

E. KUKURUDA.
WRENCH.

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983,728.

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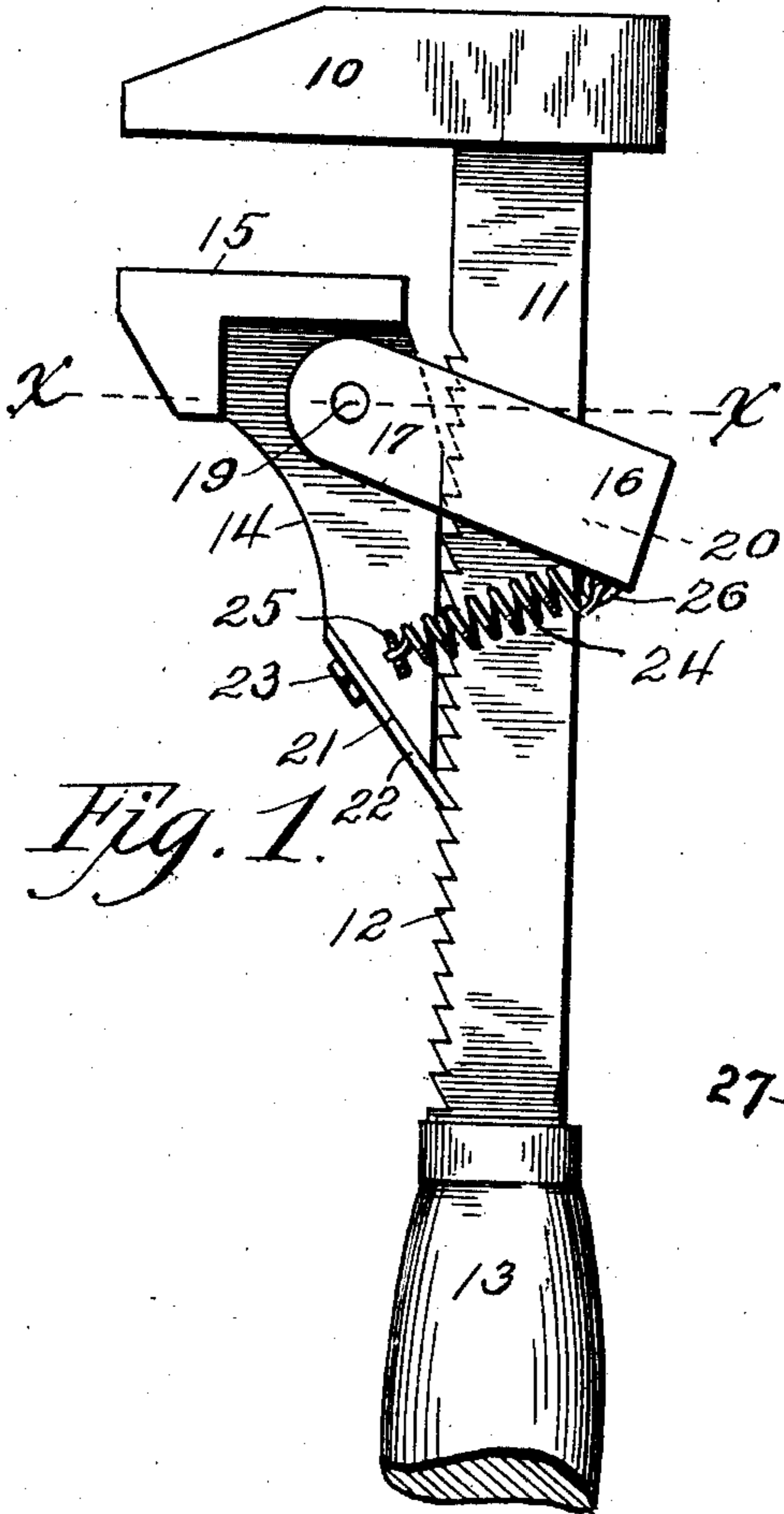


Fig. 1.

Fig. 2.

