

(No Model.)

A. E. WHITNEY.  
HIDE WORKING CYLINDER.

No. 494,183.

Patented Mar. 28, 1893.

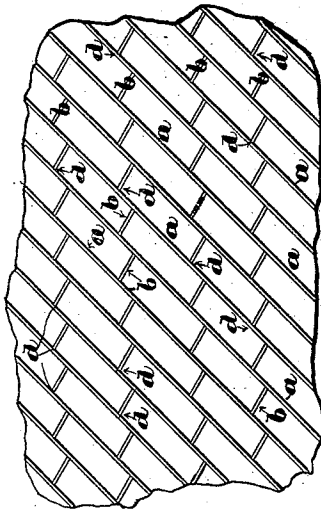


Fig. 4.

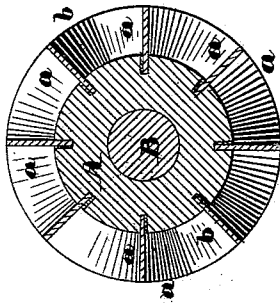


Fig. 2.

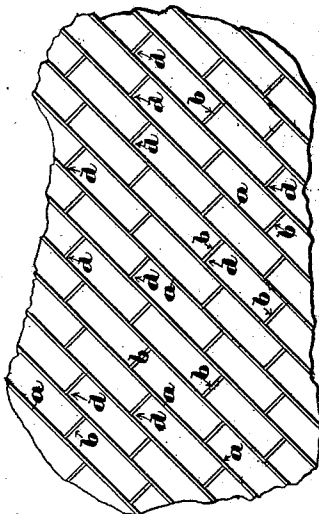


Fig. 3.

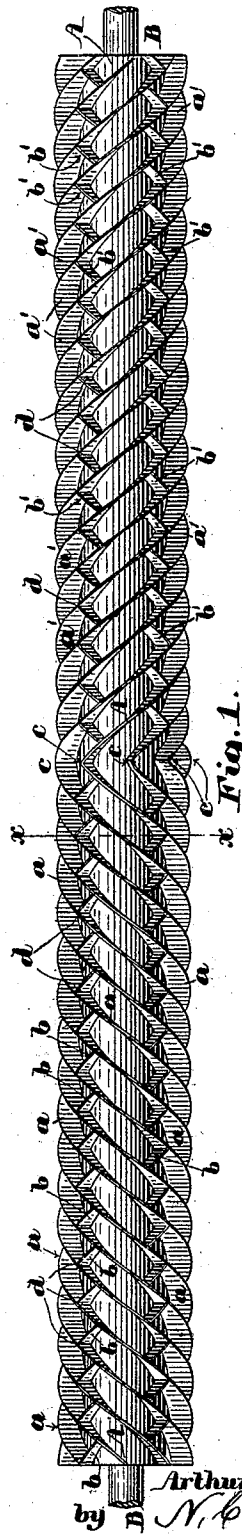


Fig. 1.

Witnesses:  
Walter E. Lombard.  
Elmer E. Chandler.

Inventor:  
Arthur E. Whitney,  
by N. C. Lombard  
Attorney.

# UNITED STATES PATENT OFFICE.

ARTHUR E. WHITNEY, OF WINCHESTER, MASSACHUSETTS.

## HIDE-WORKING CYLINDER.

SPECIFICATION forming part of Letters Patent No. 494,183, dated March 28, 1893.

Application filed January 2, 1892. Serial No. 416,766. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR E. WHITNEY, of Winchester, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Hide-Working Cylinders, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to hide working cylinders and it consists in certain novel features of construction, arrangement, and combination of parts which will be readily understood by reference to the description of the drawings and to the claims hereinafter given and in which my invention is clearly pointed out.

Figure 1 of the drawings is an elevation of a hide working cylinder embodying my invention. Fig. 2 is a transverse section of same on line *x, x*, on Fig. 1 drawn to an enlarged scale. Fig. 3 represents a development of a portion of the periphery of said cylinder at the left end of Fig. 1, as it would appear if spread upon a flat plane, and Fig. 4 is a similar view illustrating a change in the angle of the short sections of blades, relative to the long blades.

