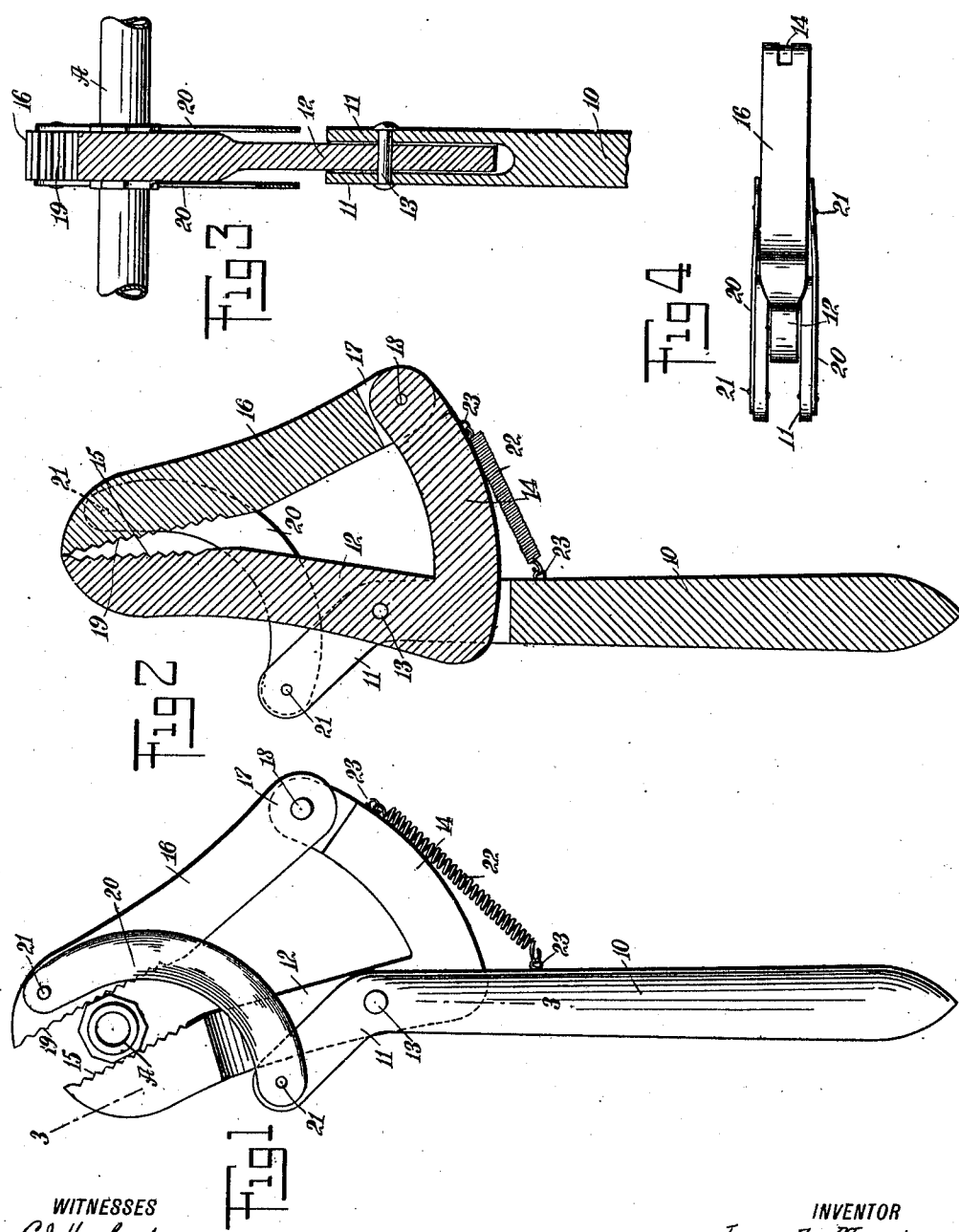


J. A. MORRIS.
WRENCH.

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974,587.

Patented Nov. 1, 1910.



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JAMES A. MORRIS, OF GILLETT GROVE, IOWA.

WRENCH.

974,587.

Specification of Letters Patent.

Patented Nov. 1, 1910.

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To all whom it may concern:

Be it known that I, JAMES A. MORRIS, a citizen of the United States, and a resident of Gillett Grove, in the county of Clay and State of Iowa, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

This invention relates to wrenches, and more particularly to a device of this class used for manipulating and holding bodies of circular cross-section, such as piping or the like, the device comprising a handle, pivotally associated jaws, a link connection between the jaws and the handle, and a resilient connection between the jaws and the handle and tending to maintain the parts in normal positions.

