

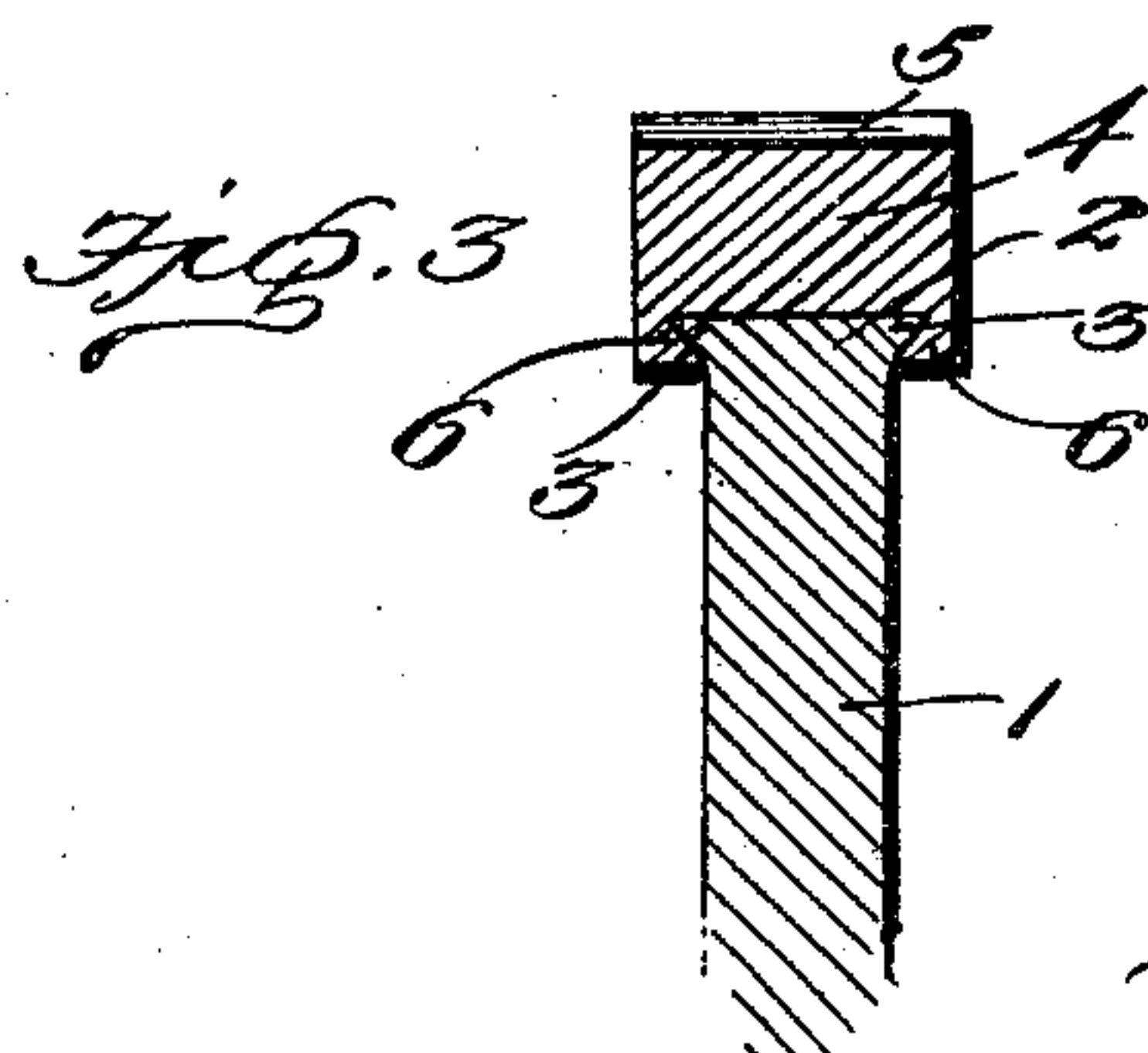
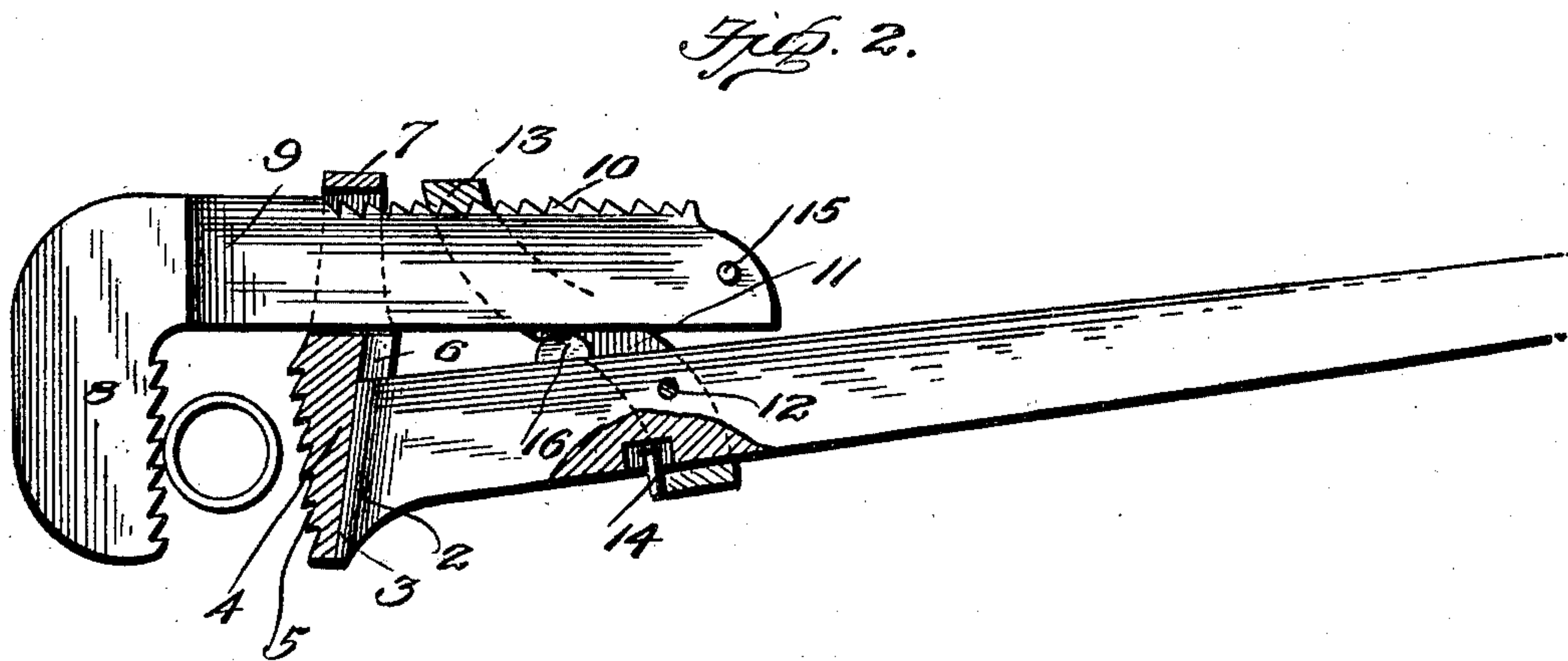
