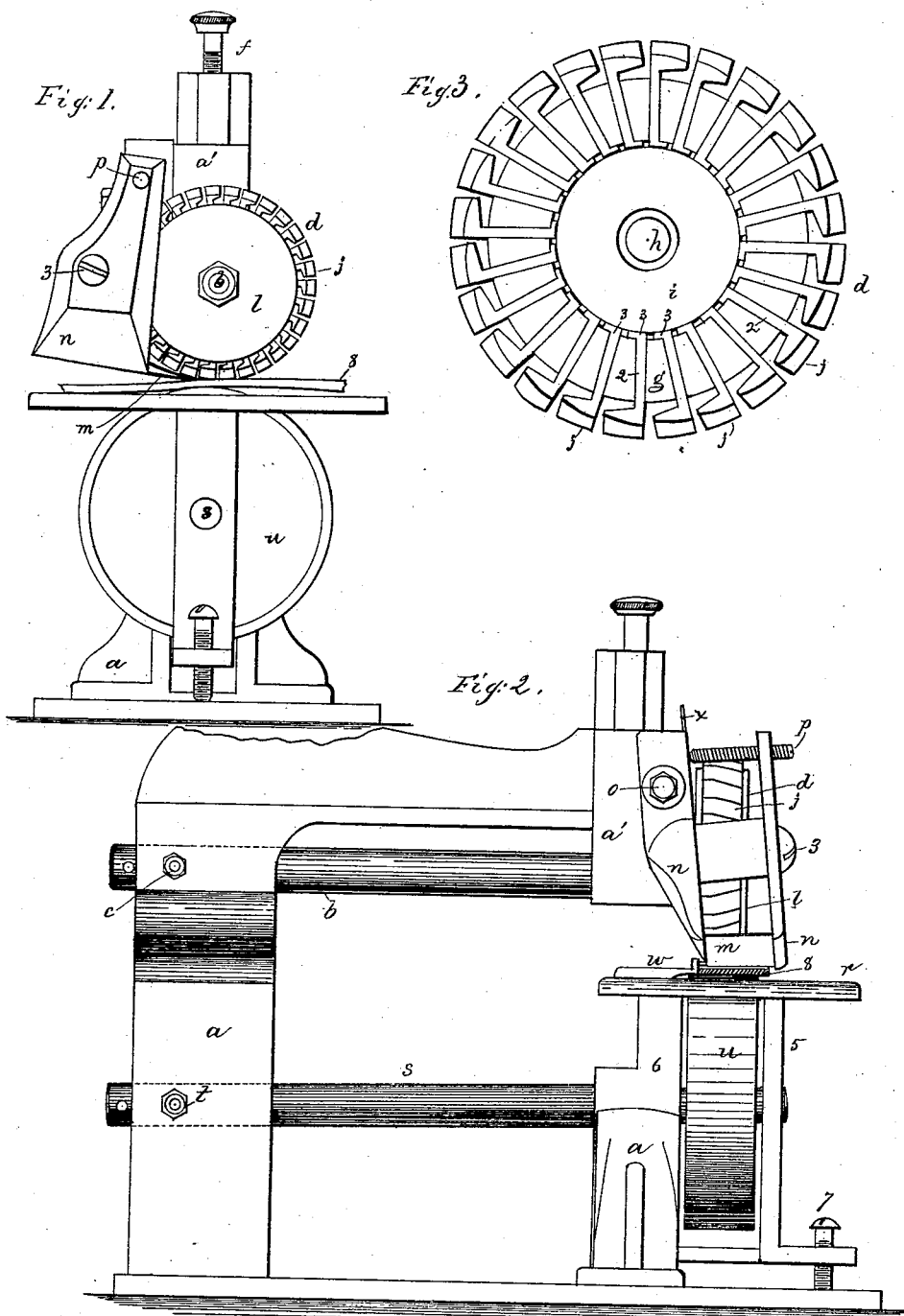


E. J. FOSS.
SKIVING-MACHINE.

No. 191,418.

Patented May 29, 1877.



Witnesses.
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UNITED STATES PATENT OFFICE.

ELIPHALET J. FOSS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SKIVING-MACHINES.

Specification forming part of Letters Patent No. 191,418, dated May 29, 1877; application filed April 24, 1877.

To all whom it may concern:

Be it known that I, ELIPHALET J. FOSS, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Skiving-Machines, of which the following is a specification:

This invention relates to improvements in skiving-machines, to skive leather, leather-board, &c., and to also trim the edges of leather.

The invention consists in a feed and presser wheel, having a series of yielding sectional blocks, adapted to engage the material and carry it forward over the supporting-surface against the edge of the knife. These sectional blocks are backed by an india-rubber or other suitable spring, and in operation they yield toward the center of the wheel, so that more than one block operates at one time upon the material, the faces of the blocks in contact with the material, adapting themselves thereto.

When the periphery of a feeding-wheel of usual construction meets the stock, it bears thereon only in a line drawn vertically through the axis of the support for the wheel; whereas my improved wheel, flattened peripherically as it meets the stock, bears upon the same for some distance, holding the stock quite up to the cutting-edge, and then pressing upon the piece skived or cut from the main body of the stock as it passes above the upper side of the knife.

