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OPERATION

FOR THE

CURE OF SQUINTING:

ILLUSTRATED BY EXPLANATORY PLATES, THE DRAWINGS AFTER NATURE:

BEING

AN APPENDIX

TO A

SYSTEM OF PRACTICAL SURGERY.

BY

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MDCCCXL.

OPERATION

FOR THE

CURE OF SQUINTING.

This operation has all at once become so common, and the modes of performing it, with their consequences, so various, that it is a duty incumbent on me to treat of it now; for it was altogether unknown in this country, when Part II. of my Practical Surgery went to press. We are indebted to Mr Lucas of London, for its introduction into Britain,—to Dr Dieffenbach of Berlin, for its discovery.

The operation is chiefly had recourse to in strabismus convergens, and hence I have only illustrated this; for any operator can easily transfer the principle to strabismus divergens.—Before proceeding to operate, the Surgeon should investigate the case, otherwise he may fail; besides, cases present themselves curable by milder means. The instances most favourable for operation, are those in which squinting has begun in early life, and where no inflammation exists; also where but one eye is affected, as represented in Plate II. fig. 1. When both eyes are the seat of this affection, we ought to operate on both at the same sitting, in order that, by liberating both eyes, we may render the axis of vision the same in both; also, that the unoperated eye may not, by its accustomed sympathy,

drag the operated one back to its abnormal state. In operating on both eyes, however, at once, we must be careful to leave a fibre of the adductor muscle of the less faulty eye, or the fibro-cellular tissue on each side of this muscle, in order to antagonize the abductors, and prevent eversion of both eyes. Where the one is more faulty than the other, we may operate upon the more faulty first, in the hope that the other may rectify itself in a week or two.

In convergent strabismus, we divide the internal rectus muscle or adductor oculi; in the divergent, the external rectus muscle or abductor oculi. In those instances where the eye is very much turned inwards, and the individual cannot turn it outwards, it is proposed to divide, not only the internal rectus, but some of the contiguous fibres of the rectus inferior or depressor oculi; but this has been found only necessary in inveterate strabismus of one eye, for where both organs are affected, the division of the internal rectus in each eye completely liberates both, whereas the division of any of the fibres of the depressor makes the eye start forwards. In one instance, I observe, that not only the adductor and inner fibres of the depressor, but that the inferior oblique muscle was also divided.

The instruments which I consider best adapted for the operation in convergent squinting, are delineated in Plate I. The probe-pointed bistoury, marked *i*, I have now laid aside, because it is not so manageable as the curved scissors *e*, and causes a little delay from the change of instruments. It may, however, be occasionally required, after the scissors have cut across the tendon, to divide any contracted fibro-cellular tissue still confining the eye.

The instruments are arranged in the order in which they are to be used; they should be placed on a small tray within reach of the operator, and on which also should be put a cupful of warm water, with a small piece of sponge fixed to the end of a probe.

The letter *a*, indicates a pair of toothed artery forceps. *b*, a speculum. *c*, is a small double hook, a trifle larger than that marked *f*. *d*, another pair of toothed forceps. *e*, a pair of curved scissors, such as are used in the ordinary case of eye

instruments. *f*, a smaller double hook than that represented by the letter *c*. *g*, a hook for raising the tendon of the muscle. *i*, a small probe-pointed bistoury, which may be required after the employment of the scissors.

The patient, having taken a gentle dose of physic the day previous, should be placed on a table covered with a blanket, the head resting on a thin pillow, so as to have the eye as nearly horizontal as possible. Some direct the patient to be placed on a chair, with the head resting on the breast of an assistant; and some, that the chair ought to slope back like that of the Dentist; but, as in the operation of extraction of the lens, the horizontal is greatly preferable to the perpendicular position, and the more especially in this operation, where it often happens that the patient is a restless child. I have been told, that some farcical exhibitions have taken place, where the patients were seated on chairs.

