F. Vester.

Drill

No 75816 Patented Mar 24, 1868

Fig. 1

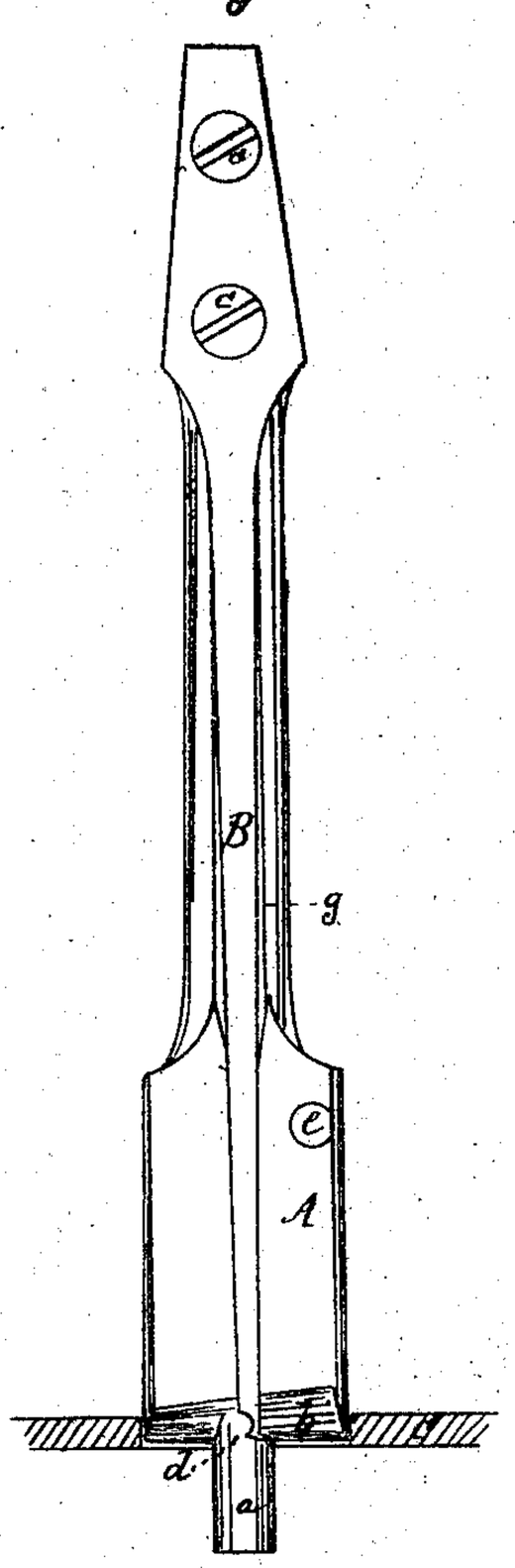


Fig. 2.

