

F. HACHMANN & D. C. McFEE.

WRENCH.

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982,956.

Patented Jan. 31, 1911.

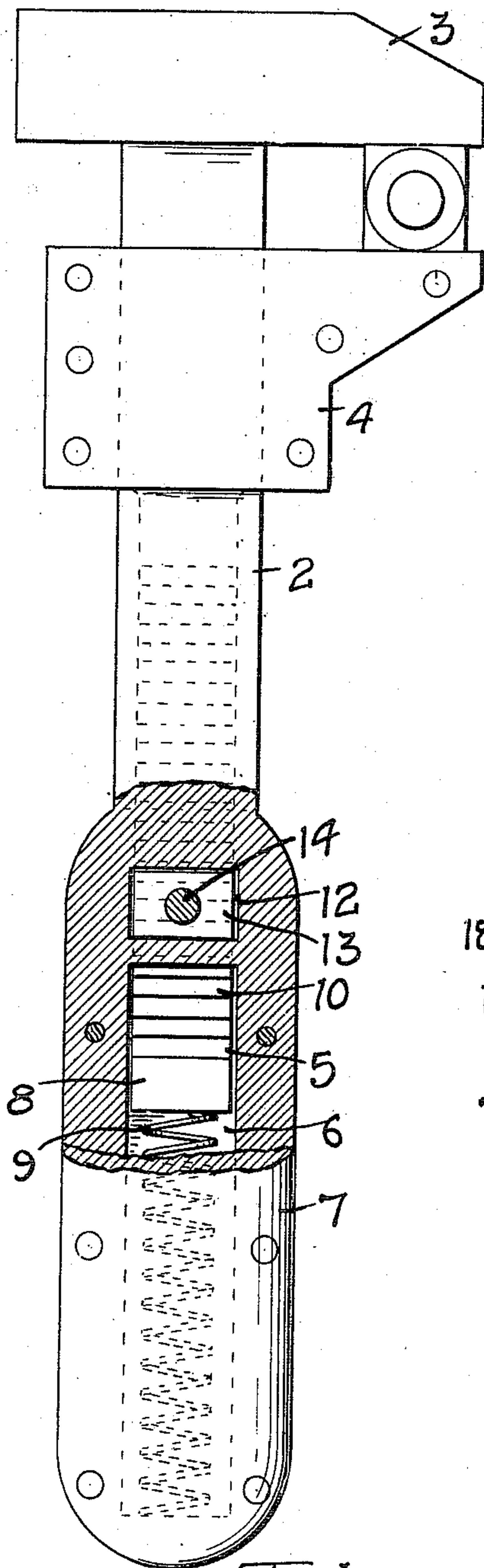


Fig 1.

