

(No Model.)

J. LUSSIER.
WRENCH.

No. 308,969.

Patented Dec. 9, 1884.

Fig. 1.

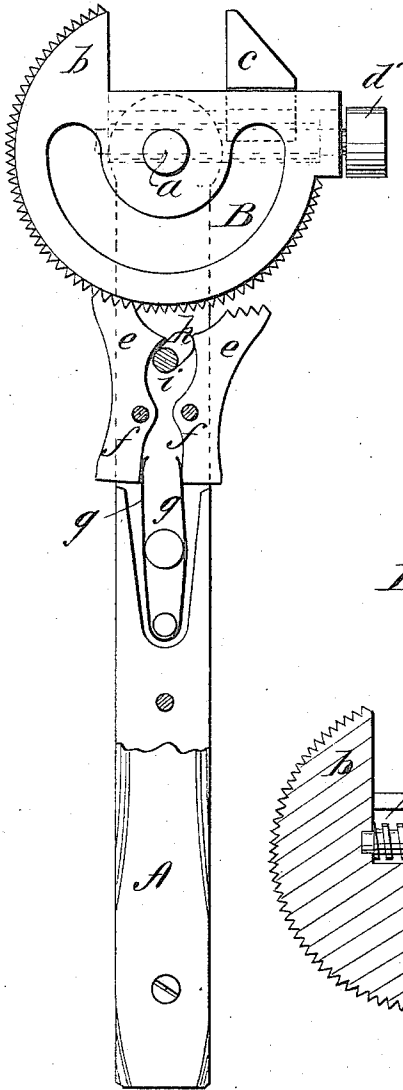


Fig. 2.

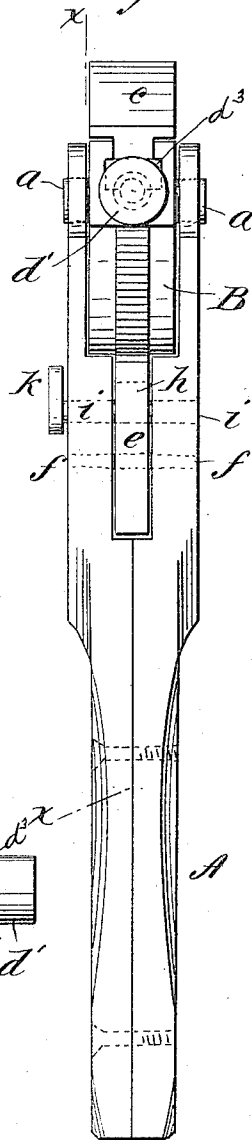
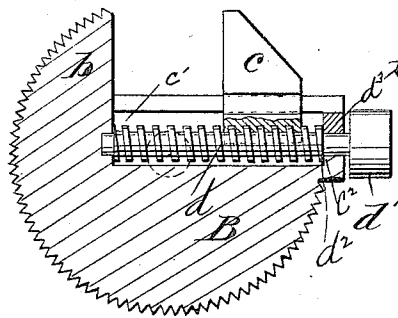


Fig. 3.



WITNESSES:

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JOSEPH LUSSIER, OF MINNEAPOLIS, MINNESOTA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 308,969, dated December 9, 1884.

Application filed February 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LUSSIER, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and
5 Improved Wrench, of which the following is a full, clear, and exact description.

The object of my invention is to furnish a wrench that can be used in corners and other
10 hardly-accessible places where it is inconvenient or impossible to use an ordinary wrench.

The improvement relates to the class of wrenches having rocking or adjustable heads; and it consists in certain novel features of
15 construction, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate
20 corresponding parts in all the figures.

Figure 1 is a side view of the wrench with a portion of the shank removed, and Fig. 2 is a face view. Fig. 3 is a section of the head,
25 showing the operating-screw and sliding jaw.

A is the handle, which is made in two parts, secured together in any suitable manner.
25 The inner sides of the handle-sections are cut away at their upper ends to form a fork, and are provided with perforations.

The head B is circular and formed with two
30 side studs, *a a*, on either side, which studs fit within the perforations of the handle when its sections are secured together, in order that the head may rotate. The head B is cut away
35 to form a fixed jaw, *b*, and is recessed at *c'*, as shown in Fig. 3, to receive the tongue of the movable jaw *c* and the operating-screw *d*. The end of the screw opposite the head *d'* has a bearing in the end wall of the slot, and the screw is provided at its opposite end with
40 a shoulder, *d²*, which bears against a shoulder, *e²*, at the outer end of the recess *c'*. The screw *d*, without its head, is first placed within the slot *c'*; then the tongue of movable jaw *c*, which is threaded on its under side,
45 is inserted with its threads meshing with those of the screw, and a small block, *e*, is placed in the outer end of the slot, with its under side cut away to fit the cut-away part of the screw adjoining the shoulder *d²*.
50 The head *d'* is now secured to the screw *d*,

which is firmly swiveled in the slot, as shown. The slot *c'* and screw *d* extend beyond and across the center of the head with which they are in line, which is easily accomplished, as there is no pivot in the way, owing to the
55 studs *a* being formed on the sides of the head. By this construction a large adjustment is capable between the jaws, which are both within the circle described by the head, and the object grasped between the jaws is brought
60 very near to the side studs—a position where the strain is best resisted, which could not be done were a pivot passed through the head, as the slot would have to be above the pivot or the pivot below and at some distance from
65 the slot. The slot could not in this case be central without pivoting the head eccentrically.

The outer edge of head B is toothed or serrated for being engaged by the ends of dogs
70 or pawls *e e*, which serve to hold the head securely in place as adjusted. These dogs are pivoted in slotted shank A on pins *f f*, at opposite sides of the shank, and are pressed into contact with the head by a spring, *g*.
75 Their lower ends extend outside the shank or handle, so that either or both may be quickly and readily disconnected by the hand of the operator grasping the tool. This allows a
80 quick adjustment of the head and re-engagement of the dogs.

In addition, for holding either dog out of contact, the cam *h* is provided within the shank A on an arbor, *i*, and between the dogs,
85 so that when turned to one side or the other by means of the projection *k* on the outer end of the arbor the pawl at that side is disengaged and held so. This construction and arrangement renders the tool very convenient
90 for use in all situations and under every possible contingency. At the same time the wrench is compact and strong in every part.

This tool is to be distinguished from rotary or pawl-and-ratchet wrenches.

Having thus described my invention, what I
95 claim as new, and desire to secure by Letters Patent, is—

1. In a wrench, the rotary circular head B, formed with the side studs, *a*, and fixed jaw *b*, and provided with the slot *c'*, extending across
100

and beyond the center, movable jaw *c*, sliding therein, and the screw *d*, swiveled within the slot in line with the center of the head, for engaging the under side of said movable jaw, in
5 combination with the handle A and mechanism, substantially as described, for holding the head in the desired position, as set forth.

2. In a wrench, the circular head B, formed with the side studs, *a*, and fixed jaw *b*, and
10 provided with the slot *c'* and shoulder *c''*, screw *d*, bearing in the end wall of the slot and pro-

vided with a shoulder, *d'*, bearing against shoulder *c''*, block *d''*, head *d'*, and the sliding jaw *c*, provided with a screw-threaded tongue meshing with the threads of the screw, sub- 15
stantially as set forth.

JOSEPH ^{his} X LUSSIER.
mark.

Witnesses:

J. H. HUGHES,
C. P. SILLOWAY.