

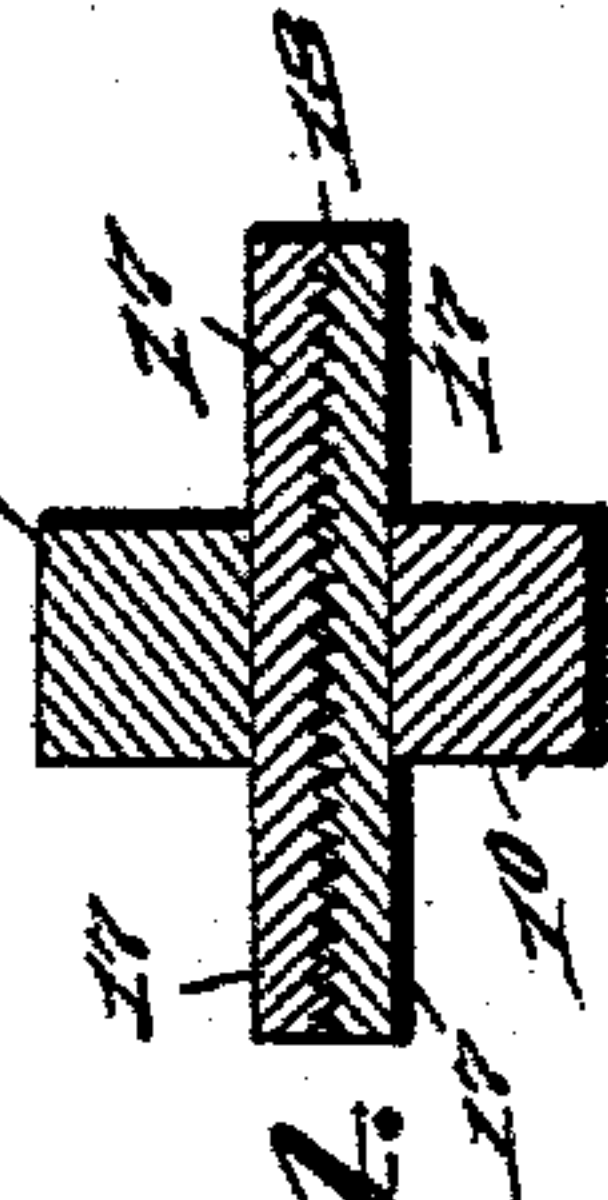
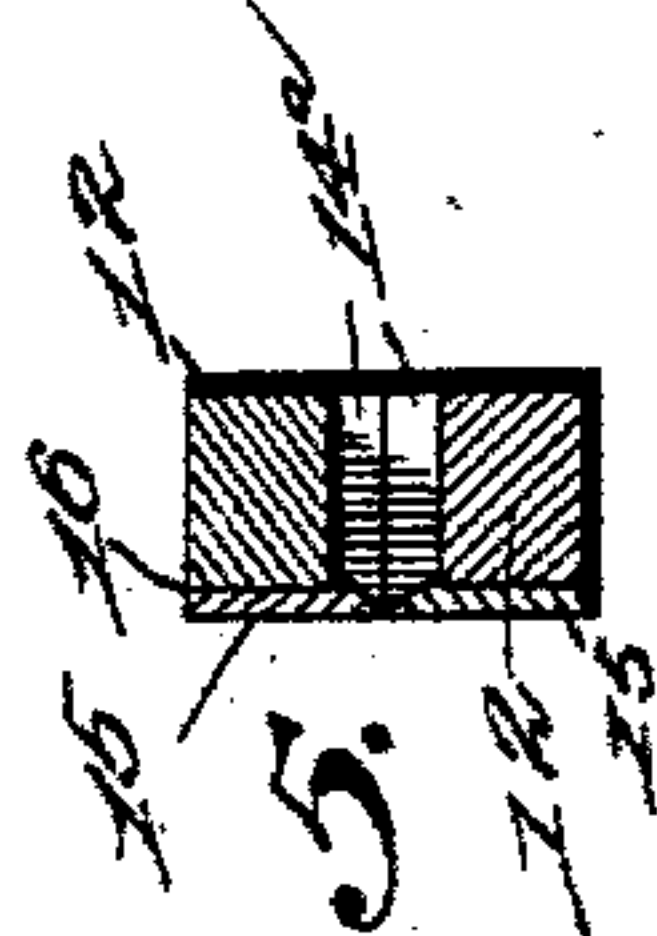
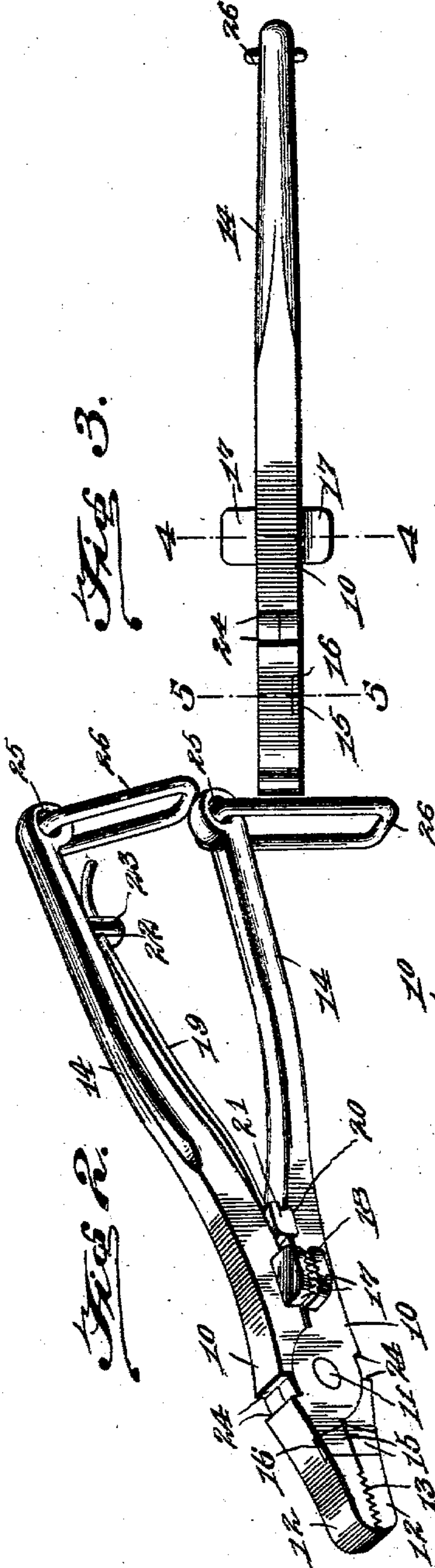
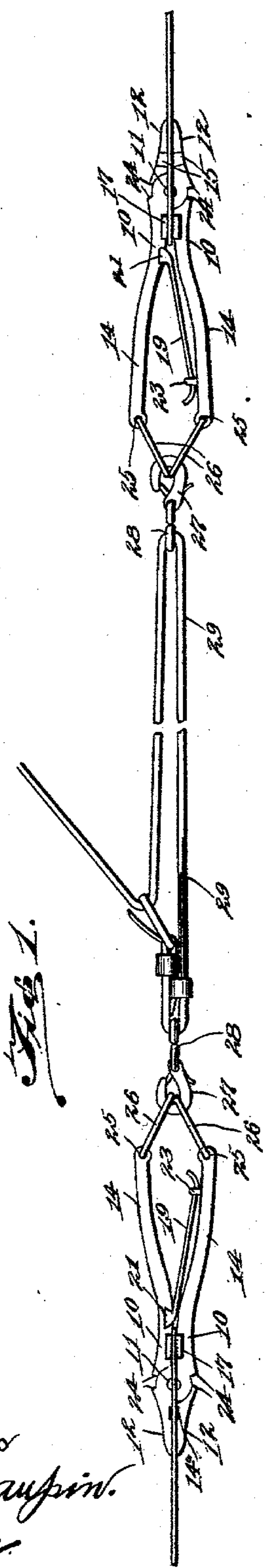
No. 720,974.

