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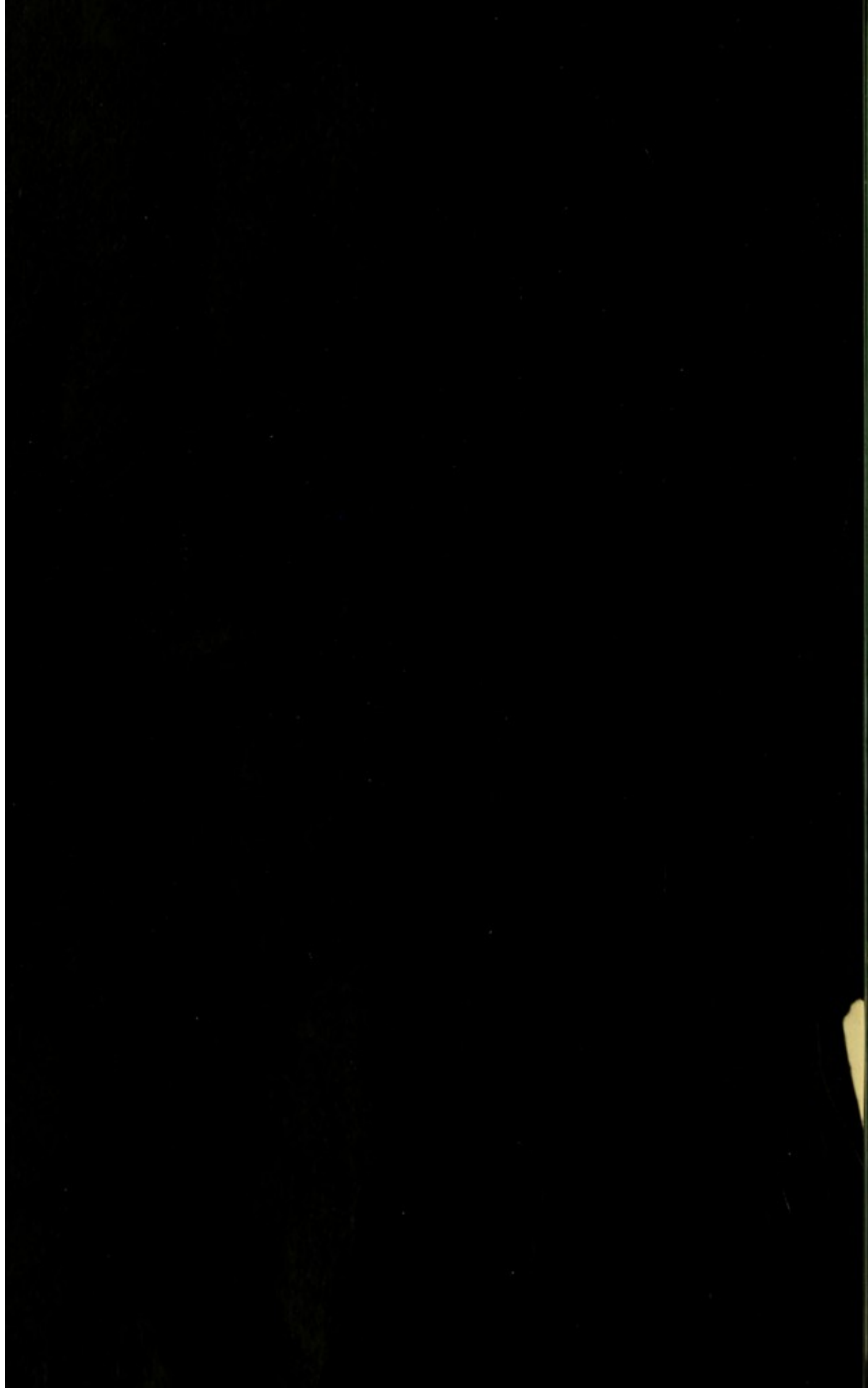
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