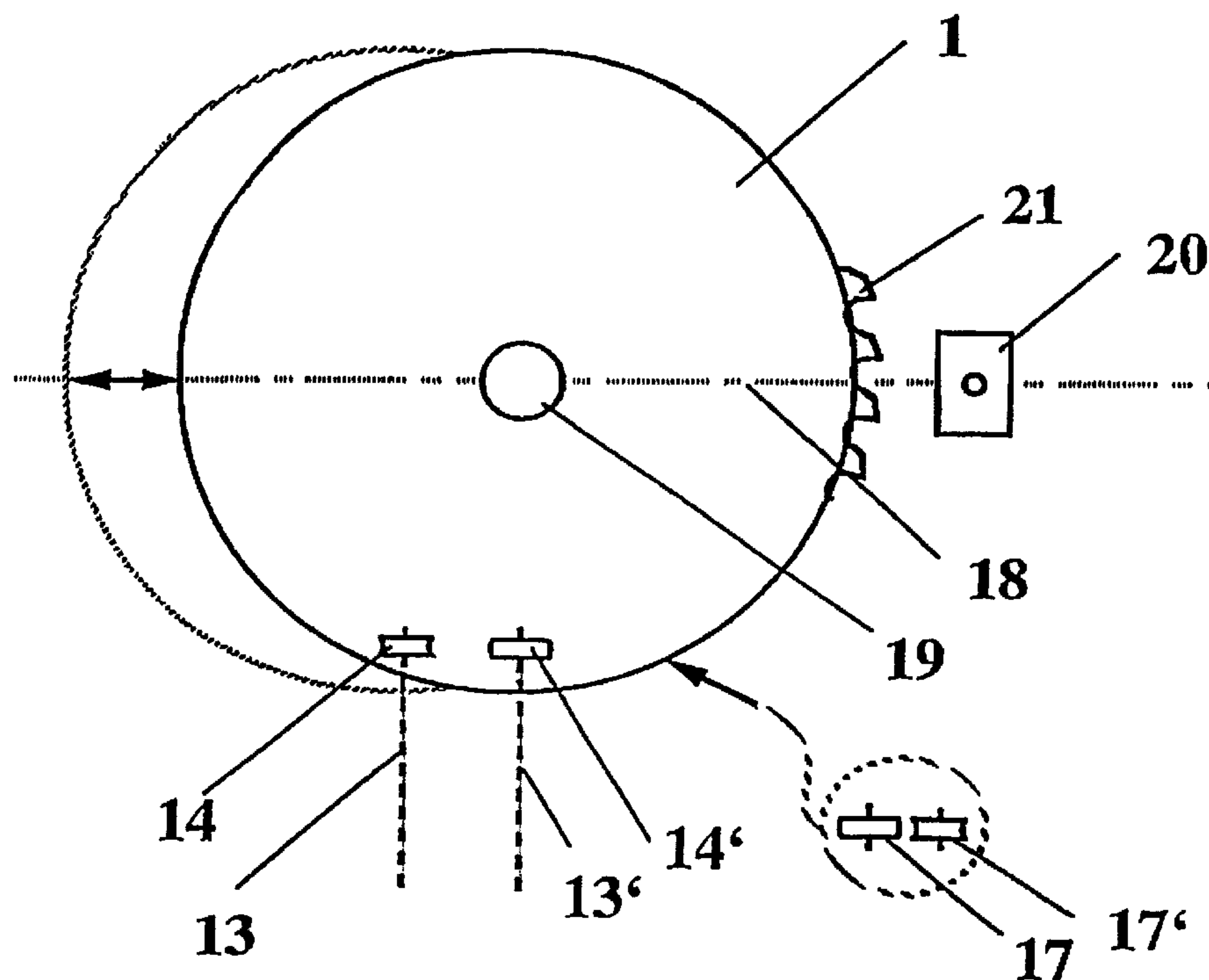




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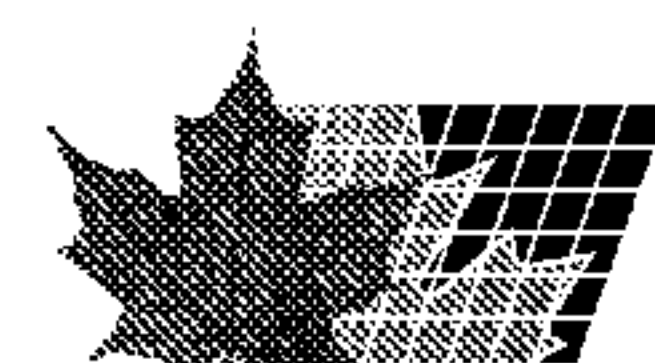
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(54) Titre : **MACHINE A DRESSER LES LAMES DE SCIES CIRCULAIRES**
(54) Title: **CIRCULAR SAW BLADE STRAIGHTENING MACHINE**



(57) **Abrégé/Abstract:**

The invention relates to a circular saw blade straightening machine for eliminating unevenness in circular saw blades, comprising straightening rollers or cylinders placed on both sides of the saw blade for straightening uneven sections of the saw blade, whereby the straightening rollers or cylinders (14, 14', 17, 17') run on parallel axes located next to one another to level unevenness on all different sides of the saw blade (1), said axes being parallel in relation to a radius of the saw blade.





