No. 635,593. Patented Oct. 24, 1899.

G. L. RAY & W. PEAK.

WRENCH.

(Application filed June 27, 1899.)

(No Model.)

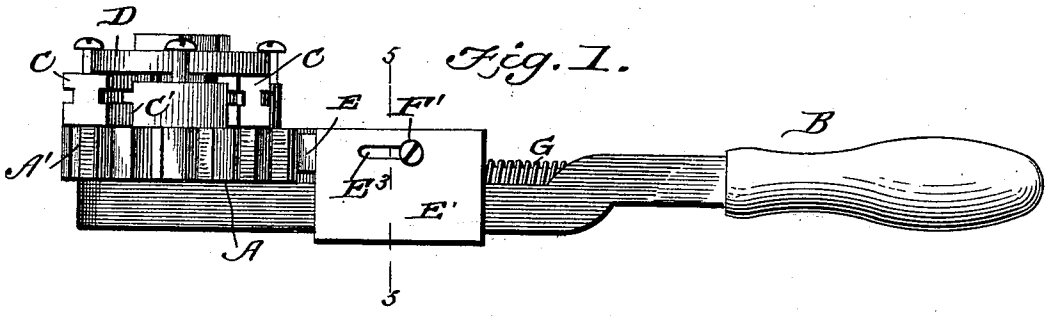

Fig. 1.

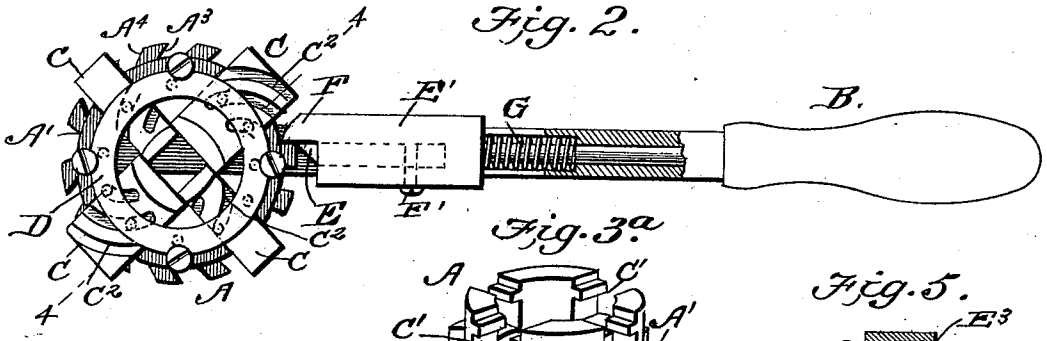

Fig. 2.

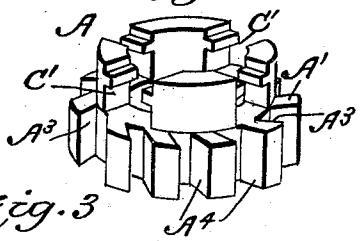

Fig. 3a

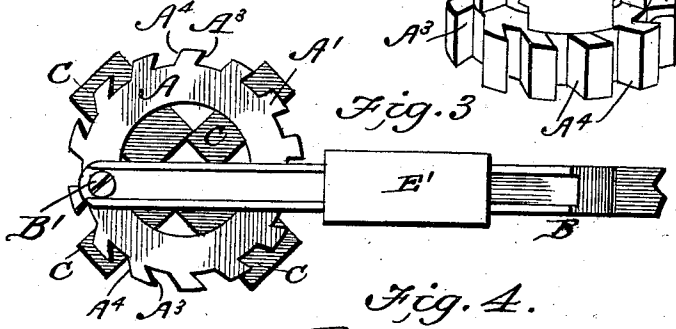

Fig. 3

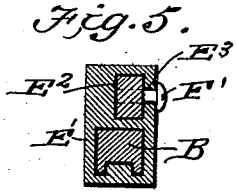

Fig. 5.

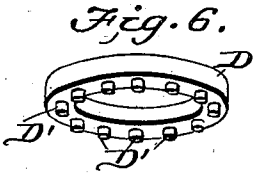

Fig. 6.

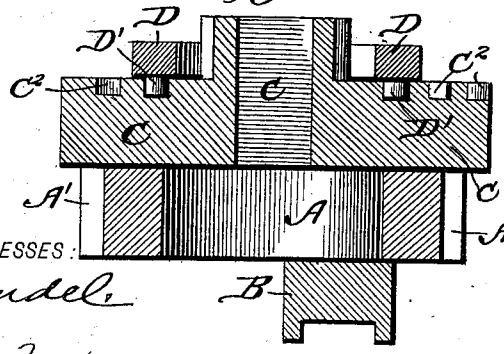

Fig. 4.