In the drawings A is the body of the cylinder, B its shaft, and *a* and *a'* thin steel blades set in grooves cut in the cylinder body said blades being wound spirally around said body in opposite directions from a point at or near the center of the length of said cylinder as shown.

So far the cylinder is of well known construction and cylinders of such construction have been in use for some time, and with a considerable degree of success when used simply for spreading the hide, or in combination with an independent spreading cylinder, but in order to simplify the construction and operation of hide working machines I have conceived the idea of employing only one bladed cylinder to spread the hide or skin and remove the surplus flesh therefrom, as illustrated in another application of mine filed November 14, 1891, Serial No. 411,895. The bladed cylinder in the machine illustrated in said prior application has a series of blades extending spirally around the same in opposite directions at angles of about forty five degrees, the edges of said blades being ground concentric to the axis of the cylinder.

This I have found to work well on the main body of the hide, but I have also found that when the irregular projections of the hide, formed from the skin of the legs and neck are presented to the action of the blades at points at the right or left of the center of the length of the cylinder the tendency of said blades to spread the hide to the right or left has the effect sometimes to bend said projections to the right or the left to such an extent as to form a wrinkle or fold therein and then cut through the fold. This is very apt to occur when said irregular projections are partially severed from the body of the hide by transverse cuts made in skinning the animal which very often occurs. To obviate this difficulty I insert in said cylinder, in addition to the main blades *a a'*, the short sections of blades *b b'* which extend from one blade *a* or *a'* to the next blade *a* or *a'* at right angles or nearly so to said blades *a a'* that is the short blades *b b'* form sections of spirals inclined in opposite directions to said main blades *a* or *a'*. The main blades *a a'* meet each other at the angles *c c* which point in the direction in which the cylinder is to be revolved, and in like manner the short blades *b b'* form similar angles with said main blades as at *d d* which angles or points of junction are distributed along the cylinder to a sufficient extent to cover all possible contingencies.

I have found by practically operating a machine provided with a cylinder of this construction that whether the irregular projections on the skirts of the hides are presented to the action of the cylinder at one side or the other of the center of said cylinder some one of the junction points or angles *d d* will strike said irregular projection at or near its center and the action of the blades *a a'* and the short sections *b* and *b'* will tend to spread that portion of the hide in both directions and thus prevent the bending of said projecting portion to one side and the consequent formation of wrinkles or folds to be injured by being cut through. It will be seen that the aggregate lengths of the short blades *b b'* are very much less than that of the main blades *a* and *a'*, in fact their lengths being only about one quarter to one third that of the blades *a a'*, and as a consequence when acting upon the body of the hide there is ample preponderance

of tendency to work the hide outward from its center to insure a proper spreading of said hide and the removal of the superfluous flesh therefrom, and at the same time when any  
5 small individual irregular projection is presented to the action of said blades at one side of the center of the cylinder, the short sectional blades *b* and *b'* presenting an acting surface at the reverse angle to the main blades  
10 *a a'* will be sufficient to insure the proper spreading and fleshing of said irregular projecting skirt. This cylinder may be used with success in hide fleshing hide scouring or unhairing machines.

15 What I claim as new, and desire to secure by Letters Patent of the United States, is—  
In a hide working cylinder, the combina-

tion of two sets of spirally curved blades, arranged in right and left hand spirals at each side of the center of the length of said cylinder, said spirals being inclined toward the opposite ends of the cylinder, and short blades interposed at intervals between said spirally curved blades, said short blades lying adjacent connecting one spirally curved blade  
20 with the other, and being oppositely inclined. 25

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 30th day of December, A. D. 1891.

ARTHUR E. WHITNEY.

Witnesses:

N. C. LOMBARD,

WALTER E. LOMBARD.