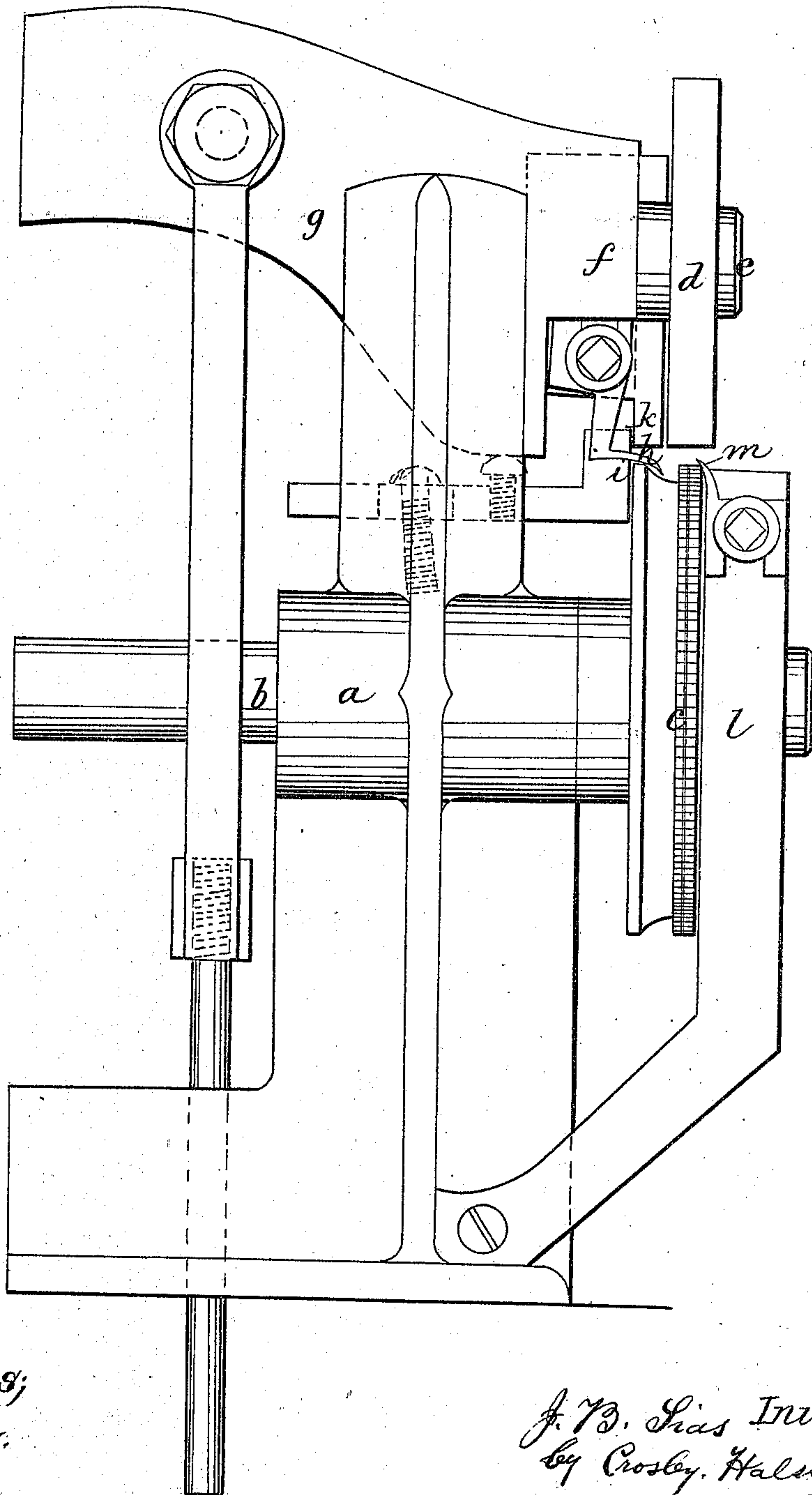


J. B. Sias.

Boot & Shoe Sole Mach.

N^o 89,798

Patented May 4, 1869.



Witnesses;
H. S. Miller,
D. P. Cowl

J. B. Sias Inventor;
by Crosby, Halsted & Gould
his attys

UNITED STATES PATENT OFFICE.

JOHN B. SIAS, OF BEVERLY, ASSIGNOR TO H. S. VROOMAN, OF BOSTON,
MASSACHUSETTS.

IMPROVED MACHINE FOR SKIVING AND CHANNELING SOLES.

