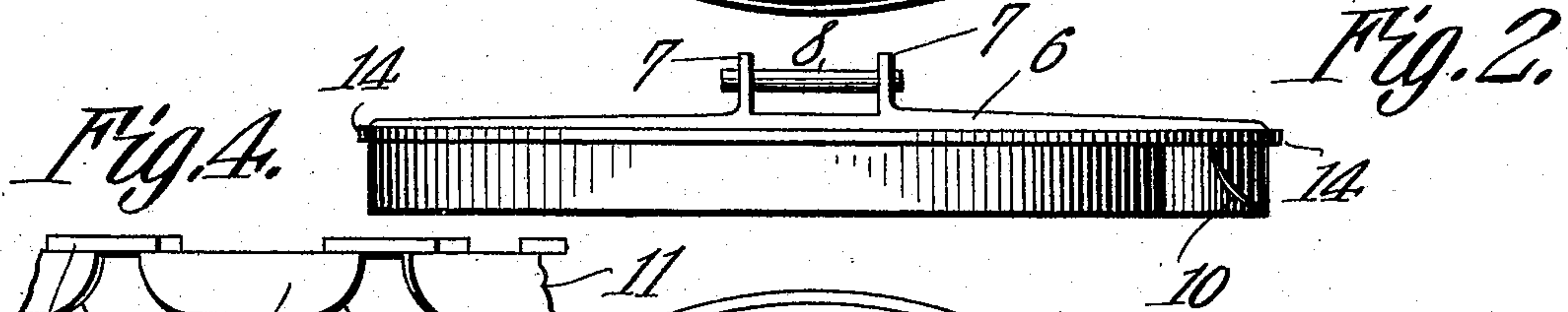
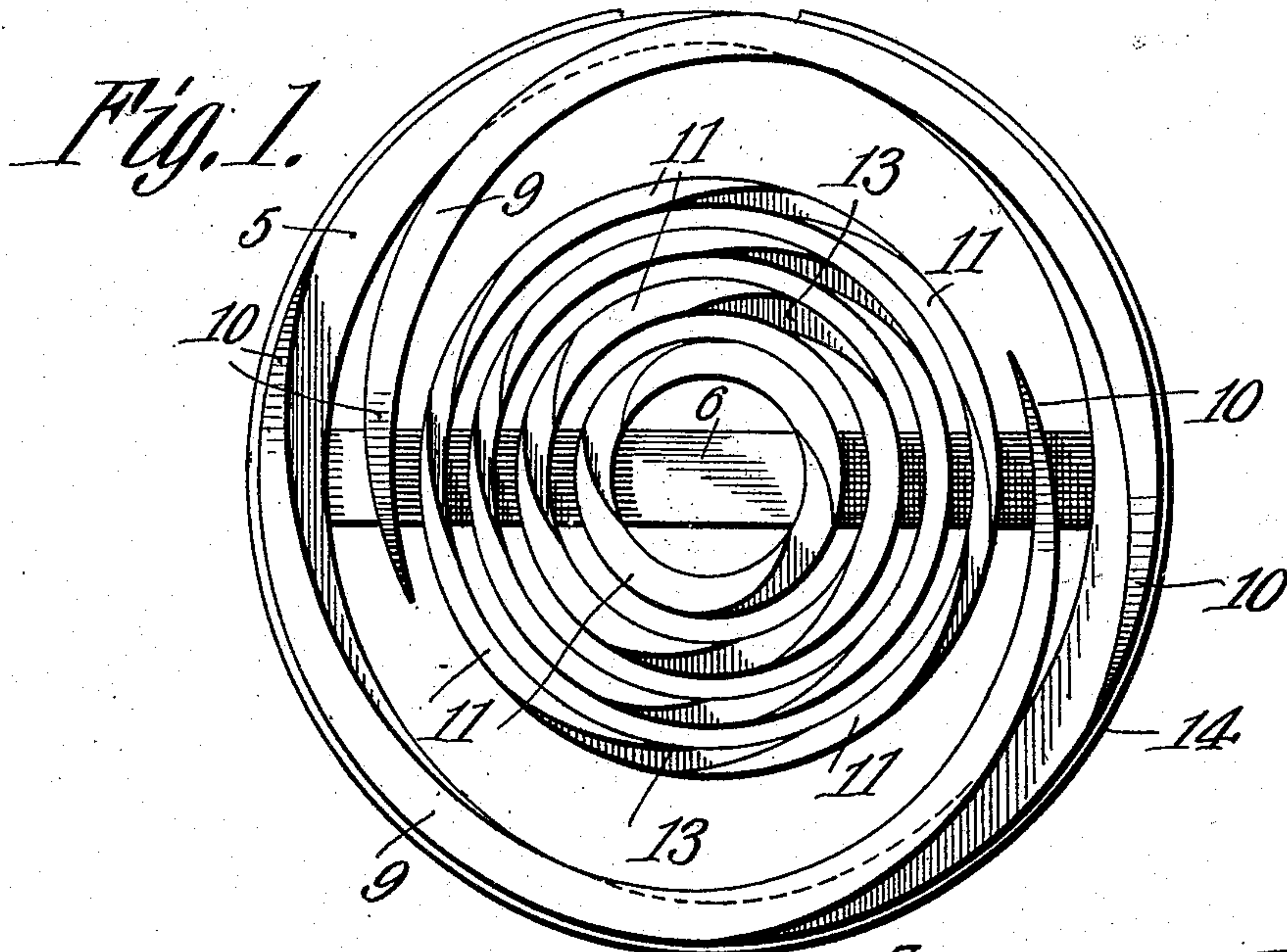


S. H. MILLS.
 POLISHING WHEEL FOR STONE.
 APPLICATION FILED OCT. 23, 1908.

930,778.

