(No Model.)

E. D. WARREN.

HIDE AND PELT WORKING MACHINE.

No. 262,520. Patented Aug. 8, 1882.

Fig. 1.

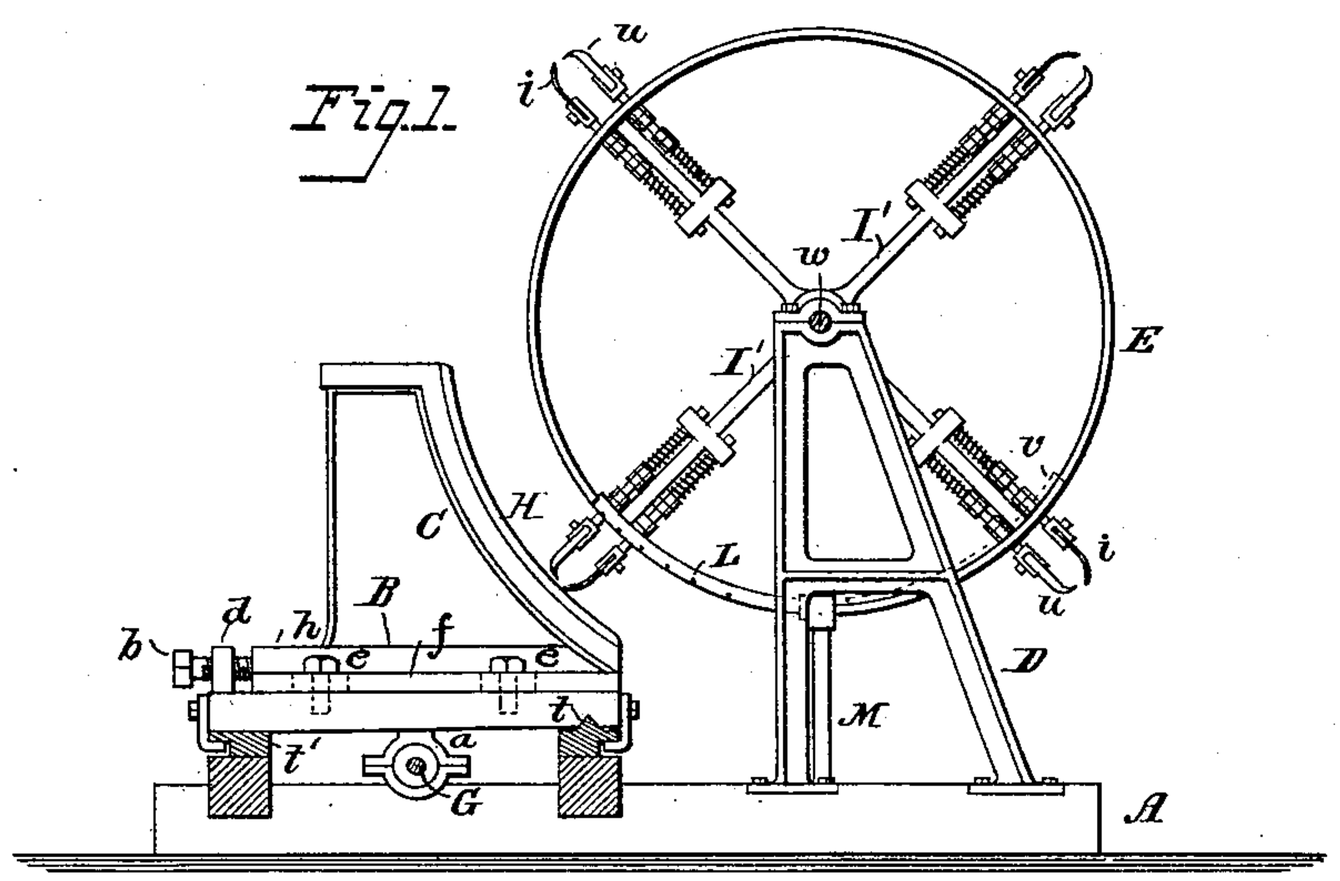

Fig. 2.

