

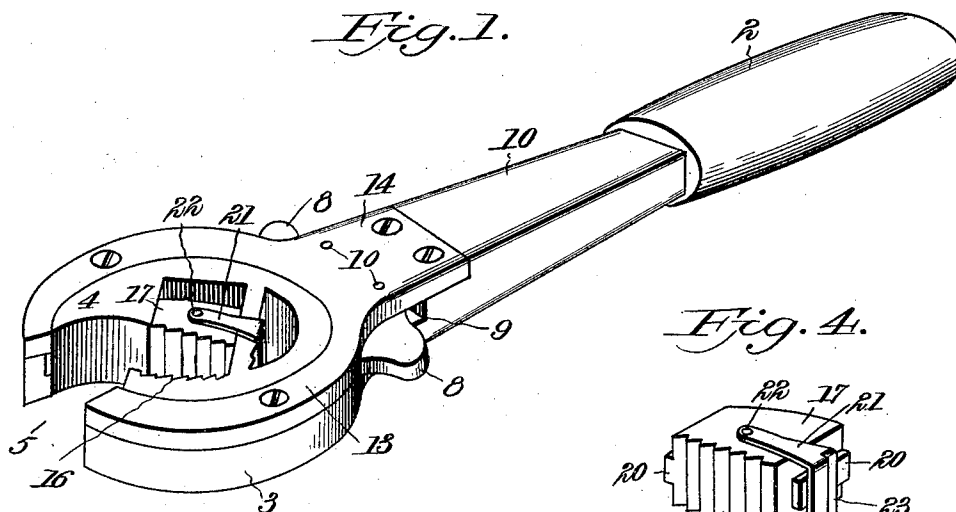
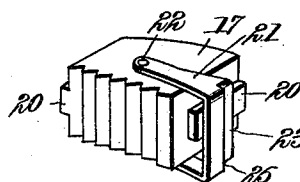
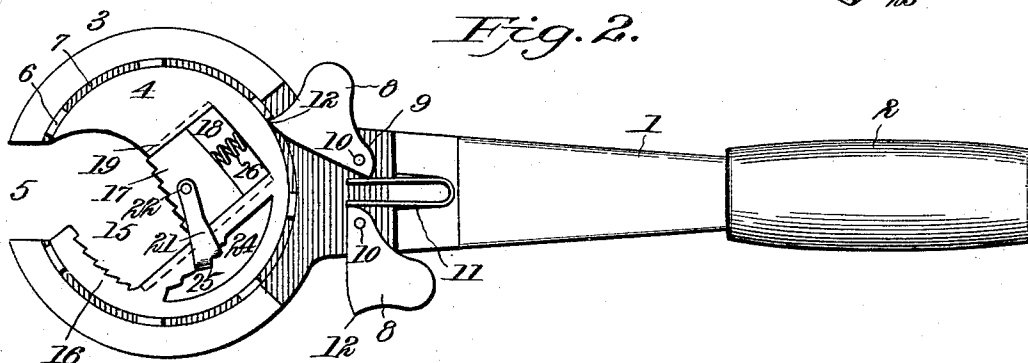
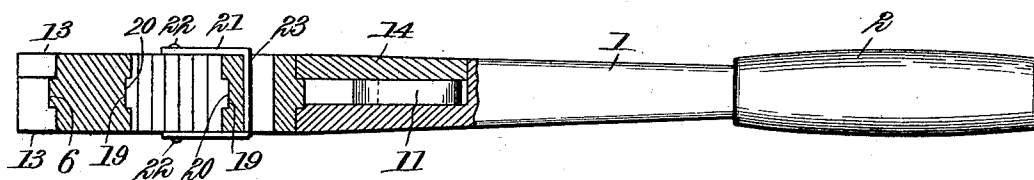
No. 747,013.

PATENTED DEC. 15, 1903.

A. W. SNYDER.
PIPE WRENCH.

APPLICATION FILED SEPT. 19, 1903.

NO MODEL.



WITNESSES:

C. H. Walker,
W. H. Britton

INVENTOR
A. W. Snyder

BY *Swift & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

ALBERT W. SNYDER, OF FARMINGTON, WEST VIRGINIA, ASSIGNOR OF
ONE-FOURTH TO GAYLORD S. BASNETT, OF AMOS, WEST VIRGINIA.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 747,013, dated December 15, 1903.

Application filed September 19, 1903. Serial No. 173,336. (No model.)

To all whom it may concern:

Be it known that I, ALBERT W. SNYDER, a citizen of the United States, residing at Farmington, in the county of Marion and State of West Virginia, have invented new and useful Improvements in Pipe-Wrenches; and I do hereby 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 improvements in pipe-wrenches, and has for its object to provide a simple and inexpensive and efficient one of great strength and durability capable of ready adjustment to engage rods and pipes of different dimensions and adapted to be oscillated for effecting the rotation of a pipe, rod, or the like for screwing or unscrewing the same.

A further object of the invention is to provide a wrench of this character which may be readily set so that its oscillation will rotate a pipe or rod in the desired direction.

With these and other objects in view the invention consists in the construction and novel arrangement of parts hereinafter described and shown, and particularly pointed out in the appended claims.

