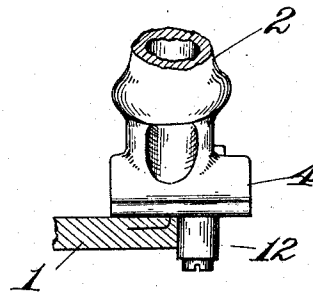
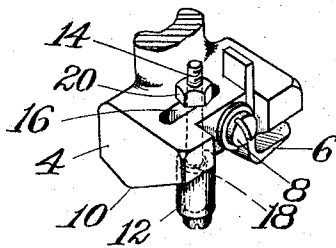
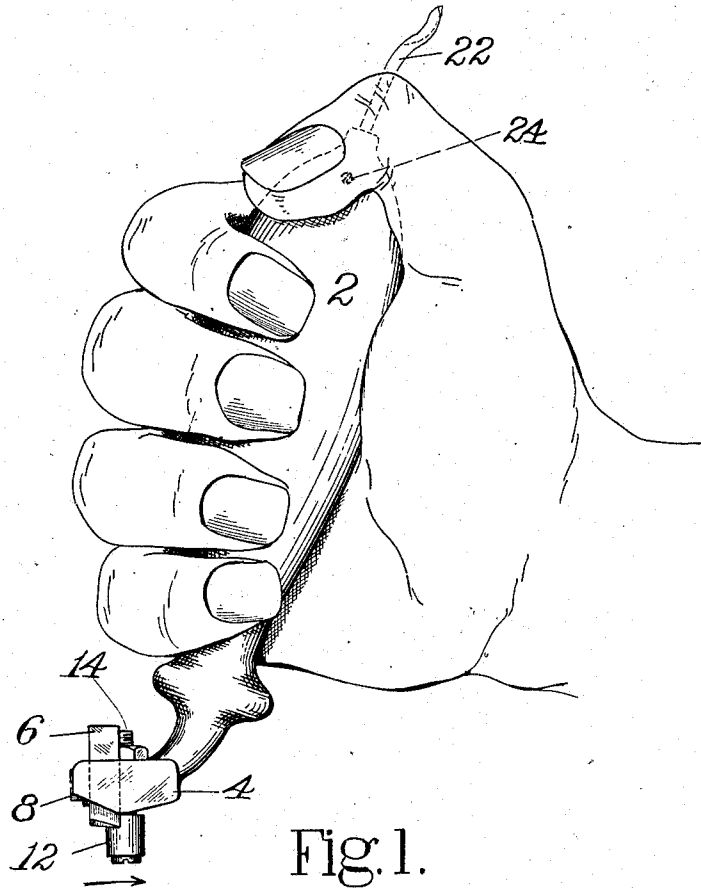


G. W. CARTER.
CHANNELING TOOL.
APPLICATION FILED AUG. 23, 1910.

1,015,377.

Patented Jan. 23, 1912.



WITNESSES.

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UNITED STATES PATENT OFFICE.

GEORGE W. CARTER, OF NORWAY, MAINE, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CHANNELING-TOOL.

1,015,377.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed August 23, 1910. Serial No. 578,560½.

To all whom it may concern:

Be it known that I, GEORGE W. CARTER, a citizen of the United States, residing at Norway, in the county of Oxford and State of Maine, have invented certain Improvements in Channeling-Tools, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to hand tools of the type used for grooving and channeling articles of leather, particularly, the soles of boots and shoes.

The general objects of the invention are to provide an improved tool of this character in which a great variety of channeling or grooving knives may be used; which shall be capable of ready adjustment to meet the requirements of different kinds of work; and particularly, to provide a tool which may be guided with ease and certainty to insure the production of uniform results.

To these ends the invention comprises a novel arrangement of the channeling or grooving knives relative to the tool handle, a novel construction of the mounting for the knife, and other features that will be pointed out in the claims.

The invention is herein shown embodied in a tool designed especially for use in hand shoe making and repairing and the several features of the invention will be made clear in the following description referring thereto.

Referring to the drawings, Figure 1 is a view in side elevation of the tool as it is held by the workman when in use; Fig. 2 is a perspective view of the body of the tool and the parts carried thereby; and Fig. 3 is an elevation showing the tool in operation upon an outsole.

The tool comprises a handle 2 of suitable form to be grasped conveniently by the workman and a head 4 at the lower end of the handle. The tool is designed for operative movement in the direction indicated by the arrow in Fig. 1 and the handle is offset from the head in the direction of said movement. A vertical slot is formed in the head 4 to receive the channeling knife 6. This knife may be adjusted vertically in the slot and secured in adjusted position by the

clamping screw 8, the rear edge of the head being notched to let the screw head well into the body of the part 4. The knife shown is one of a type used in a commercial channeling machine and is designed to cut a channel of the style shown in Fig. 3, this being a form of channel frequently cut in outsoles to receive the line of stitches by which the outsole is secured to the welt.

