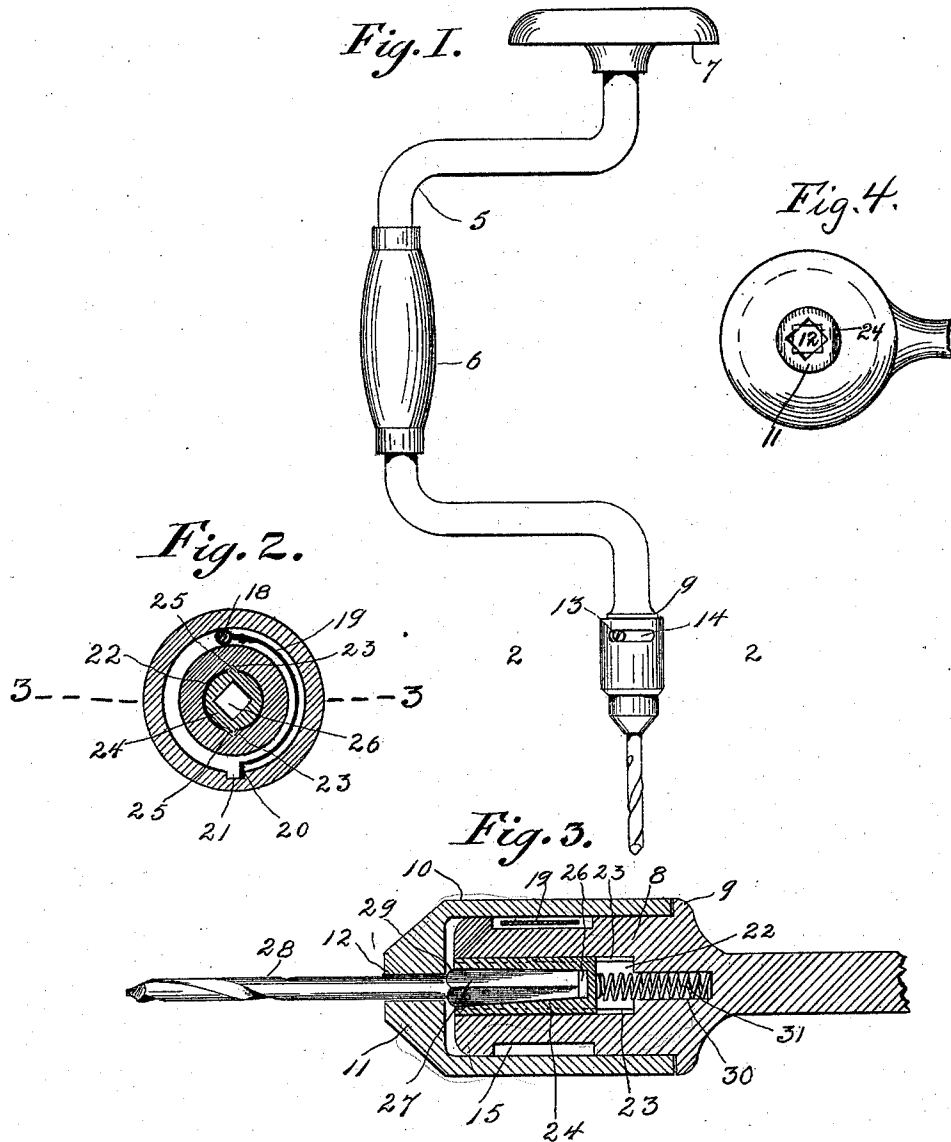


(No Model.)

J. & J. F. GUNNING.
TOOL.

No. 586,123.

Patented July 13, 1897.



WITNESSES
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JOHN GUNNING AND JAMES F. GUNNING, OF AMESBURY, MASSACHUSETTS.

TOOL.

SPECIFICATION forming part of Letters Patent No. 586,123, dated July 13, 1897.

Application filed June 13, 1896. Serial No. 595,470. (No model.)

To all whom it may concern:

Be it known that we, JOHN GUNNING and JAMES FRANCIS GUNNING, citizens of the United States, and residents of Amesbury, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Tools, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar numerals of reference indicate corresponding parts.

This invention relates to tools, and particularly to that class thereof known as "braces" and "bits;" and the object thereof is to provide an improved brace or stock which is adapted for use in connection with a bit or drill of any form or class.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of our improved tool-holder, showing the tool connected therewith; Fig. 2, a section on the line 2 2 thereof, and Fig. 3 a section on the line 3 3 of Fig. 2. Fig. 4 is an end view of the gripping portion of the tool.