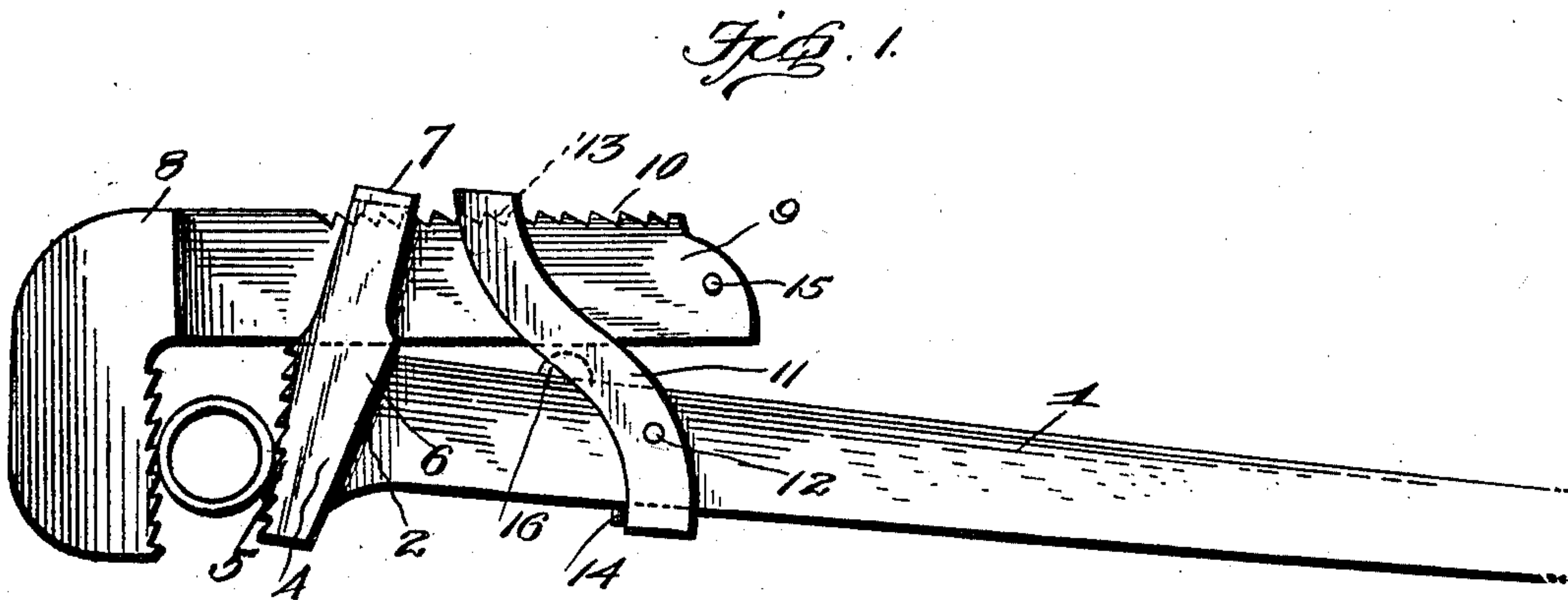
No. 705,060.