As represented in Plate II. fig. 1., I have selected the right eye affected with strabismus, being the most frequent seat of this deformity; therefore the reader will bear in mind, that the right is the eye spoken of throughout the description. To the left eye a compress of lint is to be applied, and over it a silk handkerchief; the shutting of this eye from the light enables the patient to look more correctly with the affected eye, unless the inversion be very inveterate. The operator now grasps, with the forefinger and thumb of the left hand, the eye-lashes of the lower eyelid, gently everts it, and seizes hold of the tunica conjunctiva investing it, with the artery-forceps *a*, which he gives to an assistant to support, as depicted in Plate II. fig. 2., that they may not drag the eyelid too much down. He next raises the upper eyelid with the speculum *b*, (fig. 2. Plate II.) which he gives to another assistant, whom he ought to select as his chief *aide-de-camp*.

The eyelids being thus fixed or held apart, he requests the individual to look outwards as much as possible, during which the assistant, who is supporting the forceps, should observe that the left eye be completely closed; he then plants the double hook *c* on the conjunctiva, close to the circle of the cornea, gently pulls the eye outwards, and hands the instrument to his chief assistant, who should take care that it run

parallel with the area of the face, and do not press on the eyeball. See Plate II. fig. 2.

The operator, as represented in Plate III. fig. 1., now pinches up, with the artery-forceps *d*, the tunica conjunctiva *k*, between the cornea, or rather the hook *c*, and the plica semilunaris, and clips away, with the curved scissors *e*, an oblong or ovoid portion of this membrane. A surface (*r*, fig. 2. Plate III.) is now exposed, which enables the operator to see the insertion of the tendon *m* of the internal rectus muscle, but there are generally required here the use of a bit of sponge to wipe away a little blood, and some scraping with the convex side of the scissors *e*, or the hook *g*; for the tendon *m* should be distinctly seen before the hook *g* be passed, which is to be carried from below upwards, until its point *n* appear beyond the upper margin of the tendon *m*. One limb, *o*, of the curved scissors *e* is then passed under the tendon *m*, and this cut across, so that the hook be liberated; unless this be attended to, a few fibres of the tendon may escape division, and render the operation abortive, so that it may require repetition. When passing the hook under the tendon, the operator must be careful not to be deceived, by raising tough cellular or fibro-cellular fibres, instead of the tendon. The tendon is strong, striated, of a pearly colour, and cuts toughly or gratingly. It appears much stronger and broader in the living than in the dead eye.

Whenever the tendon of the muscle is divided, the left eye should be uncovered, and the patient requested to look straight forwards; if both eyes correspond, and the muscles of the eye operated on, are unable to roll it horizontally inwards; if, in fine, the pupil turns downwards and inwards from the action of the depressor, it is presumable that the tendon has been completely divided. But if the right eye do not look straight forwards, the left should be again closed, the eyelids held apart with the fingers of the assistant, as represented in Plate VII. fig. 9, of Part II., the surface *r* sponged, the hook *g* used, in order that we may ascertain whether any fibres of the tendon *m* have been left undivided, and if so, let them be freely cut through, either with the scissors *e*, or probe-pointed bistoury *i*. If no fibres remain undivided, it is to be inferred,

that the inversion of the eye-ball is consequent on contraction of the contiguous fibro-cellular tissue, which must be in like manner cut through.

In figure 2, of Plate III., two hooks are represented, marked *c*, and *f*; the former *c*, is implanted in the conjunctiva as already described; the latter *f* is implanted in the sclerotic coat, close to the hook *c*, to assist in everting and keeping steady the eye-ball, and these should be used in every inveterate case, immediately after the operator has snipped away the ovoid portion of the conjunctiva, as represented in fig. 1. of the same Plate. Both these hooks are held by the chief assistant. The hook *f*, is a little smaller than the hook *c*.

It has been already observed, that in certain cases, it is found necessary, not only to divide the tendon of the adductor muscle, but also a fibre or two of the depressor oculi. This is to be done, by clipping away a little more of the conjunctiva at the point of the insertion of the depressor, so as to bring into view its tendinous insertion, then by inserting the hook *g* from above, downwards under the inner margin of the tendon, and by clipping with the curved scissors one or more fibres.

