(No Model.) 2 Sheets—Sheet 1.

J. ROOD & I. VAUGHAN.

MACHINE FOR SHAVING HIDES OR SKINS.

No. 383,914. Patented June 5, 1888.

Fig. 2.

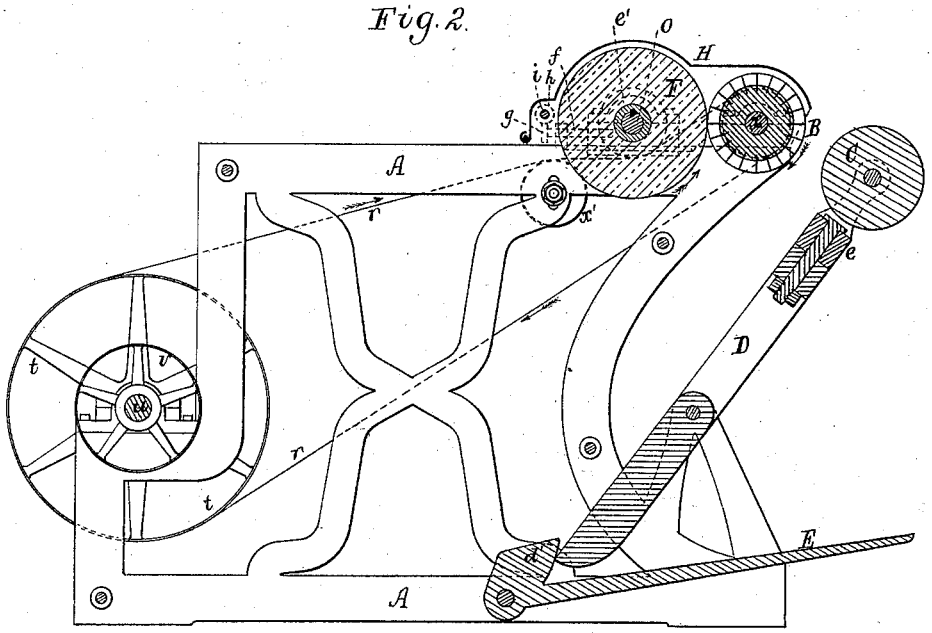
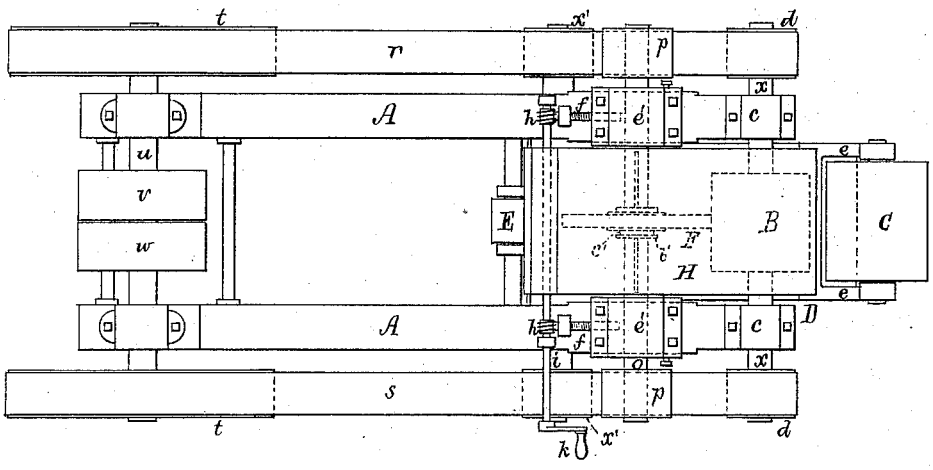


Fig. 1.



Witnesses.
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W. E. Piper.

Inventors.
John Rood.
Ira Vaughan.
by Singleton & Piper, attys

(No Model.) 2 Sheets—Sheet 2.

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Fig. 5.

