

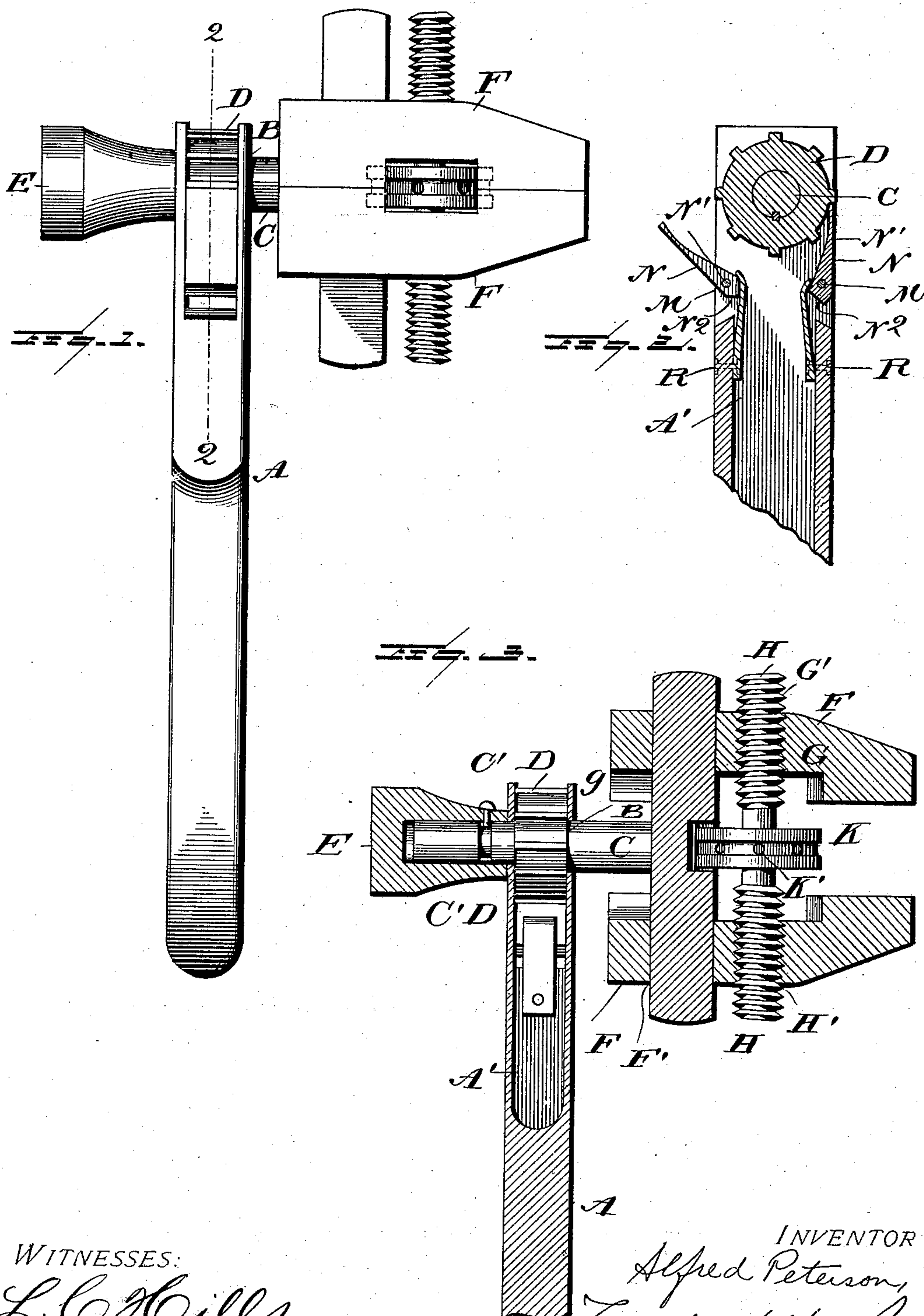
No. 657,499.

Patented Sept. 4, 1900.

**A. PETERSON.
RATCHET WRENCH.**

(Application filed May 24, 1900.)

(No Model.)



WITNESSES:

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RATCHET-WRENCH.

SPECIFICATION forming part of Letters Patent No. 657,499, dated September 4, 1900.

Application filed May 24, 1900, Serial No. 17,872. (No model.)

To all whom it may concern:

Be it known that I, ALFRED PETERSON, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Ratchet-Wrenches; and I do 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 the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in wrenches, and especially to a ratchet-wrench the jaws of which are secured to and adapted to rotate with a shaft carrying a ratchet-wheel and journaled in the end of a handle, spring-actuated dogs being provided which are adapted to engage the ratchet-wheel at locations diametrically opposite for the purpose of actuating the shaft carrying the jaws in either direction.