After the operation, let a compress of lint, dipt in warm water, be applied over the eye which is to be kept shut; the patient is to be put to bed for the rest of the day, and confined in a darkened apartment. The eye may be bathed with warm water the following day, and on the third day with cold water. On the fourth, if there be no irritation remaining, which is generally the case, he may be allowed to walk about. If an operative, he may resume his occupations.

Fig. 3. of Plate III. illustrates the eye cured of squinting.

The Profession in Edinburgh is very much obliged to Mr Simpson, Cutler, College Street, for having so early brought from London the elegant little instruments used in this operation.

H. & J. Pillans, Printers, Edinburgh.

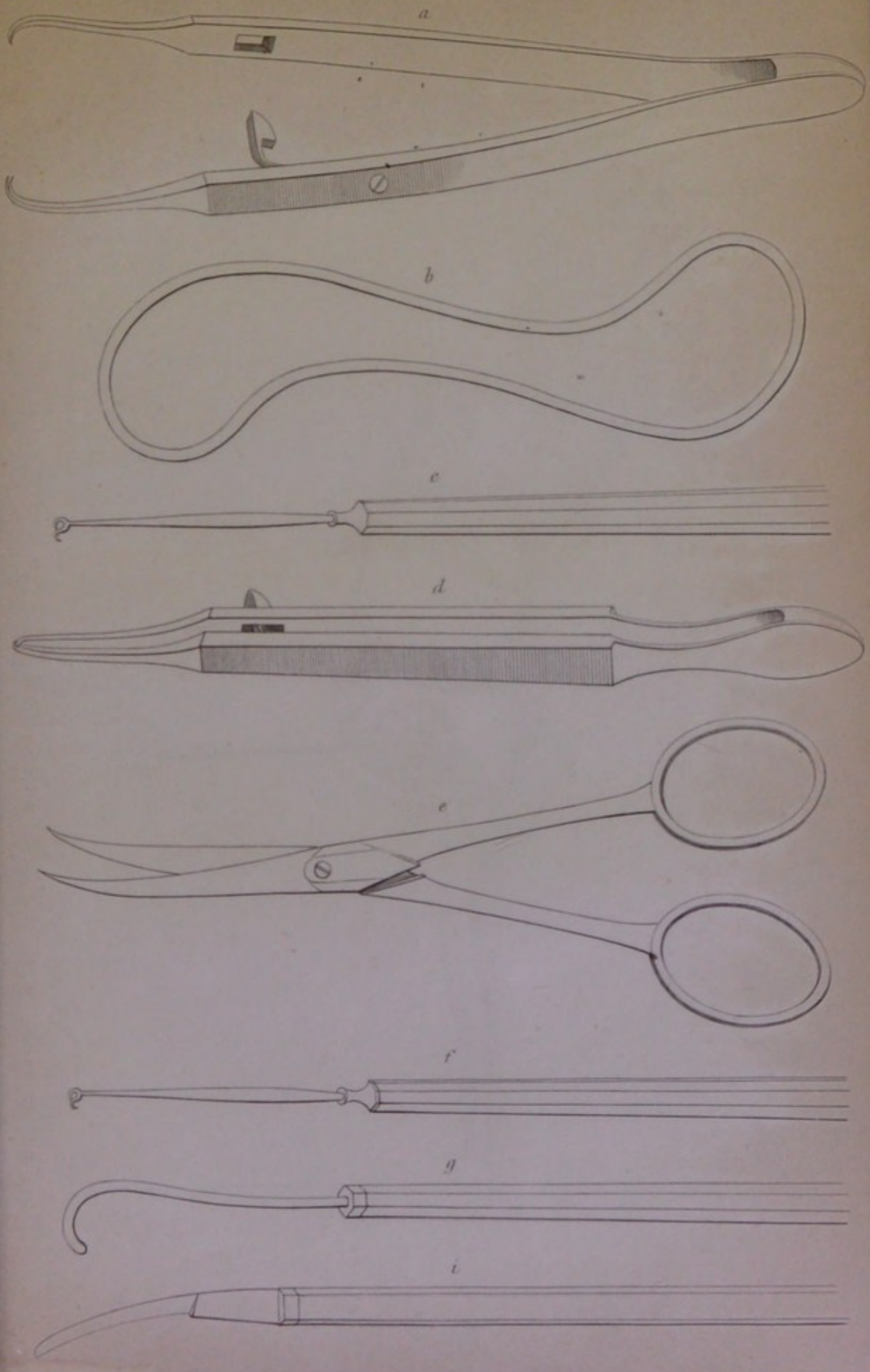
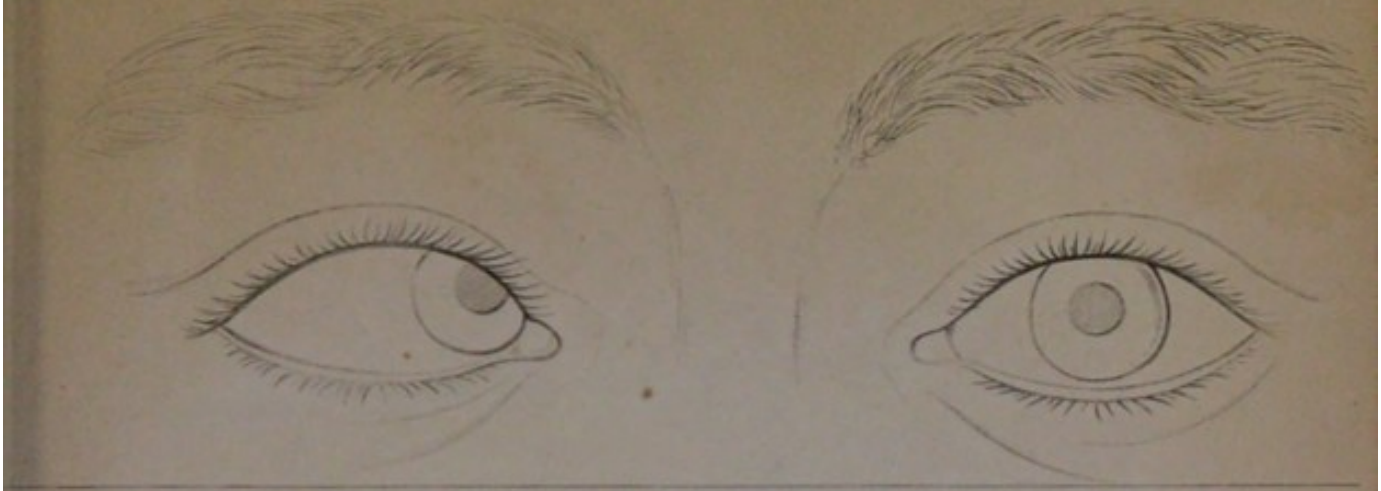

