D. F. VOLLMER.

SOCKET REVERSIBLE RATCHET WRENCH.

APPLICATION FILED APR. 12, 1909.

943,905.

Patented Dec. 21, 1909.

2 SHEETS—SHEET 1.

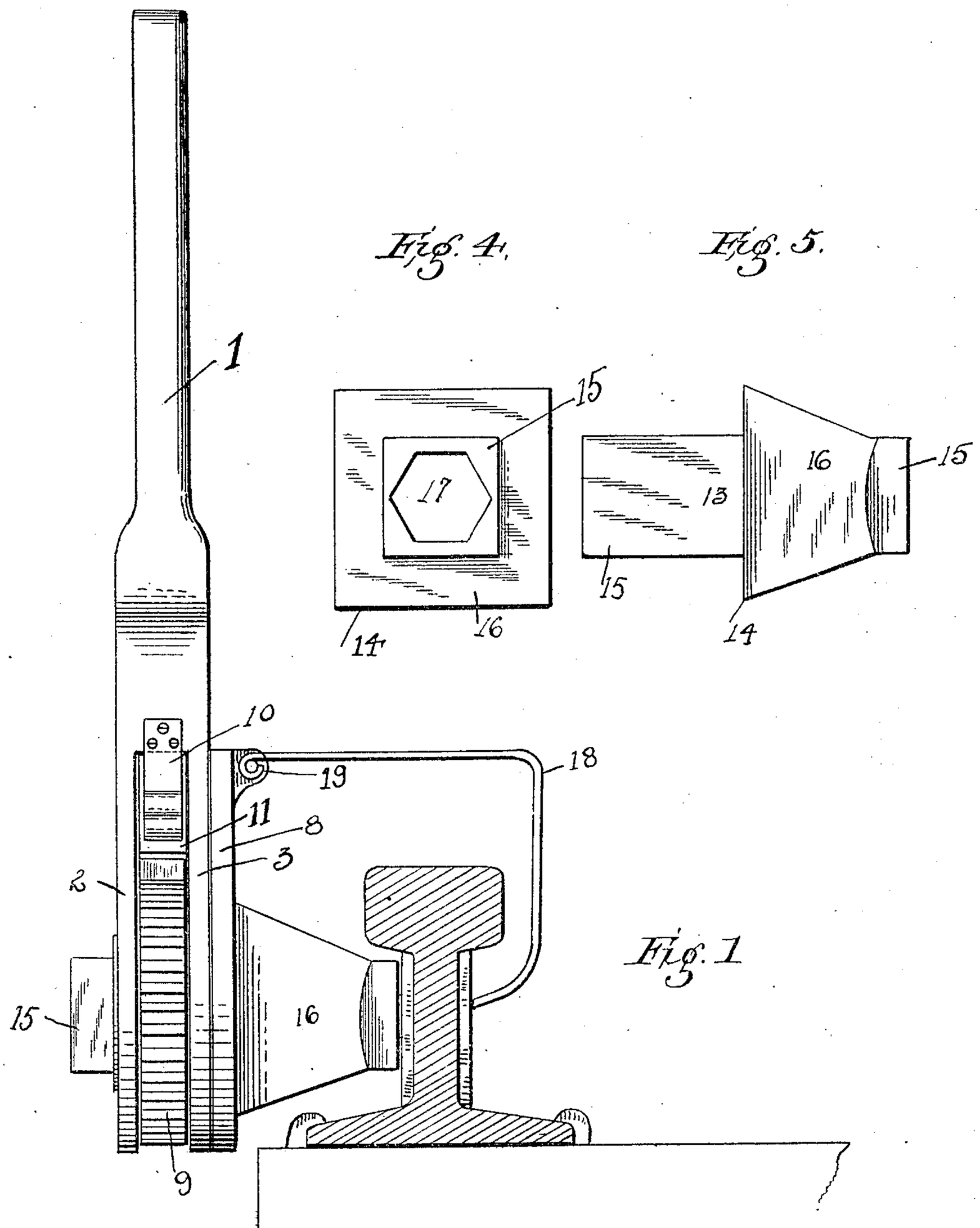


Fig. 1

Fig. 4.

Fig. 5.

Witnesses

F. L. Ourand

A. D. Duffie

Inventor

David F. Vollmer

By John S. Duffie

Attorney

D. F. VOLLMER.

SOCKET REVERSIBLE RATCHET WRENCH.

APPLICATION FILED APR. 12, 1909.

943,905.

Patented Dec. 21, 1909.

