

No. 650,186.

Patented May 22, 1900.

G. D. & L. C. MAXSON.

PLIERS.

(Application filed Dec. 23, 1899.)

(No Model.)

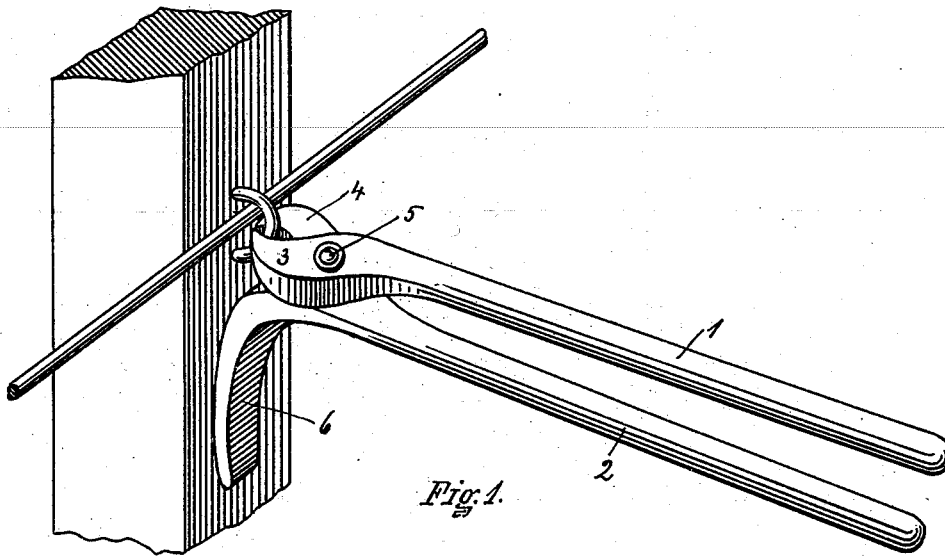


Fig. 1.

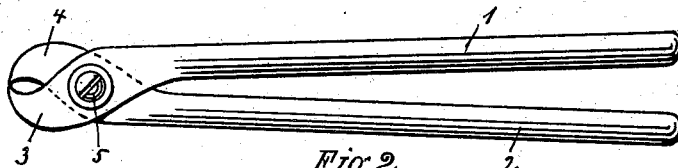


Fig. 2.

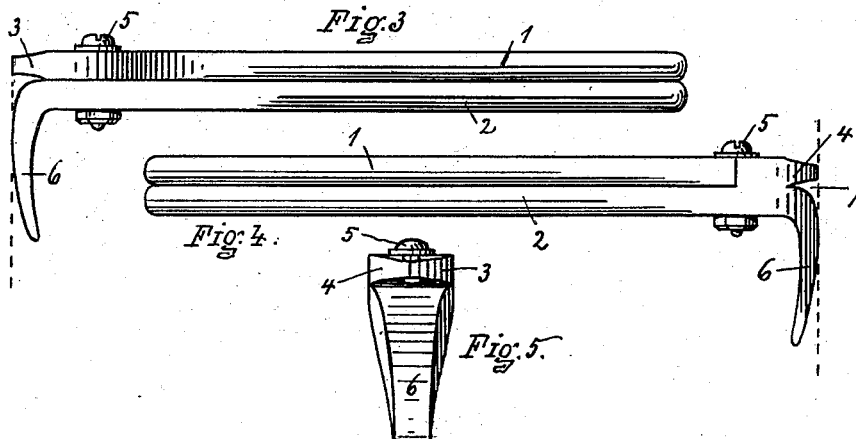


Fig. 3.

Fig. 4.

Fig. 5.

WITNESSES

Rich. A. George
C. Herbert Wilson.

INVENTORS
GEORGE D. MAXSON
LYNN C. MAXSON
BY Milton C. Robinson
ATTORNEY.

UNITED STATES PATENT OFFICE.

GEORGE D. MAXSON, OF BROOKFIELD, AND LYNN C. MAXSON, OF EDMESTON, NEW YORK.

PLIERS.

SPECIFICATION forming part of Letters Patent No. 650,186, dated May 22, 1900.

