

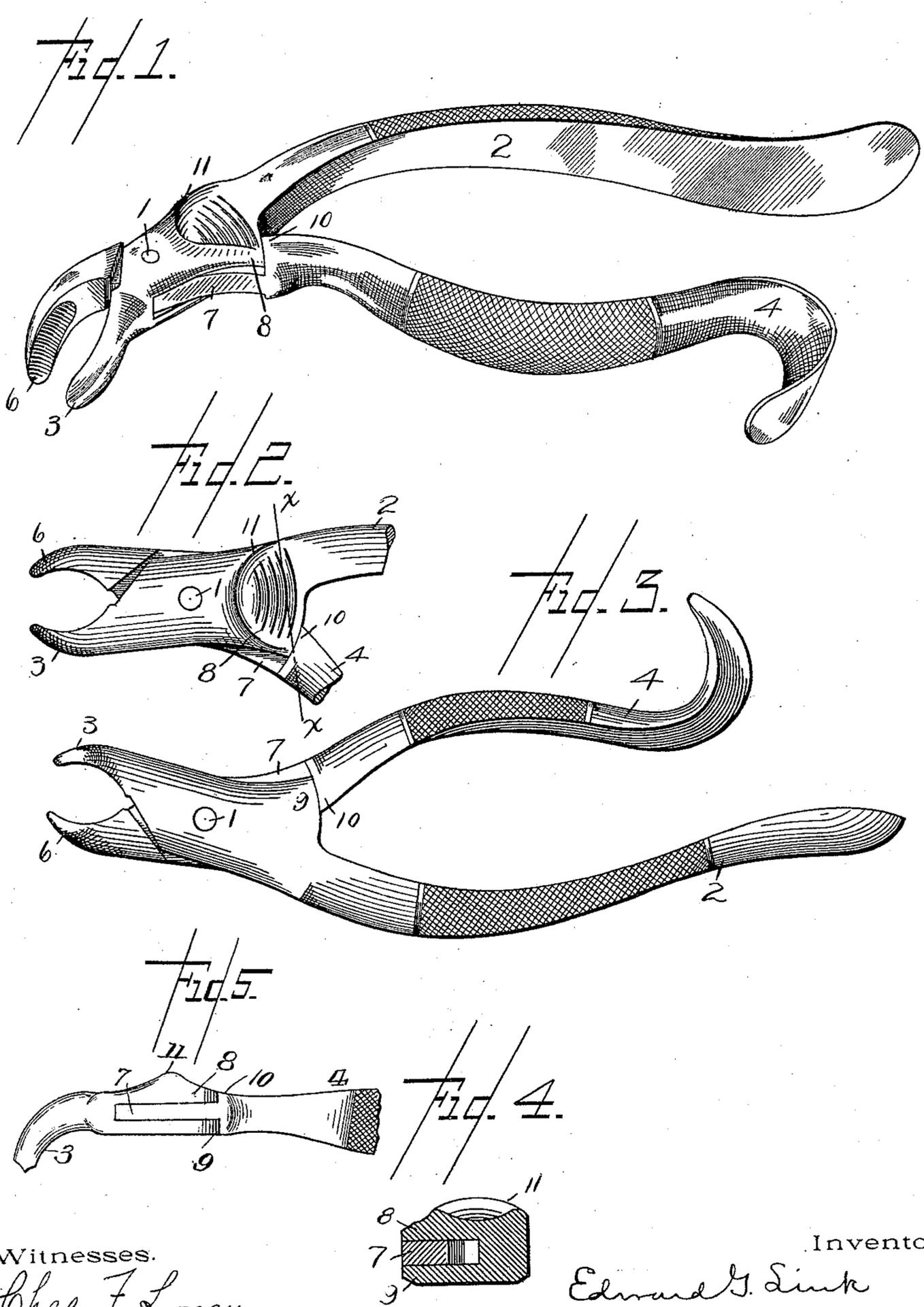
No. 617,587.

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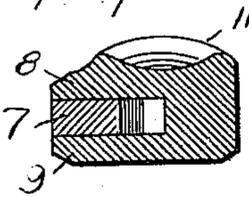
E. G. LINK.
FORCEPS.

(Application filed June 18, 1898.)

(No Model.)



Witnesses.
Chas. F. Logan.
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UNITED STATES PATENT OFFICE.

EDWARD G. LINK, OF ROCHESTER, NEW YORK.

FORCEPS.

SPECIFICATION forming part of Letters Patent No. 617,587, dated January 10, 1899.

