Part Second.

REVIEWS.

A System of Surgery, Theoretical and Practical; in Treatises by various Authors. Edited by T. Holmes, M.A. Cantab. In four volumes. Vols. I and II. London: Parker and Son. 1860-61.

These two handsome volumes form the first half of a complete work on the Principles and Practice of Surgery, the object of which, as we are informed in the preface, is "to unite into a complete system the opinions and experience of many men, most of them hospital surgeons in London, and most of them writing on subjects of their own choice." This encyclopædic mode of composition, whilst it holds out certain facilities, presents at the same time various disadvantages. On the one hand, the subdivision of labour allows the work to be completed in a much shorter time than would otherwise be possible, and permits a degree of elaboration which would be unattainable if one man had to treat of every department. But, on the other, there is the danger, nay, the absolute certainty, that the authors of "the System" may not on all points be at one, but that important differences of opinion may find expression, to the great confusion of those—especially if beginners—who consult its pages; or, if an attempt be made to conceal these differences, and to have all the articles shaped according to a certain pattern, there is the loss of that decided expression of opinion, which constitutes one great charm in the writings of the masters of the profession. In the present volumes the attempt to avoid these dangers has been as successful as was perhaps possible; still in such a subject as surgery, which combines so intimately the practical with the scientific, the want of the one guiding principle is probably more strongly felt than in any other branch of professional study.

The first of the volumes before us is devoted to General Pathology. Mr Simon commences it with an admirable treatise on inflammation, which, while showing a thorough acquaintance with the latest literature of the subject, is characterized by the vigour of intellect and clearness of expression which distinguish all Mr Simon's writings.

Mr Simon, after some remarks as to the etymology of the term "inflammation," from which it appears that not only in most European languages, but also in Arabic, Sanscrit, and Hebrew, the words which express the process are such as denote the physical fact of having been set on fire, enters upon a description and explanation of its phenomena.
A case of carbuncle is taken for illustration, and it is shown that two processes are simultaneously in operation—a loss of substance, and a reproduction of substance. In ordinary healthy nutrition the same actions are going on, but there the changes are of an impalpable character; while in inflammation "the appre-

ciability of the opposed results is in itself a differential mark of the process."

Inflammation is first considered as a destructive process; and it is shown that the destruction of tissue may occur in consequence of gangrene, ulceration, or liquefaction. Gangrene consists in the death of portions of the body which then become obedient to chemical laws, and undergo ordinary putrefaction; ulceration is chiefly distinguished from gangrene by proceeding more gradually and in a more mole-
cular manner, the tissues, instead of dying en masse, crumbling away, and being progressively discharged; liquefaction affects the covered-in textures, the tissues are gradually "so absolutely disin-
tegrated and fluidised as to be capable of soaking through the

membrane of capillary blood-vessels."

As a productive process, inflammation is considered according as it produces changes in the local circulation, in the local blastema, and in the local growth. The changes in the local circulation are among the most striking in inflammation, and it was supposed till comparatively lately that they were the really essential phenomena; there used, indeed, to be a dispute whether the action of the blood-vessels was increased or diminished. We now know that the changes which take place in the blood-vessels are not primary but secondary phenomena; that from their structure the capillaries are incapable of making any direct modification in the local distribution of the blood (although, of course, they are capable of becoming en-
gorged and distended), and that the arteries show their activity by contraction, while their dilatation is a passive process. In an in-
flamed part, accordingly, the augmented supply of blood is not the

result of an increased activity of the vessels; on the contrary, it is due to their dilatation, which is a consequence of the diminished vitality of the tissues. "A part does not inflame because it re-

ceives more blood; it receives more blood because it is inflamed." "Nothing can better illustrate the meaning of this distinction than the contrast (on which the late Dr John Reid insisted) of a case in which the femoral artery has been obliterated for aneurism with one in which amputation of the thigh has been performed: in both cases the main artery is obliterated, and at about the same spot; in both cases the pressure of the heart's action is the same; but in one case, there remains no requirement for blood below the place of ligature, and, accordingly, the collateral blood-vessels undergo no enlargement; whereas, in the other case, the entire remaining limb requires its customary supply of blood, and the collateral blood-

vessels accordingly enlarge so amply that not an hour's anaemia is inflicted on it. And to the same effect is the argument of Prof.
Virchow (supported by a curious experiment of his own, as well as by many recorded cases of disease and malformation) that, when a pulmonary artery is obstructed, the lung gets its compensative supply through arteries—bronchial and intercostal—belonging to the aortic system."—P. 19.

The conclusion accordingly is, that the cause of inflammatory stasis lies wholly in an influence exerted on the blood by the textures, that in other words it is "primarily the result of an increased attraction which the inflaming tissue exerts, as it were suctionally, on the blood coursing within its capillaries." This view of the cause of the accumulation of blood in the inflamed part is, of course, not new; it was taught by the late Dr Alison many years ago, and has been strongly insisted on by others; but Mr Simon has the merit of bringing together the arguments in favour of it, with a completeness which has only been rendered possible by recent researches.

