E. MAIER.

STITCH INDENTING MECHANISM.

APPLICATION FILED NOV. 26, 1912.

1,067,996. Patented July 22, 1913.

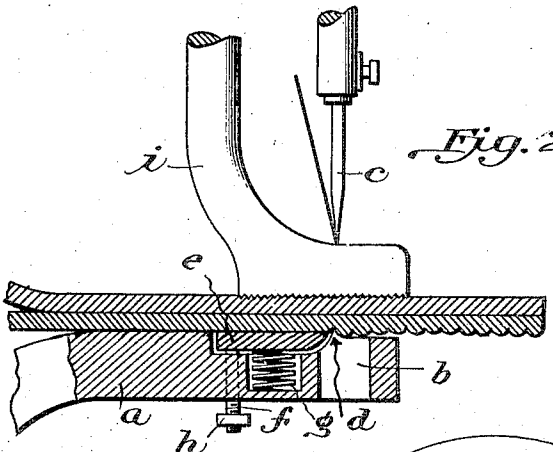


Fig. 2.

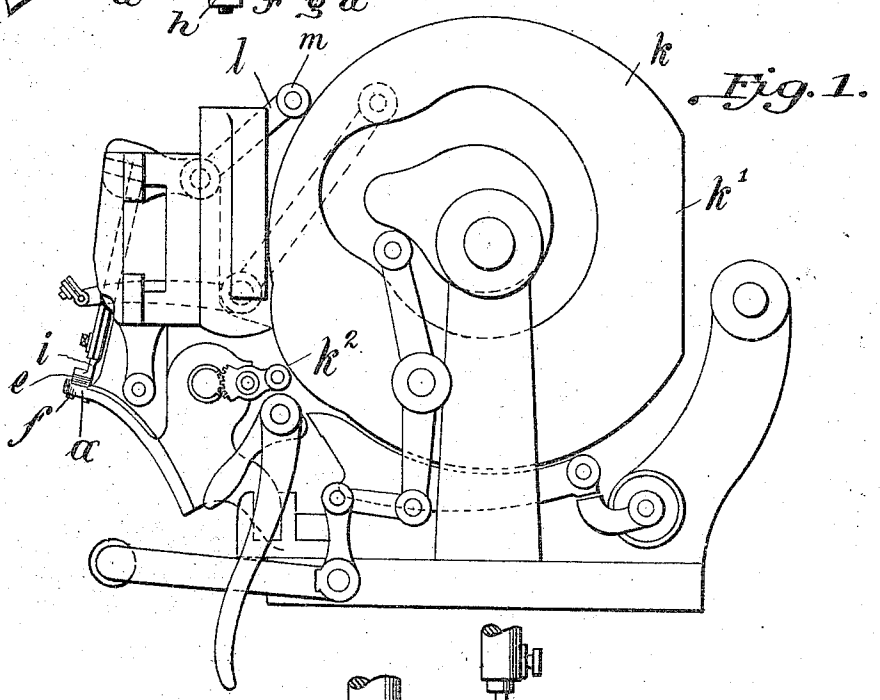


Fig. 1.

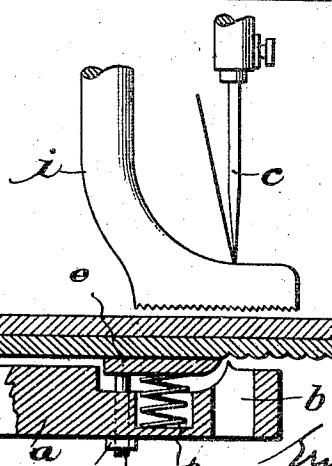


Fig. 3.

Witnesses:
L. T. Staaden.
Anna Hoyer.

Inventor:
Ernst Maier
by Appleman & Appleman
Atty

UNITED STATES PATENT OFFICE.

ERNST MAIER, OF CANNSTATT-STUTTGART, GERMANY.

STITCH-INDENTING MECHANISM.

1,067,996. Specification of Letters Patent. Patented July 22, 1913.

Application filed November 26, 1912. Serial No. 733,570.

To all whom it may concern:

Be it known that I, ERNST MAIER, a subject of the King of Prussia, residing at Cannstatt-Stuttgart, in the Kingdom of Wurttemberg and German Empire, have invented certain new and useful Improvements in Stitch-Indenting Mechanism, of which the following is a specification.

My invention relates to machines for working on boots, shoes or the like of any kind, and particularly to a machine for soling or securing the sole to the other parts of the boots, shoes or the like, and providing at the same time the welt of the sole with the customary ornamentation of the form of parallelly disposed notches.