Patented Aug. 10, 1909.



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UNITED STATES PATENT OFFICE.

SAMUEL HOBERT MILLS, OF MONTPELIER, VERMONT.

POLISHING-WHEEL FOR STONE.

No. 930,778.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed October 23, 1908. Serial No. 459,191.

To all whom it may concern:

Be it known that I, SAMUEL HOBERT MILLS, a citizen of the United States, residing at Montpelier, in the county of Washington and State of Vermont, have invented a new and useful Polishing-Wheel for Stone, of which the following is a specification.

This invention relates to wheels for dressing and polishing stone and more particularly to a polishing wheel especially designed for emerying the surface of stone.

The object of the invention is to provide a polishing wheel having a plurality of surface flanges of different configuration for feeding emery or other abrading material at varying speeds across the surface being operated upon.

A further object is to provide the active face of the wheel with a marginal flange of scroll formation for producing a rapid cut, and further to arrange a series of segmental flanges within the scroll and concentric to the axis of the wheel for producing a relatively slow cut, thereby to impart the desired polish to the surface of the stone.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification:—Figure 1 is a bottom plan view of a stone polishing wheel constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a top plan view. Fig. 4 is a detail side elevation, of a portion of the wheel with the marginal scroll flange removed.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved polishing wheel forming the subject matter of the present invention comprises a marginal supporting ring 5 preferably formed of metal and reinforced and strengthened by a transverse bar 6 having spaced ears 7 extending laterally therefrom and forming an intermediate socket for the reception of the adjacent end of an operating shaft, said wheel being secured to the oper-

ating shaft by a transverse pin or similar fastening device, indicated at 8.

Secured to or formed integral with the marginal ring 5 are a plurality of peripheral abrading flanges or ribs 9 of scroll formation, said flanges having their opposite ends inclined or beveled at 10 and adapted to direct the emery or other abrading material toward the center of the wheel.

Disposed concentric with the vertical axis of the polishing wheel are a series of segmental ribs or flanges 11 each having its opposite ends reduced in width and also inclined or beveled, as shown at 12, to permit the emery or other abrading material to pass between and under said flanges at their tapered ends and toward the center of the wheel and thus prevent the emery from caking and clogging the active face of said polishing wheel. The adjacent ends of the concentric flanges 11 are connected by bridge plates 13 which may or may not be integral with the said flanges as may be desired.

By making the outer flanges 9 of scroll formation and the inner flanges 11 concentric with the vertical axis of the wheel, a double feed of the emery or other abrading material is obtained, the outer scroll causing the emery to cut very fast and the concentric flanges 11 causing a relatively slow cut so as to give the surface of the stone the desired polish. It will thus be seen that the scroll flanges 9 draw the emery or other scouring material toward the center of the wheel where it is made to pass the concentric flanges 11 so that the abrasive will gradually work toward the center, growing finer as it passes, thereby cutting and polishing the stone and performing the work much faster than the ordinary polishing wheels, the abrading flanges of which are either all of scroll formation or all disposed concentric with the axis of the wheel. It will also be noted that this construction permits the coarse emery to be brought in contact with the outside flanges first and thus receive the initial wear, while the concentric flanges cause the abrading material to travel relatively slow in the direction of the center of the wheel to polish the stone, as before stated.

A guard ring 14 is preferably secured to the marginal ring 5 to form a guard for the wheel and thus prevent the latter from cutting into the frame which surrounds the stone during the cutting operation.

Having thus described the invention what is claimed is:—

1. A polishing wheel comprising a body portion, flanges of scroll formation secured to the outer edge of the body portion, flanges arranged within the scroll flanges and disposed concentric with the vertical axis of the body portion, the opposite ends of the concentric flanges being inclined or beveled and spaced from the inclined end of an adjacent concentric flange, and bridge plates connecting the inclined ends of the concentric flanges.

2. A polishing wheel including a marginal supporting ring, a pair of flanges of scroll formation secured to the supporting ring, and a plurality of flanges disposed concentric with

the vertical axis of the wheel and having their opposite ends spaced apart and inclined or beveled, bridge pieces connecting the inclined ends of the concentric flanges, there being openings formed in the wheel between the several concentric flanges and between said concentric flanges and the scroll flanges.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

SAMUEL HOBERT MILLS.

Witnesses:

BENJAMIN GATES,
ISABEL T. CHASE.