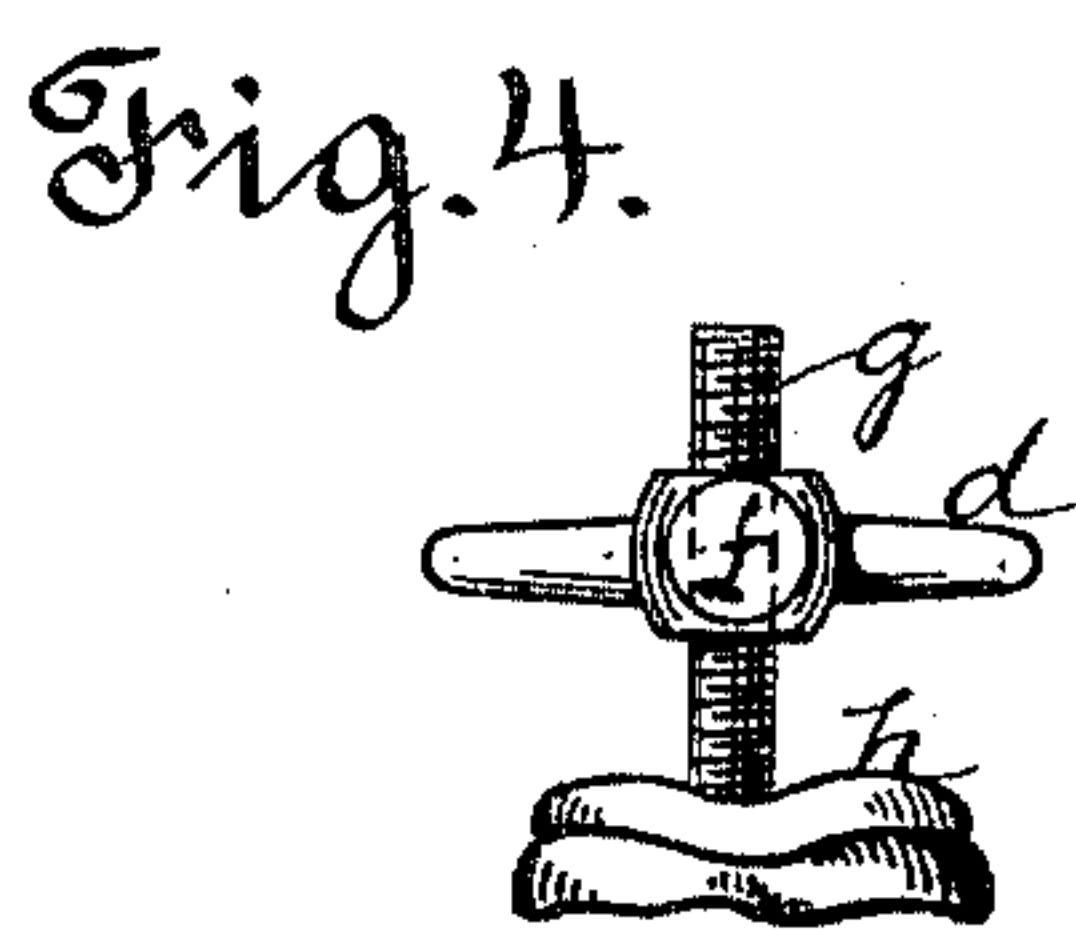
