

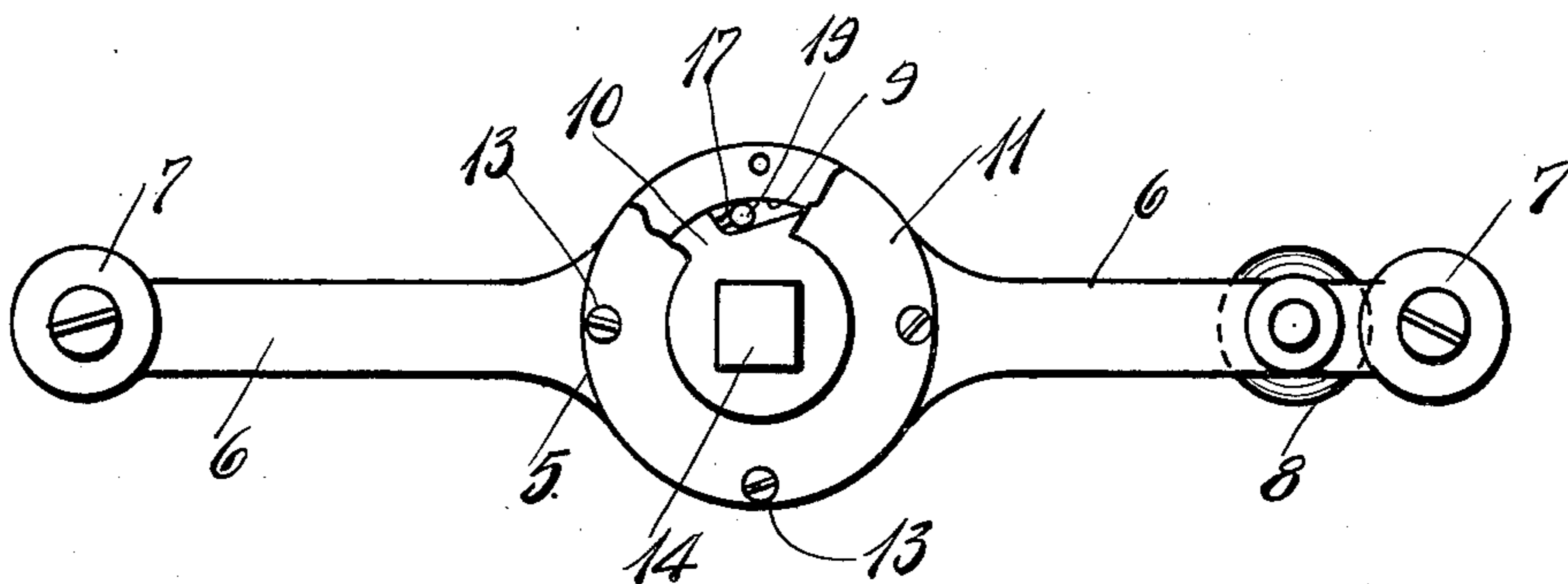
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J. W. RICHARDS

