

(No Model.)

T. M. RIGHTER & G. JEFFRYES.
PIPE WRENCH.

No. 602,229.

Patented Apr. 12, 1898.

Fig. 1.

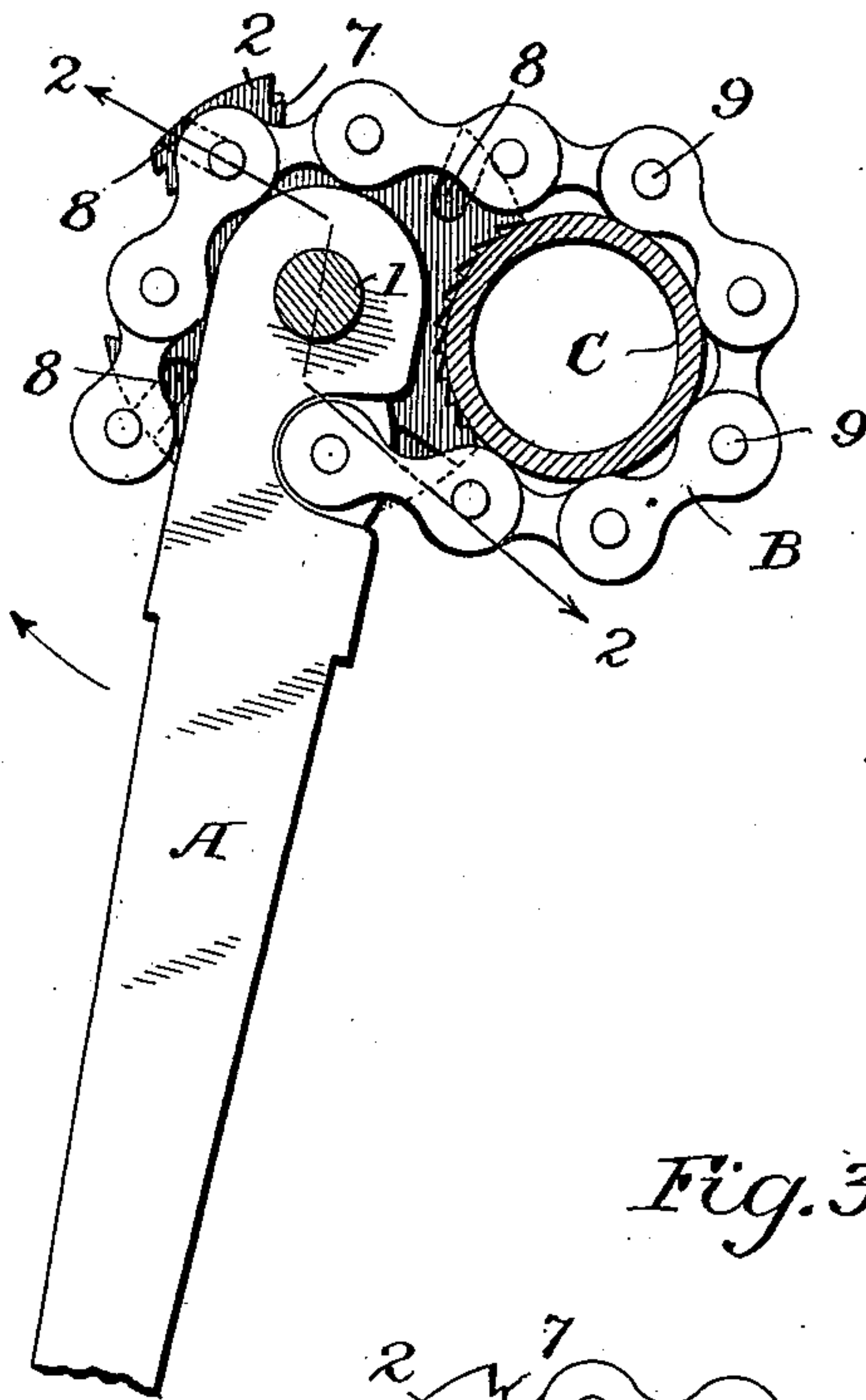


Fig. 2.