It will be obvious that a great variety of knives for channeling or grooving, having cutting edges of different shapes and extending at different angles depending upon the style of channel or groove desired, may be used in place of the one shown.

It should be noted that the body of the knife and the vertical portion of its cutting edge lie substantially in what may be termed the median plane of the handle, that is, the plane that passes through the longitudinal median line of the handle. This construction is most clearly indicated in Fig. 3 which shows the relation of the handle 2 to the cutting edge of the knife 6 as the latter channels the sole 1. By this construction and by having the handle offset from the head, as shown, the pull on the tool head is exerted directly in the line of the cutting movement of the knife; and the operator therefore is enabled to apply force to the tool close to the point of greatest resistance and directly in front of and in line with the knife. Consequently he can guide the tool with greater accuracy than would be the case if the knife were located at one side or the other of the line of pull. It will be obvious that with the latter construction the resistance met by the knife in cutting through the leather would tend to turn the tool and cause the knife to run off to one side of the desired path.

The work engaging face of the tool has two surfaces that lie at an angle to each other and meet to form a ridge 10 which is rounded off smoothly and extends transversely across the tool at substantially right angles to the direction of operative movement of the tool. The cutting edge of the knife 6 projects through the face of the tool at substantially the summit of this ridge. This arrangement is of particular advantage in using a knife of the type shown having a lip or flange extending substantially parallel with the face of the tool head, since

it provides ample clearance space for the material to pass between the lip and tool face.

To aid the workman in guiding the tool, an edge guiding roll 12 is provided. This roll is rotatably supported on a stud 14 received in a vertical slot 16 which is cut through the head 4 and opens into the face of the tool along the ridge 10. The stud 14 has a shoulder 18 thereon to engage the face of the tool at opposite sides of the slot 16. The roll with its stud may be adjusted along the ridge toward and from the knife 6 and may be secured in adjusted position by the clamping nut 20 threaded on to the stud 14 where it projects through the upper side of the tool head.

In using this tool the workman first adjusts the knife 6 so that it will cut a channel of the required depth and adjusts the roll 12 to guide the knife at the required distance from the edge of the sole or other piece of leather under operation. He then grasps the handle and places the guiding roll against the edge of the outsole, assuming this to be the article to be channeled, the parts occupying the relative positions indicated in Fig. 3. By pressing upon the tool and drawing it toward him, the workman sinks the knife into the stock and it cuts the channel. The fact that the channeling knife lies directly in the line of pull exerted by the workman on the tool reduces to a minimum the tendency of the knife to run off to one side or the other of the desired line of cut and, as above explained, contributes to the ease with which the tool may be guided.

Tools of this character are used chiefly by shoemakers in the operation of resoling shoes, and in order to facilitate this operation I have provided the tool shown with a stitch cutting knife 22. The shank of this knife is inserted in a hole drilled for that purpose in the end of the handle opposite the head 4 and a set screw 24 is threaded into the handle in position to bear against the shank and clamp it securely in place. The knife 22 is grooved or V-shaped in cross section and has a cutting edge formed at its end. This knife is intended to be run along the stitches of the outseam on top of the welt to cut off the exposed loops. The old outsole may then be pried off by forcing a screw driver or similar instrument in between the welt and outsole.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A tool of the character described comprising a tool head, a knife supported by said head, a guide carried by the head in

coöperative relationship with the knife, and a handle offset from the head substantially in the line of the cutting movement of the knife.

2. A tool of the character described comprising a tool head, a handle projecting from said head, said head having an angular work engaging face, the surfaces of which meet in a ridge that extends across the face transversely of the direction of operative movement of the tool, a knife vertically adjustable in said head with its cutting edge extending through the summit of said ridge, means for holding said knife in adjusted position, an edge guide adjustable along said ridge toward and from said knife, and means for holding said guide in adjusted position.

3. A tool of the character described comprising a tool head, a knife supported in said head, the face of the tool head being cut away behind the cutting edge of the knife to form a clearance space, an edge guiding roll supported by the head for adjustment toward and from said knife in a plane transverse to the direction of operative movement of the tool and a handle rigid with said head and having its median line entering said head at a point in front of said knife and substantially in the plane of the knife.

4. A tool of the character described comprising a tool head, a handle integral therewith but offset from said head in the direction of operative movement of the tool, said head having an angular work engaging face with a rounded ridge extending across it substantially at right angles to the direction of operative movement of the tool, the surfaces of said face sloping away from said ridge to the front and rear edges of the head, said head having a vertical slot formed therein, a channeling knife adjustably positioned in said slot with its cutting edge projecting through the summit of said ridge, the median plane of said handle passing through the cutting edge of said knife, a clamping screw for holding said knife in adjusted position, an edge guiding roll, and a shouldered stud supporting the same, said stud being adjustable toward and from said knife in a slot formed through said head and opening into the face thereof along the summit of said ridge.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. CARTER.

Witnesses:

JOHN H. MCCREADY,
JAMES R. HODDER.