(No Model.)

F. A. REICHARDT.

FORCEPS JOINT.

No. 458,254. Patented Aug. 25, 1891.

FIG. 1.

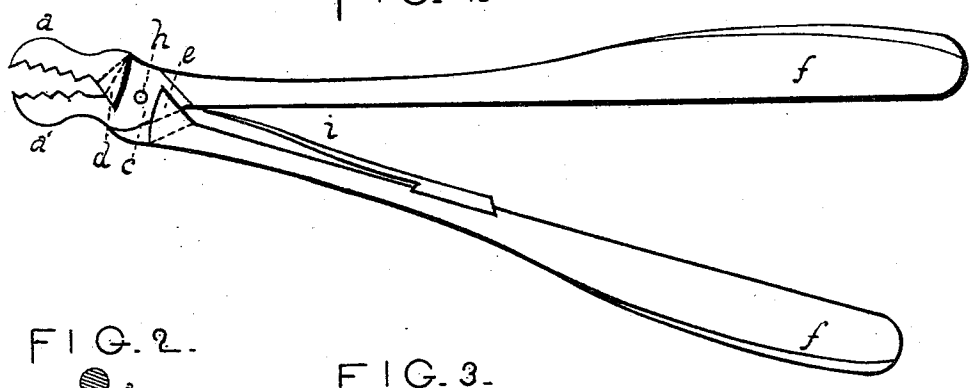


FIG. 2.

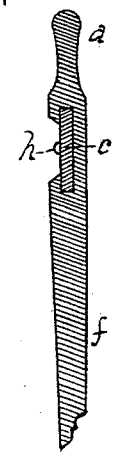


FIG. 3.

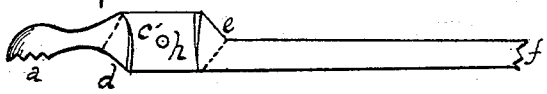


FIG. 4.

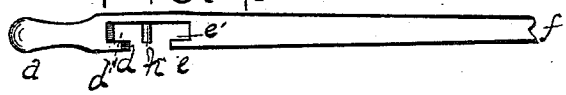


FIG. 5.

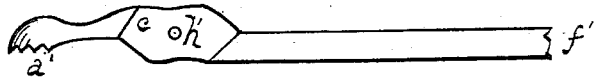
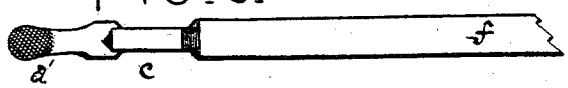


FIG. 6.



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FORCEPS-JOINT.

SPECIFICATION forming part of Letters Patent No. 458,254, dated August 25, 1891.

Application filed April 4, 1890. Serial No. 346,634. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND ALFRED REICHARDT, a citizen of the United States, residing at the city of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Surgical Forceps, of which the following is a specification.

The object of the invention is to combine the utility of a central fixed pin with the joint for forceps commonly known as the "Bex joint," as will be more fully hereinafter described.

The nature of the invention consists in the details of combination and construction, substantially as illustrated in the accompanying drawings, hereinafter described, and subsequently pointed out in the claim.

Figure 1 is a side view of my newly-invented forceps. Fig. 2 is a partial sectional view of the same. Figs. 3, 4, 5, and 6 are detail views of the same.

The two halves of the forceps are of the forms represented by $a\,f$ and $a'\,f'$ of Fig. 1. The spring i is provided between the handles to throw the forceps open in the common and well-known way. At the part where the two parts of the forceps $a\,f$ and $a'\,f'$ cross each other the part $a\,f$ widens into a plate c'. In this plate is fixed a central pin h. Two lips (designated, respectively, by d and e and integral with the part $a\,f$) extend a little over opposite edges of the plate c', but both on the same side of said plate with the pin h. Between these lips and the said plate are the grooves e' and d'. The part $a'\,f'$ of the forceps also widens into a plate at the part where it crosses the part $a\,f$. This wider part, which is in the form of a plate, is designated by c. This plate is perforated with a central hole h', adapted to fit on the pin h, and the edges of this plate are adapted to engage the grooves d' and e' when the forceps are closed, and to entirely clear said grooves when the forceps are open, the whole device to be as illustrated in the drawings.

To use my invention, the operator takes one half of the forceps in each hand, and, bringing them together nearly at right angles to each other, slips the hole h' upon the pin h. Then if the parts, being otherwise in proper position, be closed, the edges of the plate c entering the grooves d' and e' under the lips d and e will hold the parts together securely. When the parts are opened so that they stand nearly at right angles to each other, the edges of the plate c, having cleared the lips d and e, will allow the parts to be easily separated.

Otherwise than as herein described my invention can be used as an ordinary pair of forceps in the common and well-known way.

I am aware that the joint known as the "Bex joint," similar to that hereinbefore described, has heretofore been known and used, but without the improvement of a central fixed pin, thereby lessening the cracks for bacteria, &c., and increasing the capability of being readily sterilized. I do not, therefore, broadly claim a Bex joint without such central pin.

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

In a pair of forceps, the combination of one half and a plate formed thereon at the joint of such forceps, a stationary pin set in the middle of said plate, and lips integral with said half and overlapping the edges of said plate and forming a groove between said plate and each of said lips, with the other half of said forceps also formed with a plate at the hinge provided with a hole to fit upon said pin and having its edges adapted to engage said grooves, all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have hereto signed my name in presence of two witnesses.

FERDINAND ALFRED REICHARDT.

Witnesses:

S. M. S. TOMS,

S. FORBES.