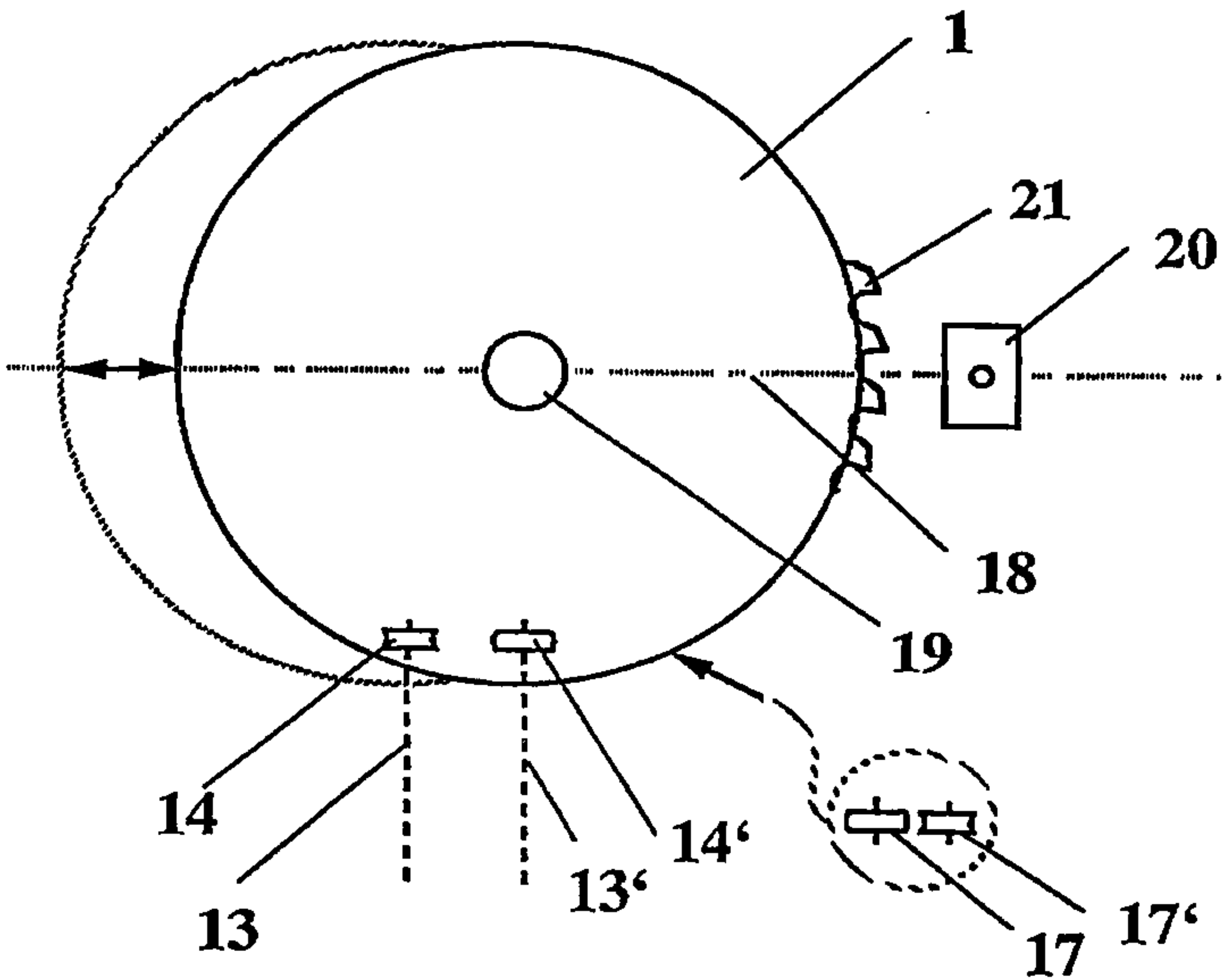
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(54) Title: CIRCULAR SAW BLADE STRAIGHTENING MACHINE
(54) Bezeichnung: KREISSÄGEBLATT-RICHTMASCHINE



(57) Abstract

The invention relates to a circular saw blade straightening machine for eliminating unevenness in circular saw blades, comprising straightening rollers or cylinders placed on both sides of the saw blade for straightening uneven sections of the saw blade, whereby the straightening rollers or cylinders (14, 14', 17, 17') run on parallel axes located next to one another to level unevenness on all different sides of the saw blade (1), said axes being parallel in relation to a radius of the saw blade.

