

(No Model.)

E. H. GOSLIN.  
WRENCH.

No. 513,916.

Patented Jan. 30, 1894.

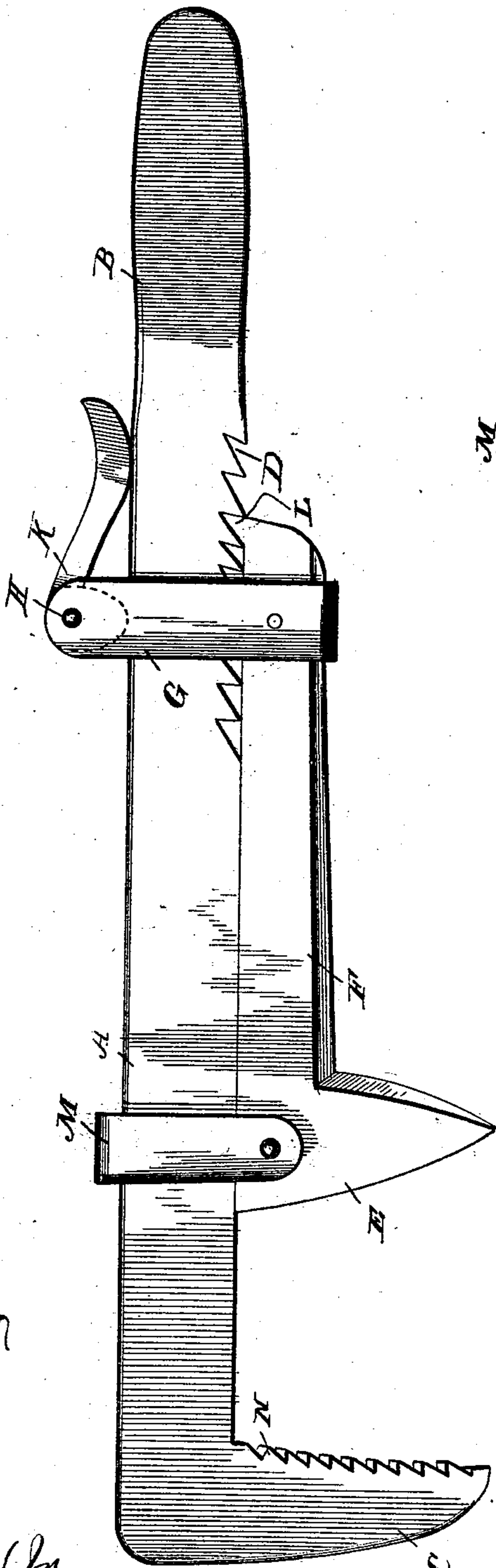


Fig. 1.