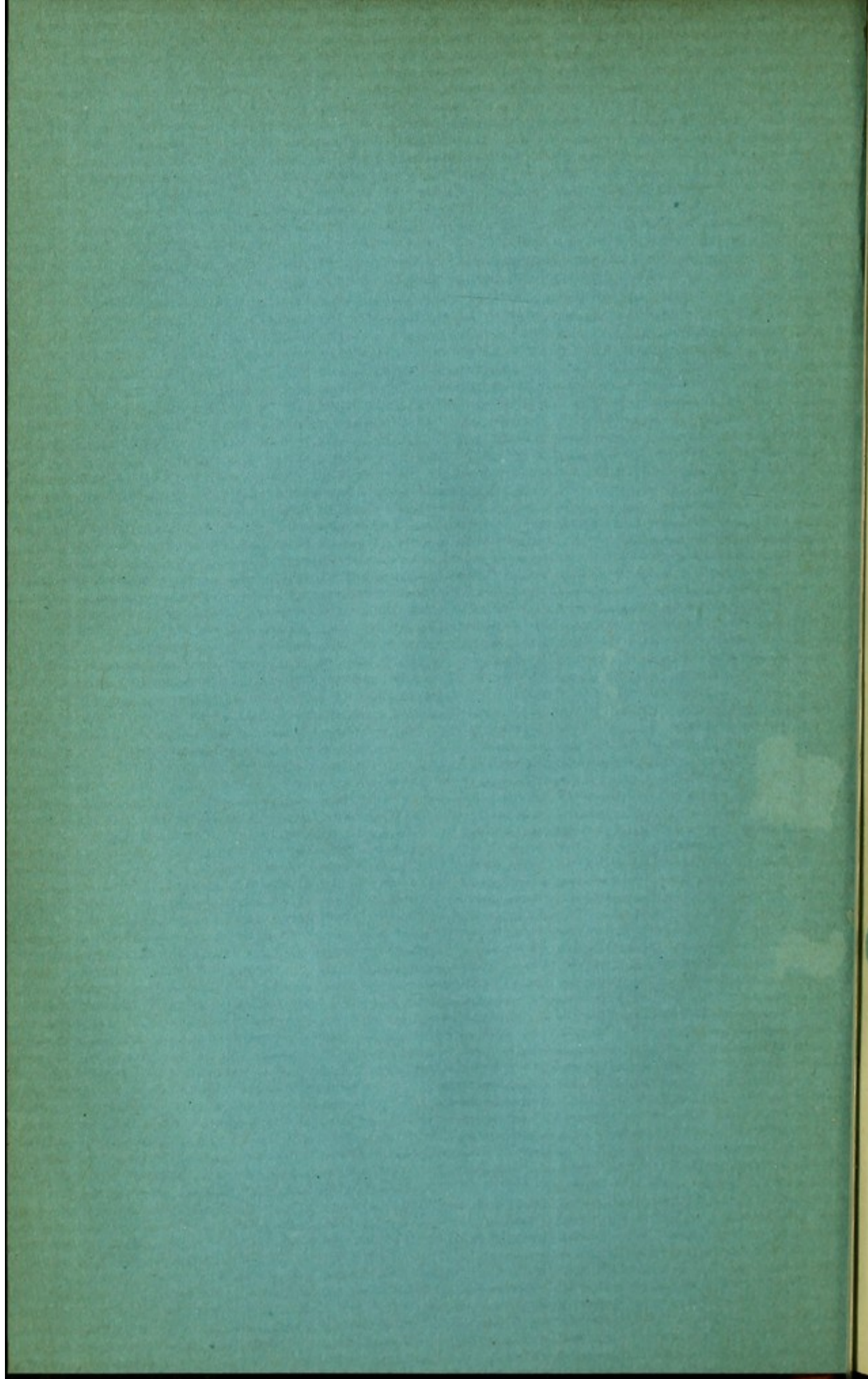
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NOTES ON
MINOR SURGERY.