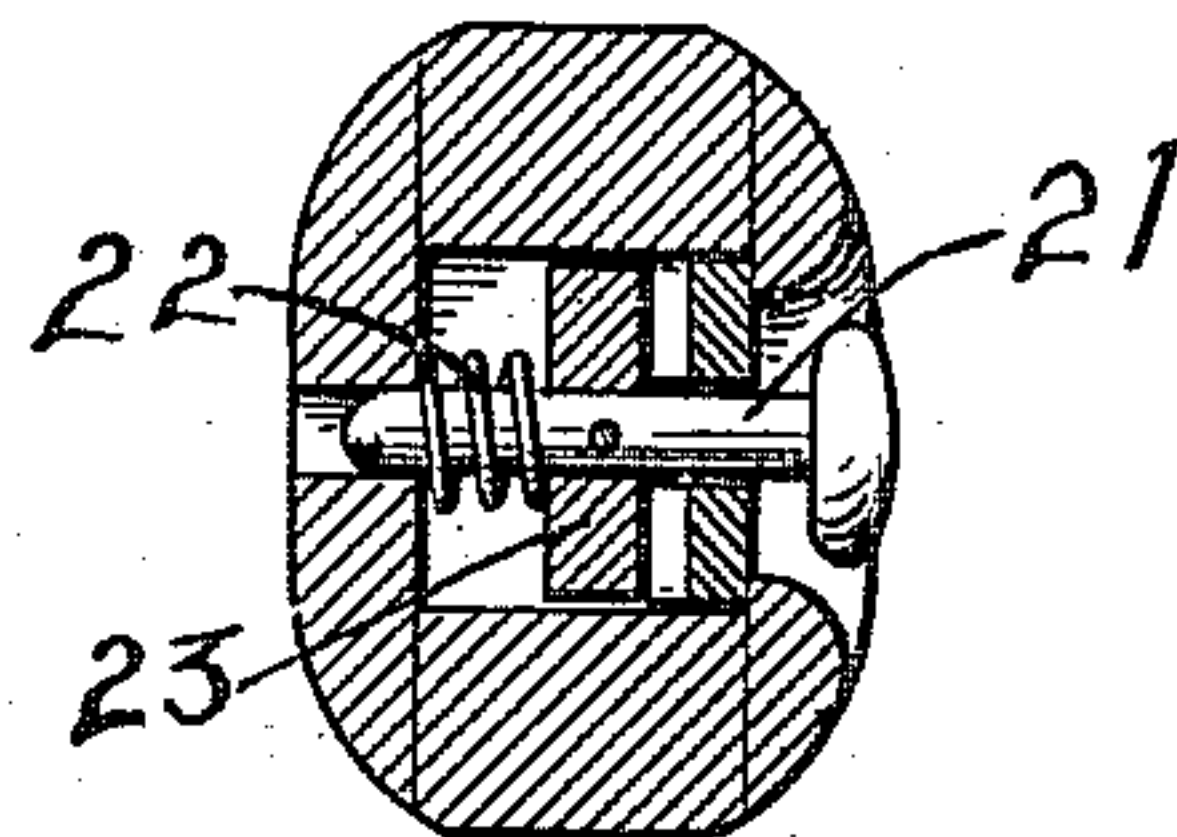


Fig 6.