2 SHEETS—SHEET 2.

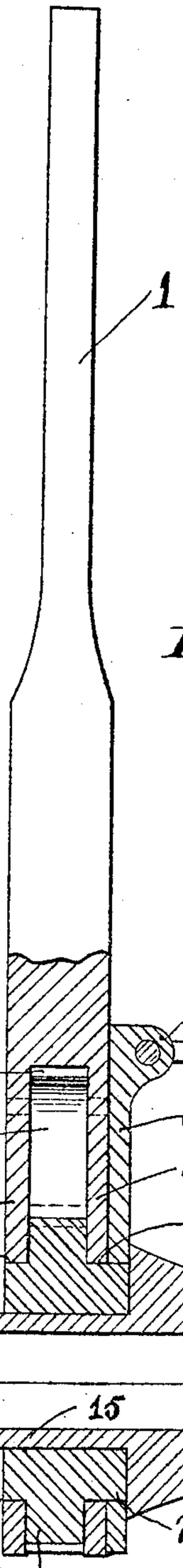
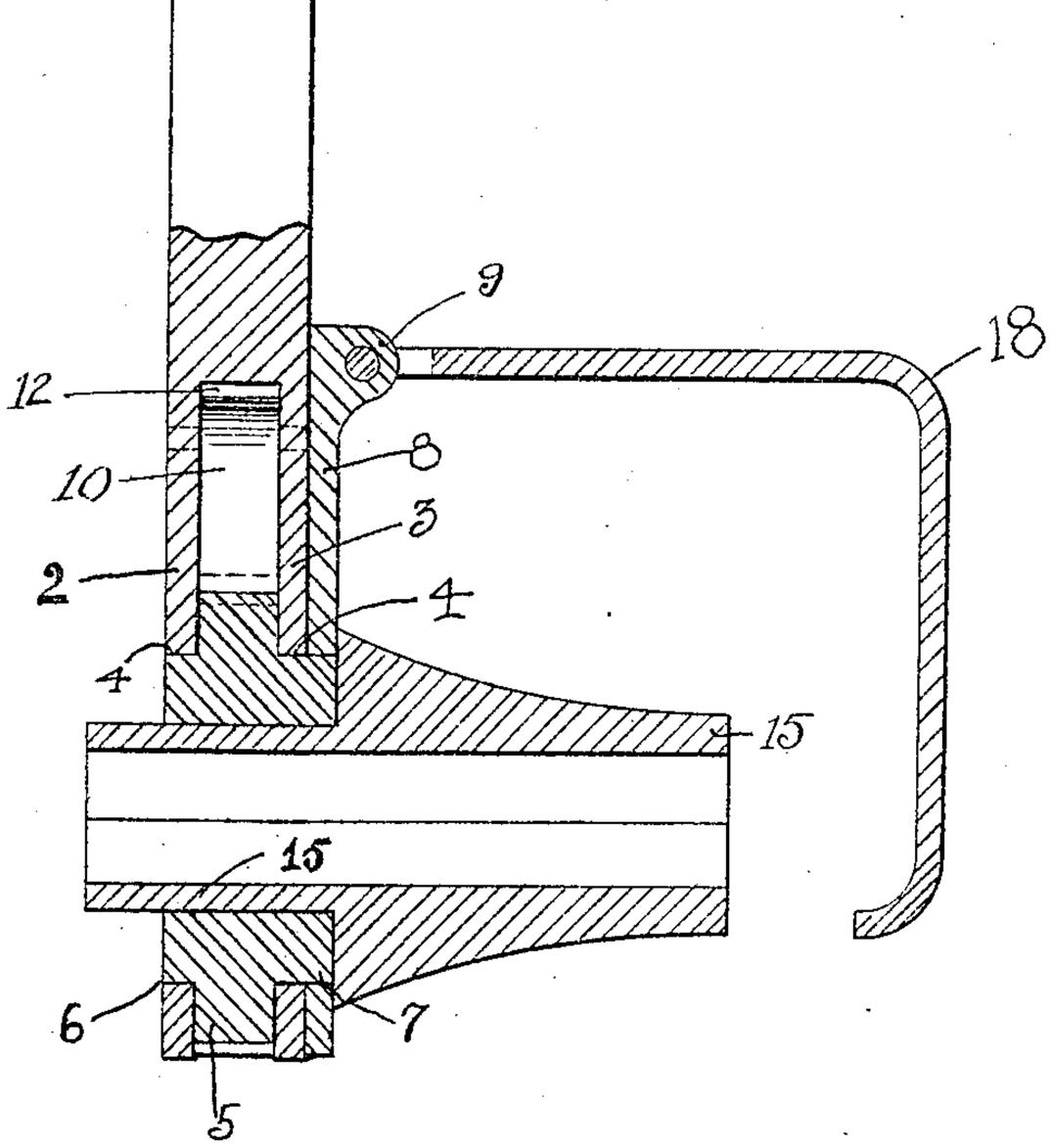
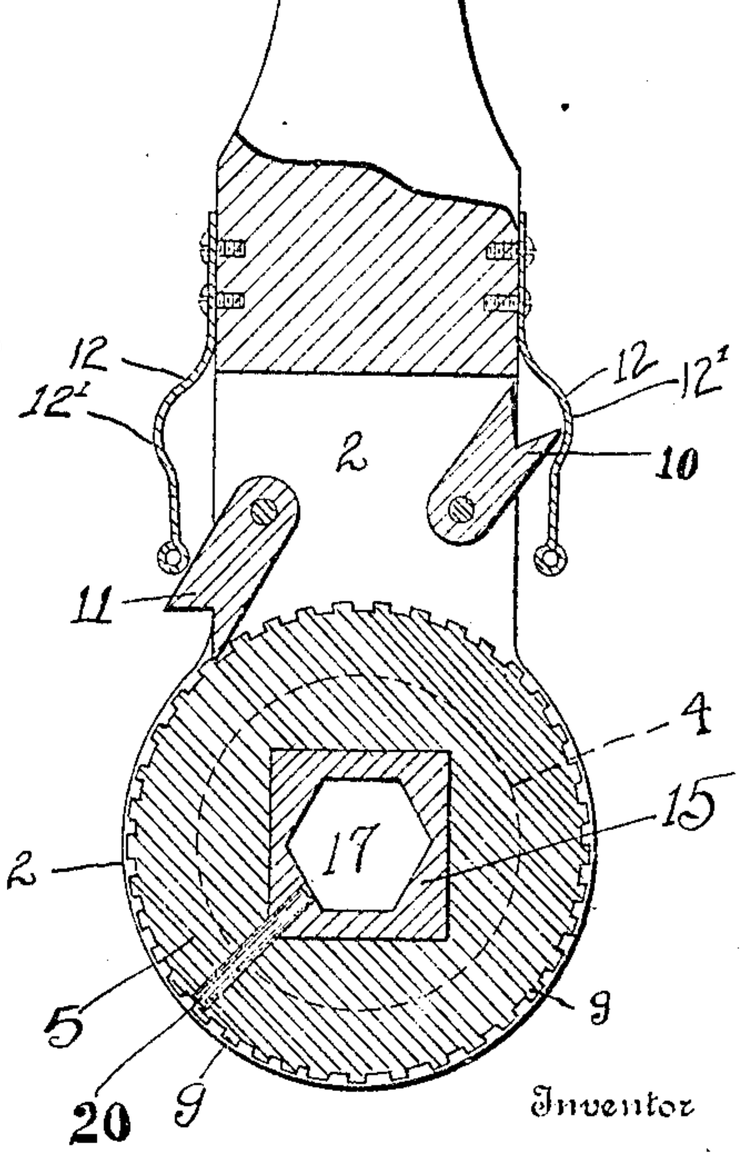


