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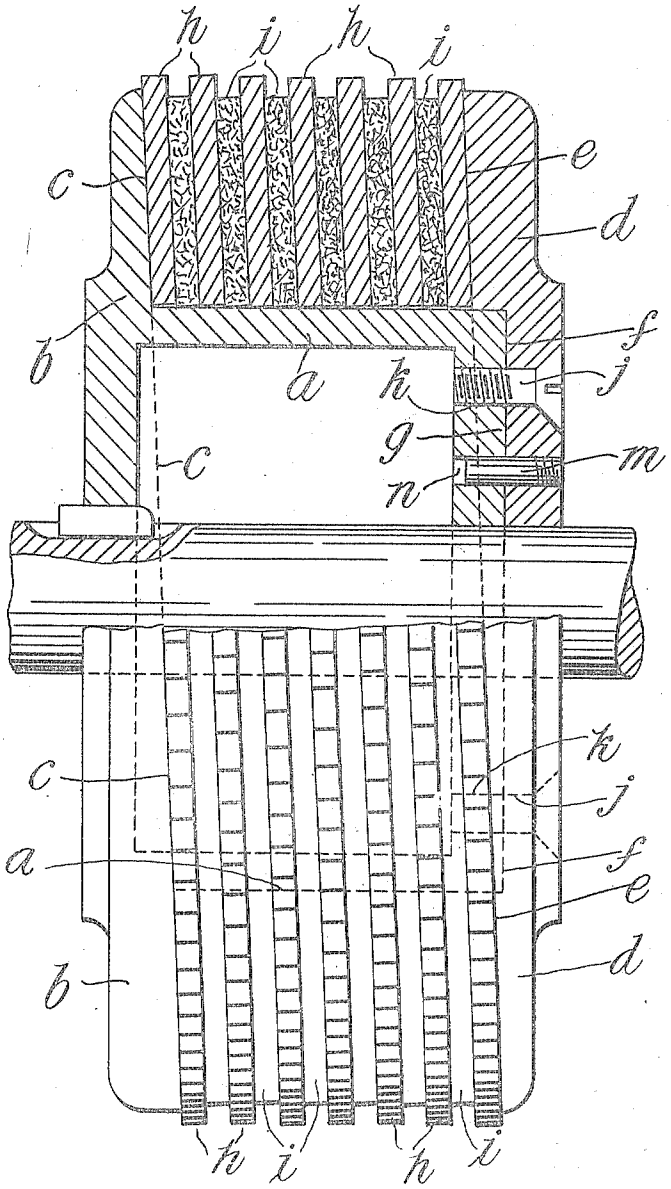
ABRASIVE WHEEL.

APPLICATION FILED JULY 19, 1918.

1,308,019. Patented June 24, 1919.



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ABRASIVE WHEEL.

1,308,019. Specification of Letters Patent. **Patented June 24, 1919.**

Application filed July 19, 1918. Serial No. 245,644.

To all whom it may concern:

Be it known that we, JOSEPH HENRY WOODINGTON and CHARLES ADAMS YOUNG, subjects of the King of Great Britain and Ireland, and residents, respectively, of Clevedon, county of Somerset, and Bristol, county of Gloucester, England, have invented a certain new and useful Improvement in Abrasive Wheels, of which the following is a specification.

In the manufacture of boots and shoes it has been the practice to rasp off the surplus leather from the uppers of boots and shoes, after the same have been lasted, by means of abrasive wheels driven at high speed, said abrasive wheels being used on machines known as "pounding-up machines."

The object of the present invention is not only to rasp off the surplus material, but also to rasp off such surplus material in such a manner that no scoring or grooving of the leather can take place, producing an even, ridgeless and smooth surface and at the same time obviating the necessity of the work being reciprocated across the abrasive wheel.

With this object in view the invention consists essentially of a gang of circular cutters with interposed washers carried by a holder which is mounted on a rotatable shaft, said cutters being maintained at an angle in oblique relation to the longitudinal axis of the holder to effect a circular and reciprocatory rasping motion over the surplus material to be removed.

For a clear understanding of the invention reference is to be had to the following description and accompanying drawing which shows, partly in section and partly in elevation, an abrasive wheel constructed in accordance with the invention.

The holder consists of a cored body *a* provided at one end with a fixed and deep flange *b* whose inner face *c* is obliquely disposed to the longitudinal axis of the body *a*, and a detachable clamping flange *d*, whose inner face *e* is also obliquely disposed, being recessed at *f* to fit over the free end *g* of the body.

A series of circular cutters *h*, of a diameter slightly greater than that of the flanges *b* and *d*, and provided with a central hole, are placed on the body *a* with a washer *i*, or fiber or other suitable material, interposed between adjacent cutters. The flange *d* is then fitted on the free end *g* of the body *a*, the inner face *e* of said flange *d* being positioned in parallel with the inner face *c* of the fixed flange *b* and clamped to said body *a* by screws *j* which take in tapped holes *k* in the free end *g* of the body, the screwing up of the screws *j* in conjunction with the forward movement of the flange *d* forcing the cutters *h* and washer *i* out of the perpendicular, thus staggering the teeth of said cutters in all directions over the peripheral surface of the wheel.

To insure the positioning of the clamping flange *d* in parallel relation to the fixed flange *b*, said clamping flange *d* is provided with a dowel *m* which takes in a hole *n* in the free end *g* of the body.

With an abrasive wheel as above set forth there obtains, when the same is rotated, a clean, ridgeless and even rasping away of the surplus material without necessitating reciprocating movement being given to the boot or shoe, which can be pressed firmly against the wheel and without fear of injury either to the work or to the operator.

Having now described our invention, what we claim as new and desire to secure by Letters Patent of the United States is:—

1. An abrasive wheel of the class described including a cutter carrying body having a centrally located shaft opening, an abutment flange formed at one end of the said body and having its inner face disposed at an oblique angle to the axis of the shaft receiving opening of the body, a plurality of circular cutters positioned on the cutter carrying body, spacing rings interposed therebetween, and a cutter clamping flange detachably fitted to the other end of the cutter carrying body and also having its inner face disposed obliquely to the axis of the central shaft receiving opening.

2. An abrasive wheel of the class described including a hollow cutter carrying hub formed at one side with an integral abutment flange having its inner face disposed at an oblique angle to the axis of the hub, a plurality of cutter disks mounted on said hub and having spacing rings interposed therebetween, a clamping flange having a socket adapted to telescope over the head of the hub and provided with an inner face disposed at an oblique angle to the axis of the hub, and detachable fastenings for securing said flange to the hub.

3. An abrasive wheel of the class described including a cutter supporting body having a central shaft opening and an integral abutment flange formed therewith, said flange having its inner face disposed at an oblique angle to the axis of the shaft opening, cutters carried by the said body, a clamping flange also having an inner face disposed obliquely with reference to the axis of the shaft receiving opening, means associated with said clamping flange and the body of the cutter for facilitating the fitting of the clamping flange to the body with its inner face parallel to the inner face of the abutment flange, and fastenings for detachably holding the clamping flange to the body.

In testimony whereof we have affixed our signatures this 25th day of June, 1918.

JOSEPH HENRY WOODINGTON.
CHARLES ADAMS YOUNG.