EDWARD O. OTIS, A. B., M. D.,
Of Boston, Mass., Surgeon to the Boston
Dispensary.

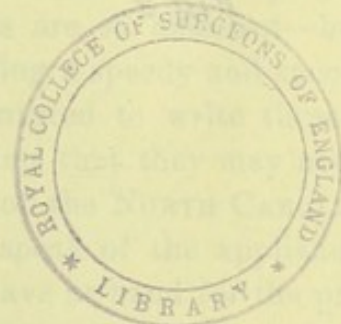
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Notes on Minor Surgery.

By KENNETH C. WREN, A.B., M.D., of Boston, Chief Surgeon in the Boston Dispensary.



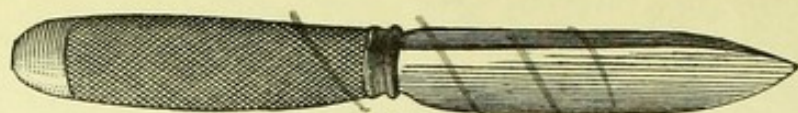


Fig. 1.

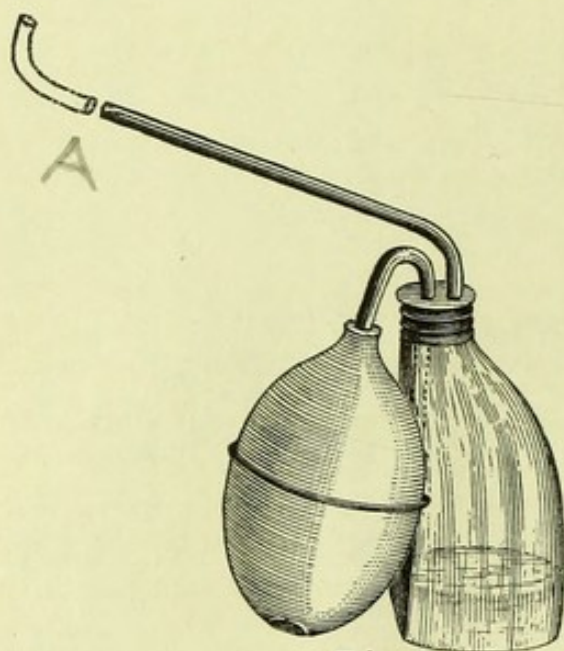


Fig. 2.

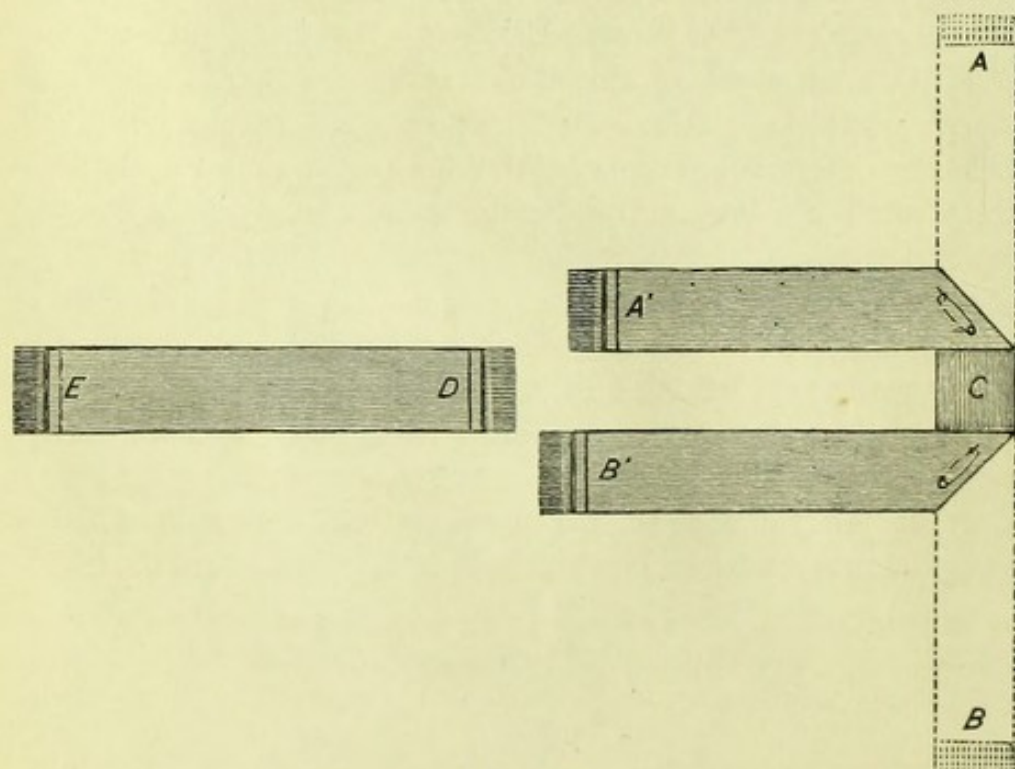
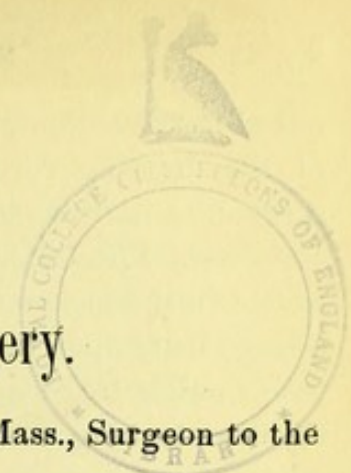


Fig. 3.