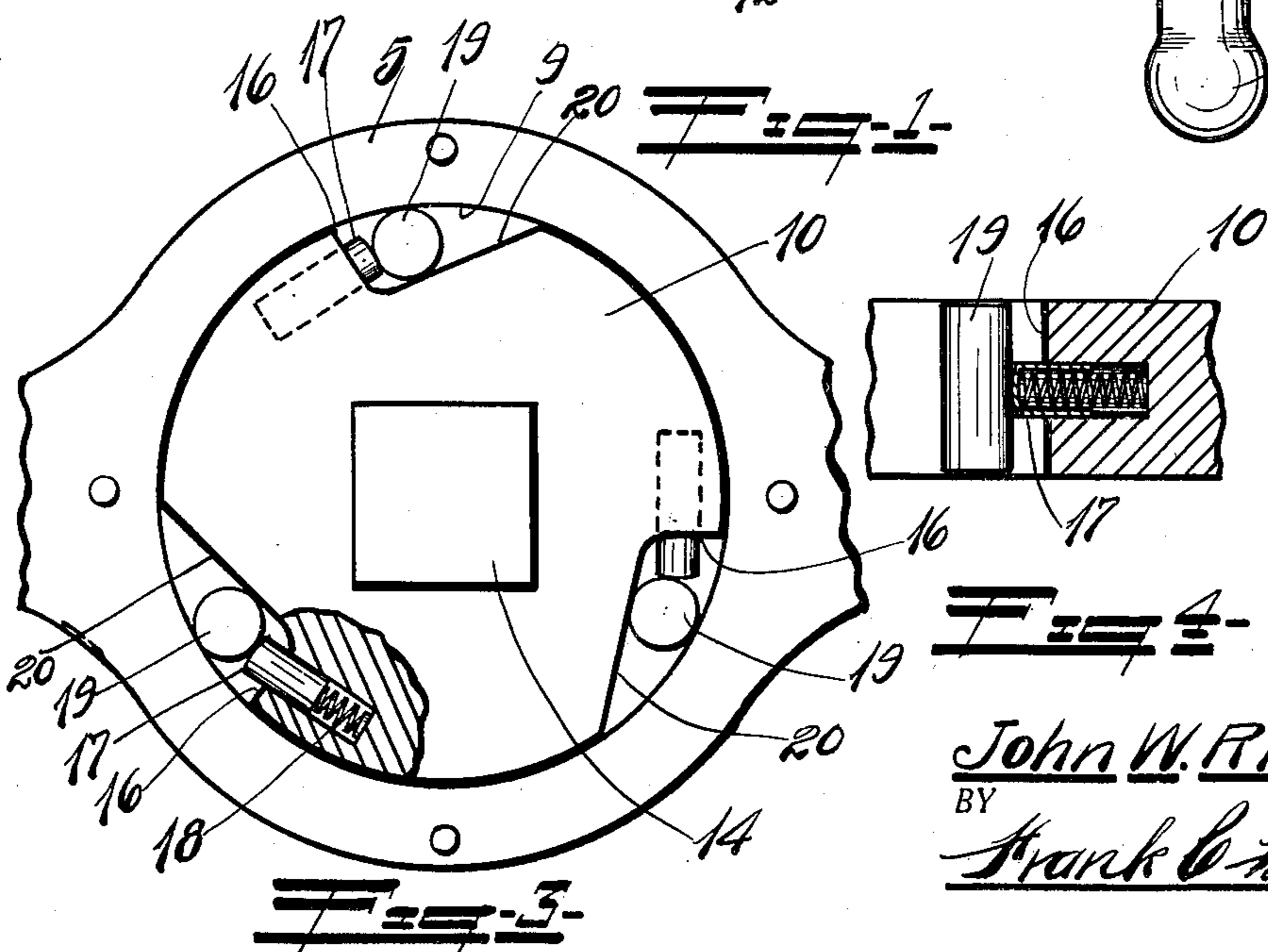
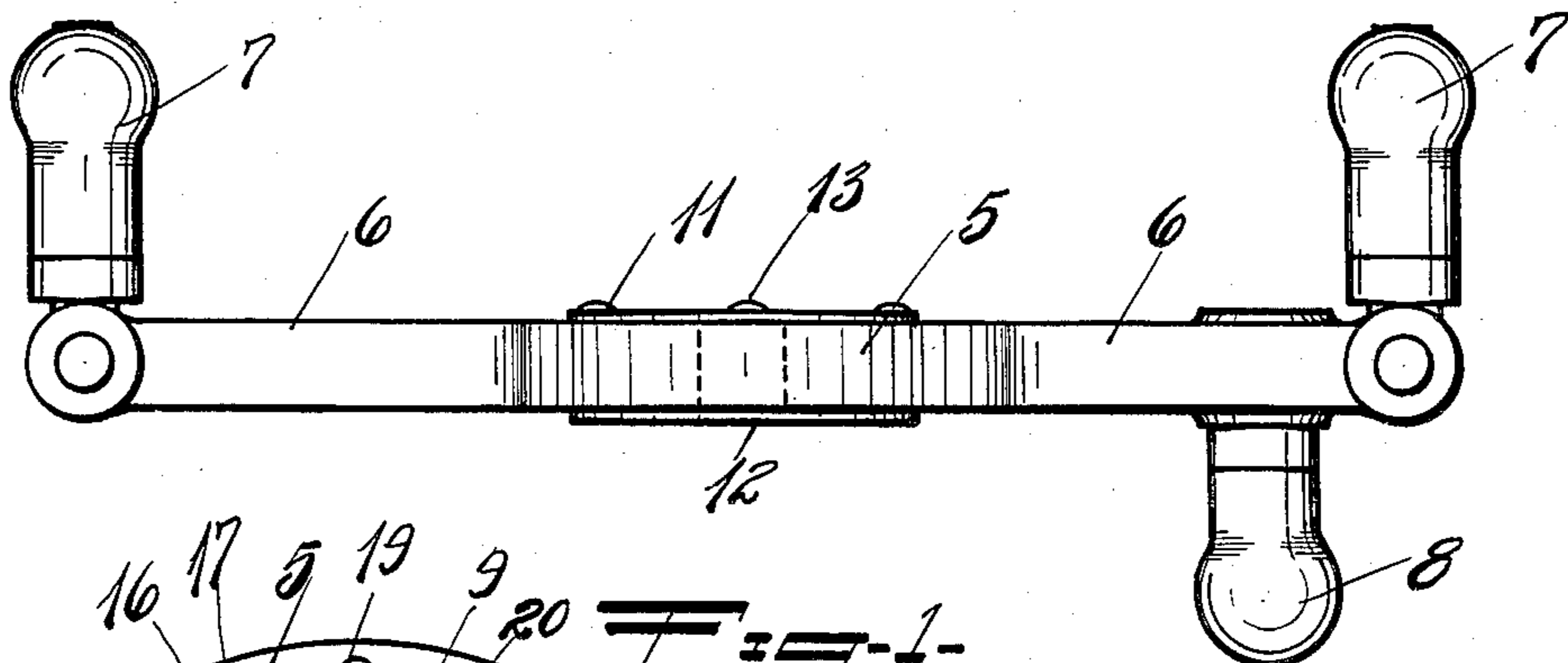
1,907,584