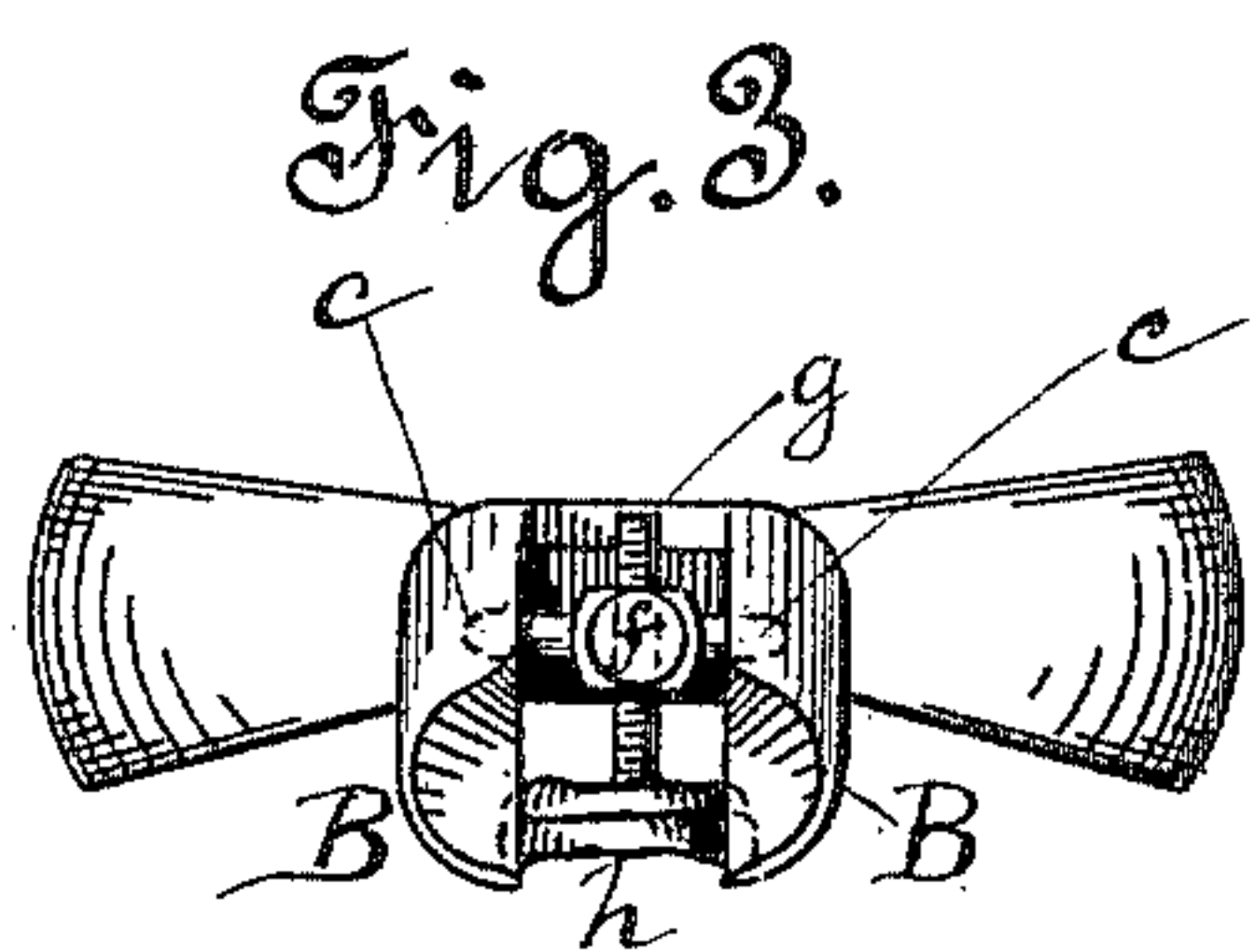
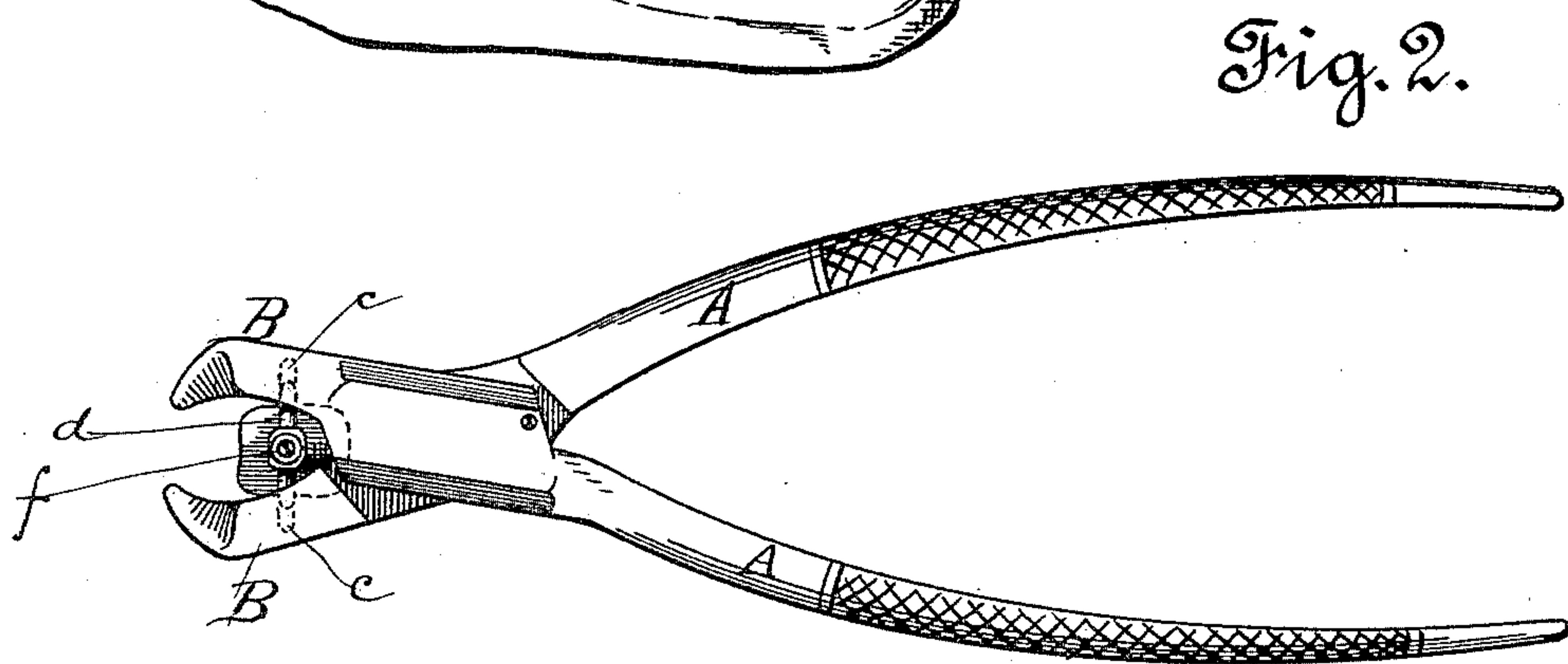
