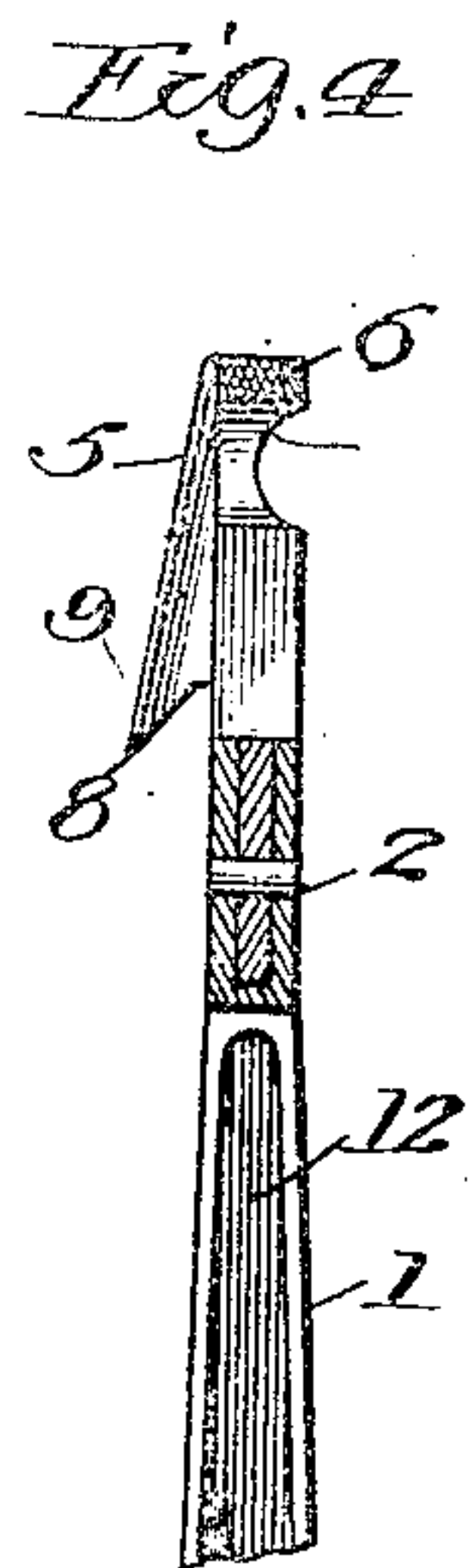
