

No. 677,350.

Patented July 2, 1901.

C. W. GRANT.
TOOL HOLDER.

(Application filed Dec. 20, 1900.)

(No Model.)

Fig. 1.

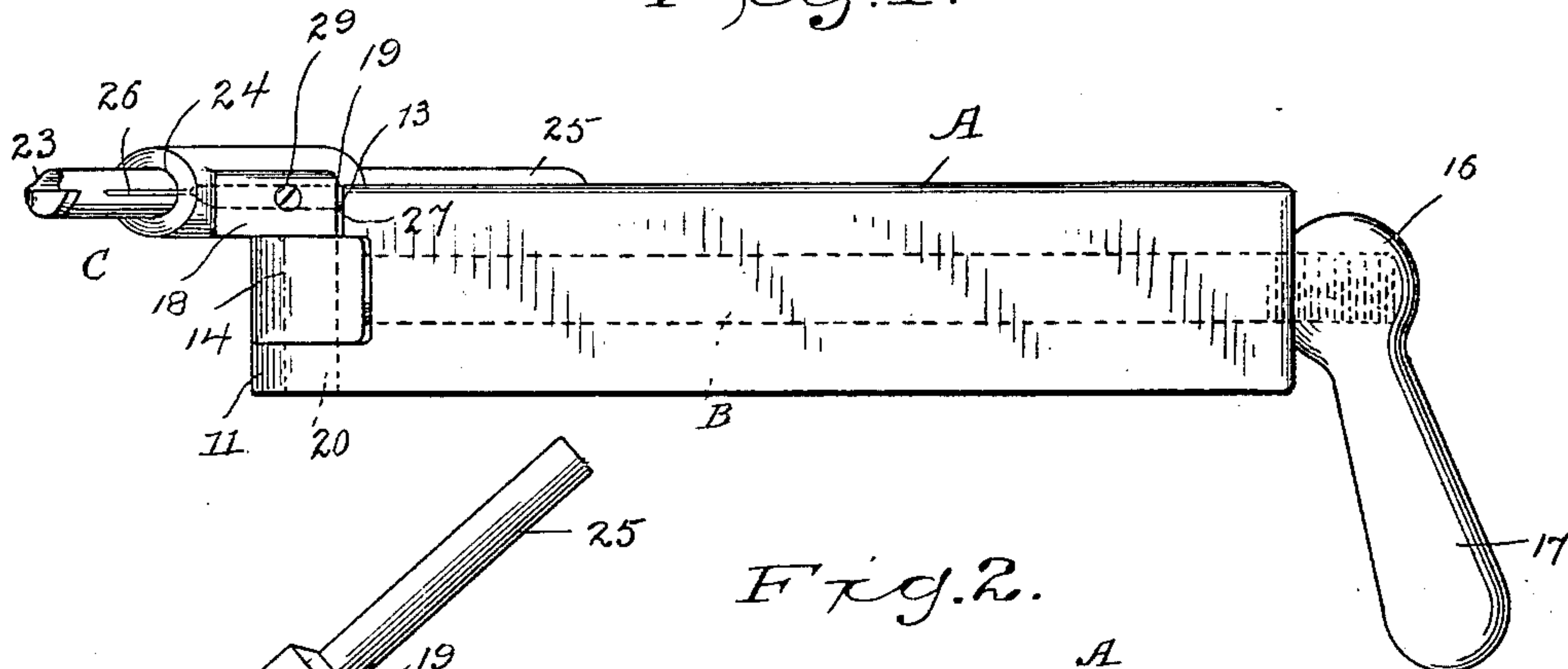


Fig. 2.

