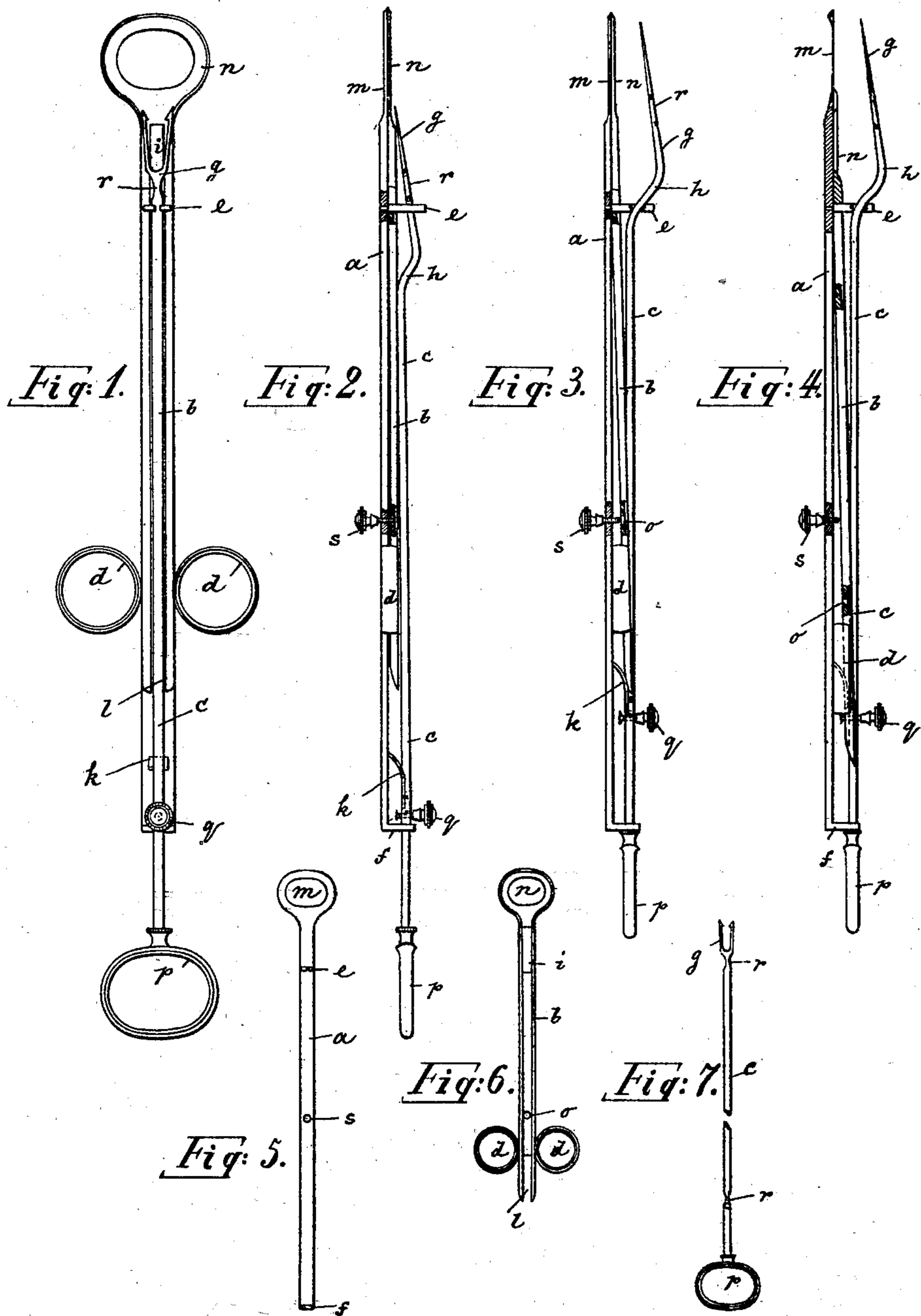


No. 671,067.

Patented Apr. 2, 1901.

