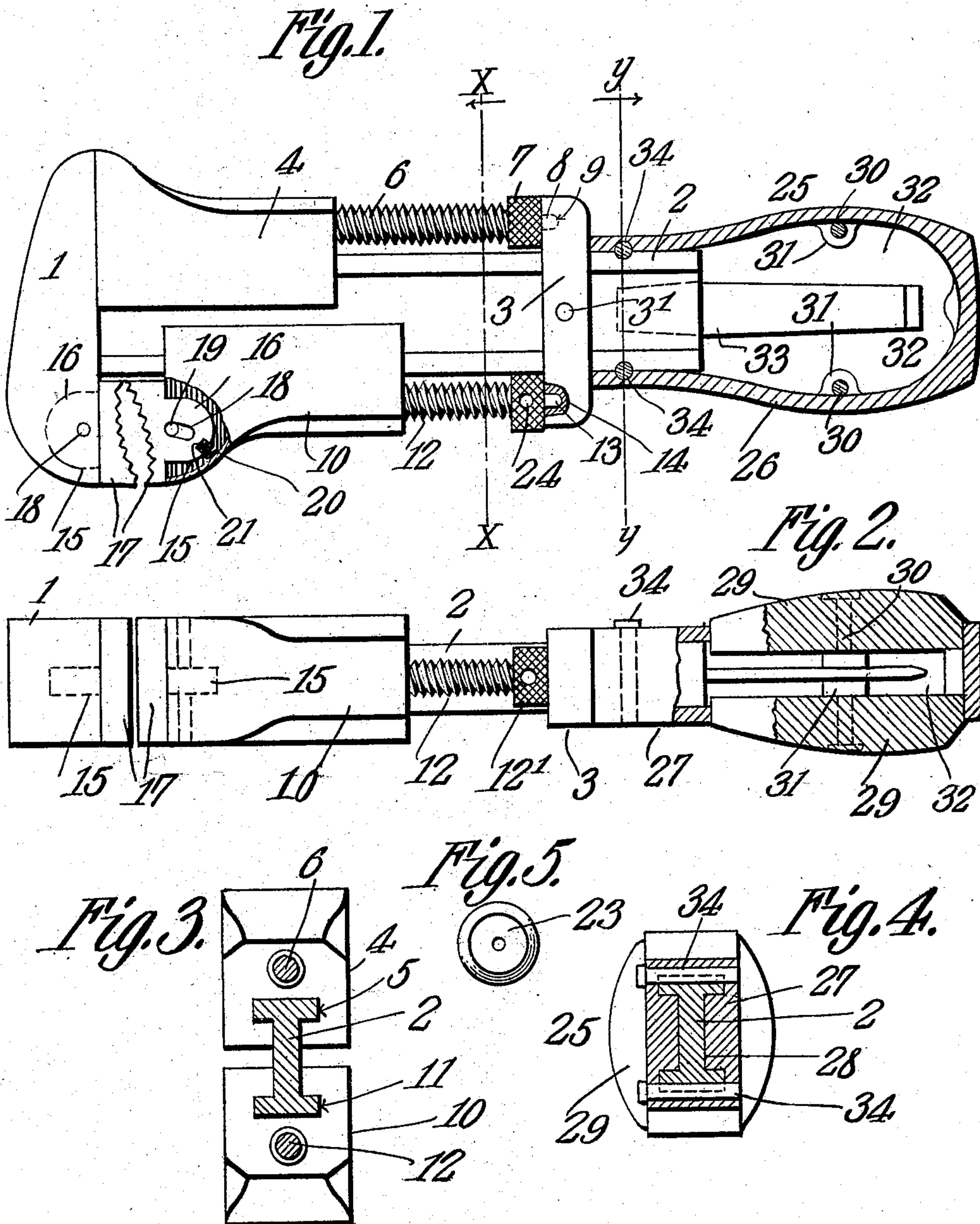


I. N. TOWER.
COMBINATION TOOL.
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905,248.

Patented Dec. 1, 1908.



Witnesses
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UNITED STATES PATENT OFFICE.

ISAAC N. TOWER, OF CHENEYVILLE, LOUISIANA.

COMBINATION-TOOL.

No. 905,248.

Specification of Letters Patent.

Patented Dec. 1, 1908.

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To all whom it may concern:

Be it known that I, ISAAC N. TOWER, a citizen of the United States, residing at Cheneyville, in the parish of Rapides and State of Louisiana, have invented a new and useful Combination-Tool, of which the following is a specification.