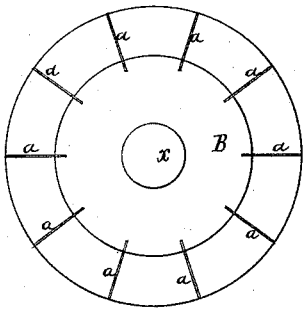


Fig. 4.

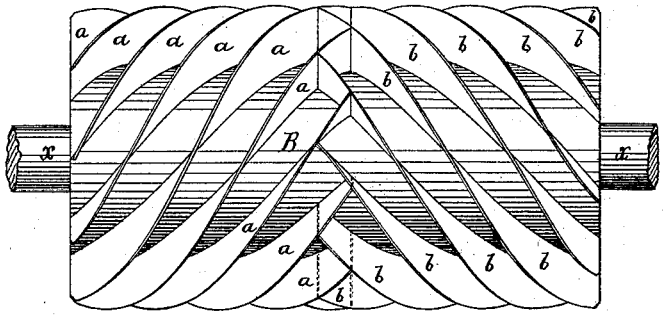
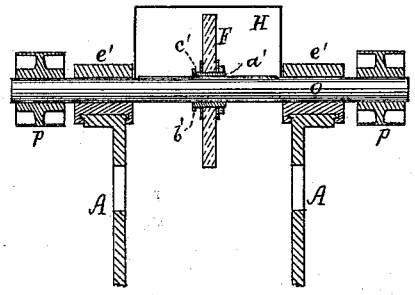


Fig. 3.



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John Rood.
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UNITED STATES PATENT OFFICE.

JOHN ROOD AND IRA VAUGHAN, OF SALEM, MASSACHUSETTS.

MACHINE FOR SHAVING HIDES OR SKINS.

SPECIFICATION forming part of Letters Patent No. 383,914, dated June 5, 1888.

Application filed March 19, 1888. Serial No. 267,673. (No model.)

To all whom it may concern:

Be it known that we, JOHN ROOD and IRA VAUGHAN, citizens of the United States, residing at Salem, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Shaving Skins or Hides; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a top view; Fig. 2, a longitudinal central and vertical section of a machine provided with our improvement. Fig. 3 is a transverse section taken through the cutter-sharpening wheel. Fig. 4 is a top view, and Fig. 5 an end view, of the cutter-cylinder of said machine.

Our present invention relates to improvements in a machine for shaving skins, such as shown in United States Patent, No. 339,323, granted to John Rood, said improvements relating more particularly to the cutter-cylinder, the knives of which are differently arranged from those in said patent. The sharpening-wheel therein shown is connected with mechanism for constantly moving it back and forth on its shaft while the machine is in operation, and in the present case is arranged to be moved or reciprocated on its shaft, as may be required, by an implement applied to the hub of the wheel and held in the hand of the attendant. The blower and the conduit *a'* and the mechanism for operating said blower (shown in said patent) are herein dispensed with. The guide-pulleys *x* of the belts *r s*, which in said patent are pivoted to standards erected on the frame of the machine, are in that case pivoted upon bearings arranged in slots in the side of the frame, which admits of adjustment, so that the tension on the belts can be regulated.

The object of our present improvements is to simplify the machine or to lessen the number of parts, so as to reduce the cost of manufacture, and also to provide a cutter-cylinder having its knives arranged so that it will shave a skin or hide without leaving marks on the surface shaved, and will also hold the skin from moving in a direction lengthwise of the cutter-cylinder.

In the drawings, A represents the frame for supporting the operative parts of the machine within said frame, and at one end of it is a cutter-cylinder, B, having on its external surface two series of knives, *a b*, each series being arranged to extend from one end of the cylinder toward the other end thereof, and in a spiral direction, the direction of each series being opposite to that of the other series. The knives of each series are extended beyond the middle of the cylinder longitudinally thereof until they abut each against the other, as shown in Fig. 4. By arranging the knives as represented no mark will remain on the hide or skin after it has been operated on by them, and during the operation of shaving said hide or skin it will be kept in a smooth state, owing to the arrangement of the knives, they tending to spread or extend the portion of the skin while being acted upon by them in directions from the said middle of the cylinder toward each end of it.

