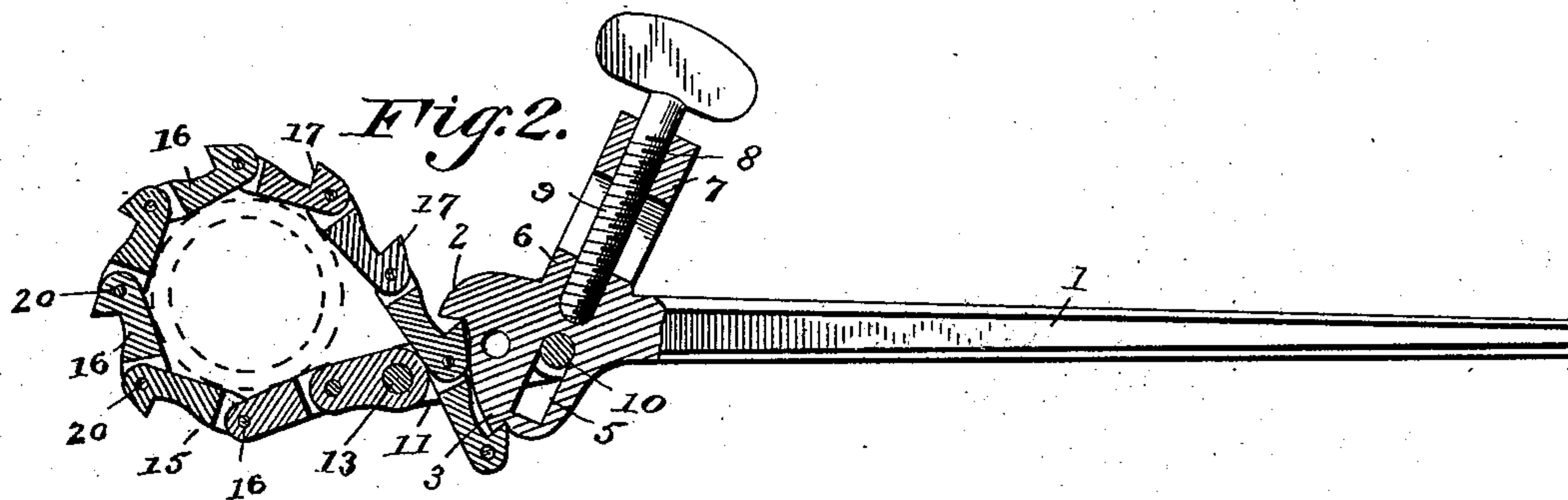
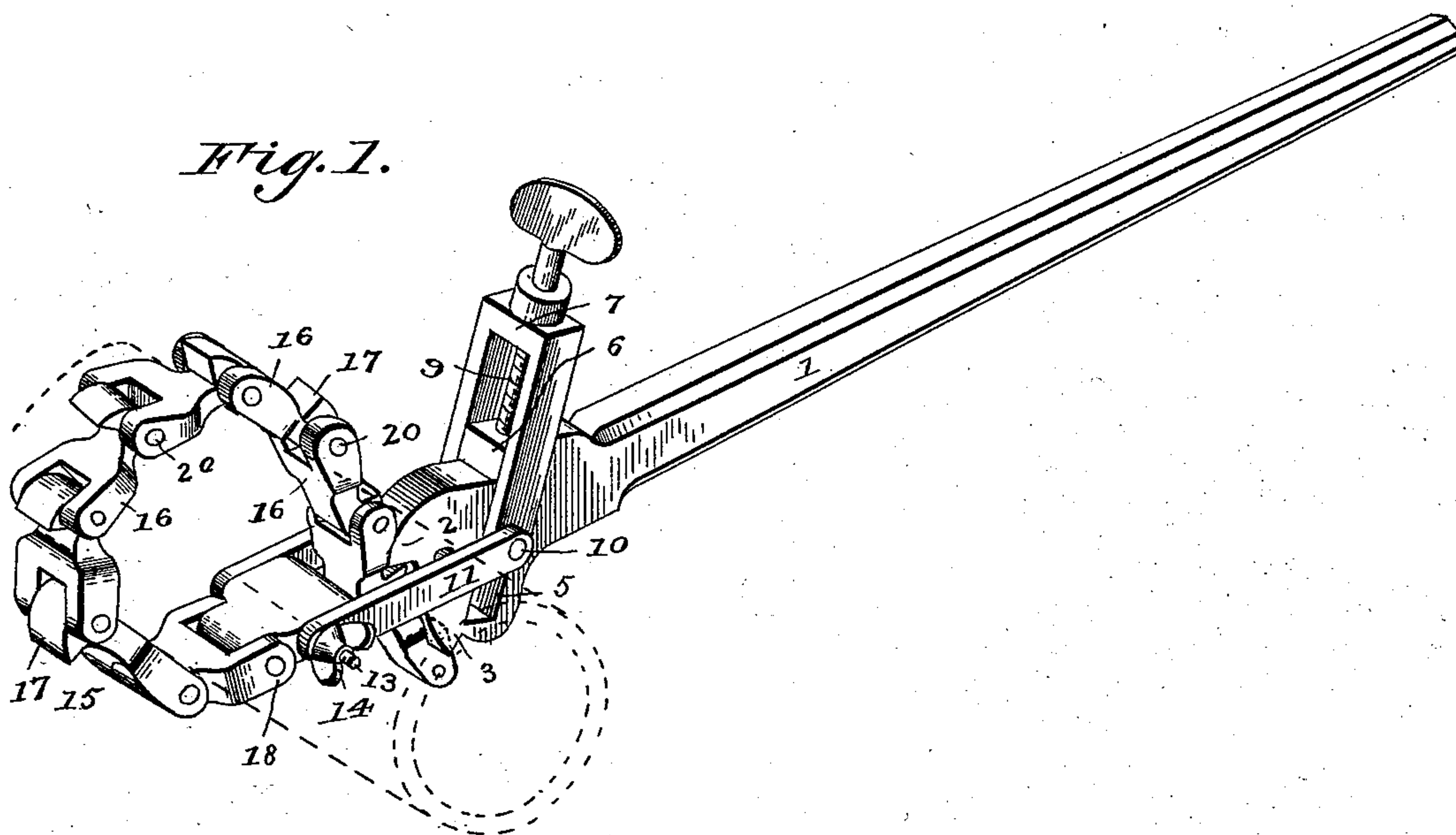


