(No Model.)

J. W. BANNER.

BRACE AND BIT.

No. 528,137. Patented Oct. 30, 1894.

Fig. 2.

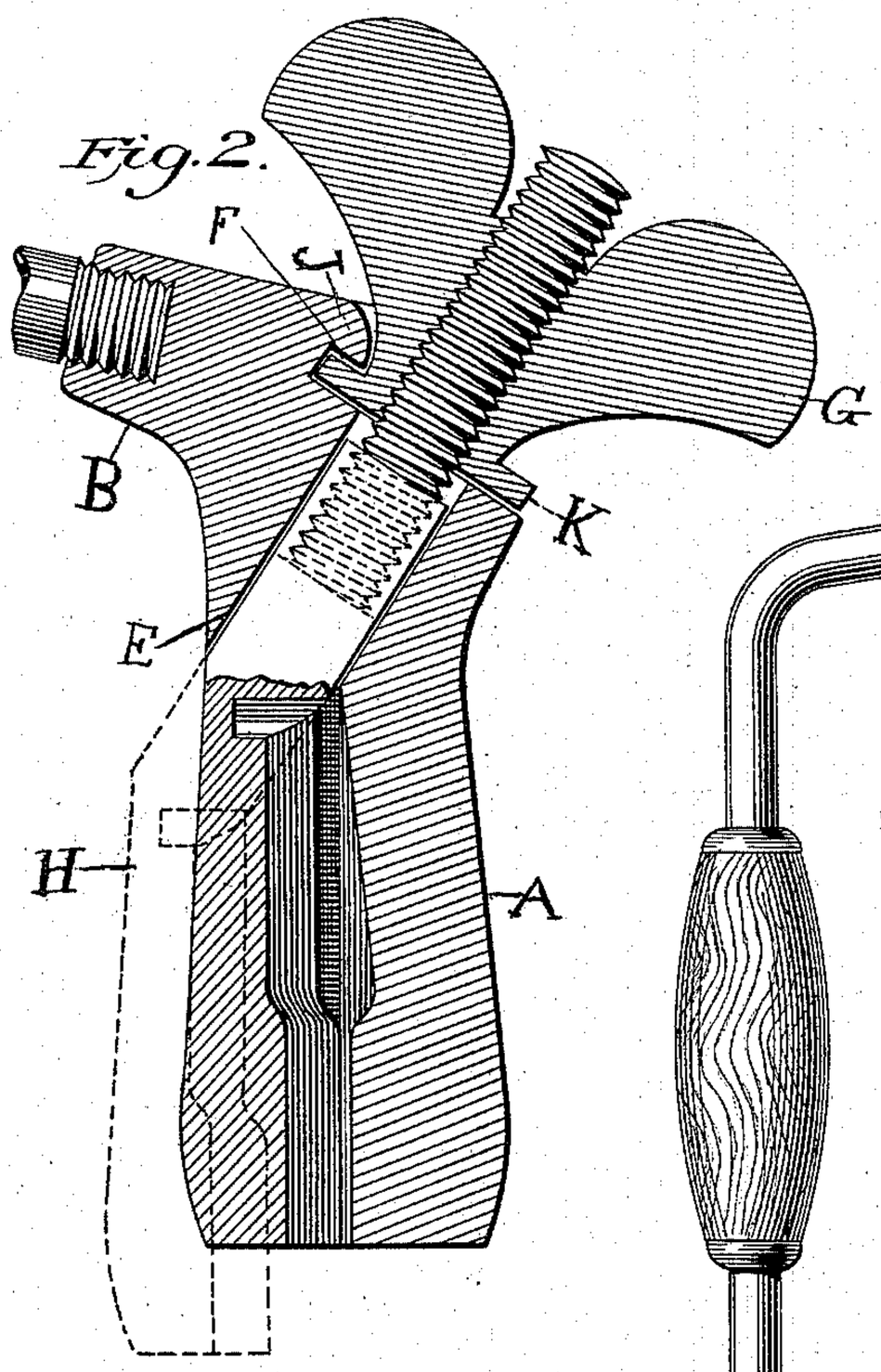
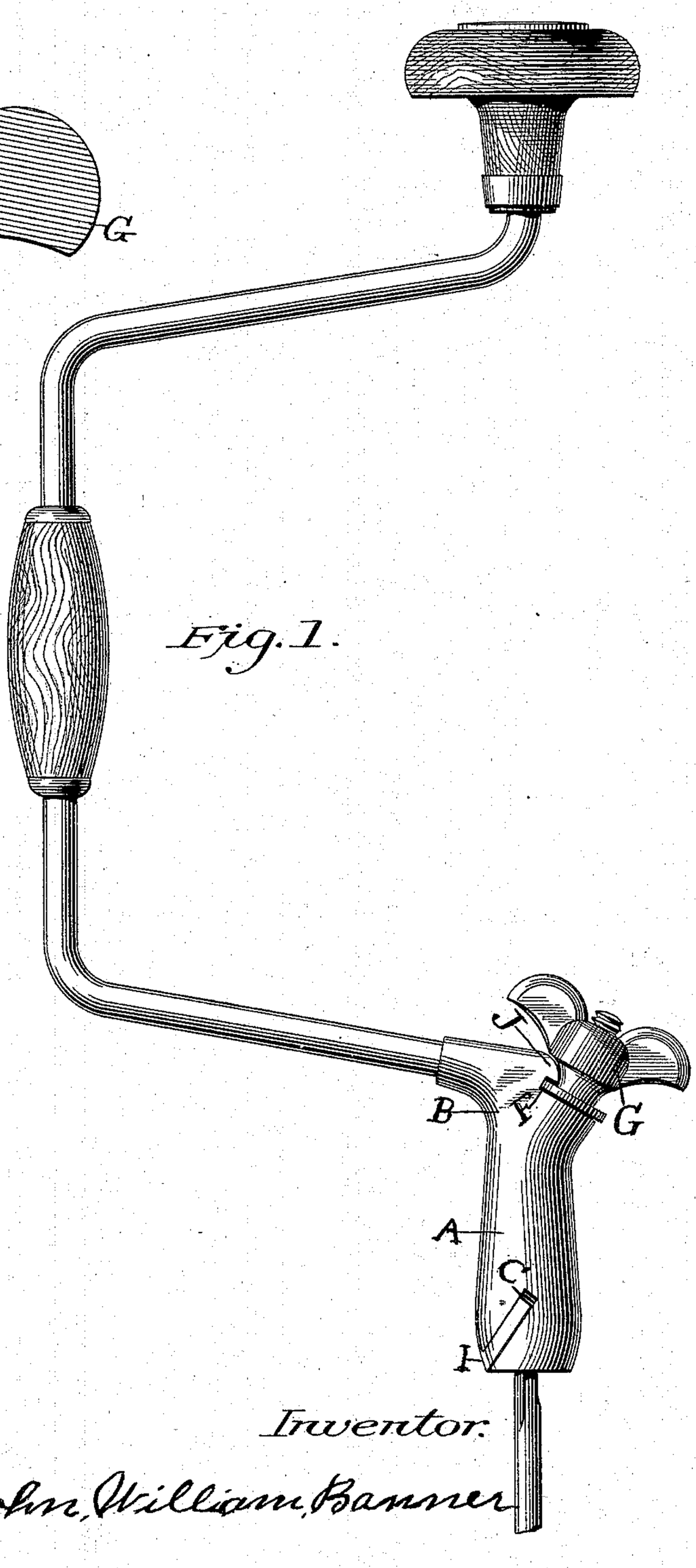


