

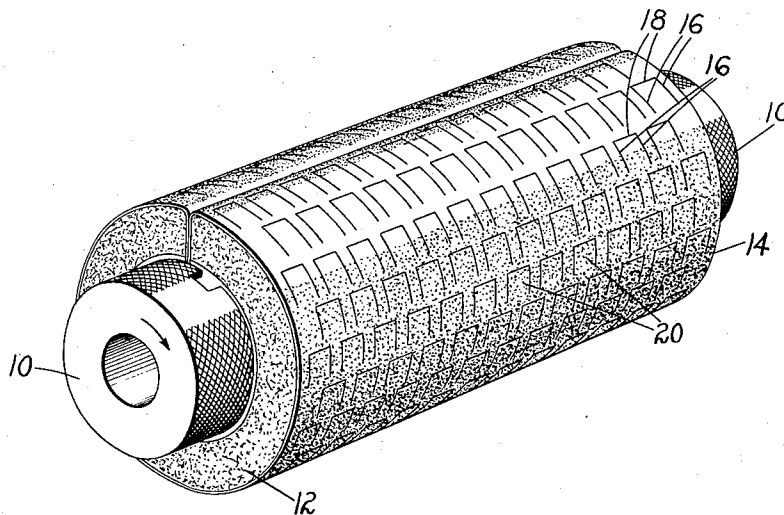
Oct. 5, 1937.

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2,094,894

ABRADING TOOL

Original Filed Dec. 11, 1931



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UNITED STATES PATENT OFFICE

2,094,894

ABRADING TOOL

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Original application December 11, 1931, Serial
No. 580,388, now Patent No. 2,032,418, dated
March 3, 1936. Divided and this application
July 11, 1935, Serial No. 30,849

3 Claims. (Cl. 51—194)

This invention relates to abrading tools and is herein disclosed as embodied in an abrading roll having a yieldable periphery. The illustrated roll may be used for operations in which the work is presented by hand, such as the scouring of shoe bottoms, or the roll may be used to perform scouring, buffing or similar operations upon pieces of sheet material in a machine of the type illustrated in United States Letters Patent No. 2,032,418, granted March 3, 1936 upon my application, of which this application is a division.

It is an object of the present invention to provide an improved abrading tool which may yield readily to conform itself to the exact shape of the work piece. The abrading element of the illustrated roll consists of a sheet of abrasive material such as sandpaper or emery cloth which is more or less stiff because of the glue employed to retain the grit. The sheet of abrasive material is supported by a yieldable cushion which constitutes the peripheral portion of the roll body. In accordance with a feature of the invention the illustrated abrasive sheet material has formed in it a plurality of pairs of parallel slits, the slits of each pair being connected by a cut to form a tab. As illustrated, the parallel slits of each pair are so directed as to be circumferential with relation to the roll upon which the abrasive sheet is mounted. The tabs which are thus formed tend to swing outwardly under the influence of centrifugal force as the roll rotates and thereby act yieldingly upon the work.

The several features of the invention will now be set forth in connection with an illustrated machine and pointed out in the appended claims.

In the drawing,

The figure is a perspective view of the improved abrading roll.

The roll illustrated in the figure is of the two-part hinged type having a pair of collars 10 at its ends for opening and closing the roll when the abrasive cover is to be replaced. The peripheral portion of the roll body consists of a cushion 12 which in the illustrated construction consists of sponge rubber. The abrasive cover for the roll consists of a sheet of emery cloth 14 which

is secured in the usual way upon the periphery of the roll body and which has formed in it a plurality of slits 16 extending circumferentially and arranged in parallel pairs, each pair being connected by a cut 18 which runs longitudinally of the roll. As a result of the above-mentioned circumferential slits and parallel cuts there is formed in the abrasive cover a plurality of tabs 20. Not only are the tabs 20 free to flex according to the curvature of the work piece but also the portions of the abrasive cover 14 between the tabs will, by reason of the slits 16 and the yielding cushion 12, be enabled to twist one way or the other to accommodate the varying contours of the work piece as the work piece is pressed against the abrasive cover. The abrasive cover 14 is so arranged upon the roll with respect to the direction of rotation, as indicated by the arrow in the figure, that the free ends of the tabs 20 will be the trailing ends. The tabs will then swing outwardly under the influence of centrifugal force and thus bear yieldingly upon the work. The tabs of the illustrated abrasive cover are arranged in parallel rows extending lengthwise of the roll, with the tabs of each row staggered with relation to the tabs of the next row.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. An abrading roll comprising a roll body having a yieldable periphery and a cover of abrasive sheet material secured upon said roll body, said cover having formed in it a plurality of pairs of slits directed circumferentially of the roll body, the slits of each of said pairs being connected by a cut extending lengthwise of the roll body to form a tab.

2. A piece of abrasive sheet material having formed in it a plurality of rows of tabs.

3. A piece of abrasive sheet material having formed in it a plurality of pairs of parallel slits, each pair of slits being connected by a cut to form a tab.

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