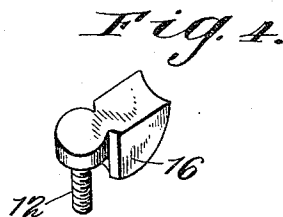
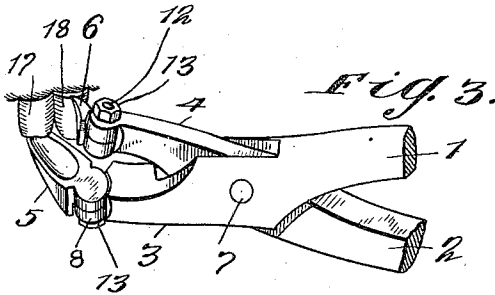
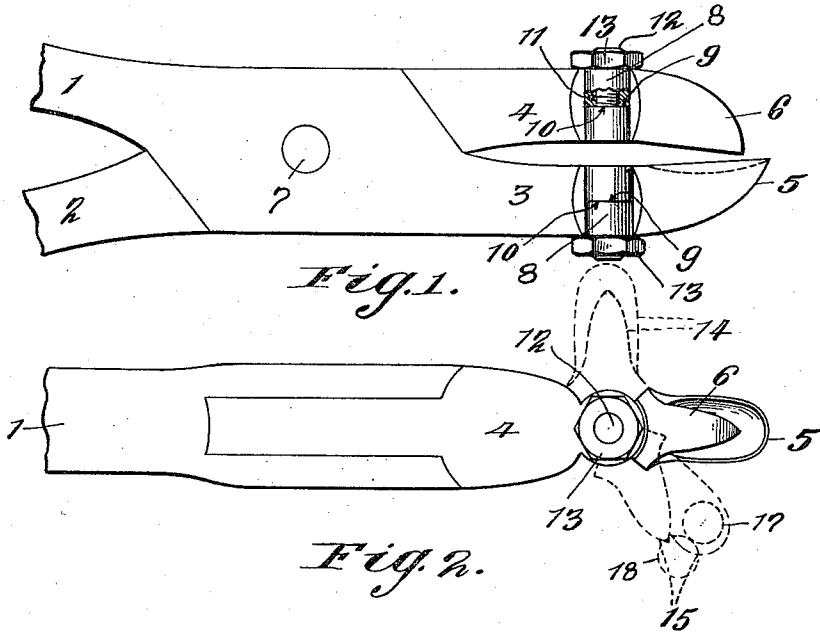


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ADJUSTABLE BEAK FORCEPS.
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1,059,696.

Patented Apr. 22, 1913.



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ADJUSTABLE-BEAK FORCEPS.

1,059,696.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JULIUS ADERER, a citizen of the United States, residing in the city of New York, borough of Manhattan, county and State of New York, have invented new and useful Improvements in Adjustable-Beak Forceps, of which the following is a full, clear, and exact specification.

This invention relates to forceps and has for its object to provide an adjustable beak forceps and for a further object a forceps with relatively adjustable interchangeable beaks.

This improvement is especially adapted for dental forceps and particularly for those to be used in the removal of gold crowns and bands from teeth.

In removing a crown it is frequently necessary to slit it from the inner end to the biting surface. This is preferably done on the lingual side. Forceps, having a slitting beak for slitting the crown on a tooth and a beak for engaging the biting end of the tooth for supporting the instrument and giving the requisite purchase, have been used. The crown sought to be removed is frequently so situated that it is with difficulty the operator can bring the beaks of the forceps into effective positions and frequently the situation is such that the forceps cannot be used at all.

My invention furnishes an instrument the beaks of which are readily adjustable so that irrespective of the position of the crown in the mouth of the patient the forceps can be employed with comfort to the patient and ease and efficiency to the practitioner.

In some situations it is undesirable to employ the tooth carrying the gold crown which is to be removed as the bearing or support for the fulcrum beak, either because of the sensitiveness of the tooth or because of its apparent lack of strength. To enable the fulcrum bearing to be taken from an adjacent tooth the beaks are adjustable one relatively to the other. And the supporting beak will be adjustable to one side or the other of the plane of movement of the slitting beak. The beaks are preferably interchangeable. The slitting beak is shown interchangeable with a beak for removing crown caps and bands without slitting these.

In the drawings accompanying this speci-

fication one practicable embodiment of my invention is illustrated wherein—

Figure 1 is an enlarged side view, parts of the handles being shown broken away. Fig. 2 is a top view of the parts shown in Fig. 1. Fig. 3 is a perspective view illustrating the forceps in use, and Fig. 4 is a perspective view of a beak interchangeable with one of those illustrated in the other views.

The forceps illustrated comprise a pair of handles 1 and 2 provided with jaws 3 and 4 upon which are respectively mounted beaks 5 and 6. The jaws are pivotally connected together by a pivot 7. Each jaw is shown having a beak carrying portion 8 having a flat face 9, facing the other jaw for engaging the bearing end or face 10 of the beak. The beak carrying portion 8 is provided with a socket 11 disposed transversely of the pivot 7, for receiving the pivot pin 12 of the beak. In the illustration both beaks 5 and 6 are thus mounted upon pivotal axis disposed in the same plane, and parallel with the plane of movement of the jaws about the axis of the pivot 7. In the illustration the beak 6 is the slitting beak and the beak 5 is the supporting element for affording a bearing or fulcrum for the slitting beak while at work. The beaks are adjustable upon their pivots and may be secured in their adjusted positions by means of set nuts 13, mounted on the screw threaded ends of the pivot pins. The beaks may be placed and secured in a normal position, see the full line position of Fig. 2, and in such position be used for slitting such adjustment.

When the crown occupies a position not accessible by a straight forceps the beaks will be released and adjusted to enable their convenient and efficient use and secured in their positions of adjustment. An adjustment transverse to the normal is shown in the dotted line position 14 of Fig. 2. When the tooth carrying the crown to be removed is unduly sensitive or is weak or does not afford a good bearing surface, the beaks may be given such relative positions that the support will be derived from an adjacent tooth. Such an adjustment is shown in the dotted line position 15 of Fig. 2 and in Fig. 3. It will thus be seen that the supporting beak 5 is adjustable to one side or the other of

the plane of the path of movement of the slitting beak 6. The beaks may be interchangeable. For instance the slitting beak may be interchanged with a band removing beak 16, see Fig. 4. The adjustability of the supporting beak for engaging an adjacent tooth is also advantageous when the forceps the used as a band remover.

In Fig. 3 the supporting beak 5 is shown engaging the biting face of tooth 17, and the point of the slitting beak 6 engaging the open end of the crown 18, and in position upon the closing of the jaws to slit the crown from such open end to the biting end. The Fig. 3 position of the beak is illustrated at the dotted line position 15 in Fig. 2, the tooth position of Fig. 3, being also shown in dotted lines in the view.

The forceps herein shown are illustrative of the invention, it being obvious that the improvement is applicable to forceps for performing various operations particularly in dentistry.

Having described my invention, I claim.

1. The combination with a pair of pivotally connected forceps jaws each having a pivot socket disposed transversely of the axis of the pivotal connection between the jaws and interchangeable beaks for each jaw each having an integral transverse pivot-pin for seating in such socket.

2. The combination with a pair of pivotally connected forceps jaws each having a flat bearing face facing the other jaw and a pivot socket perpendicular to such face disposed transversely of the axis of the pivotal connection between the jaws, and a beak for each jaw having a flat bearing face and an integral transverse pivot-pin for seating in such socket, the end of the pivot-pin being screw threaded, and a set nut for such screw thread.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."