(No Model.)

C. DUMAW, Jr.

COUNTERSINKER.

No. 605,407. Patented June 7, 1898.

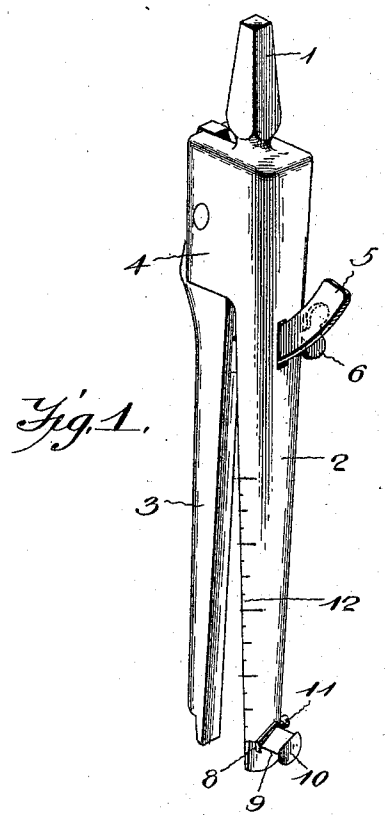


Fig. 1.

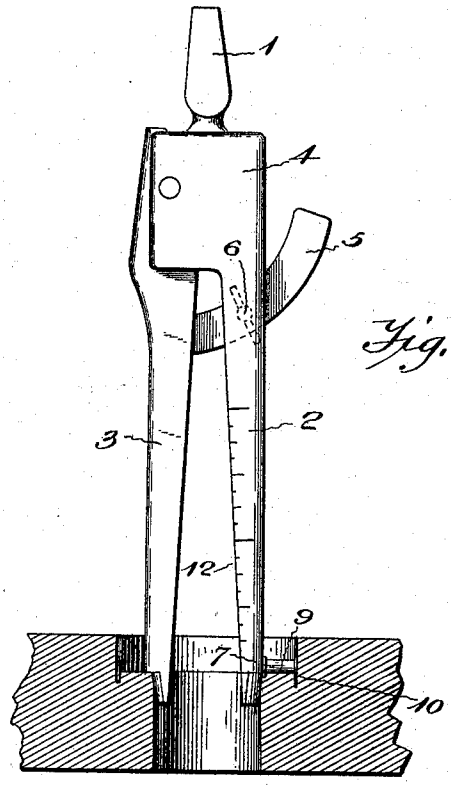


Fig. 2.

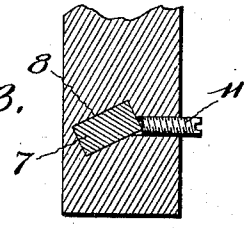


Fig. 3.

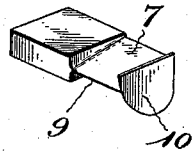


Fig. 4.

Witnesses
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Inventor
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By his Attorneys,
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES DUMAW, JR., OF CHEBOYGAN, MICHIGAN, ASSIGNOR OF ONE-HALF TO ISAAC PIERCY, OF SAME PLACE.

COUNTERSINKER.

SPECIFICATION forming part of Letters Patent No. 605,407, dated June 7, 1898.

Application filed December 23, 1897. Serial No. 663,217. (No model.)

To all whom it may concern:

Be it known that I, CHARLES DUMAW, Jr., a citizen of the United States, residing at Cheboygan, in the county of Cheboygan and State of Michigan, have invented a new and useful Countersinker, of which the following is a specification.

This invention has for its object to provide a countersinking-tool for wood or metal which is capable of adjustment to any size of bore and for forming a countersink of any diameter irrespective of the size of the bore, the bit having adjustable connection with a member of the tool, and the latter comprising parts which are adjustable so as to fit any size of bore, so as to center and steady the countersinking-bit when the tool is in operation.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

Figure 1 is a perspective view of a countersinking-tool embodying the vital features of this invention. Fig. 2 is an elevation showing the tool in operative relation. Fig. 3 is a detail view showing the manner of adjustably connecting the bit with a member of the tool. Fig. 4 is a detail perspective view of the bit.

Corresponding and like parts are referred to in the following description and indicated in the several views of the drawings by the same reference characters.

