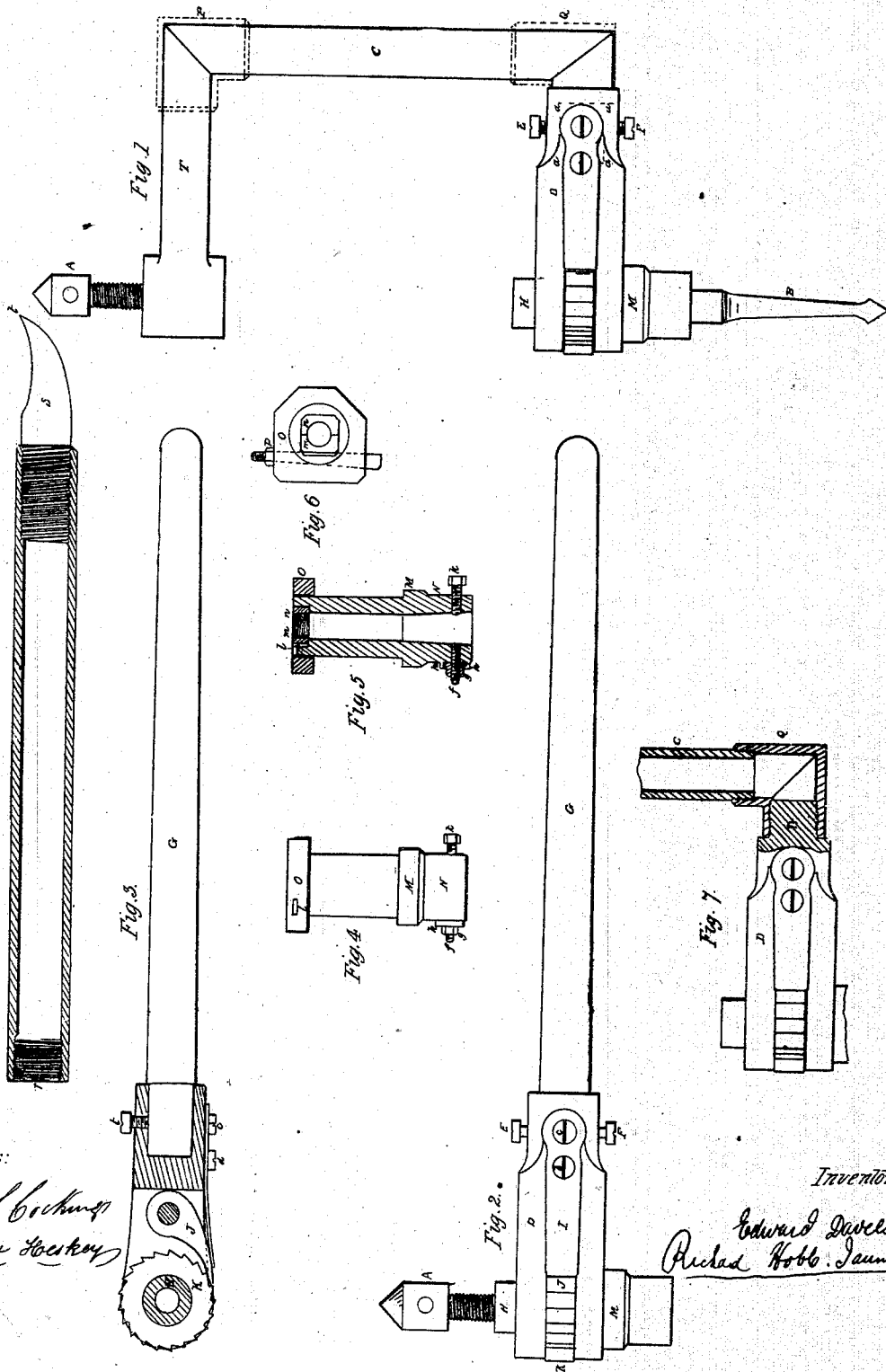


Davies & Taunton.

Tool for Drilling Metals.

Nº 71463

Patented Nov. 26, 1867.



Witnesses:

James S. Cochran
Robert Lockey

Inventor:

Edward Davies
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United States Patent Office.

EDWARD DAVIES AND RICHARD HOBBS TAUNTON, OF BIRMINGHAM,
ENGLAND.

Letters Patent No. 71,463, dated November 26, 1867.

IMPROVED TOOL FOR DRILLING METALS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Be it known that we, EDWARD DAVIES, of Birmingham, in the county of Warwick, England, engineer, and RICHARD HOBBS TAUNTON, also of Birmingham, England, aforesaid, tube manufacturer, have invented a "Combination Drill-Brace;" and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known, and of the usual manner of making, modifying, and using the same.