Application filed December 23, 1899. Serial No. 741,489. (No model.)

To all whom it may concern:

Be it known that we, GEORGE D. MAXSON, of the town of Brookfield, in the county of Madison, and LYNN C. MAXSON, of West Edmeston, in the county of Ostego, State of New York, have invented certain new and useful Improvements in Pliers; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

The object of our invention is to provide pliers which are simple in construction and of a construction which adapts them for effective use in drawing staples, nails, &c., as well as for use as ordinary pliers.

In the drawings, Figure 1 shows a perspective view of our improved pliers. Fig. 2 shows a plan or top view of the pliers. Fig. 3 shows a side or edge view. Fig. 4 shows the opposite side from that shown in Fig. 3. Fig. 5 shows an end view.

Referring to the reference-figures in a more particular description, 1 and 2 indicate the handles, which are integral with the jaws 3 and 4, respectively, and are pivoted together at 5. The working points of the jaws 3 and 4 are made narrow to allow them to be easily inserted in the loops of staples which the tool may be employed to draw. The inside faces of the working parts of the jaws are made concave and come in contact with each other only at the points, as shown in Fig. 2. The handle and jaw 4 includes also a horn or projection 6, extending laterally from the jaws in the plane of the point of separation between the working points or portions of the jaws. The working face of the horn or projection 6 is an irregular curve, as shown. The points of the jaws are substantially in line with the face of the base portion of the horn or projection 6, as appears by the dotted line in Fig. 4, and the jaws are separated from the base portion of the horn or projection by a recess or space 7, providing a clearance-space for the lower prong of a staple when the loop is forced well back in the jaws and which makes the working portions

of the jaws have a separate and individual nature, permitting their use as ordinary pliers and enabling the points to be forced into wood or other material in getting under the heads of nails and into the loops of staples which are driven deeply into the wood.

In the particular use for which these pliers are adapted the points of the jaws, which are made narrow, as shown in Fig. 2, to enable them to grasp staples the loops of which are driven into uneven surfaces or depressions, are inserted into the loop of the staple and the handles pressed together, which operation grips the points of the jaws into the loop of the staple, and by reason of the shape of the working faces of the jaws, as set forth, the loop of the staple is forced back into a stronger portion of the jaws away from the points before the strain of drawing the staple is brought upon the jaws. If the loop of the staple is driven close to the surface of the wood, the foregoing operation will force the narrow points of the jaws into the wood, making the relative position of the jaws and staple the same as in the last-mentioned case. After securing hold of the staple the handles of the pliers are then borne down, forming a lever the fulcrum of which is first at the upper or base portion of the horn, where a powerful leverage is obtained. The staple in being drawn offers the strongest resistance at the starting-point. The resistance constantly decreases until it is fully withdrawn from the wood. As the handles are borne down the fulcrum constantly changes toward the lower portion of the horn or projection 6, where a less powerful leverage is obtained. By this construction there is provided a leverage the power of which constantly decreases as the resistance offered by the staple decreases, whereby a substantially-uniform amount of power is utilized throughout the operation. As the fulcrum constantly changes farther from the staple as it is being drawn, the staple is drawn more approximately in a direct line than if the fulcrum were at one fixed point where the maximum leverage could be obtained. The staple is also drawn without being bent, so that it is in condition for subsequent use. The tool may be operated substantially the same in drawing nails.

What we claim as new, and desire to secure by Letters Patent, is—

The combination in pliers of the jaws or parts 3 and 4 formed with narrow points and including handles, respectively, pivoted together, and the laterally-projecting part 6 having an irregular-curved bearing-face, the portion of which face nearest to the working points of the jaws is in a plane with that of the working points of the jaws, the part 6 being formed integral with the jaw or part 4 and springing from a point back of the work-

ing point of the jaw 4 whereby the recess or clearance-space 7 is provided, substantially as set forth.

In witness whereof we have affixed our signatures, in presence of two witnesses, this 8th day of December, 1899.

GEORGE D. MAXSON.
LYNN C. MAXSON.

Witnesses:

HENRY M. AYLESWORTH,
ADOW P. BROWN.