

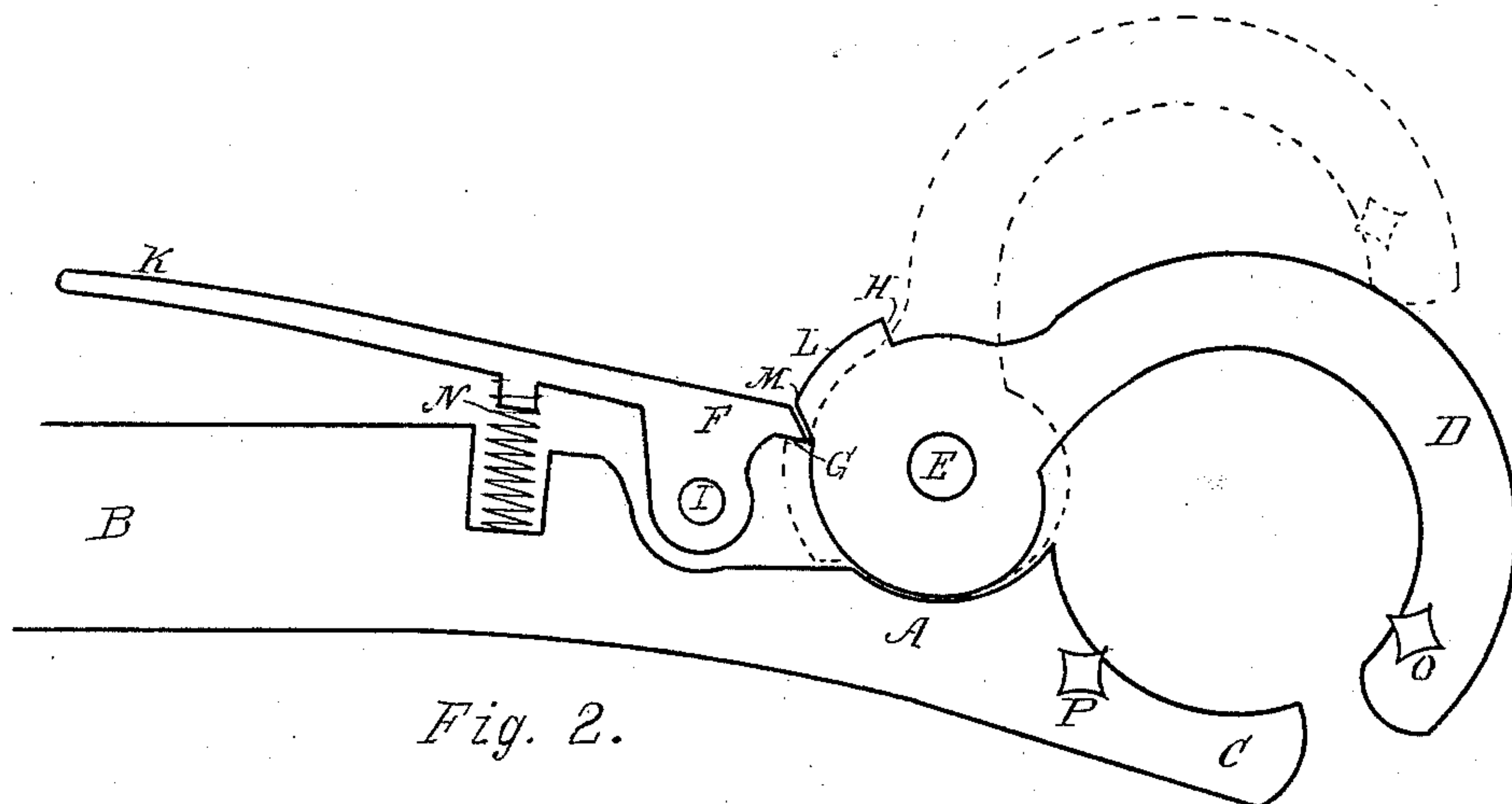
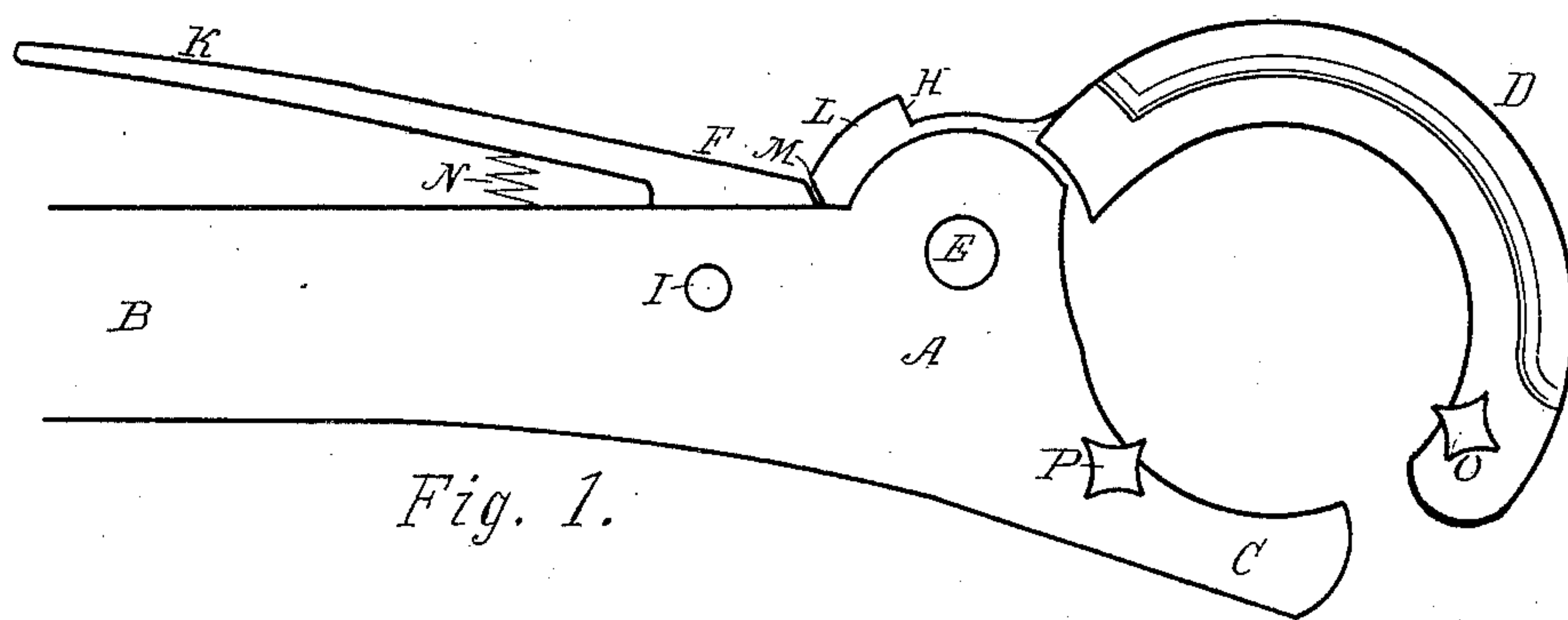
(No Model.)