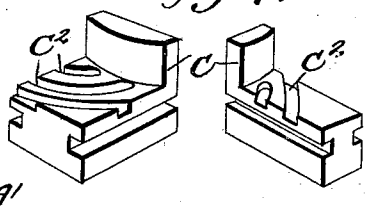

Fig. 7.

WITNESSES:

M. S. Blondel.

Percy B. Turpin.

INVENTORS

Guy L. Ray

William Peak.

BY Munn & Co.,

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GUY L. RAY AND WILLIAM PEAK, OF OURAY, COLORADO, ASSIGNORS OF ONE-FOURTH TO JOHN T. ALLISON, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 635,593, dated October 24, 1899.

Application filed June 27, 1899. Serial No. 722,059. (No model.)

To all whom it may concern:

Be it known that we, GUY L. RAY and WILLIAM PEAK, of Ouray, in the county of Ouray and State of Colorado, have invented a new and useful Improvement in Wrenches, of which the following is a specification.

Our invention is an improvement in wrenches; and it consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a side view, and Fig. 2 a top plan view, of our wrench. Fig. 3 is a view of the opposite side from that shown in Fig. 2. Fig. 3^a is a detail perspective view of the head. Fig. 4 is a cross-sectional view on about line 4 4 of Fig. 2. Fig. 5 is a cross-section on about line 5 5 of Fig. 1. Fig. 6 is a detail view of the adjusting-ring, and Fig. 7 illustrates the sliding jaws in detail.

Our wrench comprises the head A, the handle B, the jaws C, and the adjusting-ring D. The head A is provided on its rim with the teeth A′, whose opposite sides A^3 and A^4 are made radial to the pivotal axis of the handle B, so they will present a square surface to the action of their pawls E and F in the operation of the wrench. The handle-lever B is pivoted eccentrically to the head A at B′, thus providing for a variable leverage in operating the device. This handle supports the pawls E and F, which face in opposite directions and permit the operation of the handle to turn the head in either direction. The pawl F is integral with the box E′, which slides on the handle toward and from the head and is pressed toward the head by the spring G, as shown. The box E′ has a recess or socket E^2, whose wall is slotted at E^3. The pawl F fits in the socket E^2 and is adjustable therein, so it can be set to protrude beyond the pawl E when desired, the pawl F being secured in any desired adjustment by the screw F′, passed through the slot E^3. By this construction the pawl devices can be set to adjust the wrench to turn the head in either direction. The jaws C slide radially in undercut seats C′ in the head A to adapt the wrench to different sizes of nuts or bolts. These jaws C are provided with cam-grooves C^2, which are entered by pins D′, projecting from the ring D, which is held to and movable upon the head by the means shown or in any other suitable manner.

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

1. A wrench comprising the circular toothed head having a central seat or bearing for the nut or bolt and a handle pivoted eccentrically to the head and having a pawl engaging the teeth thereof substantially as set forth.

2. A wrench comprising a handle, a circular toothed head to which the handle is pivoted eccentrically, the sides of the teeth of said head being radial to the pivot of the handle, and the pawl on the handle engaging said teeth substantially as set forth.

3. A wrench comprising a circular head having a central seat for the nut or bolt and a handle pivoted eccentrically to the head and provided with means for turning the head substantially as set forth.

4. A wrench comprising a head and a handle pivoted thereto and provided with a pawl engaging said head and a second pawl adjustable upon the first one into and out of position to engage the head substantially as set forth.

5. A wrench having a handle, a ratchet-ring which is pivoted eccentrically to the handle and is provided with circular series of teeth whose opposite sides are radial to the pivot of the ring, and the pawl devices engaging said ratchet-ring substantially as set forth.

6. A wrench comprising the handle, and the head having the central seat or bearing for the nut or bolt to which said handle is pivoted eccentrically said head being provided with teeth whose opposite sides are radial to the pivot of the handle, and pawl devices on the handle for engaging the opposite sides of the teeth to move the head in either direction substantially as set forth.

7. In a wrench the combination with the head and the handle, of the main pawl having a box sliding upon the handle and provided with a recess or socket for a second pawl, the said pawl fitted in such recess or socket, and

the screw for securing such pawl in any desired adjustment substantially as set forth.

8. An improved wrench comprising the handle, the ratchet-ring pivoted eccentrically to said handle, the jaws movable radially across said ratchet-ring, and the ring for adjusting said jaws, the jaw-adjusting ring being concentric with the ratchet-ring substantially as set forth.

GUY L. RAY.
WILLIAM PEAK.

Witnesses:
J. H. CHASE,
J. T. ALLISON.