(No Model.)

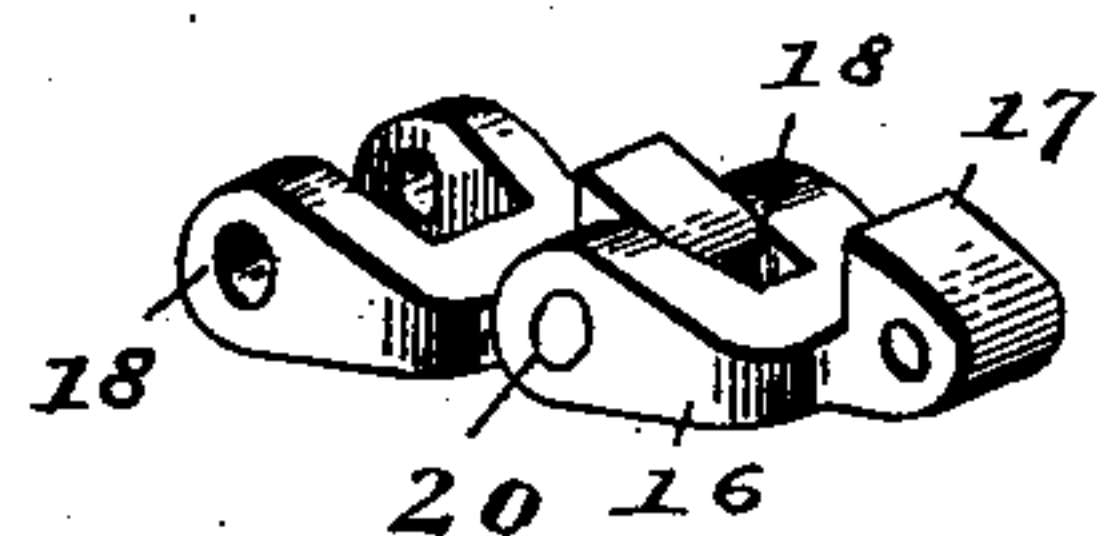
L. DAHLSTROM.  
PIPE WRENCH.

No. 508,920.