A. HEISS.
SURGICAL INSTRUMENT.
(Application filed Sept. 19, 1899.)

(No Model.)



Witnesses:
William Schulz
William Miller.

Inventor:
August Heiss
per Roeder & Briesen
attorneys

UNITED STATES PATENT OFFICE.

AUGUST HEISS, OF SOLINGEN, GERMANY.

SURGICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 671,067, dated April 2, 1901.

Application filed September 19, 1899. Serial No. 730,980. (No model.)

To all whom it may concern:

Be it known that I, AUGUST HEISS, a citizen of Germany, and a resident of Solingen, Germany, have invented certain new and useful Improvements in Surgical Instruments, of which the following is a specification.

This invention refers to an instrument for the extirpation of the tonsils which is not only very simple in shape and easily handled, but can also be very conveniently cleaned, being easily taken apart in three separate parts. The characteristic point of the instrument is a bent fork *g* in a groove of the upper part of the instrument, getting its direction by a fork *e*, the short shaft of the latter serving at the same time as director of the upper part of the instrument. As is ordinarily the case with such instruments, the fork pierces first through the tonsil to be cut out and is then lifted with the latter, whereupon one of the cutting-blades moves over the other.

The drawings accompanying this application give an idea of the device.

Figures 1 and 2 are views of the instrument with the fork retracted as seen from above and from a side. Fig. 3 shows the fork put forward and in raised position. Fig. 4 shows the instrument after the extirpation of the tonsil has been made, the upper blade being retracted. Figs. 5, 6, and 7 show the several parts in smaller measure.

The three chief parts of the instrument are indicated on the drawings by *a*, *b*, and *c*. Part or shank *a* is stationary, while parts or shanks *b* and *c* are movable. Part *a*, which forms the lower part of the instrument, is provided with the knife *m*, the forks *e* *f*, and the set-screw *s*. Part *b*, the lower part of the instrument, is provided with the knife *n*, the eyes *d*, the slots *i* *l*, and a hole *o*, taking in temporarily the bolt *s* of part *a*, while part *c*, which is peculiarly bent at the place indicated by *h*, is provided with the fork *g*, the eye *p*, the inclined claw *k*, and the screw *q*. Part *b* is held and conducted by means of the eyes *d*, which are lateral and projecting downward,

while part *c* is set into the forks *e* and *f* and is movable. In putting together or taking apart of parts *a* and *b* the latter is set diagonal to the former, so that the fork *e* can be conducted through the slot *i*. The turning of both parts in the same direction effects their holding together. At the place indicated on the drawings by *k* part *c* is so narrow that it can be set in or taken out of the forks *e* *f*, contracting above, while the taking out is no more possible when it is moved forward or backward. Part *c* is resting in a groove of part *b*, and consequently gives to the latter the direction, as the groove will not admit a lateral movement of the same, neither when the fork is lowered nor when it is raised, as in the latter case the lower part of the fork-piece *c* will catch the groove. In order to prevent the part *c* from retracting in the forks *e* *f* so far that the narrower parts get into the same and cause a detaching, the screw *q* is provided, which when set downward will catch the fork *f*.

The instrument works as follows: When the fingers of the hand directing the instrument cause a retraction of parts *b* and *c*, the fork *g*, near the knife *n*, will first go over the same. The bend (indicated on the drawings by *h*) causes a raising of the fork, and thereby a drawing upward of the tonsil to be operated. A further movement will cause a retraction of part *b* to the part *a* and the cutting through of the tonsil. The higher the screw *s* is set the more difficult is the loosening of part *b*.

I claim—

In a surgical instrument the combination of shank *a* having knife *m*, and forks *e* *f*, with shank *b* having knife *n*, a set-screw *s* that engages the shanks *a* *b*, and with a shank *c* having bent fork *g* and claw *k*, and guided in forks *e*, *f*, substantially as specified.

Signed by me at Solingen, Germany, this 4th day of September, 1899.

AUGUST HEISS.

Witnesses:

LOUIS VIATZ,
RICHARD FELIX.