Fig. 2

Fig. 3





Witnesses

W. J. Jones

F. L. Orrand

Inventor

David F. Vollmer

By John S. Duffie

Attorney

UNITED STATES PATENT OFFICE.

DAVID F. VOLLMER, OF MONROE, LOUISIANA.

SOCKET REVERSIBLE RATCHET-WRENCH.

943,905. Specification of Letters Patent. **Patented Dec. 21, 1909.**

Application filed April 12, 1909. Serial No. 489,545.

To all whom it may concern:

Be it known that I, DAVID F. VOLLMER, a citizen of the United States, residing at Monroe, in the parish of Ouachita and State of Louisiana, have invented certain new and useful Improvements in Socket Reversible Ratchet-Wrenches, of which the following is a specification.

My invention has relation to socket reversible ratchet wrenches and it is made specially to be used at fish plate joints of railroads. The sockets are made in different sizes and can be interchanged at will.

The main object of my invention is to produce a wrench of the type above mentioned, which is provided with such clamping means that it will hold the head of the bolt in proper position while the nut is being screwed on the other end thereof.

Another object of my invention is to produce a wrench of this character which is simple of construction, efficient in use, durable, and which may be manufactured at a reasonable cost.

With these and other objects in view, my invention consists of the novel construction and arrangement of parts as are hereinafter described in this specification, illustrated in the accompanying drawings forming a part thereof, and particularly pointed out in the appended claims.

Referring to the drawings: Figure 1 is an edge view of my invention, shown as it is applied. Fig. 2 is an edge view of my invention, partly in section. Fig. 3 is a side view of my device, shown in section, with the exception of the handle. Figs. 4 and 5 are details.