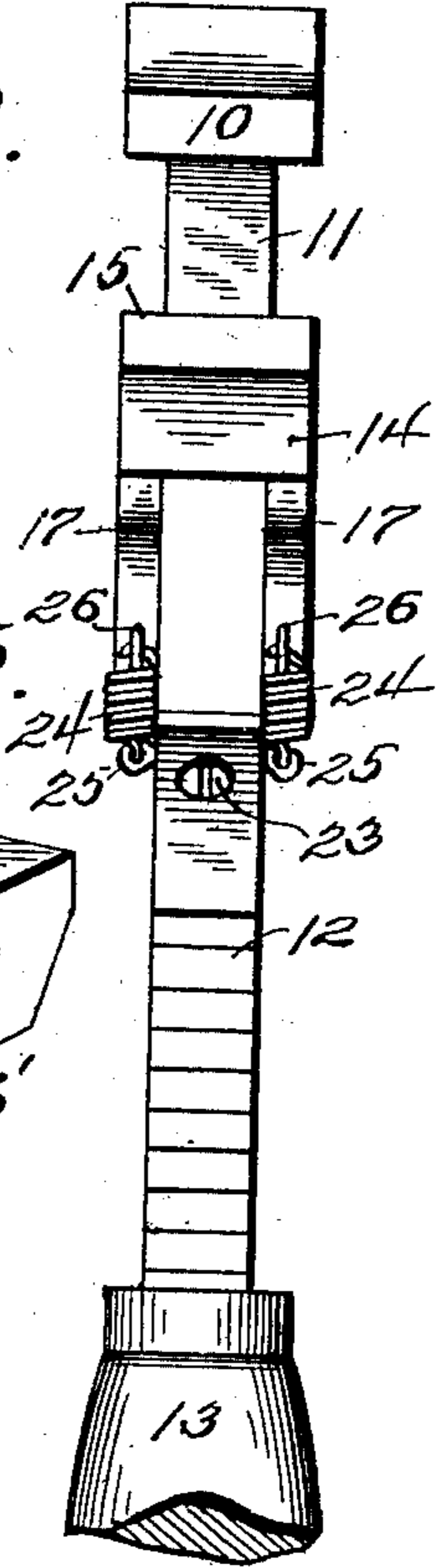


Fig. 3.