Notes on Minor Surgery.

By EDWARD O. OTIS, A.B., M.D., of Boston, Mass., Surgeon to the
Boston Dispensary.

The amount of surgery which the general practitioner sees and treats is, I suppose, small in comparison with his medical cases; and, moreover, of this amount the most of it would, I fancy, come under the head of minor surgery, so-called. It is not often that he has to do with a laparotomy or an amputation of the thigh, but an abscess, sprain or burn, for example, falls not unfrequently under his care. The skill and attention which he exhibits in the care of these smaller surgical cases will not only redound to his reputation as a successful physician—often out of proportion to the gravity of the case, for the results are so manifest—but will add much to his own satisfaction in seeing a speedy and successful cure.

I have therefore ventured to write these notes upon the small things in surgery, hoping that they may not be without profit and interest to the readers of the NORTH CAROLINA MEDICAL JOURNAL.

First, then, let me speak of the appliances and material which the physician should have at hand for the proper and careful treatment of his cases of minor surgery. At the outset let me say that everything should be done antiseptically, as absolutely so as the conditions of the case render possible; the perfect antiseptic ideal should always be kept in mind.

For holding the few instruments which are needed I find that a glass, earthenware or tin baking-dish, say about ten or twelve inches long and five or six wide, answers admirably well, and something of the kind can almost always be found in every household. This is filled a third or half full with a 5 per cent. solution of carbolic acid, into which the instruments, previously thoroughly cleansed, are placed. For almost any case of minor surgery the following instruments are sufficient: A pair of straight scissors, dissecting forceps, director, probe, dressing forceps, a Volkman's spoon for cleansing

out abscesses—though for this purpose one can use one of the blades of the dressing forceps—and one or two scalpels. With some surgeons a narrow curved bistoury is the favorite knife for incising abscesses. I prefer one with rather a short, straight blade (see Fig. 1), except in the incision of a felon, when I prefer a scalpel with rather a large belly upon it, which I use in the following way : With the finger outstretched upon the table, I enter the point of the knife, the edge looking towards the finger end, where I wish the upper angle of the incision to be, the knife being at right angles to the surface of the finger. I then sweep the knife through an arc of about forty-five degrees towards the finger-end, coming hard down upon the bone at last, the knife at the end being nearly parallel with the digit. This manœuvre can be executed with great rapidity, and if the patient pulls the finger away no harm is done and the cut is all the more satisfactory.

For irrigation and cleansing purposes carbolic acid, one to forty, or the bichloride solution, one to one or two thousand, experience has proved to be the best.

With the tablets now in the market this latter solution is quickly and readily made. A glass syringe of from one to two ounces capacity is perhaps the most convenient thing for general use in washing out wounds and cavities, it can so easily be kept clean. A fountain syringe is also good, particularly in the office. A four or five per cent. solution of cocaine and a subcutaneous syringe, to be used only for injecting cocaine, are of inestimable value in small surgical operations. Evulsion of in-growing toe-nails, excision of small tumors, amputation of fingers, circumcision and a host of other small operations can all be done under cocaine almost painlessly. In operations upon the fingers or toes, I have found it well to tie a bit of bandage pretty tightly above the place of operation, and then to inject from five to ten minims of the cocaine solution deeply into the tissues in three or four places. In removing a toe-nail, for instance, I obtained absolute immunity from pain by injecting the cocaine at each side of the toe and at the end. Nitrous oxide (laughing gas) is very convenient and safe for quick operations, such as the incision of an abscess, as is also the primary unconsciousness of ether. For dressings, a box of iodoform, with a wooden spatula or camel's-hair brush, must be always at hand. If one objects to the odor of the iodoform, this can be mitigated by

mixing with the iodoform coffee or tonga bean. In ^{venereal} ~~hernial~~ sores, where often the odor of iodoform is particularly objectionable, a saturated solution of iodol, which is odorless, in ether, can be used. For cavities, a powder-blower of almost any kind, filled with the iodoform, can be used. I am in the habit of using one like the cut (see Fig. 2), which is also used for insufflation of the posterior nares by attaching a curved tube at A. The advantage of it is that it can be held in, and managed by, one hand, leaving the other free for manipulations. Plenty of antiseptic dressing material also (one must have, and that commonly used is gauze (cheese-cloth) prepared with carbolic acid, corrosive sublimate or iodoform. Almost an infinite variety of material has been suggested which shall be the medium of the antiseptic; it makes not so much difference what it is, provided it is *thoroughly antiseptic* and of sufficient density.

