

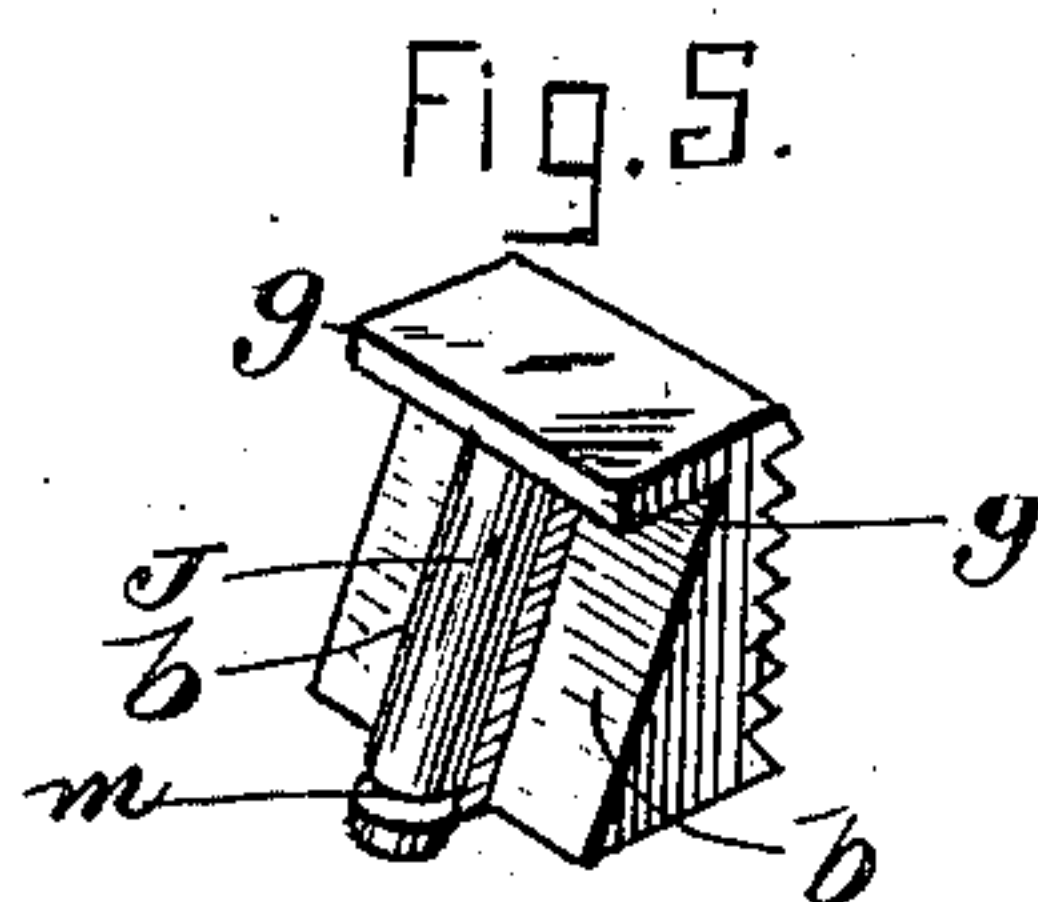
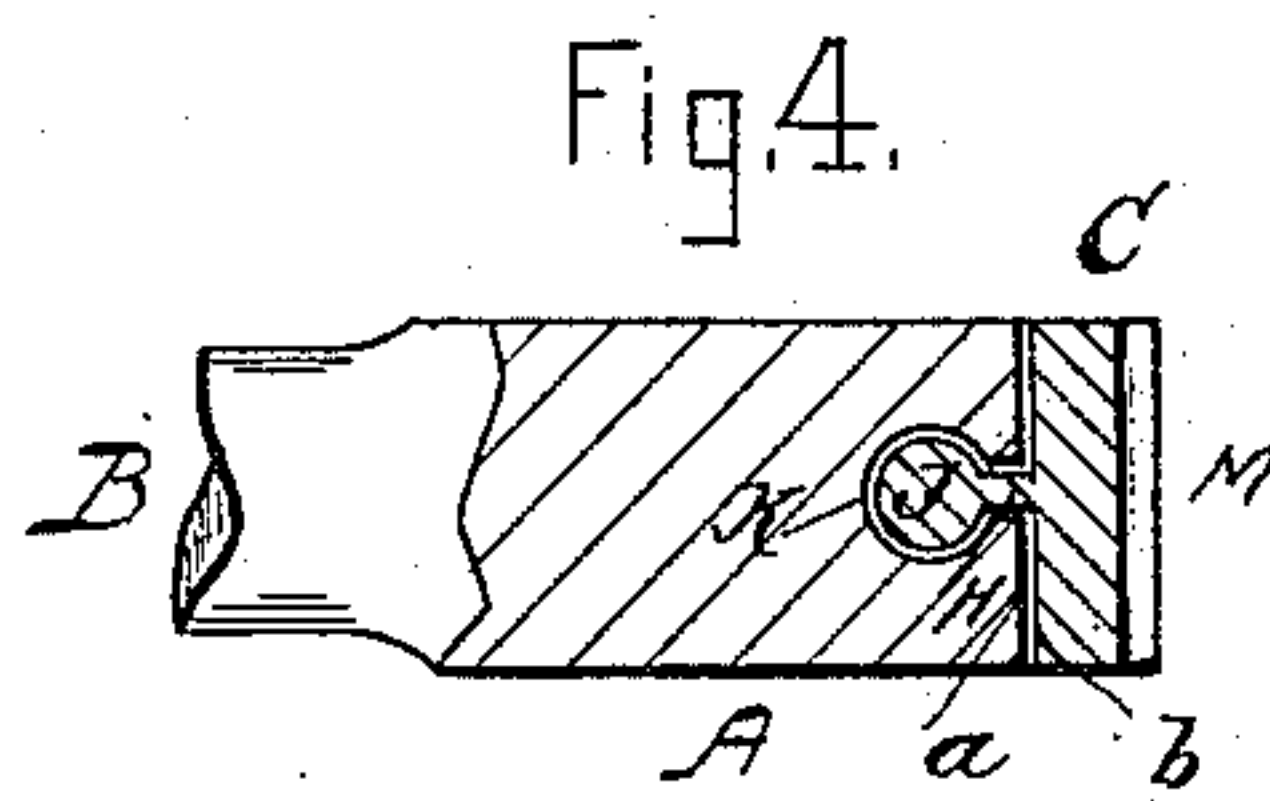
