No. 677,577. Patented July 2, 1901.

H. N. LANCASTER.

DENTAL FORCEPS.

(Application filed Apr. 17, 1901.)

(No Model.)

Fig. 1.

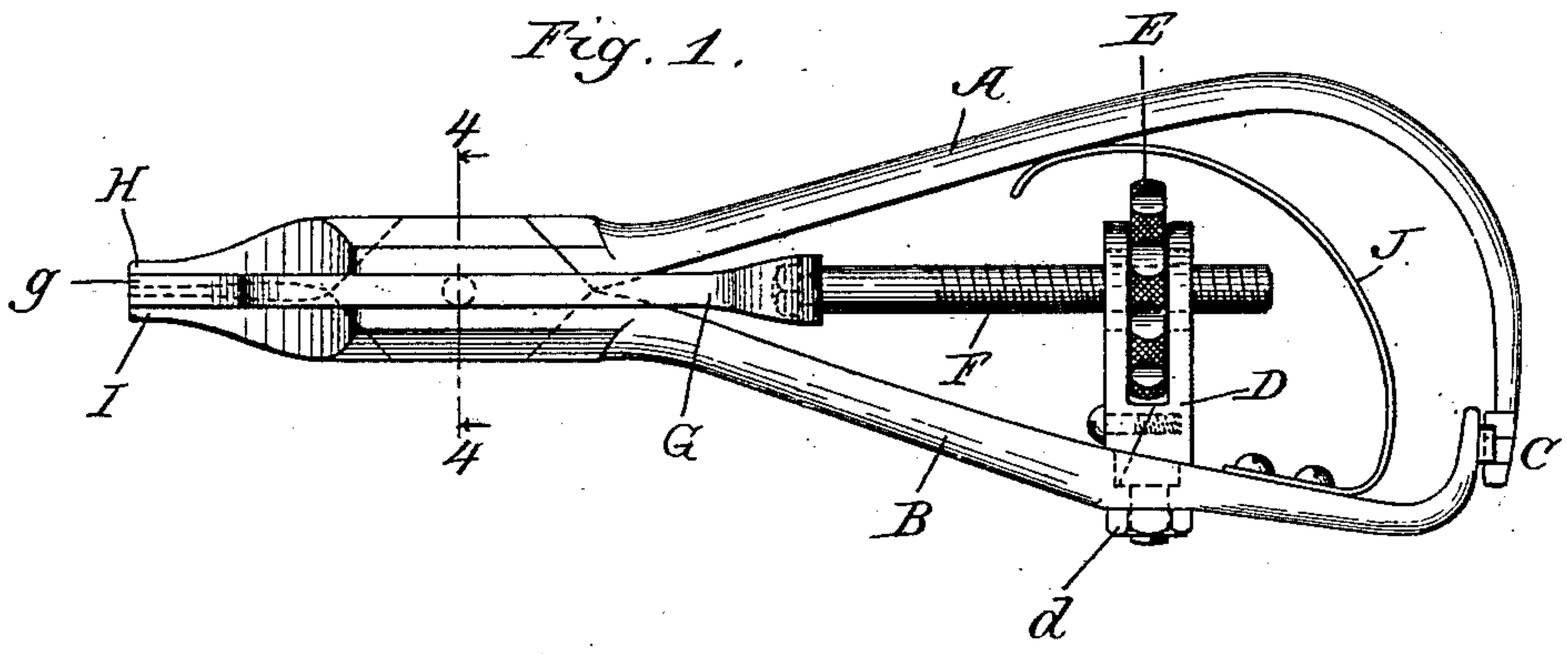


Fig. 2.

