

Johnson & Tainter, Boring Tool.

No. 95,483

Patented Oct 5, 1869.

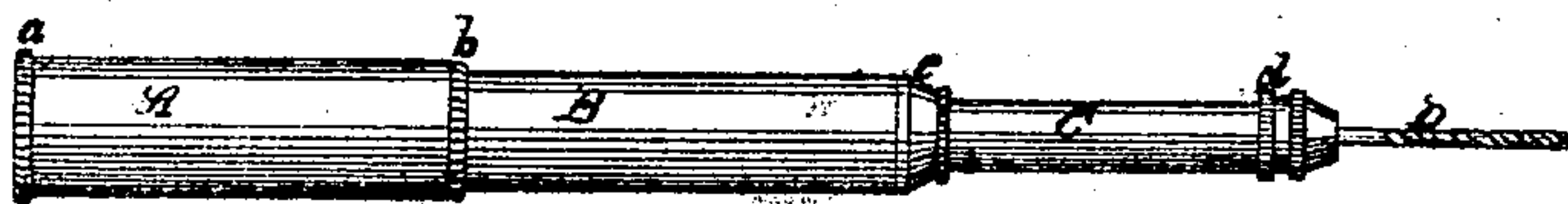


Fig. 1.

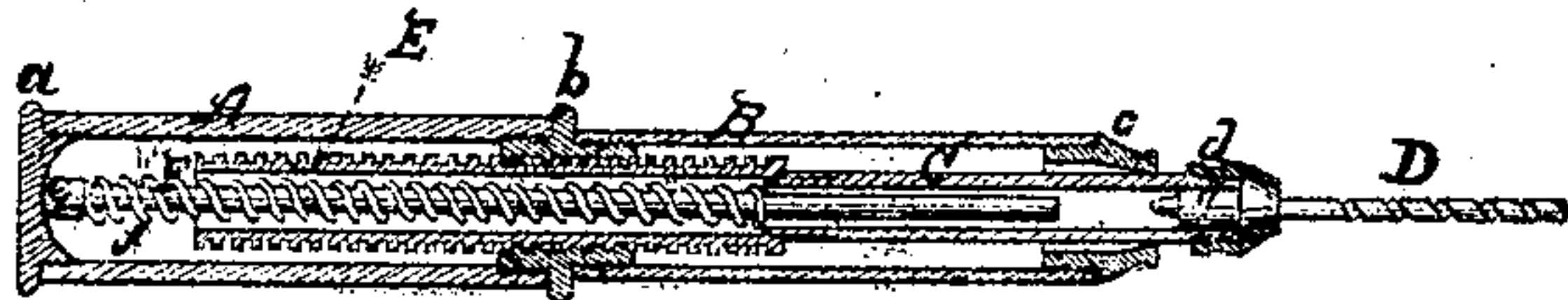


Fig. 2.

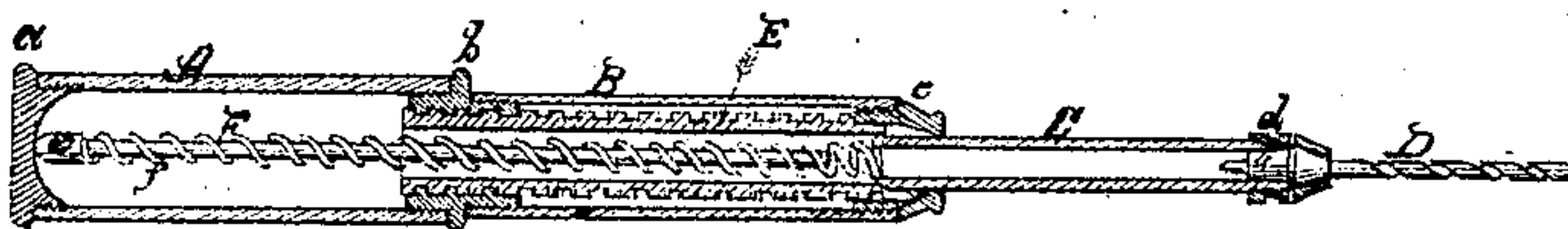


Fig. 3.

