

C. Pinder

Wrench.

N<sup>o</sup> 17,229.

Patented May 5, 1857.

Fig. 1.

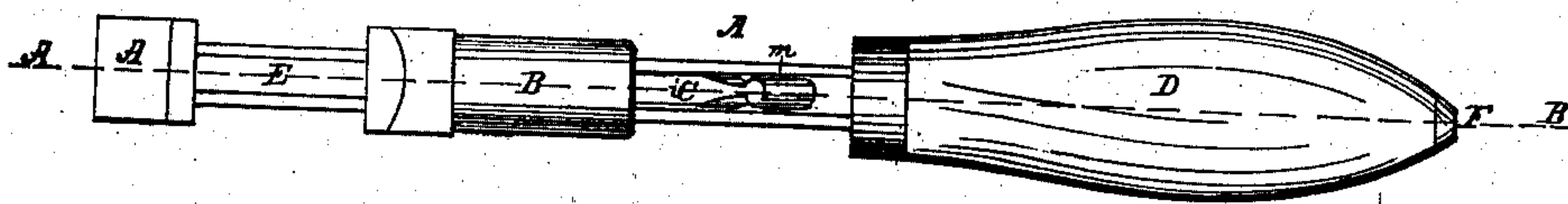


Fig. 2.

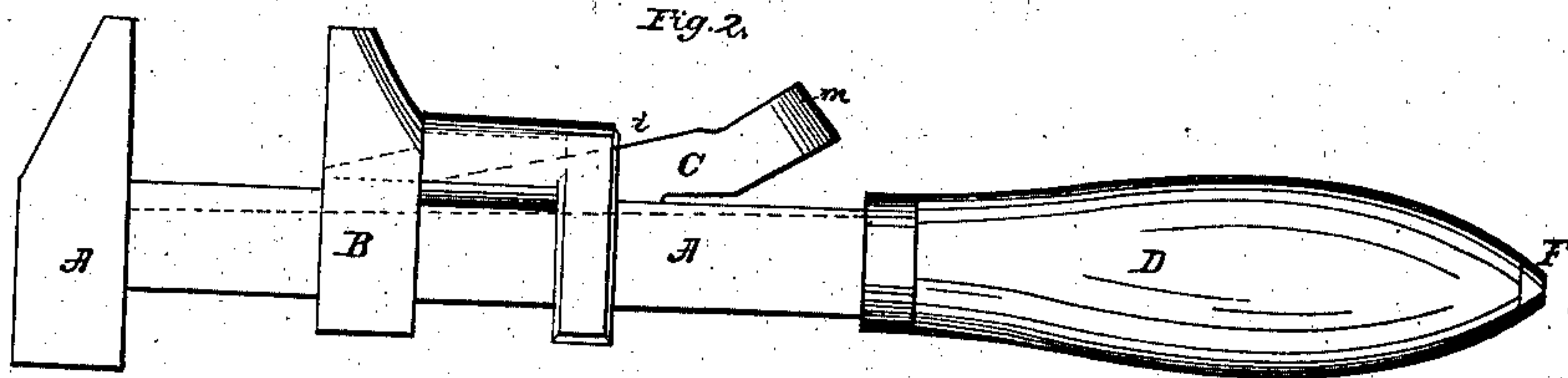


Fig. 3.