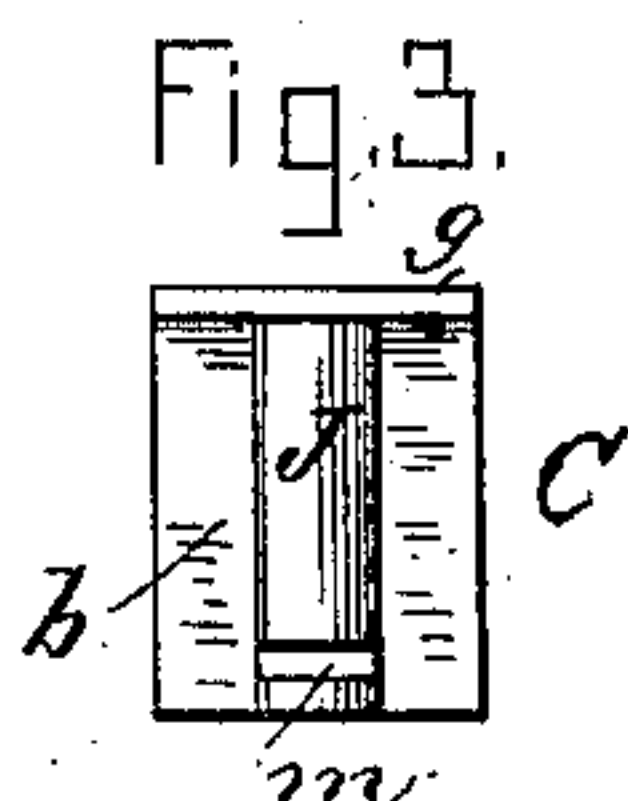
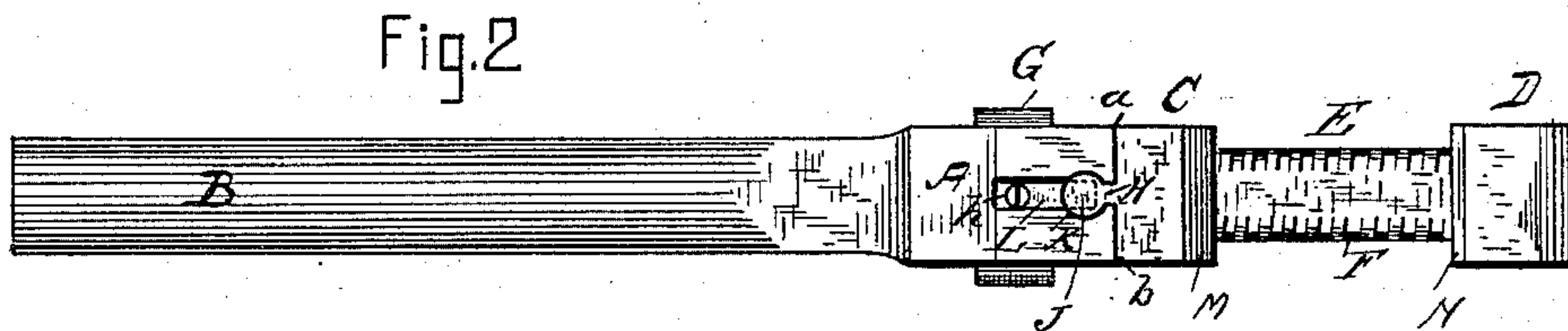