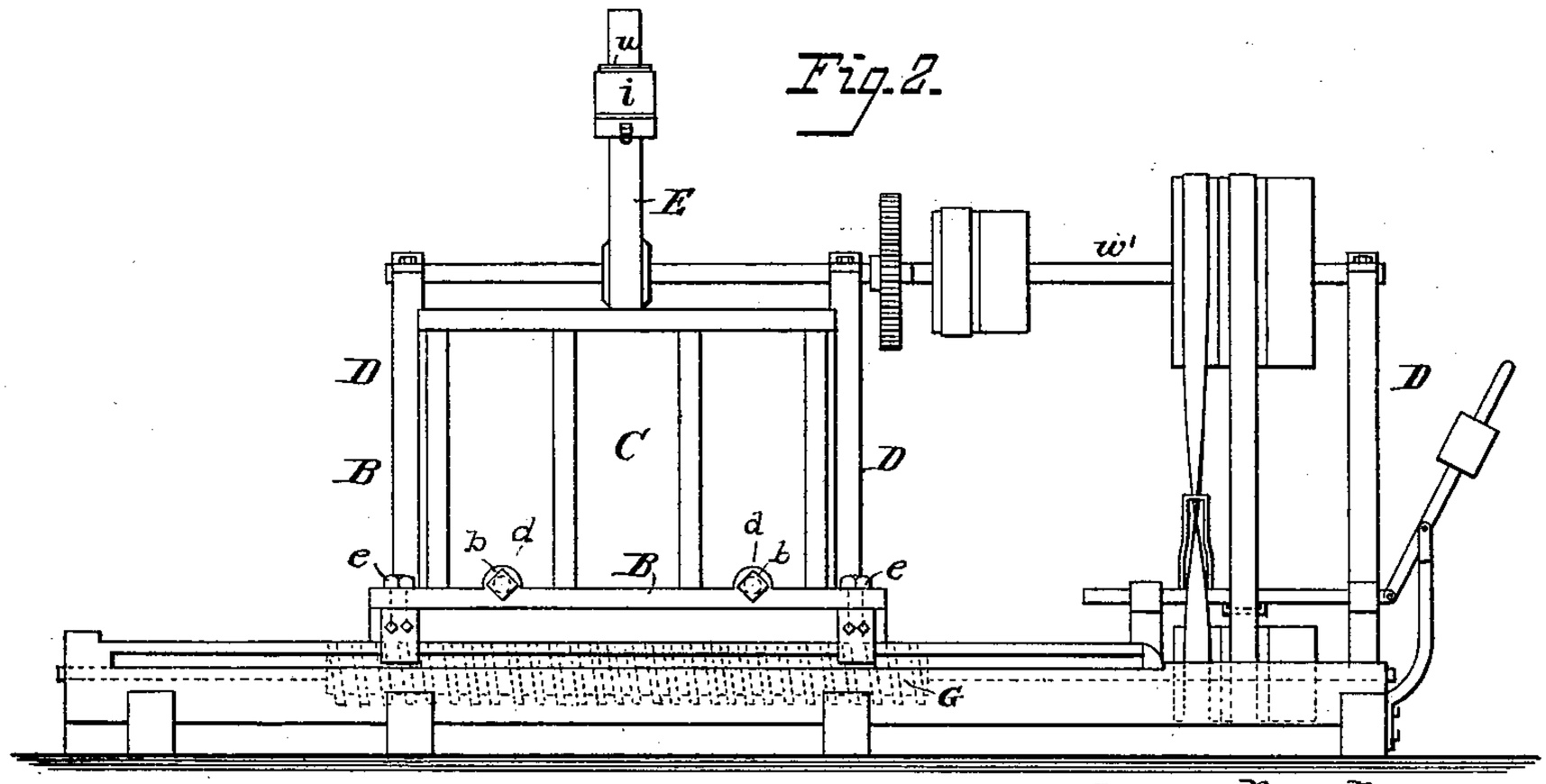

Fig. 3.

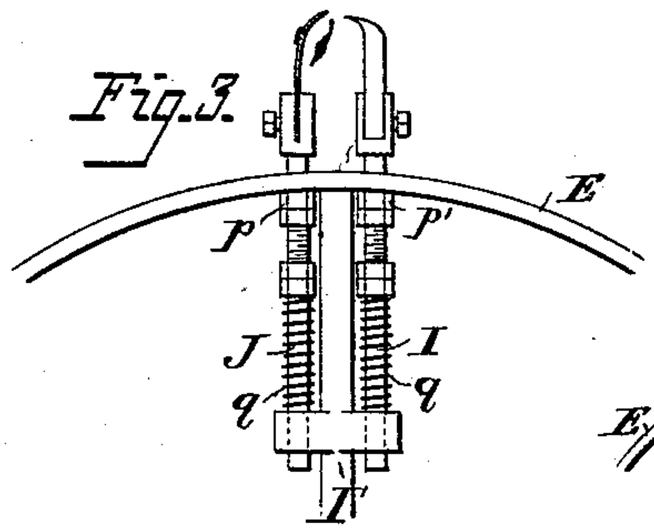

Fig. 4.