In the drawings forming part of this specification, and in which like numerals of reference designate corresponding parts, Figure 1 is a perspective view of a pipe-wrench constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a longitudinal sectional view taken at right angles to Fig. 2. Fig. 4 is a detail perspective view of the adjustable jaw and its pivoted yoke.

Referring to the drawings, 1 designates a shank or bar provided at one end with a handle 2 and having a circular head 3 at its other end, forming a bearing for a ratchet-wheel or member 4, which is rotated by the oscillation of the shank or bar and which is provided with means, hereinafter described, for engaging a pipe or rod, whereby the latter will be continuously rotated to screw or unscrew it when the shank or bar is oscillated. The circular head is provided at the outer end of the wrench with an opening 5 for the introduction of the pipe or rod, and it has an in-

teriorly-arranged annular groove 6 for the reception of lugs or teeth 7 of the rotary member or ratchet-wheel. These teeth or lugs, which form opposite shoulders, perform the double function of retaining the rotary member or wheel within the head of the wrench and of cooperating with a pair of dogs or pawls 8, which are pivotally mounted within slots or openings 9 of the shank or bar. The pawls or dogs, which are mounted on pins 10 or other suitable fastening devices, are engaged by a spring 11, and they are provided with engaging portions 12, adapted to engage the teeth or lugs of the rotary member or wheel when the shank or bar is oscillated in one direction and to ride over the same when the shank or bar is swung in the opposite direction. Either of the pawls or dogs may be swung out of engagement with the rotary member or wheel, and it will be retained in such position by the spring, as illustrated in Fig. 2 of the drawings. Any form of spring may be employed, and the head of the shank or bar is provided with a removable plate or section 13, having an extension 14, which overlaps the adjacent portion of the shank or bar, as shown. The outer portions of the pawls or dogs project beyond the shank or bar and are adapted to be readily operated.

The rotary member or wheel is provided with an opening 15 for the reception of the pipe or rod, and this opening extends inward from the periphery of the rotary member or wheel and then transversely thereof, as shown, and that portion at the outer side of the opening is provided with teeth or serrations to form a fixed jaw 16 for engaging a pipe or rod. The fixed jaw cooperates with an adjustable jaw 17, which is guided in a recess or extension 18 of the opening, and the walls of this recess are provided with grooves 19 for the reception of flanges 20 of the adjustable jaw. The adjustable jaw is held in its adjustment by a pivoted yoke 21, which is approximately U-shaped, being composed of sides and a connecting portion. The sides, which are parallel, are pivoted to the adjustable jaw near the center thereof at 22, and the engaging portion 23 operates in a slot 24 of the rotary member or wheel, as shown. One wall of the slot is provided with serra-

tions or teeth for engagement with the yoke, and the engaging portion of the yoke, which is of greater width than the sides, is provided with a projection or flange 25 and is adapted to engage two of the teeth or serrations of the slot 24.

A coiled spring 26, which is arranged in the recess or extension of the pipe-receiving opening of the rotary member or wheel, is connected with the latter and with the adjustable jaw and is adapted to draw the same inward to facilitate the adjustment of the jaw; but it may be arranged for forcing the adjustable jaw outward from the inner end of the recess toward the fixed jaw, if desired. The spring also coöperates with the yoke of the adjustable jaw to retain the former in engagement with the teeth or serrations of the rotary member or wheel, and by this arrangement there is no liability of the adjustable jaw slipping, and thereby releasing a pipe or rod. The adjustable jaw is provided at its engaging face, which is arranged at an angle to that of the fixed jaw, with serrations or teeth, and a pipe or rod is firmly gripped between the two jaws.

It will be seen that the pipe-wrench is exceedingly simple and inexpensive in construction, that it is adapted to be readily engaged with a pipe or rod when the opening of the rotary member or wheel is brought into register with the opening of the head, and that a pipe or rod may be readily rotated in either direction by simply oscillating the shank or bar.

What I claim is—

1. The combination of a shank or bar hav-

ing a bearing, a rotary member or wheel having a fixed jaw provided with serrations, an adjustable jaw mounted on the rotary member or wheel and coöperating with the fixed jaw, means comprising a spring and a pivoted device for holding the adjustable jaw, and means carried by the shank or bar, for rotating the said member or wheel, substantially as described.

2. The combination of a shank or bar having a bearing, a rotary member or wheel provided with a fixed jaw, an adjustable jaw carried by the rotary member or wheel, a pivoted yoke connected with the adjustable jaw and engaging the rotary member or wheel, and a spring connected with the adjustable jaw for holding the yoke in engagement, substantially as described.

3. The combination of a shank or bar having a bearing, a rotary member or wheel having an opening extending inward from its periphery to form a fixed jaw, said member or wheel being also provided with a slot, and having serrations or teeth therein, an adjustable jaw carried by the rotary member or wheel, a pivoted yoke connected with the adjustable jaw, and operating in the slot for engaging the serrations or teeth, and a spring for holding the yoke in such engagement, substantially as described.

In testimony whereof I have hereto affixed my signature in the presence of two witnesses.

ALBERT W. SNYDER.

Witnesses:

HUGH DAVIS,

HYDE C. SNYDER.