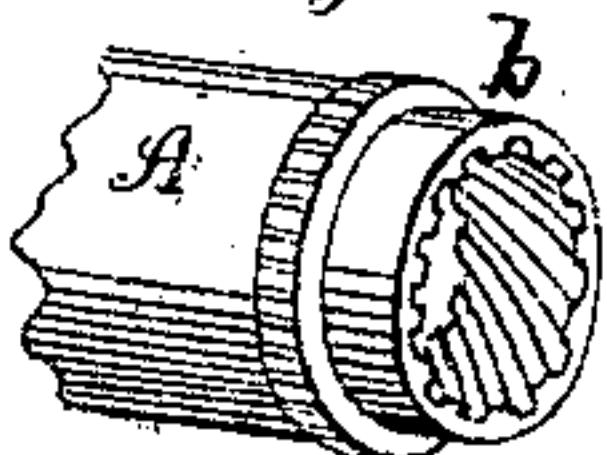


Fig. 4.

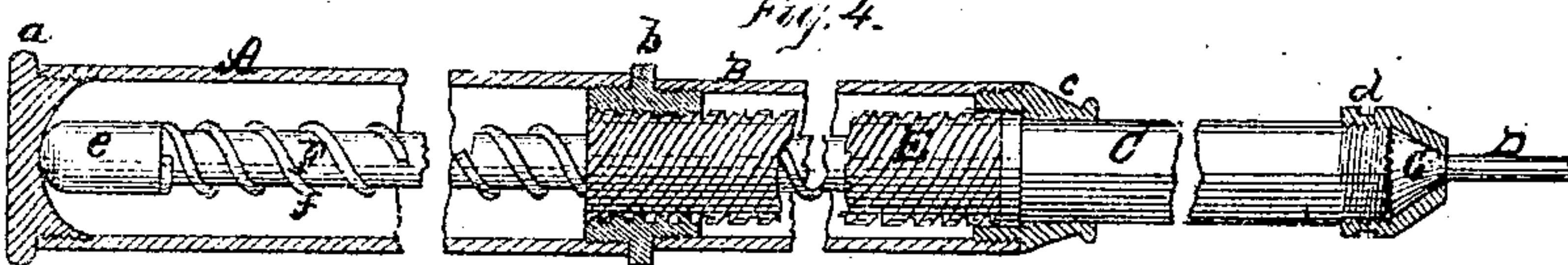


Fig. 5.

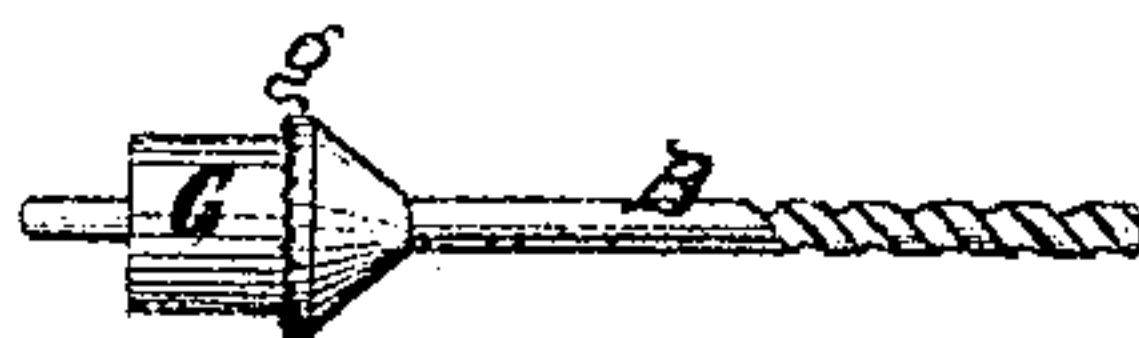


Fig. 6.

INVENTORS *Wm J Johnson*
George Tainter

Witnesses.

A. B. Ely
Alfred Ely

United States Patent Office.

WILLIAM J. JOHNSON, OF NEWTON, AND GEORGE TAINTER, OF
WATERTOWN, MASSACHUSETTS.

