(No Model.)

M. M. FUNK.

ADJUSTABLE WRENCH.

No. 593,354. Patented Nov. 9, 1897.

Fig. 1.

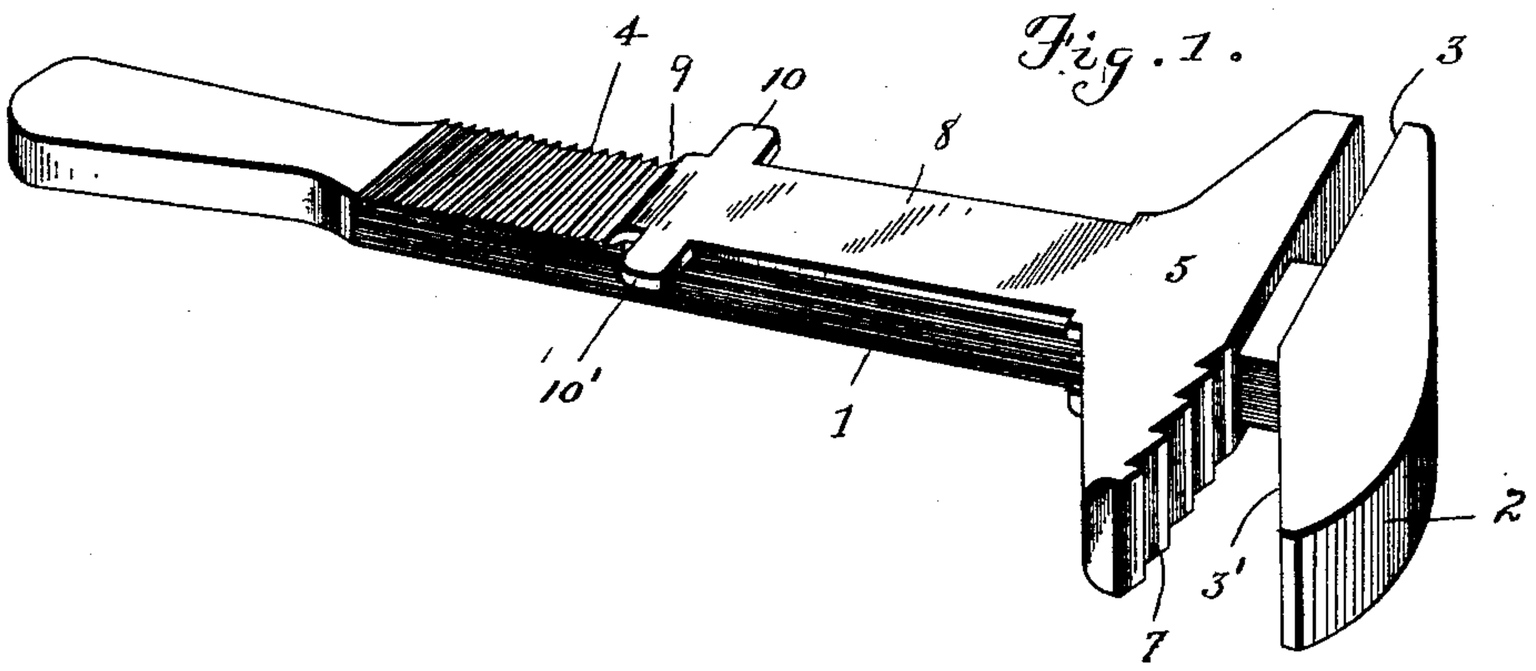


Fig. 2.