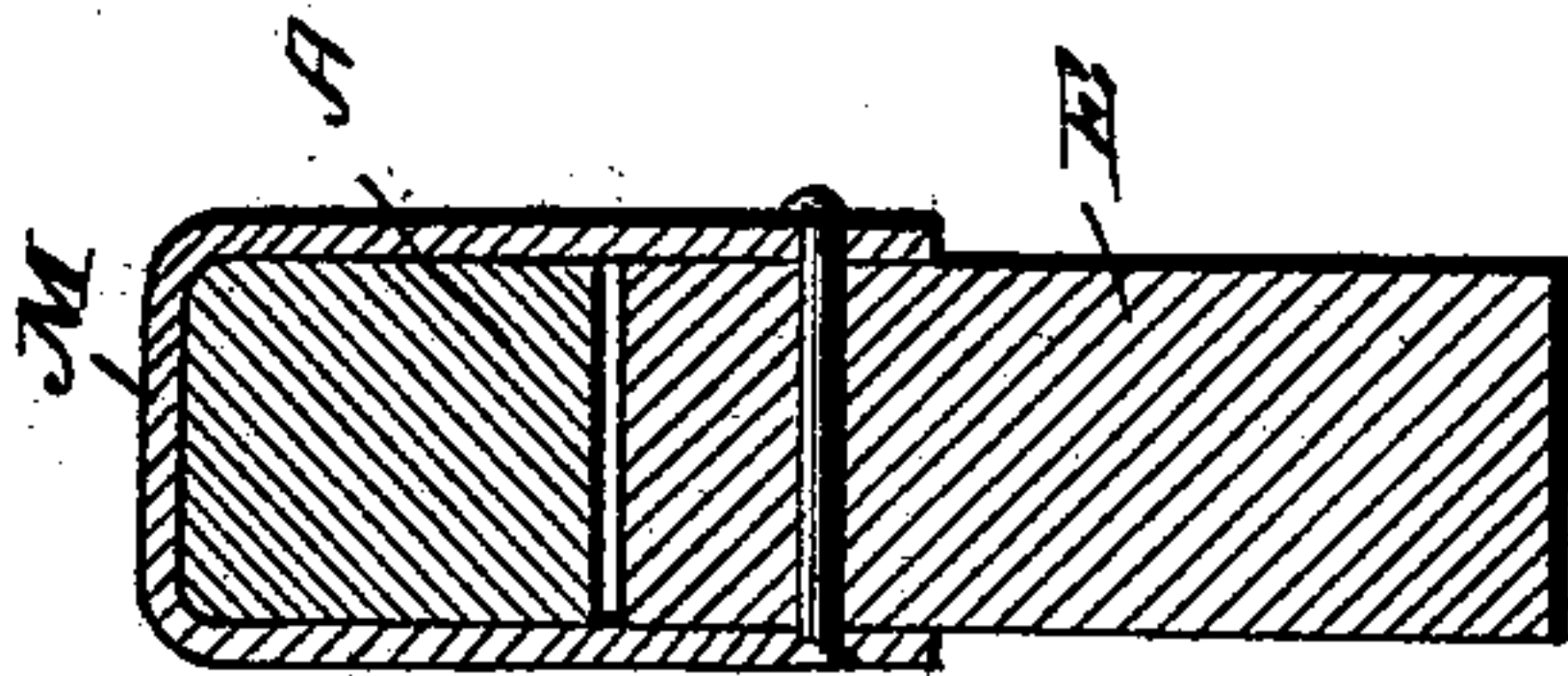


Fig. 2.

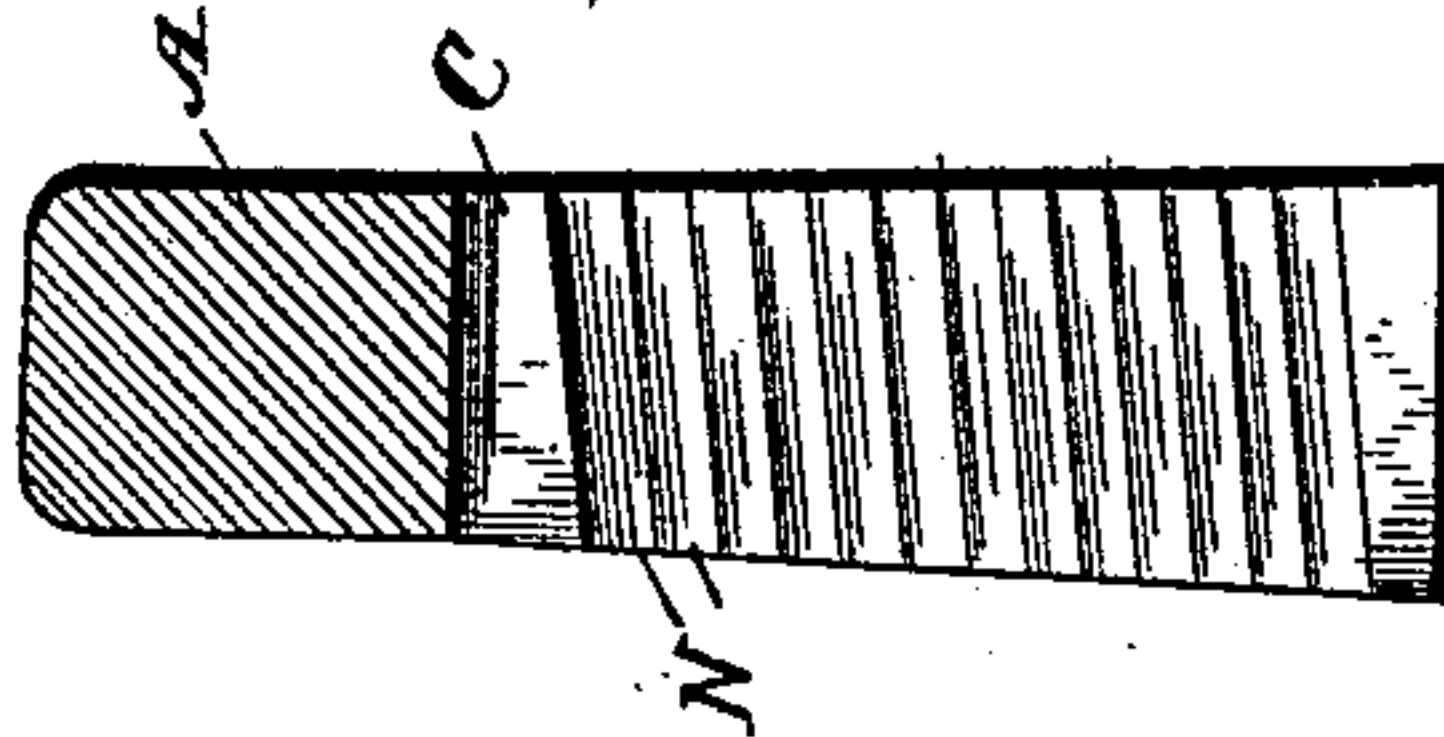


Fig. 3.