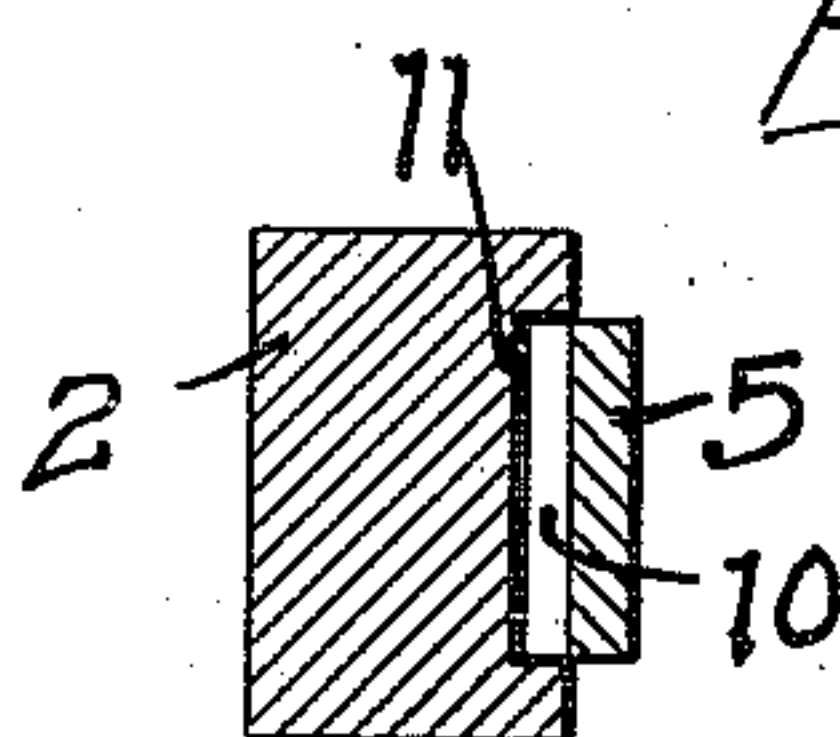


Fig 4. x-x

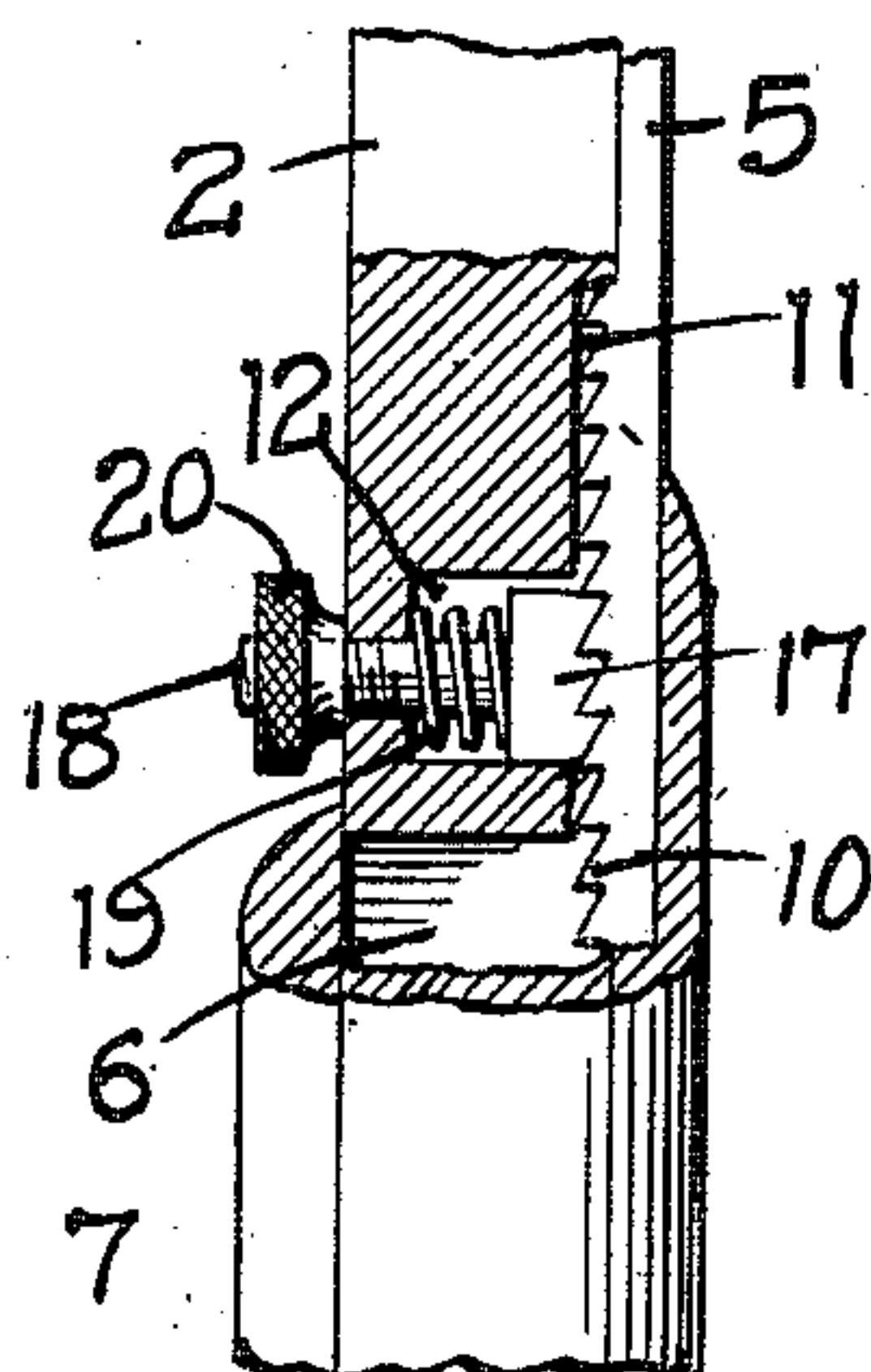


Fig 3.

