(No Model.)

W. E. GWYER.

SPIRIT LEVEL FOR BORING BITS.

No. 341,378. Patented May 4, 1886.

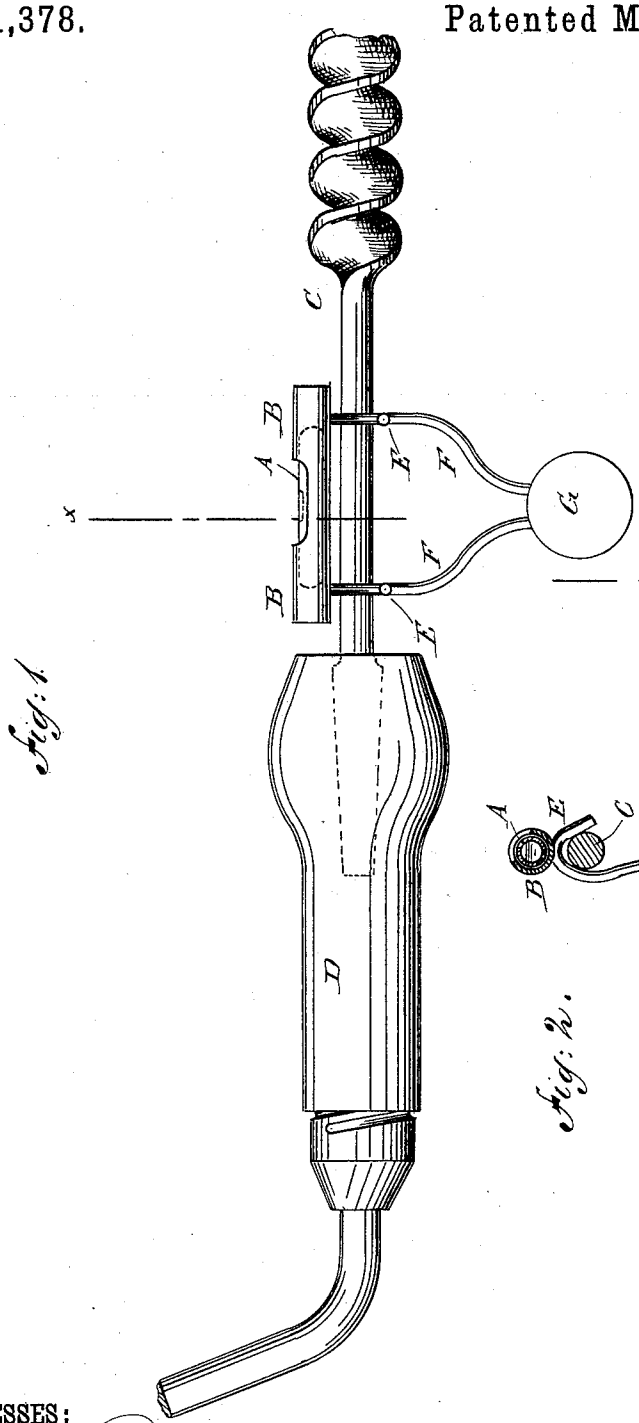


Fig. 1.

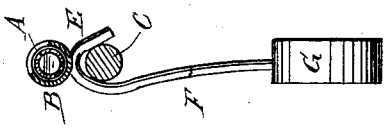


Fig. 2.

WITNESSES:

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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 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 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, taken through the line *x x*, Fig. 1.

The object of this invention is to provide 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.

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.

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.

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 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. 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 upper 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-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, 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 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.