

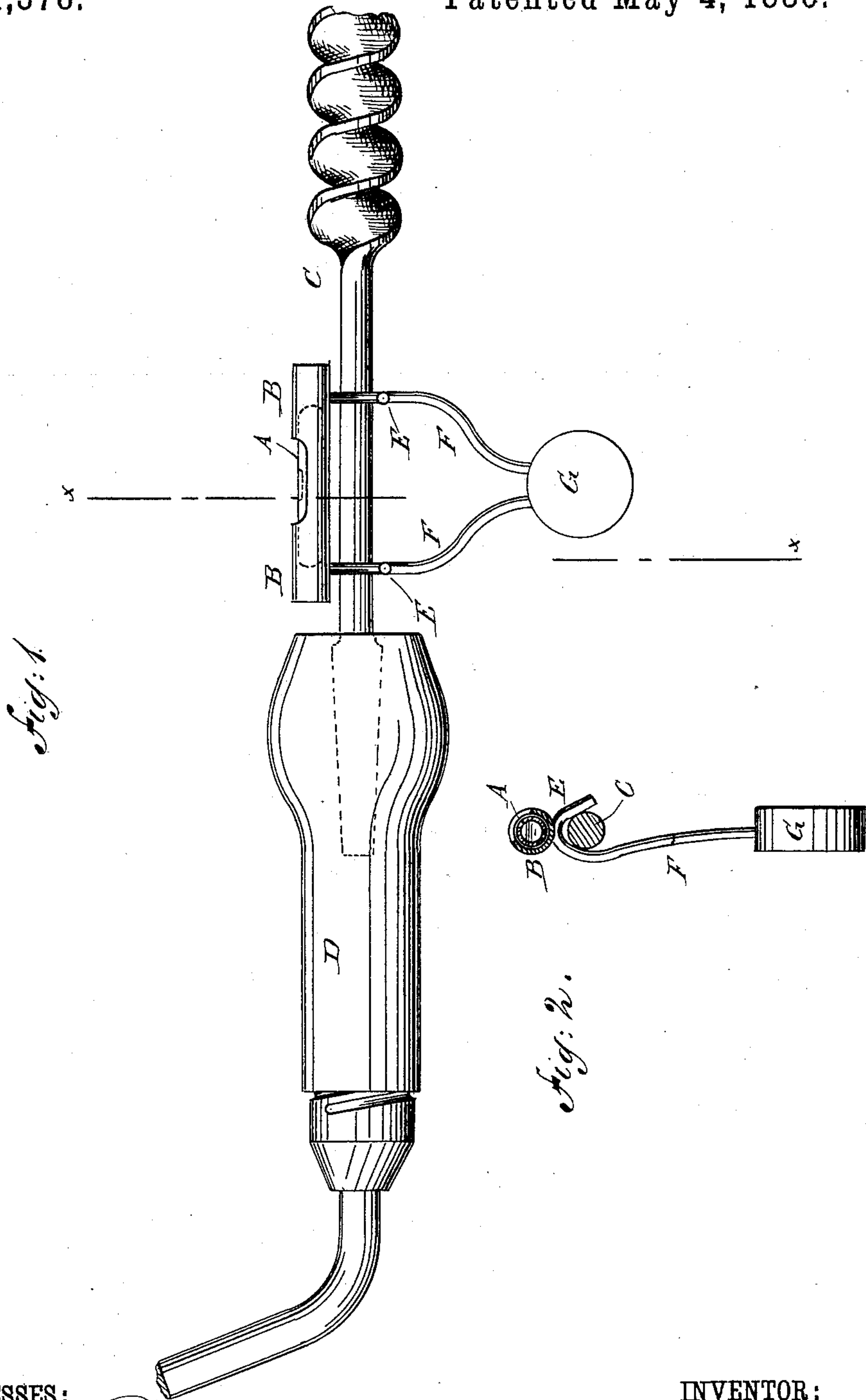
(No Model.)

W. E. GWYER.

SPIRIT LEVEL FOR BORING BITS.

No. 341,378.

Patented May 4, 1886.



WITNESSES:

Chas. Nida
E. M. Clarke

INVENTOR:

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UNITED STATES PATENT OFFICE.

WILLIAM E. GWYER, OF NEW YORK, N. Y.

SPIRIT-LEVEL FOR BORING-BITS.

SPECIFICATION forming part of Letters Patent No. 341,378, dated May 4, 1886.

Application filed September 22, 1885. Serial No. 177,822. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. GWYER, of the city, county, and State of New York, have invented a new and useful Improvement
5 in Boring-Bit Levels, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
10 corresponding parts in both the figures.

Figure 1 is an elevation of one of my improved boring-bit levels, illustrating its use. Fig. 2 is a sectional elevation of the same,
15 taken through the line *x x*, Fig. 1.

The object of this invention is to provide
15 boring-bit levels constructed in such a manner that their use will enable the operator to bore a hole exactly horizontal, and which shall be simple in construction and convenient in use.

20 The invention consists in the combination, with a spirit-bottle and its case, of suspension-hooks and a stem and balancing-weight, as will be hereinafter fully described and then claimed.

25 A is a spirit-bottle, and B is its case, which are made small and light, so that they can be suspended from the shank of a boring-bit, C, without interfering with the convenient use of the said bit.

30 D represents a brace (only part of which is shown) for operating the said bit.

To the case B are attached one or more hooks, E, to hook upon the shank of a bit, C, and thus support the said case from the said
35 shank.

F is a stem, which may be made single, but I prefer to make it double, as shown in Fig. 1.

The stem F is rigidly attached to the case B, and may be a continuation of the hooks E, or may be made separate from the said hooks. 40 The first construction is preferred, as being simpler in manufacture.

To the end of the stem F is attached a weight, G, of sufficient gravity to keep the spirit-bottle A and its case B balanced upon the up- 45 per side of the shank of the boring-bit C while the said bit is being used.

With this construction, when the shank of the boring-bit is level and the bit is boring a horizontal hole, the air-bubble of the spirit- 50 bottle A will be in the center of the spirit-bottle, and will move away from the center should the bit have the least inclination from a level.

Having thus fully described my invention, 55 I claim as new and desire to secure by Letters Patent—

The combination, with a spirit-bottle, A, and its case B, of suspension-hooks E, and a stem, F, and balancing-weight G, substantially as 60 herein shown and described, whereby the said spirit-bottle and its case can be kept in place upon the shank of a boring-bit when in use, to show when the said bit is horizontal, as set forth.

WILLIAM E. GWYER.

Witnesses:

JAMES T. GRAHAM,
EDGAR TATE.