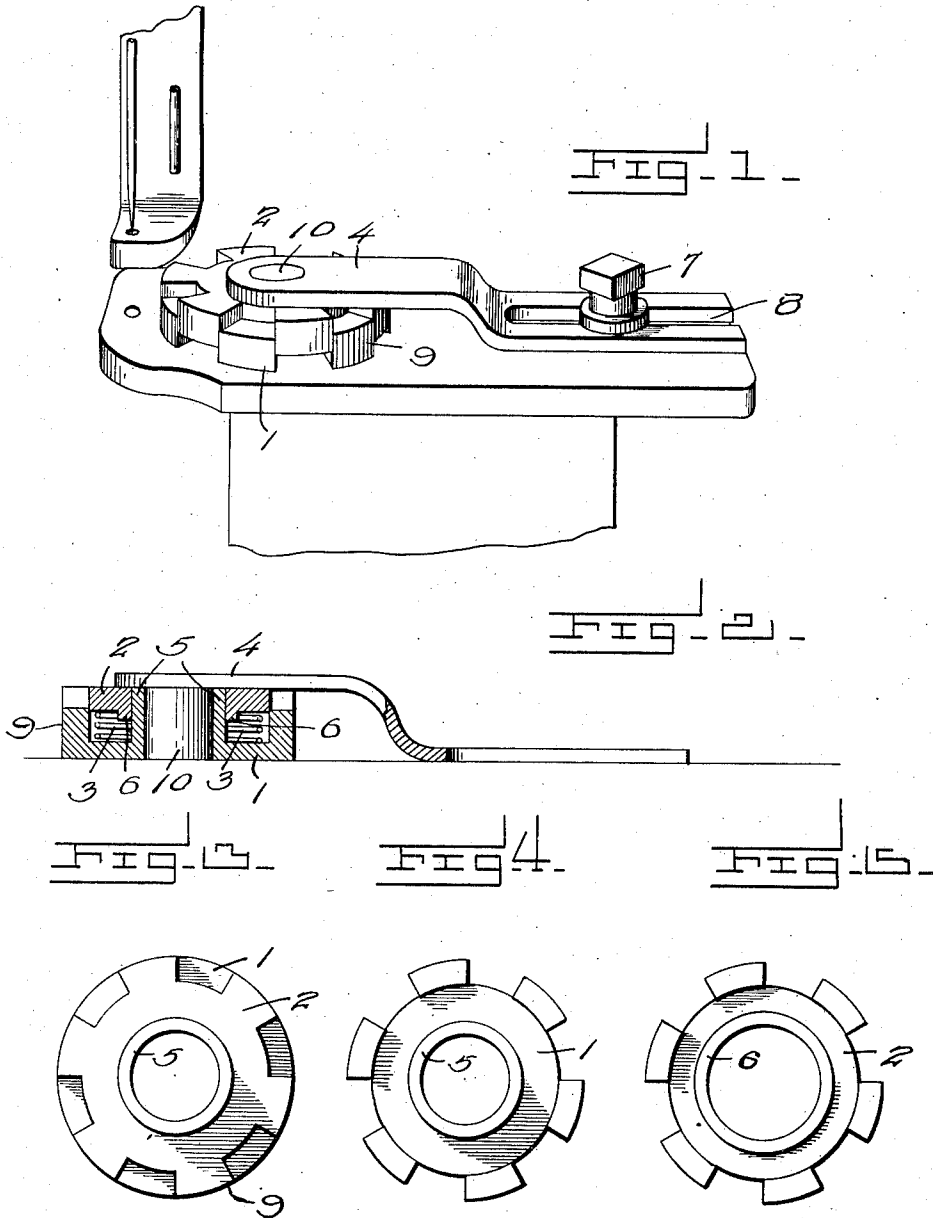


J. L. KIMBALL.
GUIDING MECHANISM FOR SEWING MACHINES.
APPLICATION FILED DEC. 1, 1911.

1,026,095.

Patented May 14, 1912.



Witnesses
L. F. Kimball
J. G. Baschalis

Inventor
James L. Kimball,

By *Lester L. Sargent*

Attorney

UNITED STATES PATENT OFFICE.

JAMES L. KIMBALL, OF HAVERHILL, MASSACHUSETTS.

GUIDING MECHANISM FOR SEWING-MACHINES.

1,026,095.

Specification of Letters Patent.

Patented May 14, 1912.

Application filed December 1, 1911. Serial No. 663,228.

To all whom it may concern:

Be it known that I, JAMES L. KIMBALL, a citizen of the United States, residing at Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Guiding Mechanism for Sewing-Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

The objects of my invention are to provide novel guiding mechanism for guiding the edges of separate and uncemented pieces of heavy material, such as a welt and an outsole, evenly together and gaging the line of stitch during the sewing process; to provide simple, compact and economical mechanism for this purpose; to give to the operator increased visibility of work, to provide means for automatically expanding and imparting resilience to the guiding mechanism to accommodate varying thicknesses of material; and to minimize the amount of possible spoiled material by simplifying the work of the operator.

