(No Model.)

E. F. BENGLER.

TOOL HOLDER.

No. 439,096. Patented Oct. 28, 1890.

Fig.1.

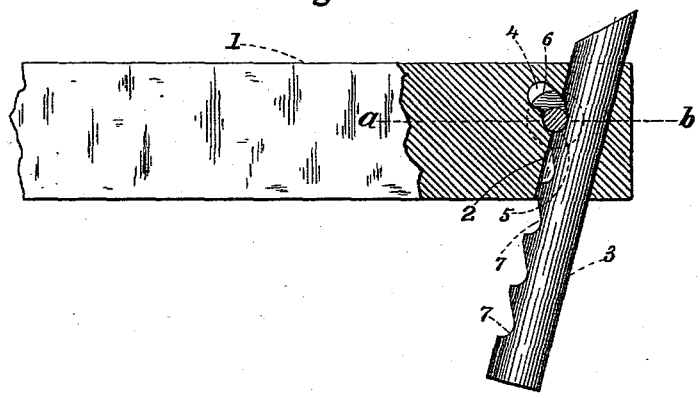
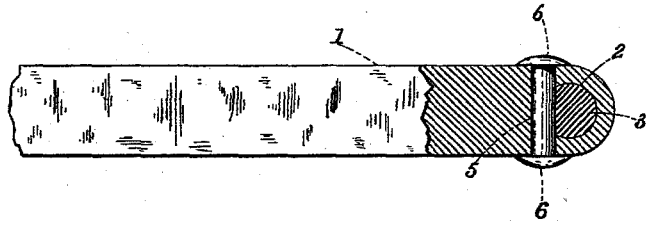


Fig.2.



Witnesses.

J. M. Caldwell

Harriet Johnson

Edwin F. Bengler, Inventor.

By James Sangster,

Attorney.

UNITED STATES PATENT OFFICE.

EDWIN F. BENGLER, OF BUFFALO, NEW YORK.

TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 439,096, dated October 28, 1890.

Application filed March 12, 1890. Serial No. 343,650. (No model.)

To all whom it may concern:

Be it known that I, EDWIN F. BENGLER, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification.

My invention relates to certain new and useful improvements in tool-holders, whereby the tool is more easily made and is efficient and durable, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, so as to expose the adjustable tool and adjusting device. Fig. 2 is a top plan view showing a horizontal section in or about line *a b*, Fig. 1, cutting through all except the movable adjusting-pin.

The tool-holder 1 is adapted to fit in the usual tool-post of a lathe, and is provided with a hole 2, bored diagonally through the end to receive the tool 3 and permit it to be moved easily up or down through it.

Horizontally through the tool-holder 1, near the end, is a curved slot or opening 4, having its lower end project forward into the hole 2, and through this curved slot or opening 4 is passed the adjusting-pin 5, having two heads 6 to keep it from coming out and to provide a convenient means for grasping it between the fingers and moving it up or down in the curved opening 4.

The tool 3 is provided with a series of notches 7, adapted to receive the adjusting-pin 5 for holding it when adjusted to the desired position.

It will be noticed that the slot or opening 4 is made of a curved form, and that it curves forward and downward so as to carry the adjusting-pin 5 into the notches 7. This curved slot starts at an angle to the bar 1 and turns downward, so that its lower portion curves down and into a nearly vertical position, or substantially so, while the surface of the upwardly-projecting portion of the notches 7 incline slightly from the perpendicular toward the pin 5, so that when the pin 5 is in its upper position the tool 3 may be moved easily up or down; but when the pin 5 is down and forward in a notch 7 it is held rigidly and cannot be forced downward with any force required for its operation nor by any force less than that required to break it. When it is desired to take the tool out, (sometimes it may be necessary to tap the lower end with a small hammer to loosen it,) the pin 5 may then be taken by the thumb and finger (pressing on the heads 6) and then moved toward the top of the slot or opening 4, or the tool may be simply pushed upward, which causes the pin to rise out of the notch up in the slot and thus permit the tool to be easily drawn up or out. In this position of the pin the tool may be easily taken out or put in, and all that is required to fasten it at any desired point is to drop the pin downward and forward into either of the notches 7. There are several of the notches 7, so that as the tool is worn away by grinding or by any means it can be adjusted and fastened at another notch.

The tool is preferably made of round steel, as shown, but may be made of a square or any other shaped bar of steel, if desired.

In place of a curved slot 4, as shown, an inclined straight slot may be used, although it possibly might not answer the purpose so well. I therefore do not wish to confine myself to the use of a curved slot 4. This construction renders the device very cheap and durable and permits the tool to be easily removed for sharpening or for other purposes, and also to be as readily inserted and fixed in place.

I claim as my invention—

A tool 3, provided with a series of notches, having their upwardly-projecting surfaces inclining in a direction forward from the tool, in combination with a tool-holding bar 1, having an inclined hole to receive the tool, and a horizontal cross-slot or opening 4, projecting partly into the side of the hole 2 and inclining in substantially the same direction as the upwardly-projecting surfaces of the notches in the tool, and a locking or adjusting pin 5, for holding or releasing the tool, substantially as described.

EDWIN F. BENGLER.

Witnesses:
JAMES SANGSTER,
HARRIET JOHNSON.

Correction in Letters Patent No. 439,096.

It is hereby certified that the name of the patentee in Letters Patent No. 439,096, granted October 28, 1890, for an improvement in "Tool-Holders," was erroneously written and printed "Edwin F. Bengler," whereas said name should have been written and printed *Edwin F. Beugler;* and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 25th day of November, A. D. 1890.

[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Interior.

Countersigned:

C. E. MITCHELL,
Commissioner of Patents.