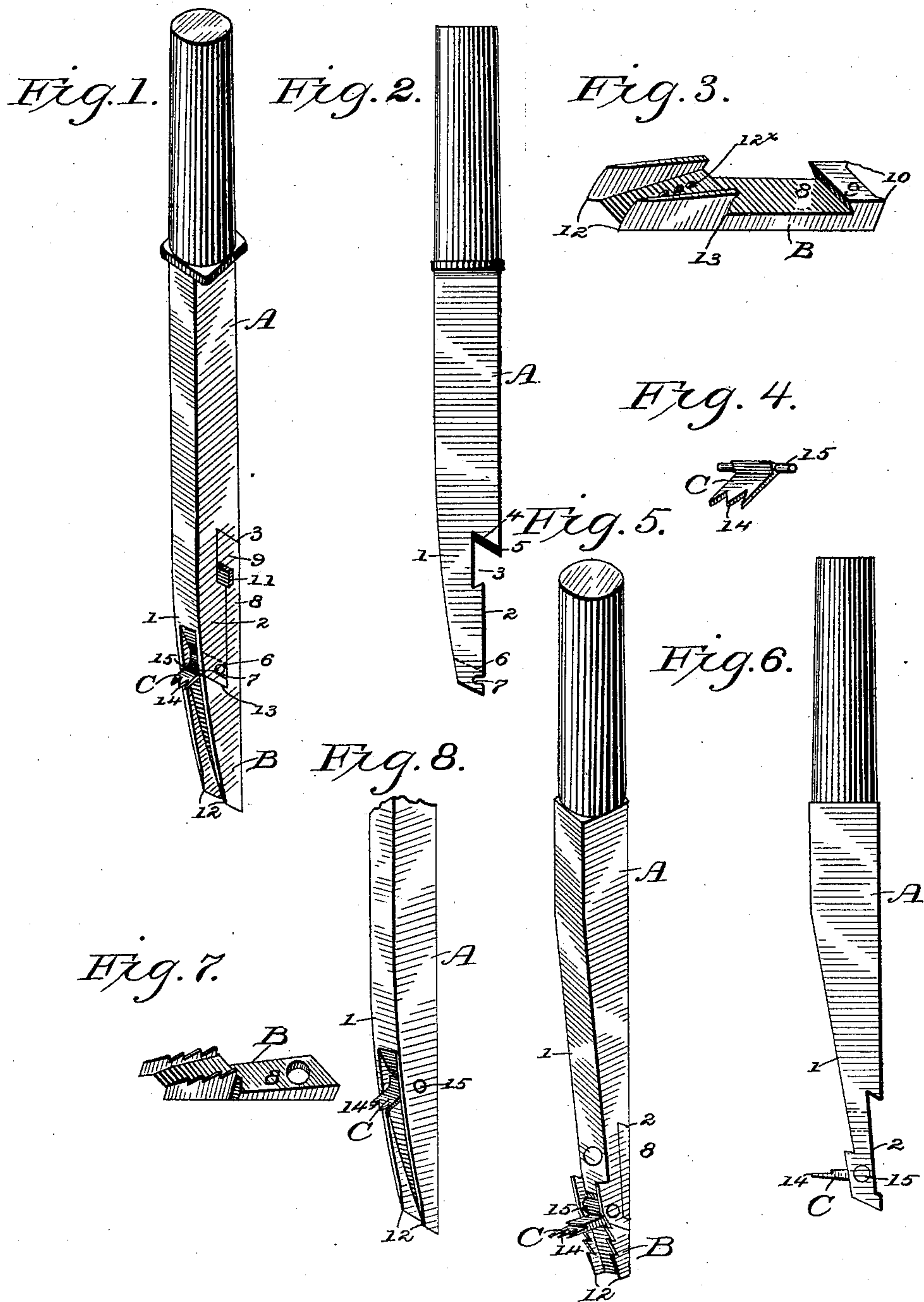


(No Model.)

C. P. BOSTIAN.  
CHISEL.

No. 420,529.

Patented Feb. 4, 1890.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## CHISEL.

SPECIFICATION forming part of Letters Patent No. 420,529, dated February 4, 1890.

Application filed September 19, 1889. Serial No. 324,401. (No model.)

### *To all whom it may concern:*

Be it known that I, CHARLES P. BOSTIAN, a citizen of the United States of America, residing at Milton, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Chisels, of which the following is a specification.

My invention has relation to improvements in chisels; and the object is to provide an implement or tool adapted to mortising and having the characteristic or functions of cleaning the mortise of the chips made during the operation of cutting the mortise.

My invention therefore consists in a chisel of the particular construction hereinafter specified, and especially as the same is particularly pointed out in the claims.