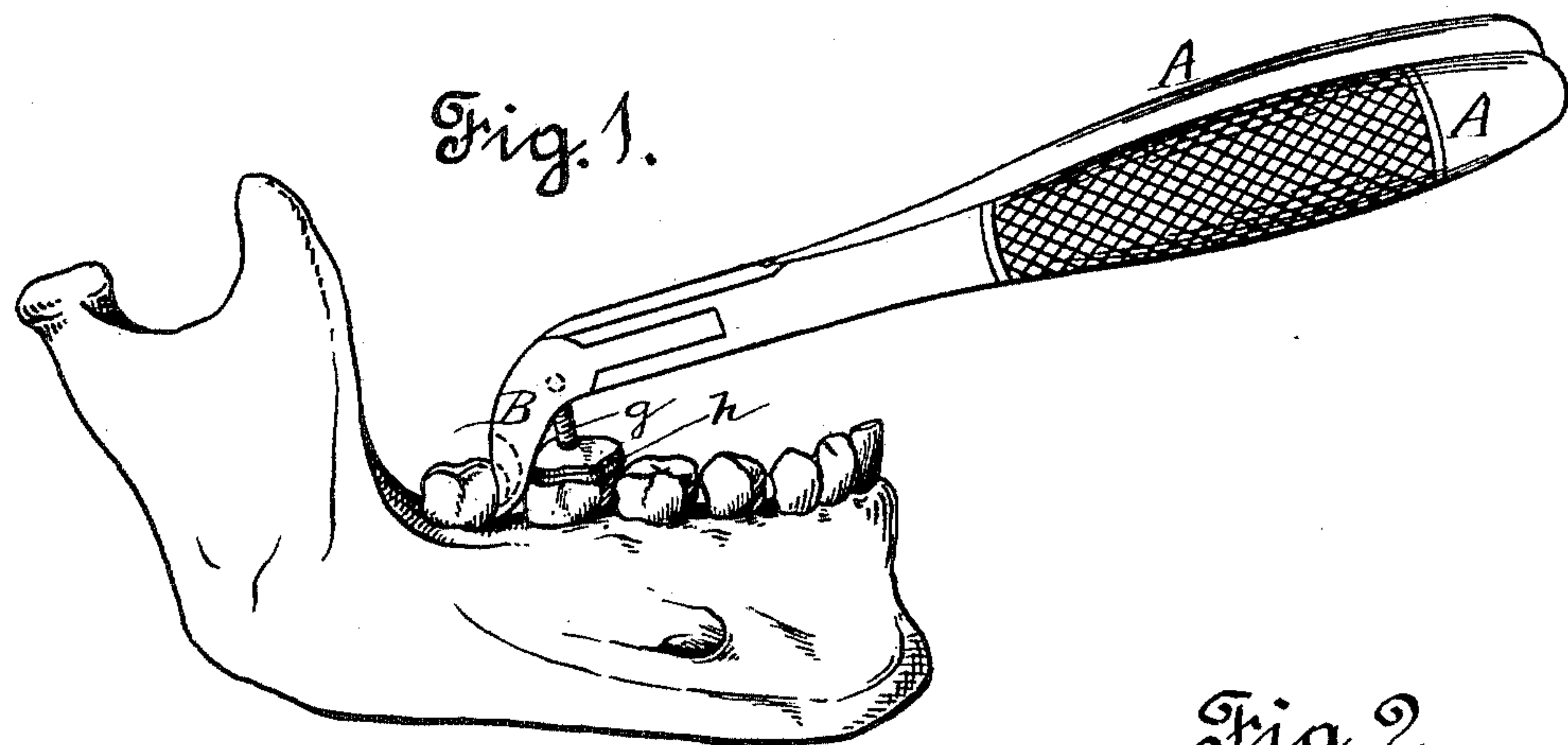


