

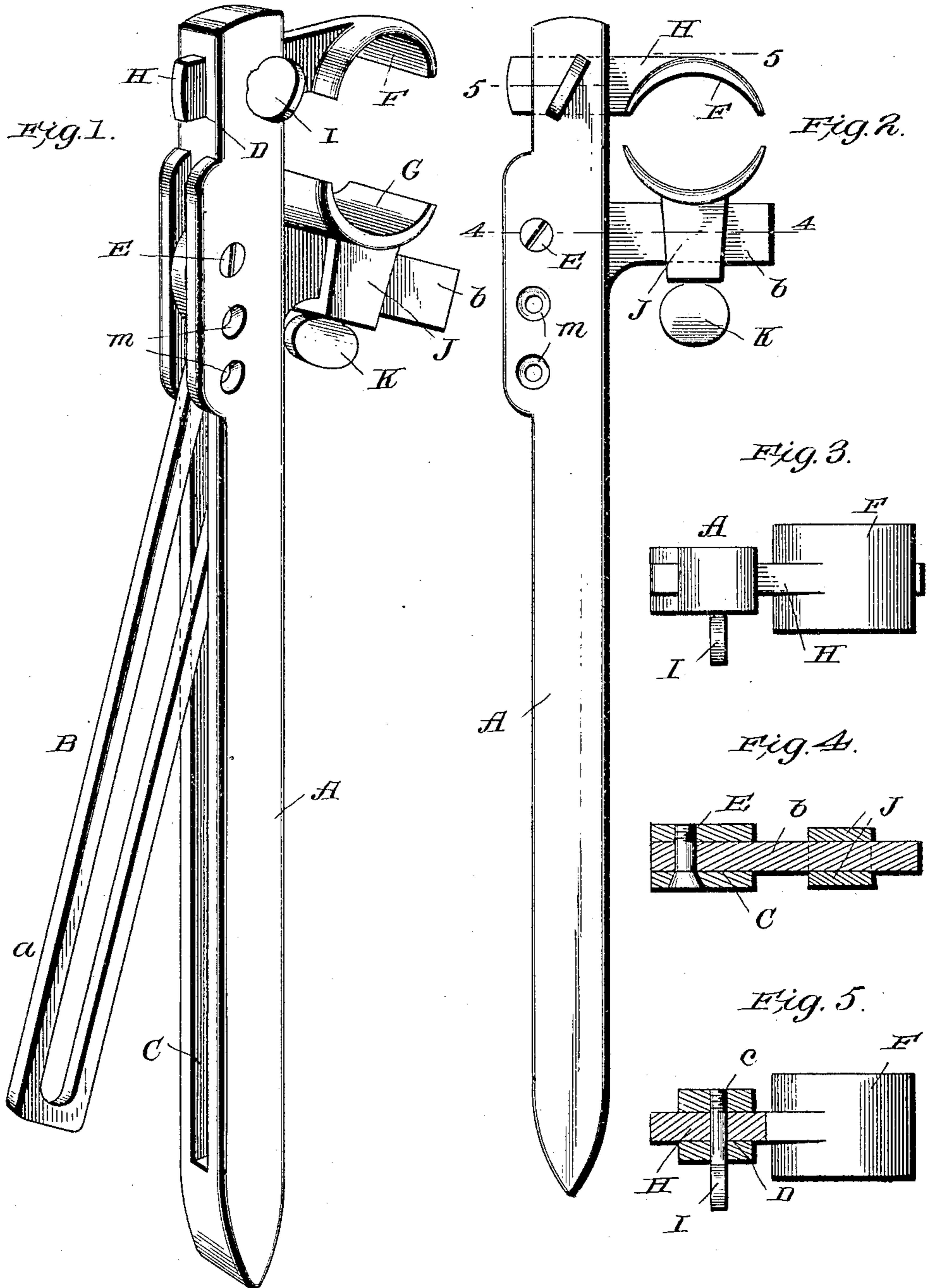
No. 869,527.

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A. L. SHEARS.

WRENCH.

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Witnesses
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UNITED STATES PATENT OFFICE.

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WRENCH.