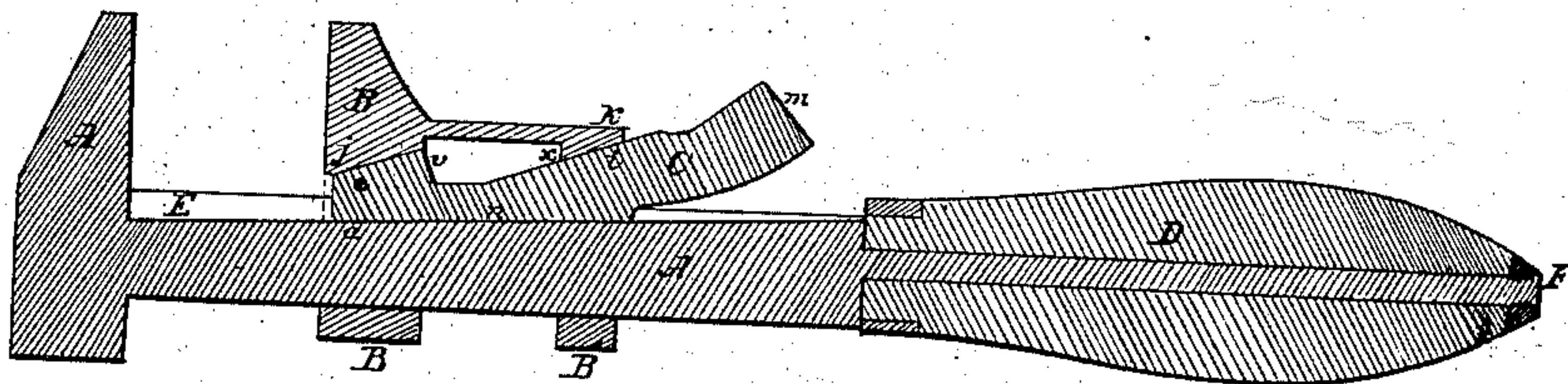
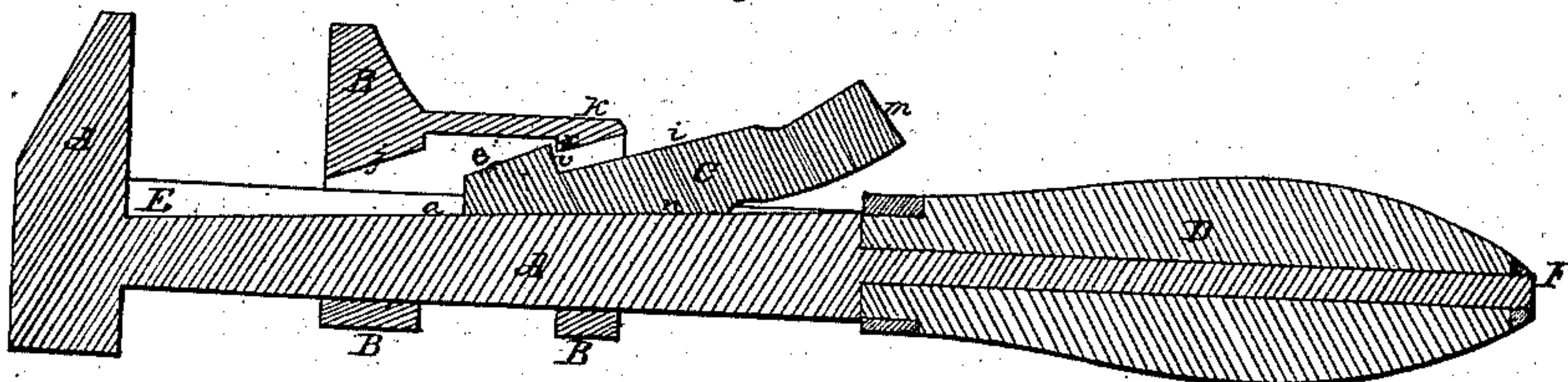


Fig. 4.



Witnesses:  
Charles A. Smith  
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Inventor:  
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# UNITED STATES PATENT OFFICE.

CHARLES PINDER, OF LOWELL, MASSACHUSETTS.

## WRENCH.

Specification of Letters Patent No. 17,229, dated May 5, 1857.

*To all whom it may concern:*

Be it known that I, CHARLES PINDER, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a new and useful Variable and Adjustable Wrench; and I hereby declare that the following specification, in connection with the accompanying drawings and references thereon, constitutes a lucid, clear, and exact description of the construction and use of the same.

In referring to the said drawings, Figure 1, denotes a plan or top view; Fig. 2, a side view or elevation of it; Fig. 3 a section on line A, B, Fig. 1, showing the movable and adjustable jaw of the wrench tightened by the key ready for operation. Fig. 4 denotes a section of the same, with the movable jaw disengaged from the bar on which it slides, by the backward movement of the key, so that this jaw can be slid and secured in any desired position for use.

