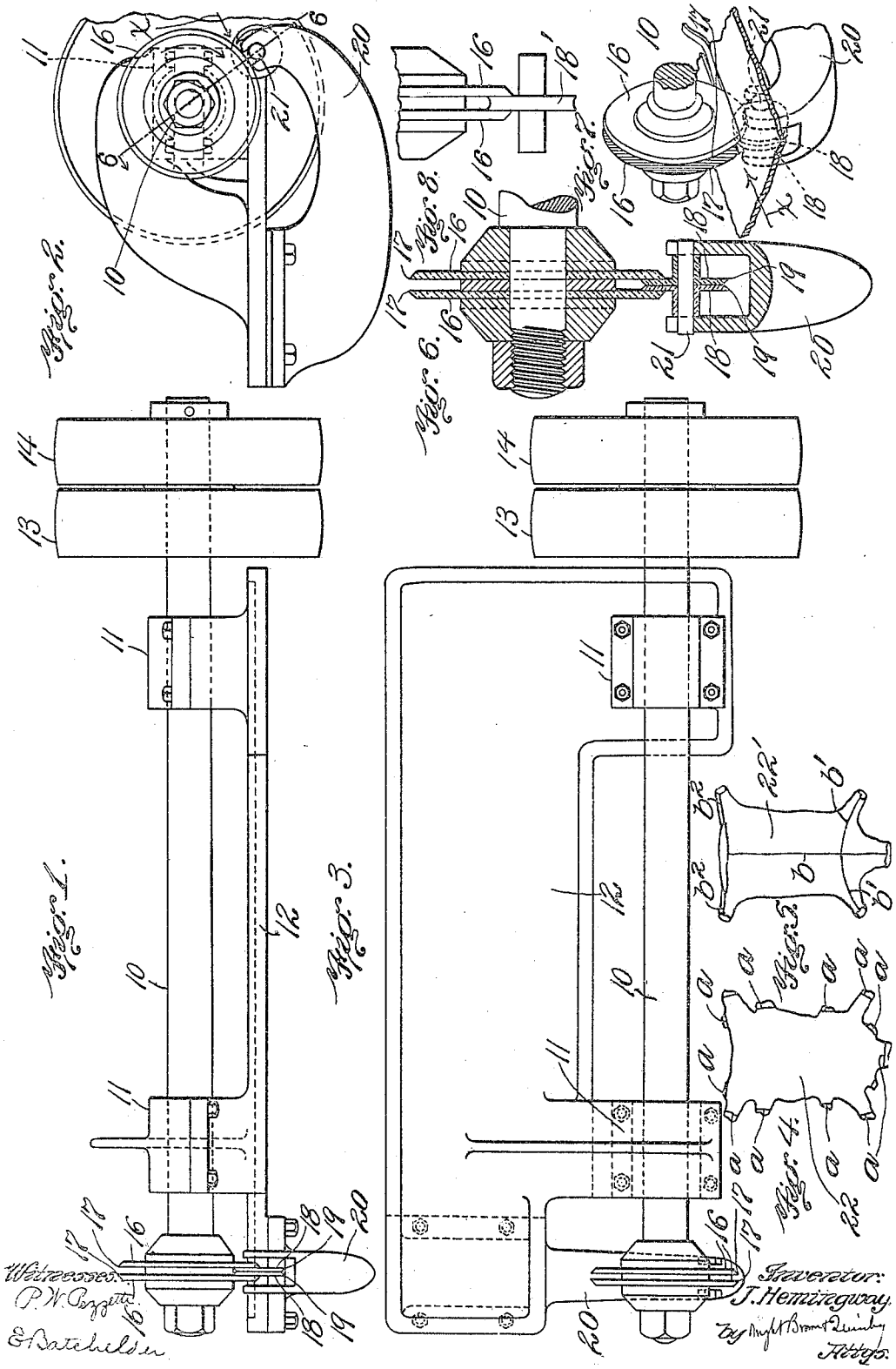
No. 831,866. PATENTED SEPT. 25, 1906.

J. HEMINGWAY.

APPARATUS FOR CUTTING DRIED SKINS.

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APPARATUS FOR CUTTING DRIED SKINS.

No. 831,866. Specification of Letters Patent. Patented Sept. 25, 1906.

Application filed February 15, 1905. Serial No. 245,715.

To all whom it may concern:

Be it known that I, JOHN HEMINGWAY, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Apparatus for Cutting Dried Skins, of which the following is a specification.

This invention relates to apparatus for cutting and trimming dried untanned animal-skins. Owing to the tough and horny nature of these dried skins and to the wrinkled and curled condition in which their edges and other portions are usually found, it has never, so far as I am aware, been found practicable prior to my invention to cut or trim these skins in a dry state. Heretofore they have been soaked in a liquor to make them pliable and usually trimmed by ordinary knives or shears; but this method has the disadvantage, among others, of requiring the skins and also the trimmings therefrom to be immediately used. The trimmings are usually sold to glue manufacturers and unless used at once they will spoil. As it is often desirable on account of market conditions or for other reasons to keep the trimmings for a period instead of disposing of them immediately, a method of dry-cutting will have obvious advantages on the above account as well as on account of cleaner handling, absence of labor and material in preparing the skins, &c.