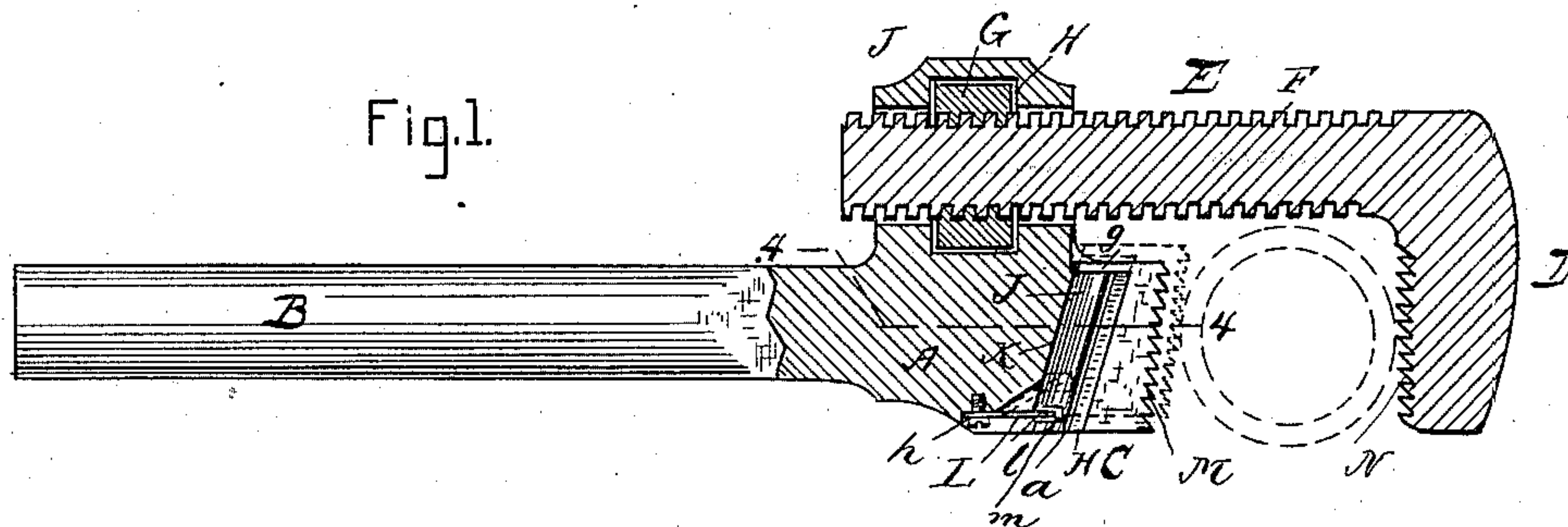
(No Model.)

