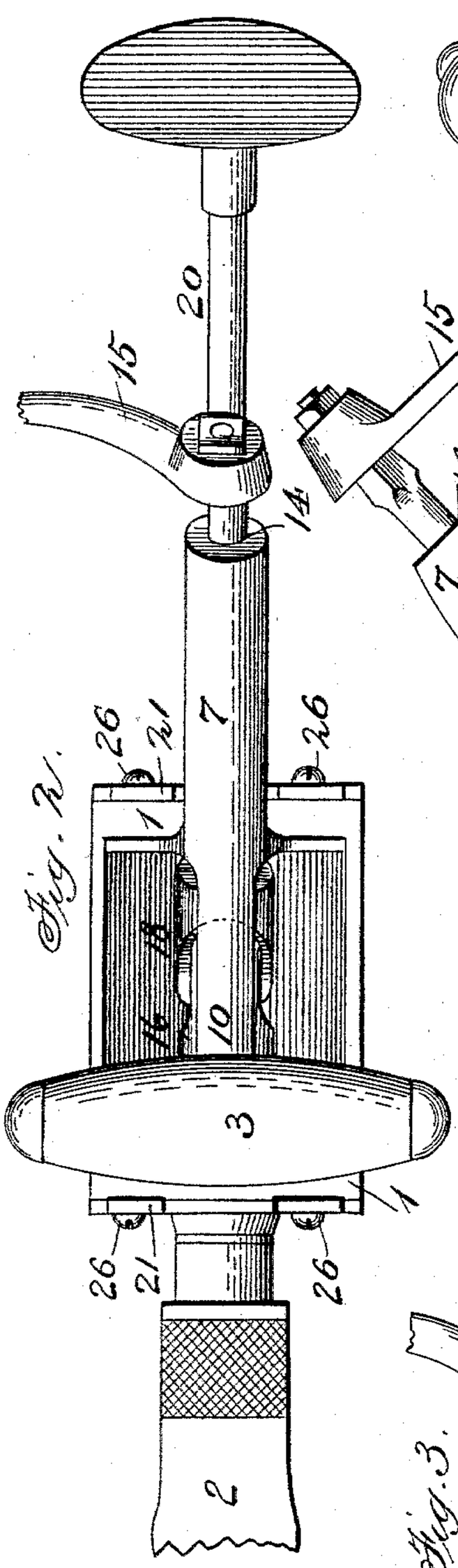
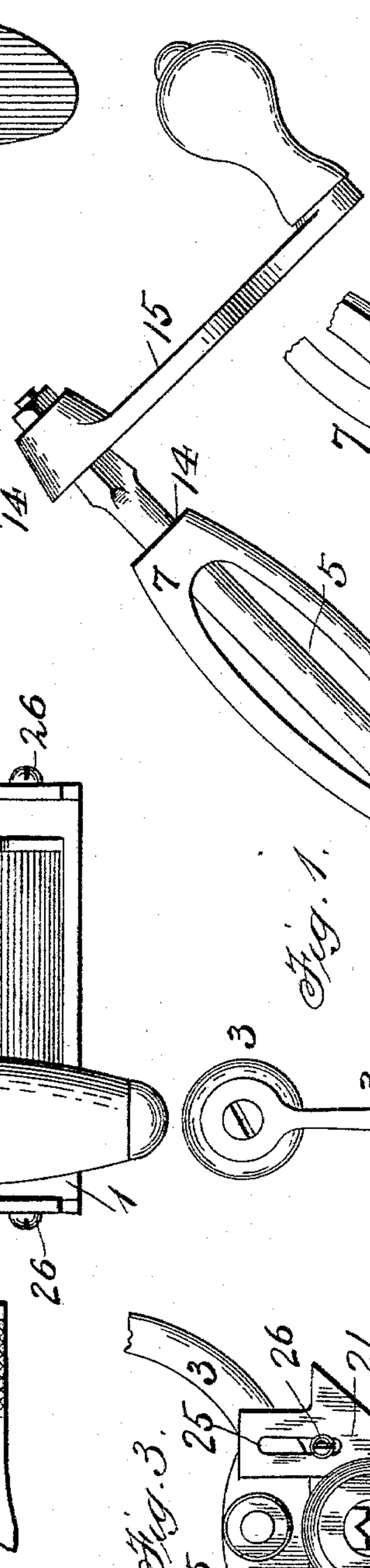
(No Model.)