a
b
c
d
e
f
g
i

Fig. 1.

PLATE II.



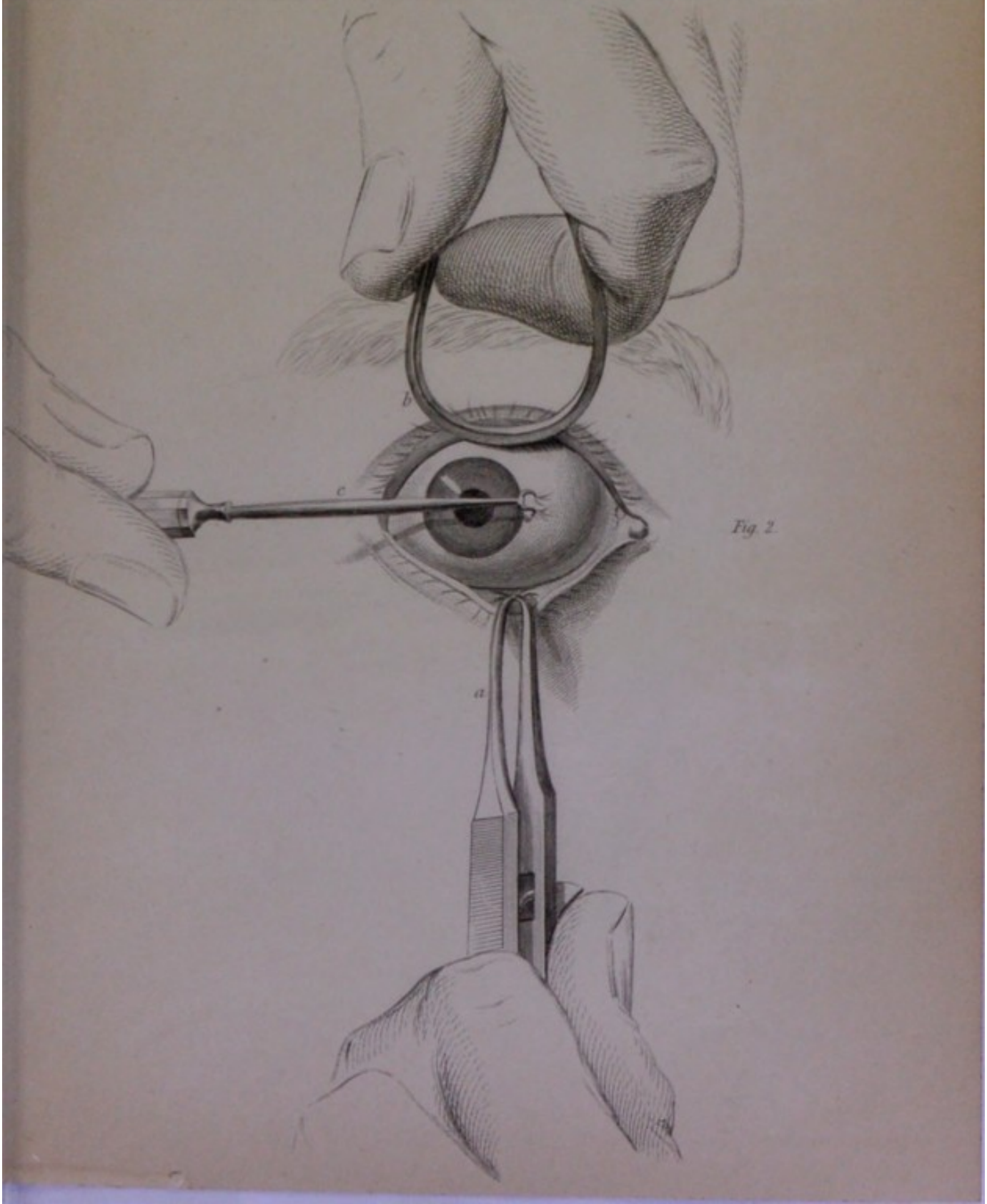