The object of the invention is to provide a simple, strong and durable wrench, which can be used for holding and manipulating piping and similar articles of circular cross-section, as well as nuts, bolt-heads and the like, which is so arranged that the jaws securely grip an article placed therebetween, so that as pressure is applied upon the handle the grip of the jaws becomes tighter, and which has the jaws resiliently controlled so that they normally tend to close.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a side elevation of an embodiment of my invention; Fig. 2 is a longitudinal section of the device, showing certain of the parts in different positions; Fig. 3 is a transverse section on the line 3—3 of Fig. 1; and Fig. 4 is an end view of the wrench.

Before proceeding to a more detailed explanation of my invention, it should be clearly understood that while I have shown for example, in the accompanying drawings, an embodiment of the device in which the jaws are serrated to permit them to grip smooth surfaces, the jaws can also be provided with smooth faces so that the device can be used for manipulating nuts and the like, without the danger of marring the surfaces engaged by the jaws. Certain of the details of construction, needless to say, can be varied in accordance with individual

preference and special conditions, without departing from the underlying spirit of the invention.

Referring more particularly to the drawings, I provide a handle 10, which is of any suitable form so that it can be conveniently grasped by the hand to permit of the manipulation of the device. The handle has at one end a bifurcated part 11, the extremities of the sides of which are laterally disposed and at an angle to the body of the handle. Pivoted between the sides of the bifurcated part 11 is a jaw 12, movably mounted in position by means of a pivot pin or rivet 13. The jaw member, at the end adjacent to the handle 10, has a laterally extended, curved arm 14, preferably integral therewith. At the other end the member is enlarged and at the inner face is provided with serrations or teeth 15.

The outer end of the arm 14 is reduced, and carries pivotally a second jaw member 16, which has a bifurcated part 17, receiving movably therebetween a reduced end of the arm 14 and which is secured in place by means of a pivot pin or rivet 18. At the free end the second jaw member 16 is provided with a serrated gripping face 19. It will be understood that the body A is gripped between the adjacent serrated faces 15 and 19, as is clearly shown in Fig. 1.

The second jaw member 16 is connected with the handle 10 by means of curved links 20, arranged at both sides of the parts and secured respectively, at the end of the jaw member 16 and at the extremity of the handle, by means of pivot pins or rivets 21. A spring 22, is connected at the ends with the arm 14 and the handle 10 respectively, attaching at suitable eyes 23, or the like, provided for the purpose.

The spring tends to force the arm 14 toward the handle, and in this way tends to swing the jaw member 12 toward the member 16, so that it serves to maintain the parts in the normal, relative positions shown in Fig. 2. When the handle is moved in one direction, the jaws are clamped together, so that an article located therebetween is securely held. By reversing the movement of the handle, the article is instantly released. It will be understood that by curving the links as is shown, it is possible to pivot the links at the end of the second jaw member 16, without interfering with the positioning of an object between the jaws.

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

1. A wrench, comprising a handle, pivotally associated jaws, a link connection between one of said jaws and said handle, and a spring fastened to one of said jaws and to said handle.
2. A wrench, comprising a handle, pivotally associated jaws, a link connection between one of said jaws and said handle, and a spring secured between said jaws and said handle, one of said jaws being pivotally secured to said handle.
3. A wrench, comprising a handle, a jaw pivotally secured directly to said handle and having a laterally disposed arm, a second jaw pivotally secured to said arm, and links pivotally secured, respectively, to said second jaw and said handle.
4. A wrench, comprising a handle, a jaw pivotally secured to said handle and having a laterally disposed arm, a second jaw pivotally secured to said arm, links pivotally secured, respectively, to said second jaw and

said handle, and a spring secured respectively, to said arm and said handle, said handle having the end adjacent to which said first jaw is located, laterally disposed.

5. A wrench, comprising a handle having a bifurcated, laterally disposed extremity, a jaw member pivotally mounted between the sides of said bifurcated extremity, said jaw member having a laterally extending, curved arm, a second jaw pivotally mounted at the end of said arm, curved links pivotally connected respectively, with the end of said second jaw and said bifurcated end of said handle, one of said links being arranged at each side of said second jaw, and a spring secured respectively, to said arm and said handle, said links being curved toward said arm.

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

JAMES A. MORRIS.

Witnesses:

A. J. HENDRY,
A. D. BROWN.