

S. Chapman,

Wrench.

No. 106467.

Patented Aug. 16. 1870.

FIG. 1.

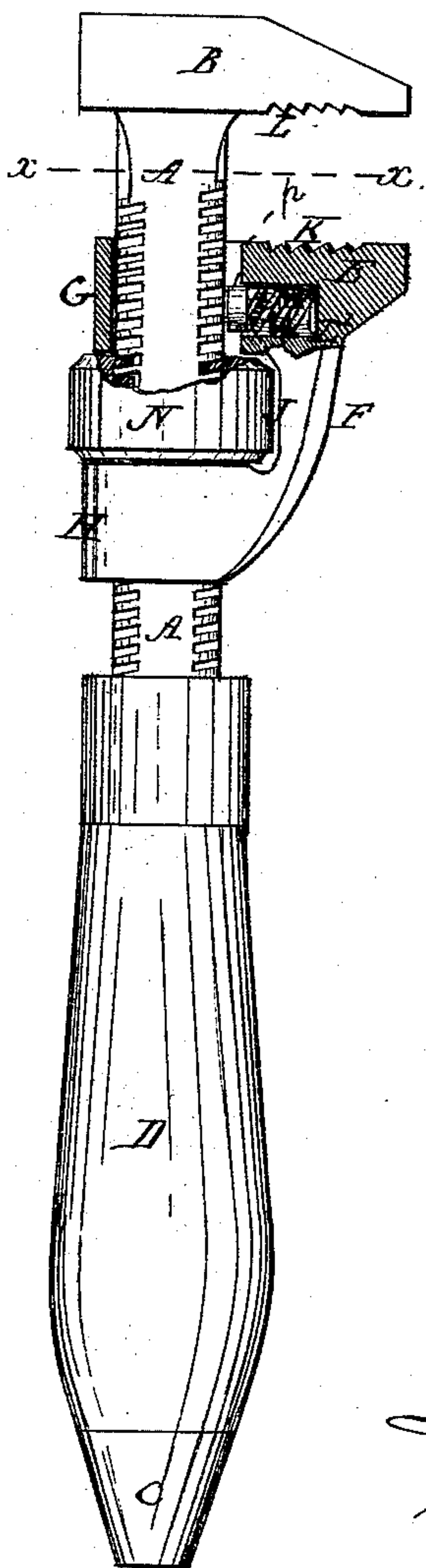
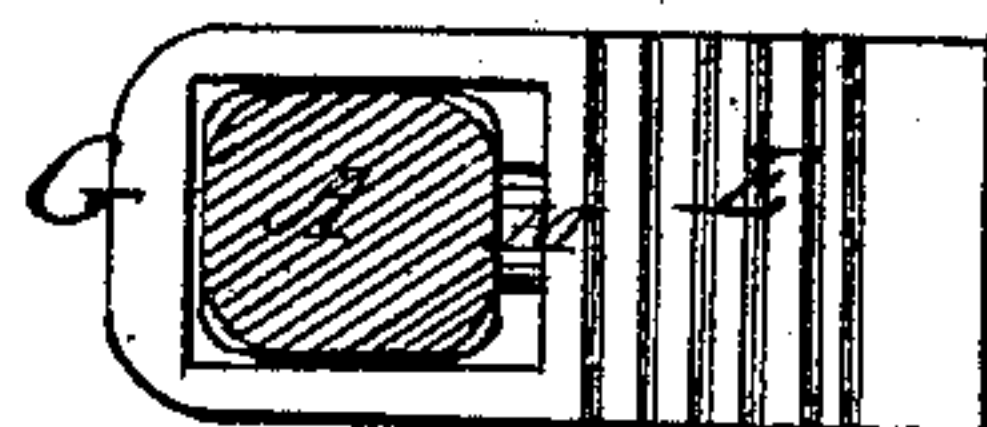


FIG. 2.



INVENTOR.

Sylvanus Chapman

WITNESSES.

Albert M. Brown.

Edwin W. Brown

United States Patent Office.

SYLVANUS CHAPMAN, OF CHARLESTOWN, MASSACHUSETTS.

Letters Patent No. 106,467, dated August 16, 1870.

IMPROVEMENT IN WRENCHES.

