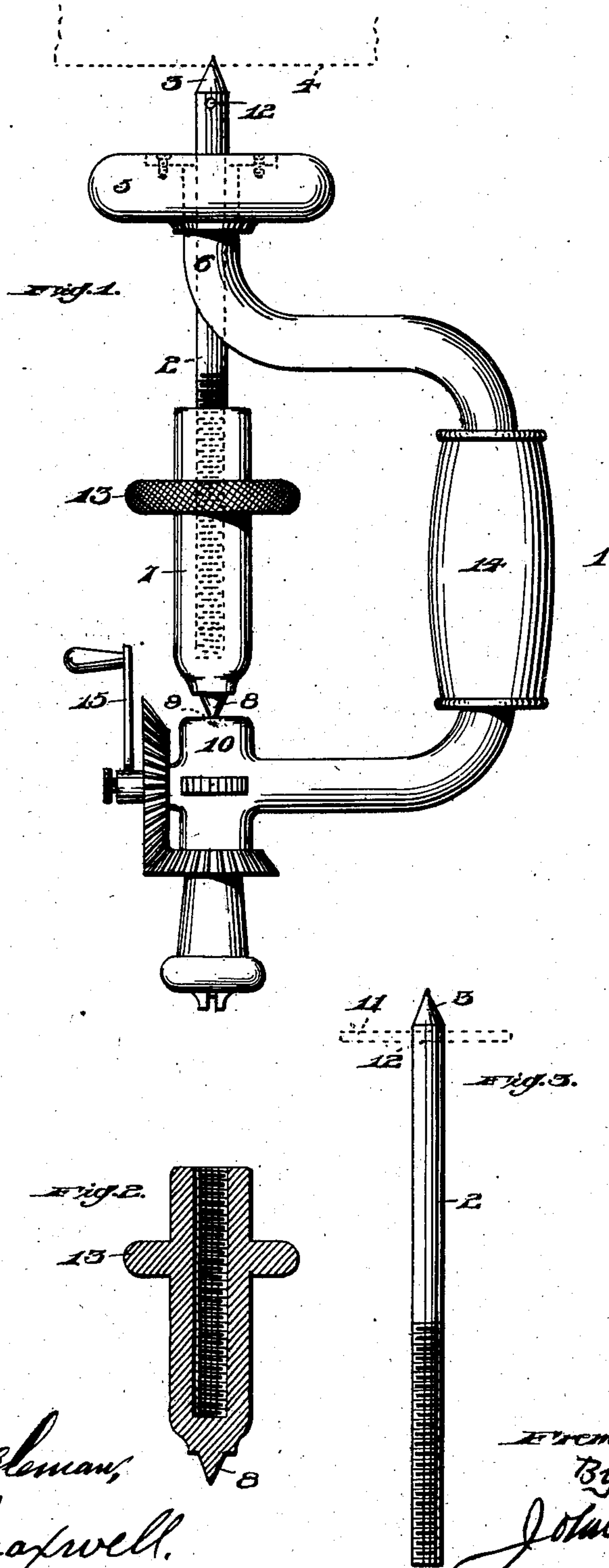


No. 747,940.

PATENTED DEC. 29, 1903.

F. J. CLEAVER.  
COMBINED RATCHET AND DRILL BRACE.  
APPLICATION FILED FEB. 28, 1903.

NO MODEL.



Witnesses:

J. C. Hepleman,  
William Maxwell.

Inventor

Fremont J. Cleaver.

By

John Roland

att'y.

# UNITED STATES PATENT OFFICE.

FREMONT J. CLEAVER, OF OAK STATION, PENNSYLVANIA.

## COMBINED RATCHET AND DRILL BRACE.

SPECIFICATION forming part of Letters Patent No. 747,940, dated December 29, 1903.

Application filed February 28, 1903. Serial No. 145,520. (No model.)

*To all whom it may concern:*

Be it known that I, FREMONT J. CLEAVER, a citizen of the United States of America, residing at Oak Station, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Combination Ratchet and Drill Braces, of which the following is a specification.

My invention relates to an improvement in combination ratchet and drill braces, and more particularly to a brace whereby it is impossible of bending the drill when my attachment is applied thereto.

The object of my invention is to provide a separable attachment which may be used as the nature of the work requires, such as in drilling metal and the like. The brace is often bent out of alignment, thus making the drilling process laborious, as it will cause the bit to bore irregular.

Still another object resides in so constructing the brace attachment that it may be readily applied and detached in a comparatively short space of time.

Finally, the object of my invention is to provide a brace attachment which will be strong, durable, and one which will be simple and inexpensive to produce, and one in which the several parts will not be liable to get out of working order.

Furthermore, the invention consists in the novel details of construction, a preferable embodiment of which is illustrated in the drawings and described in the specification and then sought to be particularly pointed out in the claim.

Figure 1 is an elevation of my invention, showing the attachment applied to a brace. Fig. 2 is a vertical section of the adjustable screw-threaded socket. Fig. 3 is a side view of the bracing-rod.

In the drawings the numeral 1 designates the drill and shows the attachment as applied when in use. The brace-rod 2 has a cone-bearing 3, which is in engagement with a rigid object 4. The rod passes through a grip 5 and

the upturned part of a brace 6, but is not screw-threaded therein. The adjustable socket 7 is also provided with a cone-bearing 8. This is seated in a concave seat 9 of brace-head 10 and prevents the same from being dislodged. To take up the loss space when drilling, I insert a pin 11 in opening 12 of bracing-rod and by holding it rigid, so it will not turn, revolve wheel 13, which is made integral with the adjustable socket. This will force the rod against rigid rest and continue to brace drill. The above operation is repeated as the drilling progresses. The drill can be operated either by the hand-grip 14 or by the crank 15, which operates bevel-gearing; but I do not claim anything for this, as it is of common usage.

For carpenters' use the attachment can be dispensed with, excepting in the working of hard wood, where more than likely it will be advantageous to use the same.

From the foregoing the application of the device will be self-evident. Therefore a further description is considered unnecessary, and I do not wish to limit myself to the exact details of construction and operation herein set forth, as I may make various changes without departing from the spirit of my invention.

Having fully described the invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination, a brace having a head with a seat in its upper surface, and a grip provided with an opening, a socket having an end rotatable in the seat, a rod threaded in the socket, said rod passing loosely through the opening in the brace-grip substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses, this 27th day of February, 1903.

FREMONT J. CLEAVER.

Witnesses:

JOHN NOLAND,

WILLIAM MAXWELL.