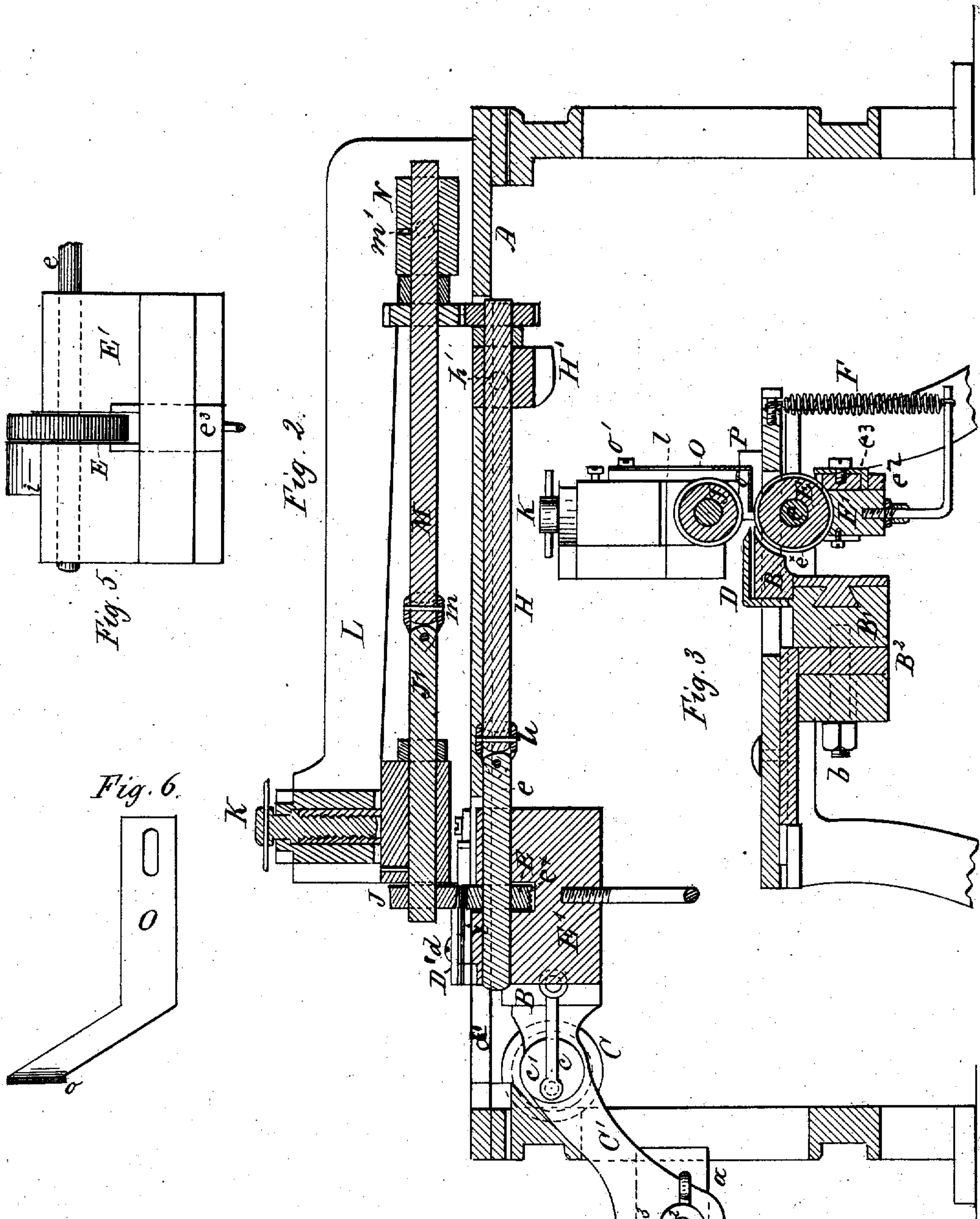


C. DANCEL & E. C. SMITH.
Leather-Skiving Machine.

No. 216,948.

Patented July 1, 1879.



Witnesses
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN LEATHER-SKIVING MACHINES.

Specification forming part of Letters Patent No. **216,948**, dated July 1, 1879; application filed
December 31, 1878.

To all whom it may concern:

Be it known that we, CHRISTIAN DANCEL, of the city, county, and State of New York, and EDMOND C. SMITH, of Brooklyn, E. D., in the county of Kings and State of New York, have invented certain new and useful Improvements in Machines for Skiving Leather; and we do hereby declare that the following is a full, clear, and exact description of the invention, which 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 is a bottom view of our machine. Fig. 2 is a vertical longitudinal section taken on line *x x* of Fig. 1. Fig. 3 is a vertical transverse section upon *y y* of Fig. 1. Fig. 4 is a top view of a portion of the devices. Fig. 5 is a detached view of one of the feeding-rollers, its supporting-block, and a guide. Fig. 6 is a detached view of one of the gages.

A is the bed-plate, slotted at *a'* to receive the knife and knife-stock, and provided with an opening, *A*², in which there is arranged a spur-gear, to be hereinafter described. The knife-stock B has a dovetail, which fits a corresponding groove formed in a supporting-block B¹, which is pivoted at *b* to a hanger, B², attached to the under side of the bed-plate. A reciprocating motion is imparted to the knife-stock by means of a pitman, *c*, and crank-wheel *c*¹, the crank-shaft being mounted in the sleeve or tubular bearing C, attached to the arm C¹, which projects from the supporting-block B¹, these parts vibrating vertically about the pivot *d*, and secured in the desired position by means of a set-screw or thumb-screw *c*², which passes through a slot, *c*³, in the lever or arm C¹ and the bracket *a* attached to the bed-plate.

