

No. 804,738.

PATENTED NOV. 14, 1905.

A. KREPS.
MILLSTONE.

APPLICATION FILED MAR. 29, 1904.

Fig. 1.

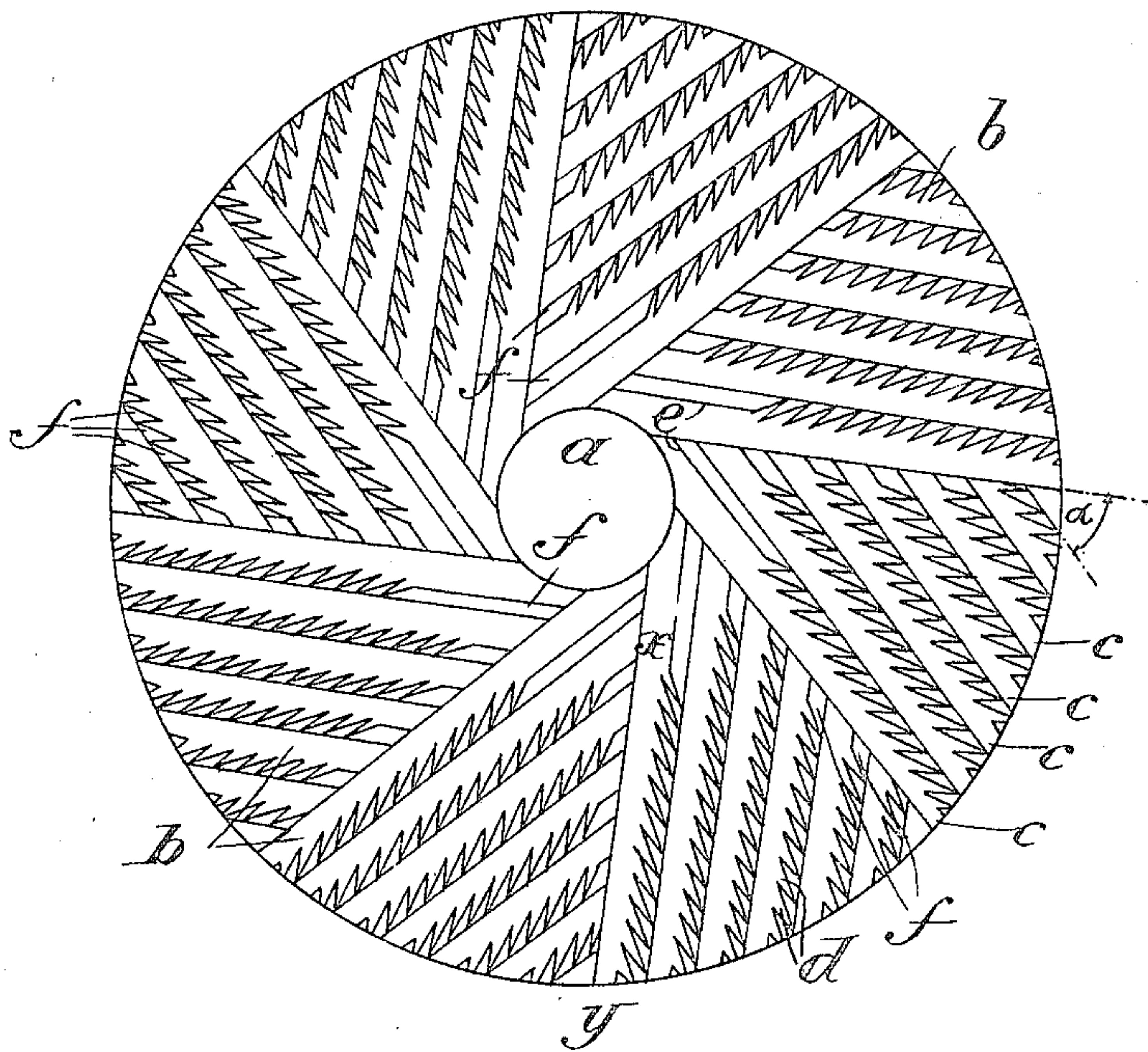
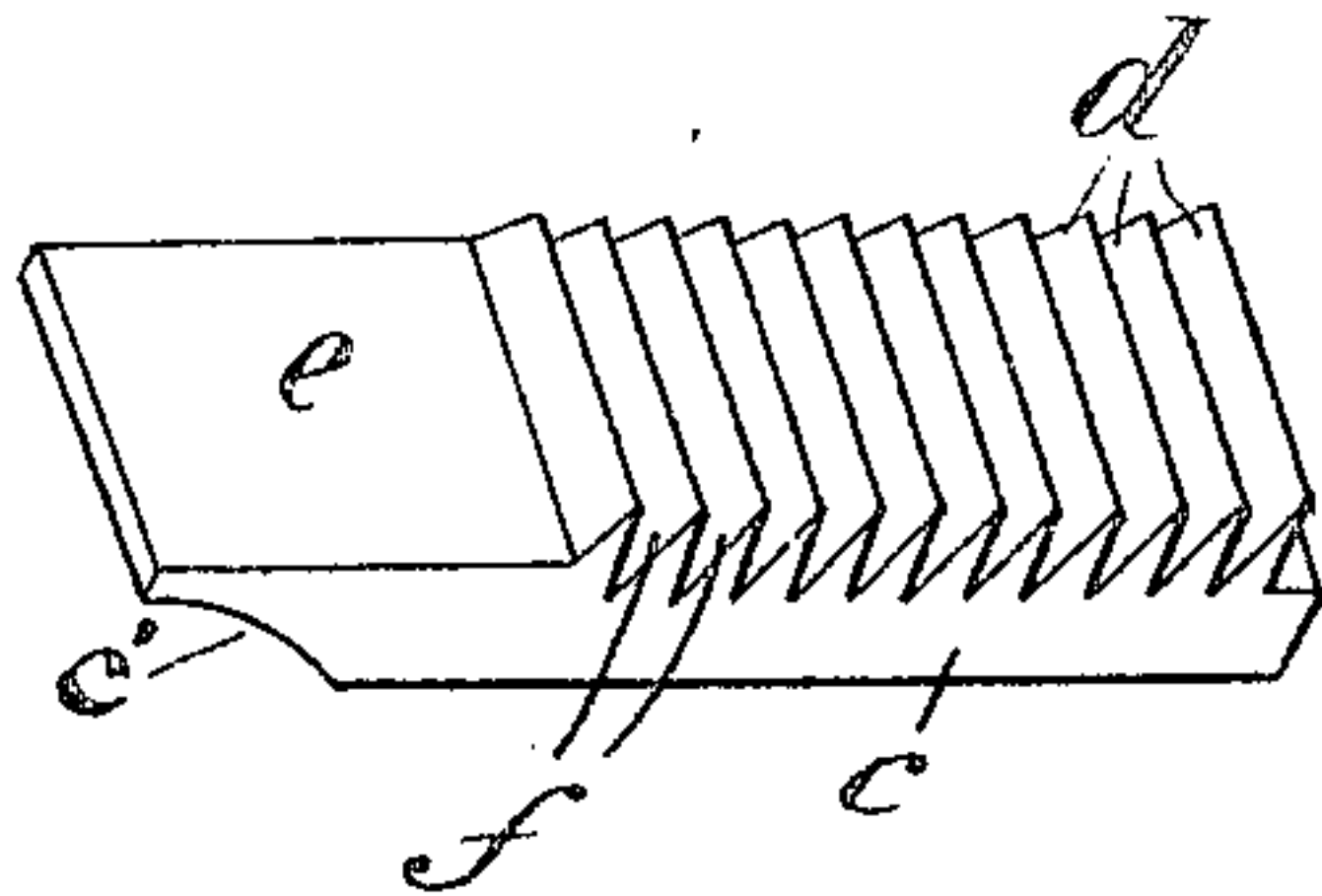


