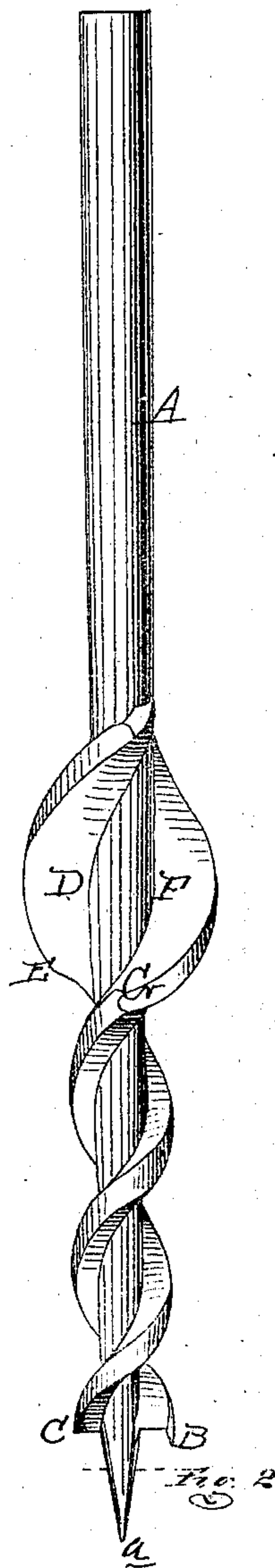
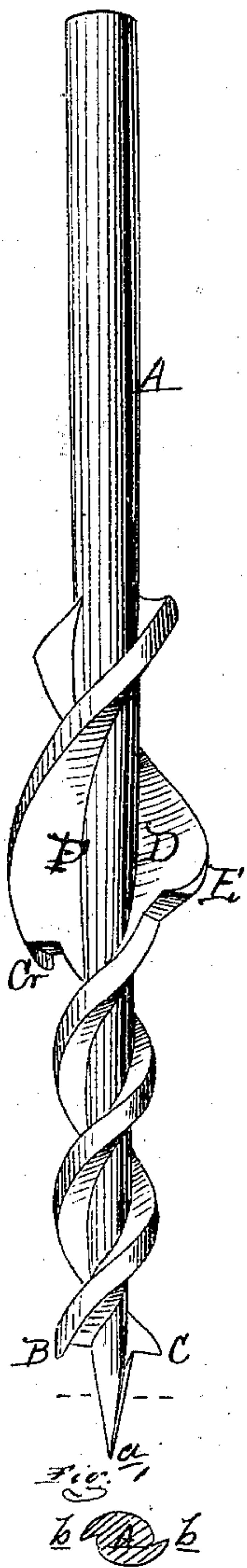


D. KELLY.
IMPROVED BIT

116837

PATENTED JUL 11 1871



ATTEST

Myron W. Church
Franklin C. Church

INVENTOR

D. Kelly
per Atty
Thos. S. Sprague

UNITED STATES PATENT OFFICE.

DANIEL KELLY, OF MUSKEGON, MICHIGAN.

IMPROVEMENT IN BORING-BITS.

Specification forming part of Letters Patent No. 116,837, dated July 11, 1871.

To all whom it may concern:

Be it known that I, DANIEL KELLY, of Muskegon, in the county of Muskegon and State of Michigan, have invented a new and useful Improvement in Compound Boring-Bits; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a perspective. Fig. 2 is an elevation.

The nature of this invention relates to the construction of a compound or double bit, by means of which two bores of different calibers may be made at the same time, and it is designed to be an improvement upon the boring-bit for which Letters Patent were issued to me on the 10th day of May, 1870. The invention consists in attaching to the stock of my bit, at any desired distance from the point, and with its spur and cutter at right angles, or nearly so, with the spur and cutter of said bit, an enlarged bit, substantially as and for the purposes hereinafter described.

In the accompanying drawing, A represents the stock of my bit, conical toward the point *a*, which is provided with two cutting-lips, *b*. B is a spur of the form generally attached to center-bits. C is the cutter, the convolution of which extends about the stock as far as the enlargement. The point *a*, being provided with two cutting-lips, cuts its passage into the wood as it advances, and does not require to be forced, as is the case with augers and center-bits of ordinary construction. The point of the spur B circumscribes the bore and gauges the depth of the cutter following it, while, the latter being but of sufficient length to feed down the tool and to carry back the chip, the boring is effected with

the least friction and perfect truth. D is an enlargement of the convolution of the spur, and at the point of enlargement is provided with a cutter, E, similar in construction to the cutter C, except that it makes but a partial convolution around the stock A. F is a corresponding enlargement of the convolution of the spur attachment, and is provided with a spur, G, which is also in the form of a partial convolution of a screw about the stock A; or it and the enlarged cutter may extend the full length above of said stock, or to an additional and corresponding enlargement, if desired.

It will readily be seen that a bit of this construction will wear much longer than either the auger or center-bit, as the screw-point of the former and the cutter of the latter will not permit of much filing. It will also be obvious that the power required to bore a large hole is much more than that required to bore two smaller ones. The use of this bit will, therefore, very materially lessen the labor of boring, for the smaller bit precedes the larger.

I am aware of a patent issued to Calvin Wardwell, April 20, 1869, and disclaim the invention described in said patent.

What I claim as my invention, and desire to secure by Letters Patent, is—

A bit, having a conical point, *a*, provided with two cutting-lips, *b*, and its stock A with a spur, B, and cutter C, both spur and cutter terminating in the form of a screw-thread about the stock, the upper ends of said convolutions terminating in enlargements D E, the former being provided with cutter E and the latter with spur G, substantially as and for the purposes set forth.

DANIEL KELLY.

Witnesses:

HIRAM J. HOYT,
DANL. JAMISON.