Application filed June 18, 1898. Serial No. 683,852. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. LINK, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Forceps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to forceps or pincers generally, but particularly to that class used by dentists and known as "lower-molar" forceps; and it has for its objects to improve their construction, whereby the operation of forcing the prongs or jaws down to engage the roots of the tooth is facilitated and there is little or no opportunity of the operator injuring himself by having a portion of his hand caught between the jaws in rear of the pivot if the instrument should slip off the tooth or if the tooth break; and to these ends the invention consists in the improvements hereinafter described, the novel features being pointed out particularly in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a perspective view of a pair of lower-molar dental forceps containing my invention; Fig. 2, a plan view of the jaws and the pivotal connection between them; Fig. 3, a view of the other side from that shown in Fig. 2; Fig. 4, a sectional view on the line $x x$ of Fig. 2, and Fig. 5 a side view of the forward portion of the forceps.

Similar reference-numerals in the several figures indicate similar parts.

One of the features of my invention being applicable to lower-molar dental forceps or those having jaws at an angle to the pivot, I have shown as an embodiment of my invention such an instrument composed as usual of a male and female member pivoted together by a pivot 1, the latter having the handle extension 2 and the downwardly-curved jaw 3 at the end opposite the pivot, the male member, embodying the handle portion 4, having the usual hook at the rear end and the forward end being provided with a curved jaw 6, cooperating with the jaw 3 on the female member. The female member is provided with the central recess, through which the

reduced portion 7 of the male member passes, and the portion just in rear of the pivot is provided with the extensions or wings 8 and 9 on the upper and lower sides, respectively. The rear portions of both said extensions are curved on the arc of a circle of which the pivot is the center and arranged to make a close joint with the shoulders 10 on the male member, which latter are also correspondingly curved on their inner edges, so that the handle portions of both the members are substantially flush where they come together, and by reason of the close fitting between the parts there are no open joints into which the operator's thumb or fingers can project and be pinched even should the instrument slip from the tooth or the tooth break while endeavoring to extract it.

In instruments of this class, and particularly those in which the jaws are curved in a plane at an angle to that of the handle, it is necessary oftentimes that considerable force be exercised in pressing the jaws of the instrument down into the patient's gum to grasp the tooth below the crown, and in order to facilitate this operation and prevent slipping I provide upon the upper side of one of the members of the forceps (in the present embodiment the female member) a curved rib or shoulder 11, constituting a thumb grip or rest, preferably slightly recessed and corrugated on its upper side to prevent slipping, and in such position that as the instrument is grasped by the right hand of the operator the rest thus formed will be in proper position to be engaged by his thumb, whereby he may press the jaws firmly down on either side of the tooth and close them tightly without liability of having his thumb pinched, and may more readily manipulate the hooked handle 4 to open and close the jaws. This thumb-grip is particularly desirable when using nickel-plated instruments in warm weather, as the operator's hands when damp with perspiration are quite liable to slip on the polished surface of forceps not provided with my improvements and there is great danger of injury, accidents of this nature not being at all infrequent.

It is eminently desirable that the shoulder or thumb-rest be formed between the pivot and handle and upon the handle side of the

pivot, as shown, as it enables the operator to push the instrument downwardly or longitudinally of the jaws without liability of slipping, and the protection afforded to prevent his thumb being caught between the moving parts of the members is accomplished by curving the extension, as shown.

The cost of forming forceps of this description is but a trifle more than of the ordinary forceps, and the advantages are such as will be readily apparent to those skilled in the art.

I claim as my invention—

1. In forceps, the combination of the male and female members pivoted together, each having the jaw and handle, said male member having the reduced portion 7 and the shoulders 10, and the female member having the transverse aperture and the shoulders or wings 8 and 9 curved on the arc of a circle of which the pivot is the center, and making a close joint with the shoulders 10 on the male member, substantially as described.

2. In forceps, the combination of the mem-

bers pivoted together and each having the jaw and handle, one of said members having the thumb rest or grip on the handle side of the pivot.

3. In a dental forceps, the combination of the pivoted members, each having the laterally-extending curved jaw at one end, and the handle at the other, one of said jaws having a thumb-grip on the side opposite to that from which the jaws extend.

4. In dental forceps, the combination of the male and female members pivoted together, each having the curved jaw and the handle, said female member having the extensions on opposite sides curved concentrically with the pivot, and the thumb-grip on the side opposite the jaw, and the male member having the curved shoulders cooperating with the extensions.

EDWARD G. LINK.

Witnesses:

F. F. CHURCH,

G. W. RICH.