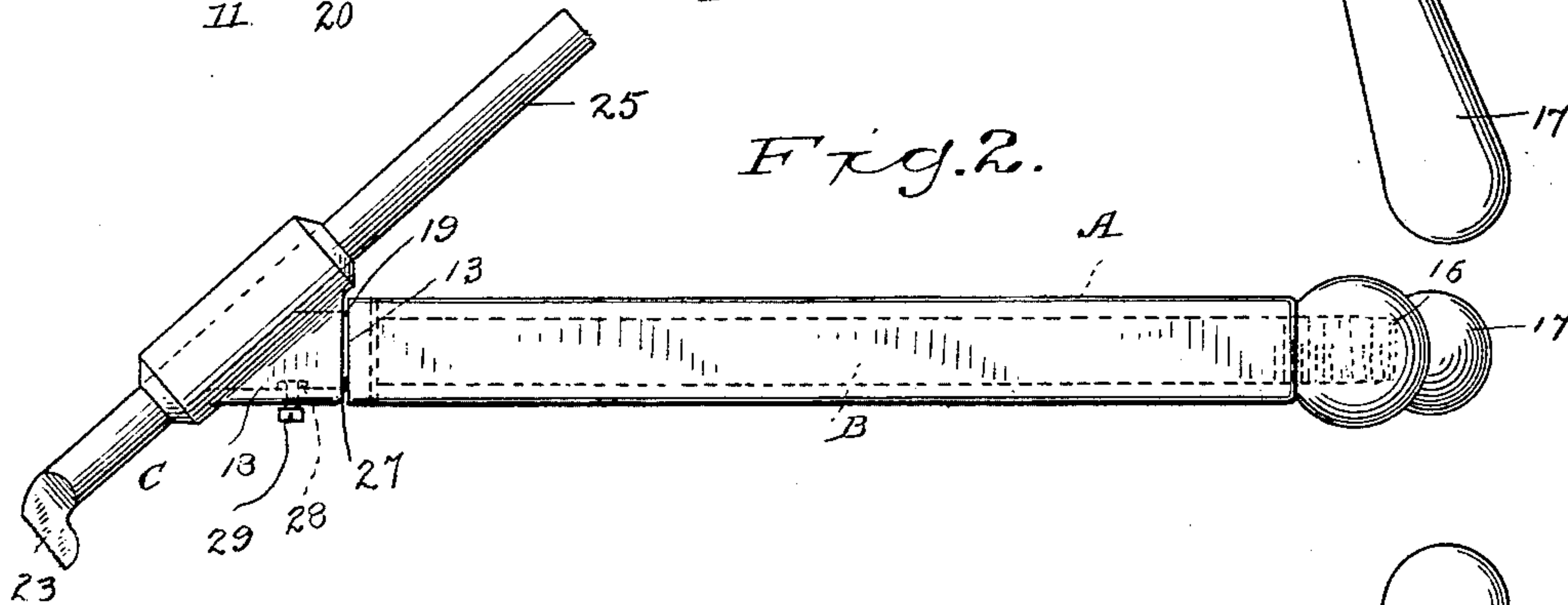


Fig. 3.