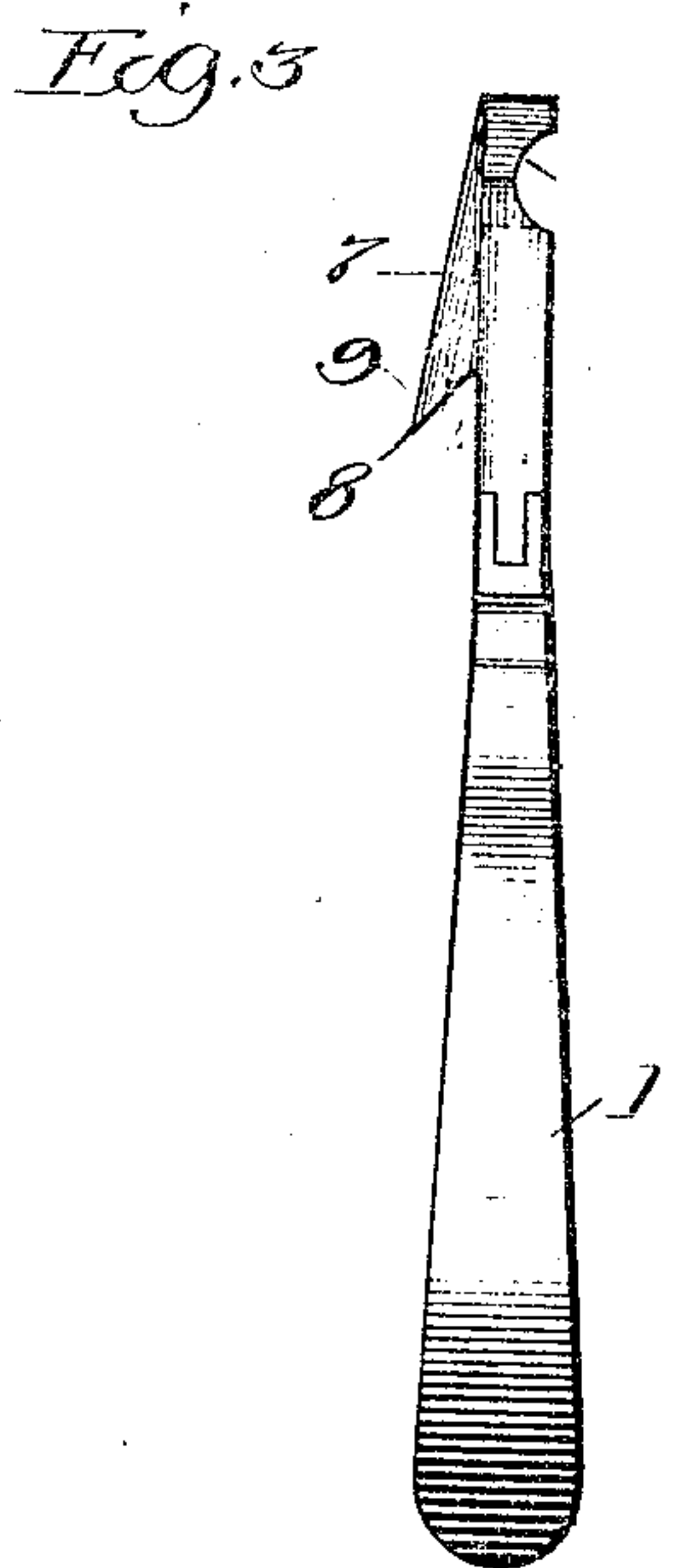
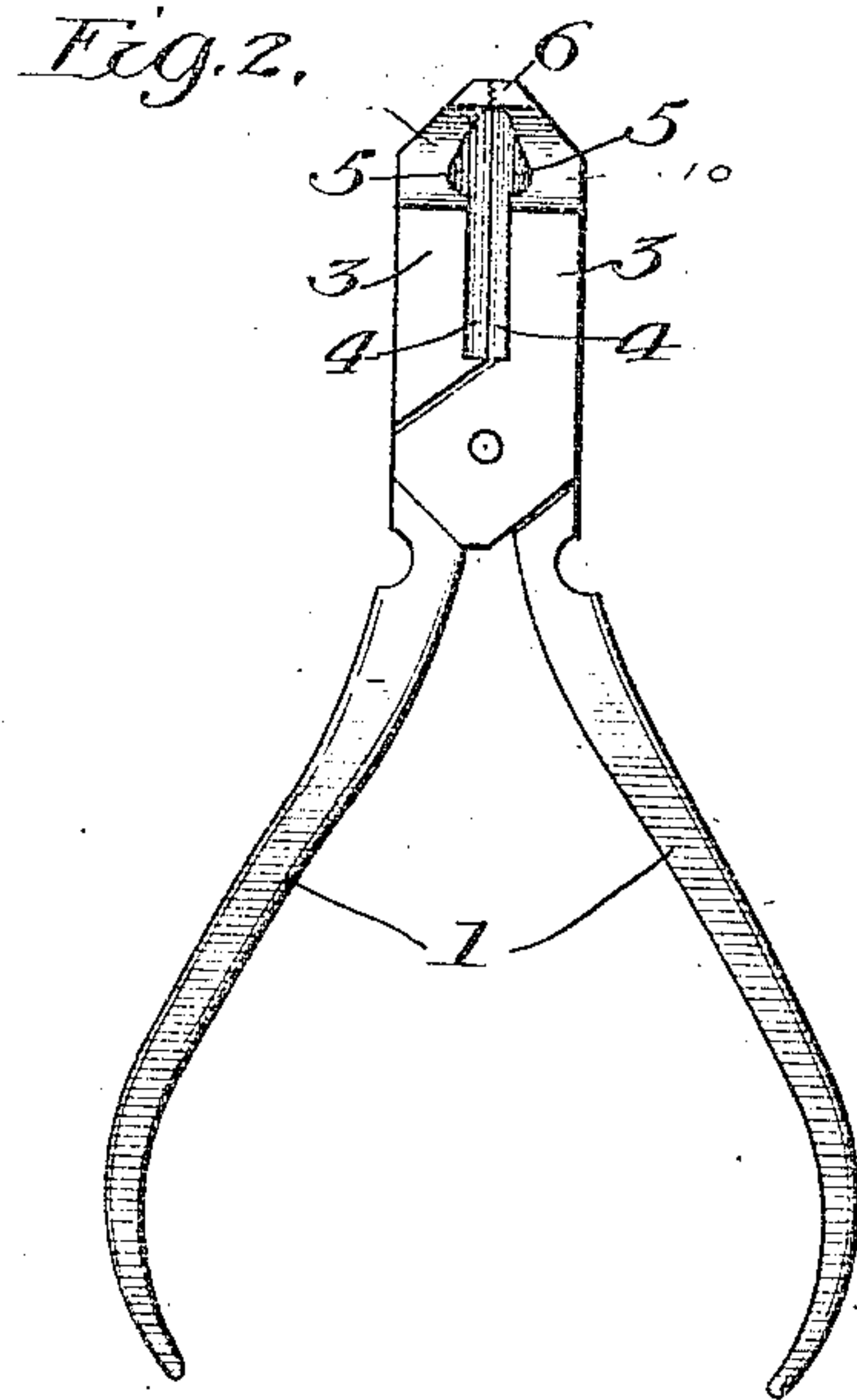
