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C. H. BROWN ET AL
CUTTER FOR DEFIBERIZING OR SHREDDING REDWOOD
BARK, WOOD, AND MILL WASTE
Filed Aug. 12, 1929

1,827,352

Fig. 1.

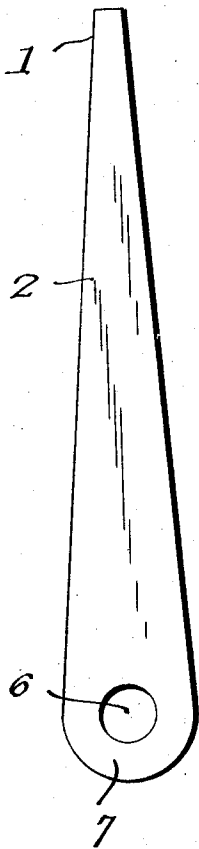


Fig. 2.

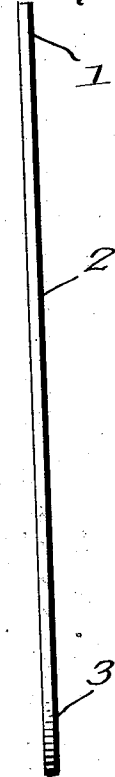


Fig. 3.

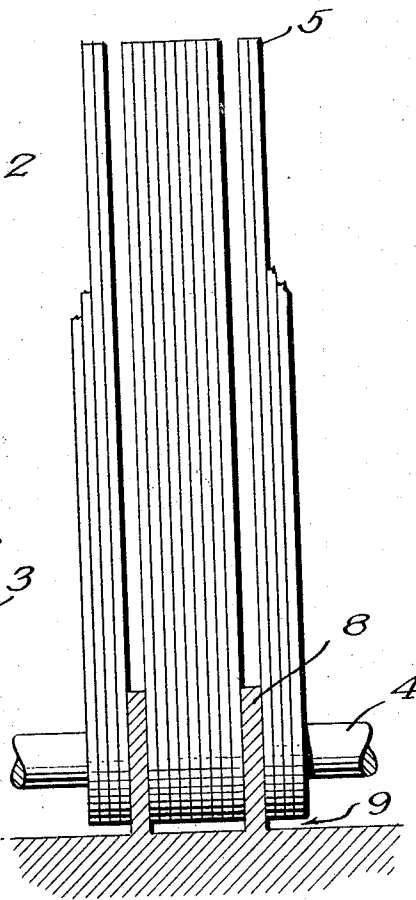
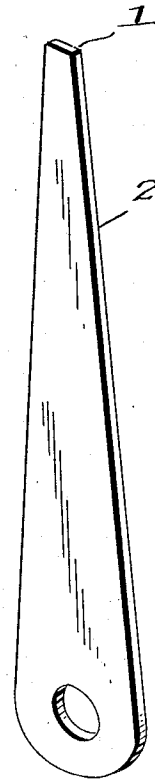


Fig. 4.



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CUTTER FOR DEFIBERIZING OR SHREDDING REDWOOD BARK, WOOD, AND MILL WASTE

Application filed August 12, 1929. Serial No. 385,241.

Our invention relates to a cutter for the defiberizing or shredding of redwood bark, wood, or mill waste, and the invention relates more particularly to improvement in the apparatus set forth and described in United States Letters Patent Number 1,344,180, granted Uel. S. McMillan under date of June 22, 1920 and also in the apparatus set forth and described in United States Letters Patent Number 1,476,032, granted to Gustav Aicher and Uel. S. McMillan, assignors to McMillan Process Company, a corporation, under date of December 4, 1923.

An object of the invention is to provide a cutter or apparatus capable of defiberizing or shredding redwood bark, wood, and mill waste longitudinally.

Another object is to provide a cutter so constructed that it shall be stable and rigid to withstand abnormal strain which tends to bend or break them.

Another object is to provide a cutter that is highly efficient.