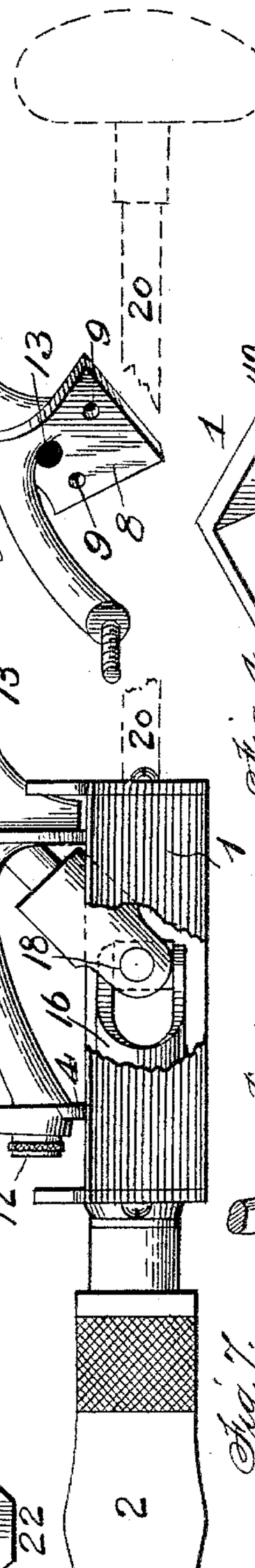
S. McCLELLAN.

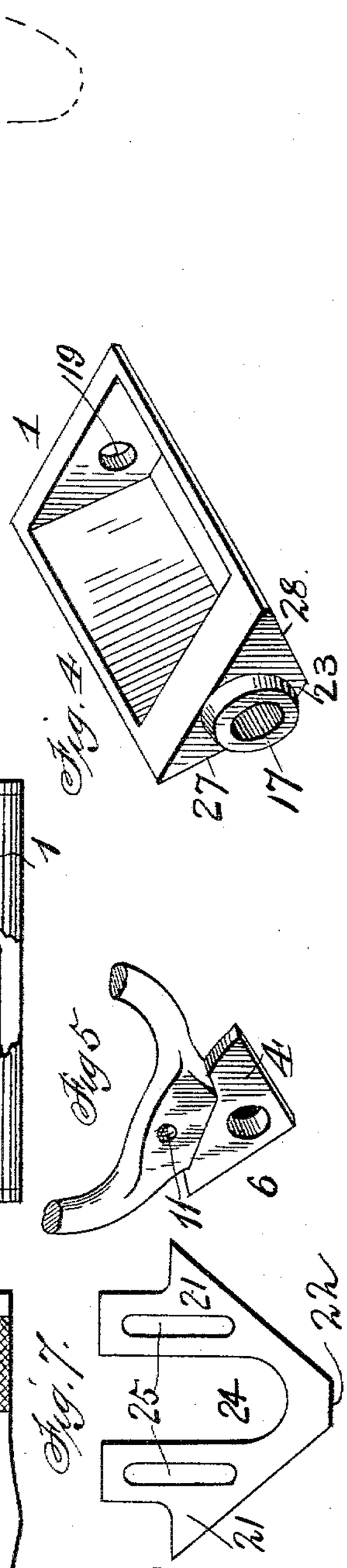
BIT BRACE WITH RIGHT ANGLED V-GUIDE FRAME.