PATENTED FEB. 17, 1903.

C. M. SCHOOLEY.
PLIERS.

APPLICATION FILED APR. 21, 1902.

NO MODEL.



Clayton M. Schooley Inventor

By

E. G. Suggs

Attorney

Witnesses
John Maupin.
R. H. Foster.

UNITED STATES PATENT OFFICE.

CLAYTON M. SCHOOLEY, OF LEESBURG, VIRGINIA.

PLIERS.

SPECIFICATION forming part of Letters Patent No. 720,974, dated February 17, 1903.

Application filed April 21, 1902. Serial No. 103,989. (No model.)

To all whom it may concern:

Be it known that I, CLAYTON M. SCHOOLEY, a citizen of the United States, residing at Leesburg, in the county of Loudoun and State of Virginia, have invented a new and useful Pliers, of which the following is a specification.

The present invention relates to pliers, and while particularly intended for use in stretching and holding wire it will be evident that the device may be employed for various purposes.

One of the objects of the invention is to provide a novel structure in which means are employed for holding the coacting jaws in closed position, said means being detachable from the pliers, so that the latter may be used in the ordinary manner when desired.

A further object is to provide improved means for clutching and holding wires when the same are to be secured together, said means being so disposed that a powerful grip is assured. The preferred construction is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of a wire-stretcher, showing the improved pliers employed in connection therewith. Fig. 2 is a perspective view of the pliers. Fig. 3 is a top plan view of the same. Fig. 4 is a cross-sectional view taken on the line 4 4 of Fig. 3. Fig. 5 is a similar view taken on the line 5 5 of Fig. 3.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

In the present embodiment of the invention the pliers are constructed of a pair of crossed pivotally-connected lever-arms 10, the pivot 11 being located intermediate their ends, the portions 12 on one side of said pivot constituting the usual jaws having serrated teeth 13, while the remaining portions on the other side of said pivot form handles 14, that are arranged in divergent relation. The jaws 12 are provided in their inner faces and contiguous to the pivots with transverse sockets 14^a, arranged to form a wire-receiving opening, cutting-blades 15, secured in suitable sockets 16 in the sides of the jaws, projecting across the sockets and having their coacting edges sharpened, as clearly

shown in Fig. 5. The handle portions 14 carry offset outstanding jaws 17, which project beyond the side faces of the lever-arms, on opposite sides of the same, said jaws being located contiguous to the pivot 11 and having flat inner faces 18, which are serrated or toothed. These jaws may either be made of separate pieces set into sockets formed in the inner faces of the lever-arms or they may be made integral, as desired.