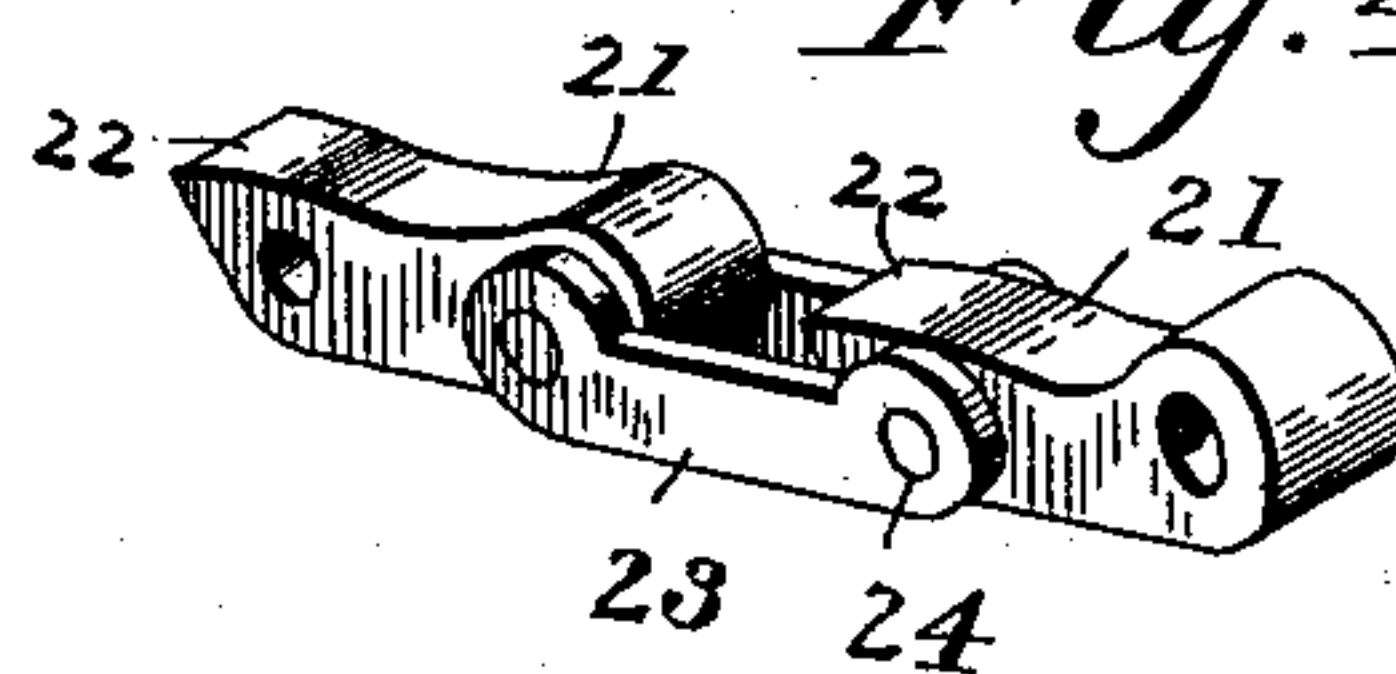
Patented Nov. 21, 1893.



*Fig. 3.*



*Fig. 4.*



Inventor:

Leopold Dahlstrom,

Witnesses:

Julius Ulke, Jr.  
W. S. Duval.

By his Attorneys,

C. A. Snow & Co.



# UNITED STATES PATENT OFFICE.

LEOPOLD DAHLSTROM, OF SANTA CLARA, CALIFORNIA.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 508,920, dated November 21, 1893.

Application filed August 15, 1893. Serial No. 483,194. (No model.)

*To all whom it may concern:*

Be it known that I, LEOPOLD DAHLSTROM, a citizen of the United States, residing at Santa Clara, in the county of Santa Clara and State of California, have invented a new and useful Pipe-Wrench, of which the following is a specification.

My invention relates to improvements in pipe-wrenches; and the objects in view are to provide a wrench that may be readily gripped about a pipe, rod, or other cylindrical object, and when in position will bear equally around the entire surface thereof so as to obviate any marring or crushing of the same; to arrange for a convenient adjustment of the stock or lever of the wrench with relation to the teeth of the binding-chain; to provide for a disposition of any surplus chain; and to provide a new and improved chain for use in connection with the wrench.

With these main and other detail objects in view, the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a wrench embodying my invention, the same being in operative position upon a pipe, the latter being shown in dotted lines. Fig. 2 is a longitudinal sectional view of the wrench. Fig. 3 is a detail in perspective of a portion of the binding-chain. Fig. 4 is a similar view of a modified construction of chain.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I employ a lever or stock 1, which is shaped to form a suitable hand-hold, and at its lower or operative end terminates in a head that is thickened or widened as shown and provided with two teeth 2 and 3 respectively. Above and in advance of the teeth an inclined transverse slot 5 is formed in the head. In rear of the teeth upon the upper side of the head a boss 6 is formed, and the same is countersunk to receive a screw hereinafter described. The head is embraced by an inverted U-shaped yoke 7, whose upper end is provided with a threaded perforation 8, and through the latter there is passed an adjusting-screw 9, whose upper end terminates in a suitable

head designed to be operated by the thumb and forefinger of the operator, and whose lower or inner end takes into the countersink or cavity formed in the boss and by a manipulation of the screw, it will be obvious that the yoke may be adjusted upon the head or rather the head adjusted in the yoke. The terminals of the yoke embrace the head to a point opposite the binding-slot, and a transverse pin or pintle 10 passes through the terminal and through the slot, moving loosely in the latter, whereby the yoke is guided. A pair of links 11 have their upper ends pivoted upon this pintle, and their lower ends are connected by a transverse bolt 13, having a thumb-nut 14 at one end. Loosely suspended on this transverse bolt 13 is the binding-chain 15, and the same consists of a series of links 16, each one of which is reduced at opposite sides, at one end perforated, and provided upon its upper side with a shoulder 17, and at its opposite end is widened and bifurcated, forming perforated lugs 18, the perforated lugs of one link embracing the reduced shouldered end of the adjacent link, the two being pivoted by pins 20.

