

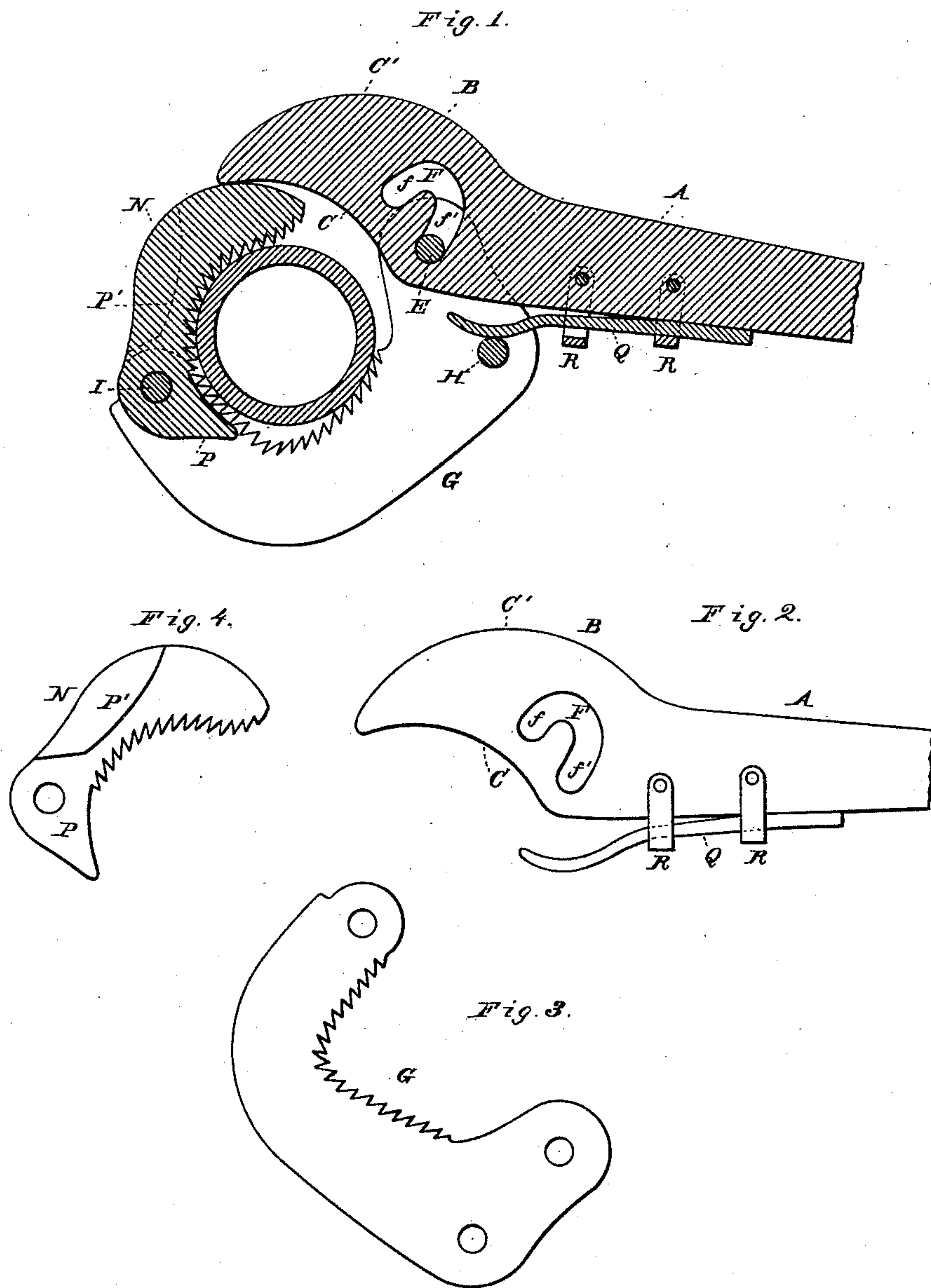
(No Model.)

I. ANDERSON.

PIPE WRENCH.

No. 359,197.

Patented Mar. 8, 1887.



WITNESSES

*Villette Anderson.*  
*Philip Lemasi.*

INVENTOR

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ATTORNEYS

# UNITED STATES PATENT OFFICE.

ISAAC ANDERSON, OF SAGINAW, MICHIGAN, ASSIGNOR OF ONE-HALF TO  
THOMAS H. SMITH, OF SAME PLACE.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 359,197, dated March 8, 1887.

Application filed August 10, 1886. Serial No. 210,531. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC ANDERSON, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Pipe-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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a vertical section, a part of the handle being broken off; Figs. 2, 3, and 4, details, and are side views of the different parts.

My invention relates to pipe-wrenches; and it consists in the construction and novel combination of parts, as hereinafter described, and pointed out in the claim.

Referring by letter to the accompanying drawings, A designates the handle of the wrench, which is provided with an integral cam-shaped arm, B, made concave in its bearing portion C and convex on its outer edge, as at C'. The cam-shaped arm B is provided with a cam-slot, F, having the front upper shorter arm, *f*, and the rear lower longer arm, *f'*, the latter arm, *f'*, extending down nearly to the lower edge of the handle A, just a little in the rear of the concave bearing C.

D designates the jaw-head, which consists of the lateral portions G G, which are connected by the pin E and the pivots H and I, the latter connecting the outer ends of said lateral portions. The jaw-head D is supported by its pin E either in the upper or lower end of the cam-slot F, as the operator may desire, to adapt the wrench to pipes of different sizes. The side plates or lateral portions, G G, of jaw-head D are toothed or serrated on their

upper edges, and between the forward upper ends of the lateral portions G G is pivoted the curved jaw N, having the integral dog or stop P at its lower end and the shoulders P' along its back above the pivotal point.

Q designates a spring, secured to the lower edge of the handle A by clamps R R', said spring being curved downwardly at its forward end, and bearing down upon the pivot H to hold the pin E in place either in the upper or lower end of the cam slot F, as the operator may elect.

In applying the wrench the curved jaw N is placed on the pipe and turned toward the handle, so that its back will engage the cam-arm of said handle, the pipe being grasped between said curved jaw and the concave bearing of the jaw-head. By turning the handle in such a manner as to force the cam-arm upon the back of the curved jaw C, a firm purchase will be obtained on the pipe, whether the latter be of large or small diameter. By moving the handle in the opposite direction, the wrench can be easily detached.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The combination, with the lever provided with the integral cam-shaped arm, having the arc-slot extending laterally through it, and the curved spring secured to the lower edge of the lever by hangers, of the toothed slotted jaw-head pivoted adjustably in the arc-slot, and the curved, shouldered, and toothed jaw having the integral guard-arm, said curved, shouldered, and toothed jaw and guard-arm being pivoted between the outer ends of the jaw-head, substantially as specified.

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

ISAAC ANDERSON.

Witnesses:

F. A. KING,

THOS. G. DERRY.