The changes in the local blastema are next considered. In health, the nutritive fluid is probably very analogous to the liquor sanguinis, except that it is in a much more diluted condition. In inflammation the so-called 'effusions' present the characteristics of a blastema which has transuded under more than normal pressure, or with less than normal resistance. Their specific gravity is high. Their proportion of albumen is great. And, where they are not purulent, they commonly give a fibrinous coagulum."—P. 27. But not only is this the case, they contain certain ingredients in different proportion from that in which they exist in the blood, and they are rich in organic forms. As illustrative of the first of these characteristics may be mentioned the large proportion of chloride of sodium and phosphates they contain. In pneumonia, the quantity of chloride of sodium in the inflamed lung is often so great, that no trace of this salt can be found in the urine; while the thin, colourless discharge of wounds is stated by Lehmann to be richer in phosphates than the liquor sanguinis.

The third change produced by inflammation is in the textural elements themselves. This, at the present day, is the most debatable point in the history of the inflammatory process. The doctrine, which for long was universally maintained, was, that in the inflammatory effusion, at first structureless, nuclei made their appearance, that these became surrounded with a cell-membrane, and that in this way pus and the other forms of cell-growth were produced. Of late years a different view has been gaining ground. Virchow and many other German observers maintain that there is no such things as a spontaneous or equivocal generation of cell-forms; that no cell can arise where no cell previously existed; that the doctrine omnis cellula e cellula is universally true. Into a critical consideration of these two doctrines Mr Simon does not enter, but it is evident that he is strongly predisposed in favour of the latter. In regard to the nuclear elements he entertains no doubt that they are
all derived from pre-existent tissues, and although, in the case of
cell-membranes and cell-contents, he admits that there may be
more difference of opinion, he feels warranted in stating as a general
law, that "the cell-forms of inflammation are derivatives of the
cell-forms of health." Of the truth of this great principle we enter-
tain no doubt; innumerable observations in support of it may now
be brought forward, amongst the most prominent of which are
those of Goodsir, Redfern, Reinhardt, Virchow, Strube, His, and
Weber.

The classical symptoms of inflammation are still, as in the days
of Celsus, "redness and swelling, with heat and pain." We have
only a few words to say in reference to "heat." John Hunter's ex-
planation of the increased heat, was that the inflammed part became
fuller of blood until at length its temperature was equal to that of
the blood, but that in no case could it be made warmer than that
fluid. Others again have maintained that an inflamed part is
actively calorific, and that it becomes or tends to become of higher
temperature than the blood which supplies it. Here then there is a
difference not only as to theory, but as to a question of facts, and which
can only be cleared up by experiments of an extremely delicate
nature. Mr Simon, in conjunction with Dr Edmund Montgomery,
entered upon this inquiry, employing a thermo-electric apparatus
which could indicate the minutest differences of temperature. We
cannot give the details of the experiments, but the conclusions
arrived at were the following:—"First, that the arterial blood sup-
plied to an inflamed limb is found less warm than the focus of in-
flammation itself; secondly, that the venous blood returning from
an inflamed limb, though found less warm than the focus of inflam-
mation, is found warmer than the arterial blood supplied to the
limb; and thirdly, that the venous blood returning from an in-
flamed limb is found warmer than the corresponding current on the
opposite side of the body. Unquestionably, therefore, the inflam-
atory process involves a local production of heat."

It was long supposed that the fever which accompanies most in-
flammations was the result of heated blood. On this point, too,
Mr Simon has instituted experiments, and has arrived at these con-
clusions: that increased temperature of the blood is an invariable
fact in the febrile state, and according to its degree measures the
intensity of the fever; that the excess of temperature ranges per-
haps as high as 10° Fahr. above the normal heat of the blood; and
that this excessive heat of the blood explains the apparent drought
of the body, and the stimulated state of the nervous centres, and of
organs dependent upon them.

The remainder of this excellent article is devoted to a considera-
tion of the causes of inflammation, and of the principles which
should guide the practitioner in its treatment. All this is thoroughly
sound; and we can altogether recommend this article to the careful
consideration of our readers, as we do not know where they could,
in the same bulk, find so much valuable information on a much contested and somewhat complicated subject.

The chapters on Abscess and Gangrene are contributed by Mr Holmes Coote, and are treated in a satisfactory manner. In speaking of the origin of pus, Mr Coote observes that the view which regards pus cells as generated from the corpuscles of areolar tissue, is that most generally adopted; although, somewhat illogically, the statement immediately follows, that the universal existence of these cellular tissue corpuscles has yet to be proved. The remarks regarding the absorption of pus are true so far as they go, though a little more amplification would have been desirable. The symptoms of abscess in general, of abscesses in particular situations, and the general treatment of these affections, are well treated of.