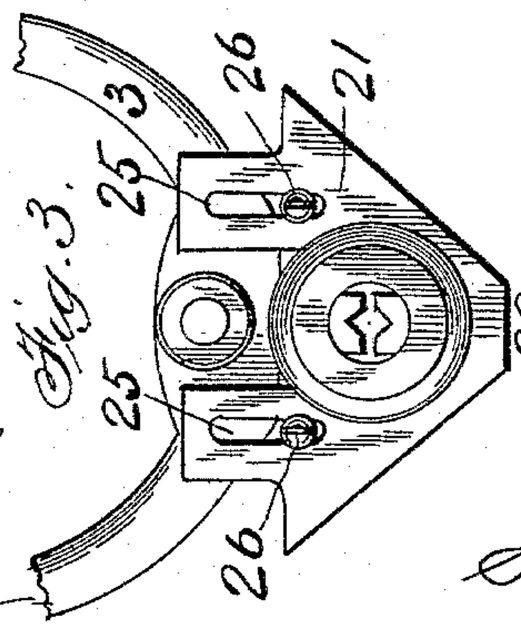
No. 583,922. Patented June 8, 1897.











Witnesses.
Franck L. Ourand
R. C. Rabbitt,

Inventor.
S. McClellan
By J. L. Bridgeman Attorney.

UNITED STATES PATENT OFFICE.

STEPHEN McCLELLAN, OF SAN MARCOS, TEXAS.

BIT-BRACE WITH RIGHT-ANGLED V-GUIDE FRAME.

SPECIFICATION forming part of Letters Patent No. 583,922, dated June 8, 1897.

Application filed May 6, 1896. Serial No. 590,406. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN MCCLELLAN, a citizen of the United States, residing at San Marcos, in the county of Hays and State of Texas, have invented certain new and useful Improvements in Bit-Braces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is a bit-brace having a right-angled V-guide and a driving-shaft working in an arm setting at an angle of about forty-five degrees to a line with the face of the guide, so that the crank-arm of the handle will turn in a corner without striking the wall and will not strike the plane on which the guide rests when boring a hole.

The brace is so constructed that it will bore a hole in a corner, up or down, right or left, by simply turning the machine, or it will bore a hole on a line parallel to a base on which the guide rests, or it may be used as an ordinary brace by using the removable breast-rest.

In the accompanying drawings, Figure 1 is a side elevation with part of the guide cut away to show the knuckle-joint. Fig. 2 is a top plan view with part of the crank-handle and part of the chuck broken away. Fig. 3 is a front end view with a part of the handle broken away. Fig. 4 is a perspective view of the guide. Figs. 5, 6, and 7 are detail views.

My invention is described as follows:

1 is the guide.

2 is the chuck.

3 is the handle.

4 is the lower part of the handle, which fits in the front end of the opening in the guide, the forward end of the shaft 16 passing through the opening 6 of said part 4. The sides and ends of the guide may be perforated to lighten its weight.

To the rear part and inner face of the guide is secured the arm 7, its lower part 8 being secured in place by bolts passing through perforations 9 in said part and into the end wall of said guide. Said arm has a span 10, which reaches to the handle 3, and its threaded end passes through the perforation 11 in said handle, where it is secured by a nut 12, or the arm 7 and reach 10 may be cast solidly with the body or guide 1. Said arm 7 is provided with a perforation 13 in its lower end and a perforation 14 in its upper end, and through these perforations revolves the shaft 5, and on the upper and square end of said shaft is a crank-handle 15. Said shaft is connected with another shaft 16, which passes forward through the opening 17 of the guide 1. These two shafts 5 and 16 are united by a knuckle-joint 18, which works in the opening of the guide-frame 1. These two shafts, however, may be united by beveled gear-wheels or any other known mechanical equivalent.

On the outer end of the shaft 16 works a chuck 2. In the rear end of the guide-frame is a perforation 19, in which the threaded end of a breast-rest 20 is screwed.

On each end of the guide I have attachments 21, which may or may not be used, or one attachment may be used and the other may be left off. These attachments consist of a V-shaped plate having its point cut off, forming a narrow flat surface 22 to correspond with the narrow flat surface 23 of the guide. These plates 21 are each provided with a recess 24, that they may work up and down against the ends of the guide-frame without interfering with the bosses. These attachments are provided with slots 25 and are adjustably secured to each end of said guide by means of screws 26.