This invention relates to tools so constructed as to be capable of several different uses, and has especial reference to wrenches.

The invention has for its object to provide a wrench, which may be used as a pipe wrench or monkey wrench without removing or changing any of its parts.

The invention further has for its object to provide a combination tool which may be used as a monkey wrench, a pipe wrench, a pipe cutter, and a screw driver.

The invention consists in a combined tool of this kind constructed, and arranged as hereinafter set forth and claimed.

Referring to the drawings:—Figure 1 is a longitudinal side view with a portion of handle removed of a combination tool, constructed in accordance with this invention. Fig. 2 is a longitudinal edge view thereof with a portion of the handle in longitudinal section. Fig. 3 is a cross section thereof on the line $x-x$ Fig. 1 looking endwise towards the head of the tool. Fig. 4 is a cross section on the line $y-y$ Fig. 1 looking endwise towards the handle of the tool. Fig. 5 is a detail view of a rotary cutter.

In the construction of the tool it is formed with a fixed head 1 having a shank 2, I-shaped in cross section. Adjacent to the rear end of the shank there is mounted thereon a cross piece 3, detachably secured there to by a pin 3' or other suitable means, and having an I-shaped passageway adapted to fit over the I-shaped shank 2. Slidably mounted on the shank 2 is a movable head 4 having a T-shaped passageway 5 engaging one side of the shank 2, the head 4 being operated by a screw rod 6 having one end projecting into and adapted to turn in a threaded socket in the head 4, and provided at its other end with a thumb nut 7 having a pintle 8 located in a socket 9 in the cross piece 3. The abutting faces of the fixed head 1, and the movable head 4 form the jaws of a monkey wrench. Slidably mounted on the other side of the shank 2 is a movable head 10 having a T-shaped passageway 11 engaging one side of the shank 2, the head 10 being operated by a screw rod 12 having

one end projecting into and adapted to turn in a threaded socket in the head 10, and provided at its other end with a thumb nut 12' having a pintle 13 seated in a socket 14 in the cross piece 3. The opposing faces of the fixed head 1, and movable head 10 are each provided with a curved socket 15 in which is seated the tongue or projection 16 of a toothed jaw 17, the jaws 17 being detachably retained in place by a removable pin 18. By means of the fixed head 1, and the movable head 10, with the toothed jaws 17 a pipe wrench is provided. The toothed jaw 17 on the movable head 10 is preferably made yielding, to assist in gripping a pipe, by providing a longitudinal slot 19 in the tongue 16 through which the pin 18 extends, and a spring 20 located in a socket 21 in the tongue 16 and in a socket 22 in the head 10.

When it is desired to use the pipe wrench as a pipe cutter the jaws 17 may be removed, and cutters, similar to the rotary cutter 23 in Fig. 5, substituted therefor, the cutters being mounted in the sockets 15, and projecting therefrom, and held in place by the pins 18. As more force is required to be used in operating the pipe wrench than the monkey wrench, the thumb nut 12' is made somewhat larger than the thumb nut 7, and is provided with holes or sockets 24 for engagement of a suitable tool to operate the nut.

25 is a handle preferably of metal and formed with a skeleton portion 26, and a solid end portion 27 having an I-shaped passageway 28 through which extends the end of shank 2, the end 27 of handle 25 abutting against the cross piece 3. On the sides of the portion 26 of handle 25 are secured the wooden sections 29 by means of pins 30 extending through the sections 29, and lugs 31, said sections inclosing a chamber 32 in the handle. Within the chamber 32 is located a screw driver 33 mounted in the end of shank 2. The handle 25 is detachably secured to the shank 2 by removable pins 34, extending through alining recesses in the handle 25, and shank 2. By this means, when it is desired to use the screw driver, by removing pins 34 and drawing the handle 25 off of the shank 2, the tool may be used as a screw driver. It will thus be seen that a combination tool is provided which can be used as a monkey wrench, or pipe wrench without removing any parts, and as a pipe cutter by simply substituting cutters for the toothed

jaws; and as a screw driver by simply removing the wrench handle.

Having described the invention, I claim:—

In a combination tool of the character described, a fixed head and a shank, a cross piece fixed upon the shank, a head slidably mounted upon the shank, an operating screw bearing against the cross piece and engaging said head, and forming with the fixed head
10 a monkey wrench, a second head slidably mounted on the shank independent of the first said slidable head, an operating screw

bearing against the cross piece and engaging the second said head, a toothed pipe jaw on the fixed head, and a toothed pipe jaw on 15 the second slidable head.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ISAAC N. TOWER.

Witnesses:

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