R. F. WHITNEY.

HELICAL TOOL.

APPLICATION FILED OCT. 26, 1914.

1,173,155. Patented Feb. 22, 1916.

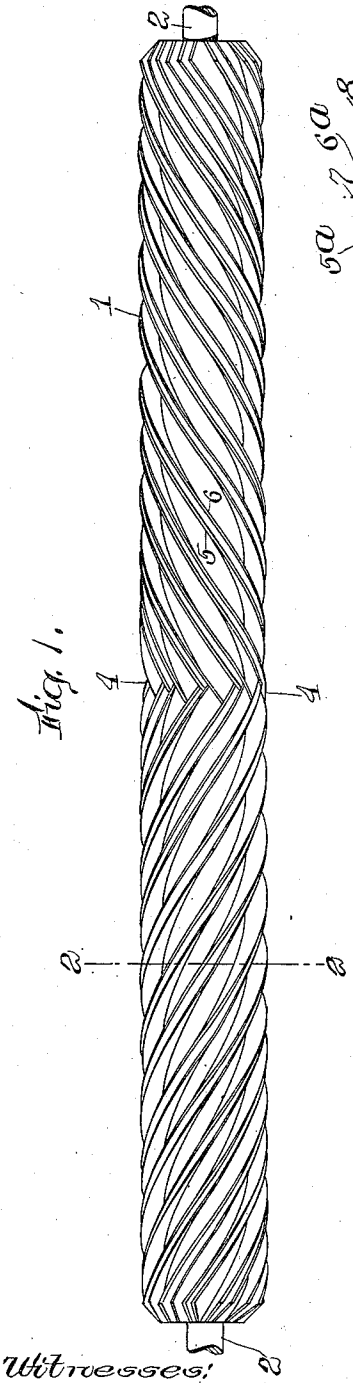

Fig. 1.

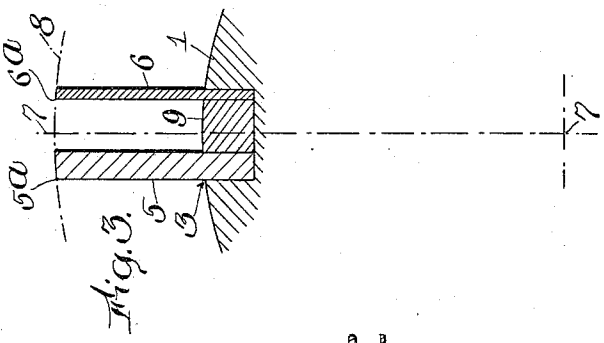

Fig. 3.

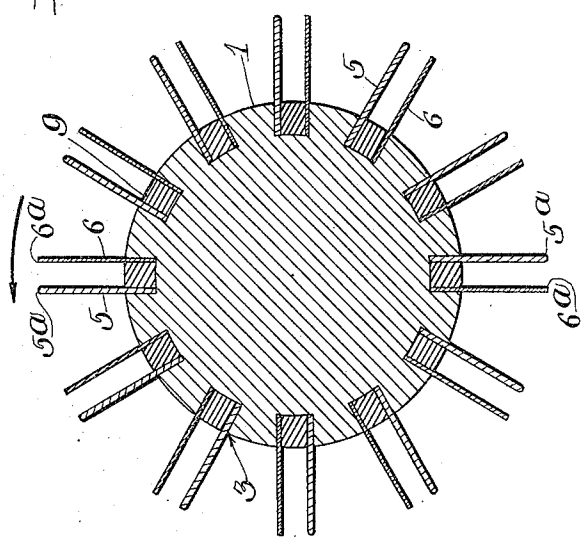

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

ROBERT F. WHITNEY, OF WINCHESTER, MASSACHUSETTS.

HELICAL TOOL.

1,173,155. Specification of Letters Patent. Patented Feb. 22, 1916.

Application filed October 26, 1914. Serial No. 868,603.

To all whom it may concern:

Be it known that I, ROBERT F. WHITNEY, a citizen of the United States, and a resident of Winchester, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Helical Tools, of which the following is a specification.

This invention relates to helical tools, or bladed cylinders, employed for various purposes, such as unhairing and working out hides and skins and fleshing sweated, dry hides; and its object is to provide a tool capable of performing its work in a thorough manner.

