

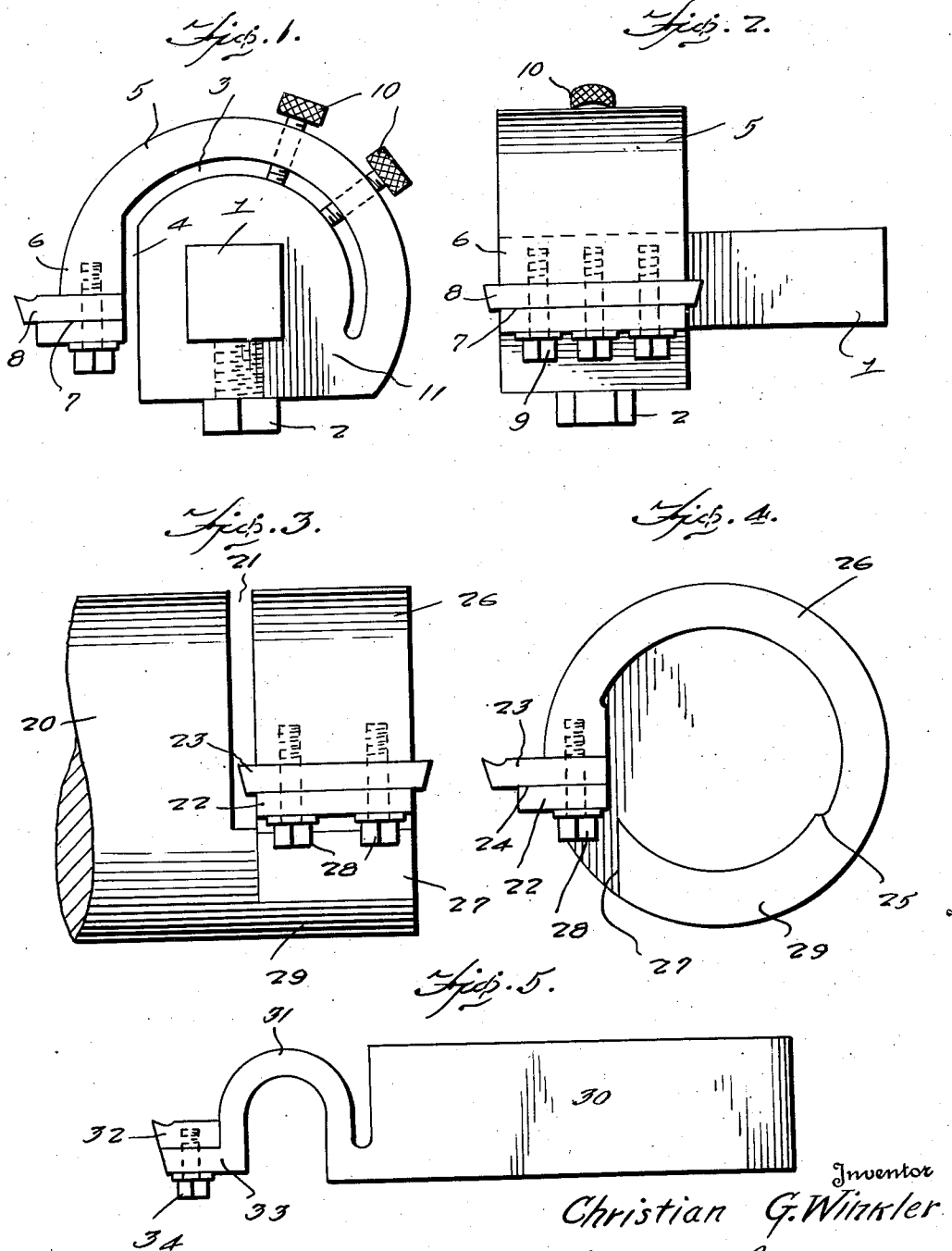
July 13, 1948.

C. G. WINKLER

2,445,013

TOOL HOLDER

Filed March 22, 1946



Inventor  
Christian G. Winkler

By *McMorris, Brown & Ransom*  
Attorney

## UNITED STATES PATENT OFFICE

2,445,013

## TOOLHOLDER

Christian G. Winkler, Portland, Oreg.

Application March 22, 1946, Serial No. 656,229

2 Claims. (Cl. 29—97.5)

1

This invention relates generally to tool holders and relates particularly to tool holders providing spring tension.

It is an object of the invention to provide new and improved tool holders wherein the tool is held in a spring device.

It is a further object of the invention to provide a tool holder of the above character which shall provide a resiliently mounted clamp for a cutting tool, and shall further provide means for adjusting the tension of the mounting.

It is still a further object of the invention to provide a tool holder of the above character which shall be particularly adapted for internal boring, and which shall permit boring of a hole which more nearly approaches the dimensions of the boring bar than has heretofore been the case.