The two principal bottom planes 27 and 28 of the guide-frame are at right angles, so that when the same is placed in a corner the chuck and boring device will be exactly on a line with the two walls of the corner and will bore a hole exactly parallel with said lines, either up or down, right or left, by simply turning the device end for end, or the device by placing either of the surfaces 22, 27, and 28 flat upon any plane will bore a hole exactly parallel with the line of the plane. Thus it will be seen that the guide-frame is one of the principal features of the invention.

If I desire to bore farther from the corner of the wall than I could do simply by the use of the guide 1, I adjust the attachments 21 to suit, or if I wish to bore a hole at an angle I adjust one of the attachments to suit.

In the general use of my device I do not use

the breast-rest 20, but when I wish to use it as an ordinary bit-brace I attach said breast-rest.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A bit-brace comprising the V-shaped guide-frame 1, an inclined arm rigidly connected thereto, a shaft journaled in said frame and carrying a chuck, a second shaft journaled in said inclined arm and connected to the former shaft by a knuckle-joint, and means for turning said second shaft, substantially as described.

2. A bit-brace, consisting of the V-shaped guide-frame 1, its sides 27 and 28, being at right angles; arm 7, perforated longitudinally, and having its lower end secured to the rear part of said frame; shaft 16, journaled in the front end of said frame, its front end carrying a chuck; shaft 5, journaled in arm 7, its lower end connected to the rear end of shaft 16, in the bowl of the frame 1, by a knuckle-joint 18, its upper end adapted to carry means for rotating the same, substantially as shown and described and for the purposes set forth.

3. A bit-brace, consisting of the V-shaped guide-frame 1, its sides 27 and 28, being at right angles; arm 7, perforated longitudinally and having its lower end secured to the rear part of said frame; shaft 16, journaled in the front end carrying a chuck; shaft 5, journaled in arm 7, and means at its lower end to revolve shaft 16, substantially as shown and described and for the purposes set forth.

4. A bit-brace, consisting of the V-shaped guide-frame 1, having its sides 27 and 28, at right angles, and a base plane 23; arm 7, perforated longitudinally and setting at an angle of forty-five degrees to a line parallel with plane 23; handle 3, secured to the front end of said frame; reach 10, extending from arm 7, to handle 3; shaft 16, journaled through the front end of said frame carrying on its front end a chuck; shaft 5, journaled in arm 7, and having means to rotate shaft 16, substantially as shown and described and for the purposes set forth.

5. In a bit-brace, substantially as shown and described, the V-shaped guide-frame 1, having its sides 27 and 28, at right angles, said frame carrying shaft, 16, and means for carrying a shaft, 5, at an angle of forty-five degrees from its base-line, said shaft 5, having means to rotate shaft, 16, substantially as shown and described and for the purposes set forth.

6. In a bit-brace, substantially as shown and described, the V-shaped guide-frame 1, having its sides 27 and 28, at right angles and a base plane 23; said frame carrying shaft 16, and a means for carrying a shaft, 5, at an angle of forty-five degrees from its base-line, said shaft, 5, having means to rotate shaft, 16, substantially as shown and described and for the purposes set forth.

7. In a bit-brace, substantially as described, the adjustable end attachments 21, having slots 25, one adapted to be secured to each end of frame 1, by means of bolts 26, substantially as shown and described and for the purposes set forth.

8. A brace-bit, consisting of a V-shaped guide-frame 1; the perforated arm 7, extending from the rear end of said frame; shaft 16 working through the front end of said frame and carrying on its front end a chuck; shaft 5, working through the perforation in arm 7, and having means to rotate shaft 16; breast-rest 20, detachably secured to the rear part of frame 1, substantially as shown and described and for the purposes set forth.

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

STEPHEN McCLELLAN.

Witnesses:

EMMA M. GILLETT,

ROSE E. RABBITT.