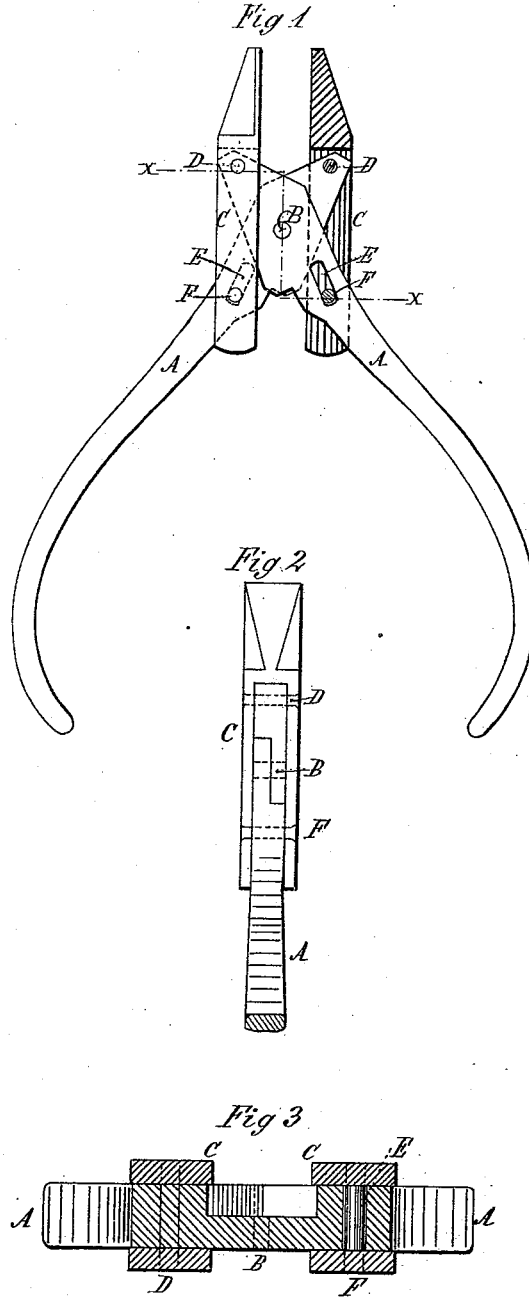


W. QUIRK.
PARALLEL PLIERS.

No. 188,408.

Patented March 13, 1877.



Witnesses:
Albert P. Guitbert.
B. H. Lowry

Inventor:

William Quirk

UNITED STATES PATENT OFFICE.

WILLIAM QUIRK, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THOMAS B. HAGSTOZ AND CHARLES N. THORPE, OF SAME PLACE.

IMPROVEMENT IN PARALLEL PLIERS.

Specification forming part of Letters Patent No. **188,408**, dated March 13, 1877; application filed
February 9, 1877.

To all whom it may concern.

Be it known that I, WILLIAM QUIRK, of the city and county of Philadelphia, and State of Pennsylvania, have invented new and Improved Parallel Pliers and Vises, of which the following is a description:

My invention relates to pliers, vises, &c., in which the jaws are constructed independently of the pivoted handles or levers for working them, and are so pivoted to the handles or levers, and provided with guide-pins, that they always work parallel to each other, while the handles or levers turn on a pivot; and it consists of guide-pins passing through and permanently fastened in the jaws, and so contrived that they slide in the slots grooved out in the handles or levers.

This plan is just the reverse of the one where the guide-pins are fastened to the levers and slide in slots grooved out in the jaws. In a simple and effective way, and without additional metal or bulk, it binds together the two sides of the jaws, prevents their springing under pressure, and makes a strong and neat tool.

Figure 1 is a side elevation of my improved parallel pliers, with a part sectioned to show the slot in the handle or lever in which the guide-pin slides or works. Fig. 2 is a rear elevation of the closed tool. Fig. 3 is a section on the line *xx* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the handles or levers, which are pivoted at B in the manner of ordinary pliers. C represents the jaws, which are pivoted to the levers at D, near the gripping ends, and to their other ends are attached the guide-pins F, which slide in the slots E in the handles A. The pivots D and guide-pins F are equidistant from pivot B.

What I claim is—

Parallel pliers, having guide-pins F passing through and permanently fastened in the jaws C, and sliding in slots E in the levers or handles A, as and for the purpose specified.

WILLIAM QUIRK.

Witnesses:

ALBERT B. GUILBERT,
B. H. LOWRY.