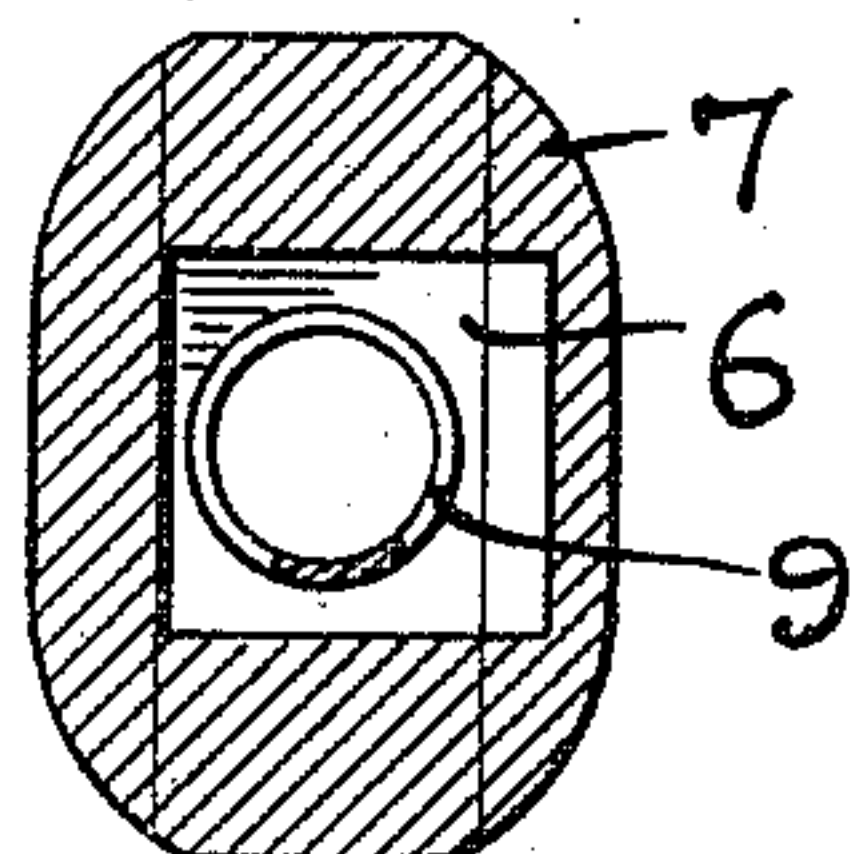


Fig 5.

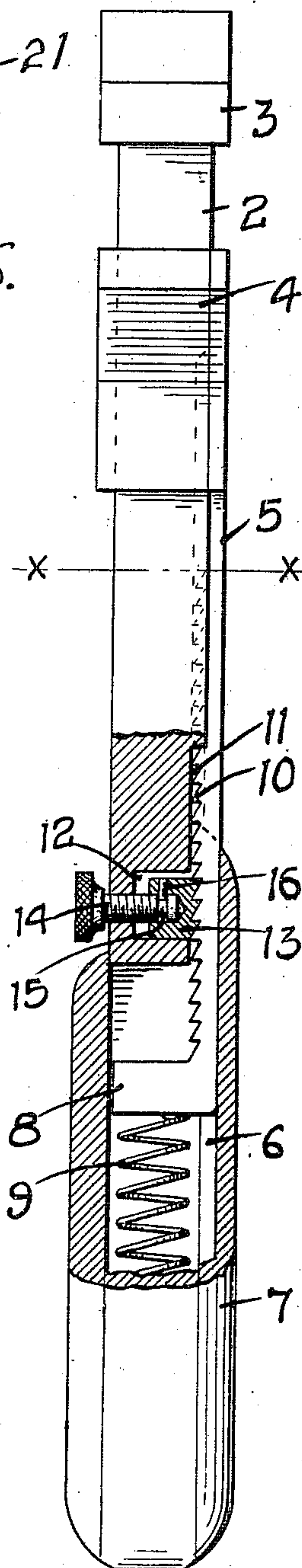


Fig 2.

WITNESSES
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UNITED STATES PATENT OFFICE.