Patented July 22, 1902.

J. T. FORD.
PIPE WRENCH.

(Application filed Dec. 19, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JAMES T. FORD, OF SAN FRANCISCO, CALIFORNIA.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 705,060, dated July 22, 1902.

Application filed December 19, 1901. Serial No. 86,547. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. FORD, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, 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.

The invention relates to pipe-wrenches.

The object of the invention is to provide a pipe-wrench which shall be simple of construction, durable in use, and comparatively inexpensive of production.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of the wrench, showing it applied to a piece of pipe and the position the parts assume when pressure is applied to turn the pipe. Fig. 2 is a longitudinal sectional view showing the wrench applied to a pipe and the position the parts assume when the handle of the wrench is moved in a reverse direction to that shown in Fig. 1 to obtain a fresh grip or hold upon the pipe. Fig. 3 is a transverse sectional view through the outer end of the handle and jaw connected thereto.

Referring to the drawings, 1 denotes the handle of the wrench, the outer end of which is provided with a head 2, having laterally-projecting lips 3.

4 denotes a jaw having downwardly-projecting teeth 5, provided with guide-flanges 6, which engage said lips, and formed with a bail extension 7. This jaw has a movement diagonally with respect to the handle.

8 denotes the outer sliding jaw, having upwardly-projecting teeth, and 9 denotes the shank of said jaw, which extends through the bail extension and is provided on its upper edge with outwardly-projecting teeth 10.

11 denotes a lever pivoted to the handle at 12 and provided with teeth 13 to engage the teeth of the shank. This lever is preferably in

the form of a bail, as shown, and is adapted to coact with a spring-stud 14, projecting downwardly from the lower edge of the handle.

15 denotes a stop-pin, which is inserted through the inner end of the shank to limit the outward movement of said shank.

16 denotes a fulcrum block or bearing secured or formed integral with the upper edge of the handle.

In operation, assuming the parts to be in the position shown in Fig. 1, wherein pressure is applied to the handle to turn the wrench, it will be observed that the jaw 4 is moved upwardly and swung outwardly toward the jaw 8 to firmly clasp or grip the pipe. A movement of the handle in the reverse direction, with the fulcrum-block bearing against the lower edge of the shank of the jaw 8, tends to withdraw the jaw 4 from the pipe and enables the wrench to get a fresh grip or hold, when the operation first described is repeated.

The jaw 8 is held in proper adjustment with the jaw 4 by the teeth of the bail 11, which are held normally in engagement with the teeth of the shank by the spring-stud 14. When it is desired to adjust the jaw 8 with respect to the jaw 4, the lower end of the bail-shaped lever is pressed forwardly against the action of the spring-stud, thus freeing the teeth of the bail-shaped lever from those of the shank and permitting of the outward movement of the jaw 8.

In applying the wrench the jaw 8 is placed around a pipe and one hand of the operator placed against the jaw, while the other forces the handle 1, with its jaw, against the pipe. The inclination of the teeth of the shank will permit the teeth of the bail-shaped lever to freely slide over the teeth of the shank, so that a quick adjustment of the jaws to the work may be effected.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and details of construction may be made

within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

1. The combination with a handle, of a jaw
having a sliding engagement therewith in a
direction diagonally to the length of the han-
10 dle and formed with a bail extension, a jaw
mounted to slide longitudinally with respect
to the handle and adapted to coact with the
first-named jaw and provided with ratchet-
teeth, and a spring-actuated lever pivoted to
15 said handle and having teeth to engage the
ratchet-teeth, substantially as set forth.

2. The combination with a wrench-handle
formed with inclined side lips at its outer end,

of a jaw formed with a bail extension and
with guide-flanges to engage said lips, where- 20
by it is capable of moving diagonally with re-
spect to the length of the handle, a second
jaw formed with a shank which extends
through the bail extension and is provided
with teeth on its upper edge, and a spring- 25
actuated bail-shaped lever pivoted to said
handle and provided with teeth to engage the
teeth of the shank, substantially as set forth.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit- 30
nesses.

JAMES T. FORD.

Witnesses:

H. K. DAGGETT,
H. ELLIS.