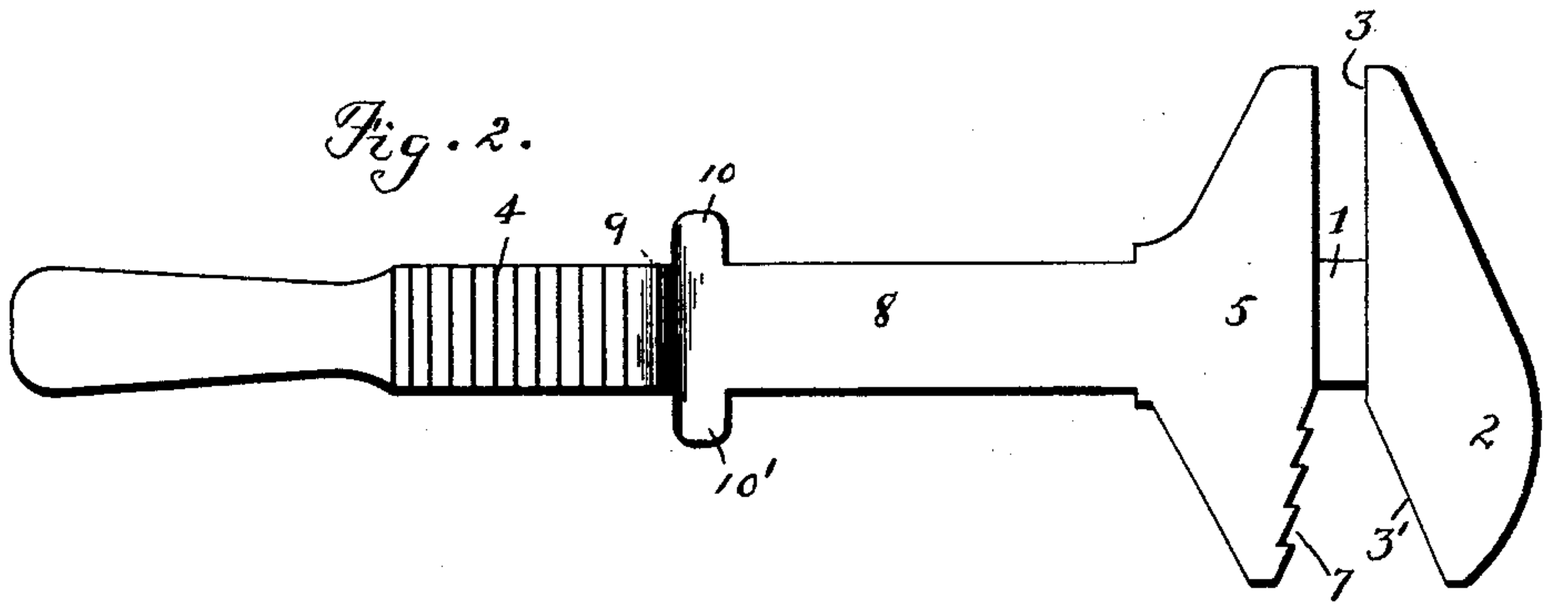
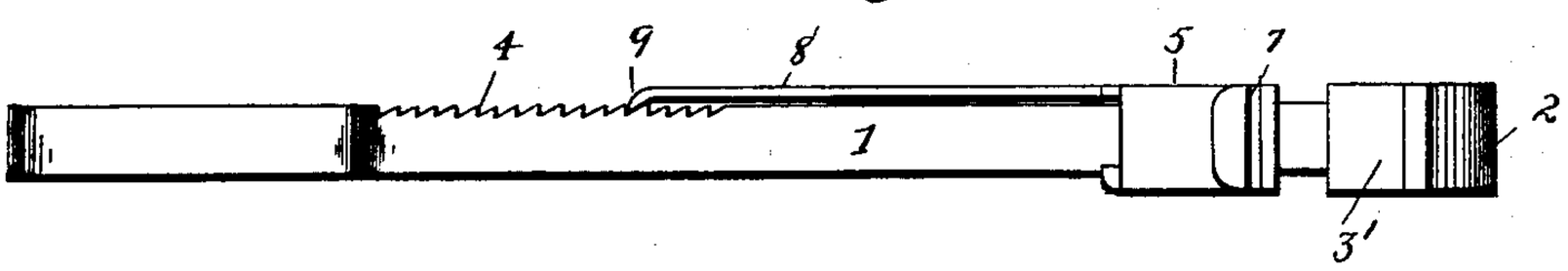


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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ADJUSTABLE WRENCH.

SPECIFICATION forming part of Letters Patent No. 593,354, dated November 9, 1897.

Application filed July 3, 1897. Serial No. 643,398. (No model.)

To all whom it may concern:

Be it known that I, MARK M. FUNK, of Mercersburg, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved adjustable combination nut and pipe wrench, and has for its object to provide a simple device of this character by which either nuts or pipes may be rotated and which may be adjusted with the greatest expedition, so as to engage with any size pipe or nut within the limits of its capacity.

In the drawings herewith forming part of this specification, Figure 1 is a perspective view of my improved adjustable pipe and nut wrench. Fig. 2 is a side elevation. Fig. 3 is an edge view thereof.