I have fully and clearly illustrated my invention in the accompanying drawings, wherein—

Figure 1 is a view of the complete chisel. Fig. 2 is a view of the stock with the chisel-bit removed. Fig. 3 is a view of the chisel-bit removed from the stock. Fig. 4 is a view of the chip-clearer removed from the chisel. Fig. 5 is a view of a modified means for securing the bit to the stock. Fig. 6 is a detail of the stock of the chisel shown in Fig. 5. Fig. 7 is a detail of the bit of the chisel shown in Fig. 5. Fig. 8 is a view showing the chip-clearer attached to an integral stock and chisel.

A designates the stock, having parallel side faces, a straight back face, and inclined on the front face for a distance extending to the bit end, as seen at 1. At the lower end of the stock-piece in the rear face the metal is cut away, forming a seat 2 to receive the shank of the chisel-bit. At the upper end of this seat 2 is formed a transversely-arranged dovetail groove 3, to take the dovetail projection or lug on the end of the shank of the chisel-bit. The projecting wall, as 4, of this groove is chamfered off on its side edges, as at 5, making the end narrower and somewhat tapered to engage the socket formed in the inclined end of the shank of the chisel-bit, and thus hold that element against displacement laterally. The lower wall of the dovetail may be arranged at a slight incline across the stock, in order to have a wedging function

when the key is inserted. The metal of the stock is extended at the sides below the end, as seen at 6, and in these extensions are formed small notches 7, constituting the bearings for the bearing-lugs on the hinged chip-cleaner. The extensions have inclined ends, as shown, to set against the oppositely-arranged inclines on the chisel-bit.

B designates the chisel-bit, having a shank formed with a seat 8 to rest on the floor of the seat 2 in the stock. The upper end of the seat 8 terminates in a dovetail lug 9, the end face of the shank being formed at an incline, with the sides extended, as seen at 10, to fit over and against the formed upper wall of the dovetail groove in the stock. The lug 9 is made shorter than the width of the groove across the stock, in order that when the parts are laid together there will be formed a key-space between them, in which a key 11 is driven, and the stock and bit thus firmly locked together. The bit is formed with side bits 12 on its edges to cut in advance of the chisel-bit and break the chips, so that the progress of the tool will be aided, and in the center of the bit may be a line of teeth 12<sup>x</sup> to aid in breaking the chips. The upper end of the bit terminates in a projecting incline wall 13, against which the end of the stock sets and is held.

C designates the chip-cleaner. This consists of a piece of metal having points 14 on its free end, and formed with bearing-lugs 15 to fit in the bearings on the stock. This chip-cleaner is arranged in its bearings so that it may turn up out of the way when the chisel is driven into the wood and to turn down and stand at about right angles to the stock when used as a cleaner or clearer of the mortise.

In Figs. 5, 6, and 7 I have illustrated a modified means for connecting the stock and bit, which consists in making the shank of the bit fit a seat in the end of the stock and projecting a screw through them. The clearer or cleaner is also mounted on a bearing-pin, and forms in this respect a permanent connection to the bit. It will thus be seen that the use of the hinged clearer is not confined to the chisels having detachable bits, but may be hinged to an integral tool and serve the purpose intended. The instrument is adapted for use in any mortising-machine, or a han-



dle may be put on the stock and used as a hand-chisel in the usual way.

The operation is apparent. The tool having entered the wood below the surface to any depth in the progress of cutting mortises, the chips made are drawn out by the hinged chip-piece when the chisel is withdrawn.

I am aware that mortising-chisels have been made with side edges to cut in advance of the bit; but I believe I am the first in the art to provide a chisel with a cleaning-piece hinged to the face of the chisel and arranged to operate as described, and to this end it is apparent that the bit and shank may be integral and the chip-piece hinged to the face, as more fully mentioned hereinbefore.

Having thus described my invention, I proceed to particularly point out and distinctly claim what I claim as my invention, as follows:

1. A mortising-chisel provided with a chip-piece hinged to the front face of the bit and arranged to normally lie vertically against the face of the bit and to turn down and lodge at right angles to the bit when the chisel is lifted in the mortise, substantially as described.

2. A mortise-chisel provided with a cleaning-piece hinged to the front face of the bit and formed with a notched edge and arranged to lie against the face and to turn down and

lodge at right angles thereto, substantially as described.

3. The mortising-chisel composed of a stock A, formed with a seat at its lower end to receive the shank of the chisel-bit and provided with a chip-piece hinged to its front face, a chisel-bit having a shank to engage the seat in the stock, and fastening means projected through the stock and the shank of the chisel-bit, all substantially as and for the purpose specified.

4. The mortising-chisel composed of a stock A, formed with a seat 2 at its lower end, having a dovetail groove 3 across the upper portion and bearing-notches 7 at its lower end, a chisel-bit 10, having a shank to set on the seat of the stock and formed with a dovetail lug to engage the dovetail groove of the stock, a hinged chip-cleaner C, having its journals in the bearings of the stock, and a key to lock the stock and bit together, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two attesting witnesses.

CHARLES P. BOSTIAN.

Attest:

JOHN F. MECKLY,  
JOS. ANGSTADT.