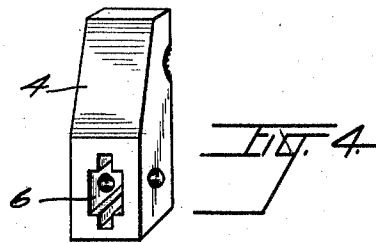
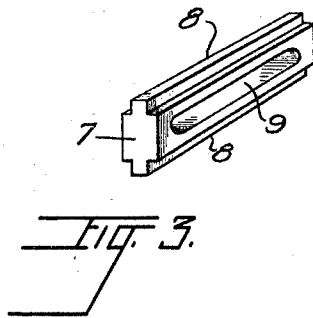
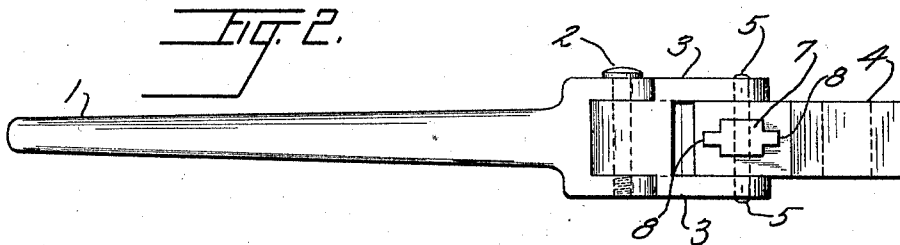
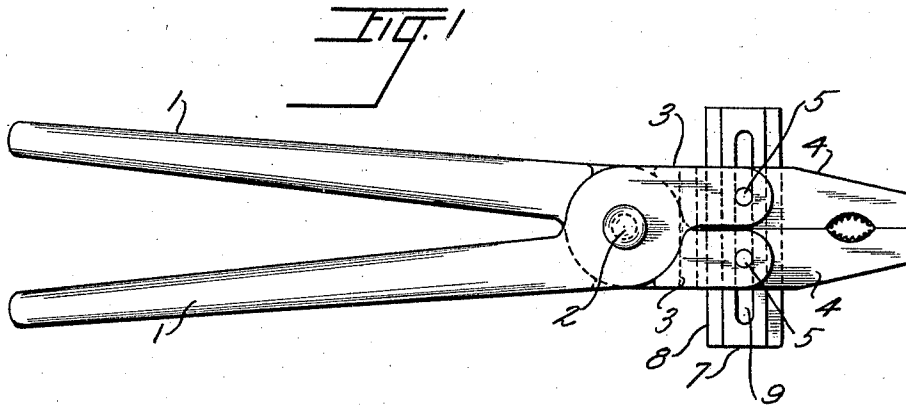


J. A. OLSEN.
PLIERS.
APPLICATION FILED JAN. 17, 1918.

1,315,235.

Patented Sept. 9, 1919.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN ALFRED OLSEN, OF CARIBOU, MINNESOTA.

PLIERS.

1,315,235.

Specification of Letters Patent.

Patented Sept. 9, 1919.

Application filed January 17, 1918. Serial No. 212,240.

To all whom it may concern:

Be it known that I, JOHN ALFRED OLSEN, a citizen of the United States, residing at Caribou, in the county of Kittson and State of Minnesota, have invented certain new and useful Improvements in Pliers, of which the following is a specification.

This invention relates to improvements in pliers and more particularly to that class of pliers in which the grip jaws, as they are opened and closed, so move relatively to each other that the contact faces of the jaws advance and recede toward and from each other in substantially parallel relationship. A further object is to provide pliers of this class comprised of few parts that consequently are cheap to manufacture and that are positive and efficient in operation and that are of durable construction.

With the foregoing and other objects in view the invention consists in the combination and arrangement of parts to be hereinafter fully described, pointed out in the appended claims and illustrated in the accompanying drawing which forms a part of this specification and in which—

Figure 1 is a view in side elevation of my improved pliers.

Fig. 2 is a plan view of Fig. 1.

Fig. 3 is a view in perspective of the guide plate employed.

Fig. 4 is a perspective view of one of the grip jaws.

Like reference characters denote corresponding parts throughout the several views.

The reference numeral 1 denotes the handles which are pivotally connected by the bolt 2 in the usual manner and the said handles are formed with the integral jaw-connecting bars 3, said bars being bifurcated at their free or forward ends to receive the gripping jaws 4 which are pivotally connected to the bars 3 by the pins 5, the said jaws 4 being formed with the alined slots 6 which are disposed at right angles to the pins 5 and are of such shape as to snugly receive the guide plate 7, said plate being formed with the longitudinal edge ridges 8, 8 and with the elongated slot 9 opening in its lateral faces. The jaws 4 are so supported by

the bars 3 that as said bars are separated the jaws and guide plate 7 may move toward the handles 1.

Before the pins 5 are inserted to connect the grip jaws and bars 3 the plate 7 is inserted in the slotted portions 6 of the said jaws 4; the pins 5 are now inserted to pass through the said slot 9 and the tool is assembled. As the handles 1 are opened and closed the bars 3 are opened and closed thus moving the pins 5 toward and away from each other in the slot 9 of plate 7 which operate to retain the contact faces of the said jaws 4 in parallel relationship, the jaws 4 being separated and moved deeper into the bifurcated end of the bars 3 by said handle movement.

What is claimed is:—

1. In pliers comprising handles pivotally connected and formed with integral terminally bifurcated bars, grip jaws disposed in the bifurcated portions of said bars, said grip jaws being formed with alined slots, a pivotal connection between the said grip jaws and the said bifurcated bars, and a guide plate slidably carried in the slotted portions of both grip jaws and slidably pivoted to both of said bifurcated bars.

2. In pliers comprising handles pivotally connected and formed with integral terminally bifurcated bars, grip jaws terminally disposed in the bifurcated bars, said grip jaws being formed with alined slots, a pivotal connection between the said grip jaws and the said bifurcated bars, said pivotal connection being disposed at right angles to the alined slots of said grip jaws, and a guide plate connecting the slotted portions of said grip jaws, said guide plate being formed with an elongated slot receiving the pivots connecting the said grip jaws and bifurcated bars.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two subscribing witnesses.

JOHN ALFRED OLSEN.

Witnesses:

J. A. MCKIBBIN,
ALMA MCKIBBIN.