In the practice of our invention we provide a brace or stock 5 of the usual form and which is provided with the usual handles 6 and 7, and opposite the handle 7 the brace is provided with a cylindrical head 8, at the upper end of which is an annular flange or shoulder 9, and mounted on said head is a tubular casing 10, which is closed at its lower end, as shown at 11, and the closed end is provided with a central passage 12, which is angular or square in cross-section and is of sufficient size to allow the head of the bit to pass therethrough.

The head 8 is provided near its upper end with a pin or bolt 13, which passes through a transverse slot 14, formed in the tubular casing 10, and said head is provided centrally thereof with an annular chamber 15, in which is placed at one side thereof a pin or bolt 18, to which is secured one end of a strong segmental plate-spring 19, the opposite end of which is carried part way around said head and provided with an outwardly-directed shoulder or projection 20, which is adapted to operate in a longitudinal groove

or recess 21, formed in the inner walls of the tubular casing 10.

The head 8 is provided with a central longitudinal bore 22, in the opposite side walls of which are formed longitudinal grooves 23, and said bore is open at the lower end of the head 8, and mounted therein is a tool-holder 24, which is cylindrical in form and provided at its opposite side with longitudinal ribs 25, which are adapted to enter the longitudinal grooves 23 in the head 8, and said tool-holder is provided with a central longitudinal chamber 26, which is angular in cross-section and which is adapted to receive the head 26 of the bit or drill 28.

The central chamber 26 in the tool-holder is angular or square in cross-section and is larger at its outer than at its inner end, and the head 27 of the drill or bit 28 is similarly formed, and said head 27 is adapted to be inserted through the opening 12 in the end 11 of the cylindrical casing 10, and the head 27 of the bit or drill 28 is provided with shoulders or projections 29, so that when the bit or drill has been inserted through the opening 12 and turned part way around it cannot come out of the casing 10.

The central bore 22 of the head 8 is provided at its inner end with an extension 30, in which is mounted a spring 31, and said spring bears upon the inner end of the tool-holder 24 and forces it outwardly, and the operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

In order to insert the tool or the bit or brace 28, the casing 10 is turned against the operation of the spring 19 as far as the plug or pin 13 will allow it to turn. The tool or brace or bit 28 is then inserted, as shown in Fig. 3, after which the casing is released, and the spring 19 immediately turns it into the position shown in Fig. 1, when the tool cannot be removed, and the spring 31 operates to force the tool-holder outwardly against the end of the casing 10, and thus securely holds the tool in the desired position.

It will be understood that the bit or drill 28 may be removed whenever desired by again turning the casing 10, and the operation of

the brace or stock when the tool is connected therewith will be the same as in other devices of this class. The normal position of the square opening 12 of the casing does not coincide with the opening 24 in the tool-holder, but the two squares are forty-five degrees out of alinement, so that the sides of one overlap the corner of the other.

This improvement is applicable to drill-braces, drilling-machines of various kinds and classes, as well as to ordinary braces or stocks, and with our invention the drill or tool may be removed from the holder without removing the latter from the press, drilling-machine, brace, or stock, and, as will be observed, the device is automatic in operation, or that part thereof which constitutes the holder or chuck, and does not involve the use of screw-threaded caps, cylinders, or set-screws, and thus a great saving of time in the use thereof is accomplished.

The device is also simple in construction and operation and is perfectly adapted to accomplish the result for which it is intended, and it will be evident that any kind or class of bit, drill, or other tool may be held and operated thereby.

Having fully described our invention, we claim as new and desire to secure by Letters Patent—

As a new article of manufacture a tool consisting of a brace and bit, and having said brace provided with handles, a cylindrical head secured to said brace opposite to said handle, an annular flange or shoulder mounted on the upper surface of said cylindrical head, a tubular casing having a closed lower end provided with a central passage therein

mounted on said head and engaging at its upper end said shoulder, said central passage being of an angular or square form in cross-section, a pin or bolt secured to the upper end of said head, said tubular casing being provided with a transversely-extending slot therein, and having said pin passed through, said head being provided with a central annular chamber therein and at one end thereof, a strong semicircular plate-spring partly surrounding said head, an outwardly-directed shoulder on the end thereof entering into a longitudinal groove or recess formed in the inner walls of said casing, a pin or bolt secured in the other end of said plate-spring, said head being provided also with a central longitudinal bore having formed in the opposite side walls longitudinally-extending grooves, said bore having a lower open end, a holder mounted therein of a cylindrical form, longitudinally-extending ribs on the opposite sides thereof adapted to enter said grooves, and being also provided with a central longitudinal chamber, an extension in communication with said central bore and said head and a spring mounted thereon adapted to actuate said holder, all of said parts being combined substantially as described.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of the subscribing witnesses, this 8th day of June, 1896.

JOHN GUNNING.
JAMES F. GUNNING.

Witnesses:

ALPHONSUS LIGOURIA GUNNING,
EDWARD PAYSON WALLACE.