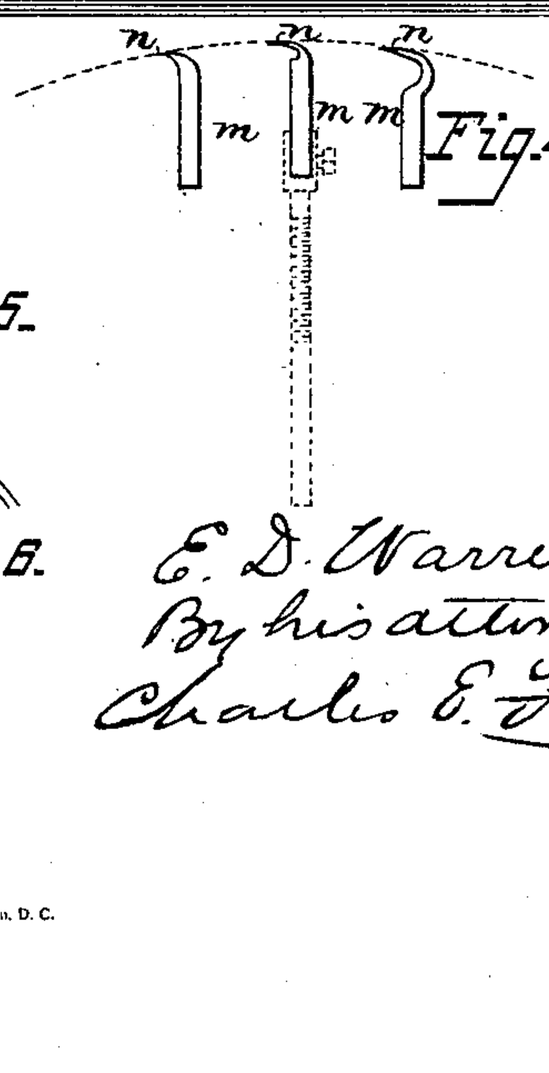

Fig. 5.

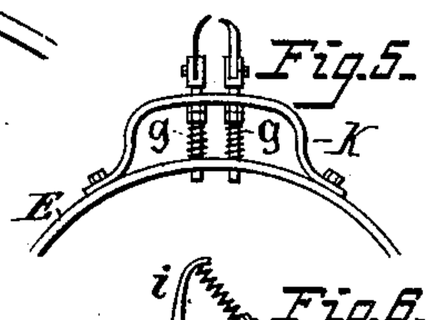

Fig. 6.

Attest:
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E. D. Warren
By his attorney
Charles E. Foster

UNITED STATES PATENT OFFICE.

EDMUND D. WARREN, OF WOBURN, MASSACHUSETTS.

HIDE AND PELT WORKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 262,520, dated August 8, 1882.

Application filed March 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDMUND D. WARREN, of Woburn, Middlesex county, Massachusetts, have invented certain Improvements in Hide and Pelt Working Machines, of which the following is a specification.

My invention relates to that class of hide and pelt working machines in which a revolving wheel carries tools that operate upon the pelt held upon a curved bed, as illustrated in the machine patented to me May 10, 1881; and my invention consists in certain details of construction whereby the efficiency of the machine is greatly increased.

In the drawings, Figure 1 is a side elevation of a hide and pelt working machine with my improvements. Fig. 2 is a front elevation. Fig. 3 is a side view of part of the wheel and tools enlarged. Fig. 4 is a view illustrating different forms of cutting, and Figs. 5 and 6 are views illustrating modifications of parts of the machine.

The base A of the machine is constructed in any suitable manner, and is provided with a V-shaped guide, *t*, and a flat rail, *t'*, parallel thereto and adapted to bearings of the carriage B, that supports the curved bed-plate C, opposite which, in suitable standards, D D D, revolves a shaft, *w*, supporting a wheel, E, carrying tools of any suitable form, as described hereinafter. By using one V-guide and a flat rail the carriage is guided without the binding and increase of friction sometimes resulting from the shrinking of the frame when two V-guides are used.

As shown in the drawings, the carriage B is moved back and forth along the ways by means of a long screw upon the shaft G, which turns in bearings on the base and passes through a nut, *a*, at the under side of the carriage B, the motion of the shaft being reversed as the carriage approaches either end of the frame by any suitable shifting devices, the bed being thus moved automatically back and forth in front of the wheel.

I do not limit myself to the use of the means described for reciprocating the bed, as other devices of various kinds may be used for this purpose—as, for instance, a chain traveling over pulleys, or a piston reciprocating in a cylinder of a crank-wheel and pitman.