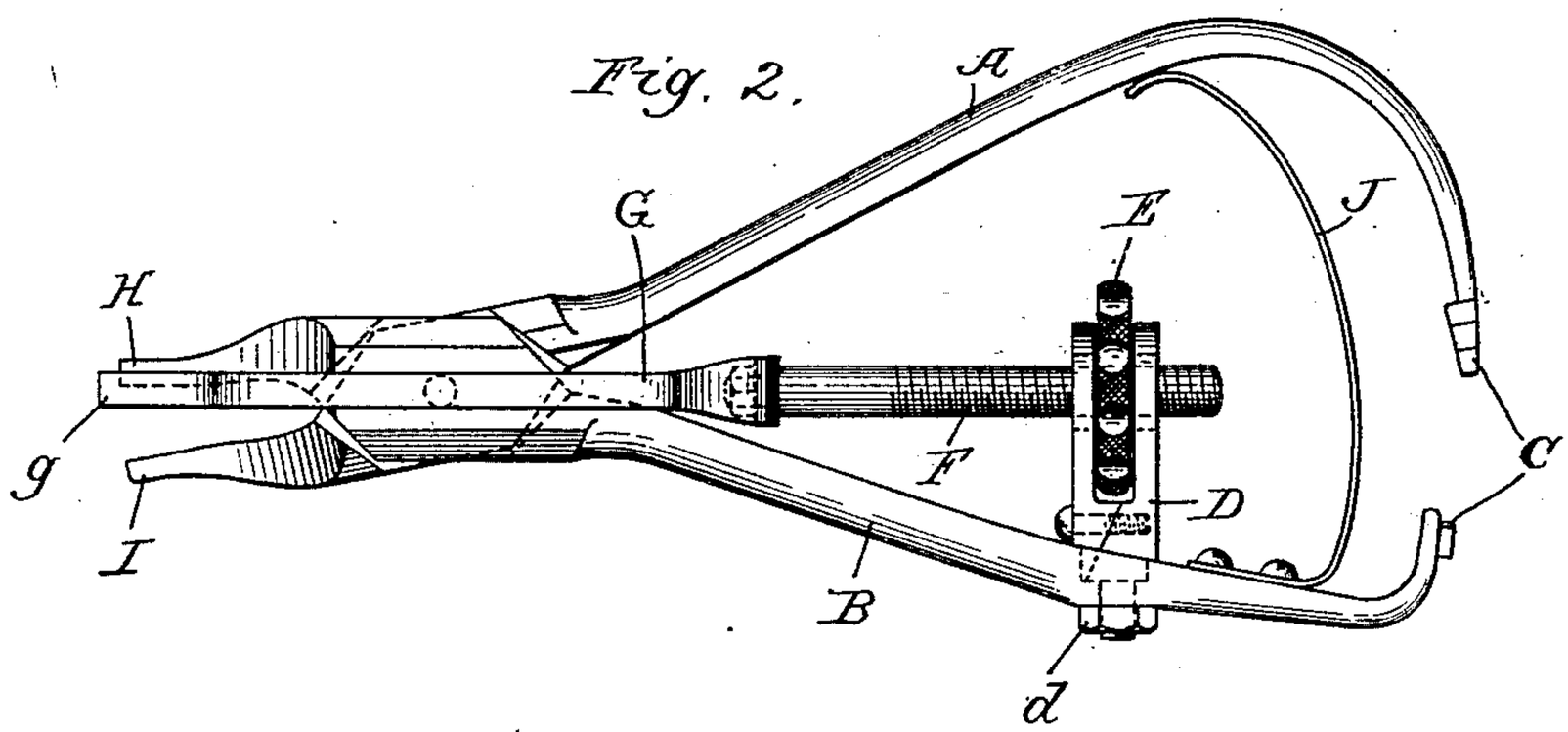


Fig. 3.

