

C. KANE.

WRENCH.

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995,876.

Patented June 20, 1911.

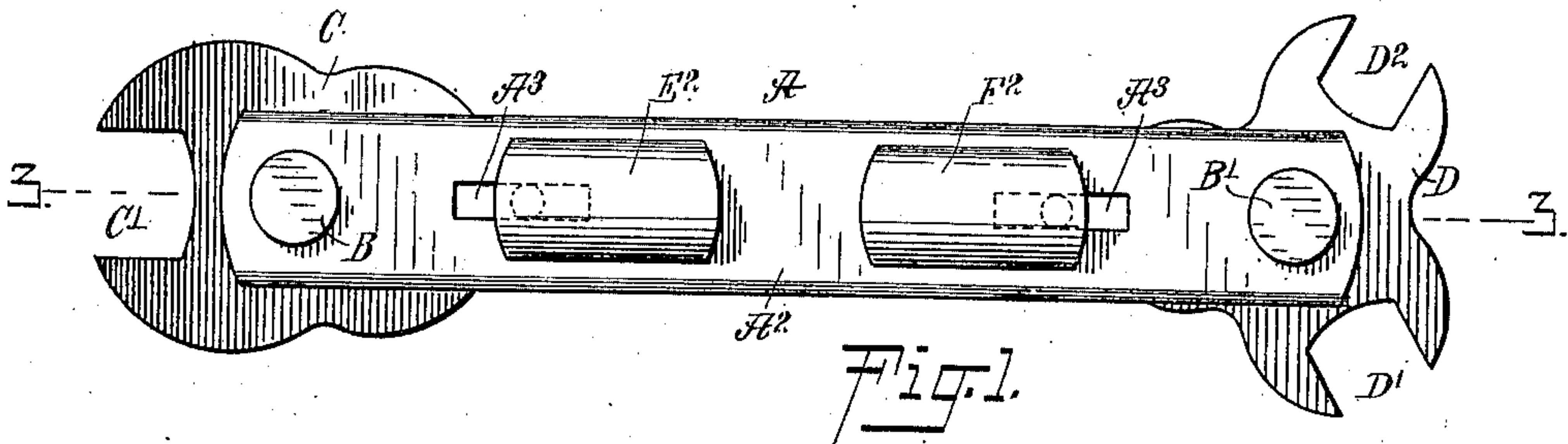


Fig. 1.