The shaft *x* of the cutter-cylinder is supported in boxes *c c*, and there is secured on each end of said shaft a pulley, *d*.

Back of or in rear of the cutter-cylinder B is a roller, C, arranged and pivoted within a fork, *e*, secured to one end of a lever, D, fulcrumed to the frame A. The lower arm of said lever rests against a cam, *d'*, extending upward from a pedal, E, arranged as shown, and pivoted to the frame A. By pressing downward the pedal the roller C will be moved toward the cutter-cylinder, the said roller moving by its own weight away from such cylinder and causing the pedal to rise on the foot of the operative being removed from the pedal.

In front of the cutter-cylinder B there is a grinding-wheel, F, whose shaft *o* is supported in adjustable boxes *e' e'*, each of which is provided with a screw, *f*, for moving it either way lengthwise of the machine, in order to set the grinding-wheel up to the cutter-cylinder as such wheel and the cutters of such cylinder may become worn.

Each screw *f* is provided at its outer end with a worm-gear, *g*, to engage with a screw,

h, fixed on a shaft, *i*, arranged as shown, and provided with a crank, *k*, for revolving the said shaft.

The grinding-wheel is applied to the shaft *o*, so that it can slide thereon lengthwise, it being arranged on a sleeve, *a'*, which is splined to said shaft, so as to revolve therewith. One end of the sleeve is provided with a flange, *b'*. When it is desired to sharpen the knives of the cylinder B, by revolving the crank *k* in one direction the mechanism connected therewith will move the boxes *e'* of the shaft *o*, so as to carry the periphery of the sharpening-wheel F against the knives, and by applying a fork or other suitable instrument to the groove or neck *c'* of the sleeve *a'*, held in the hand of the attendant, the wheel can be reciprocated on the shaft to the necessary extent to sharpen the knives, after which, by turning the crank *k* in the opposite direction, the wheel F will be moved away from the knives.

Endless belts *r s* extend around the two pulleys *d d*, secured to the ends of the shaft *x* of the cutter-cylinder, and also about larger pulleys, *t t*, fixed on a driving-shaft, *u*, provided with a fast pulley, *v*, and a loose one, *w*, all arranged as represented. The upper portion of each belt also goes over a guide-pulley, *x'*, which revolves on a bearing secured to the frame of the machine. The belts are borne upward by said pulleys *x'* against the under side of the pulleys *p p* with sufficient force to revolve the shaft *o* of the sharpening-wheel.

A hood, H, is arranged over the grinding-wheel and cutter-cylinder, as shown.

On the machine being put in operation, so as to cause the cutter-cylinder and the sharpening-wheel to revolve in the direction indicated by the arrows in Fig. 2, a skin to be shaved or dressed on its flesh side is to be introduced between the cutter-cylinder and the roller C and with the hair side of the said skin against such roller, after which said roller, by means of the pedal, is to be moved forward, so as to cause the skin to be carried up to the cutter-cylinder, which, revolving, will shave, dress, or remove from the skin the protuberant parts to be taken from it, the skin in the meantime being pulled and drawn upward upon the roller.

We claim as our invention—

1. The cutter-cylinder having the two series of knives arranged as described, in combination with the pressure-roller and the sharpening-wheel, arranged substantially as set forth.

2. The cutter-cylinder having the two series of knives, as described, arranged in a spiral direction on the external surface of said cylinder, the direction of each series being opposite to that of the other series and extending a short distance beyond the middle of the cylinder, longitudinally thereof, in combination with the presser-roller and sharpening-wheel, arranged and provided with mechanism, substantially as explained, for operating such cylinder, roller, and wheel, as set forth.

3. The cutter-cylinder having the two series of knives, as described, arranged in a spiral direction on the external surface of said cylinder, the direction of each series being opposite to or the reverse of that of the other series, and the knives of each series extending from one end of the cylinder to and beyond the middle of such cylinder longitudinally thereof until they abut each against the other, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN ROOD.
IRA VAUGHAN.

Witnesses:
S. N. PIPER,
H. J. HARWOOD.