The invention relates, further, to the provision of a ratchet-wrench having a shaft journaled in a suitable handle and having a ratchet-wheel turning with the shaft, on which are the laterally-adjustable jaws, and the provision of a swivel member for holding the instrument while the shaft is being rotated by the handle which carries ratchet-dogs, which may be adjusted to operate the shaft, carrying the jaws in either direction.

My invention will be hereinafter more fully described and then specifically defined in the appended claims, and is illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form part of this application, and in which—

Figure 1 is a side elevation of my improved ratchet-wrench. Fig. 2 is a sectional view on line 2 2 of Fig. 1, and Fig. 3 is a sectional view longitudinally through the shaft carrying the jaws in a plane at right angles to the section shown in Fig. 2.

Reference now being had to the details of the drawings by letter, A designates the handle of my improved wrench, which is made, preferably, of metal and has one end recessed out, as at A', and the walls of said recessed portion are apertured, as at B, and a shaft C

is journaled in said apertures. The portion of the shaft between the two pivotal bearings in the walls of said recessed portion is preferably squared, and a ratchet-wheel D, having a square aperture, is fitted over said shaft in the recess of the handle. If desired, the ratchet-wheel may be secured in any other manner, as by means of a key, to the shaft. One end of the shaft, which projects beyond the outer wall of the handle, is grooved, as at C', and the swivel-handle E, which is apertured near its end, carries a threaded pin or bolt, the inner end of which is adapted to travel in said groove and allow the handle to rotate independent of the shaft. The opposite end of the shaft has a T-shaped end which is recessed at D at a location in alignment with the shaft and is substantially at the middle portion of said T-shaped end. The two jaws F, which are similarly constructed, have rectangular-shaped apertures F', which are provided to receive the laterally-projecting portions of said T-shaped end, and at any suitable location (preferably near the center of the jaws) are the threaded apertures G and H, one of which is provided with left threads and the other with right threads adapted to receive the right and left threaded portions of the jaw-adjusting screw H, which has respectively the left and right threads G' and H'. At the middle of said screw is carried a wheel K, having a milled edge and radiating holes K', in which a rod may be placed for the purpose of rotating the wheel and the screw carrying the same, whereby the jaws may be screwed toward each other or opened to their widest limit. The inner face of each of said jaws is concaved out, as shown at g, so that the shaft provided with T-shaped end will not interfere when the jaws are screwed together. Pivoted on the pins M, the ends of which are supported in the walls of the recessed portion of the handle, are the dogs N, which have the two angled faces N' and N², the former of which, N', is adapted to contact with a spring Q when the free end of the dog is held in contact with the circumference of said ratchet-wheel, and when one or the other of the dogs is desired to be thrown out of engagement with the spring the free end of the dog is swung out, so that the spring will bear against the flat or angled surface N² of the dog,

which will hold the dog out of engagement with the teeth of said ratchet-wheel, while the ratchet on the opposite edge is in operative position. The spring which I have
5 shown consists of a single piece of metal which is bent upon itself near its longitudinal center and confined within a hollow center portion of the handle by means of a pin R, the free end of said spring being held
10 against the dogs for the purpose of holding the latter either into or out of an operative position, as will be readily understood.

In operation the jaws are adjusted to the desired distance apart, and the operator, holding the swiveled handle by one hand, grasps
15 the handle with the other and throws one or the other of said dogs out of the path of the teeth of the ratchet-wheel, accordingly as it is desired to operate the shaft carrying the
20 jaws in one direction or the other. The dogs are readily thrown out of engagement by the operator pushing in on the inner end of the dog which projects beyond its pivotal point, and the spring will readily engage the inner
25 flat face N² of the dog and hold the free end of the latter away from the ratchet-wheel.

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

30 1. A ratchet-wrench, comprising a handle, a shaft having a T-shaped end journaled in said handle at right angles thereto, a ratchet-

wheel turning with the shaft, jaws laterally adjustable on said T-shaped end of the shaft, a swiveled handle mounted on the opposite
35 end of the shaft, pivoted dogs designed to engage said ratchet-wheel at locations diametrically opposite each other, each dog having two angled faces near their pivotal points, and a spring adapted to engage one or the
40 other of said angled faces, accordingly as it is desired to hold the dog into or out of engagement with the ratchet-wheel, as set forth.

2. In a ratchet-wrench, a handle, a shaft journaled in apertures in the recessed end of
45 the handle, ratchet-wheel mounted on and rotating with the shaft in said recessed end of the handle, the jaws mounted on the T-shaped end of the shaft, a right and left screw mounted in right and left threaded apertures
50 in the jaws, a milled wheel rotating with said screw, and guided in a recess in the T-shaped end of the shaft, in alinement with the shaft, the swiveled handle and the spring-actuated
55 dogs, and springs for holding the free ends of the latter either into or out of engagement with the teeth of the ratchet-wheel, as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ALFRED PETERSON.

Witnesses:

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EMANUEL T. GRIESE.