J. F. GUTHRIE.

PIPE WRENCH.

No. 310,818.

Patented Jan. 13, 1885.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES F. GUTHRIE, OF SOMERVILLE, MASSACHUSETTS.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 310,818, dated January 13, 1885.

Application filed March 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. GUTHRIE, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a full, clear, and exact description.

This invention relates to improvements in pipe tongs or wrenches more especially, although the invention is applicable to other wrenches; and it consists in the construction and arrangement of parts, all substantially as hereinafter fully described.

In the accompanying plate of drawings is illustrated this invention as applied to a pipe-wrench, Figure 1 being a view in partial longitudinal section; Fig. 2, an edge view. Figs. 3 and 5 are respectively a back view and perspective view of one of the jaws of the wrench; and Fig. 4 is a detail sectional view on line 4 4, Fig. 1.

In the drawings, A represents the body of the wrench, having a handle, B, a jaw, C, and a movable adjustable jaw, D. This movable jaw D has an arm, E, at right angles to it, and extending in a direction parallel to the body A of the wrench, on which arm E is cut a screw-thread, F, on which screws a nut, G, arranged to turn freely within an open slot, H, in an offset, J, of the body A, so that turning the screw-nut G in one direction the jaw D will be moved away from, and turning the screw-nut in the other direction the jaw D will be moved toward, the jaw C, all as usual in pipe tongs and wrenches. The face *a* of the end of the body A inclines in relation to a line at right angles to the wrench, as shown in Fig. 1, on which incline face *a* the jaw C, which is separate from the body A, by its inclined face *b*, is arranged to move forward and backward, and in such forward movement to approach the jaw D, as shown in dotted lines, Fig. 1, and in its backward movement to recede from said jaw D.

To secure the jaw C to the body A, and yet allow its movements as described, it is interlocked with the same by a downward longitudinal extension, H, having an enlargement, J, which is circular in cross-section and is arranged to slide in a correspondingly-shaped socket, K, in the end of body A.

L is a spring secured at *h* to the front edge of the body, and projecting by its free end *l* into an opening, *m*, in the extension H, to act by its tension to hold the jaw C in the position shown in Fig. 1.

To prevent detachment of the jaw C from the body and any farther outward movement of the jaw C, it is provided at its inner end with a projecting arm, *g*, arranged to abut against the inner side of the body.

The operation of the parts constituting this improvement in pipe-wrenches is as follows: Placing the pipe to be operated upon between the two jaws, and adjusting the distance of the jaw D from the jaw C to the diameter of the pipe by turning the screw-nut in the proper direction, pull the wrench by its handle toward you, which will, by the binding of the two jaws upon the pipe, cause the jaw C to move up the incline *a*, and in such movement to the more firmly grasp and bind the pipe between it and the jaw D, and according to the force exerted on the wrench, thereby operating on the pipe as desired, and in swinging the wrench back to take a new hold of the pipe between the two jaws, the jaw C frees itself from its grasp on the pipe by the action of its spring, causing it to slide down the incline face, which allows the wrench to freely move on the pipe, and as the wrench is again pulled forward the pipe will be again operated upon, the wrench again moved back to release it for another grip, and so on, until the pipe is operated upon to the extent desired. Thus in the forward movement of the wrench to operate upon the pipe the jaws will be caused to firmly grasp the pipe for the purpose desired, and in its backward movement will be free to move around the pipe to secure, by another forward movement of the wrench, another grip upon the pipe, and so on, all in a simple, cheap, and practical manner.

This invention is applicable to all kinds of wrenches as well as pipe-wrenches, and it is not intended to limit the invention to any particular purpose or kind of wrench. The extension H and its interlock can be of other forms to accomplish the same result, also the spring L can be arranged for operation in any manner desired. The jaws C D have their gripping-surfaces M N serrated or grooved,

as usual, for the firmer hold upon the pipe or other article to be operated upon by it.

Having thus described my invention, what I claim is—

5 1. In a pipe-wrench, in combination with a jaw, D, a jaw, C, arranged to bear and slide upon an inclined surface, *a*, across the body portion of the wrench, and provided with an arm, *g*, substantially as and for the purpose
10 specified.

2. In a pipe-wrench, in combination with a jaw, D, a jaw, C, arranged to bear and slide upon an inclined surface, *a*, across the body

portion of the wrench and secured thereto by an extension, H, having its outer end enlarged 15 in cross-section and engaging with a socket, K, in said body, and provided with an arm, *g*, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my 20 hand in the presence of two subscribing witnesses.

J. F. GUTHRIE.

Witnesses:

EDWIN W. BROWN,
WM. S. BELLOWS.