Specification forming part of Letters Patent No. 89,798, dated May 4, 1869.

To all whom it may concern:

Be it known that I, JOHN B. SIAS, of Beverly, in the county of Essex and State of Massachusetts, have invented an Improvement in Machines for Skiving and Channeling Soles; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention, sufficient to enable those skilled in the art to practice it.

The invention has particular reference to the arrangement of the knives or cutters of channeling and edge-skiving machines, or machines for preparing the edges of boot and shoe soles for the reception of the stitches by means of which the soles and vamps are united.

In channeling-machines, as heretofore made, two feed-wheels are employed, the lower one having a toothed or serrated periphery, and the upper one a smooth periphery, the outer or wearing surface of the sole being presented to the upper or smooth-surfaced wheel, so as to be left unmarred by contact therewith. The channel, however, is cut in this outer sole-surface, so that a flap being formed by the incision of the knife, said flap may be turned up to open the channel, in the bottom of which channel the stitches are laid, the flap being subsequently pressed back and cemented in finishing the shoe, leaving a smooth and apparently uncut surface. In making "turns," however, or that class of shoes in which the edge of the vamp is secured by stitches running angularly into the inner surface of the sole, and not through from inner to outer surface, it is desirable to form a flap and channel at the inner surface of the sole, while preserving the outer surface unmarred; and to so make the machine as to properly form, in connection with or without such an undercut flap or channel, a chamfered or reduced edge at the under surface of the sole is the object of my improvement.

My invention consists, primarily, in mounting a skiving knife or cutter upon the upper or movable arm of the machine, when said knife or cutter is so formed and disposed as to skive the lower surface of the sole-edge, leaving the skived edge of uniform thickness, and also in combining with such skiving-knife a

stationary channeling knife or cutter, so arranged as to cut upward into the lower or inner surface of the sole.

The drawing represents a side view of the front part of the mechanism of an ordinary channeling-machine, my improvements being shown as embodied therewith.

a denotes the bearing of the lower or feed-wheel shaft *b*, upon the front end of which shaft is fixed the toothed or serrated feed-wheel *c*. *d* denotes the upper or presser wheel, journaled upon a pin, *e*, projecting from the head *f* of the movable arm *g*. To this arm *g* is fastened the stock of the skiving-cutter *h*, the shank of which extends down at the side of the edge-guide *i*, the cutting-edge projecting out therefrom over the feed-wheel and in front of the edge-guide, as seen in the drawing, the point of the cutter dropping down below the plane of the top of the feed-wheel, as shown.

The sole to be skived is introduced between the wheels *c* and *d*, with the edge against the guide *i*. The feed-wheel being then turned, the skiving-knife cuts off the strip from the under surface of the sole, extending from the edge to the stitch-entering line, the trimmed edge of the sole then passing on between the edge of the cutter and the presser-wheel, (or a gage-piece, *k*, in line with the lower surface of the presser-wheel,) such edge being gaged to a uniform thickness, corresponding to the depth of space between the wheel or gage and the cutter, and the edge being reduced to greater or less thickness by setting the cutting-edge of the knife to a greater or less distance below the presser-wheel or the gage *k*.

In front of the feed-wheel is a post, *l*, to which is fastened the stock of the channeling-cutter *m*. The top of the feed-wheel *c* serves as a rest for the under surface of the sole in line with the channel to be cut, and the cutter projecting up beyond the top of the wheel to a distance equal to the depth to which the slit or channel is to be cut.

It will thus be seen that both cutters are arranged to operate upon the lower surface of the sole, while by hanging the skiving-cutter from the movable arm, or so as to be stationary relatively to the tangential plane of the

lower surface of the presser-wheel, the skived edge of the sole is reduced to a uniform thickness.

Instead of arranging the channeling and skiving cutters as shown, the lower wheel might be made with a smooth periphery, and the upper wheel be made as a feed-wheel, and provided with periphery-teeth, the sole being fed between the wheels smooth side down, in which case I attach the channeling-cutter to the head or arm, and the skiving-cutter to the stationary frame; but I consider the specific arrangement shown to be preferable.

I claim—

1. In combination with the feed and presser wheels and edge-guide, the skiving and slit or channel-forming knives or cutters, arranged to operate together, substantially as described.

2. Also, in combination with the feed-wheels and edge-guide, a skiving-knife attached to the arm or frame upon which the presser-wheel is journaled, but acting upon the opposite surface of the sole, substantially as described.

JOHN B. SIAS.

Witnesses:

JAMES HILL,
H. S. VROOMAN.