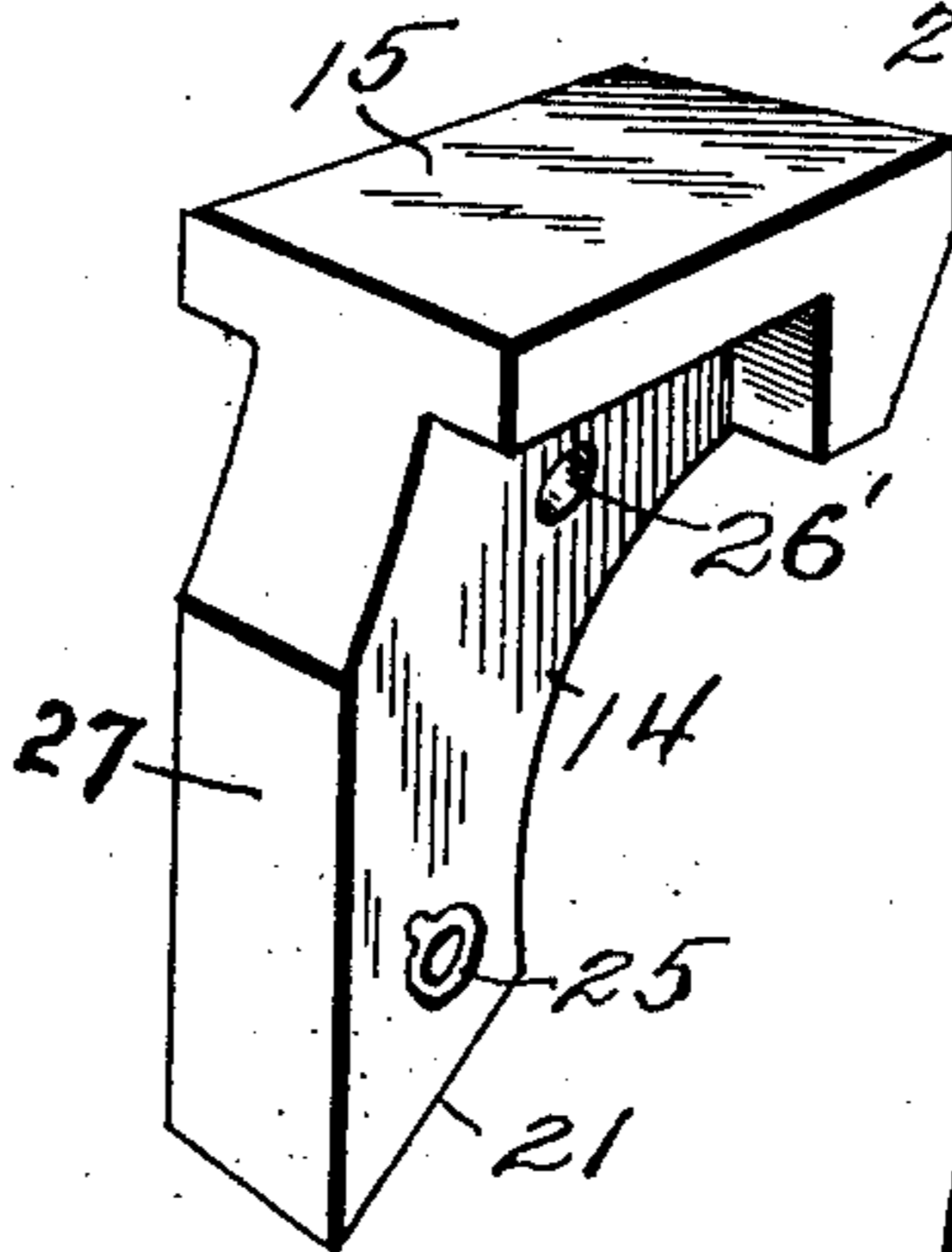


Fig. 4.