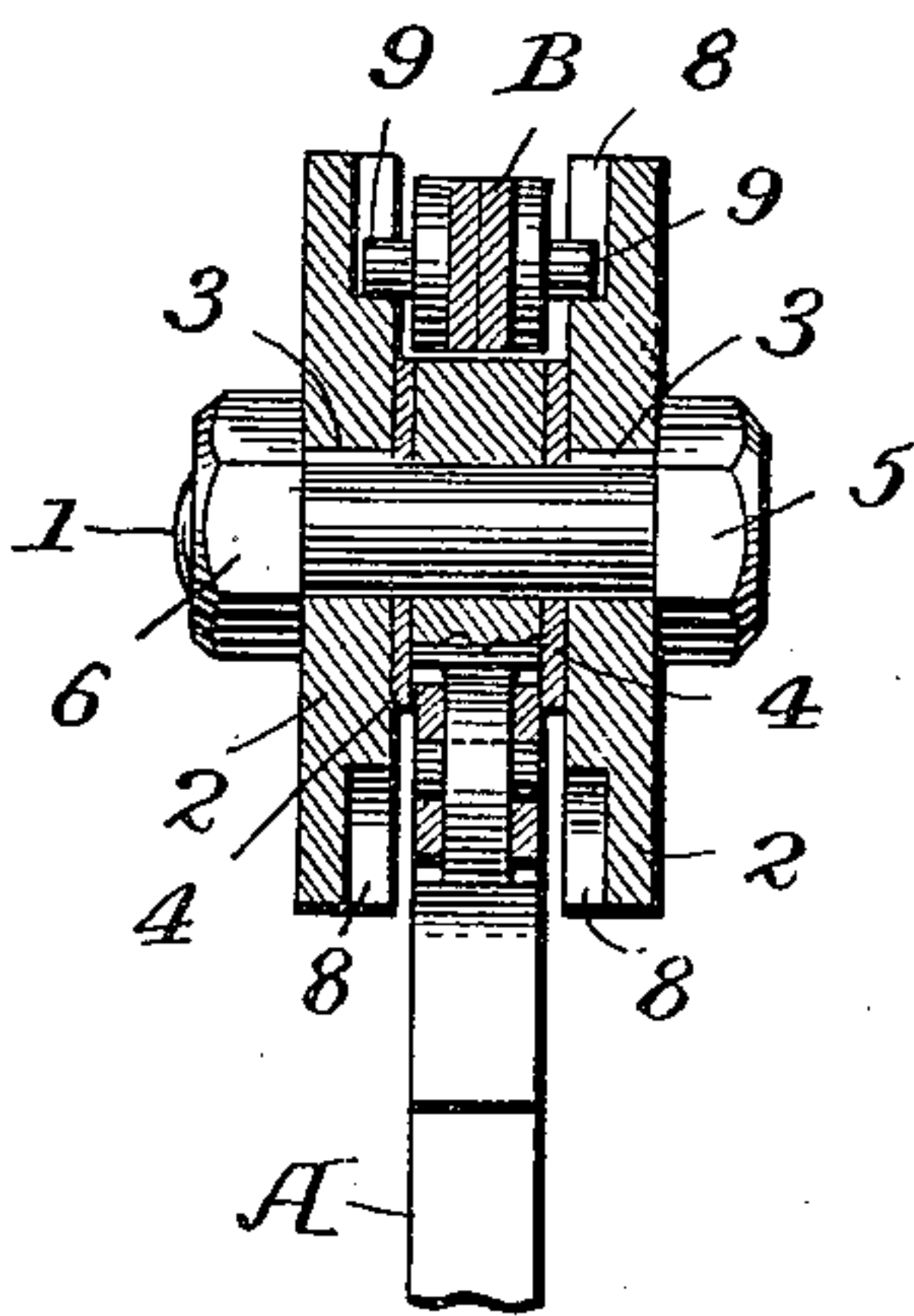


Fig. 3.