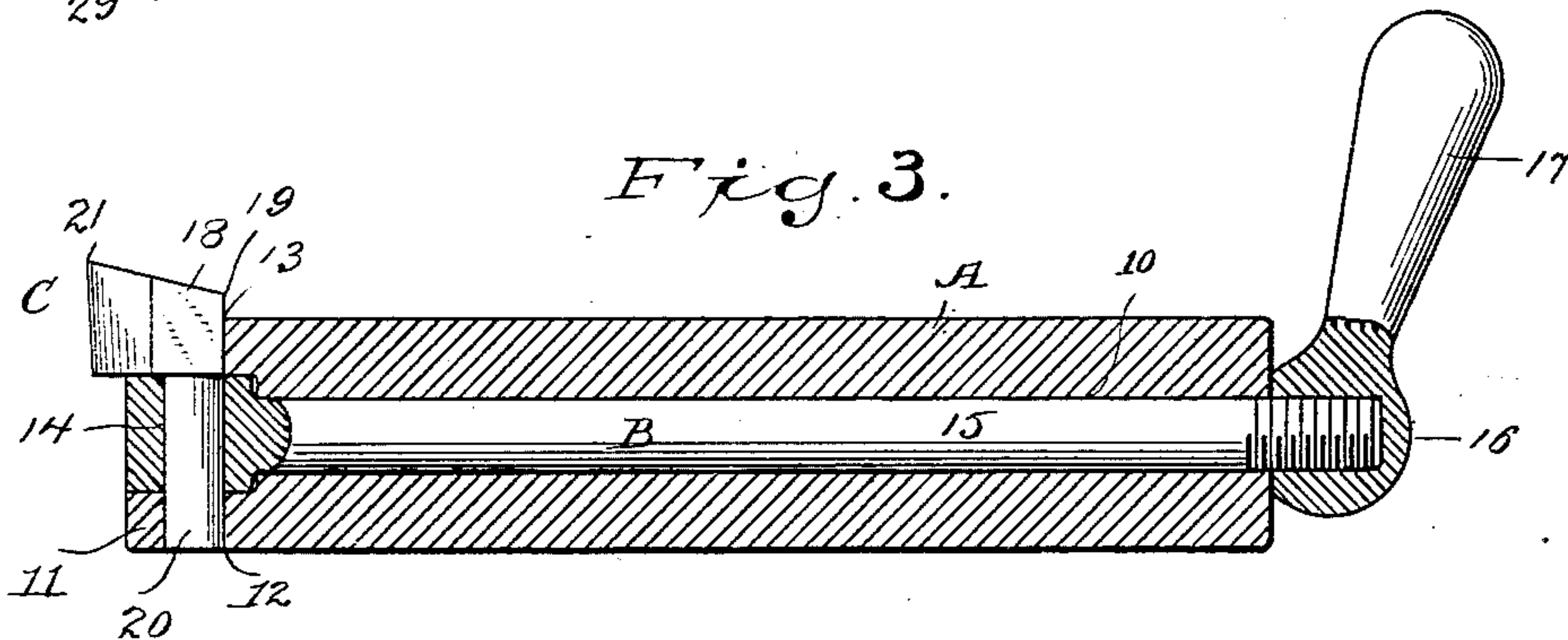


Fig. 4.

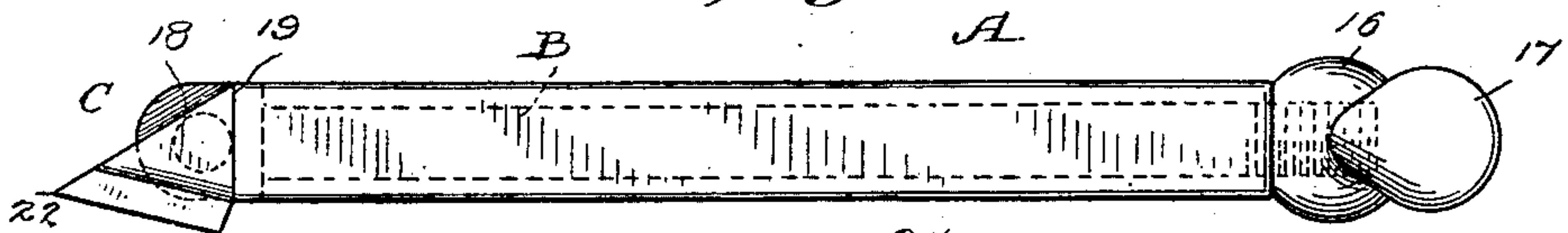
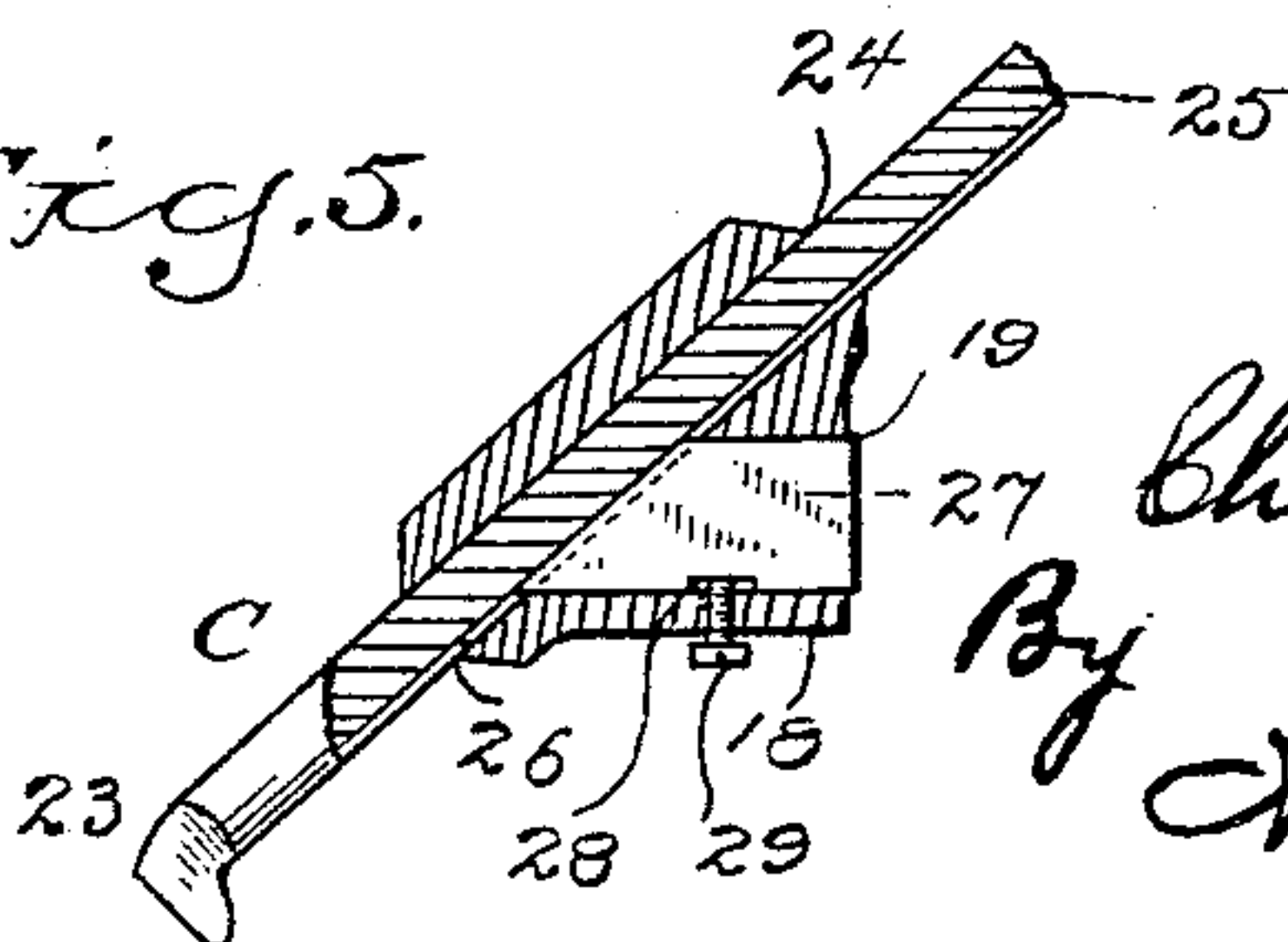


