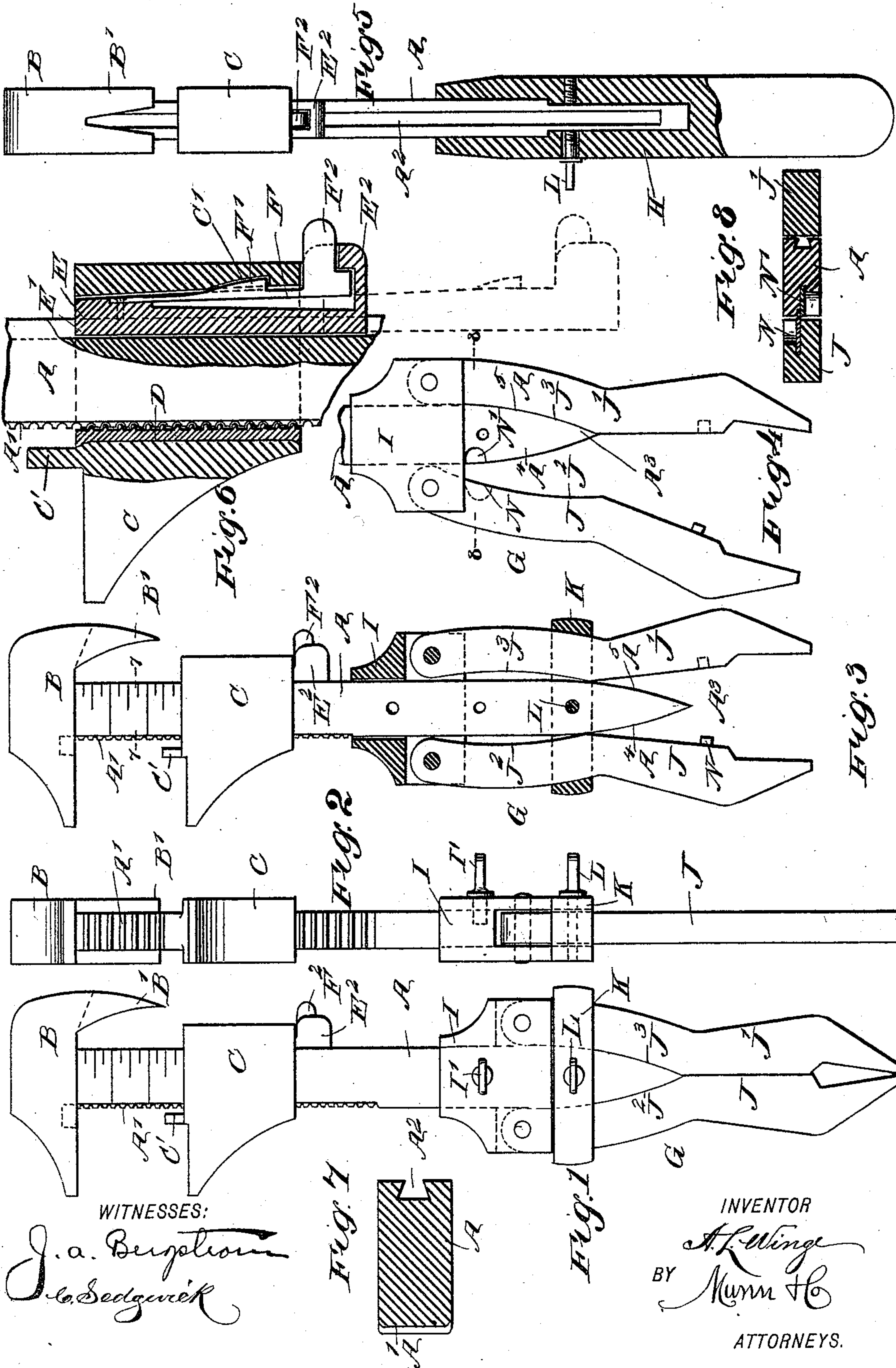


(No Model.)

A. L. WINGE.  
WRENCH.

No. 527,643.

Patented Oct. 16, 1894.



WITNESSES:

J. a. Bergstrom  
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ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ALF L. WINGE, OF MILES CITY, MONTANA, ASSIGNOR OF ONE-HALF TO  
JOHN S. TRUSCOTT, OF SAME PLACE.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 527,643, dated October 16, 1894.

Application filed December 22, 1893. Serial No. 494,430. (No model.)

*To all whom it may concern:*

Be it known that I, ALF LAUBERT WINGE, of Miles City, in the county of Custer and State of Montana, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved wrench, which is simple and durable in construction, and arranged to permit the operator to conveniently and quickly adjust the jaws and lock the same in position.

The invention consists of certain parts and details, and combinations of the same, as will be fully described hereinafter and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is an edge view of the same. Fig. 3 is a sectional side elevation with the end jaws open. Fig. 4 is a side elevation of the end jaws arranged as a wire cutter. Fig. 5 is an edge view of the improvement with a handle substituted for the end jaws, the handle being in section. Fig. 6 is an enlarged sectional side elevation of the movable jaw and means for locking the same to the stock. Fig. 7 is an enlarged sectional plan view of the stock on the line 7—7 of Fig. 3; and Fig. 8 is a sectional plan view of part of the improvement on the line 8—8 of Fig. 4.