Compound tincture of benzoin is very satisfactory for superficial wounds, the dressing being saturated with it. It can be used either alone or in the combination known as styptic colloid, made according to Mr. Gamgee's formula as follows:

R.—Tannin	1 part
Tr. benzoin co.....	2 parts
Collodion.....	5 parts

This can be applied on a bit of absorbent cotton. One should also have at hand bits of old soft cloth, upon which to spread ointments, absorbent cotton, cotton-batting, good adhesive plaster, and bandages, made of washed, unbleached cotton cloth, preferably.

A pickle or fruit-preserving jar, with a solution of one to twenty carbolic acid in it, is about the best thing to keep one's catheters in, whether they be soft rubber or metal.

For sutures and ligatures silk can be used which has been boiled an hour in one to twenty carbolic acid and preserved in a wide-mouthed bottle filled with a solution of carbolic acid of the same strength, or it can be soaked for a couple of hours in a one per cent. solution of corrosive sublimate and preserved in a weaker solution of the same (one to one thousand). If catgut is used, though I find the silk answers perfectly well, it can be soaked for two days in oil of juniper, washed and kept in alcohol.

For ointments the following are perhaps the most commonly

useful: Eucalyptus—one part by measure of the oil to four parts by weight of vaseline; boracic—boracic acid one part and five parts either of simple vaseline or of a base composed of two parts of paraffine to one part of vaseline, and of this base five parts to one of boracic acid; this can also be made of half strength; salicylic—one part of salicylic acid to twenty-nine of the same base as used in the boracic ointment or of simple vaseline; carbolic—made with vaseline of varying proportions, perhaps one to twenty, is the most useful. These are substantially the ointments and the proportions given by Cheyne in his "Antiseptic Treatment of Wounds."

For lubricating catheters I prefer eucalyptus oil or eucalyptus vaseline on account of its fragrant, pleasant odor, and use it in the proportion of one part of the eucalyptus oil to sixteen parts of vaseline, olive oil or castor oil. If an application is to be made to the urethra after passing the catheter or sound, then glycerine must be the base.

Having now made preparations for the treatment of any case of minor surgery which may present itself, let me next speak of some of the more frequently occurring cases. And first, I will refer to that *bête noire* of the general practitioner as well as the out-patient surgeon, *enlarged cervical glands*, which are too often dismissed with a coat of tincture of iodine and a prescription for iron or cod-liver oil. All the exciting causes in the track of the lymphatics should be looked for and considered—eczema of the head; parasites. Often have I found that an abundant crop of pediculi capitis was the offending cause. In a child consider, (1) Purulent otorrhœal (2) Ulcers in the mouth. (3) Discharge from the nose. (4) Enlarged tonsils. In an adult, (1) Enlarged tonsils also, and tonsillitis. (2) A carious tooth. (3) A cold. (4) Enlarged caseating follicles in the pharynx. (5) Syphilis.

If the cause can be discovered and removed, the enlargement will often speedily disappear. If no such exciting cause can be found, then it is fair to presume that the gland is a so-called scrofulous one, and for such I have obtained the best results (so far as external applications go) from the ung. hydrarg. iodidi. rubria, of the British Pharmacopœia, well diluted, say one part of the ung. hydrarg. iodidi. to seven or eight of simple ointment. For young children this must be still more diluted or vesication will be produced. A bit of this oint-

ment, about as large as the end of the thumb, is to be thoroughly rubbed in over the gland for from fifteen to twenty minutes every day or every other day. I have also used iodide of potash made into an ointment with lanolin, but have not been able to obtain as good results from it as from the iodide of mercury ointment. In almost every case constitutional treatment is also needed in the form of iron, cod-liver oil or mercury, and it goes without saying that the hygienic conditions should be carefully regulated. Recently, chloride of calcium has been advocated as efficacious in scrofulous glands, given in 10 gr. doses three times a day and gradually increased to 20 grs. [Vide *Practitioner*, London, January, 1886.] In a case of enormously enlarged glands, in which it was used for many weeks, I could detect no especial improvement.

