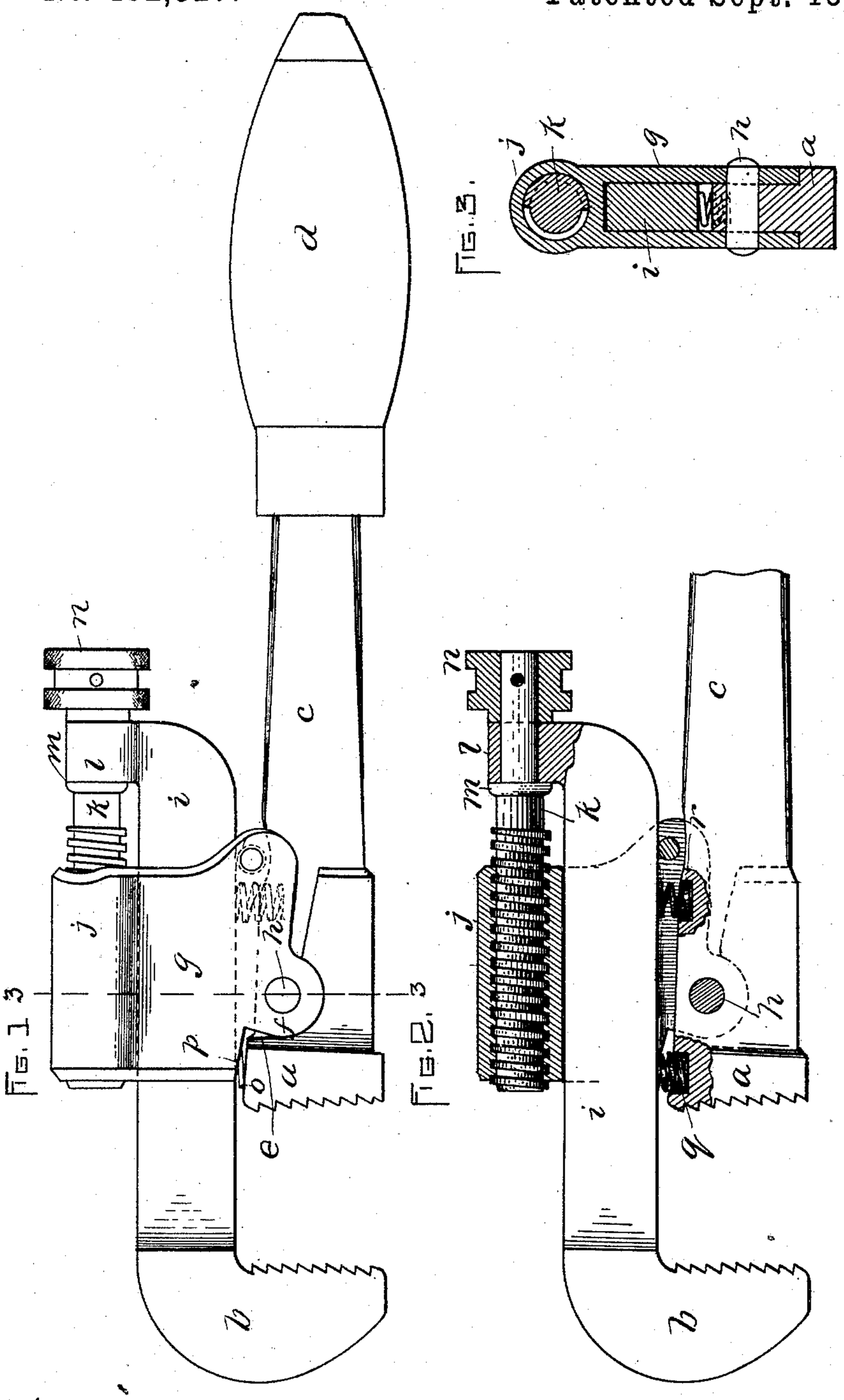
(No Model.)

D. R. PORTER.

PIPE WRENCH.

No. 482,527. Patented Sept. 13, 1892.



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UNITED STATES PATENT OFFICE.

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PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 482,527, dated September 13, 1892.

Application filed May 16, 1892. Serial No. 433,110. (No model.)

