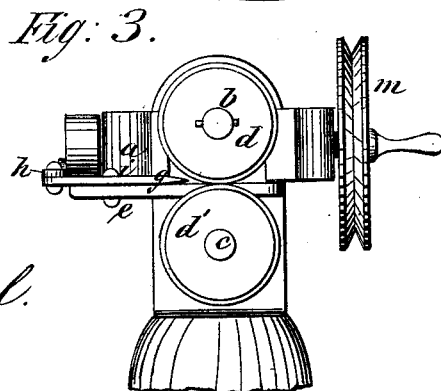
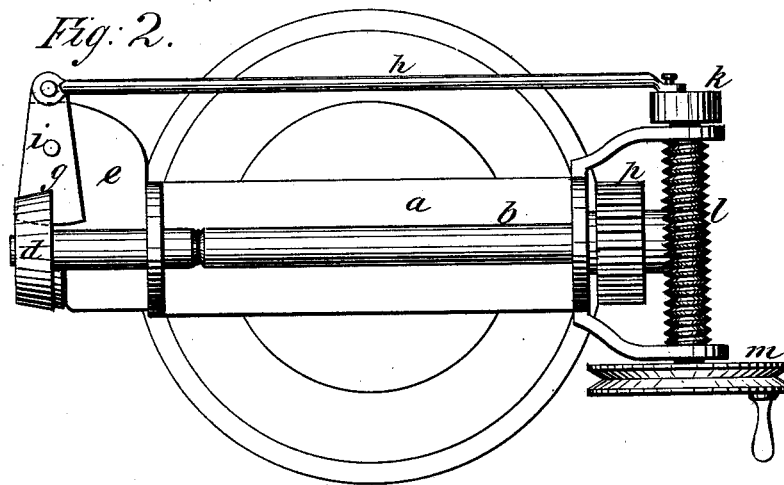
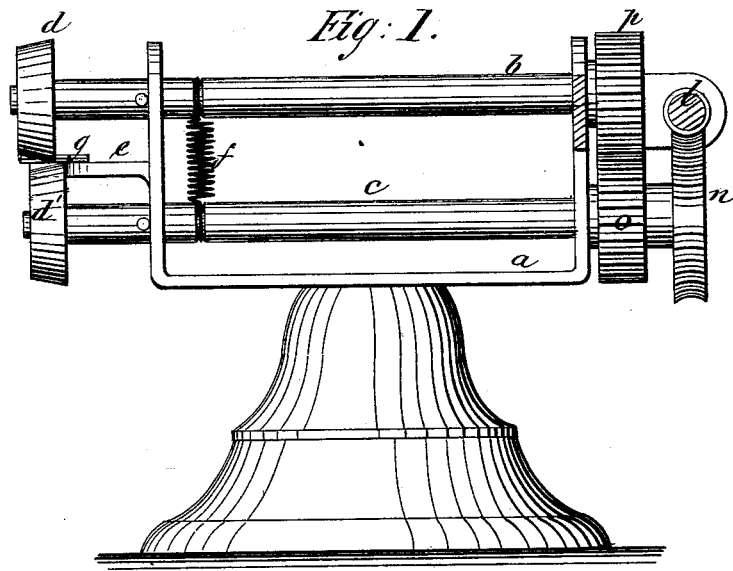


C. E. LANGMAID.
Skiving-Machine.

No. 220,847.

Patented Oct. 21, 1879.



WITNESSES:

A. Schehl.
C. Sedgwick

INVENTOR:

C. E. Langmaid

BY

Mum Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES E. LANGMAID, OF STONEHAM, MASSACHUSETTS, ASSIGNOR TO
HIMSELF AND GEORGE A. LANGMAID, OF MECHANICS FALLS, MAINE.

IMPROVEMENT IN SKIVING-MACHINES.

Specification forming part of Letters Patent No. **220,847**, dated October 21, 1879; application filed
March 11, 1879.

To all whom it may concern:

Be it known that I, CHARLES E. LANGMAID, of Stoneham, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Skiving-Machines, of which the following is a specification.

My invention relates to machines for chamfering or beveling the edges of boot and shoe counters, and other work of a similar character.

The invention consists in a vibrating knife that is hung upon the bed, and used in connection with the usual clamps or rolls for feeding the material, and operated by mechanism as hereinafter described, whereby the cutting is done with greater facility than heretofore, and the machine may be used for the finest work.

The machine is shown in the accompanying drawings, wherein Figure 1 is a side elevation, partially in section. Fig. 2 is a plan view. Fig. 3 is an end view.

Similar letters of reference indicate corresponding parts.

a represents the support for the horizontal shafts *b c* of the feed-rolls *d d'*, which parts are of usual character. The upper roll, *d*, will be fitted for adjustment to and from the roll *d'* and feeding-bed *e*, and is kept down to its work by a spring, *f*, arranged in any desired manner.

The knife *g* is fitted upon bed *e* at the delivery side of the rollers. This knife is pivoted to *e* by a pin or screw, *i*, that serves as a fulcrum on which the knife may vibrate horizontally and in a direction at right angles to the feed of the material.

The knife is operated by rod *h*, that is connected to it, and passes to a crank-wheel, *k*, upon a worm-shaft, *l*, which is driven by a belt or other connection to the pulley *m* on shaft *l*.

The worm *l* operates the worm-wheel *n* on the lower feeding-shaft, *c*, which shaft *c* also carries a gear, *o*, that meshes with gear *p* on the upper feeding-shaft, *b*. By this construction the knife and feed-rolls are simultaneously operated by power applied to pulley *m*, and the knife has a rapid vibration in comparison with the speed of rollers *d d'*.

As the work is pressed up to the cutting-edge the knife, by its vibration, will act with a shearing cut, and with great ease and freedom. This action permits the material to pass through evenly, and adapts the machine for fine work.

The rolls will be self-adjusting for different thicknesses of material.

The knife *g* is shown as formed with a slightly-curved cutting-edge; but I do not limit myself in that particular, nor to the described manner of hanging the knife.

The knife will preferably be formed wider in proportion than a stationary knife for the same work.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the feed-rollers or clamps *d d'*, of the vibrating knife *g*, hung upon the bed *e*, and operated by the rod *h*, substantially as described and shown, and for the purposes specified.

2. In a skiving-machine, the combination and arrangement, with the vibrating knife *g* and feed-roll shafts *b c*, of the rod *h*, crank *k*, worm-shaft *l*, worm-wheel *n*, gears *o p*, and driving-pulley *m*, as and for the purposes specified.

CHARLES E. LANGMAID.

Witnesses:

AMOS HILL,
ALMON A. PLATTS.