F. CROCKER.

PIPE WRENCH.

No. 318,089.

Patented May 19, 1885.



J. L. Weil
P. A. Painter } Witnesses.

Frederick Crocker } Inventor.
By Joseph Smith
Attorney.

UNITED STATES PATENT OFFICE.

FREDERICK CROCKER, OF OLEAN, NEW YORK.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 318,089, dated May 19, 1885.

Application filed October 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK CROCKER, a citizen of the United States, residing at Olean, in the county of Cattaraugus and State of New York, have invented a new and useful Improvement in Pipe-Wrenches, of which the following is a specification.

My invention relates to an improvement in pipe-wrenches used for screwing together pipe of larger size and in various different positions, as oil-line pipe, Artesian-well tubing, &c., the position in which the pipe is laid and consequently the position of the wrench varying almost indefinitely, my object being to so construct the wrench that it may be quickly and easily adjusted, sure in operation, and convenient in use in any position. I attain this in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side view, and Fig. 2 a central sectional view, of my device.

Similar letters refer to similar parts.

In both views the end of the handle or lever is shown as broken off, it not being essential, in order to understand the device, to show the entire handle.

A is the shank; B, the handle or lever; C, the fixed jaw; D, a swinging or movable jaw, hinged to the shank A by the pivot-bolt E. F is a dog or catch hinged upon the pivot-bolt I, and with the handle K projecting upward along the lever B.

Upon the hinge part of the movable jaw D is the projection or catch L. The dog F is so arranged and adjusted that when the swinging jaw D is brought forward, inclosing the pipe, the end of the dog bears against the shoulder M of the projection L, and prevents it from flying back, the joint between the dog and shoulder being at such an angle that the action of the dog shall press the jaw forward and upon the pipe. N is a spring acting between the handle of the dog F and the lever B, holding the dog in place. When it is desired to release the grip and remove the wrench from the pipe, by pressing upon the handle K the dog F is raised, allowing the jaw D to swing back, when the jaw G of the dog engages with the reverse shoulder H of the projection L, and holds the jaw back and

open, the parts then taking the position shown by the dotted lines in Fig. 2.

O is a cast-steel die inserted in the movable jaw D, so set that one corner shall project beyond the inside surface of the jaw, and P a similar die placed in the fixed jaw C. These are for the purpose that the corners of the dies shall cut into the pipe and prevent the wrench from slipping. The dies are in a general square form, but with each of the four sides concave, so as to present a sharper cutting-edge at each corner.

The operation of the wrench is obvious. The movable jaws being open, as shown by the dotted lines in Fig. 2, the wrench is applied to the pipe with the fixed jaw C resting against it. The handle K is pressed down and the movable jaw released, which falls or is carried forward until the dog engages with the shoulder M, and the movable jaw embraces the pipe. With the downward motion of the lever B the grip is tightened and the dies O and P cut into the pipe, preventing the wrench from slipping. When the lever B is raised, the grip is loosened, allowing the wrench to revolve backward, the action of the dog F against the shoulder M holding the swinging jaw D against the pipe, but not with such force as to injure the edge of the dies, being only sufficient to enable it to engage with the pipe when the forward motion is resumed. The jaw D being held automatically against the pipe by the dog the wrench can be used upon horizontal or vertical pipe, and in any desired position. This vibratory motion is continued until the pipe is screwed to place, when by pressure upon the handle K the movable jaw is released and thrown back and the wrench removed from the pipe.

In the drawings, the two dies O and P are shown. The die P on the fixed jaw may be omitted; or the number of dies may be increased, if desired.

What I claim is—

In a pipe-wrench with a swinging jaw, the projection L upon the pivotal part of the swinging jaw D, in combination with the dog F, attached to the shank and fixed jaw, the dog F, and the shoulder M upon the projection L being so arranged and inclined that

the pressure of the dog upon the shoulder shall hold the jaw D in contact with the pipe when closed, and with the handle K of the dog F extending along the shank or handle 5 of the wrench, and with the spring N, operating between the handle K and the shank A, so that the whole is under the immediate and

convenient control of the operator, substantially as shown and described.

FREDERICK CROCKER.

Witnesses:

L. E. GERRETY,
EARLE H. EATON.