Within the last year or two a number of very suggestive papers have been written upon this subject, the titles of some of which I will give for those who wish to make further investigation :

I. "On the Nature of Scrofulous Glands of the Neck and their Surgical Treatment." By Kendal Franks (*London Lancet*), June 19 and 26, 1886.

II. "The Surgery of Scrofulous Glands." By T. Prigden Teale (*Medical Times and Gazette*), January 10, 1885.

III. "Enlarged Cervical Glands." By H. F. Vickery, Boston (*Medical and Surgical Journal*), March 11, 1886.

IV. "Rest in the Treatment of Scrofulous Glands of the Neck." By F. Treves (*London Lancet*), June 5, 1886.

Enlarged inguinal glands are also of frequent occurrence, and are a very interesting study, both as to their cause and treatment. Here, again, one should have in mind the cause of the lymphatics which supply the different glands in the groin. Of the superficial glands, with which we have most to do, there are two groups, those above Poupart's ligament and those below. Those above are counted with the lymphatics coming from the integument of the scrotum, penis, parietes of the abdomen, perineal and gluteal regions; those below with the lymphatics coming from the inferior extremity. The long axis of those above is parallel with the leg. If we can then determine the position and form of the enlarged gland, we shall know in what region to look for the cause of the bubo, whether in the genito-urinary, lower abdominal or gluteal regions, or to the leg or foot. In considering inguinal glands one must always bear in mind the possi-

bility of a hernia. The most frequent cause of an inguinal bubo is some irritation in the genito-urinary tract, gonorrhœa or venereal sore; and we may have either a hard non-suppurating gland or a soft fluctuating one. In the former case, besides, of course, treatment directed to the cause of the trouble, one may apply the iodide of mercury ointment as in glands of the neck, keeping, if possible the patient at rest with the leg elevated. In the latter a free incision should be made, either parallel to the long axis of the gland, or perhaps better, at right angles to it, and the interior of the cavity curetted with the Volkman's spoon. Iodoform powder should then be freely applied and an antiseptic dressing, covered with layers of cotton batting, for compression, tightly bound on with a spica bandage. This should remain untouched for several days. A poultice, in most cases, only prolongs the suppuration.

It is remarkable how soon healing ensues under this method of treatment. O. Peterson, a German surgeon, found that in a trial of this method for three years the average time of healing was twenty-three days, while previously the average time was from seventy to ninety days. One meets also with enlarged inguinal glands, the cause of which is apparently some strain in lifting or doing heavy work; here simple rest is generally sufficient. The lymphatics in their course are sometimes inflamed, as, for example, the red lines running up the arm from some injury to the fingers or hand, and the injury may be very slight, too. In such a case painting with tincture of iodine is followed with good results.

Abscesses occurring in different parts of the body, particularly those on the back of the neck, can often be treated in the same manner as suppurating buboes, namely, incision, curetting and an antiseptic bandage. At all events, if a poultice is applied it should not be kept on too long. As a temporary dressing after the incision, until the patient can apply a poultice at home, if one is thought proper, a wad of absorbent cotton, smeared with carbolic glycerine or vaseline is good.

In *alveolar abscess*, a not unusual affection, the mouth and teeth should be carefully examined. If a decayed tooth is discovered about which the mucous membrane is tense, inflamed and boggy, it should at once be extracted, and there will often follow a welling up of pus in its cavity. If the tooth appears sound, about which the inflammation seems to be, scarification can be resorted to. If

there is a fluctuating point anywhere about the tooth, that, of course, should be incised, which can be most safely done by a scalpel, guarded by a bit of bandage wound around it to within half or three-quarters of an inch of its point. A mouth-wash of the following

R.	c. c.	
Acidi carbolici.....	0 5	= ℥ ix
Tr. myrrh.....	5	= ℥ lxxxi
Aquæ ad.....	100	= ℥ iii ss
℥.		

is agreeable and disinfectant while pus is being secreted anywhere in the mouth.