To all whom it may concern:

Be it known that I, DANIEL R. PORTER, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

My invention has relation to that class of devices known as "pipe-wrenches;" and it has for its objects the simplification of the construction, reducing the cost of manufacture, and providing improvements whereby when the jaws are separated to operate on larger pipe, and a greater strain is exerted upon the wrench the thread of the adjusting-screw may be given increased bearing in its end.

Another object of my invention is to provide such improvements in wrenches as will reduce the width of the head of the wrench to a minimum.

To these ends my invention consists of a wrench comprising a fixed and a movable jaw, the shanks of which are arranged parallel with each other, a rocker pivoted to the fixed jaw and extended above the shank of the movable jaw, the latter having its rear end upturned, and an adjusting-nut for the movable jaw having a bearing in the upturned end and threaded into the adjusting-nut.

My invention also consists of improvements incidental to the foregoing, all as is hereinafter more fully described and explained.

Reference is to be had to the annexed drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

In the drawings, Figure 1 is a side elevation of my improved wrench complete. Fig. 2 is a similar view, partially in section, the handle of the wrench being represented as broken off. Fig. 3 is a transverse sectional view taken on the line 3 3 of Fig. 1.

In the drawings, *a* designates the fixed jaw, and *b* the movable jaw. The fixed jaw is provided with a shank *c*, upon the outer end of which is affixed the handle *d*. The fixed jaw is rabbeted, as represented at *e*, for the reception of the rounded ears *f* of the rocker *g*, a pivot *h* passing through the said ears and fixed jaw, as shown. The rocker *g* is extended above the shank *i* of the movable jaw, and the extended portion is constructed as a nut *j* for the reception of the thread-adjusting screw *k*, which is tapped therein and has a bearing in the upturned end *l*, constituting an integral part of the rearward end of the shank *i*. A shoulder *m* is formed on the adjusting-screw and bears against the inner face of the upturned end *l*, while a thumb-piece *n* is fixed upon the outer end of the adjusting-screw, as shown. By the construction and arrangement of parts thus far described it will be seen that the movable jaw may be readily adjusted by manipulating the thumb-piece *n* with the thumb and fingers of the hand, and that the wider the jaws are separated the greater will be the bearing of the thread of the adjusting-screw in the nut *j*, so that when the greater strain is exerted upon the wrench, as when it is bearing upon pipe of large size, the adjusting-screw may have greater bearing in the nut and so protect the thread of the screw against becoming bruised or damaged by the strain thereon. The fixed jaw *a* is provided with a bearing *o*, which is adapted to receive bearing *p*, formed on the lower forward surface of the rocker *g*, so that when the two bearings mentioned come together the jaws cannot further close upon the pipe, and in this way the crushing of the latter is avoided.

q r represent springs interposed between the fixed and movable jaws on opposite sides of the pivot-pin *h* to maintain the jaws and their shanks in proper relative position.

It will be observed that by my improvements an exceedingly simple and at the same time efficient wrench is provided for the purpose mentioned.

Having thus described the nature of my invention and explained a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its employment, I declare that what I claim is—

1. A wrench comprising in its construction fixed and movable jaws having their shanks arranged parallel with each other, a rocker pivoted on the fixed jaws, a nut forming an integral part of the rocker and extended above the shank of the movable jaw, the last-mentioned shank being provided with an up-

turned end, and an adjusting-screw having a bearing in said upturned end and threaded into said nut, as set forth.

2. In a wrench, a fixed jaw, a rocker pivoted thereto having a threaded opening, and a channel intermediate the threaded opening and the fixed jaw, a movable jaw working in the channel and having an upturned end, and an adjusting-screw loosely journaled in the said end and engaging the threaded opening in the rocker, as set forth.

3. In a wrench, a fixed jaw, a rocker pivoted thereto having a threaded opening, and a channel intermediate the threaded opening and the fixed jaw, a movable jaw working in the channel and having an upturned end, an adjusting-screw loosely journaled in the said end and engaging the threaded opening in the rocker, and springs interposed between the rocker and the fixed jaw, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 21st day of April, A. D. 1892.

DANIEL R. PORTER.

Witnesses:

ARTHUR W. CROSSLEY,

RONTÉ FORWITZ.