

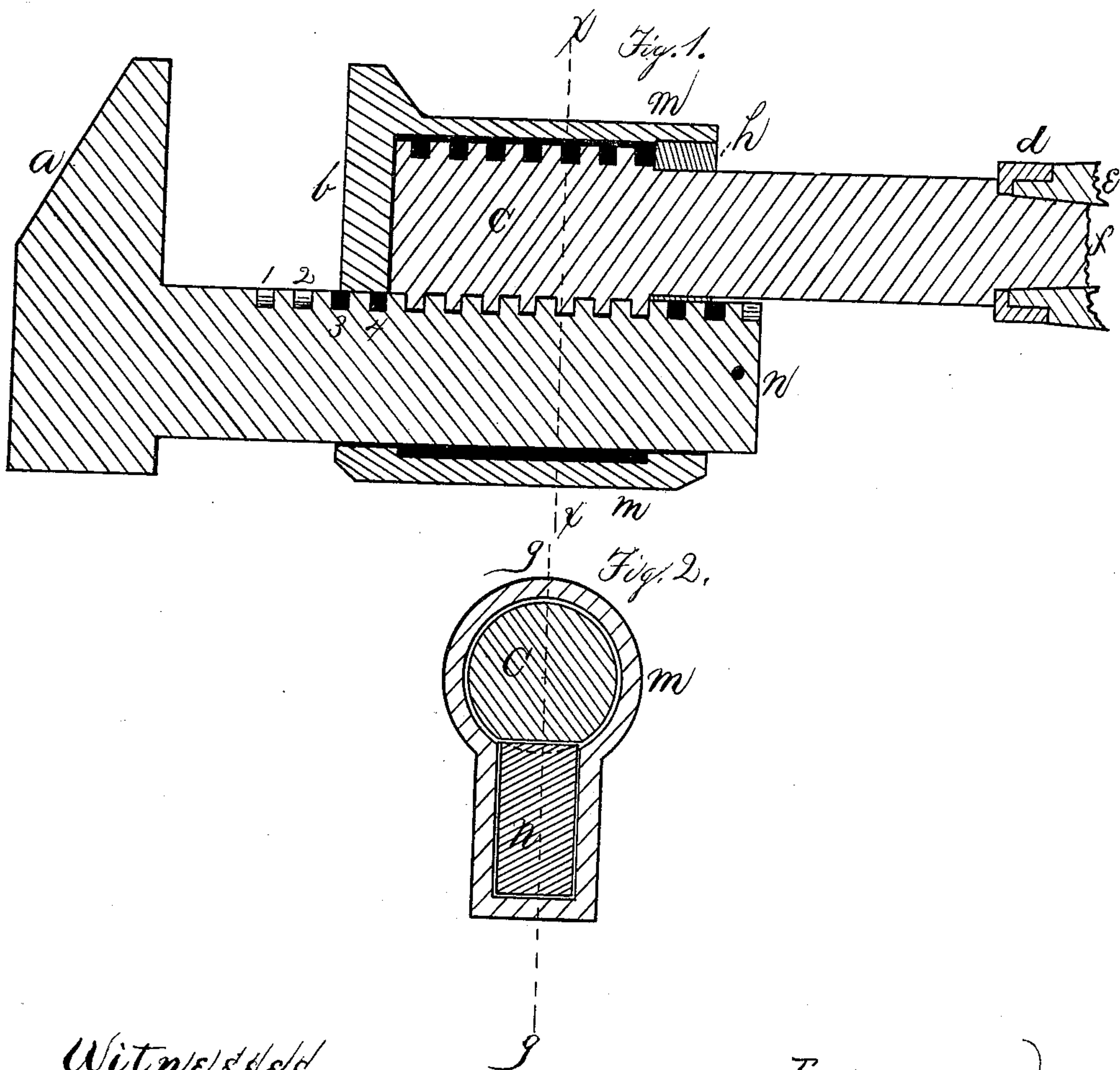
(No Model.)

J. A. FAIRBANKS.

WRENCH.

No. 329,542.

Patented Nov. 3, 1885.



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# UNITED STATES PATENT OFFICE.

JAMES A. FAIRBANKS, OF AUGUSTA, MAINE.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 329,542, dated November 3, 1885.

Application filed June 29, 1885. Serial No. 170,082. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. FAIRBANKS, of Augusta, in the county of Kennebec and State of Maine, have invented a new and useful Improvement in Wrenches, which improvement is fully set forth in the following specification and accompanying drawings, which represent sections of a wrench constructed according to my invention.

Figure 1 is a longitudinal section through the line *g g*, Fig. 2. Fig. 2 is a cross-section through the line *x x*, Fig. 1.

Like letters of reference indicate like parts.

My invention relates to that class of wrenches which have jaws adjustable by means of screw-threads cut in various parts thereof. The ordinary parts of the wrench are represented, but need no extended description. *e* is the wooden handle; *f*, the shank passing through same, and *d* the ferrule thereon. *a* and *b* are the jaws of the wrench; *n*, the shank of the jaw *a*. *m* is the case inclosing the bolt *c* and other parts of the wrench. The shank *n* has formed in the throat thereof concave screw-thread sections of internal screws, 1 2 3 4, &c. The bolt *c* has external screw-threads cut thereon to fit those cut in the shank. In Fig. 1 the bolt *c* is integral with and forms a part of the shank *f*, and is secured in the case *m* by the sleeve *h*.

The operation of a wrench constructed according to my invention as illustrated in Figs. 1 and 2 is as follows: The turning of the handle to the right closes the jaws, the screw cut on the bolt *c* engaging that cut in the shank *n*. The leverage given by the handle enables the operator to set the jaws hard against the nut or other object. The jaws are loosened by turning the handle to the left, the sleeve *h* preventing the bolt *c* coming out of the case *m*. To give a quick return, the peculiar construction of the bolt *c* is shown in Fig. 2. In order to give this, the bolt *c* is made flat on one side, the screw being cut off, as indicated

in Fig. 2. Then when the handle is thrown to the left the flat surface on *c* is brought on the flat throat of the shank, as indicated in Fig. 2. It will be seen that then the screw-threads cut on the bolt *c* will not engage those cut in the shank *n*, but, the flat surfaces coming together, the shank *n* will slide freely through the case *m*. Then, when adjusted to the object, the handle, having the bolt *c* thereon, may be turned to the right, the threads on the bolt engage those in the shank, the jaws are locked, and, by turning the handle to the right, the jaws will be closed on each other, and the object firmly held between.

From the foregoing description it will be seen that my invention can be applied to several styles of wrenches and operated with the bolt *c* either upon the handle or as a separate piece.

I claim as my invention—

1. In a wrench of the class described, a handle having a bolt integral therewith, said bolt being connected to one jaw of the wrench and having an external screw cut thereon, in combination with the second jaw of the wrench, all operating as fully described.

2. In a wrench of the class described, a handle having a bolt integral therewith, said bolt being connected to one jaw of the wrench and having an external screw cut thereon, said screw being cut off on the side to give a quick return, in combination with the second jaw of the wrench, all operating as fully described.

3. In a wrench of the class described, the combination of the shank *f*, having the bolt *c*, with external screw integral therewith, the jaw *b* on the case *m*, the sleeve *h*, and the shank *n*, having concave screws 1 2 3 4, &c., and jaw *a* thereon.

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Witnesses:

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