Witnesses

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# UNITED STATES PATENT OFFICE.

ELI H. GOSLIN, OF WASHINGTON, INDIANA.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 513,916, dated January 30, 1894.

Application filed August 12, 1892. Serial No. 442,858. (No model.)

*To all whom it may concern:*

Be it known that I, ELI H. GOSLIN, a citizen of the United States, residing at Washington, in the county of Daviess and State of Indiana, have invented a new and useful Wrench, of which the following is a specification.

My invention relates to an improvement in wrenches, of the class known as pipe-wrenches, the object of the improvement being to provide a simple, cheap and effective device, comprising a minimum number of parts, united in a simple and strong manner.

A further object of my invention is to provide a construction of the jaws whereby the movable or swinging feature of the sliding jaw may be avoided.

Further objects of my invention will appear in the following description the novel features thereof being particularly pointed out in the appended claim.

In the drawings, Figure 1 is a side view of a wrench embodying my improvements. Fig. 2 is a face view of the fixed jaw. Fig. 3 is a transverse section through the pivoted link.

A designates the shank of my improved wrench, having at its lower end a handle, B, and C designates the fixed upper jaw, which is attached to the shank. The shank is rectangular in cross-section, and is provided near its lower end with a series of teeth or transverse notches, as shown at D.

E represents the sliding jaw, secured rigidly to a stem, F, having a flat rear side or edge to bear firmly against the edge of the shank.

Pivotaly connected to the stem of the sliding jaw, near its lower extremity, is a guiding link, G, which is in the form of a loop, the closed end of which embraces and bears against the outer side of the lower end of the stem of the sliding jaw, and the parallel arms of which pass upon opposite sides of the shank and extend beyond the rear side of the same.

Between the free ends of the side arms of the loop-shaped guiding link, G, upon a transverse pivot pin, H, is fulcrumed the cam-lever, K, the head of which is adapted to bear against the rear side of the shank.

The stem of the sliding jaw is provided at its lower end with a rearwardly projecting

detent, L, which extends slightly in rear of the plane of the rear side of the stem to engage the serrations or notches in the front side of the shank, as shown in Fig. 1, and by pressing the free end of the handle of the cam lever toward the shank the said detent is caused to engage said notches and hold the sliding jaw stationary. An upper pivotal guiding-link, M, is connected to the upper end of the stem of the sliding jaw; this link is loop-shaped, also, the free ends of its parallel arms being pivotaly connected to the sliding jaw, and its closed end passing around and bearing against the three sides of the shank. The face of the fixed or upper jaw is concaved, as shown, and is provided with diagonal serrations or ridges, N, and the face of the sliding jaw is downwardly-inclined, or diverges from the face of the fixed jaw, toward its front end, and is convexed, as shown. The combination with a concaved and diagonally serrated upper jaw of a divergent and convexed lower jaw, the latter having a smooth face, enables a pipe or rod to be firmly gripped without the swinging feature which is common to pipe-wrenches. By doing away with this swinging feature I work a simplification of the construction of pipe and rod wrenches, without detracting from the effectiveness of the tool. I also provide an implement which may be more cheaply manufactured and which is less liable to be put out of order by use, and is less liable to be rendered inoperative by wear incident to its use. Furthermore, by the peculiar arrangement of parts, namely, the straight shank carrying an integral jaw, a sliding stem carrying an integral jaw and an integral tooth to engage teeth or notches upon the adjacent face of the shank, the simple reversed, or oppositely disposed loop-shaped links, and the operating lever which is fulcrumed between the arms of one of said links, I am enabled to avoid the use of complicated castings, and provide a wrench in which all of the parts are exposed to view whereby they may be readily repaired, cleaned, replaced, &c.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In a wrench, the combination of the shank

provided with a series of teeth and having a  
fixed jaw provided with a concaved serrated  
engaging face, a sliding jaw provided with a  
stem terminating at its lower end in a tooth  
5 engaging the shank, the upper loop-shaped  
guiding link embracing the shank and fitting  
snugly thereon and pivoted to the sliding  
jaw, the lower guiding link embracing the  
shank and the stem, and a cam lever pivot-

ally mounted in the lower link, substantially as and for the purpose described.

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in  
the presence of two witnesses.

ELI H. GOSLIN.

Witnesses:

MARY O'CONNOR,

JOHN C. BILLHEIMER.