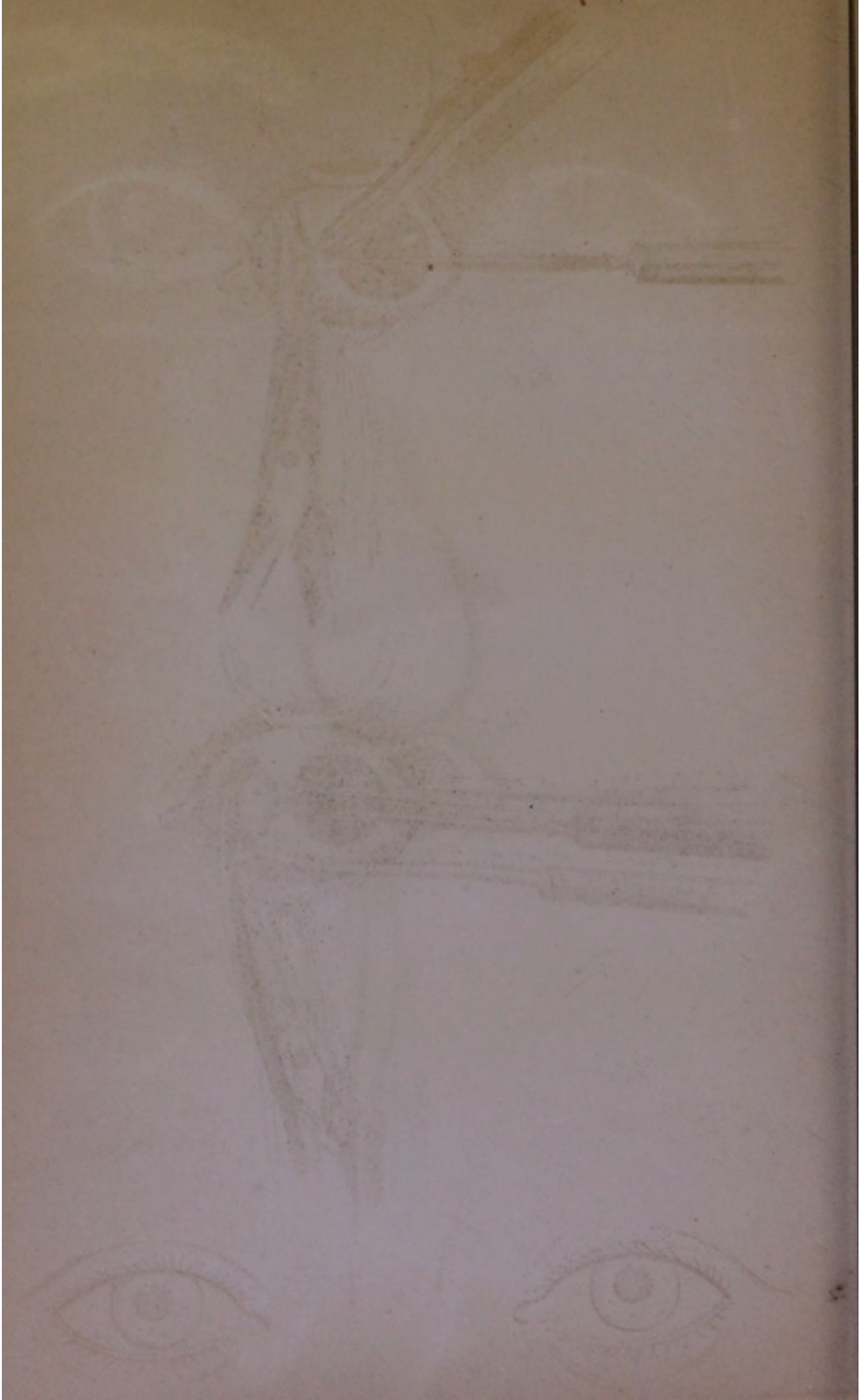


