J. F. O'MALLEY.

COMBINATION TOOL.

APPLICATION FILED JUNE 30, 1908.

922,322. Patented May 18, 1909.

Fig. 1.

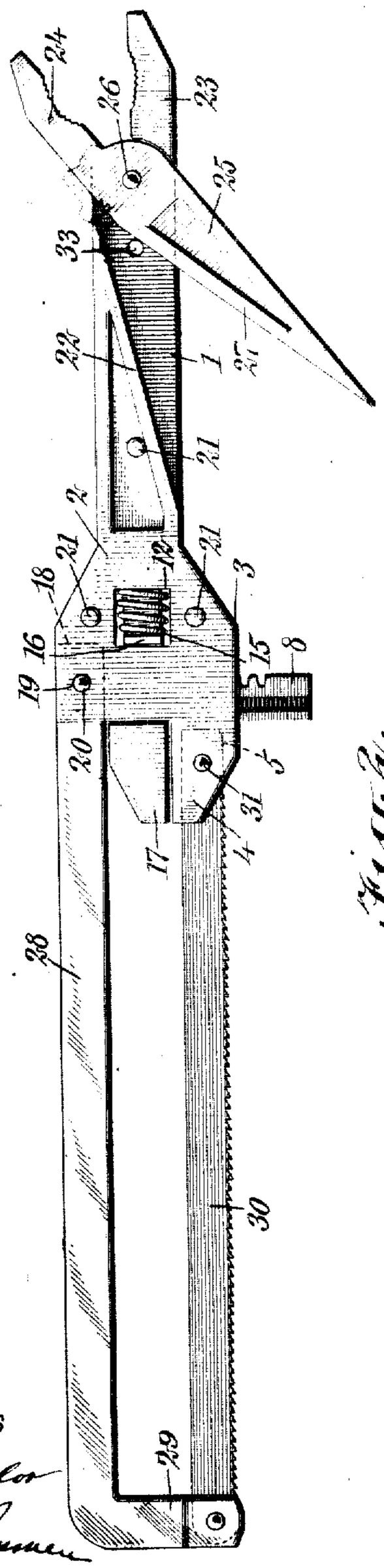


Fig. 2.

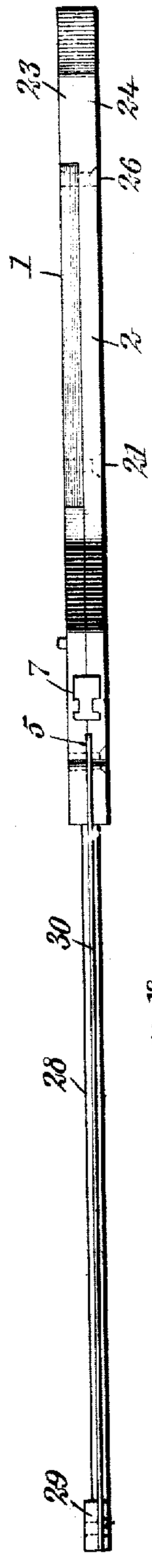
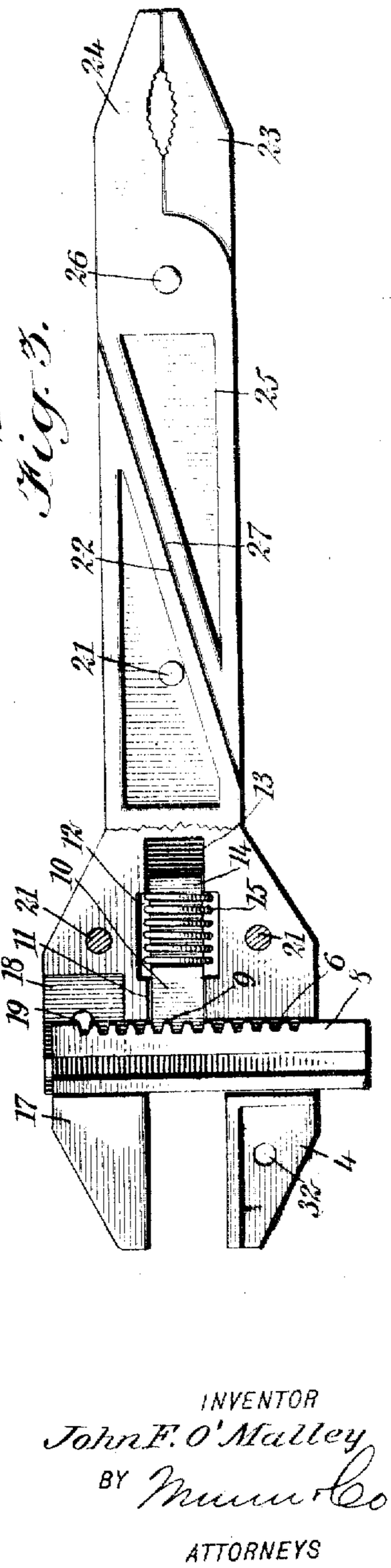


Fig. 3.



WITNESSES

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JOHN FRANCIS O'MALLEY, OF AVOCA, PENNSYLVANIA.

COMBINATION-TOOL.

No. 922,322. Specification of Letters Patent. Patented May 18, 1909.