It is a still further object of the invention to provide a spring tool of novel design and having a gooseneck of smaller proportions than has heretofore been the case, whereby the gooseneck as well as the body of the tool may be insertable in the slot of a tool holder.

The above and still further objects of the invention will become evident upon study of the following detailed description of the invention, when taken in conjunction with the accompanying drawings, and the invention will be particularly pointed out in the appended claims.

In the drawings:

Figure 1 illustrates an end elevational view of a first embodiment of the invention;

Figure 2 is a front elevational view corresponding to Figure 1;

Figure 3 is a front elevational view of a second embodiment of the invention, as applied to a spring holder particularly adapted for boring;

Figure 4 is an end view corresponding to Figure 3; and

Figure 5 is a side elevational view of a spring tool of novel design.

Referring now to the drawings in detail, the numeral 1 refers to a block which is adapted to be held in a common and well known type of tool support, and to which may be secured the novel tool holder of the invention by means of the bolt 2, the tool being provided with a suitably shaped aperture for this purpose.

The tool holder itself is preferably fabricated from a solid steel bar, and being in part semi-circular, as at 3, and in part vertical, as at 4. The presence of the slot 3, 4, creates a resilient gooseneck 5, of generally arcuate shape, but having a terminating portion 6 which depends vertically, and in which is provided a slot 7 for ac-

2

commodating a cutting tool 8. The tool 8 may be secured within the slot 7 by means of a plurality of bolts 9 which extend within and threadedly engage the portion 6 and serve to tighten up on the slot 7. The thumb screws 10 are spaced on the arcuate section of the gooseneck 5 and extend threadedly through the gooseneck 5 and the arcuate slot 3 to bear against the bar 11. Tightening of the thumb screws 10 serves to decrease the resilience of the gooseneck.

While the embodiment of the invention illustrated in Figures 1 and 2 of the drawings is especially adapted for external cutting, the embodiment of Figures 3 and 4, hereinafter to be described, is especially adapted to boring.

The boring bar 20, in Figures 3 and 4, is provided with a transversely extending slot 21, for an angular distance of slightly more than a half circle and extending from the shelf 22 for supporting the cutting tool 23 within the slot 24 to a point 25 in the circumference of the bar 20.

The end of the bar 20 is then bored out defining a hollow end leaving an arcuate resilient section 26, and a further non-resilient arcuate section 29 which is integral with the bar 20.

The solid section 26 is cut away vertically at 27 to provide clearance for the tool 23 and the tool supporting shelf 22. The shelf 22 is formed by the provision of a slot adjacent the free end of the resilient arcuate section 26, and the tool 23 is held therein by means of bolts 28 extending through the shelf 22 and threadedly engaging the arcuate section 26.

The construction which has been illustrated and described enables boring to be accomplished to a dimension approximating that of the bar 20.

Figure 5 illustrates a resilient cutting tool holder which has a body 30, a gooseneck or shank 31 and a tool 32 secured to a horizontal extension 33 of the gooseneck 31 to provide a shelf for the tool 32, to which the tool 32 may be secured by one or more bolts 34. The provision of a gooseneck, such as 31 which extends in no direction beyond the outlines of the body 30, enables the entire tool holder to be inserted, for example, in a boring bar, leaving only a small portion of the cutting tool 32 protruding therefrom.

While I have illustrated and described in detail several embodiments of the invention, it is to be understood that various modifications may be made in the general arrangement of the parts or in the details of construction without departing from the spirit of the invention or the appended

55 claims.

3

What I claim and desire to secure by Letters Patent of the United States is:

1. A tool holder comprising a cylindrical bar having a slot extending longitudinally from an end thereof to define a hollow end portion, there being a transversely-extending slot in said bar and terminating in said longitudinal slot, said bar being provided with a second slot extending inwardly from its peripheral surface at a point contiguous to said longitudinal slot and communicating with the latter, said slots defining a resilient gooseneck for the support thereon of a cutting tool, and means for securing said cutting tool on said gooseneck.

2. A tool holder comprising a cylindrical bar having a slot extending longitudinally from an end thereof to define a hollow end portion, there being a transversely-extending slot in said bar and terminating in said longitudinal slot, said bar being provided with a second slot extending inwardly from its peripheral surface at a point

4

contiguous to said longitudinal slot and communicating with the latter, the point of communication of said second slot with said longitudinal slot forming a shelf for the support thereon of a cutting tool, and means for securing said cutting tool on said shelf.

CHRISTIAN G. WINKLER.

#### REFERENCES CITED

The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

Number	Name	Date
952,470	Shapowalow	Mar. 22, 1910
1,416,832	Johansson	May 23, 1922
2,371,715	Smith	Mar. 20, 1945

#### FOREIGN PATENTS

Number	Country	Date
16,841	Great Britain	Aug. 22, 1901