In my aforesaid patented machine the curved bed was connected immovably to the carriage. I have improved this construction by arranging the bed adjustably upon its carriage, securing it thereto by bolts *e* passing through slotted flanges *f*, and adjusting it by set-screws *b* passing through ears *d* upon the carriage and bearing upon the base-plate *h* of the bed-plate C. I am thus enabled to set the bed-plate with the greatest exactness in its position and adjust it from time to time, as may be required.

It is difficult to secure to the bed-plate C the elastic apron or bed H, of rubber, felt, or other material usually employed as a facing, the action of the tools tending to wrinkle or tear the same, resulting in damage to the skins. I obviate this by vulcanizing the bed or sheet of rubber or other suitable material directly upon the curved metal plate, thereby so cementing it in place that it will not give way under the influence of the tools, without in the least interfering with its desirable yielding qualities.

I may use any suitable metal or composition for a bed-plate, but prefer to employ a sheet of malleable iron bent to the proper form. In place of using a traveling bed, the latter may be stationary, and the wheel E may be moved upon or with its shaft in front of the bed.

In fleshing hides it is very desirable that the fleshing tool or knife shall work upon a smooth and consolidated body of hide. For this purpose I combine with each fleshing-tool *u* a blade or smoothing-tool, *i*, arranged so as to bear upon and consolidate the hide just previous to the action of the fleshing-knife thereon. The said tool *i* is arranged upon the wheel so as to be brought upon the skin from three to twelve inches in advance of the fleshing-knife, the shorter distance being preferable, and may consist of a curved blade of spring-steel so shaped as to press forcibly upon and slide over without tearing the skin. Instead of a spring-blade, however, a smooth stiff blade or bar may be used with a spring-bearing—such, for instance, as that shown in Fig. 6. The presence of this spring-blade upon the skin smooths and condenses the latter without tearing it, so that the fleshing-knife will cut solidly and evenly into the skin.

Instead of using the old form of knife, which is but little more than a scraper, I employ a knife, *u*, in which a thin tapering cutting-blade, *n*, projects laterally from the stem *m* at nearly

a right angle, that its outer face may be nearly parallel to the face of the skin operated upon. A cutter of this character will completely remove the cuticle without the slightest danger of cutting too deep or injuring the skin. It can be kept sharp more readily than the ordinary knife and requires less power to operate it. It also has greater elasticity at the point, and will yield without tearing the hide.

The cutters and rubbers may be arranged in any suitable manner upon the wheel. For instance, they may be secured to shafts I J, guided and supported by projections upon the spokes *i'*, as shown in Fig. 3, or extending through a bracket, K, as shown in Fig. 5, springs *g* throwing the shafts outward and affording yielding bearings for the tools, nuts *p'*, adjustable upon the shafts, serving to regulate the spring-pressure, and nuts *p* regulating and limiting the extent of the outward movement.

In fleshing-machines the tools are apt to become clogged with dirt and gummy matter, and in hide-working machines it is desirable to maintain the hides in a moist condition while operating upon them. To maintain the tools clean and moisten the hides, I arrange one or more perforated pipes, L, adjacent to the periphery of the wheel and connected to water-pipes M in such a manner that streams of water may be thrown upon the tools, so as to cleanse the same, and, if desired, upon the skins; and the tubes L may swivel upon the tubes M, so as to be turned to the position shown in dotted lines *v*, Fig. 1, when it is desired to wet the tools without wetting the skins.

I do not limit myself to the form and arrangement of tubes shown, as many different arrangements may be employed with like result.

I do not here claim the construction of the fleshing-knife, as it may form the subject of a separate application for Letters Patent.

I claim—

1. The combination, with the carriage and means for reciprocating the same in front of a wheel, E, of a curved bed-plate, C, secured adjustably upon the carriage, and the screws *b*, extending through the studs on the carriage and bearing on the bed-plate, substantially as set forth.

2. The combination, with the bed-plate C, of an elastic bed, H, vulcanized to the bed-plate, as specified.

3. The combination of the fleshing-knife and an elastic smoothing-tool arranged to operate in advance of the knife, substantially as specified.

4. The combination, with the wheel E, of the tool-shafts, springs *g*, and nuts *p p'*, substantially as specified.

5. The combination, with the bed and hide-working tools, of a water-pipe arranged and adjustable to throw streams of water upon the tools and bed or upon the tools alone, substantially as set forth.

6. The combination of the reciprocating bed, revolving wheel carrying the hide-working tools, and stationary pipe M, and pipe L, swiveled to the pipe M, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDMUND D. WARREN.

Witnesses:
CHARLES E. FOSTER,
A. E. T. HANSMANN.