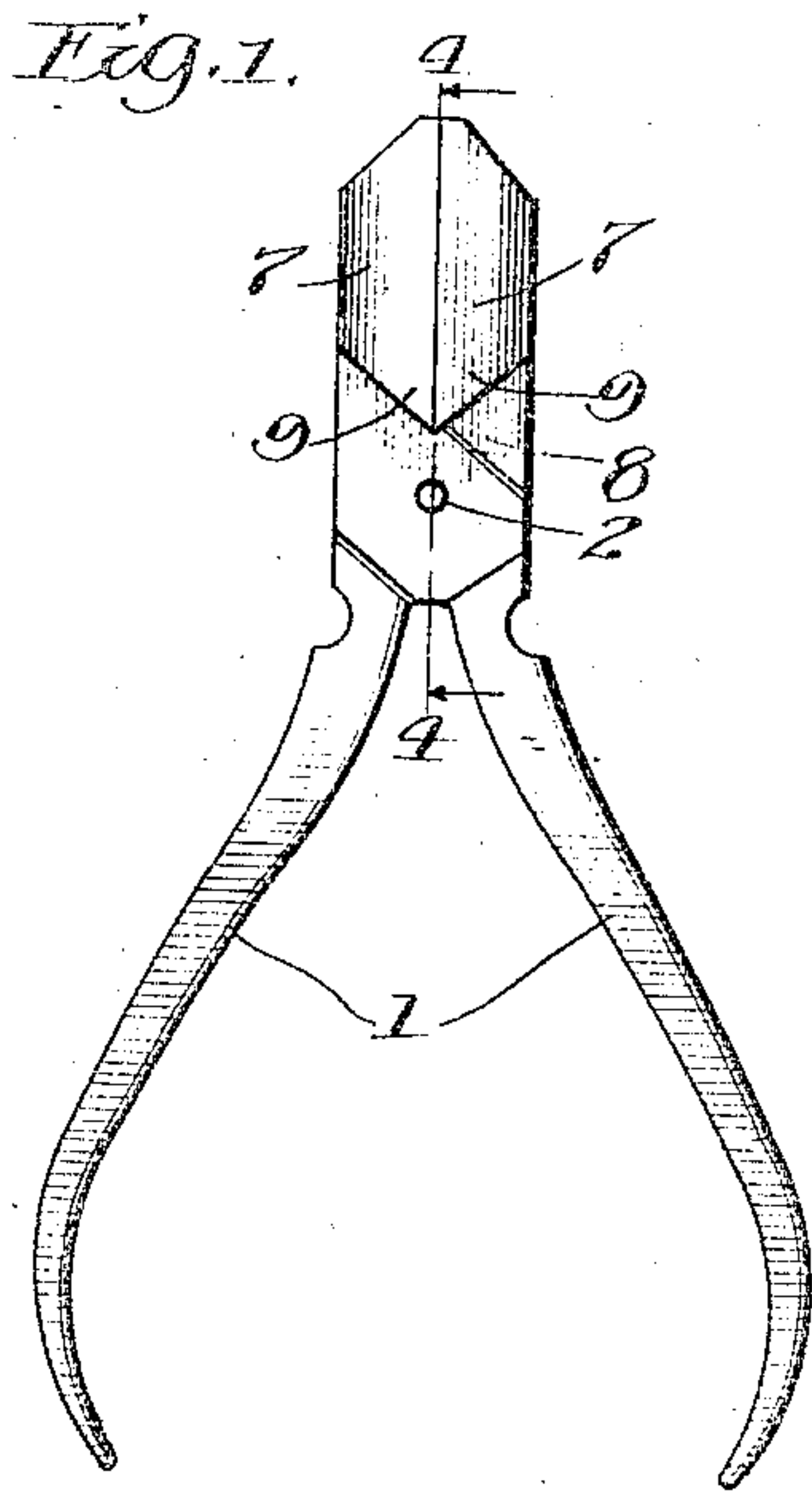