Our improvements in the combination drill-brace named in the title consist in so constructing it that it may be used either as a ratchet or swing-brace, with all the appliances for regulating the pressure for advancing the drill necessarily used with such apparatus; which may also be arranged for carrying taps and dies, or cutters for cutting off the ends of tubes or facing the bearings of holes. To effect this we divide the bow of the brace in any convenient part or parts, either to form a handle tubular or otherwise, or for the convenience of applying an additional lever handle, which also may be tubular, if so preferred, when using the apparatus as a ratchet-brace, as may be required, according to the weight of work under operation. When using this brace as a swing-brace, we reconnect the top and ratchet part together in any convenient part of the bow or otherwise, in such a way, either by a screw or screw-pin or socket, or by using an additional tube, which form the double purpose, first, for holding in the hand while working, and secondly for forming a socket or secure means for holding the parts together.

But as our invention will be best comprehended and understood by referring to the drawings hereunto annexed, we will proceed to describe the same, reference being made to the figures marked thereon.

Description of Drawings.

Figure 1 represents in a vertical side view our combination drill-brace, arranged to be used as an ordinary swing-brace, with the screw A for obtaining the necessary pressure for advancing the drill B as it progresses with its work.

In this view we have represented the lower angle part of the handle C reduced to form a pin, which enters in a corresponding hole in the part D, in which position it is retained by the screws E and F, the reversing of which will permit the part D to be used as a ratchet-brace, by inserting into the same socket represented in dotted lines at *a a* a suitable extended lever-handle, represented at G, Figure 2, which exhibits the parts arranged as for a ratchet. In this view we have omitted the drill exhibited, marked B, fig. 1, and we have exhibited the regulating screw A of that figure, here inserted in the part H, for the same object and purpose as in that figure, viz, for affording the necessary pressure for advancing the drill. The spring-stop that presses on the pawl J is marked I, secured by screws marked *b* and *c*, and the ratchet itself is marked K, in which details there is no material difference of arrangement from the ordinary ratchet-brace.

Figure 3 represents the lever-handle G, with the ratchet part in section, and with an additional screw at the back, marked L, if required, for further security for holding in the handle G. *d* is the axis on which the pawl J works. The hollow axis of the ratchet, marked H, projects up above the stock D, as exhibited in figs. 1 and 2, and may receive an additional collar for holding it in position, while its lower part, not seen in this view, forms the stock for receiving the drill, as exhibited, marked M, in figs. 1 and 2. This same part we have exhibited in a separate side view at Figure 4, with an adjustable collar at the top, and a wedge, so as to form a socket for holding dies for screwing, such as the ends of gas-tubes, &c., for which purpose it may be found useful, the tube being passed through the centre.

At the lower part of the stock we have exhibited the outer end of a cutter, marked *f*, held in position by an adjusting-screw, *f*, which is held by the collar *h*, the collar *h* being secured to the stock N; while on the other side we apply a set-screw, *k*, which holds the work up to the cutter while the cutter is performing its work. These parts we have exhibited in a vertical section at Figure 5, showing the collar O, wedge *l l*, and dies *m* and *n*, with the cutter *f*, screw *g*, and collar *h h*, as also the regulating-screw *k*.

Figure 6 represents a top view of the collar O, as also the dies *m* and *n*, with the wedge *l*, which is actuated by the screw *p*, for closing the dies as the process or work of screwing proceeds.

In some cases where lightness may be desirable, the part C, in fig. 1, as well as the angles exhibited in dotted lines, marked P and Q, may be hollow, viz, the ordinary tubing and angles as used for gas-fitting, the parts being tapped and screwed together; and we have exhibited this arrangement in connection of the handle C and angle Q, with the stock or ratchet part D, at Figure 7, the end of the part D terminating in a pin for screwing into the angle; and, when carrying out this arrangement for a ratchet, and dispensing with the handle C and angle Q, we purpose applying a tubular lever-handle instead of a solid one, as exhibited at G, figs. 2 and 3, which tubular handle we have exhibited in section at Figure 8; the part *p* being intended to be screwed on or over the shank R, fig. 7; which may be further secured by a set-screw, if necessary; and with a view of further utilizing this part, a steel claw may be applied as exhibited, marked S, its shank being fashioned to simply fit in the tube, or tapped and screwed, as preferred. The extreme end, marked *t*, may be divided as the claw of an ordinary claw-hammer, thus making it serviceable as a short lever.

Having thus given a general description of our invention, and the manner in which the same may be carried into effect, we wish it understood that we do not purpose limiting ourselves to the exact details herein described and exhibited, as the same may be varied without departing from the spirit of our invention; as, for instance, the handle C, instead of being as here shown, may be so formed and fashioned as to form a curve so as to combine the parts C and T in one, and dispense with the use of the angles P and Q, and in like manner other details may be modified; and we will remark that we set up no claim whatever or pretension to novelty in the application of the claw S to the tubular handle, as exhibited at fig. 8, as iron levers have been before so constructed; but

What we claim, and wish to protect by Letters Patent, is—

The construction and arrangement of a combination drill-brace in the manner and for the purposes hereinbefore described and represented in the accompanying drawing.

In witness whereof we, the said EDWARD DAVIES and RICHARD HOBBS TAUNTON, have hereunto set our hands and seals this second day of October, in the year of our Lord one thousand eight hundred and sixty-five.

EDWARD DAVIES, [L. S.]
RICHARD HOBBS TAUNTON. [L. S.]

Witnesses:

HERBERT HESHER
JAMES S. COCKINGS.