When there is an external swelling on the jaw, do not be in a hurry to incise it, for possibly suppuration may be averted and the risk of a fistula avoided. Contractile collodion or a solution of carbolic acid, one to twenty, are sometimes effectual as abortives. If fluctuation is made out, or there is great pain and throbbing, an incision will have to be made, and when attempted should be deep enough to strike the pus, down to the alveolar process itself, if needed. In such a case as this ether had better be given and the incision carefully made. A pair of dressing forceps used as dilators will safely enlarge the opening.

In threatened *abscesses of the breast*, where the gland is hard, tense and exceedingly painful, an attempt, often successful, should be made to avert suppuration. The first and most important thing to do is to apply support and compression. To accomplish this an arrangement with two towels known about Boston as the "Richardson" bandage, first devised by Dr. W. L. Richardson, of the Boston Lying-In Hospital, seems to me to be the easiest and is very effectual. It is made in the following way (see Fig. 3): A towel, A B, is folded lengthwise about five inches wide. The two ends are then folded diagonally so as to be parallel with each other, A B, leaving space enough to embrace the breast between them. At C the end D of a second towel, folded lengthwise like the first, is attached with safety-pins, and being carried around the back, meets the ends of the first towel, when all three ends, A' B' and E, are united by safety-pins as before. A piece of cloth or bandage can be carried over each shoulder and pinned to the towel bandage to hold it up, if necessary, while the patient is walking about. Beneath this towel bandage cotton-batting or absorbent cotton can

be placed so as to make compression. Various applications have been suggested to prevent suppuration : spirits of turpentine, applied on a cloth ; an ounce of carbonate of ammonia in a pint of boiling water, applied assiduously for half an hour, and repeated in from two to three hours ; lead and opium wash ; spirits of camphor. In one case in which I tried the spirits of turpentine I was not successful. If the mastitis goes on to suppuration a good free opening must be made at the most dependent portion and a drainage-tube inserted. Here, again, a good antiseptic dressing, firmly applied, is better than a poultice, and will bring about a more speedy cessation of suppuration and a quicker recovery.

Chronic varicose ulcers of the leg, though so often regarded as exceedingly uninteresting cases, because they are so frequent and so chronic, have very much of interest, particularly in their treatment, to the reflective and ingenious physician.

As to local treatment, the applications and methods are innumerable. Some do well, often being cleaned up by a poultice for a few days, under a good layer of iodoform. In others I have found compression, by means of strips of mill-board, applied over cotton-batting with a firm bandage, successful. When the edges of the ulcer are indurated and brawny, and the ulcer itself unhealthy-looking, with a thin, watery discharge, the unguentum hydrarg. applied over both ulcer and edges, is often speedily successful in stimulating the parts into a healthy condition. Blisters about the ulcer on the indurated borders, I have also found of service. Whatever the application, the leg should be firmly bandaged from foot to knee.

Sometimes, after everything else has failed, thoroughly curetting the ulcer will be the beginning of a successful termination.

The rubber bandage, the silk elastic stocking, a bandage made of Shaker flannel cut bias, so as to increase its elasticity, are all useful.

The general condition needs often quite as much care as the local. As a rule it is below par, and besides good food and hygienic surroundings, a tonic is indicated. One like the following, from our Dispensary formulary, I am fond of giving :

℞.	
Strychniæ sulph.....	04 grs. = gr. 3-5
Ferri sulph.....	
Cinchoniæ sulph., āā.....	1 5 grs. = gr. xxv
Syr. simp.....	100 c. c. = $\frac{2}{3}$ iii ss
℥. Sig. teaspoonful 3 t. d., after meals.	

The preparation known as the syrup or elixir of the triple phosphates is also good. Again, iodide of potash seems best to fulfil the indications.

I have been struck with the complaint made by so many patients suffering from chronic ulcer of inability to sleep. This must be attended to and care given that the nervous system has complete rest. The heart must also be looked to, and if found feeble and weak, toned up with digitalis or whatever seems the best drug for its special condition.

