(Model.)

W. C. SHIPHERD.

RATCHET WRENCH AND DRILL.

No. 278,053. Patented May 22, 1883.

Fig 2

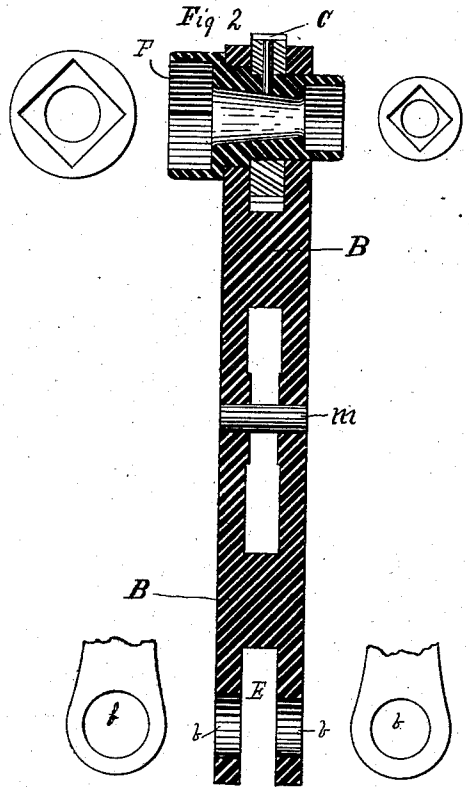


Fig 1

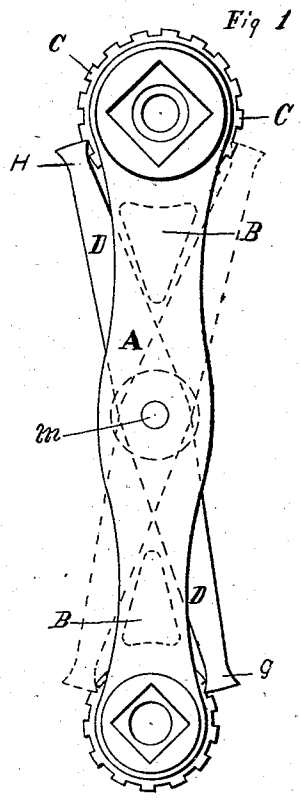


Fig 3

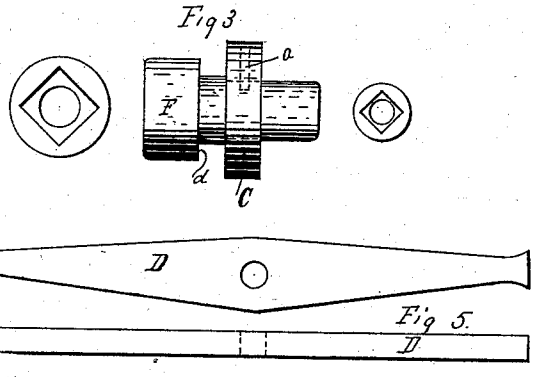
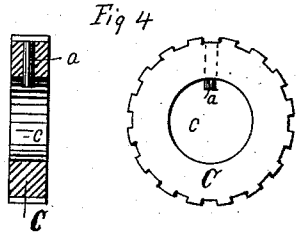


Fig 5.

Fig 4



Witnesses;

J. T. Logue

Aug. Bubak

Inventor;

William C. Shipherd.

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM C. SHIPHERD, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO F. H. STRIEBY, OF SAME PLACE.

RATCHET WRENCH AND DRILL.

SPECIFICATION forming part of Letters Patent No. 278,053, dated May 22, 1883.

Application filed October 6, 1882. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM C. SHIPHERD, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Ratchet Wrenches and Drills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in ratchet-wrenches, drills, and other devices requiring a ratchet-movement. The method of operating and the construction of the invention are fully set forth in the following description and claims.

In the drawings, Figure 1 represents a view of a ratchet-wrench embodying my invention. Fig. 2 is a sectional view of the wrench with the lever or pawl and one of the socket-barrels detached, and showing a plan view of the socket and socket-eye. Fig. 3 is a detached view of the socket-barrel and wheel. Fig. 4 shows two views of the ratchet-wheel. Fig. 5 shows two views the lever or pawl.

The drawings show a double-end wrench; but it is not my intention to limit my invention to wrenches with a ratchet in both ends, as my device will work equally well in wrenches with the ratchet in one end only, as it may be found more desirable in this case, as in other devices to which my invention can be applied, that but one ratchet should be used.

A represents the handle of a wrench embodying my invention, and consists of two plates joined or cast together at the seats B B. C is a ratchet wheel or disk provided with notches in its circumference of such a shape that the lever or pawl D will shoulder in the said notches from either side. The disk C should be made thick enough to fill the space E between the two plates of the handle A, and it forms the shoulder that keeps the socket-barrel F in place, to which barrel said ratchet wheel or disk C is rigidly fastened by the pin *a* or any suitable device. The socket-barrel F is provided with holes or mortises in one or both ends, and of such a size and shape as may be required. The said barrel should be made to fit the circular holes *b b* in the ends of the handle. (See Fig. 2.) Then, placing the ratchet-wheel C in the slot E, slip the socket-barrel F through the holes *b b* in the handle and through the hole *c* in the ratchet-wheel C until the shoulder *d* of the socket-barrel F comes in contact with the handle. Then while in this position pin or fasten the ratchet-wheel to the socket-barrel. This will permit the barrel F to revolve freely in the holes *b b*, and at the same time secures it in the handle. (See Fig. 2.) The lever or pawl D should swing freely on the pin M. The ends G and H of the said lever should be made of a shape best adapted to interlock with the notches in the ratchet-wheel.

In operating, place the socket on the nut to be moved. Then grasp the handle so that the fingers will press against the end G of the lever D. This will cause the end H to catch into one of the notches in the wheel C, locking the socket-barrel to the handle, which, pulled in that direction, carries the nut with it as far as the nature of the location will permit the handle to move. Then relax the fingers slightly, thereby loosening the lever and allowing the handle to swing back freely on the socket-barrel, which remains stationary. Repeat the operation as often as is required to secure the nut. To reverse the action of the wrench, swing the lever D around until the end G interlocks with the ratchet-wheel on the opposite side from that interlocked by the end H, and, pulling toward the G side, operate as before.

What I claim is—

1. The combination, with the handle A, having at each end a recess, E, receiving the socket-barrels F, provided with ratchets C, of a lever, D, engaging both the ratchets C, substantially as and for the purpose specified.

2. The combination, with the handle A, having at each end a recess, E, receiving the socket-barrels F, provided with ratchets C, of a reversible lever, D, capable of engaging with both sides of each ratchet, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM C. SHIPHERD.

Witnesses:

J. T. LOGAN,

AUG. BUBAK.