The jaws are yieldingly held in their closed or coacting position by means of a spring 19, that is located between the handles 14 and connected to both in such a manner as to urge them toward each other. To this end one of the handles is provided in its inner face with a dovetailed transverse socket 20, that receives a similarly-shaped block 21, secured to one end of the spring 19, this block being removable from the socket. The other end of the spring passes through an opening 22, formed in an ear 23, secured to the inner side face of the other handle contiguous to its free end. This spring projects through the ear for some distance, as shown, and preferably has its terminal curved inwardly. This permits a comparatively great movement of the arms without permitting the spring to become disengaged from the ear, and abnormal movement of said arms is prohibited by means of stops 24, arranged upon the lever-arms 10 at their points of intersection.

The free ends of the handles 14 are provided with eyes 25, through which are passed links 26. When the pliers are to be used as wire-stretchers, these links are attached to a snap-hook 27, that has a swiveled connection, as shown at 28, with a holding-strap 29.

In connecting wires two of these instruments are employed, which are connected by the holding-strap 29, as shown in Fig. 1. The wires are clamped between the side jaws 17, and said jaws, as well as the jaws 12, are held in coacting positions by means of the spring 19. This is an important advantage over those classes of pliers in which no springs are used or in which springs are employed that maintain the jaws in open position, for in grasping a wire with either kind the operator has to hold the jaws together. In the present device, however, this is unnecessary, as the jaws will remain gripped to a wire or

other article because of the particular arrangement of the spring. Should it become desirable, however, to have the jaws so that they will remain in open positions, it is only
 5 necessary to remove the spring, which may be readily done by slipping out the holding-block 21 and disengaging the free end from the ear 23. It will therefore be seen that this structure can be used in the same manner as
 10 the ordinary cross-armed pliers, and it is the added advantage of the spring for holding the jaws in coacting relation. Furthermore, the offstanding jaws are particularly advantageous in connecting wires which will overlap, as one wire may be placed between the
 15 jaws on one side of the arms and the other may be clamped by the jaws on the other side. The swiveled connection between the pliers and the holding-strap permits the necessary
 20 rotation of either without twisting or in any manner affecting the other.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will
 25 be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages
 30 of the invention.

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

35 1. In pliers, the combination with a pair of crossed pivotally-connected lever-arms having coacting jaws, of a spring, and means for connecting the spring to both lever-arms, said spring being arranged to draw the arms to-
 40 ward each other and yieldingly hold the jaws in coacting or closed position.

2. In pliers, the combination with a pair of crossed lever-arms pivotally connected intermediate their ends, the ends of said arms on
 45 one side of the pivot constituting coacting jaws, the other ends forming handles, of a spring located between the handles, and means for securing the spring to both handles, said spring being arranged to draw the handles
 50 toward each other and hold the jaws in coacting or closed position.

3. In pliers, the combination with a pair of crossed lever-arms pivotally connected inter-

mediate their ends, the ends of said arms on one side of the pivot constituting coacting
 55 jaws, the other ends forming handles, of a spring and detachable connections between the ends of the spring and both handles, said spring being arranged to draw the handles toward each other and hold the jaws in co-
 60 acting or closed position, said spring being removable from the handles.

4. In pliers, the combination with a pair of crossed lever-arms pivotally connected intermediate their ends, the ends of said arms of
 65 one side of the pivot constituting coacting jaws, the other ends forming handles, of an ear secured to one handle, the other handle having a dovetailed notch, and a spring having a dovetailed attaching-block located in
 70 the notch of the handle, the end of said spring passing through the ear.

5. In pliers, the combination with a pair of crossed lever-arms pivotally connected intermediate their ends, the ends of said arms on
 75 one side of the pivot constituting coacting jaws, the other ends forming handles, of an ear secured to one handle, a spring secured to the other handle and passing through the ear, and stops carried by the lever-arms for
 80 limiting the movement of the same to prevent the disengagement of the spring from the ear.

6. Pliers comprising lever-arms pivotally connected intermediate their ends, the portions of the arms of one side of the pivot constituting coacting jaws, the other portions
 85 forming handles, and a pair of offset jaws located upon the handle portions of the arms contiguous to the pivot, said jaws extending across and projecting beyond both side faces
 90 of the arms.

7. In pliers of the class described, the combination with crossed pivotally-connected lever-arms having coacting jaws, one of said arms being provided with an ear, of a spring
 95 secured to the other arm and having a portion engaging the ear, said spring being arranged to draw said arms toward each other and maintain the jaws in closed relation.

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

CLAYTON M. SCHOOLEY.

Witnesses:

JOHN H. SIGGERS,
 GEORGE TATE.