The improved wrench is provided with a stock A, carrying at its upper end the fixed jaw B provided at the back with downwardly extending prongs B' to form a claw hammer on the wrench. On the stock A is fitted to slide a movable jaw C, carrying an interior plate formed with teeth D, adapted to mesh in correspondingly shaped teeth A', formed at one side of the stock A. The jaw C is provided with an upwardly projecting lug C', adapted to engage a corresponding recess in the fixed jaw B. The purpose of this lug is to prevent the article clamped between the jaw from striking against and injuring the teeth A' of the stock. The opening in the movable jaw C is sufficiently large to conveniently move the jaw C up or down on the

stock A, without engaging the teeth D with the teeth A'; but in order to lock the jaw C in place on the stock A with the teeth D meshing into the teeth A', I provide a wedge E, adapted to pass into the opening of the jaw C, on the back of the stock A.

The inner face of the wedge E, is formed with a dovetail prong E' fitted to slide in a correspondingly shaped groove A<sup>2</sup>, arranged longitudinally in the back of the stock A. In order to lock the wedge E to the movable jaw C, I provide a spring catch F, fastened to the outer side of the wedge E, as is plainly shown in Fig. 6, the said catch being provided with a projection F' adapted to engage a correspondingly shaped recess C', formed inside of the jaw C, so as to lock the said wedge in position in the jaw C.

The free end of the spring catch F, is provided with a finger piece F<sup>2</sup>, extending outward through the head E<sup>2</sup> of the wedge E, as is plainly illustrated in Figs. 1, 3 and 6, so that the operator by pressing the finger piece F<sup>2</sup>, can disengage the projection F' from the recess C', to slide the wedge E out of the jaw C. When the wedge is in this position, the jaw C can be conveniently moved up or down on the stock A, to move the movable jaw C in engagement with the nut or other object to be taken hold of by the wrench; it being understood that the said nut is also engaged on the one side by the fixed jaw B.

When the jaws B and C are in engagement with the opposite sides of the nut or other article, then the operator pushes the wedge E along the back of the stock A to move it into the opening of the jaw C, so as to draw the latter to one side toward the back, to engage the teeth D with the teeth A', at the same time causing the projection F' to snap into the recess C', thus locking all the parts in position.

The stock A, is preferably graduated to indicate linear measurement, as indicated in Figs. 1 and 3. The outer end of the stock A, terminates in an edge A<sup>3</sup> to form a screw driver on the said stock, the sides A<sup>4</sup> and A<sup>5</sup> of this outer end being curved, as is plainly shown in Figs. 1 and 3.

On the outer end of the stock A is arranged a second gripping device G, comprising a



sleeve I, fitted to slide on the stock and adapted to be secured thereon by a set screw I'. On the sleeve I, are pivoted two jaws J and J', formed in their inner faces with curved edges J<sup>2</sup> and J<sup>3</sup>, adapted to engage the curved sides A<sup>4</sup> and A<sup>5</sup>, so as to move the jaws J and J' apart at their free ends at the time the sleeve I is shifted upward on the stock A.

10 In order to hold the jaws J and J' in position, I provide a ring K, through which extend the said jaws, and which also passes over the front and back of the stock A, as is plainly indicated in Figs. 1 and 3. This ring K is adapted to be secured in place on the stock A, by a suitable pin L. Now it will be seen, that by loosening the set screw I', and moving the sleeve I upward on the stock A, the curved edges J<sup>2</sup> and J<sup>3</sup> of the jaws J and J', move up the similarly curved sides A<sup>4</sup> and A<sup>5</sup> of the stock A, so as to cause the jaws to swing apart, as is plainly illustrated in Fig. 3, whereby the outer ends of the said jaws are moved a distance apart, corresponding to the article to be driven. When this distance between the outer ends of the jaws J and J' is reached, the sleeve I is fastened in place by the set screw I', and then the stock A is manipulated by the operator in the usual manner, to turn the article gripped.

On the jaw J, is secured a knife N, adapted to operate in conjunction with a fixed knife N', secured on the stock A, near the outer end thereof, as is plainly shown in Figs. 4 and 8, it being understood that the sleeve I is then locked in its normal lowermost position by the set screw I', and the ring K is entirely removed from the said jaws. Now it will be seen that by swinging the jaw J open, as shown in Fig. 4, a wire, twine or other article

can be brought between the two knives N and N', and then by closing the jaw J, the wire, twine or other inserted article is cut by the cutting edges of the knives N and N', passing each other.

The gripping device G can be entirely dispensed with, as illustrated in Fig. 5, and a handle H substituted on the lower or outer end of the stock A. In this case the handle H is fastened in place on the stock, by the pin L, as will be readily understood by reference to the said Fig. 5.

It will be seen that the instrument above described, and shown in the drawings, can be conveniently used for various purposes, and its several parts can be readily adjusted by the operator, and the parts locked in place after the article is gripped.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

A wrench, comprising a toothed stock having a fixed jaw whose gripping surface extends essentially perpendicular to the longitudinal axis of the stock, a movable jaw embracing the stock and having longitudinal sliding movement thereon, the said movable jaw being provided with teeth adapted to mesh with those of the stock, a wedge fitted to slide between the movable jaw and the stock, longitudinally of the latter, to lock the movable jaw to the stock, and a spring catch under the control of the operator, and secured to the said wedge, the said catch having a projection adapted to engage a recess in the movable jaw, substantially as described.

ALF L. WINGE.

Witnesses:

J. E. LIGHT,

J. S. TRUSCOTT.