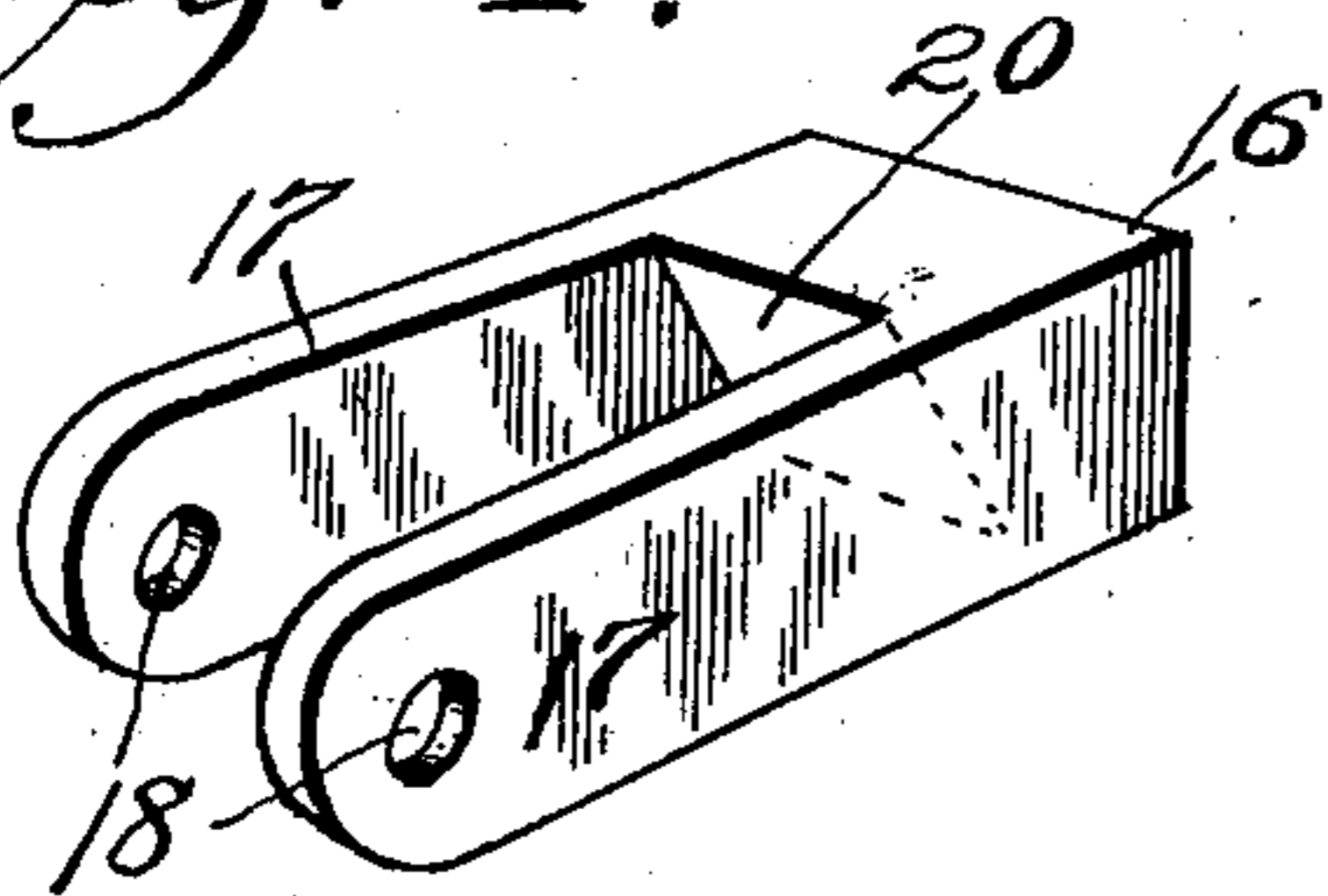
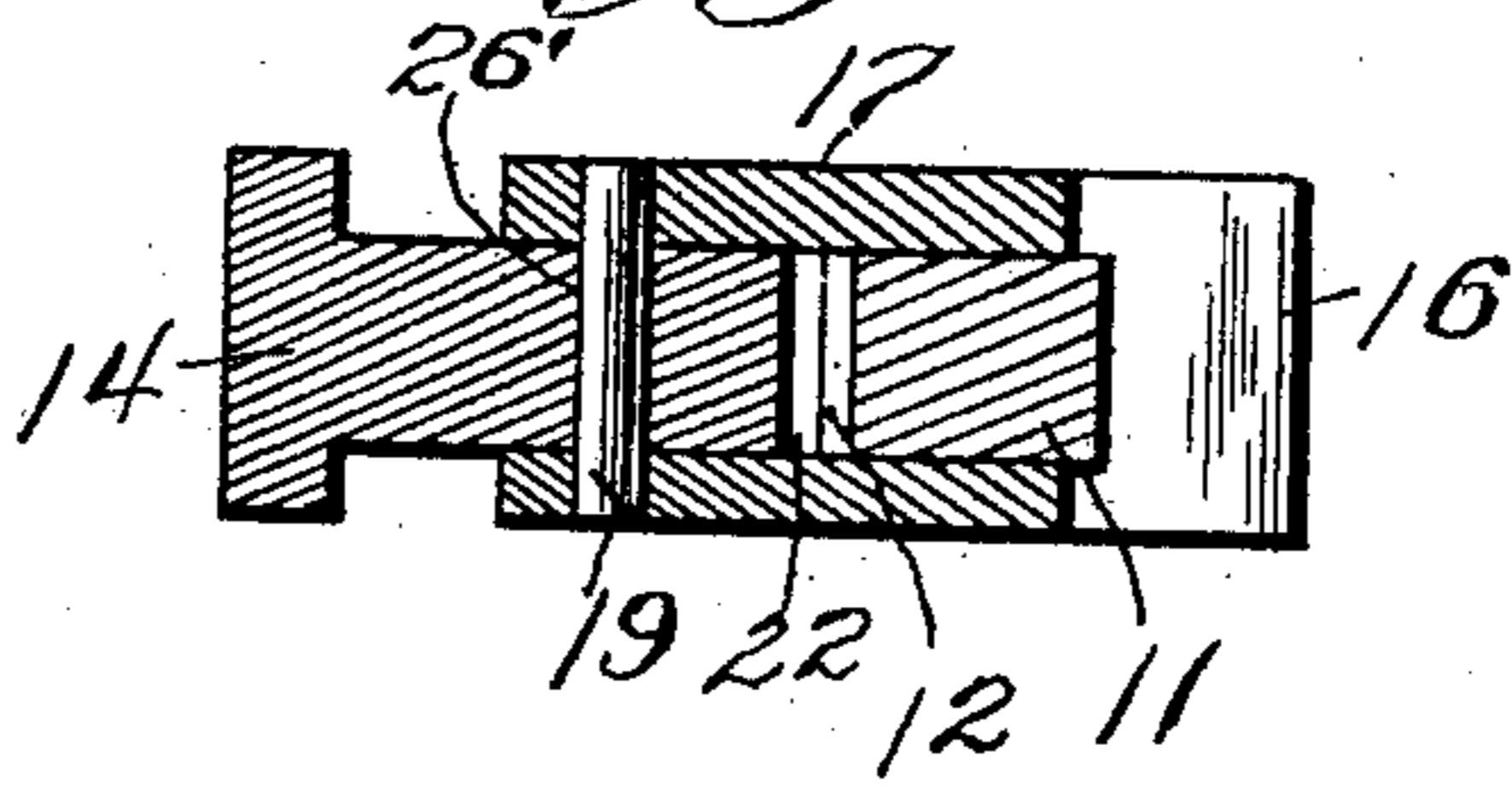