Fig. 1.



Witnesses.
M. E. Proffit.
R. L. Lowe

Inventor.
John William Banner

UNITED STATES PATENT OFFICE.

JOHN WILLIAM BANNER, OF BANNER'S ELK, NORTH CAROLINA.

BRACE AND BIT.

SPECIFICATION forming part of Letters Patent No. 528,137, dated October 30, 1894.

Application filed June 15, 1894. Serial No. 514,704. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILLIAM BANNER, a citizen of the United States, residing at Banner's Elk, in the county of Watauga and State of North Carolina, have invented a new and useful Improvement in a Brace and Bit, of which the following is a specification.

My invention relates to an improvement in a brace and bit, and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side view of a brace and bit embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of the same.

A represents a round body, which is made of metal, and the rear end of the same is curved upward, as at B, and the end of the curved portion is provided with an upwardly projecting crank or sweep, as is shown in the drawings, Fig. 1 whereby it may be readily grasped by the hands of the operator. Said body A, is provided at its front end with angle grooves C set at an angle of about fifty-five degrees and a longitudinal groove extending rearwardly at one end and passing through the body A. forming an angle recess as at E. and set at an angle of about fifty-five degrees, pointing in the same direction as cross groove C. On the rear end of the recess E. is a flat surface and projection with a cross groove F. to receive the shoulder rim on screw tap G. said tap being screwed on the rear end of the clamp bar H. with the shoulder rim fitting snugly in the groove F. as shown in the drawings, whereby it will be seen that a back turn on the tap G. will loosen and move out the bit and a forward turn on the tap will draw in and tighten the same.

H represents a clamp bar having a threaded rear end to receive the screw tap G. said bar having also a crook fitting snugly in the recess E the front end of the same fitting in the longitudinal groove, said bar being provided on each side at its front end with outwardly extending projections I. each being set at an angle of about fifty-five degrees pointing in the same direction as the crook and recess E. so, that a backturn on the screw tap moves the bar out and a forward turn will draw the bar back and tighten the same. The clamping bar is made inside with an acute angle gutter and the head A is made flat, the two forming a equilateral triangular adjustable socket being operated by screw tap G thus allowing the bits to be moved forward so as to bore a deeper hole or sink deep into the socket so as to prevent the weak bits from springing and having the equilateral triangular bit shank fitting the same. Obviously the triangular shank may have a crook fitting in the hole in the clamping bar and when moved forward will fit in the gutter holding as an auxiliary means when the bit is all out of the socket but one half inch.

The operation of my brace is as follows: The hand nut on the clamp bar is turned about one round and the bit introduced the shank dropping to the bottom of the socket. Then the nut is turned drawing in the clamping bar in its leverage form pressing with great force against the shank of the bit holding it firmly. To project a bit so as to bore a deeper hole, loosen the nut and slide the bit forward until there is only one half inch of the rear end of the shank left in the socket. Then turn the nut till the bit is tight. The hole can then be bored two inches deeper.

Having thus described my invention, I claim—

1. In a brace bit socket and bit shank the combination of the head A having the recess E extending at an angle across and the slots *c c* parallel to such recess with the clamping bar H having a part to fit the recess and projections I I fitting the slots *c c* and means for drawing in the clamping bar with the bit shank having the equilateral triangular shape and with the screw tap G said tap having the circumferential flange K and being screwed on the rear end of the clamping bar with the flange fitting in the groove F, the head A having a projection I on the rear end extending out over the flange so as to keep the tap from giving back a means for drawing in and pressing out the clamping bar, substantially as described.

2. In a brace bit socket and bit shank the combination of the head A having the recess E extending at an angle across and the slots *c c* parallel to such recess with the clamping

bar H having a part to fit the recess and projections to fit the slots with the screw tap G, and with the equilateral triangular shaped bit shank being secured by a triangular socket one side of said socket being represented by the inside of the head A and the other two by an acute angled gutter in the clamping bar which is adjusted to the bit shank by screw tap G allowing the bit to slide forward so as to bore a deeper hole substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN WILLIAM BANNER.

Witnesses:

R. L. LOWE,

M. E. PROFFITT.