In the construction of my improved combination pipe and nut wrench I provide, first, a straight bar or shank portion 1, having secured upon or formed integrally therewith at one end a fixed jaw 2, the said shank portion meeting said jaw approximately of its vertical center. One of the inner surfaces 3 of said jaw 2 is cut so as to form a right angle with the shank 1. The other face 3′ of said fixed jaw is outwardly inclined at a point upon the lateral surface of the shank 1. Near its longitudinal center I provide a plurality of ratchet-teeth 4, said ratchet-teeth being inclined forwardly toward the wrench-head. I next provide a sliding jaw 5, which consists of a portion substantially similar to the fixed jaw and provided in its vertical center with a rectangular aperture adapted for the passage of the shank portion 1. One of the meeting faces of said sliding jaw 5 forms a right angle with the shank 1 and the other portion is inclined backwardly and provided with a series of ratchet-teeth 7, the said ratchet-teeth being inclined toward the outer fixed jaw 2. I next provide, extending backwardly from said sliding jaw 5 in line with said shank portion 1, a lateral spring-plate 8, formed integrally with said jaw and provided at its free end with a downwardly-projected pawl 9, adapted to be engaged successively by the ratchet-teeth 4. The said plate 8 is adjacent to the pawl portion 9, provided with two extended portions 10 10′ for lifting said spring-plate and thereby disengaging said pawl 9 from engagement with said ratchet-teeth 4. By means of the construction hereinbefore set forth the wrench may be incidentally adjusted to either a nut or pipe by either drawing backwardly or moving forwardly the said sliding jaw 5, and after adjustment the said sliding jaw will be held firmly in engagement with the nut or pipe by means of the pawl 9 being engaged by the said ratchet-teeth 4. The outer or shank portion 1 may be formed in any desired shape, either curved or cylindrical in cross-section and provided with a wooden sleeve.

Having thus described my invention, what I claim as new, and desire to secure by means of Letters Patent, is—

1. The combination in an adjustable pipe and nut wrench, of a shank portion, a fixed jaw mounted upon or formed integrally at one end of said shank portion, a sliding jaw mounted upon the shank portion, ratchet-teeth formed upon one of the inner surfaces of said sliding jaw, ratchet-teeth formed upon one of the lateral surfaces of the shank portion, a spring-plate extended rearwardly from said sliding jaw, a pawl formed at the end of said spring-plate adapted to be engaged by the ratchet-teeth upon said shank portion, and laterally-projected portions formed upon said spring-plate adjacent to the end thereof for lifting said pawl out of engagement with said ratchet-teeth.

2. The combination in an adjustable pipe and nut wrench, of a shank portion, a fixed jaw upon the end thereof, one end of said jaw forming a right angle with the shank portion, and the other portion of the jaw inclined outwardly, ratchet-teeth formed upon the lateral surface of said shank, a sliding jaw provided with an aperture adapted to receive said shank, ratchet-teeth formed upon one of the rearwardly-inclined surfaces of the said sliding jaw, a spring-plate projected rearwardly from one of the lateral surfaces of said sliding jaw, a pawl formed upon the end

of said spring-plate adapted to engage with the ratchet-teeth formed upon said shank, and laterally-projected portions formed upon said spring-plate for lifting said pawl out of engagement with said ratchet-teeth.

3. An improved combination pipe and nut wrench, consisting of a shank, a fixed jaw upon one end of said shank, ratchet-teeth formed upon one of the lateral surfaces of said shank, adjacent to its longitudinal center, a sliding jaw provided with a rectangular aperture for the passage of said shank, a spring-plate projected rearwardly from one of the lateral surfaces of said sliding jaw, a pawl formed upon the end of said spring-plate adapted to be engaged by said ratchet-teeth upon the shank, projected portions on said spring-plate adjacent to the end thereof for lifting said pawl out of engagement with said ratchet-teeth, and other ratchet-teeth formed upon one of the inclined inner surfaces of the sliding jaw so as to form in conjunction with the oppositely-inclined surfaces of the fixed jaw a pipe-wrench, the other opposite meeting surfaces of the fixed and sliding jaw forming a nut-wrench, the whole constructed, arranged and adapted for operation, substantially as and for the purpose herein set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MARK M. FUNK.

Witnesses:
W. D. McKINSTRY,
W. E. McKINSTRY.