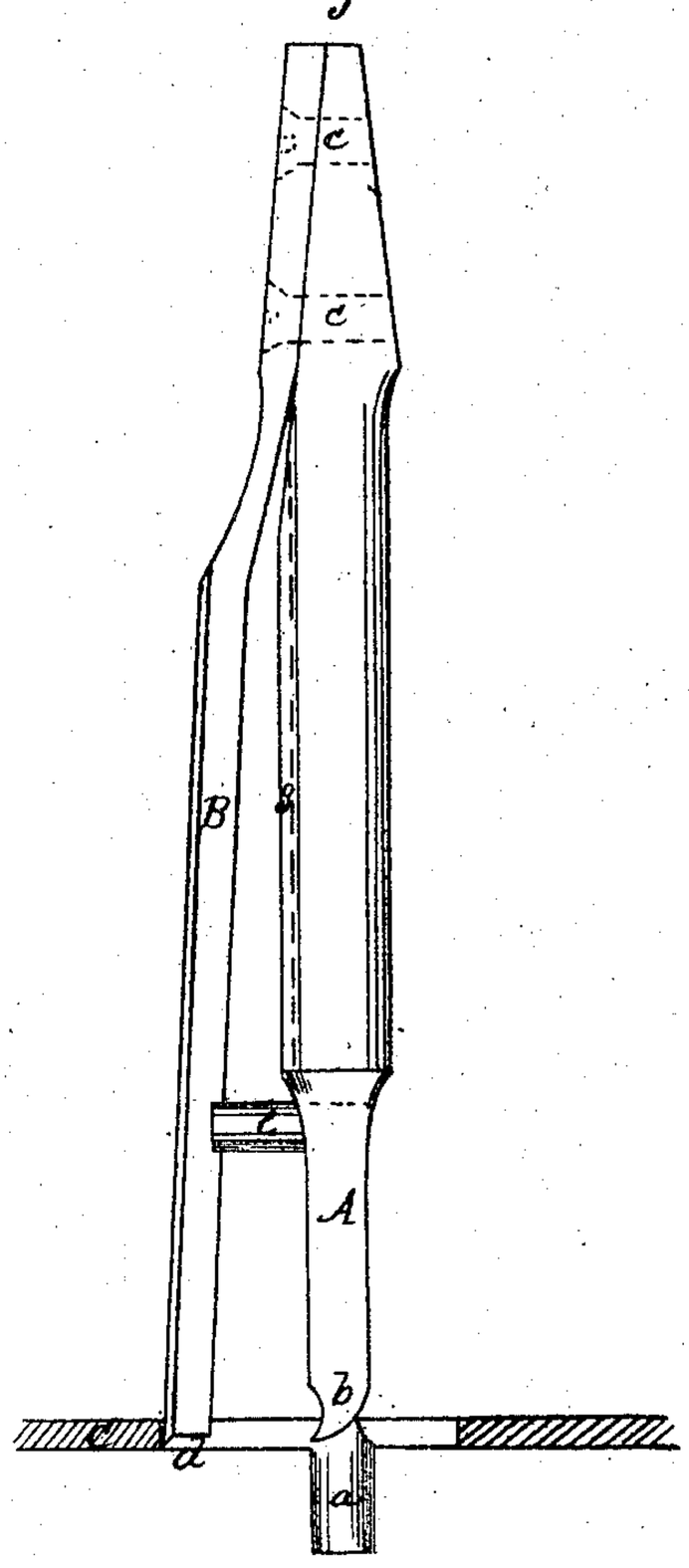


Fig. 4

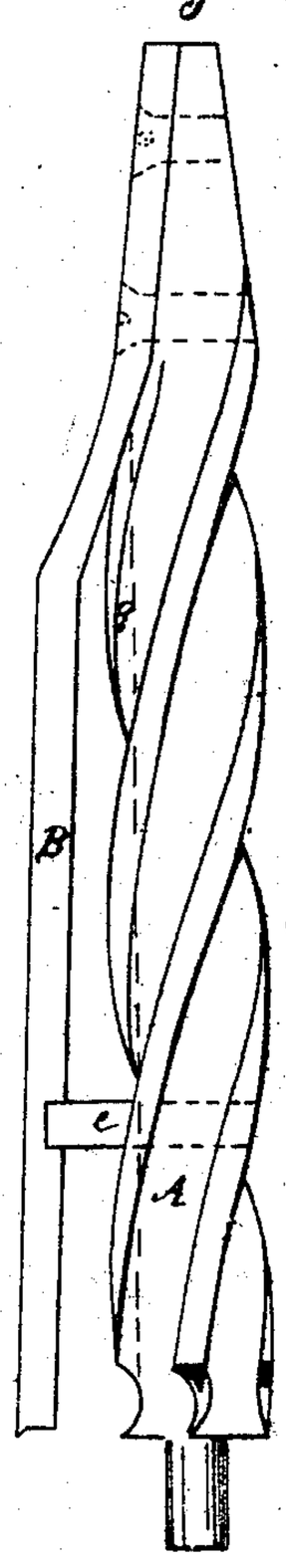
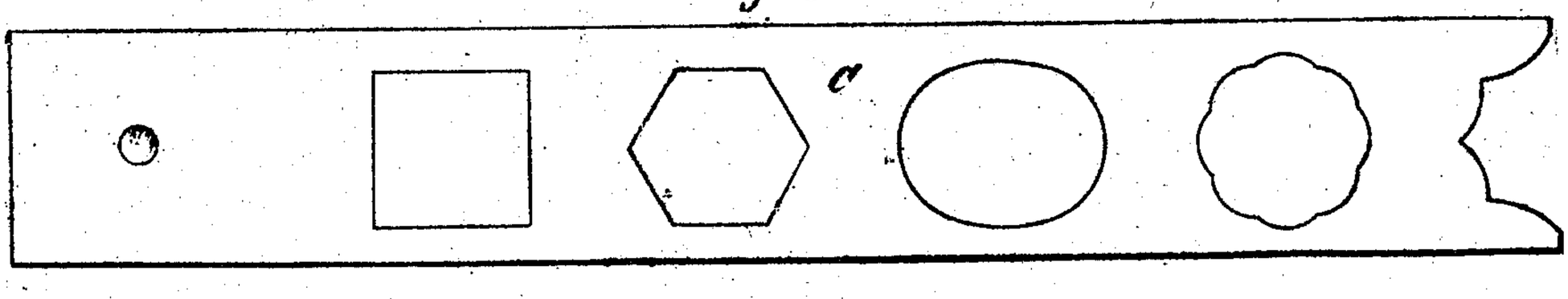


