

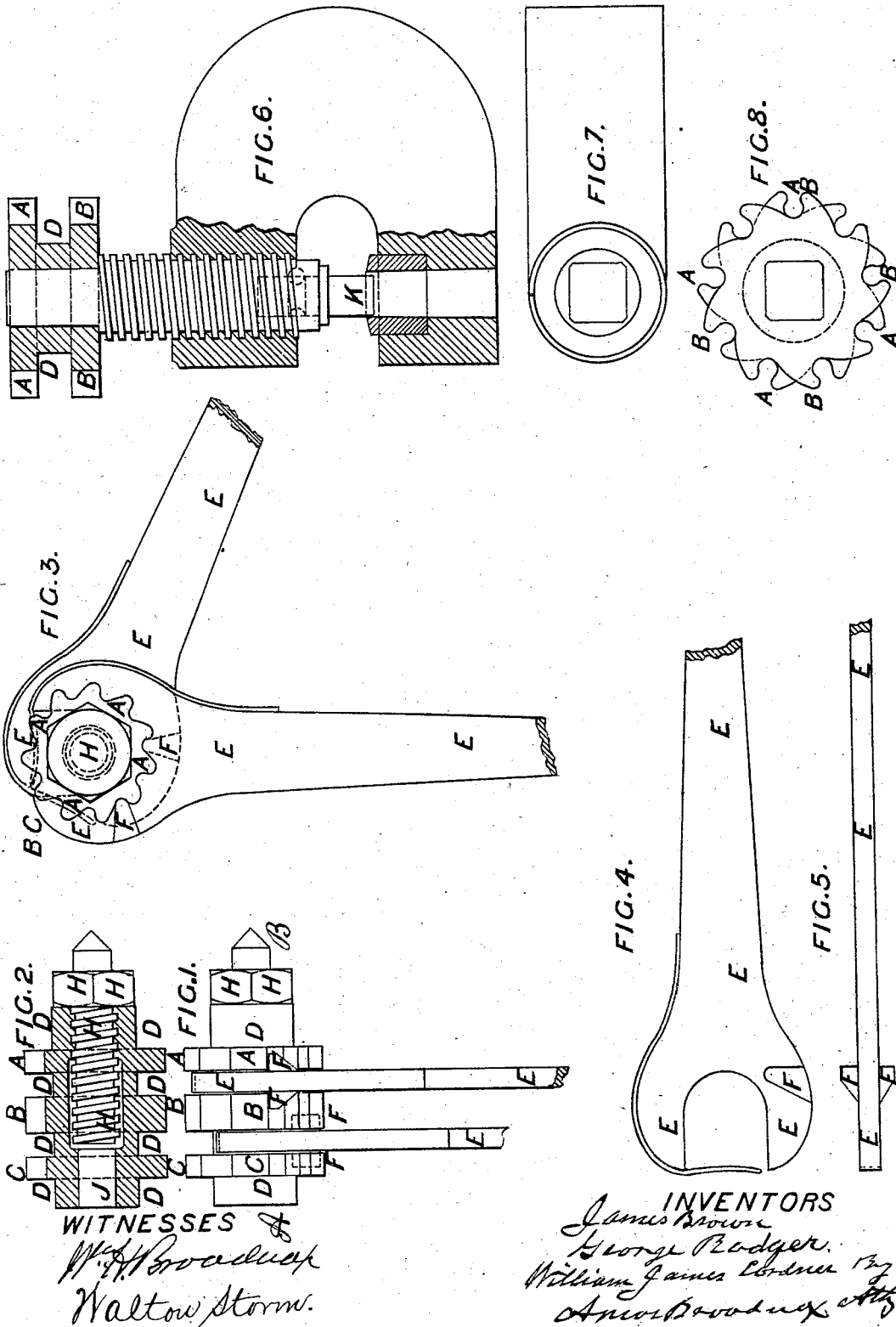
(No Model.)

J. BROWN, G. RODGER & W. J. CORDNER.

RATCHET.

No. 260,834.

Patented July 11, 1882.



UNITED STATES PATENT OFFICE.

JAMES BROWN, GEORGE RODGER, AND WILLIAM JAMES CORDNER, OF
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RATCHET.

SPECIFICATION forming part of Letters Patent No. 260,834, dated July 11, 1882.

Application filed November 23, 1881. (No model.) Patented in England November 30, 1878, No. 4,891.