Another object is to provide a cutter with a maximum amount of cutting surface.

Another object is to provide a cutter of scientific design, giving sufficient strength to the cutting surface and body in direct proportion to the length of cutter.

Another object is to provide a cutter consisting of a single unit which may be manufactured at a slight cost.

Another object is to provide a cutter which may be sharpened without removing same from machine.

Another object is to provide a cutter having a long life.

Another object is to provide a cutter which will produce a constant amount of material while in the process of wearing down.

Another object is to provide a cutter which in their plurality arrangement can all be jointed simultaneously and speedily while in the machine.

Other objects and advantages may become apparent to persons who read the following details of description in connection with the accompanying drawings.

In the drawings illustrating the principle of this invention and the best mode now

known to ourselves of applying these principles; Figure 1 is an elevation showing the face of the cutter while Figure 2 shows the edge or side elevation; Figure 3 is a similar view as Figure 2 except that in Figure 3 the plurality arrangement of the cutters is shown. Figure 4 is a view of the cutter in perspective.

Referring to the accompanying drawings similar numerals refer to similar parts throughout the different figures. Figures 1, 2, and 4 show clearly the governing shape of the cutter which is made of high grade material to withstand the work and give life to the machine of which it is a part. Numeral 1, of Figures 1, 2, and 4 indicates the cutter at the small or tapered end. It is this end which comes in contact with the bark or other woods, and accomplishes the desired cutting effect. The square end of this cutter, rather than a rounded end running to a sharp point, materially increases the cutting surface, making possible to remove a uniform layer, leaving no ridges to over-burden the following cutter. It also possesses much greater durability, and the cutting point or edge is not easily broken down.

An important factor in its favor is that after continued use, and the cutting edge, as indicated by numeral 5 in Figure 3, which shows the relative arrangement of the cutters in plurality, does become worn and dull, that by reversing the rotation of the cylinder which is made up of several thousand cutters mounted in rotation as shown by portion in Figure 3, that these cutters can easily and quickly be jointed by allowing them to come in contact with a jointing stone in reverse motion. If the cutting edge or end, was rounded, and terminated in a sharp point, as previously mentioned in comparison in this application it would necessitate the dismantling of the entire cylinder and sharpen each member individually.

Numerals 2 shows in Figures 1 and 4 the gradual taper to the body part or shaft of the cutter. This tapered shape to the cutter allows sufficient material at various receding points to meet the strain as it is required on out to the cutting end itself. As a result of

this construction breakage and bending have been reduced to a minimum.

The base of the cutter, numeral 3 of Figures 1, 2, and 4 terminates in a semi-circle following the line of curve of the punched hole, numeral 6, which is a fraction larger in diameter than the rod, 4 of Figure 3 on which the cutter is mounted.

This gives the cutter a positive anchorage, and at the same time a loose mounting, allowing the cutter to swing freely on the rod 4.

The part of the cutter shown by numeral 7 in Figures 1 and 4 consists of and is part of the body of the cutter. In punching the hole, 6, the rim or eyelet is left intact, the material strength of which has not been injured and breakage at this point is minimized. Also, enough body has been left to allow that part sufficient life against normal wear to equal other wearing parts of the cutter.

In Figure 3 which shows a small section of their plural arrangement on a multiple system of rods securely fastened to the cylinder, numeral 5 illustrates the uniform cutting edge of maximum efficiency, which can only be obtained by the square cutting end. Numeral 4 of Figure 3 shows the rod which passes through the eye of the cutter, numeral 6, and on through the lugs, numeral 8, which serve as means of securing the rods to the cylinder. Numeral 9 indicates the space left clear at the base of the cutter so the cutter will have an unobstructed path to swing freely upon the rod, numeral 4.

We claim:

A cutter of parallel faces, tapering sides, terminating at the small end in a square like manner substantially at right angles to the two faces, and the large end or base rounded off and equipped with a punched hole for holding proper position when in use.

In testimony whereof we have hereunto set our hands this 6th day of August, 1929.

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