I prefer, in connection with the pressing and feeding wheel, to employ a second wheel, to assist in sustaining the stock, such wheel projecting upward a certain distance through the surface of the supporting-table.

Figure 1 represents one of my improved skiving-machines in end elevation. Fig. 2 is a side elevation thereof, and Fig. 3 an enlarged detail of the pressing and feeding wheel.

The frame *a* of the machine is or may be made of suitable shape, and of sufficient strength to properly sustain the working parts. The main shaft *b* is mounted at one end in a bearing pivoted at *c*; and the front end of the shaft, to which is attached the pressing and feeding wheel *d*, is sustained in a movable bearing located within the head *a'*,

and controlled, as to its pressure, by a suitable adjusting-screw, *f*, or equivalent.

This wheel *d*, to move the stock, is composed of a body, *g*, provided at its center with a hole, *h*, for the shaft *b*; then with a central space, to contain a cylindrical block of india-rubber, *i*, and with a series of radial grooves, for the reception of the shanks 2 of the blocks *j*. The shanks, at their back ends, are provided with hooks 3, to prevent the blocks from falling from the grooves. These blocks are retained in the grooves by a face-plate, *l*. The faces of the pieces *j* are inclined from the plate *l* backward for the most of their length, and at their extreme rear portions are preferably left so that such portions of the faces are horizontal and parallel with the shaft *b*, and these horizontal portions are roughened, to better engage and move the stock.

Fig. 3 shows all the faces thrown out into a true circular path.

In Fig. 1, which is intended to represent the wheel *d* pressed down upon the stock, it will be noticed that the sections at the under side of the wheel have been pressed back toward the center of the wheel, the india-rubber then yielding, so that two or more of the faces bear firmly upon the stock, and hold it in the movement quite up to the edge of the knife *m*, which is gripped in a holder, *n*, attached adjustably to the head *a'* by a bolt, *o*, or otherwise.

The outer plate of the holder is pivoted at 3, and provided with a screw, *p*, by which it may be moved to grasp the knife and permit its removal or adjustment. The forward edge of the knife is so shaped as to present its cutting-edge at an angle with relation to the width of the knife and the movement of the stock, and its forward edge is inclined with relation to the supporting-surface, and placed substantially in accordance with the inclination of the faces of the blocks *j*, so that the knife cuts off a skiving thicker at one edge than at the other.

The supporting-surface *r* for the stock is mounted on standards 5 6, that receive and form bearings for the shaft *s*, having its back bearing pivoted at *t*. At the front end of the shaft *s* is the stock-supporting wheel *u*. Its

periphery extends above the top of the supporting-surface r , and the wheel d presses the stock directly down thereon. This construction obviates friction, and holds the stock between rolling-surfaces. The position of the wheel u and support r may be regulated by the screw 7.

The triangular piece skived from the upper flat side of the stock passes above the knife m . Each face j , after passing a vertical line drawn through the centers of the wheels d u , continues to bear upon the stock to crowd it along horizontally, and press it against and past the edge of the knife. Each face continues to bear upon this piece, passing above the knife, for a short distance back of the cutting-edge, thereby keeping the knife and stock steady at the cutting-point, and making a smooth, uniform cut, substantially as made by hand.

The edge of the stock is controlled by a guide, w , attached to the support r . The knife-holder n may be provided with a knife, x , made vertically adjustable, so as to be raised or lowered to cut and trim the edge of a piece of leather, a sole, or other piece. Such an edge-trimming knife is shown in Fig. 2, elevated out of operative position. Figs. 1 and 2 show a piece of leather, 8, in position to be skived.

The india-rubber spring is so covered as not to be reached by oil. By removing the face-plate l a new block of rubber may be substituted.

This feeding-wheel may be employed in other than leather-skiving machines.

The screw 7 permits the table r to be raised or lowered to adapt the machine to stock of different thicknesses.

In practice, I prefer to arrange the center of rotation of wheel d a little to the side of a vertical line drawn through the center of rotation of the wheel u . This enables the knife-edge to meet the leather nearer the extreme top of the wheel u , and enables the knife to cut smoother than if farther removed from the extreme upper center of the wheel.

The faces of the blocks, for some uses, will be parallel with the axis of the shaft for moving it.

I claim—

1. A feeding and pressure wheel, composed of a spring and yielding blocks, to operate substantially as described.

2. A feeding-wheel provided with yielding blocks, inclined upon their faces at the front of the wheel, substantially as described.

3. In a skiving-machine, the combination of a feeding-wheel, having its face composed of yielding blocks, with a knife to operate, substantially as described.

4. In a skiving-machine, a wheel having its periphery composed of yielding blocks, in combination with a supporting-wheel.

5. The feeding-wheel, having its periphery composed of yielding blocks, in combination with a supporting-bed and a knife to skive leather, the feed-wheel operating to hold and move the stock, substantially as described.

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

ELIPHALET J. FOSS.

Witnesses:

G. W. GREGORY,
W. J. PRATT.