HYDRANT WRENCH

Filed April 8, 1931



**Fig. 2-**



**Fig. 3-**

**Fig. 4-**

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## UNITED STATES PATENT OFFICE

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## HYDRANT WRENCH

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The prime object of the invention is to provide a hydrant wrench so constructed that the wrench will function only when turned in proper direction, thereby eliminating the possibility of stripping and damaging the threads of the operating valve stem.

Another object is to provide a hydrant wrench of sturdy, rugged, and practical construction, which is dependable and positive in its operation, and which will not stick at a critical time when hydrants must be opened and when a fire occurs.

Another object is to provide a smooth operating balanced wrench mechanism, the operation of which is similar to an over running clutch.

A further object is to provide a wrench having a special handle arrangement, including spaced apart handles, provided on opposite sides of the head to permit a pull on one and a push on the other, so that the operator may readily brace himself when opening a hydrant, the lower handle being provided so that when the wrench is reversed, this handle will be in upright position so that the wrench may be spun.

The above and other objects will appear as the specification progresses, reference being had to the accompanying drawing in which I have shown the preferred embodiment of my invention, and in which like reference numerals indicate like parts throughout the several views thereof.

In the drawing.

Fig. 1 is an edge view of my hydrant wrench.

Fig. 2 is a top plan view, a plate being broken away to show the working parts.

Fig. 3 is an enlarged fragmentary part sectional plan view illustrating the hub and locking members.

Fig. 4 is an enlarged fragmentary sectional view of the hub showing the resilient pin adjuster.

Referring now more particularly to the drawing, the numeral 5 indicates a flat head having extensions 6 formed integral therewith, and to which the handles 7 are secured in any approved manner, a similar handle 8 being secured to the opposite side

of one of said extensions, and for a purpose to be presently described.

A centrally disposed opening 9 is provided in the head as shown, and a ratchet hub member 10 is mounted therein, plates 11 and 12 respectively, serving to hold said hub in position, said plates being held by screws 13 in the usual manner.

The ratchet hub 10 is formed as clearly shown in Fig. 3 of the drawing, and is provided with a centrally disposed square opening 14, adapted to accommodate a hydrant cap, or the head of the hydrant operating valve stem.

Spaced apart notches are provided in the outer rim of the ratchet hub, the wall 16 of each notch being bored to receive a hollow cylindrical shell 17, the outer head of which is closed, a coil spring 18 being mounted in said bore and shell for normally urging said shell outwardly, and into engagement with the vertically disposed ratchet pin 19 which is mounted in each notch, the wall 20 leading outwardly and forming together with the head, a gradually narrowing passage or chamber so that as the wrench is rotated the pins 19 are forced outwardly from the walls 16 and are wedged between the wall 20 and the head 10, thereby locking the ratchet hub and head together, rotation of the wrench in the opposite direction tending to roll the pin out of driving engagement, so that the head may rotate around the hub.

It will therefore be obvious that when the wrench is in position shown in Fig. 3 of the drawing, that it will grip and lock when rotated in a counter clockwise direction only, and by turning the wrench over so that the handle 8 is upright, the pins are again engaged so that a valve stem cap can be rotated in a clockwise direction for tightening, and inasmuch as this operation is comparatively easy the single handle is conducive to permit the spinning or rapid rotation of the wrench so that the operation is rapid and easy.

It will also be understood that the opening 14 can be of any desired shape, and that the hub can be interchangeable and that if so desired one handle only can be utilized.

From the foregoing description it will be obvious that I have perfected a very simple, practical, and convenient hydrant wrench which can be readily manufactured and assembled, and which can be readily operated.

What I claim is:—

A hydrant wrench comprising a head provided with oppositely disposed extensions and having a centrally disposed opening therein, vertically disposed handles on the ends of said extensions, a downwardly projecting handle on the opposite side of one of said extensions, a hub removably mounted in said opening, spaced apart notches in the rim of the hub and forming a gradually narrowing chamber with the rim of the opening, a pin mounted in each opening, and resilient means normally urging said pins towards the narrow end of the chamber for locking the head and hub together when the wrench is rotated in a predetermined direction.

In testimony whereof I hereunto affix my signature.

JOHN W. RICHARDS.

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