The crank-shaft is driven by a belt passing from any desired motor around the pulley C². The knife D is secured to the upper face of the knife-stock, and adjusted longitudinally thereon by means of screws *d d* and a binding-plate, D', which gripes the knife to the stock at a point opposite the feed-rollers, the knife being considerably longer than the dis-

tance which it reciprocates, the object in making it of such length being to avoid frequently stopping the machine to sharpen said knife; and when one spot becomes dull, it may be moved such distance upon the stock as may be required to bring the sharp portion in the proper position relative to the feeding mechanism; and in order to accommodate the forward projecting end of the knife we have slotted the bed-plate, as at *a'*. The supporting-block B is pivoted in substantially the same relation to the feeding and guiding mechanism as is the same part in our former patent, No. 208,574.

E is the lower feed-wheel, mounted upon shaft *e*, which is supported in the block E', sliding vertically upon posts *e*¹ *e*¹, projecting downwardly from the bed-plate, the block E' being secured to said posts by means of the rib *e*² and cross-bar *e*³. This feed-wheel is provided upon the inner edge of its periphery with a projecting rib or flange, *e*^x, to insure that it shall feed all thicknesses of leather with certainty. This rib and the rest of the periphery may be roughened when desired. Block E' is held up by a spring, F, its upward movement being limited by a set-screw, *f*, the head of this set-screw overlapping the end of one of the posts *e*¹. (See Fig. 1.)

H is a shaft, connected at one end with shaft *e*, by a universal joint, *h*, and supported at its opposite end in the bearing H', which is pivoted to the bed-plate, as is indicated at dotted lines *h'*.

By an examination of the drawings it will be seen that the block E' is free to reciprocate upon a line at right angles to the axis of the shaft *e* and the bed-plate A, the extent of such reciprocation being limited by the spring F and set-screw *f*; and it is evident that during such reciprocation the sides of the block E' are always vertical to the bed-plate, and that consequently the shaft *e* is always parallel with the bed-plate in every position during such reciprocation.

i is a guiding plate or rest, having by preference its upper surface curved in the arc of a circle corresponding to the periphery of feed-wheel E. This rest is rigidly attached to the block E', and its upper face extends for-

ward—that is, toward the knife—to a point a little beyond a vertical line drawn through the axis of feed-wheel E, to provide an additional or supplemental support for the material as it is being skived.

J is the upper feeding-wheel. Its periphery is slightly beveled, as shown in Fig. 2, and has by preference a smooth periphery. It is secured to the front end of shaft J', which is mounted in a bearing made adjustable vertically by means of the screw K, passing through rail L, supported upon the bed-plate. M is a shaft, connected at one end with shaft J' by a universal joint, *m*, and supported at its opposite end in the bearing N, which is pivoted to rail L at *m'*.

It will be readily understood that as the bearing of the shaft J' is adjusted upon a line vertical to the bed-plate, said bearing fitting closely within the support formed in or attached to the rail L, this shaft J' is always parallel to the bed-plate and with the shaft *e* of the lower feed-roller, the flexible connection between said shaft J' and its driving-shaft M permitting such adjustment without any cramping of the parts, the result of the connections between the two feed-roller shafts and their respective driving-shafts H and M being that the two feed-wheels or feed-rollers are always maintained in the same vertical planes relative to the leather which is being skived, which becomes an important feature of construction in view of the fact that this machine is adapted for operating upon pieces of leather which vary greatly from each other in thickness, a successful operation of the machine upon thin leather depending very materially upon the proper working relation between the adjacent faces of the feed-rollers.

l is a tie-bar connecting the front end of the rail L with the bed-plate A. *O o* is an adjustable guide, attached to rail L by a set-screw, *o'*, passing through a slot in the upper end of said guide. The lower end of this guide projects horizontally between the feed-wheels nearly to a vertical line drawn through their centers.

It will be seen that the upper edge of the lower feed-roll is nearly in the same horizontal plane with the upper edge of the bed-plate A, and that the lower face of the guide *O o* is flat, thus forming a narrow throat between the

guide and the bed-plate, through which the leather is passed to the feed-roll, the object being to prevent the material from being wrinkled or puckered at that point, thereby insuring uniformity in work, especially in skiving material having a curved or angular edge.

P is an edge-gage, arranged in substantially the same relation to the knife and feed-wheels as is the edge-gage in our Patent No. 208,574, and performing substantially the same function.

O' is a guide or support secured to the bed-plate, with its front end projecting toward the knife in a plane a little above the plane of the guide *i*, the object being to so direct the leather in its movement past the knife that the width of the skived surface shall be substantially the same whether the leather be thick or thin.

The operation of our machine will be readily understood from the above description by those who are familiar with the construction and operation of this class of skivers.

What we claim is—

1. In a skiving-machine, the combination, with the feed-rolls E J, guide *O o*, and edge-guide P, of the knife-stock B, knife D, considerably longer than the distance which it reciprocates, the clamping-plate D', and set-screw *d*, whereby the long knife D may be gripped upon the knife-stock B at a point opposite the feed-rolls, and adjusted longitudinally to present a sharp cutting-edge to the leather, substantially as set forth.

2. The combination, in a machine for skiving leather, of the feed-rolls E J, the knife D, the guide *O o*, and the guide I attached to and moving with the supporting-block E', substantially as set forth.

3. In a machine for skiving leather, the combination of the feed-rolls E J, knife D, the edge-guide P, guide I, attached to and moving with the supporting-block E', and the supplemental guide *O'*, substantially as set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

CHRISTIAN DANCEL.
EDMOND C. SMITH.

Witnesses:

J. G. JENKINS,
C. H. WILSON.