FREDERICK HACHMANN, OF ST. PAUL, MINNESOTA, AND DONALD C. McFEE, OF WINNIPEG, MANITOBA, CANADA; SAID HACHMANN ASSIGNOR OF ONE-EIGHTH TO WILLIAM HANFT, ONE-EIGHTH TO HARRY J. MULDOON, AND ONE-EIGHTH TO JAMES C. MURNANE, ALL OF ST. PAUL, MINNESOTA, AND ONE-EIGHTH TO JACOB HEILBRON, OF ATTLEBORO, MASSACHUSETTS.

WRENCH.

982,956.

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To all whom it may concern:

Be it known that we, FREDERICK HACHMANN, of St. Paul, Ramsey county, Minnesota, and DONALD C. McFEE, of Winnipeg, Province of Manitoba, Dominion of Canada, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

The object of our invention is to provide a wrench, which can be opened and closed quickly and of very strong and durable construction.

The invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claim.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view of a wrench, embodying our invention, a portion of the handle being shown in section. Fig. 2 is an edge view of the same, also partially in section, Fig. 3 is a detail view, illustrating a modified construction, Fig. 4 is a sectional view on the line X—X of Fig. 2, Fig. 5 is a transverse sectional view through the handle. Fig. 6 is a detailed sectional view showing a modified construction.

In the drawing 2 represents the shank of the wrench having a jaw 3 fixed thereon.

4 is a movable jaw and 5 a bar secured thereto on one side of the shank 2 and adapted to slide within a chamber 6 provided in the hollow handle 7. The plate 5 has a block 8 arranged to slide within the chamber 6 and a coil spring 9 is located between said block and the end of the chamber and the compression of this spring tends to force the movable jaw 4 toward the fixed jaw 3. One side of the plate 5 is provided with a series of ratchet teeth 10, which fit within a recess 11 provided in one side of the shank 2 and are slidable therein. The shank also has a recess 12 and a block 13, provided with teeth, which are adapted to engage the teeth of the bar 5 and lock the bar against movement away from the fixed jaw, but allow it to slide with the movable jaw toward the fixed jaw.

14 is an operative screw fitting within a socket in the block 13 and having an an-

nular groove 15 to receive a pin 16, which projects into said groove. This pin allows the screw 14 to be turned without being withdrawn from the block 13. The threads of this screw engage the threads in the shank 2 and when the screw is manipulated, the block 13 will be moved toward or from the teeth of the bar 5 to lock or release the bar. By means of this block and screw, the movement of the bar can be easily controlled and the sliding jaw moved to its clamping or released position easily and quickly.

In Fig. 3, we have shown a block 17 carrying a threaded stud 18, which is provided with a spring 19 to normally hold the block in engagement with the teeth of the rack bar. A thumb nut 20 on the stud 18 controls the movement of the block, withdrawing it from the teeth of the bar against the tension of the spring 19.

In Fig. 6, we have illustrated a modified construction, which consists in providing a pin 21 movable longitudinally against the tension of a spring 22 and carrying a block 23, having teeth to engage the teeth of the bar 5, which is slotted to allow it to slide lengthwise on the pin. One side of the handle has an opening therein, exposing the end of the pin, which is provided with a head, which the operator will press upon to actuate the pin and disengage the teeth of the block from those on the bar.

We claim as our invention:—

A wrench of the class described comprising a shank having a fixed jaw at one end and a hollow handle at its other end, a movable jaw slidable on said shank, a bar secured to said movable jaw and adapted to slide on one side of said shank and within said handle, a block carried by said bar within said handle, a spring interposed between said block and the outer end of said handle, said bar having a series of ratchet teeth on its inner surface, said shank having a recess in its face opposite said ratchet teeth and near said handle, a block fitting loosely within said recess and having teeth to engage the teeth of said bar, a screw having one end mounted in said block and projecting outwardly through a threaded opening in the rear wall of said recess and having a thumb

nut on its outer end, the revolution of said screw projecting said block into engagement with the teeth of said bar and withdrawing it from contact therewith, and said thumb
5 screw being contiguous to said handle and conveniently operable therefrom, for the purpose specified.

In witness whereof, we have hereunto set our hands this 17th day of April 1909.

FREDERICK HACHMANN.

DONALD C. McFEE.

Witnesses:

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J. A. BYINGTON.