Fig. 5.



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WRENCH.

983,728.

Specification of Letters Patent.

Patented Feb. 7, 1911.

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To all whom it may concern:

Be it known that I, EDWARD KUKURUDA, a subject of the King of Hungary, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to improvements in wrenches and more especially to that class of such devices embodying a stationary and a movable jaw.

15 The primary object of this invention is the provision of a movable jaw in such relation to the stationary jaw that the former may be freely moved longitudinally for operative engagement with the work without requiring the manipulation of any adjusting or securing means.

20 A further object of the invention is to provide such a device that although simple in construction and inexpensive to manufacture it is at the same time an extremely strong and durable tool.

25 In carrying out these objects I provide a movable jaw having a catch or dog member adapted to coöperate with a toothed rack of the shank, said movable jaw being 30 freely operable in both directions and resiliently positioned in its relations to said shank.

35 With these general objects in view and others that will appear as the nature of the invention is better understood my improvements consist in the novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the appended 40 claims.

45 In the drawings forming a part of this application and in which like designating numerals refer to corresponding parts throughout the several views: Figure 1 is a side elevation of my improved wrench, Fig. 2 is a front view thereof, Fig. 3 is a perspective view of the movable jaw detached from the device, Fig. 4 is a perspective view of the pivoted yoke member, 50 and Fig. 5 is a transverse sectional view taken on line $x-x$ of Fig. 1.

Referring more in detail to the drawings, the stationary jaw 10 is mounted upon the shank 11 the latter having a toothed face 12

while said shank is provided at its inner end 55 with a handle 13 in the usual manner.

Positionable in operative relation with the stationary jaw is the movable jaw member 14 having a coöperating face 15 normally lying in substantially parallel relation to the operative face of the stationary jaw 10. 60