The tool or countersink is adapted for use in connection with a bit-stock of any of the varieties commonly in use and upon the market, and for this purpose is provided with a shank 1 to be fitted into the chuck of a brace or stock. The body of the tool comprises members 2 and 3, relatively adjustable, so as to be separated or brought together at their active ends to adapt the tool to the size of bore to be countersunk. The members 2 and 3 are by preference pivoted at their upper ends, and in order to provide a substantial construction one of the members, as 2, is formed with a head 4, which is slotted to receive the upper end of the member 3, whereby it is braced laterally. Any of the usual means may be provided for adjusting and holding the members separated at the desired position, and, as shown, a curved bar 5 is secured at one end to the member 3 and passes loosely through a slot formed in the member 2, a set or thumb screw 6 being mounted in a threaded opening of the member 2 and adapted to engage at its inner end with the bar 5, so as to hold the members when adjusted. The lower or active ends of the members are reduced and slightly beveled, so as to enable them to enter the bore to be countersunk, so as to center the tool and steady the countersinking-bit 7.

The bit 7 projects laterally from a side of a member a short distance from its extremity, thereby providing for the entering of the members a short distance into the bore before the bit is brought into position for active operation. The bit has adjustable connection with the member and fits in an opening 8 formed therein and is adjustable, so as to expose more or less of the bit, whereby the diameter of the countersink may be varied. If preferred, bits of different size may be provided and interchangeably used, thereby adapting the tool for making countersinks of different diameters with bores of the same diameter, whereby the tool is capable of universal application within the range of its adjustment for purposes of making countersinks. The bit has a horizontal cutting edge 9 of chisel shape and a vertical portion 10 at the outer end and which is designed for making the initial cut defining the countersink, the horizontal cutting edge removing the material comprised between said circumscribing cut and the wall of the bore being enlarged or countersunk, as will be readily understood. The bit is held in the opening 8 by a binding-screw 11.

The tool may be cast, forged, or constructed in any economical manner and finished according to the design of the manufacturer and the desired grade or intended cost, and the material entering into its formation will likewise depend upon the character and quality of the tool. Therefore it is to be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

In order that the depth of the countersink

may be readily determined without requiring the use of a ruler, one of the members of the tool is graduated, as indicated at 12, these graduations corresponding with inches and fractional parts thereof in the ordinary manner.

Having thus described the invention, what is claimed as new is—

1. A countersinking-tool comprising relatively-adjustable members, adapted to have their end portions fitted within the bore or opening to be countersunk, means for securing the members in an adjusted position, and a bit applied to and projecting laterally from one of the members a short distance from its active extremity, substantially as set forth.

2. A countersinking-tool comprising relatively-adjustable members having their active ends reduced to readily enter the bore to be countersunk, said tool having a shank at its opposite end to be fitted into a bit-stock, means for holding the members in an adjusted position, and a bit applied to a member a short distance from its extremity, substantially as set forth.

3. A countersinking-tool comprising pivoted members adapted to have their end portions fitted within the bore or opening to be countersunk, one of the members having a shank to admit of the tool being fitted to a bit-stock, means for holding the members at the required distance apart, and a bit applied to and projecting laterally from a member a short distance from its extremity, substantially as set forth.

4. A countersinking-tool comprising a member having a head provided with a shank to be fitted into a bit-stock, and having a slot, a second member pivoted within the slotted head, both members adapted to have their end portions fitted within the bore or opening to be countersunk, means for holding the members at the required distance apart, and a bit applied to and projecting outwardly from a side of a member a short distance from its active extremity, substantially as set forth.

5. In a countersinking-tool, the combination of members relatively adjustable, and adapted to have their end portions fitted within the bore or opening to be countersunk, one of the members having a transverse opening a short distance from its active end, a bit having a substantially horizontal and vertical cutting edge and fitted into the opening of the member to which it is secured, and means for fastening the bit in position, substantially as described.

6. The herein-described countersinking-tool, comprising a member having a slotted head formed with a shank to be fitted into a bit-stock, a second member pivoted within the slotted head, the extremities of the members being adapted to be fitted within the bore or opening to be countersunk, a curved bar secured to one of the members and passing loosely through an opening in the opposite member, a set-screw for securing the curved bar within the opening and holding the members at the required distance apart, and a bit having an approximately horizontal and a vertical cutting edge and having adjustable connection with and projecting laterally from one of the members a short distance from its active end, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHAS. DUMAW, JR.

Witnesses:
JNO. REID,
F. N. KLINGENSMITH.