No. 869,527.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALBERT L. SHEARS, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented new and useful Improvements in Wrenches, of which the following is a specification.

My invention pertains to wrenches and more particularly to wrenches of the type in which the jaws are held in proper relation for holding a piece of work by the grip of the hand; and it consists in the peculiar and advantageous wrench hereinafter described and particularly pointed out in the claims appended.

In the accompanying drawings, forming part of this specification: Figure 1 is a perspective view of my novel wrench as the same appears when opened. Fig. 2 is a side elevation of the wrench showing the same as closed. Fig. 3 is a plan view of the closed wrench, and: Fig. 4 is a transverse section taken in the plane indicated by the line 4—4 of Fig. 2, while Fig. 5 is a transverse section taken in the plane indicated by the line 5—5 of Fig. 2.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is the main handle member of the wrench, and B is the other handle member which is arranged to move into and out of the main handle member in the manner hereinafter pointed out in detail.

The main handle member A is provided in the direction of its greatest width with a slot C which extends throughout the greater part of its length, and is also provided at about the proportional distance illustrated in advance of the slot C with a socket D disposed in the same direction as said slot.

The handle member B is pivotally connected to the main handle member A through the medium of a pintle E which extends transversely through the members; and said member B is made up of a comparatively long arm *a* which is slotted for the sake of lightness and is of a length corresponding to that of the slot C, and a short arm *b* which reaches at a right angle from the forward end of the arm *a*.

In addition to the handle members A and B and the pintle E, the wrench comprises a jaw member F which is preferably, though not necessarily, shaped as shown so as to engage a pipe or the like, and a complementary jaw member G which is correspondingly shaped. The jaw member F is provided with a straight shank H, and this shank is arranged in the socket D of the handle member A, and is removably secured in said socket through the medium of a screw I which extends through opposite walls of the socket and through the shank H.

and is threaded into one wall of the socket as indicated by *c* in Fig. 5. The jaw member G is provided at its back with a loop J which receives the short arm *b* of the handle member B and is designed to be adjustably fixed on said arm through the medium of a set screw K which bears in the back wall of the loop J.

It will be gathered from the foregoing that in order to open my novel wrench, the handle member B is moved to the position shown in Fig. 1 relative to the handle member, and it will also be gathered that when it is desired to close the wrench the long arm *a* of the handle member B is swung into the socket C of the handle member A. With the parts in this latter position it will be apparent that the handle member B is reinforced by the handle member A in such manner that said member B is subjected to but little strain incident to the use of the wrench, and it will also be apparent that the user of the wrench is enabled by gripping the rear portions of the handle members A and B to hold the jaws F and G to their work with the expenditure of but a minimum amount of effort.

As will be readily understood the jaw member F is readily removable from the handle member A to give place to another jaw member of different shape or size, and the jaw member G is likewise removable for a similar purpose from the short arm *b* of the handle member B.

It will be readily appreciated from the foregoing that my novel wrench is efficient in operation and simple and compact in construction, and at the same time the handle members A and B are so arranged relative to each other that when the wrench is closed upon and used to turn a piece of work the wrench is enabled to withstand considerable strain.

The construction herein shown and described constitutes the preferred embodiment of my invention, but it is obvious that in practice various changes in the construction and relative arrangement of parts may be made without involving departure from the scope of my invention as defined in the claims appended. When deemed expedient by the manufacturer, the main handle member A may be provided with a plurality of apertures *m* to receive the pintle E, and handle members B having arms *a* of a less length than the member B illustrated may be employed interchangeably with the member B, this in order that the wrench may be made to properly fit pipes and other pieces of work of various sizes.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

The combination in a wrench, of a handle member hav-

ing a longitudinal slot and also having a socket arranged in advance of and disposed in the same direction as the slot, a second handle member pivoted in the forward portion of the slot of the first mentioned member and comprising a long arm arranged to be swung into and out of said slot and a short arm reaching at a right angle from the forward end of the long arm, a jaw member having a shank arranged and removably secured in the socket of the first mentioned handle member, and a second jaw mem-

ber having a loop receiving and removably secured on the short arm of the second mentioned handle member. 10

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALBERT L. SHEARS.

Witnesses:

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