*Invention.*—The nature of my invention consists of my within described wrench so constructed that the movable jaw can be moved to the desired position by loosening or drawing back the key, by the thumb and fore finger of the hand holding the wrench, and the holding of this jaw firmly in such adjusted position, by a wedge or key acting in a groove or a plane formed in the main bar, and inclined from the surface of this bar as hereinafter set forth.

*Construction.*—To enable persons skilled in the art to which my invention appertains to construct and carry out the same, I will describe it as follows: All the parts of the wrench or of which it is composed, except the handle, may be made of malleable iron and cast from suitable patterns. The main bar of the wrench, seen at A in the several figures, terminates at one of its ends in the stationary jaw, while its other end is formed a shank to receive the handle D, which is secured thereon by the nut F. At B can be seen the movable jaw so fitted as to slide freely on the bar A. A groove or channel, seen at E, Figs. 1, 3 and 4, is formed in the top of the bar A, and at an angle or incline from the surface of this bar. I then construct a key or wedge, seen at C, the lower edge of it being fitted so as to slide on the surface *a*, or bottom of the groove E, while the top of this wedge is formed two inclined planes or bevels, seen at *e* and *i*, Figs. 3 and 4, at proper distances apart to give stability

to the jaw B when holding it for use, which bevels are fitted to corresponding inclines or bevels *j* and *k* formed in the inside of the movable jaw B, as seen at Figs. 3 and 4, so that the key C as it is pushed forward or into the movable jaw B the bevels or incline planes on the key C and those in the movable jaw B are brought in contact, which forces the lower edge *n* of the key C down or against the bottom *a* of the groove E in the bar A, by which means the movable jaw B, is firmly held for use, and when so held it cannot slip back because the key would necessarily have to rise on the incline E, to allow the jaw B to slip which is impossible, and the surfaces *e* and *i*, *j* and *k* are made such a bevel they cannot slip when using the wrench, consequently the jaw B can thus be instantly adjusted and firmly held in any desired position, and can also be released by the key C operated by the thumb or finger.

It is very desirable to have the wrench so constructed that the movable jaw can be easily and conveniently adjusted by the same hand in which the wrench is held, and it is of still greater importance that the adjustable jaw can be instantly moved from one extreme to another *i. e.* from a small nut to a large one or vice versa, without the trouble and time of turning a screw the whole distance of the variation of the movable jaw. Both of these desirable features are contained in my wrench.

The surface or projection *v* on the key C, prevents the jaw B, from dropping off the key C, when disengaged from the bar A. By simply moving back the key C, it disengages the jaw B and allows this jaw to be moved where desired on the bar A, and then tightened, all by the same key and without removing the thumb from this key, and also while holding it in the same hand and without any other assistance. The greatest simplicity of construction and manner of operation for use is embodied in my wrench, which will be readily understood.

*Use.*—When desired, the position of the movable jaw B, can be changed instantly as follows: The wrench being seized in the hand by the handle D the thumb of this same hand is placed upon the surface *m* of the key C, by which it is moved slightly toward the handle D, by a gripping or pressing movement, which instantly disengages the movable jaw B, so that it may then be freely slid to any desired position, bringing



the surface *v*, on the key C against the surface *w* on the movable jaw B, by the same thumb or forefinger of the same hand in which the wrench is held, operating on the same key C, and the jaw B, may be tightened by pressing the wedge and key C, into the jaw B with the same thumb or finger, which will render the jaw B very firm and ready for use.

10 I claim—

Moving, holding, and releasing the movable jaw B, by means of the double wedge

or key, with its incline planes *e* and *i*, operating against similar ones *j* and *k* formed in the movable jaw B, while the lower surface *n* of this wedge comes in contact with the incline plane *a*, in the groove E formed in the wrench bar A, essentially in the manner and for the purposes fully set forth.

CHARLES PINDER.

Witnesses:

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