Fig. 3



Witnesses

A Harris

A Veile

Inventor

Franz Vester

United States Patent Office.

FRANZ VESTER, OF NEWARK, NEW JERSEY.

Letters Patent No. 75,816, *dated March* 24, 1868.

IMPROVED DRILL.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, FRANZ VESTER, of Newark, in the county of Essex, and State of New Jersey, have invented a new and useful Improvement in Drills for boring wood, iron, and other metals; and do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view of my improved drill.

Figure 2, a view at right angles to the former.

Figure 3 is a plan or top view of the guide-plate, used in connection with the said drill, for purposes hereinafter explained; and

Figure 4 a modification of my invention.

It is well known to machinists and others that to drill a square or polygonal hole in a piece of wood or iron, for reception of a plug or bolt of similar form, one or more circular holes has in the first place to be bored, and next a square-cutting drill or reamer, used for cutting out the angles, thus requiring a change of boring-tools, as well as a shifting of the piece to be bored.

In remedying this defect in boring-instruments, by attaching a spring-cutter to the drill, and the use of a guide-plate, so that a circular, polygonal, or square hole may be bored by one and the same operation, consists the nature of my invention, which, by reference to the drawings, I will explain as follows:

In the said drawings, A represents an ordinary drill or bit, of which *a* is the centre, and *b b* the cutters. To this drill is attached, by means of screws *c c*, or by any other proper device, a spring-cutter, B, (see figs. 1 and 2.) This spring-cutter, of which there may be one or more, has a knife or cutting-edge, *d*, which follows in the wake of the cutters *b b*, and while so engaged, and having the property of a rigid spring within itself, bears against a stay or retaining-post, *e*, projecting outwards from the drill A, and also bears against the guide-plate C, which contains a pattern of the form of hole to be drilled, (see fig. 3.) Hence it will be seen that while the drill A bores out the centre or circular part of the hole, the auxiliary drill B will bear against the guide-plate C, and while cutting within the circle described by the drill A, will recede within the recess *g* of said drill, and will also spring out and bore out the angles of the square or polygonal hole to be bored.

In operating my improved drill, I merely place the guide-plate C with the pattern-hole in position, and clamp the same to the wood or iron to be bored. I then set the drill in position, and next in motion, when a hole of any desired shape can be bored, and thus I produce an improved drill, which will be found of great convenience to machinists, carpenters, and others, especially where countersinking is required for the square or polygonal heads of brace-bolts.

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

The spring-cutter B, the stay-post *e*, and guide-plate C, when used in combination with an ordinary drill or auger A, substantially as and for the purposes described and set forth.

In testimony whereof, I have hereunto set my signature, this fourteenth day of August, A. D. 1867.

FRANZ VESTER.

Witnesses:

A. HARRIS,

A. NEILL.