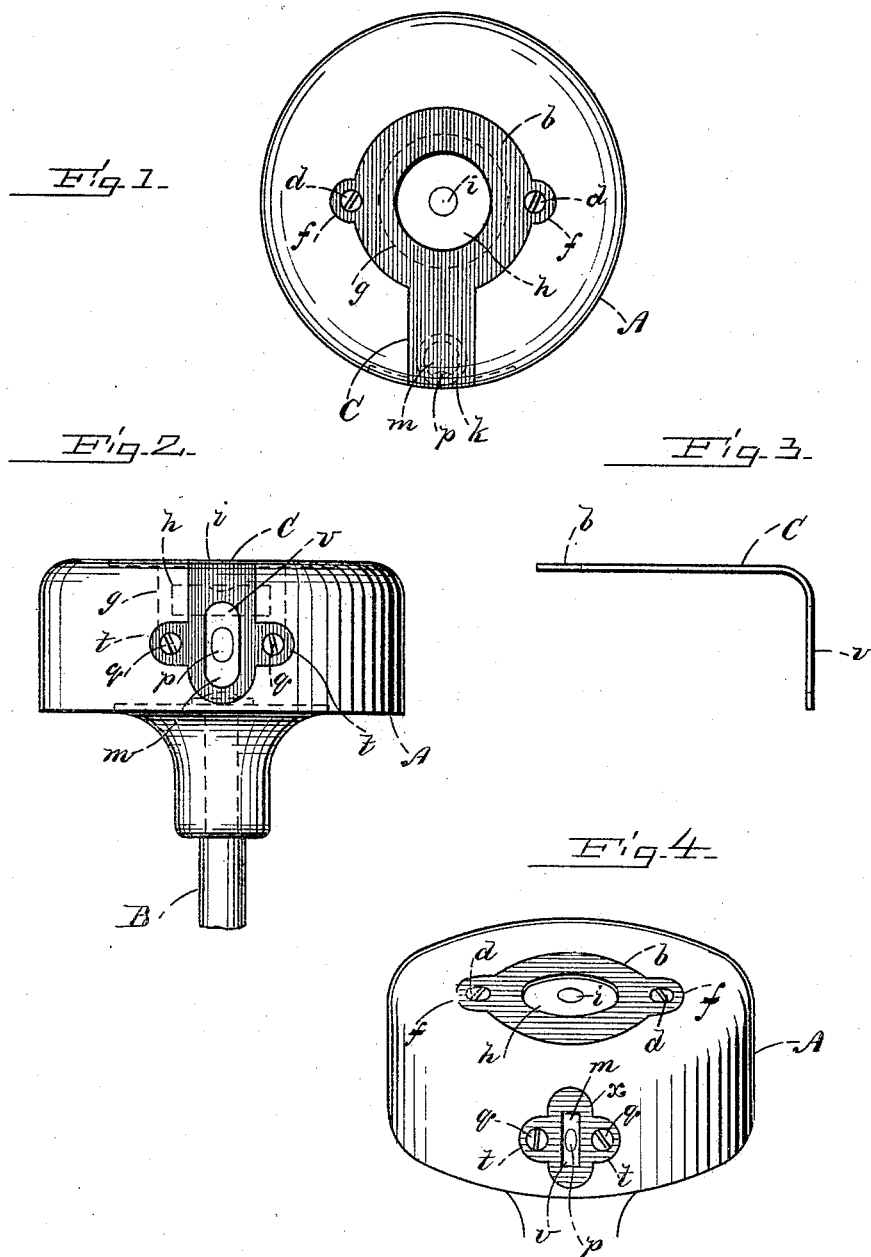


(No Model.)

J. McLAUGHLIN.  
SPIRIT LEVEL FOR BIT BRACES.

No. 419,703.

Patented Jan. 21, 1890.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JOSEPH McLAUGHLIN, OF ERVING, MASSACHUSETTS.

## SPIRIT-LEVEL FOR BIT-BRACES.

SPECIFICATION forming part of Letters Patent No. 419,703, dated January 21, 1890.

Application filed November 13, 1889. Serial No. 330,131. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH McLAUGHLIN, of Erving, in the county of Franklin, State of Massachusetts, have invented certain new and useful Improvements in Bit-Braces, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of the brace-head provided with my improvement; Fig. 2, a side elevation of the same; Fig. 3, an edge elevation of the glass-attaching plate detached; and Fig. 4, a perspective view of a brace-head, showing a modification of my improvement.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates especially to a plumb and level attachment for bit-braces; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the head of the brace, and B the stalk, these parts being of the ordinary form and attached in the usual manner. An angle-plate C, adapted to fit over the edge of the head A, has an annulus *b* formed in one end, which is disposed centrally on the upper face of the head and secured thereto by screws *d*, passing through ears *f* on said ring. The head is chambered in its upper face at *g*, and a spirit plumb-glass *h*, preferably constructed circular in plan view, is disposed therein, said glass being secured in position by the ring, and its bubble *i* showing through the opening thereof. The head has a vertical chamber *k* in its side, in which an ordinary level-glass *m* is disposed. The lower end of the plate C is secured to the side of the head A by screws *q*, passing through ears *t*. The plate is also provided with a vertical slot *v*, through which the bubble *p* of the level-glass is displayed.

Instead of employing the angle-plate C described, the plumb and level glasses may be disposed as set forth and secured in their respective chambers by a detached slotted plate *x* and ring *b*, as shown in Fig. 4.

In the use of my improvement, by means of the plumb and level glasses, the bit may be accurately adjusted and guided in a vertical position while boring in a manner readily understood without a more explicit description.

I do not confine myself to using the device described with a bit-brace, as it is equally well adapted for use with other drills and bit-boring tools.

Having thus explained my invention, what I claim is—

1. In a bit-brace, a head provided with a vertical chamber in its side and a horizontal chamber in its top for respectively receiving a level and plumb glass, substantially as described.

2. In a bit-brace, a head provided with a plumb-glass in its upper face and a level-glass in its side, said glasses being secured therein by an angle-plate having openings to display the spirit-bubbles, substantially as described.

3. In a bit-brace, a head provided with a centrally-disposed chamber in its top and a vertical chamber in its side, in combination with a plumb and a level glass disposed, respectively, in said chambers and an angle-plate secured to said head over said glasses and provided with bubble-slots, substantially as described.

4. The head A, provided with the chambers *g k*, in combination with the glasses *h m* and the angle-plate C, secured to said head and provided with the ring *b* and slot *v*, substantially as described.

5. In a bit-brace, the head A, provided with the chambers *g k*, in combination with the glasses *h m*, disposed therein, the ring *b*, secured over said chamber *g*, and the slotted plate *x*, secured over the chamber *k*, substantially as and for the purpose set forth.

JOSEPH McLAUGHLIN.

Witnesses:

CHESTER C. CONANT,  
THOS. O'KEEFFE.