(No Model.)

C. E. BLAKE, Sr.  
DENTAL FORCEPS.

No. 491,514.

Patented Feb. 14, 1893.



Witnesses.  
*F. Houteverde,*  
Ira V. Hitchcock

Inventor.  
*Chas. E. Blake Sr.*



# UNITED STATES PATENT OFFICE.

CHARLES E. BLAKE, SR., OF SAN FRANCISCO, CALIFORNIA.

## DENTAL FORCEPS.

SPECIFICATION forming part of Letters Patent No. 491,514, dated February 14, 1893.

Application filed June 27, 1892. Serial No. 438,181. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. BLAKE, Sr., a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Dental Forceps; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

The object of my invention is to provide dental forceps such as are used for extracting rear molars with an adjustable fulcrum, which can be seated upon the crown of the tooth immediately in front of the molar to be removed, so that when the tooth is grasped by the jaws or beaks of the forceps a downward force or pressure on the handles will unseat and lift the tooth in its socket, so that it can be easily removed by an extracting forceps.

Referring to the accompanying drawings, Figure 1 represents the side of a jaw, showing a dental forceps with my fulcrum adjusted to lift or unseat a back molar; Fig. 2 is a top view of the forceps; Fig. 3 is a front view, showing the open jaws and fulcrum, and Fig. 4 shows detached fulcrum.

Let A. A. represent the two handles of an ordinary dental forceps, and B. B. the grasping jaws or beaks. In the opposite inner faces of the jaws, B. B. and close to the junction of the shear joint on which the handles work, I drill holes *c. c.* transversely through or partly through the jaws and in line with each other. I then place a strong bar *d*, with its opposite ends in the holes *c*, of the jaws, so that the bar extends across the space between the jaws. The ends of the bar work freely and loosely in the holes, *c. c.*, so that the jaws can open and close readily. In the middle of the bar, *d*, is a nut, *f*, through which a short screw stem, *g*, passes. On the lower end of this screw stem is a flat foot or base, *h*, about the size of the crown of a molar tooth. This foot or base is made of metal and can be shod on its under surface with lead, leather or other soft substance that will form a cushion. If desired the shoe or base can be connected with the lower end of the screw stem by a joint

or swivel connection, in order to give it greater adjustability, but for ordinary service this is not necessary.

In use the instrument is inserted in the mouth and the jaws or beaks gripped upon the rear molar to be removed. The foot or base, *h*, of the fulcrum is then seated upon the crown of the molar in front of the one to be removed. The gripping jaws are then tightly pressed upon the tooth and the handle of the instrument forced downward. This downward pressure causes the jaws of the forceps to lift directly upward with a powerful pull that breaks the tooth loose from its seat, and lifts it a short distance upward in its socket without any wrenching, twisting or luxating movement. The lever instrument can then be removed and the tooth picked out with an ordinary extracting forceps, or in some cases it can be removed with the same instrument. Ordinarily, however, the principal use of this lever forceps is to simply insert the tooth and lift it out of its bed, so that it can readily be removed with an extracting forceps.

This instrument I have found in my dental practice to be a most excellent means for extracting back molars painlessly, because the short sudden and powerful pull obtained by its use, and the lifting of the tooth in a direct line with its insertion in the process, places it in a position to be easily removed before the patient is hardly aware that the operation has begun.

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

1. A dental forceps for back molars, having jaws for grasping a tooth, and provided with a pendent vertically adjustable fulcrum adapted to bear upon the face or crown of the molar tooth in front of it, substantially as described.

2. In a dental forceps having jaws, B. B. a cross bar, *d*, having its ends fitting in holes, *c. c.* in the jaws, a depending fulcrum, or stem, connected with said cross bar, and a base or shoe, *h*, attached to the lower end of the fulcrum, or stem, substantially as and for the purpose described.

3. In a dental forceps having jaws, B. B., a cross bar loosely supported in said jaws, said

cross bar having a nut at its middle, a screw stem, or fulcrum, adapted to be screwed into said nut and a shoe or flat base connected with the opposite end of said screw stem, substantially as described.

5 4. A dental forceps for back molar teeth, having jaws adapted to rest against the tooth upon its approximate anterior surface, and provided with a fulcrum upon which the

wedge-shaped jaws are axially or pivotally and laterally movable, to secure a simultaneous wedging, and a prying, action upon the tooth, substantially as set forth.

CHAS. E. BLAKE, SR.

Witnesses:

THOMAS J. STALEY,  
J. WM. MISTER.