The yoke 16 shown in perspective in Fig. 4 and having the bifurcated arms 17 perforated as at 18 for receiving the rivet 19 65 and by which the movable jaw is pivoted thereto, is adapted to mount said jaw in operative position with the shank, it being noted that the latter extends between the arms thereof while the rear plane face of 70 the shank normally abuts the inner slanting end wall 20 of the yoke. Upon the inner oblique face or end 21 of the movable jaw member is fixedly secured a plate tooth 22 in any desired manner such as by the use of 75 the hold fast device 23. With the shank extending through said yoke and the tooth 22 in engagement with the teeth 12 of the shank, resilient means for retaining the members in this normal operative position 80 becomes necessary and for this purpose the helical springs 24 are positioned between the inner end portion of the movable jaw and the rear end portion of the pivoted yoke and serve to turn the latter upon its 85 pivot pin and in a direction toward the movable jaw, which, thus retains the yoke normally in contact with the rear face of the shank and the movable jaw and tooth 22 in engagement with the toothed face of 90 the shank. For securing said spring members 24 to said connected members I preferably mount loops or eyes 25 at opposite points upon the movable jaw and similar eye members 26 upon the inner surface of 95 the end of the yoke. It will be further noted that the pivot pin 19 projects through the perforation 26' of the movable jaw and that the space between the arms 17 of the yoke member is not only of a width to receive the shank 11 but also the main portion 100 of the movable jaw which is cut away, as at 27 to render the same of substantially an equal thickness to said shank.

The operation of the invention it is believed will be clear from the above description thereof. With the parts properly assembled and positioned relatively as dis- 105

closed in Fig. 1, a movement of the movable jaw 15 toward the stationary jaw 10 will result in a sliding of the tooth 22 over the teeth 12 of the shank until the desired position is reached whereupon the tooth 22 seats itself against the rack tooth contiguous to which it is positioned. In this operation it will be noted that the movable jaw may be positioned to engage the work in cooperation with the stationary jaw 10, without the necessity of manipulating any screws or bolts, but is accomplished merely by the manual sliding of the movable jaw itself. To disengage the wrench from the piece of work requires the forcible removal of the tooth 22 from its engagement with the shank tooth by which it is positioned and such movement is allowed by reason of the pivoting of the movable jaw to the swinging yoke 16 and the resilient connections therebetween. Upon an unseating of the interengaging teeth, it is evident that a longitudinal movement of the movable jaw toward the tool handle is at once rendered possible.

While the forms of the invention herein shown and described are what are believed to be preferable embodiments thereof, it is nevertheless to be understood that minor changes may be made in the form, proportion and minor points of detail without departing from the spirit and scope of the invention as set forth in the appended claims.

Having thus fully described my invention and in what manner the same is designed for use, what I claim as new and desire to secure by Letters-Patent of the United States is:

1. A wrench comprising a shank, a stationary jaw carried on the outer end thereof, a toothed inner face provided upon said shank, a movable jaw positioned upon the toothed side of said shank, a fixed tooth secured to said jaw and adapted to engage with the teeth of said shank, a yoke pivoted to said movable jaw, and said shank loosely positioned within said yoke, said movable jaw and yoke resiliently connected together

upon opposite sides of the shank and at points removed from the point of pivoting therebetween.

2. A wrench comprising a shank, a stationary jaw carried by the outer end of said shank, a plurality of teeth provided upon the inner face of said shank, a movable jaw member positioned adjacent said teeth, a jaw face provided at the outer end of said movable jaw, a plate tooth secured to the inner end of said movable jaw, said movable jaw provided with a cut away portion upon each side thereof, a yoke member pivoted to said movable jaw within said cut away portions, oppositely projecting arms provided upon said yoke member and said shank positioned between said arms, one end of said yoke provided with an internal oblique face, resilient members connecting said yoke with said movable jaw and adapted to normally contact said oblique face with the rear face of said shank.

3. A wrench comprising a shank, a stationary jaw carried on the outer end thereof, a plurality of teeth provided upon the inner face of said shank, a movable jaw member positioned adjacent said teeth, a jaw face provided at the outer end of said movable jaw, a plate tooth secured to the inner end of said movable jaw, said movable jaw provided with a cut away portion upon each side thereof, a yoke member pivoted to said movable jaw within said cut away portions, oppositely projecting arms provided upon said yoke member, and said shank positioned between said arms, one end of said yoke provided with an internal oblique face, spring members positioned on opposite sides of the shank and secured at their opposite ends to the inner end portion of said movable jaw and to the rear end of said yoke.

In testimony whereof I affix my signature in the presence of two witnesses.

EDWARD KUKURUDA.

Witnesses:

JOSEPH LICHNER,
JOHN KUKURUDA.