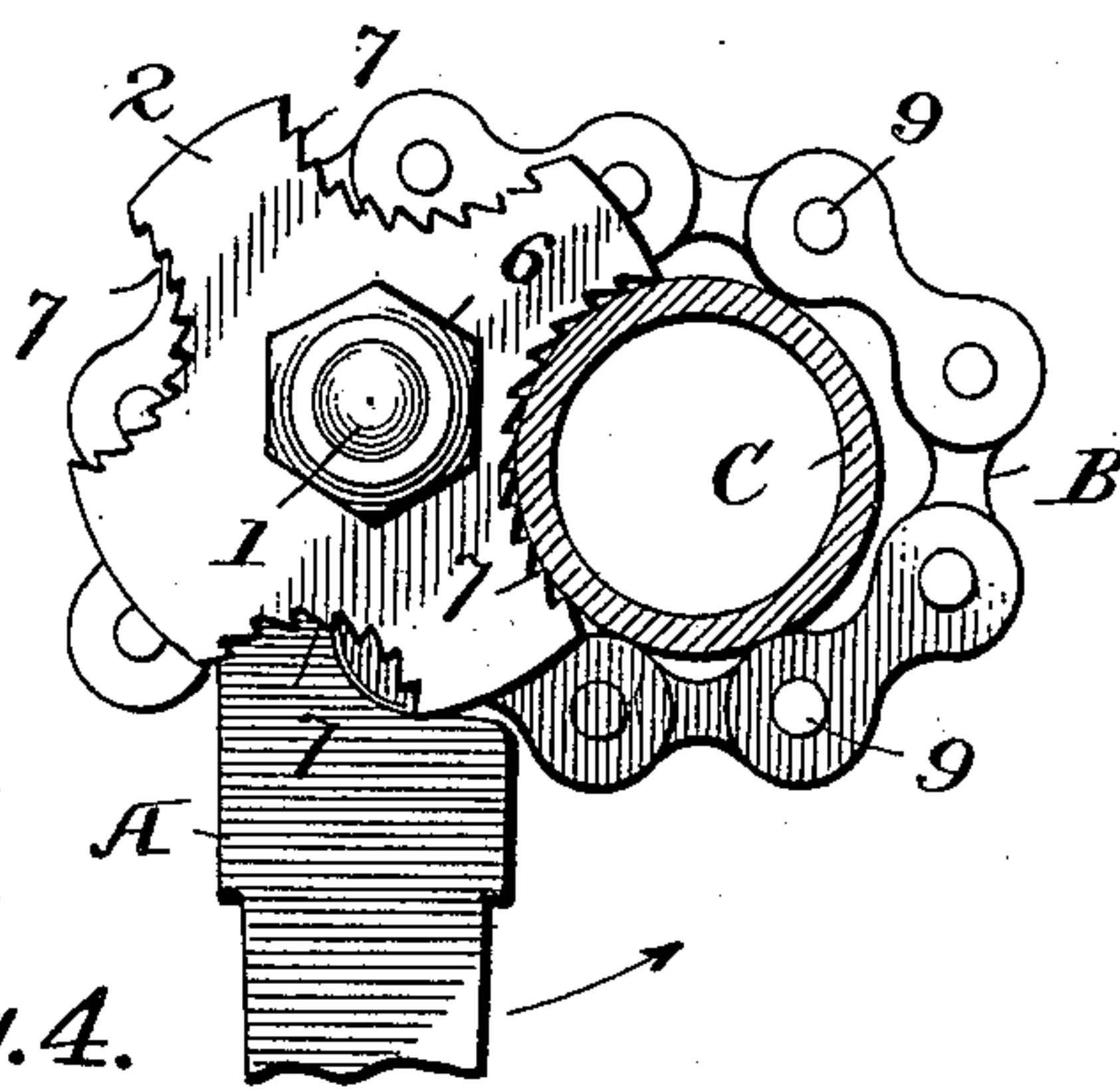