Fig. 2.



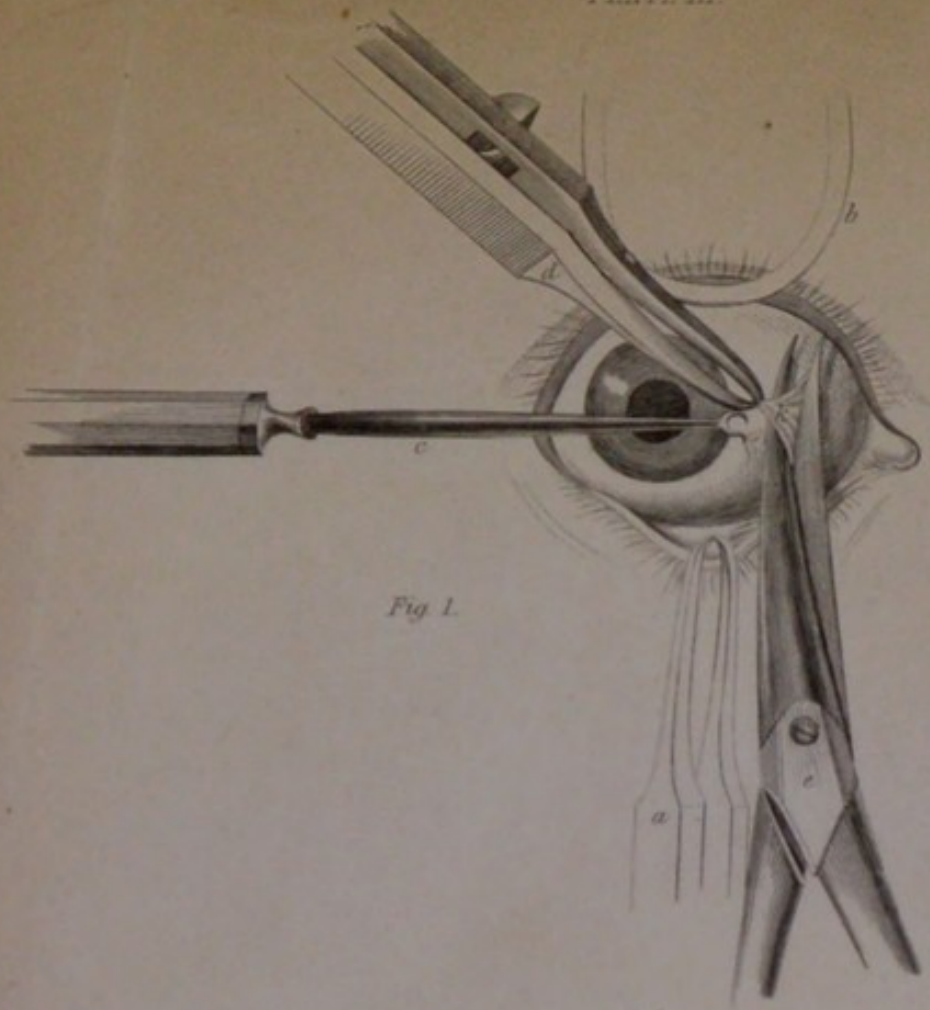


Fig. 1.

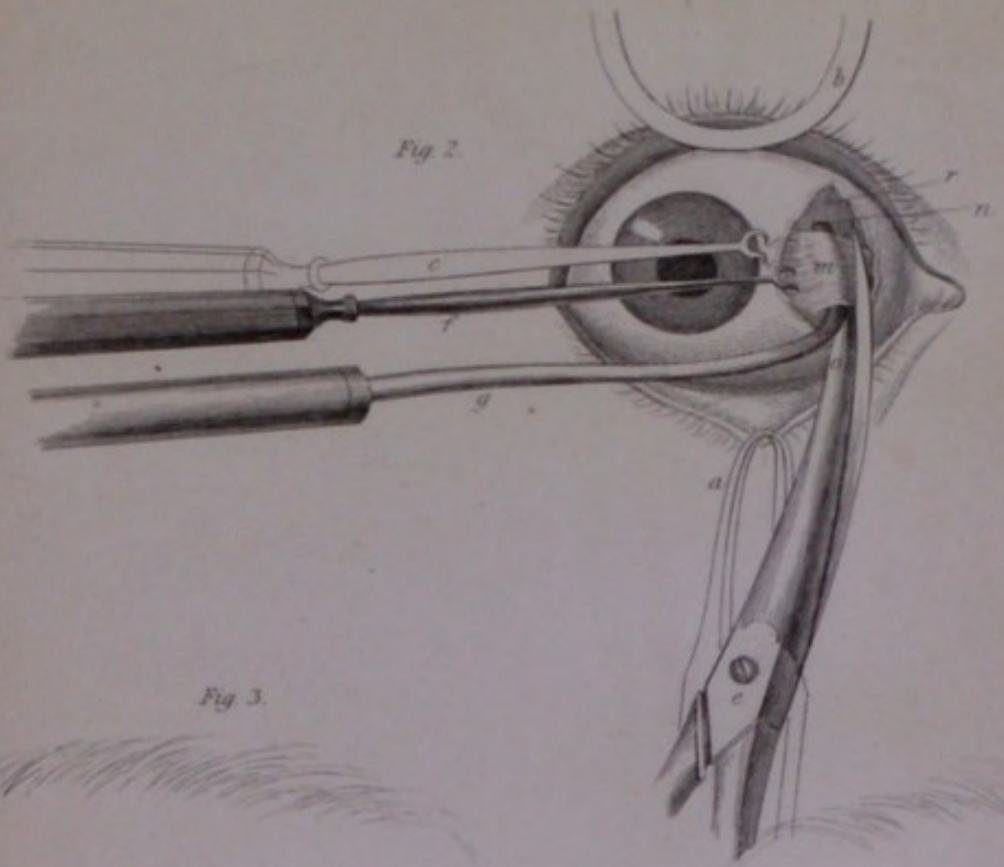


Fig. 2.

Fig. 3.