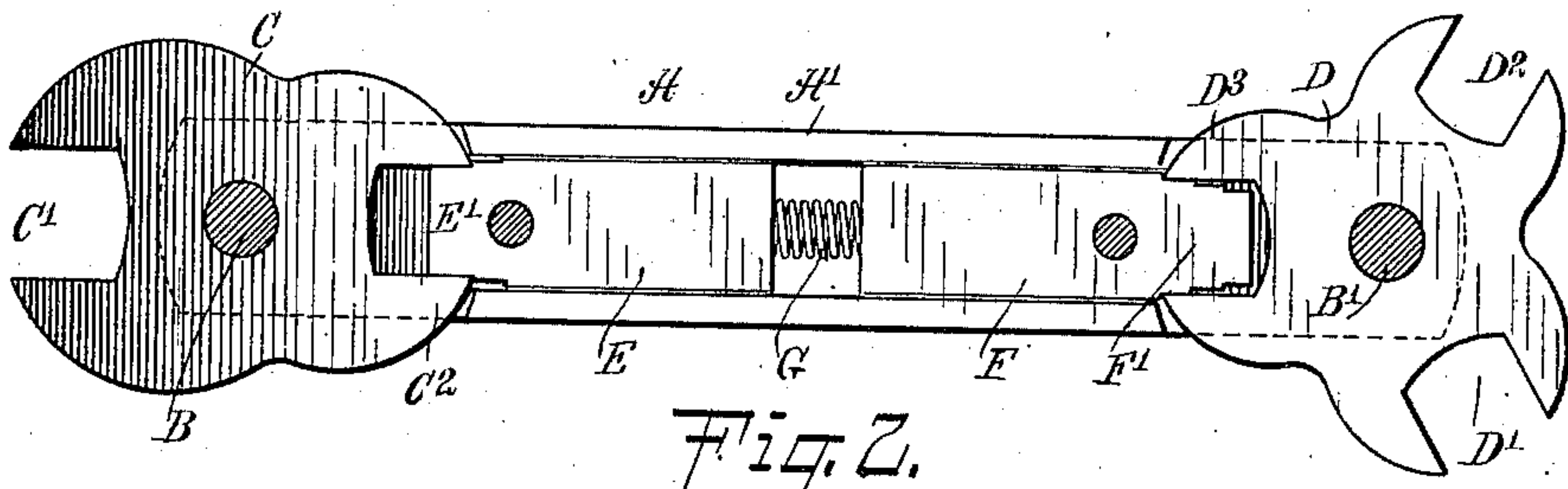


Fig. 2.

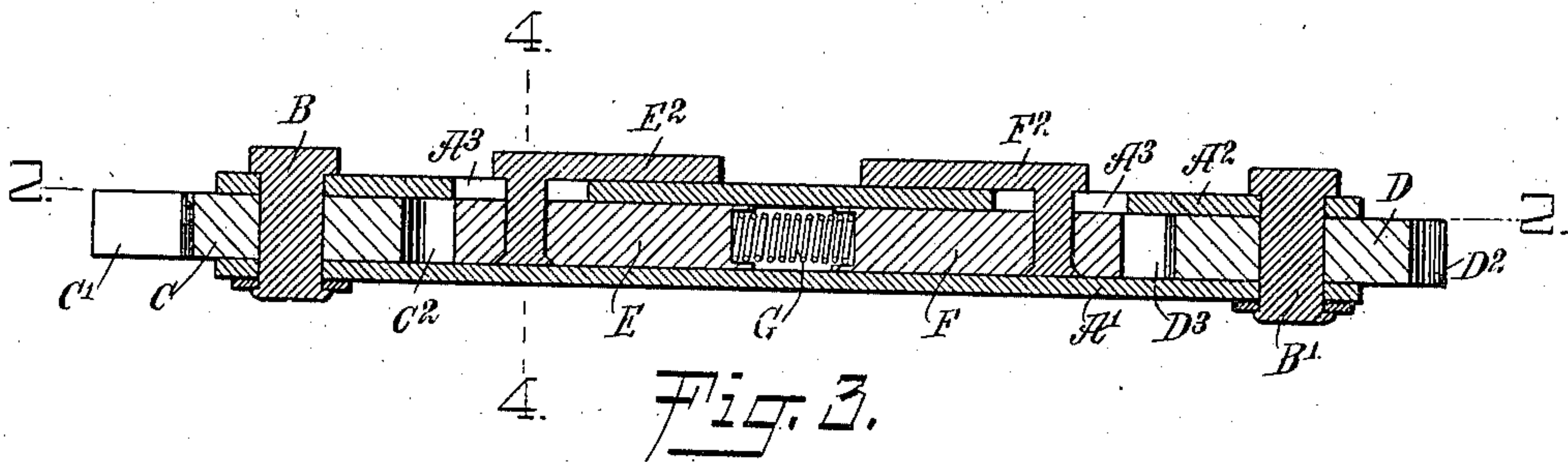


Fig. 3.

Fig. 4.