Scalp wounds, particularly those over the eye and on the forehead, are a class of injuries which do remarkably well under cleanliness and antiseptic dressings, but give no end of trouble if not carefully and properly attended to. How often have I had a scalp wound brought to me several days after its occurrence, which had been closed tight, with no attempt at disinfection, by the sticking-plaster of an officious apothecary, the œdema, swelling and pain indicating only too truly that abundant germs have been shut up in the unclean wound, and a gush of pus following the removal of the plaster. With careful cleansing by the carbolic or bichloride solution, followed by a thick layer of iodoform and an antiseptic pad, healing generally readily ensues, but alas! often with an unseemly scar, which might have been avoided if only, in the first place, cleanliness, antisepsis and a careful approximation of the edges of the wound had been done. Moreover, all suppuration is dangerous, and particularly so is it about the scalp, where it may extend rapidly and induce grave cerebral trouble. When pus collects in the loose bag of tissue about the eyebrows, after pressing it out and disinfecting the cavity, a small antiseptic pad, tightly applied, will expedite the glueing down of the surfaces.

Sprains are a frequently recurring class of injuries which often tax the resources and ingenuity of the surgeon as to their best treatment. Those of the ankle and wrist are the most common. In both it is sometimes difficult, if not impossible, to distinguish between a fracture and a sprain, or even a partial dislocation. If doubt exists as to which of these it may be, it is a safe way to immobilize the joint, and this can be done either with ordinary splints, with the mill boards, as described in the treatment of ulcers of the leg; or, if the physician can watch it carefully, with a plaster of Paris bandage. Even if the diagnosis of a sprain is clearly made out, and it be a severe one, as indicated by the amount of

swelling and pain, immobilization is perhaps the best treatment. It is often a nice question to decide when to begin passive and active motion. If the sprain is a less severe one, a douche with hot water, as hot as can be borne, applied for an hour or two even, and frequently repeated, I have found a most efficient and comfortable treatment. Contractile collodion painted over the joint, as first suggested by Dr. A. N. Blodgett, of this city, I have found of value, giving both a certain amount of immobilization and compression. I would refer the reader to a most excellent paper upon this subject by Edmund Owens in the *Practitioner* (London) for August, 1886.

In sprains of muscles and vague injuries about the trunk I have often obtained great and permanent relief by tight strapping as for fractured ribs; and I will also mention in this connection the wonderful relief obtained by strapping the chest so as to immobilize the intercostal muscles, in the excruciating pain of acute pleurisy. Here, however, instead of applying the strips of plaster parallel to each other around the chest, one can obtain greater immobility by applying them at an angle to each other, as in strapping an ulcer.

For *burns* I am fond of using either the boracic or eucalyptus ointment. The latter at first, and the former later, when more stimulation may be needed. One should always bear in mind the tendency to contractions in burns, and keep the part in its natural position as near as may be. If, in spite of careful attention, contraction ensues, and sometimes it is inevitable, let the ulcers first thoroughly heal, and then begin movements to overcome the deformity. Carron oil, which has been for so long the regulation application to burns, is both nauseous and septic.

All *fresh wounds* should be treated with thorough antiseptics and not disturbed for a week, or until healed, unless pain or discharge indicates that the antiseptic dressing has failed, or rather that the surgeon has not succeeded in his antiseptics.

In *suppuration about the hand* pus travels with great rapidity in the smooth track of the tendons, and free incisions should be made at once; it is the only safe and sound practice. In the case of a young man who came to the dispensary with suppuration in the palm of the hand from an abscess in the finger, all suppuration ceased in two days after a free opening under ether. Delay is

dangerous whenever suppuration is going on, and nowhere more than in the hand.

With regard to *foreign bodies*, needles and the like, there is only one rule to follow: if you do not feel the body and there is no evidence of inflammation, let it alone; do not cut and grope around for it. "Only attempt to remove a foreign body if you can feel it."

In closing these desultory notes I wish to impress upon my readers the *influence which the condition of the general health exercises upon the healing of wounds and ulcers*. Let me give an illustration or two: After the excision of a long-standing unhealthy ulcer of the prepuce, healing went on satisfactorily for a while, and then, quite mysteriously, the wound began to take on an unhealthy condition and ceased to heal. On inquiry it was discovered that the man had been indulging in stimulants, and these being stopped, healing ensued. Again, in a girl with a small ulcer upon the leg, no application seemed to produce the least beneficial effect upon it. The girl showed some evidences of anæmia and iron was given. Almost immediately the ulcer began to improve and soon healed.

After all it is the so-called slight ailments and minor surgery which demand the acumen and judgment of the physician quite as much as the graver cases; and, moreover, it is the judicious and painstaking attention to these smaller cases which happily prevents them from terminating in more serious ones.

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