Heretofore in the manufacture of boots, shoes or the like by machinery, the soling and the notching of the welt has been performed in two distinct working operations, and separate machines have been employed for performing these operations. This mode of working involving two distinct operations and separate machines therefor has various disadvantages and to obviate said disadvantages machines have already been devised for notching and stitching simultaneously. But the known devices for performing these two operations simultaneously present the disadvantage, that they do not secure the notches being located exactly to the side of the stitch-holes in order to obviate injury to the thread.

The object of the invention is to remove this disadvantage of the known machines for simultaneously stitching the sole and notching the welt. This is accomplished by arranging the notching tool in such a manner on the stitching table of the machine that during the stitching operation, that is to say, simultaneously with every formation of a stitch, the welt is notched, that is to say, a notch is formed by said tool close by or to the side of the stitch hole.

My invention is shown in the accompanying drawings.

Figure 1 is a side view of a soling machine provided with the improved arrangement, Figs. 2 and 3 are sectional views of the stitching table and presser member in two different positions.

The arrangement for notching the welt may be advantageously employed in soling machines of any desired construction. The drawings show a soling machine of the known kind comprising a stitching table *a*, a presser member *i* located above said stitching table, and an arrangement for periodically depressing the member *i* shown in Fig. 1. The arrangement for operating the presser member *i* consists of a cam-or grooved disk *k* and a double armed lever *l*, the one arm of which rests against the top end of the presser member while a roller *m* is attached to the other arm of the lever which bears against the periphery of the cam disk *k*. The material to be stitched is placed between the stitching table *a* and the presser member *i* and is pressed against the stitching table by the presser member which is actuated by the cam disk. Any suitable means may be employed for feeding the material to be stitched; for instance this may be accomplished by the presser member moving periodically sidewise and simultaneously also forwardly, or, after raising the presser member, by means of the cam disk provided for the purpose with a raising face k^1, it may be performed through the medium of any other suitable mechanism.

A slot *b* is arranged on the stitching table *a*, which serves for the reception of the needle *c*. The notching tool comprises a blade or knife *d* which is firmly mounted in the stitching table. The knife *d* acts to produce the channeled depressions or notches on the sole or its welt. The location of this notching tool *d* in relation to the needle *c* is such that a depression or notch is formed immediately close by or to the side of the stitch.

A lifting plate or support *e* which is vertically adjustable is arranged on or in the stitching table close to and in advance of the notching tool *d*. When not in operation this plate *e* lies in about the same horizontal plane as the cutting edge of the notching knife, so that the material to be operated on may slide unhindered over the notching tool during the feeding of the same by the presser member or the like. Only during the stitching operation, *i. e.*, when the needle forms the stitch, the presser member *i* is pressed down against the sole to be notched by means of a suitable raised part k^2 of the cam disk *k* and the sole is pressed against the immovably arranged notching tool. The plate *e* is at the same time also pressed down from the position shown in Fig. 3 to that in Fig. 2. In this manner the material to be operated on is simultaneously stitched and provided

with the ornamental depression or notch close by or to the side of the stitch hole. A spring *g* is provided for raising the plate *e* with the material or work to be operated on, when the presser member is being lifted clear of the work.

The plate *e* is formed with pins or bolts *f* (one only being visible in the drawing) which pass through the stitching table of the soling machine and serve for guiding the said plate *e*. These pins *f* are provided at their lower free ends with screw threads adapted to receive and retain the nuts *h*. By tightening the nuts *h* more or less the distance to be taken up by the plate *e* from the stitching table may be exactly regulated or the height of the plate *e* may be brought into accordance with the height of the cutting edge of the notching tool *d*.

What I claim is:

1. In a soling machine, the combination with the reciprocating needle, a stitching table and a presser foot above said table, of a notching tool mounted in said table, a movable plate supporting the work and yielding means for lifting said plate.

2. In a soling machine, the combination with a reciprocating needle, a stitching table and a presser foot above said table, of a notching tool mounted in said table, a movable plate supporting the work and a spring in the table below said plate, for yieldingly keeping said plate with the work in lifted position.

3. In a soling machine, the combination with a reciprocating needle, a stitching table and a presser foot above said table, of a notching tool mounted in said table, a movable plate, supporting the work, a spring in the table below said plate for yieldingly keeping the plate and the work in lifted position, and pins for guiding said plate.

4. In a soling machine, the combination with a reciprocating needle, a stitching table and a presser foot above said table, of a notching tool mounted in said table, a movable plate, supporting the work, a spring in the table below said plate for yieldingly keeping the plate and the work in lifted position, and pins for guiding said plate, and adjustable stops on said pins for controlling the lifted position of said plate.

In testimony whereof I have affixed my signature in presence of two witnesses.

ERNST MAIER.

Witnesses:
WILHELM HAAS,
WILHELM MAIER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."