The invention is illustrated by the accompanying drawings, in which:

Figure 1 is an elevation of the bladed cylinder; Fig. 2 is an enlarged sectional view on the line 2—2 Fig. 1; and Fig. 3 is an enlarged sectional view of a pair of blades.

The cylinder 1 adapted as indicated at 2 to be journaled in suitable bearings in the machine, in which it is to be used, is furnished with two series of parallel, helical grooves 3 running in opposite directions from a vertical plane 4 between the ends of the cylinder; though the grooves may run the entire length of the cylinder; or be otherwise disposed, depending on the use to which the cylinder is to be put. The grooves are of sufficient width to receive the inner ends of the relatively thicker and thinner blades 5 and 6, which are mounted therein approximately one-half inch apart, the distance between the parallel grooves being approximately one and one-half inches. These blades 5 and 6 in cross section (Fig. 3) are parallel to a radius 7 of the cylinder extended and approximately equi-distant from the outer walls of said blades.

The outer ends 5^a, 6^a of the blades 5, 6 are so curved (as shown in vertical section, Fig. 3) as to coincide with an imaginary arc 8 concentric with that of the cylinder; thereby furnishing the front blade 5 with an upper outer obtuse angle and the rear blade 6 with an upper inner acute angle. By this arrangement, when the cylinder rotates in the direction indicated by the arrow, Fig. 2, the front blade 5 presents to the hide or skin, on which it operates, a relatively blunter edge and broader end and the rear blade 6 a relatively sharper edge and narrower end, whereby the front blade, preferably made of soft metal, such as brass, is adapted to remove the coarse hair from the hide or skin and to act as a guard for the rear blade, preferably made of hard metal, such as steel, and prevent its penetrating or cutting the hide or skin; the harder and sharper blade being adapted to remove the fine hair, dirt and lime from the pores of said hide or skin. The blades may be calked, or held in place, by any suitable material, preferably a soft metal, such as brass.

I claim:

1. A helical tool comprising a cylinder furnished with a series of parallel blades disposed helically thereon in pairs, each pair comprising a rear blade and a front blade adapted to act as a guard therefor; and each pair being separated from the adjacent pairs by a space wider than that between its blades.

2. A helical tool comprising a cylinder furnished with a series of blades disposed helically thereon in pairs, each pair comprising a rear blade and a front blade adapted to act as a guard therefor; and each pair being separated from the adjacent pairs by a space wider than that between its blades.

3. A helical tool comprising a cylinder furnished with a series of parallel blades disposed helically thereon in pairs, each pair comprising a rear blade furnished with a comparatively hard and sharp forward edge and a front blade furnished with a comparatively soft and blunt forward edge and adapted to act as a guard for said rear blade; and each pair being separated from the adjacent pairs by a space wider than that between its blades.

4. A helical tool comprising a cylinder furnished with a series of blades disposed helically thereon in pairs, each pair comprising a rear blade furnished with a comparatively hard and sharp forward edge and a front blade furnished with a comparatively soft and blunt forward edge and adapted to act as a guard for said rear blade; and each pair being separated from the adjacent pairs by a space wider than that between its blades.

5. A helical tool comprising a cylinder furnished with a series of parallel blades disposed helically thereon in pairs, each pair comprising a rear blade furnished with

a forward edge forming an acute angle and a front blade furnished with a forward edge forming an obtuse angle and adapted to act as a guard for said rear blade; and each pair being separated from the adjacent pairs by a space wider than that between its blades.

6. A helical tool comprising a cylinder furnished with a series of blades disposed helically thereon in pairs, each pair comprising a rear blade furnished with a forward edge forming an acute angle and a front blade furnished with a forward edge forming an obtuse angle and adapted to act as a guard for said rear blade.

7. A helical tool comprising a cylinder furnished with a series of parallel blades disposed helically thereon in pairs, each pair comprising a rear blade and a front blade adapted to act as a guard therefor; and the blades of each pair being parallel to the radial line drawn midway between their outer faces.

In testimony whereof I have affixed my signature, in presence of two witnesses.

ROBERT F. WHITNEY.

Witnesses:
RALPH W. FOSTER,
GEORGE G. CLARK.