To all whom it may concern:

Be it known that we, JAMES BROWN, GEORGE RODGER, and WILLIAM JAMES CORDNER, all subjects of the Queen of Great Britain, and of the town of Barrow-in-Furness, in the county of Lancaster, in that part of the United Kingdom of Great Britain and Ireland called England, have jointly invented a certain new and useful Improved Ratchet, (for which we have jointly obtained a Patent in Great Britain, No. 4,891, bearing date the 30th day of November, 1878;) and the following is a description of our said joint invention in such full, clear, and exact terms as to enable any one skilled in the arts to which it appertains to make and use the same, reference being had to the accompanying sheet of drawings, making a part of this specification, by which there is illustrated a ratchet according to our invention, like letters and figures on the drawings being used to denote the same or corresponding parts throughout the various views.

In the drawings, Figure 1 is a front elevation of a ratchet constructed according to our invention as applied to a ratchet-brace. Fig. 2 is a section through A B, Fig. 3. Fig. 3 is a side view of Figs. 1 and 2, showing the actuating spanners or handles in position. Figs. 4 and 5 illustrate a spanner or handle such as may be used with our invention. Fig. 6 is a sectional elevation of a punching-bear fitted with a ratchet according to our invention. Fig. 7 is a plan of Fig. 6. Fig. 8 is a side view of ratchet-wheels as applied to Fig. 6.

Our invention relates to a novel construction of ratchet to be applied to braces, bears, jacks, and numerous other purposes where ratchet actions are used; and it consists of two ratchet-toothed wheels connected by a circular shaft or a journal, upon which works an ordinary spanner, the spanner being provided with a cross-pin, which takes into the teeth of the ratchet-wheels.

A duplex arrangement for continuous working consists of three ratchet-wheels joined by two journal pieces or shafts, onto which take duplex spanners, thus providing a double-handed arrangement for continuous working.

Upon reference to the example shown at

Figs. 1, 2, and 3, which represents a ratchet-brace, it will be seen that A B C are ratchet-wheels connected together and formed on and in one piece with the shaft or journal D. The ratchet-wheels A B C are worked by the spanners E, which fit onto the journals E'. The spanners E are provided with the pins or projecting lugs F, which take into the teeth of the ratchet-wheels A B C.

H is the nut and screw for lengthening the brace and feeding the tool.

J is the tool-holder.

In the drawings, Figs. 1, 2, and 3, we have shown our invention applied to a double-handle ratchet-brace; but it will be evident that a single action or handle brace can be obtained by dispensing with the wheel A or the wheel C. We have also shown the wheels A, B, and C formed in one piece with the shaft or journal D.

It will be evident that the wheels A, B, and C may be made separately and keyed onto or otherwise attached to the shaft or journal D, if desired.

In the case of a ratchet-brace such as Figs. 1, 2, and 3 the teeth of the wheels A, B, and C are all one-hand, as the ratchet has to be turned in one direction only.

In the case of a punching-bear, as shown at Figs. 6, 7, and 8, the teeth of the wheel A are right-hand, the teeth of the wheel B are left-hand, or vice versa, and the spanner E used for turning has a pin or lug, F, projecting on one side only, so that it can be reversed to work into the wheel A or into the wheel B, as may be desired, for raising or lowering the punching-tool K.

The spanner E (shown at Figs. 4 and 5) is a spanner such as may be used for working our improved ratchet, and it may have a double pin or lug, F, as shown, when required for working in one direction only, or with a pin on one side only when required for reversing.

L is a spring, which may be used round the jaw of the spanner E to keep it in position when on the journal D'.

Although we have shown our invention only as applied to a ratchet-brace and a punch, we would have it understood that a ratchet according to our invention may also be applied

to lifting-jacks, the hand turning gear of marine or other engines, and any other purpose for which ordinary ratchets are now used; also, in addition to the spanner now shown in the drawings, a hook-spanner may be used, especially when the ratchet is in a higher position than the person using it.

The reverse action can be given to the punch such as shown at Figs. 6, 7, and 8 by having a removable reversible ratchet-wheel of the type shown at Fig. 1, in lieu of the right and left hand wheels shown at Fig. 8. The reversible wheel may be secured by a key, or be on a square or like shaft.

Having now described our invention, and shown how the same may be put into practice, what we claim, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a ratchet consisting of the toothed ratchet-wheels A, B, and C, fixed upon a shaft or journal, D, and operated by a spanner or spanners, E, substantially as described, and shown at Figs. 1, 2, and 3 of the drawings hereto annexed.

2. As a new article of manufacture, a ratchet consisting of double ratchet-wheels mounted on a journal, and operated by a spanner mounted on the journal, substantially as described, and shown in the drawings hereto annexed.

3. As a new article of manufacture, a ratchet constructed and having right and left action, substantially as herein described, and shown in Figs. 6 and 8 of the drawings hereto annexed.

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