Letters Patent No. 95,483, dated October 5, 1869.

IMPROVEMENT IN BORING-TOOL.

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

Be it known that we, WILLIAM J. JOHNSON, of Newton, and GEORGE TAINTER, of Watertown, in the State of Massachusetts, have invented a new and useful Improved Boring-Tool, of which the following, with the accompanying drawings, is a full description.

The nature of our invention consists in producing a rotary motion in a drill or bit, by pressing it against the object to be perforated; and our object is to produce a tool which shall automatically revolve and bore, by means of a straight forward and back movement of the handle toward and from the substance to be bored, and by means the most convenient for manipulation.

Figure 1 is a plan view of the tool.

Figure 2 is a section, with the many-threaded screw-tube forced into the case.

Figure 3 is a section, with the screw-tube or spindle out.

Figure 4 is a view of the many-threaded screw-nut.

Figure 5 is a partially-sectional view of the case and nut, and a partial plan view of the spindle, spring, and guide.

In the drawings—

A B is a hollow case, somewhat like a pencil-case, made in two parts.

a is a screw-cap upon the but or handle-end.

b is a hollow coupling-nut, having screw-threads on the outside, to which the ends of A B are screwed or coupled, and also having a many-threaded female screw on the inside, for the many-threaded screw-tube or spindle, to be hereafter described.

E is a hollow tube, with a many-threaded screw cut on its outer side, so as to run in and out of the many-threaded screw-nut *b*.

C is a prolongation of E, and may be made hollow or solid. It is better hollow. It is also smaller than E in diameter, although not necessarily.

c is a guide-nut or cap, screwed into the end of B, and through which C passes back and forth.

Between E and C is a shoulder, which strikes against the guide-nut or cap *c*, and prevents the further advance forward of E.

D is the bit, gimlet, borer, or boring-point, tightly fastened, near its inner end, into a solid chuck or reinforce G.

d is a conical screw-cap, screwed on to the end of C, through the end of which D passes, and against which, on the inside, G presses.

f is a spiral spring, enclosed in the case and the many-threaded hollow tube E, and with one end pressing against the inner end of the spindle C.

The other end rests on a step, *e*, of a guide-rod F the end of *e* resting against the screw-cap *a*. The guide-rod may be dispensed with, but it is better as it is.

When the screw-cap *d* is screwed on, the shoulder *g*, of the solid chuck or reinforce G, of the borer D, will be pressed firmly against the end of the tube C.

If the end of C and the under side of *g* be serrated, it may be found advantageous to prevent any separate revolution of D.

The mode of operation is as follows:

The part A being held in the hand, D is pressed against the substance to be perforated. A being pressed forward from the position in figs. 1 and 3 to that in fig. 2, the hollow screw-spindle E C is driven backward through the screw-nut *b*, and against the spiral spring *f*, and in so doing, D is rapidly revolved, and bores its way into the wood, &c. The pressure of the hand being relaxed, by the action of the spring *f* the parts return to the position of fig. 3, when the forward pressure of the hand again continues the perforation.

The screw-tube may be arranged to have its screw inside; the spiral spring may be arranged outside the tube; but we have found the methods above mentioned the best and cheapest.

The chuck or reinforce G may be struck up from wire, and different bits or bores may each be furnished with such a reinforce, and, for many purposes and reasons, this is better than having one chuck fitted to accommodate different-sized shanks of bits or borers.

What we claim, is—

1. The boring-tool, constructed and arranged, as to its several parts, substantially as described.

2. The screw-tube, constructed substantially as set forth, in combination with the screw-nut and case, when constructed and arranged substantially as shown and described.

3. The screw-tube, with its screw-nut, spiral spring, and borer or bit, severally constructed and arranged to operate substantially as shown and described.

4. The screw-tube, nut, spiral spring, and guide-rod, severally constructed and arranged to operate in combination, substantially as shown, and for the purposes described.

In testimony whereof, we have hereunto subscribed our names.

WM. J. JOHNSON.
GEORGE TAINTER.

Witnesses:

A. B. ELY,
ALFRED ELY.