An important consequence of the use of my invention is a decreased liability to the spread of diseases, such as anthrax, which have in many instances been communicated to operatives by the handling of wet skins bearing the disease-germs.

I have discovered that skins of the above-mentioned character can be rapidly and effectively cut or trimmed by subjecting them to the action of overlapping rotary shearing-knives, and my invention consists in the improved apparatus of which that action is the distinguishing feature.

The apparatus is further constructed with a view to enabling sloughed skins—that is, those obtained in a whole state by stripping the skin from the animal like a glove—to be opened out while in a dry state.

Of the accompanying drawings, Figure 1 represents a side elevation of a cutting-machine embodying my invention. Fig. 2 represents a front elevation thereof. Fig. 3 represents a plan view. Fig. 4 represents a plan view of an opened skin with the trimming-lines indicated thereon. Fig. 5 represents a plan view of a sloughed skin with the cutting-lines designated. Fig. 6 represents a section on line 6 6 of Fig. 2. Fig. 7 represents a perspective view showing the cutting action of the knives upon the work. Fig. 8 represents an edge view of a modification in the construction of the lower cutting member.

The same reference characters indicate the same parts in all the figures.

In the drawings, 10 is a shaft mounted in bearings 11 11 on a frame 12 and having fast and loose pulleys 13 14 for the driving-belt. On the outer end of shaft 10 are fixed a pair of rotary shearing-knives 16 16, clamped to the shaft with a space between their adjacent faces. The margins of these knives are beveled and terminate in circular cutting edges 17 17 on the inner or adjacent faces of the knives.

Between the knives 16 16 is mounted a complemental rotary cutting member interlapping with the knives 16 and composed of a pair of cutting disks or knives 18, having beveled margins terminating in circular cutting edges 19 19, located on the outer or remote faces of the disks and adapted to coöperate with the cutting edges of the upper knives 16. The object of this construction of the lower cutting member is to give two cutting edges and allow them to be easily sharpened. The cutting edges might, however, be made upon the margin of a single lower disk 18′, as indicated in Fig. 8.

The lower cutting member 18 18 has a bearing in a supporting horn or arm 20, which springs from the frame 12 a considerable distance back of the cutting-point of the knives 16 18 and reaches forwardly and upwardly to a point below and slightly forward of the shaft 10. This leaves a portion of said horn back of the bearing-trunnion 21 of cutting member 18 and in line with the direction of movement of the skin, which is in a plane including the common chord of the upper and lower knives 16 18, and leaves free spaces on both sides of the member 18 18, which are essential in cutting through one wall of a tubular skin.

In trimming an open or flat-dried untanned skin, such as the skin 22, (represented in Fig. 4,) the cuts are along lines such as *a a* in order to remove superfluous projections. Although the dried skin is very tough and horny and usually curled or wrinkled on the edges, the shearing action of the rotary knives 16 18 is found to effectively cut or

sever the skin. It will be noted that the two pairs of cutting edges 17 19 have opposing thrusts—that is, the tendency of the left-hand pair of knives 16 18 to separate is opposed by a contrary tendency on the part of the right-hand pair. As the thrusts are thus balanced, the skin is cleanly cut and passes through without any tendency to slue to either side, the effect of the knives being to cut out a thin strip from between the severed portions.

In operating upon a sloughed skin, such as represented at 22′ in Fig. 5, the skin is cut along lines, such as *b*, through the neck and down the middle of the body, *b*′ down the fore legs and meeting the cleft *b*, and b^2 down the hind legs and meeting the breech-opening in the skin. The horn or arm 20, supporting the lower cutting-knives 18, enters the tubular portions of the skin, the cut margins of the latter separating and passing on either side of said arm as the skin is fed in the direction of the arrows *x* in Figs. 2 and 7.

It will be understood that various modifications may be made without departing from the scope of my invention.

I claim—

1. A cutting-machine comprising a rotatable knife, a horn extending from one side of the knife to the opposite side, and a knife journaled in the horn near its outer extremity and coöperating with the first-named knife, the horn being narrow and the journal of its knife being short to permit the side portions of a skin being cut to freely pass the axis of said knife.

2. A cutting-machine comprising a rotatable knife having separated cutting edges, a horn extending from one side of the knife to the opposite side, and a knife journaled in the horn near its outer extremity and having cutting edges upon its opposite faces coöperating with the first-named cutting edges, the sides of the horn and its knife journal or support being free to permit the passage of side portions of a tubular skin.

3. A cutting-machine of the character described comprising overlapping rotary shearing-knives, and a horn journaling one of said knives and extending in a direction longitudinal of the chord common to said knives, free spaces being provided on both sides of the horn and its knife to permit the passage of side portions of a tubular skin.

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

JOHN HEMINGWAY.

Witnesses:
R. M. PIERSON,
A. C. RATIGAN.