Other forms of links may be readily devised and employed. As for instance, in the modified construction thereof illustrated in Fig. 4, I employ a series of metal blocks 21, the same terminating at one end in an abrupt shoulder 22. These blocks are of the same width throughout their length, and are loosely connected by opposite side links 23, through which and the blocks pivoting-pins 24 are passed.

In the operation of my invention, the chain is passed about the pipe and any surplus that may occur passes through and between the links 11, the lever being swung at an angle to the yoke and drawn upward so that the lower part of its inclined slot is adjacent to the pintle 10. When the chain has been placed in position, in order to engage the same with one of the teeth of the stock or lever, it is simply necessary to swing the lever toward the yoke, which brings its teeth toward the chain, and one of its teeth will engage a convenient shoulder of the chain. Any fine adjustments that may be required in order to effect an engagement may be readily pro-



cured through the medium of the adjusting-screw. After having engaged the chain it is simply necessary to swing the lever, and the chain being bound snugly upon the pipe throughout the circumference of the latter, will serve to rotate the pipe in a manner that will be obvious.

Certain changes in the details of construction of my invention may be made without departing from the spirit thereof or sacrificing any of the advantages, and I therefore do not limit myself to such precise details as are herein shown and described.

Having described my invention, what I claim is—

1. In a pipe-wrench, the combination with a lever terminating at its lower end in a head, provided with a peripheral tooth, of a binding-chain loosely connected eccentrically to the head each of the links of the chain provided upon its outer side with an abrupt shoulder adapted to be engaged by said tooth, substantially as specified.

2. In a pipe-wrench, the combination with a lever terminating at its lower end in a head and having a plurality of peripheral teeth, of a chain eccentrically and loosely connected with the head of said lever, each of the links of said chain being provided upon its outer side with shoulders for engagement by the teeth, substantially as specified.

3. In a pipe-wrench, the combination with a lever terminating at its lower end in an enlarged head, provided with a tooth, of a pair of loose links pivotally and eccentrically connected with the head, a chain the links of which have a series of shoulders for engagement by the tooth, a bolt passed through the links and the inner end of the chain, and a thumb-nut arranged upon the bolt, substantially as specified.

4. In a pipe-wrench, the combination with a lever terminating at its lower end in an enlarged head having a tooth, an inclined slot arranged in the head, a pintle arranged in the slot and adapted for movement therein, links hung upon the pintle, a bolt passed through the lower ends of the links, and a thumb-nut for the bolt, of a chain having shoulders adapted to be engaged by the teeth and re-

movably and loosely connected to the link by means of said bolt, substantially as specified.

5. In a pipe-wrench, the combination with a lever terminating at its lower end in an enlarged head provided with teeth and eccentrically located, an inclined slot, and back of the same provided with a countersunk boss, an inverted U-shaped yoke embracing the head, and having a threaded perforation at its upper end, an adjusting-screw arranged in the perforation and entering the countersunk boss, a pintle arranged in the inclined slot and connecting the terminals of the yokes, and a chain loosely connected with said pintle and having its links provided with shoulders adapted to be engaged by the teeth of the lever, substantially as specified.

6. In a pipe-wrench, the combination with a lever, terminating at its lower end in an enlarged head having a plurality of teeth, an eccentric, inclined slot, and back of the same provided with a countersunk boss, an inverted U-shaped yoke embracing the head, a pintle passing through the same and the slot, an adjusting-screw passing through the upper end of the yoke and engaging the countersunk boss, a pair of links loosely hung upon the pintle, a transverse bolt, a thumb-nut arranged upon the bolt, and a binding-chain, the links of which are provided with shoulders for engaging the teeth of the lever connected with the bolt, substantially as specified.

7. In a pipe-wrench, the combination with a handle terminating at its lower end in a head provided with teeth, of the binding-chain loosely and eccentrically connected with the head, said chain consisting of a series of links having their opposite ends perforated, one end being reduced at opposite sides and provided upon its upper side with a shoulder, and the opposite end bifurcated and embracing and pivoted to the reduced end of the adjacent link, substantially as specified.

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

LEOPOLD DAHLSTROM.

Witnesses:

W. E. WADAMS,

A. A. WITHROW.