Jan. 7, 1941. M. S. QUILLEN 2,227,796

TOOLHOLDER

Filed March 14, 1939

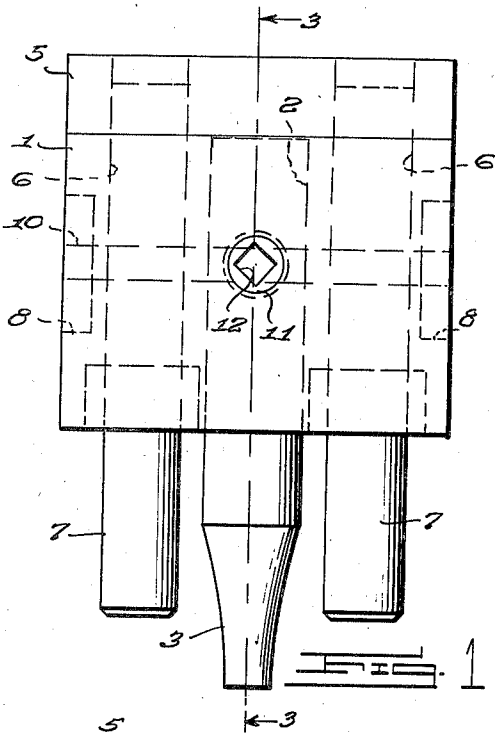


FIG. 1.

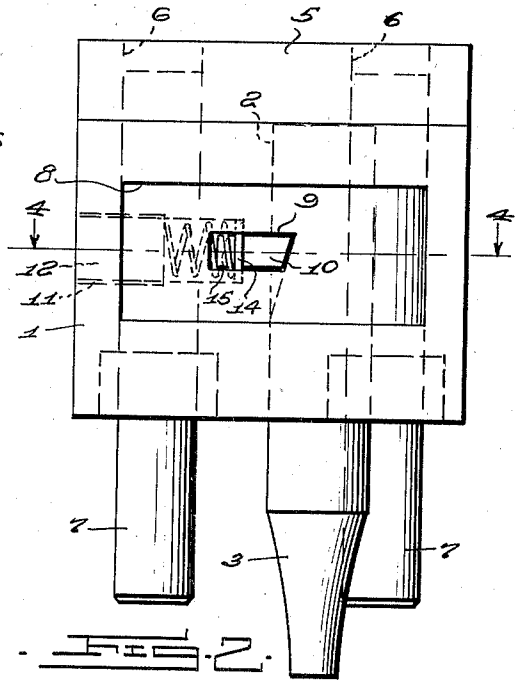


FIG. 2.

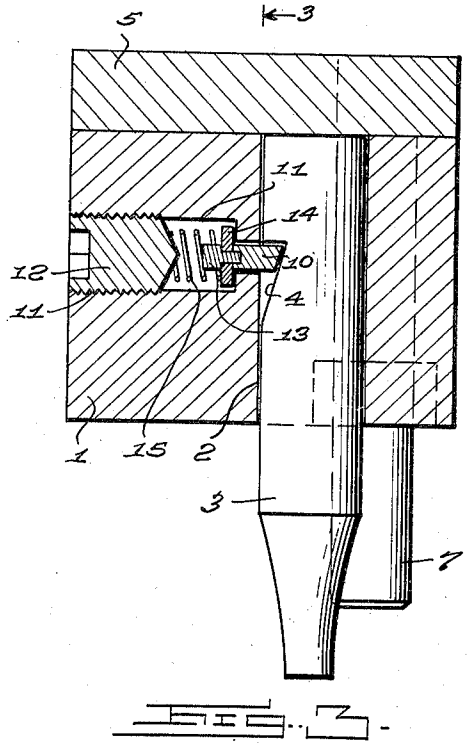


FIG. 3.