Application filed June 30, 1908. Serial No. 441,083.

To all whom it may concern:

Be it known that I, JOHN F. O'MALLEY, a citizen of the United States, and a resident of Avoca, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Combination-Tool, of which the following is a full, clear, and exact description.

This invention relates to a combination tool, and the object of the invention is to produce a tool of simple construction which can be used as a wrench or hack saw. In its construction the device is embodied with a pair of pliers which also constitute a wire cutter.

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 figures.

Figure 1 is a side elevation of the device showing the same when adapted to be used as a hack saw, the pliers being represented in their open position; when they are closed they constitute a handle for the saw and also a handle for a wrench, as indicated in Fig. 3; Fig. 2 is a bottom plan or bottom edge view of the device when used as a saw; and Fig. 3 is a side elevation of the tool, showing a portion of the same broken away.

Referring more particularly to the parts, the body of the tool is formed of two plates 1 and 2 which are superposed upon each other and secured together, as shown. The plate 1 has an elongated portion at the handle of the device, and both plates are enlarged so as to form a head 3. This head 3 is formed below with an outwardly projecting jaw 4 which constitutes the main jaw of the wrench. This jaw is formed with a vertical slot 5 as illustrated which is employed when the device is being used as a saw. The head 3 at the rear of the jaw 4, is formed with a vertical or transverse guide slot 6 as shown which is produced by forming channels 7 in the adjacent faces of the plates, as indicated in Fig. 2. In this guide slot 6, a rack 8 is adapted to slide, and this rack on its rear face is provided with teeth 9. These teeth are adapted to be engaged by a shoe or block 10, which has teeth on its forward face for this purpose, as shown. This shoe or block 10 is guided in a horizontal slot 11 as illustrated which communicates with an opening 12 formed through the two plates. Beyond this opening 12, the head is provided with a horizontal guide pocket 13 as illustrated which is in alinement with the guide-way 11. The shoe or block 10 is formed with an integral shank 14 of rectangular cross section, which extends across the opening and projects into the guide pocket 13. In the opening 12 there is provided a spring 15, and this spring thrusts against the right edge of the opening and also against the block 10 so as to hold the block in engagement with the rack as shown in Fig. 3. At its sides the block or shoe 10 is provided with outwardly projecting lips 16 which are adapted to be seized so as to compress the spring in order to release the rack. The rack 8 is formed integral with a movable jaw 17, which lies opposite to the jaw 4 and is adapted to approach the same, in a well understood manner, so as to grip a nut or similar machine part.

Communicating with the upper portion of the guide slot 6 as illustrated, a recess or socket 18 is formed between the plates, and at this recess the side plates are provided with registering openings 19, one of which openings is threaded so as to receive a removable screw 20, as indicated in Fig. 1. When the device is being used as a wrench, this screw 20 is not placed in position. The two plates 1 and 2 are rigidly secured together by means of rivets 21, which are placed as shown in Fig. 1. The edge of the plate 2 of the tool, at the handle part, is formed so as to present an inclined face 22, and at the extremity of the handle part of the plate 1, a jaw 23 is formed which coöperates with a similar jaw 24 formed on a lever 25 which is pivoted at 26 to the plate 1. This lever 25 has an inclined edge 27 which is adapted to come against the edge 22 when the pliers are closed, as indicated in Fig. 3.

In order to enable the device to be used as a hack saw, I provide a saw bar 28, the end of which is received in the socket 18. This saw bar is provided with an opening through which the screw 20 passes so as to hold the saw bar rigidly in position, as will be readily understood. In this connection it should be understood that the rear end of the saw bar comes against the rear edge of the socket 18, and the lower edge of the saw bar seats against the lower edge of the socket, so that the bar will be held rigidly in position. The saw bar 28 has a downwardly turned arm 29 to which a saw blade 30 is attached. The

other end of this saw blade is received in the socket 5, and is held in this position by means of a removable screw 31 which is mounted in openings 32 formed in the lower jaw.

When the device is being used as a wrench, evidently the distance between the jaws may be quickly adjusted. The pliers when not in use constitute a convenient handle for operating the wrench or saw. It is also evident that the wrench can be quickly transformed into a hack saw.

Before attaching the saw it is necessary to close the wrench, that is, to bring the jaws 17 and 4 together, as indicated in Fig. 1. The movable jaw may then be adjusted to bear on the inner edge of the saw bar and provide a substantial support therefor.

In the rear extremity of the plate 1, an opening 33 is formed through which a wire may be thrust so that the wire may be cut by the edge of 27 of the lever 25 in closing the pliers.

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

1. A wrench having jaws and a guide slot, the guide slot adapted to receive the inner end portion of a saw bar, one of the jaws rigid with the wrench and having a slot to receive the saw blade and the other jaw engaged in the guide slot to move to and from the rigid jaw and adapted to support the saw bar when the saw blade and saw bar are in working position.

2. The combination of a wrench having jaws and a guide slot one of the jaws movable to and from the other jaw in the said guide slot and the other jaw having a slot, a saw bar and a saw blade adapted to be respectively secured in the guide slot and in the slot of the jaw and means for holding the movable jaw in adjusted position and against the saw bar.

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

JOHN FRANCIS O'MALLEY.

Witnesses:
FRANK CAREY,
GRAFTON HOEY.