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Circular saw blade straightening machine

The invention relates to a circular saw blade straightening machine for eliminating unevennesses in circular saw blades, comprising rollers for straightening uneven
5 sections of the saw blade.

When circular saws are used in woodworking, unevennesses occur on the saw blades; after only a few hours of use, these unevennesses can assume proportions that greatly impair the performance of the circular saw. Circular saw blades
10 therefore have to be straightened at regular intervals, i.e. unevennesses have to be eliminated.

A straightening machine for this purpose is described in EP-B-0 521 824. The saw blade is arranged horizontally in this machine and the straightening rollers operate
15 by applying pressure from above and below.

The object of the invention is to propose a circular saw blade straightening machine of mechanically simpler and more compact design.

20 This is achieved according to the invention by a straightening machine of the type mentioned at the outset which is distinguished by the features defined in the Claims.

An embodiment of the invention is described below with the aid of the
25 accompanying drawing, in which:

Fig. 1 is a front view of the saw blade and straightening rollers of an embodiment of the machine, and

Fig. 2 is a side view of the arrangement shown in Fig. 1.

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In the following description, reference is made to EP-B-0 521 824. Design details known from said patent description are not repeated here.

In the machine shown in part in Fig. 1 and 2, the saw blade is vertical and, in

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contrast to the state of the art, no pressure rollers are present. Instead, the second pair of straightening rollers 14', 17', for the unevennesses rising above the rear side of the saw blade, are located on the same side of the drive axle 3, next to the first pair of straightening rollers 14, 17, where, in the previously described embodiment, the pair of pressure rollers 28 are located.

The rollers 17, 17' on the rear side are shown in Fig. 1 next to the saw blade, the arrow indicating that they are located on that side of the saw blade which is not visible in Fig. 1.

Accordingly, the axle 3, with the saw blade, is moved linearly between the two positions for the smoothing of the front side and the rear side. This takes place in such a way that first one side, for example the front side, is completely smoothed and then the saw blade is moved and the whole of the rear side is treated.

Alternatively, the saw blade can be treated in such a way that each track is straightened on the front and rear sides before the next track is treated. In this case the saw blade is moved between the two positions for each track.

A commercially available laser instrument 20 is provided for measuring purposes. Before the treatment is started, the laser reference line 18 is aligned precisely with the axle 3. The laser 20 travels as close as possible to the axial hole 19 in the saw blade 1 and adjusts to deal level. It then travels to the tooth base 21 of the saw blade 1 and establishes whether the tooth base 21 is at the same distance from the laser reference line as the centre of the saw blade.

If the tooth base is outside the set tolerance, the saw blade 1 is not even but dish-shaped, which has to be rectified. This is done first before the elimination of smaller dents in the saw blade with the same pairs of rollers. If the tooth base is located closer to the reference line, the curvature of the saw blade is directed away from the reference line. However, the laser measures this difference as a dent directed towards the reference line. To rectify the dish shape, the saw blade 1 therefore has to be treated, as it were, with the wrong pair of rollers, i.e. with the right-hand pair of rollers 14', 17', until the mean value of the tooth base 21 falls

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within the set tolerance. Conversely, the treatment has to be applied with the left-hand pair of rollers 14, 17 if the tooth base is at a greater distance from the reference line 18 and the saw blade 1 is thus outwardly dish-shaped.

- 5 In contrast to the flattening of dents, whole tracks are rolled with a constant pressure in order to rectify the dish shape with the appropriate pair of opposed rollers.

- 10 After the dish shape of the saw blade 1 has been rectified or after it has been established that the saw blade is even or within the tolerance, the dents are flattened. For this treatment, dead level relative to the reference line is set at the tooth base; this is in contrast to rectification of the dish shape, where dead level is defined close to the middle of the saw blade 1. The right-hand pair of rollers is used for dents directed outwards, i.e. towards the observer, and the left-hand pair of
15 rollers is used for dents directed inwards.

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Claims

1. Circular saw blade straightening machine for eliminating unevennesses in circular saw blades, comprising rollers for straightening uneven sections of the saw
5 blade, characterized in that straightening rollers (14, 14', 17, 17') for flattening unevennesses directed towards the different sides of the saw blade (1) run on parallel axes (13, 13') located next to one another, said axes being parallel to a radius of the saw blade, and in that the saw blade is moved laterally between two positions in which the corresponding axes are located in a plane defined by the
10 radius and perpendicular to the saw blade.
2. Circular saw blade straightening machine according to Claim 1, characterized in that a laser instrument 20 is provided for measuring the unevennesses.
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3. Circular saw blade straightening machine according to Claim 2, characterized in that, to rectify the so-called dish shape of the saw blade (1), the pairs of rollers used to straighten the unevennesses are those which are opposed to the measured unevenness.