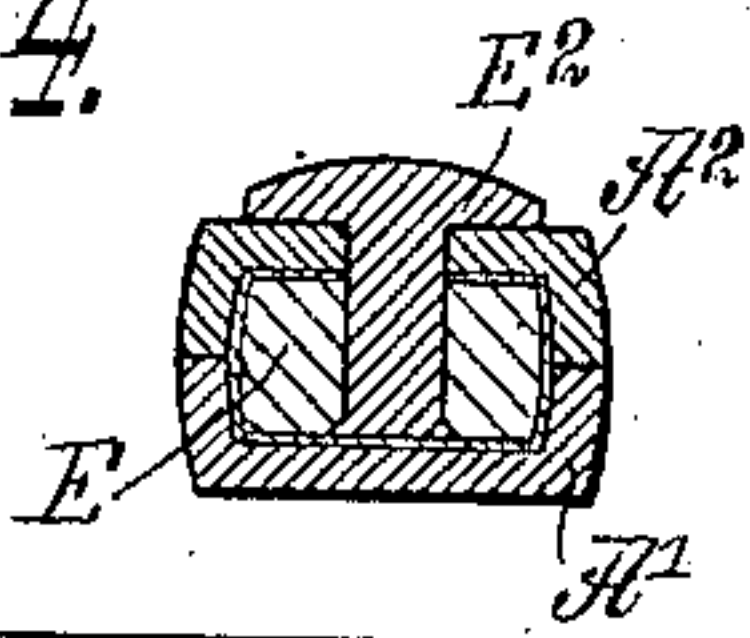
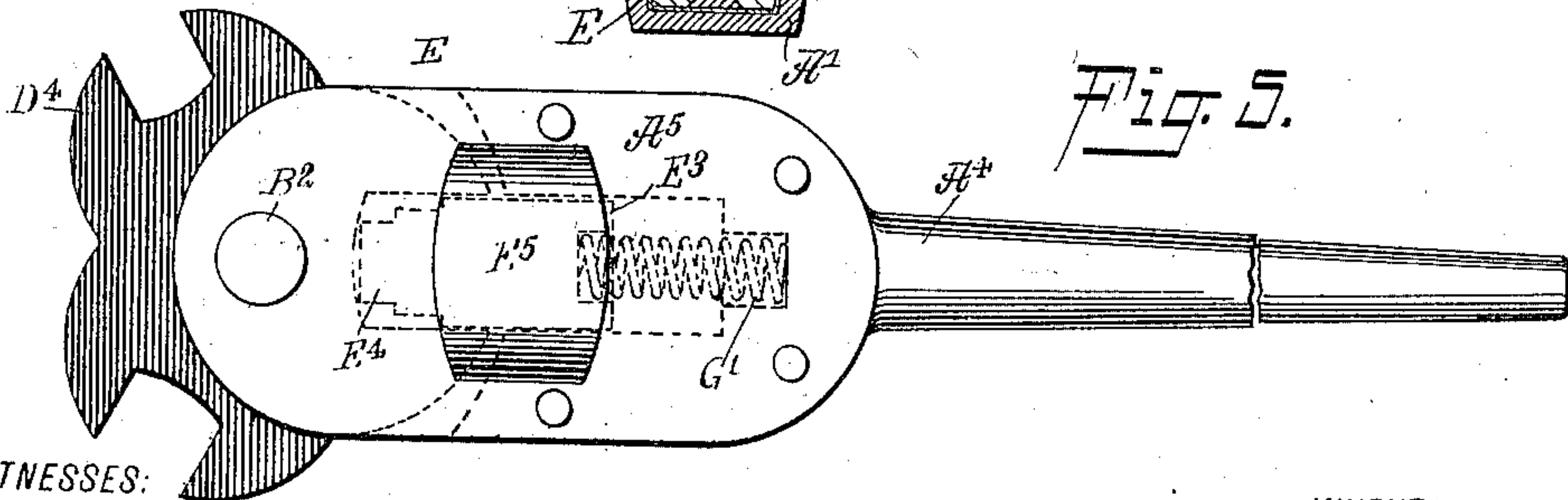


Fig. 5.



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WRENCH.

995,876.

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Application filed August 16, 1910. Serial No. 577,389.

To all whom it may concern:

Be it known that I, CHARLES KANE, a citizen of the United States, and a resident of the National Military Home, in the county of Washington and State of Tennessee, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved wrench provided with different sized jaws, any one of which can be readily moved into active position and securely locked therein.

For the purpose mentioned, use is made of a jaw head mounted to turn on the end of the wrench handle and having a plurality of integral jaws of different sizes, and a bolt slidable lengthwise on the wrench handle and having its outer end reduced in step form to engage and fit any one of the said jaws, to hold the jaw head against turning in either direction on the said handle.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the wrench having two jaw heads; Fig. 2 is a sectional plan view of the same on the line 2—2 of Fig. 3; Fig. 3 is a sectional side elevation of the same on the line 3—3 of Fig. 1; Fig. 4 is a cross section of the same on the line 4—4 of Fig. 3; and Fig. 5 is a plan view of a wrench having a single jaw head.