Fig. 5.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 677,350, dated July 2, 1901.

Application filed December 20, 1900. Serial No. 40,584. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. GRANT, a citizen of the United States, residing at Derby, county of New Haven, State of Connecticut, have invented a new and useful Tool-Holder, of which the following is a specification.

My invention has for its object to provide a tool-holder adapted for general use upon lathes, planing-machines, shaping-machines, &c., and which, furthermore, shall be adapted to hold a boring-tool, thereby doing away with special tool-holders which have heretofore been required for boring-tools, my novel tool-holder, which may be termed a "combination tool-holder," being just as light, requiring no more room in a tool-box, and costing no more than an ordinary tool-holder for general tools or a special tool-holder for boring-tools, all of the tools being readily inserted and removed and being securely locked by a slight turn of a nut against possible movement in any direction.

With the above ends in view I have devised the simple and novel tool-holder of which the following description, in connection with the accompanying drawings, is a specification, reference characters being used to designate the several parts.

Figure 1 is a side elevation illustrating my novel tool-holder with a boring-tool therein, but in the unlocked position; Fig. 2, a plan view corresponding therewith; Fig. 3, a vertical longitudinal section, another form of tool being shown in the locked position; Fig. 4, a plan view illustrating still another form of tool in the locked position, and Fig. 5 is a horizontal section of a base especially adapted to hold a boring-tool.

A denotes the body of my novel tool-holder, which is provided with a longitudinal hole 10, an abutment 11, having a vertical hole 12, and an abutment 13.

B denotes an eyebolt whose eye 14 is adapted to lie between the abutments, the hole therein registering with hole 12, and whose shank 15 extends through and projects from the rear end of hole 10 in the body, the end of the shank being threaded to receive a nut 16, which for convenience is provided with a handle 17.