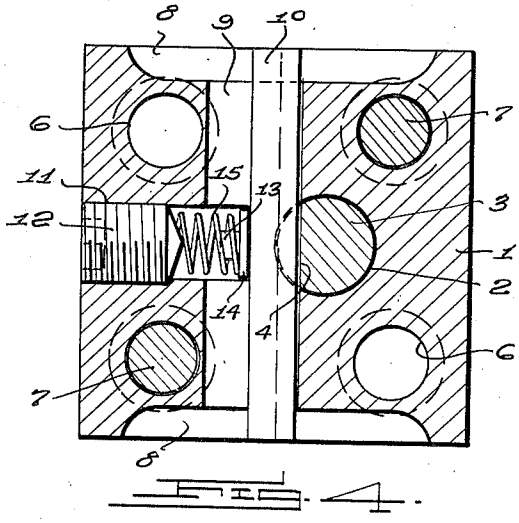


FIG. 4.

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TOOLHOLDER

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Application March 14, 1939, Serial No. 261,858

1 Claim. (Cl. 279—76)

The present invention relates to new and useful improvements in holders for punches, dies, etc., and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character embodying novel means for automatically locking the tool in the bore when said tool is inserted.

Another very important object of the invention is to provide a toolholder of the aforementioned character comprising a construction and arrangement which is such that the locking means may be conveniently adjusted as desired.

Still another important object of the invention is to provide a toolholder of the character described which embodies a unique construction and arrangement whereby the tool may be expeditiously released for removal when desired.

Other objects of the invention are to provide a toolholder of the character set forth which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is an elevational view of a holder constructed in accordance with the present invention, showing a tool mounted therein.

Figure 2 is an elevational view taken at right angles to Fig. 1.

Figure 3 is a vertical sectional view, taken substantially on the line 3—3 of Fig. 1.

Figure 4 is a view in horizontal section, taken substantially on the line 4—4 of Fig. 2.

Referring now to the drawing in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a block 1 which may be of any suitable metal. The block 1 has formed therein a vertical bore 2 for the reception of a tool 3. Formed in the tool 3 is a notch or recess 4. A backing plate 5 for the tool 3 is secured on the block 1. Extending through the block 1 and the backing plate 5 are bores 6 which accommodate dowel pins 7.

The sides of the block 1 have formed therein depressions or recesses 8 which are shown to advantage in Fig. 4 of the drawing. Extending transversely through the block 1 is a slot 9 which communicates at its ends with the recesses or depressions 8. Slidably mounted in the block 9 is a locking bar 10 which is engageable in the notch 4 of the tool 3 for releasably securing said tool in the bore 2. It will be noted that the end portions of the locking bar 10 project into the recesses 8.

Extending into the block 1 at right angles to the slot 9 and communicating therewith is a socket 11. Threadedly mounted for adjustment in the outer portion of the socket 11 is a plug 12. Fixed on the back of the locking bar 10 is a pin 13 having mounted thereon a collar 14. A coil spring 15 in the socket 11 has one end engaged with the plug 12 and its other end engaged with the collar 14 for yieldingly urging the bar 10 toward locking position. The pin 13 maintains the coil spring 15 in proper engagement with the collar 14.

It is thought that the manner in which the device functions will be readily apparent from a consideration of the foregoing. When the tool 3 is inserted in the bore 2 of the block 1 the bar 10 is automatically engaged in the notch 4 by the coil spring 15, thus securely locking said tool in the holder. The tension of the coil spring 15 may be adjusted as desired through the medium of the plug 12. To remove the tool, the projecting end portions of the locking bar 10 are gripped between the thumb and fingers of one hand, the recesses 8 facilitating this, and said locking bar is retracted in the slot 9 against the tension of the coil spring 15. The tool 3 may then be conveniently removed with the other hand.

It is believed that the many advantages of a toolholder constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A toolholder comprising a block having a vertical bore therein for the reception of a tool, said block further having a slot extending transversely therethrough and communicating with the bore, the block still further having a socket extending horizontally thereinto and communicating with the slot, a bar slidably mounted in the slot and engageable with a tool for releasably securing said tool in the bore, the socket extending transversely into the slot to an intermediate point, a pin mounted on said bar, a collar mounted on the pin, a coil spring mounted in the socket and engaged with the collar for yieldingly urging the bar into engagement with the tool, and a plug threadedly mounted in the socket and engaged with the coil spring for regulating the tension thereof.

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