The Schedule referred to in these Letters Patent and making part of the same

To all persons to whom these presents shall come:

Be it known that I, SYLVANUS CHAPMAN, of Charlestown, in the county of Middlesex and State of Massachusetts, have invented a certain new and useful Improvement in Wrenches, and that the following is a full and exact description of the same, reference being had to the accompanying drawing.

The present invention relates to "monkey-wrenches," so known, and consists in the movable jaw, which, with its shank, is composed in itself of two loops or clasps to embrace the stock or bar of the wrench, is in and of one piece of metal, the operating nut being arranged between the said loops, being so constructed by and at one of the said loops that the grip of the wrench-jaws, when the wrench is turned in the one direction, will be firm and rigid on the device to which the jaws have been previously adjusted, but, when the wrench is turned in the opposite direction, said grip of the jaws will be self-relieved, the jaws sliding freely around on the said device.

The wrench is thus made susceptible of use for purposes where a ratchet-wrench heretofore is ordinarily employed.

In the accompanying drawing my improvement in wrenches is illustrated.

Figure 1 is a side view of a monkey-wrench constructed according thereto, the movable jaw and operating nut being in partial section.

Figure 2 is a transverse section in plane of line *x* *x*, fig. 1.

A in the drawing represents the stock or bar of a monkey-wrench.

This stock A at one end terminates in a fixed jaw, B, and at the other end has secured to it, by means of a screw-nut, C, a handle, D.

The stock A, in transverse section, is made of a square shape, with the corners or edges thereof rounded off, and constructed with screw-threads, *a*, along between the fixed jaw B and handle D.

E, the movable jaw of the wrench.

F, the shank to jaw.

This shank is constructed with two loops or clasps, G and H, the one in the tail of the jaw, and the other removed therefrom, but connected on one side by the bar F, leaving a space, J, between the two clasps.

The clasps G and H, jaw E, and connecting-bar F, are of one and the same piece of metal, and by the clasps the jaw is arranged upon the stock A, with the face K of the jaw E toward the face L of the fixed jaw B.

The internal periphery of the clasp G is in one direction made larger than the diameter of the stock A in a similar direction, (see drawing,) to allow the jaw to have a vertical play or movement on the stock, the center or fulcrum of motion being at the other clasp H, that, by its internal periphery, is made of or about the periphery of the stock.

L², a socket in tail of jaw E.

In this socket is located a spiral spring, M, bearing on the stock A to hold the clasp G of the jaw by its under side against the under side of the stock.

Within the socket L² of the movable jaw is placed a pin, *p*, formed with a head at one end, in such a manner that the pin is embraced or operated by a suitable spring, so as to force the head of the pin against the stock portion of the wrench.

N, the operating nut of the wrench. This nut is provided with a screw-thread of suitable shape to gear into the thread of the stock A, on which, when the wrench is put together, it is placed in and between the two loops and clasps of the movable jaw.

By turning the nut N to the right or left, the movable jaw will be moved, as the case may be, toward or away from the fixed jaw, as in ordinary monkey-wrenches.

With a wrench constructed in the clasp G of its movable jaw, as described, applied and adjusted to a tube, pipe, or other cylindrical surface, when the wrench is turned in the one direction, that is, in a similar direction to that in which the jaws project beyond the stock A, the grip of the wrench-jaws on the tube is firm and rigid, but such grip, when the wrench is turned in the reverse direction, is released, the jaws passing freely over the pipe, &c., without any action on it.

The spring M arranged within the jaw-clasp facilitates and increases the releasing movement of the jaw, as aforesaid.

From the above description it is obvious that a monkey-wrench is constructed so as to be susceptible of use as ratchet-wrench.

Having thus described my invention,

What I claim as my invention, and desire to secure by Letters Patent, is

1. The pin *p*, arranged within the socket L² of the movable jaw, in such a manner as to be operated upon by a spring, M, substantially as described, for the purpose set forth.

2. The connecting bar F, formed with the loops G and H, in one piece, with the spring M arranged within the socket L² of the jaw E, substantially as described.

3. The clasps G and H, jaw E, and connecting-bar F, formed in one piece, with the operating nut interposed between the clasps G and H, and the spring M located within the socket L² of the jaw E, when combined and arranged to operate in connection with the stock A, formed with the jaw B, substantially as herein shown and described.

The above specification of my invention signed by me this 22d day of June, A. D. 1870.

SYLVANUS CHAPMAN.

Witnesses:

ALBERT W. BROWN,
EDWIN W. BROWN.