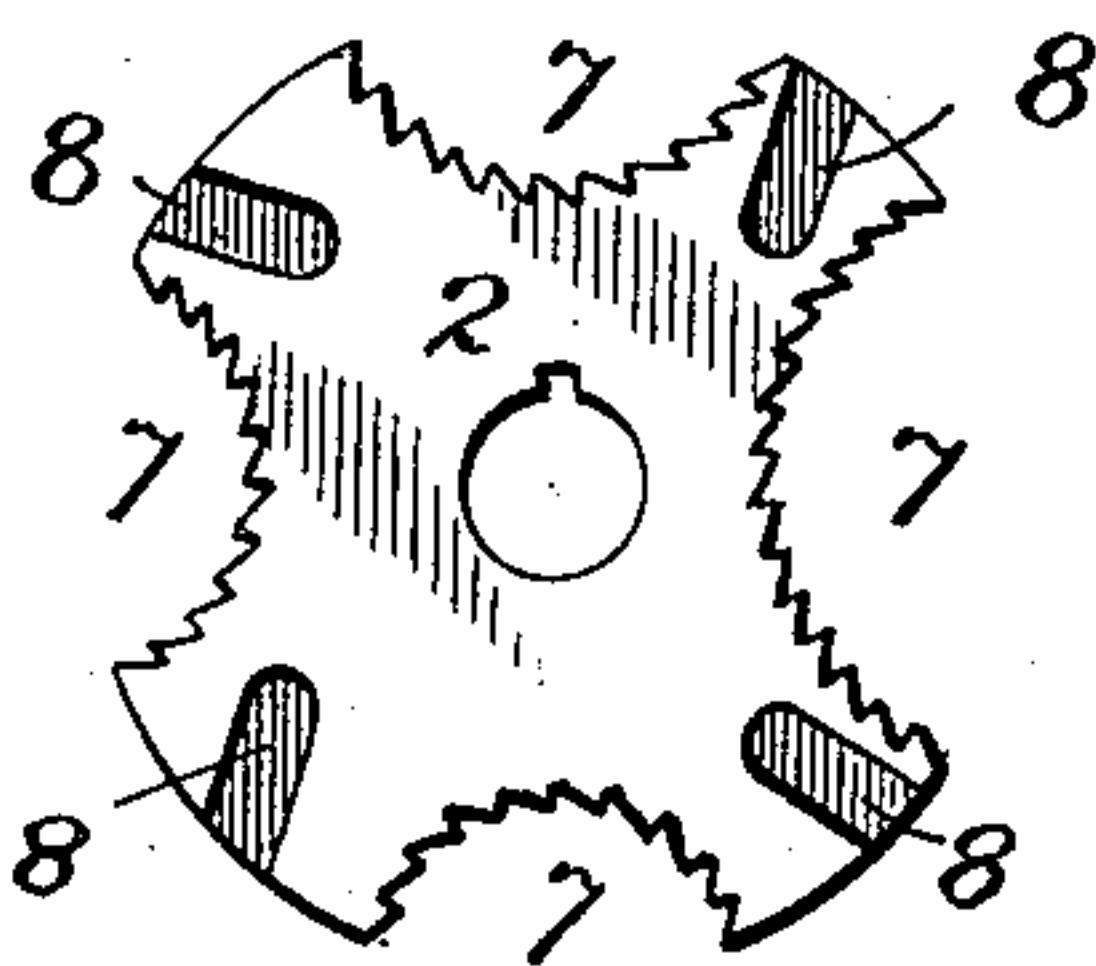