C denotes the tools as a whole, each tool

comprising a base 18, which is adapted to rest upon the eye and is provided with a surface 19, adapted to engage abutment 13, and with a shank 20, adapted to engage the eye and also the hole 12 in abutment 11. The special shape or location of the operative surfaces of the tools is of course not of the essence of my invention, as it is obviously within the scope of my invention to provide variously-shaped special tools for the various operations required to be performed by lathes and planing and shaping machines and for various boring operations. For example, the operative surface may be a point 21, formed upon the base, as in Fig. 3, or a cutting edge 22, integral with the base, as in Fig. 4, or a boring-tool 23 may be provided, as in Figs. 1, 2, and 5, which is made wholly independent of the base and is locked thereto by the act of locking the base to the body. The base in Figs. 1, 2, and 5 is provided with an oblique hole 24, which is adapted to receive the shank 25 of the boring-tool. This shank is provided with a groove 26, which is adapted to be engaged by a dog 27, socketed in the base and projecting slightly from the rear of the base, so that when the base is drawn into engagement with abutment 11 the dog will be forced into the groove and the tool as a whole will be rigidly locked to the body. The boring-tool will be locked to the base and will also be locked against rotary movement in the base. In order to prevent the dog from dropping out when the boring-tool is not in use, I provide in one side of the dog a groove 28, which is engaged by a set-screw 29, by which the dog is retained in the base, but is not locked against movement therein.

The operation will be readily understood from the drawings. In use a half-turn of the nut is all that is required to lock or release a tool. The shank of the eyebolt and the nut are preferably so formed as to lock a tool when the handle is in the raised position, as in Figs. 3 and 4. To release the tool, the operator gives the handle a backward turn, allowing it to drop down. This releases the eyebolt and allows the tool to be removed therefrom. To insert another tool, the operator simply places the shank of the tool in the eye of the eyebolt and in hole 12 in abutment 11,

engaging surface 19 of the tool lying contiguous to abutment 13, and then tightens up the nut. In case a boring-tool is to be used, care is taken to place the dog in engagement with
 5 groove 26, so that when the nut is tightened up both the base and the tool will be rigidly locked in place.

Having thus described my invention, I claim—

- 10 1. A tool-holder comprising a body having a longitudinal hole and at its forward end an abutment 11 with a vertical hole, and an abutment 13, an eyebolt whose eye is adapted to lie between the abutments, to rest on
 15 abutment 11 and to register with the hole therein and the end of whose shank extends through the longitudinal hole and is threaded and a nut for drawing up the eyebolt between the abutments.
- 20 2. The combination with a body having a longitudinal hole and at its forward end an abutment with a vertical hole and an abutment 13, and an eyebolt whose eye is adapted to register with the vertical hole and the
 25 end of whose shank extends through the longitudinal hole, of a tool with a base having an engaging surface and a shank adapted to pass through the eye and engage the vertical hole and means for drawing up the eyebolt
 30 between the abutments so that the engaging surface will be forced against abutment 13 and the shank of the tool will be clamped by the eye.
- 35 3. The combination with a body having at its forward end an abutment with a vertical hole and an abutment 13, and an eye between

the abutments, of a tool having a shank provided with a groove, a base having an oblique hole to receive said shank, a shank 20 adapted to engage the eye and the vertical
 40 hole, and a socketed dog which is adapted to engage the groove and also abutment 13 and means for drawing the eye between the abutments so that both the tool and the base will be locked to the body.

4. The combination with a tool having a shank provided with a groove, a base having a hole to receive said shank and a dog socketed therein and adapted to engage the groove,
 50 of a body having an abutment adapted to be engaged by the base and the dog and means for drawing said base and dog into engagement with the abutment, whereby the tool and the base will be locked to the body.

5. The combination with a tool having a shank provided with a groove, a base having a hole to receive said shank, a dog socketed in the base and adapted to engage the groove and means, as a set-screw and groove, for retaining the dog without locking it, of a body
 60 having an abutment adapted to be engaged by the base and the dog and means for drawing the base into engagement with the abutment, substantially as shown, for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. GRANT.

Witnesses:

GEORGE W. CONKLIN,
 W. H. KNIGHT.