The handle A of the wrench shown in Figs. 1, 2, 3 and 4 is made hollow, and preferably formed of two sections A', A², arranged to form between them a guideway, and the said handle sections A', A² are connected with each other at their ends by pivot pins B, B' on which are mounted to turn jaw heads C and D, having jaws C', C² and D', D² and D³ of different sizes, to permit of conveniently using the wrench for engagement with nuts or with other parts to be turned and of different sizes.

In turning the jaw heads C and D, any one of the jaws can be moved in such a position as to be clear of the handle for convenient engagement with a nut or other part to be turned, and at the same time another of the jaws of the heads C and D extends between the outer ends of the handle sections A', A², to be engaged by the outer ends E' and F' of bolts E and F, mounted

to slide lengthwise in the guideway formed by the two handle sections A' and A².

A spring G is located in the guideway of the handle, and is interposed between the inner ends of the bolts E and F to press the latter outward in opposite directions, with a view to engage their outer ends E' and F' with the corresponding jaws of the jaw heads C and D.

The ends E' and F' of the bolts E and F are reduced in step form, as plainly indicated in Fig. 2, so that the ends engage and snugly fit into the corresponding jaws to hold the jaw heads C and D against turning. Thus into the largest sized jaw C' of the jaw head C fits the widest step portion of the end E' of the bolt E, to hold this jaw head C against turning in either direction. When the bolt E is withdrawn, that is, moved inward against the tension of the spring G and out of engagement with the jaw C', then the head C can be turned to move the other jaw C² into an innermost locking position, after which the bolt E is released to engage the jaw C² with the narrow step portion of the end E', thus again holding the head C against turning. The end F' of the bolt F is arranged in a similar manner relative to the jaws D', D² and D³, that is, the corresponding reduced portions of the end F' fit the corresponding jaws to hold the jaw head D against turning in either direction. The depth of the largest sized jaws C' and D' is sufficient to receive the entire end E' or F' of the corresponding bolts E and F, but it is distinctly understood that a snug fitting is had between a jaw and its corresponding reduced portion on the bolts E and F, so as to hold the heads C and D to enable them to turn in either direction. The bolts E and F are provided with finger pieces E², F² extending through elongated slots A³ formed in the handle section A², to permit the user of the wrench to conveniently slide the bolts E and F in or out of engagement with the jaws of the jaw heads C and D.

In the modified form shown in Fig. 5, the handle A⁴ is provided with a hollow enlargement A⁵ carrying a pivot B² for the jaw head D⁴ to turn on, the said jaw head D⁴ having a plurality of different sized jaws similar to the jaw head D. A locking bolt E³ is slidable in the enlargement A⁵ of the handle A⁴ and has its outer end E⁴ in step form to engage and fit in each of the said

jaws to lock the jaw head against turning. The bolt E³ is pressed outwardly by a spring G' and is provided with a finger piece E⁵ for manipulating the bolt in the same manner as above described in reference to the bolts E and F.

The wrench shown and described is very simple and durable in construction, and can be quickly and conveniently adjusted to engage a nut or other part to be turned.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

A wrench comprising superposed handle sections spaced apart from each other, pivot pins connecting the sections at their outer ends, a jaw head mounted to rotate on each of the said pins and having jaws of different sizes, locking bolts slidable between the handle sections toward and from the jaw

heads and having their outer ends reduced in stepped form to engage and fit each jaw in the adjacent jaw head to lock the said head against turning, a spring arranged between the inner ends of the bolts and normally pressing the said bolts into engagement with the heads, and a finger piece slidable on the outer face of one of the handle sections adjacent to each bolt and connected therewith for moving the bolts, the handle section having a slot through which the connection between the finger piece and the bolt extends.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES KANE.

Witnesses:

J. H. PIERCE,
L. E. LATTURE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