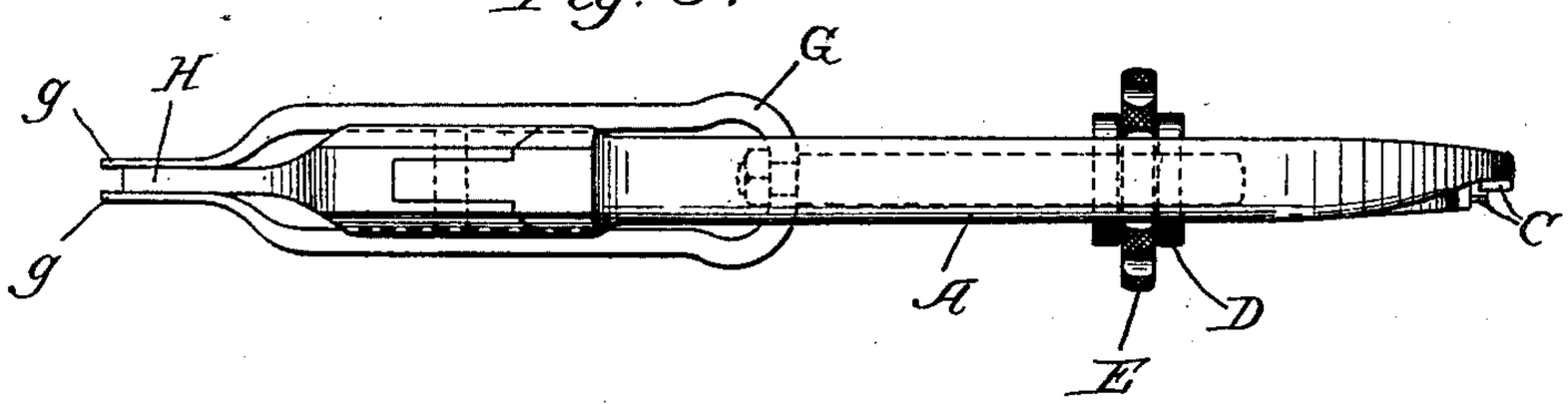
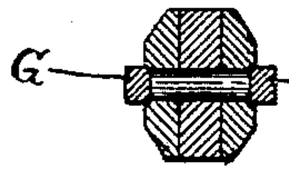


Fig. 4.



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DENTAL FORCEPS.

SPECIFICATION forming part of Letters Patent No. 677,577, dated July 2, 1901.

Application filed April 17, 1901. Serial No. 56,304. (No model.)

To all whom it may concern:

Be it known that I, HOWARD N. LANCASTER, a citizen of the United States, residing at Chicago, in the State of Illinois, have invented a new and useful Improvement in Dental Forceps, of which the following is a specification.

My invention relates to an improvement in dental forceps; and my object is to provide an ordinary forceps with an attachment that will afford a free and painless extraction of crown-pins from tooth-roots by an application of reciprocal forces. I attain these results by means of the mechanism shown in the accompanying drawings, in which—

Figure 1 is a side view of the forceps with handles closed and locked. Fig. 2 is a side view of the forceps with handles and jaws opened and forked attachment extended from the ends of the jaws. Fig. 3 is a view of the forceps, showing the fork in extended position. Fig. 4 is a view of the joint of the forceps, showing cross-section of the sides of the fork and grooves in which it slides.

Referring to Fig. 1, A and B represent the handles of the forceps; C, the locking device of the handles; D, the brace, firmly set in B and held by means of a nut *d*. In the brace D is placed a thumb-wheel E with shoulders containing threads within, through which the shaft F is screwed. The shaft F and the fork G are one piece, and the fork is placed in grooves astride the axis of the forceps, narrowing down at the point *g*.

H and I represent the upper and lower jaws of the forceps, respectively.

J is a spring holding the handles A and B in proper position.

Fig. 1 represents the instrument closed.

Fig. 2 shows the forceps with the jaws H and I open and the points *g g* of the fork G carried beyond them. The direction and position of the points *g g* of the fork G are controlled by the thumb-wheel E.

Fig. 3 represents the vertical position of the forceps, with the points *g g* of the fork G carried beyond the jaws H and I of the forceps.

Fig. 4 shows in detail a transverse section of the instrument at the forcep-joint, in which G G represent the sides of the fork set in the grooves in which they slide.

In operating with the forceps the crown-pin is grasped by the jaws H and I close to the tooth-root. The handles A and B are closed and held by the locking device. The ends *g g* of the fork G are set against the tooth-root; and by turning the thumb-wheel E the reciprocal forces of pulling and pushing are obtained without injuring or disturbing the tooth-root in its socket or causing pain to the patient.

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

The combination with a pair of forcep-beaks of a fork propelled through grooves by means of a thumb-wheel and threaded shaft; said thumb-wheel being set in the forcep-handle.

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