Referring to the drawings more specifically, my invention is described as follows: The handle 1, is so bifurcated at its lower end that it forms the two extensions 2 and 3, each of which is circular in shape. Passing through each of said extensions is an annular hole 4, each of said holes being of the same diameter and one arranged opposite the other.

A ratchet wheel 5, provided with a square hole at its center, has formed one on each side thereof annular necks 6 and 7. Said necks are adapted to be engaged by the holes in said extensions 2 and 3, and it is intended that they should rotate in said holes as bearings. Said neck 6, projects such a distance that its surface is even with the surface of said extension 2. Said neck 7, extends such a distance beyond the surface of said extension 3, that a collar 8, provided with a hole the diameter of which is equivalent to the diameter of said neck, may be mounted loosely thereupon. Said ratchet wheel 5, is provided with a number of teeth 9, said teeth adapted to be engaged by either of the dogs 10 or 11, either or both of which may be thrown out of engagement at will. Said dogs are pivotally mounted in a suitable manner between said extensions 2 and 3. That these dogs may be thrown out of engagement, I provide a spring extension 12, one of which is secured to each edge of said handle 1, immediately above the bifurcated portion thereof. Each of said spring extensions is provided with a raised portion 12^1, leaving a concave surface on their under sides wherein lodge said dogs when they are thrown out of engagement.

A socket 13, is provided with a shoulder 14, from which joint said socket tapers down to the diameter of the core 15. This tapering portion will be hereinafter designated as the rotary head and will be numbered 16. The core 15, passes through said hole at the center of said ratchet wheel 5, and is adapted to be rotated thereby. A square, hexagonal or octagonal or other shaped hole 17, passes through said core 15, from end to end. This hole is for the purpose of receiving the nut that is to be screwed upon a bolt, the head of which is held in place by means of a clamp 18. Said clamp 18, has one portion extending horizontally, another of its portions extends vertically, the lower end of which is inwardly turned. The inner end of said horizontal portion is pivotally connected to an ear 19, formed or secured at the periphery of said collar 8. The manner of engaging the head of a bolt, while the nut is being tightened thereon, is illustrated in Fig. 1. The said core 15, is held against the sidewise movement by means of a pin 20, passing through said ratchet wheel and one of the corner edges of said core. The rear face of said rotary head 16, abuts against the end face of said annular neck 7.

Although I have specifically described my invention, bringing forth its preferred construction, yet I may exercise the right to make such slight deviations in its general

form and arrangement as do not depart from the spirit thereof, and as fall within the scope of the appended claims.

Having described my invention, what I claim is:

1. In a wrench of the class described comprising a bifurcated handle, a revoluble element mounted for rotation between the extensions of the bifurcated portion, said element provided with a neck formed on each face thereof, which necks are received by holes in the extensions, one of the necks extending beyond the surface of that extension through which it passes, a collar loosely mounted on the last-mentioned neck, a socket extending through the center of said element and rotated thereby, the collar being held on said last-mentioned neck by the socket, a clamp connected to the collar at the periphery thereof, said clamp assisting in holding the head of a bolt in place while said socket is turning a nut upon its other end.

2. In a ratchet wrench of the class described comprising a bifurcated handle, a ratchet wheel rotating between the extensions of said bifurcated portion, said wheel provided with a neck formed on each side thereof, which necks are received by suitable holes in said extensions, one of said necks extending beyond the surface of the extension through which it passes, a collar loosely mounted on said last-mentioned neck, a socket passed through the center of said wheel, rotated thereby, and holding said collar in place, a right-angular clamp pivoted to said collar at its periphery, said clamp holding the head of a bolt in place while said socket is turning a nut upon the other end thereof, substantially as shown.

3. In a ratchet wrench of the class described comprising a bifurcated handle, a ratchet wheel rotating between the extensions of said bifurcated portion, said wheel provided with a neck formed on each side thereof which are received by suitable holes in said extensions, one of said necks extending beyond the surface of the extension through which it passes, a collar loosely mounted on said last-mentioned neck, a socket passed through the center of said wheel, rotated thereby, and holding said collar in place, a right-angular clamp pivoted to said collar at its periphery, said clamp holding the head of a bolt in place while said socket is turning a nut upon the other end thereof, said clamp having a horizontal portion and a vertical portion, the lower end of said vertical portion being inwardly turned, the inner end of the horizontal portion being the point at which said clamp is pivoted to said collar, substantially as shown.

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

DAVID F. VOLLMER.

Witnesses:
A. BERNSTEIN,
HENRY BERNSTEIN.