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

AUGUSTE KREPS, OF ANTWERP, BELGIUM.

MILLSTONE.

No. 804,738.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUSTE KREPS, a subject of the King of Belgium, and a resident of Antwerp, Belgium, have invented a certain new and Improved Millstone, of which the following is a specification.

My invention relates to millstones; and it consists of segments arranged nearly tangentially to the central opening, the different segments being composed of a plurality of laterally-toothed bars which are parallel one to the other, but form angles with the direction of the bars of the adjacent segment.

In the annexed drawings, Figure 1 shows the plan view of a millstone. Fig. 2 is a perspective view of a toothed bar.

Like all well-known millstones, the millstone of the present invention has also a central opening *a*, with the aid of which it is keyed on the working shaft. Round this opening are grouped nearly tangentially the stone-segments *b*, in the present case eight in number. These segments are composed of a plurality of bars *c*, one of which is shown in an enlarged scale in Fig. 2. It has the form of a flat strip furnished for a certain distance on one of its large sides with saw-like teeth. The part which is not furnished with teeth is indicated by *e*. The bar shown in Fig. 2 represents the inner or base bar of each segment, the next and succeeding bars being successively shorter, the last bar having only three or four teeth therein. In order to build up each section, the longest bar is first laid on edge with the curved cut-away portion *c'* at its end at the central hole *a*, with the teeth *f* projecting outwardly or from the direction of the central hole, a shorter toothed bar with its plain side then placed against the toothed side of the first bar, and so on, until a complete segment is made up and a sufficient number of these segments are thus formed to form a complete millstone. All the interstices between the teeth are then filled with a suitable agglomerating material, and when the latter has become hard all the parts form one rigid mass—that is to say, an ordinary millstone. The segments *b* being tangential to the central opening and the bars being parallel one to the other, the bars of two adjacent segments meet always under an angle, Fig. 1.

The new technical effect obtained with my

improved millstone is that it never needs to be sharpened. During the grinding operation the agglomerating material, which is softer than that of the bars, is first worn away. Therefore, first, recesses are formed in the hollows, which recesses slightly lay bare the sharp edges of the teeth; secondly, the upper surface of the teeth *d* are worn away less rapidly than the agglomerating material, and, thirdly, the large uninterrupted upper surface of the bars *c* is worn away, so that between the last-named surfaces a slight taper is obtained, while at the bottom of the teeth an obtuse angle is also formed. Thus a sharp edge (line *x y*) is produced, which greatly assists the grinding operation. These working parts, the outline, and edges of the teeth *x y* thus laid bare are continuously formed—that is to say, they have straight continuous edges until the stone is quite worn away, so that the millstone never needs to be sharpened. The renewing of the millstone seldom becomes necessary, as it must only be replaced when it is worn out, and consequently the working period of the mill is almost continuous.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A millstone, comprising a plurality of segments, each segment composed of a set of bars of different lengths, with saw-shaped teeth across one side of each bar, said bars being tangentially arranged to the central opening, as set forth.

2. A millstone, comprising a plurality of segments, each segment composed of a set of bars of different lengths, with saw-shaped teeth across one side of each bar, said teeth being formed on one side of each bar at right angles to the face of the stone, and said bars being tangentially arranged to the central opening, the bars of one segment being at an angle to the bars of the next section, and the interstices between the teeth being filled with agglomerating material, as set forth.

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

AUGUSTE KREPS.

Witnesses:

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