J. K. MULLENBACH.
MILLINER'S PLIERS.
APPLICATION FILED SEPT. 3, 1907.

898,496.

Patented Sept. 15, 1908



Witnesses:
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UNITED STATES PATENT OFFICE.

JULIA K. MULLENBACH, OF MARSHALL, MISSOURI.

MILLINER'S PLIERS.

No. 898,496.

Specification of Letters Patent.

Patented Sept. 15, 1908.

Application filed September 3, 1907. Serial No. 891,118.

To all whom it may concern:

Be it known that I, JULIA K. MULLENBACH, a citizen of the United States, residing at the village of Marshall, in the county of Saline and State of Missouri, have invented a new and useful Improvement in Milliners' Pliers, of which the following is a specification.

My invention relates to nippers or pliers used by milliners for cutting and manipulating wires in the construction of hat and bonnet frames. In such construction a variety of sizes of wire is used. The principal frame wires are the larger while the tie wires used to connect them together are comparatively small. All of these wires have to be cut to proper lengths and twisted together to secure the ends, and to hold the different parts in proper relation to each other. Heretofore the operator has been provided with two or more appliances, one a cutting plier for cutting the wires to the proper length, and the other a nipper or tweezer for twisting the wires as desired. This has made it necessary to lay down an instrument and pick up another constantly in the course of the work, or, as is sometimes done, use the cutting pliers for twisting. In the latter case an insecure fastening is frequently formed and the wires partly or completely cut through.

It is the object of my invention to provide an improved appliance for the work described, and which shall overcome the difficulties of the present practice.

The pliers of my invention are light, strong and simple, provided both with cutting and twisting bits, and the same are so related to each other and to the entire structure as to enable the operator to perform the different operations in the most convenient manner, as well as the sequence of operations with the greatest economy of time.