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS M. RIGHTER AND GEORGE JEFFRYES, OF MOUNT CARMEL,
PENNSYLVANIA.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 602,229, dated April 12, 1898.

Application filed December 13, 1897. Serial No. 661,655. (No model.)

To all whom it may concern:

Be it known that we, THOMAS M. RIGHTER and GEORGE JEFFRYES, citizens of the United States, residing at Mount Carmel, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

Our invention consists in a pipe-wrench comprising a handle which serves as a lever, a pair of rotating jaws on opposite sides of the handle, mounted on a pivot-bolt passing through the same, and a chain which is connected with the handle at one end and provided with pivot-pins which project from the links on both sides of the chain and are adapted to engage slots on the inner faces of the jaws.

For a detailed description of the invention reference is had to the following specification and to the accompanying drawings, in which—

Figure 1 is a side view of our improved wrench, showing it in operation, one of the jaws being removed to show the interior construction. Fig. 2 is a cross-section on the line 2 2 of Fig. 1, some of the parts being shown in full. Fig. 3 is a side view showing the manner of releasing the grip, and Fig. 4 is an inside view of one of the jaws.

Referring to the drawings, A is a handle or lever, through one end of which a pivot-bolt 1 passes, said bolt being free to turn in the handle. Upon the projecting ends of the pivot-bolt are a pair of rotating jaws 2, connected with the bolt so as to turn simultaneously. As shown, they are connected by suitable keys or feathers 3. Between the jaws and the lever are preferably placed washers 4, and upon its outer ends the pivot is provided with a head 5 and nut 6 or other suitable means for retaining the jaws in position.

The jaws 2 are preferably circular and provided with a series of recesses 7, suitably curved to receive pipes or rods of different diameters and provided with teeth to prevent slipping. The inner faces of the jaws between the recesses are provided with inclined slots 8, extending inward a short distance from the periphery.

Connected with the handle near the pivot 3 is a chain B, which coöperates with the jaws to grip the article to be turned. The pivot-pins 9 of the chain project from both sides thereof and are adapted to pass into the slots 8 in the jaws. To avoid any tendency of the pins to slip out of the slots, the latter are preferably inclined instead of radial. The chain should be long enough to embrace the largest pipe for which the jaws are adapted.

In Figs. 1 and 3 the wrench is shown in operation upon a pipe C.

The operation is as follows: The jaws are rotated until the recess best adapted for the pipe or rod is brought into proper position. The wrench is then applied to the pipe and the chain wrapped around it, as shown in Fig. 1, the projecting ends of one of the pins in the chain being passed into a pair of the slots 8. It will be evident that when the lever is moved in the direction of the arrow in Fig. 1 it will draw the chain powerfully against the pipe, causing the teeth of the rotary jaws to take hold, after which the pipe will turn with the lever. Immediately when the lever is moved backward, or in the direction of the arrow in Fig. 3, the chain will slacken and the entire wrench will turn freely about the pipe into position to take a new grip.

It will be seen that our improved wrench is very simple in construction and that a single wrench may operate upon many sizes of pipe. Instead of the bolt and nut shown in the drawings the pivot-pin may be upset or riveted upon the jaws. The jaws may be connected to the pin by splines, as shown, or by any equivalent construction.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a pipe-wrench, the combination of a lever, a pivot-bolt passing through the lever, a pair of jaws fixed upon and adapted to rotate with said bolt, toothed recesses in the periphery of said jaws, slots in the inner faces of the jaws between the recesses, and a chain connected with the lever and provided with pins adapted to engage the slots in the jaws, substantially as described.

2. A pipe-wrench comprising a lever or han-

dle, a pivot-bolt free to turn in an opening in
said handle, a pair of circular jaws arranged
upon the bolt on opposite sides of the handle,
inclined slots in the inner faces of said jaws,
5 said slots extending inward from the periph-
ery and being inclined to the radii, a chain
connected with the handle near the pivot-
bolt, said chain having pins projecting from
the sides thereof adapted to be seated in the

inclined slots of the jaws, substantially as de-
scribed.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

THOMAS M. RIGHTER.
GEORGE JEFFRYES.

Witnesses:

W. B. FAUST,
A. E. SHOEMAKER.