In the accompanying drawings, which illustrate one method of carrying out this invention:—Figure 1 is a perspective view of the guiding mechanism; Fig. 2 is a longitudinal sectional view; Fig. 3 is a top plan view of the guiding members combined; Fig. 4 is a top plan view of the lower guiding member; and Fig. 5 is a bottom plan view of the upper guiding member.

Like letters indicate like parts throughout the drawings.

For the purpose of guiding the under piece of material to be sewed, the clutch-like guiding member 1, perforated for a suitable fastening device 4, is suitably mounted on the plate of a sewing machine. Guiding member 1 preferably is provided with an upwardly turned annular flange 5 encircling the perforation provided for the pivotal portion of the fastening device 4. The flange referred to is illustrated in Fig. 2.

For the purpose of guiding the upper piece of material to be sewed, the clutch-like guiding member 2, perforated for the fastening device 4, is suitably superimposed over the guiding member 1. Guiding member 2 is preferably provided with a downwardly turned annular flange 6, encircling

the upwardly turned annular flange 5 of guiding member 1, as illustrated in Fig. 2.

The guiding members 1 and 2 shown in the accompanying drawings illustrate the preferred embodiment of my invention, but may be altered in form, size, etc., and continue to embody my invention, provided they present guiding surfaces to the materials which it is their function to guide, and are fastened when in operation so as to prevent direct lateral movement from the materials guided.

For the purpose of expanding and imparting resilience to the guiding members 1 and 2, a spring 3 is interposed between them. In order to secure the guiding members against direct lateral movement and to limit their resilient movement, a suitable fastening device 4 is provided, which in the preferred form of my invention is a slotted angle iron having an axle-like part 10, pivotally securing the guiding members 1 and 2, as illustrated in Figs. 1 and 2 of the drawings. A suitable screw 7 penetrating the slot 8 of the fastening device 4 adjustably secures it to the sewing machine plate.

My invention in its ordinary application to a shoe-sewing machine operates as follows: Preliminary to the sewing operation, the outsole of a shoe, with one end of a welt attached to the outsole, is held by the operator and guided along on the plate of the sewing machine with the edge of the outsole in contact with the guiding surface 9 of the guiding members 1 and 2. The edge of the welt is similarly brought into contact with the guiding surfaces 9 of the guiding members 1 and 2, except that instead of the welt being held in the hand of the operator as the work is fed along toward the guiding mechanism, the welt is held apart from the outsole by a separate, auxiliary device for holding the welt, such as ordinarily is provided by sewing machine operators and shaped to accommodate the particular work in hand. When the sewing operation is in progress the operator feeds the materials to the sewing machine and keeps the edge of the outsole pressed against the aligned guiding surfaces 9 of the guiding members 1 and 2. Thus the two pieces of material are guided evenly together and the line of stitch is evenly gaged from their outer edge. The presser foot of the sewing machine, under

the control of the operator, is pressed against both the top surface of the welt and the top surface of the upper guiding member 2. As the presser foot is raised and lowered to accommodate varying thicknesses of leather, the guiding mechanism expands or is compressed to a corresponding extent, resilience being imparted to it by the spring 3 pressing upon the guiding members, as illustrated in Fig. 2. The clutch-like guiding members 1 and 2 in the preferred form of my invention, as illustrated in Fig. 1, interlock and thus impart a unitary character to the alined guiding surface 9, varying in extent with the expansion or compression of the guiding mechanism under the presser foot of the sewing machine. With the guiding mechanism expanded and the guiding members in an incompactly interlocked relation the edge of the outsole contacts only with guiding member 1, and the welt contacts only with guiding member 2. When the guiding members are pressed into a compactly interlocked relation the welt and outsole contact with both guiding members. The materials upon which the sewing is performed travel tangentially to the guiding surface 9 of the guiding members 1 and 2. The varying extent of guiding surface 9 presented by the guiding members 1 and 2 is coextensive with the varying interspace between the presser foot and the plate of the sewing machine. In this manner the materials being sewed are guided so as to prevent their wedging between the guiding members, or between the guiding mechanism and adjacent parts of the sewing machine.

In view of the improvements in the art disclosed in the foregoing description of my invention, I claim:—

1. The combination of guiding members mounted one above the other and having outer interlocking guiding flanges, yieldingly expanding mechanism disposed intermediate the guiding members, and means for mounting the same adjustably relative to the sewing machine.

2. The combination of rotatable superposed circular guiding members having marginally-positioned guiding surfaces, with resilient mechanism whereby the guiding members are yieldingly pressed apart.

3. In sewing machine guiding mechanism, the combination of rotatable guiding members having interlocking flanges, resilient mechanism so positioned as to expand said guiding members, with means for mounting the mechanism adjustably relative to the sewing machine.

4. In mechanism of the class described, the combination of rotatable guiding members formed so as to interlock one with the other, yieldingly expanding mechanism disposed intermediate the guiding members, and a slotted, fastening device with a pivotal part, pivotally securing the guiding members and capable of adjustable attachment rigidly to a sewing machine.

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

JAMES L. KIMBALL.

Witnesses:

LUCIUS H. SARGENT,
WILLIAM D. STEARNS.