The principles of my invention are illustrated in the drawings in which—

Figure 1 shows a top view of my device; Fig. 2 represents a back view thereof; Fig. 3 a side view, and Fig. 4 a view partly in section taken on the line 4—4 of Fig. 1.

Further describing my invention with reference to the drawings, in which like characters of reference denote like parts throughout: 1—1 are the two members of a pair of pliers, pivoted together at 2, and provided with the jaws 3—3. Each of said jaws is recessed at 4; the said recesses are each broadened at 5 near the extreme ends of the jaws.

The latter are each provided with one narrow transverse gripping bits 6 at their extreme ends, which should be roughened or knurled to provide a secure hold when used for twisting the wires. The said jaws are also each provided with cutting bits 7, the ends of which start at the gripping bits and are continued backwardly at a constantly increasing distance from the longitudinal axis of the instrument until the extreme ends thereof are reached at the point 8. Near the latter part they may be undercut so as to form projecting or extending wings 9. On the underside of the jaws opposite the broadened portions of the slot or depression 4, is a deeply cut and preferably rounded transverse groove or furrow 10. When properly constructed the handles should diverge broadly and to still further lighten the instrument beyond the construction above described they should be concaved as shown at 12.

The several depressions 4, 5 and 10 allow a considerable portion of the material to be removed, whereby the instrument is greatly lightened. Their relation to each other and to the cutting and gripping bits, and of the latter to each other is such that the instrument can be used to the greatest advantage in each operation, as well as in the sequence of operations which is necessary in practice. The position in which the cutting bits is placed enables the wires to be cut thereby, either when passed through the jaws, or placed, if desired, lengthwise thereof.

I claim and desire to secure by Letters Patent:

1. Milliners' pliers having jaws provided with narrow transverse gripping bits near their extremities, and cutting bits extended backwardly and laterally outside said jaws at an angle thereto, said jaws having recessed portions between said bits and the pivoted or hinged portions.

2. Milliners' pliers having jaws provided with transverse gripping bits near their extremities, and cutting bits extending backwardly from the gripping bits and laterally outside the jaws at an angle thereto, said jaws being recessed between said bits and the pivoted or hinged portions, the recessing being deeper at the ends adjacent to the gripping bits.

3. Milliners' pliers having jaws provided with transverse gripping bits near their extremities, and cutting bits extending backwardly and laterally from and outside the

gripping bits on one side of the pliers, said jaws being cut away on the side opposite the cutting bits and recessed between the bits and the pivoted portions.

5 4. In milliners' pliers, the combination of gripping bits in the jaws thereof and cutting bits extending backwardly and laterally outside the gripping bits at an oblique angle thereto.

10 5. In milliners' pliers, the combination of narrow gripping bits at the extremities of the jaws and transverse thereto, and cutting bits on one side of the jaws having one end of each adjacent to the gripping bits and extending backwardly laterally therefrom at an oblique angle.

15 6. In milliners' pliers, gripping bits in the ends of the jaws, and cutting bits on one side of the jaws, having one end of each attached to the gripping bits and extending backwardly and laterally therefrom at an oblique angle.

20 7. In milliners' pliers having gripping bits, the combination therewith of cutting bits

extending backwardly therefrom and provided with projecting wings at their rear ends. 25

8. In milliners' pliers, transverse gripping bits on the ends of the jaws and cutting bits extending backwardly at an oblique angle to the gripping bits, said cutting bits being undercut at their rear ends so as to form projecting wings. 30

9. Milliners' pliers having jaws provided with cutting bits on one face thereof, said bits being extended backwardly from the ends of the jaws at an acute angle to the axis of the pliers and having their rear ends undercut to form projecting wings. 35

In witness whereof, I have hereunto set my hand, this 29th day of August A. D. 1907, in the presence of two subscribing witnesses. 40

JULIA K MULLENBACH.

Witnesses:

C. K. CHAMBERLAIN,
A. S. PHILLIPS.