Mr Paget contributes excellent articles on the following subjects: Sinus and Fistula, Ulcers, Innocent Tumours, Contusions, and Wounds. Most of these subjects have already been treated of by the same author in his admirable Lectures on Surgical Pathology; in the present work, however, they are viewed in a less abstract and more practical manner. We have only one remark to make regarding the classification of ulcers, which is complex, and not very satisfactory. Thus we have the simple or healthy, the inflammatory, the eczematous, the cold, the senile, the strumous, the scorbutic, the gouty, the syphilitic, the lupous, the rodent, the cancerous, the varicose, the oedematous or weak, the exuberant, the haemorrhagic, the neuralgic or irritable, the inflamed, the chronic indolent or callous, and the phagedænic and sloughing. This list appears to us to be very unnecessarily prolonged, and to be calculated to produce the greatest perplexity in the mind of the student. The treatment, however, recommended by Mr Paget is in every way satisfactory.

Mr Campbell De Morgan is the author of the article on Erysipelas. There is, in our opinion, a very unnecessary degree of refinement in the division of erythema and erysipelas into a great number of varieties. What the surgeon has to do with are erythema simple and phlegmonous erysipelas; a special description of forms which are mere modifications of these being, it seems to us, unnecessary. As an illustration of our preliminary remarks regarding the impossibility of preventing different expressions of opinion where a number of authors are associated together, we may quote the following passage:—"The presence of pus-corpuscles in the blood of patients suffering under the most severe forms of erysipelas has been noticed by Dr C. B. Williams and others. This may account for the frequent association of erysipelas with manifest pyæmia."—P. 237. This statement is not only opposed to the present state of pathological knowledge, but is at variance with the views entertained by some at least of Mr De Morgan's collaborators. Few, we believe, now doubt the correctness of Virchow's doctrine, that pus-corpuscles and the white cells of the blood are
histologically identical, and can only be distinguished by their mode of origin. That is to say, if a cell of a peculiar form be found external to the blood, we may safely conclude that it is pus; if this is not the case, we have to do with a blood-globule. The cases where pus-cells have been stated to have been found in the blood are in reality examples of acute leukaemia or leucocytosis, where the colourless blood-corpuscles have been present in large numbers, generally in connection with irritation and enlargement of the lymphatic glands.

We entirely coincide with Mr De Morgan's remarks on the treatment of Erysipelas. Whilst it is freely granted that depressent treatment is generally badly borne, no favour is shown to that system of excessive stimulation which came lately into vogue. Mr De Morgan is a strong advocate for the treatment of the disease by the muriated tincture of iron. He says "but that it will do, in the majority of cases, what no medicine of any other class has yet been found to do, namely, cut short the disease, no one, I believe, who has fairly tried it will deny. In the records of failure, it is evident that often the medicine has not been fully tried. In a recently published lecture by Dr Parkes, for example, he expresses the opinion from his own experience that the iron exerts no power over the disease. In one of the cases, however, ten drops were given three times a-day; in another, three drachms were taken in all. In quantities such as these the iron is inert, or at least the effects are too slight to be appreciable. Less than a drachm and a half to two drachms a-day will rarely in adults produce much effect. In severe cases, an ounce and a half to two ounces a-day will often be required. The evidence of its effects rests on this: treated in the ordinary way, erysipelas, as a rule, runs a course of from seven to ten days at the least; treated by the iron, it often subsides in from the second to the fourth day."

Pyæmia is treated of by Mr Callender. The subject is one which has engaged much attention, and regarding which much difference of opinion still prevails. The term denotes a condition in which pus-globules are found in the blood; various theories have been propounded to account for this state. It was at one time supposed that pus was directly absorbed through the walls of the veins; then that it had entered them by their open mouths; and finally that it was furnished as a product of secretion or inflammation of their internal coats. That pus can pass into the veins by direct absorption through their coats is impossible; the idea of haemorrhage by exhalation has been abandoned; the doctrine of pyæmia by inhalation is equally untenable. Pus, it is true, can be absorbed, but not until its elements have been completely disintegrated. Except in the case of an abscess bursting into a vein it is probable that pus-globules cannot directly enter the circulation; for, even when the open mouth of a vein (as in a bone after an amputation) is bathed in pus, there is no reason to believe that the pus-globules
can mix with the current of the blood; they have no power of independent locomotion, and hence cannot of themselves go beyond the orifice of the vessel, and as no circulation is going on at its lower part they cannot be carried onwards by that means. The third mode by which it was supposed pyæmia might be produced was by phlebitis, pus being believed to be poured out by the inflamed wall of the vein; but no experimenter who has prevented blood from entering the irritated part has succeeded in producing an exudation within its cavity. Cruveilhier, indeed, had observed that, previous to the supposed suppuration, a clot of blood was formed, that this clot softened from the centre, and that in this way purulent matter was formed. But the researches of Gulliver, and still more of Virchow, have shown that this supposed suppuration is no more than the softening and disintegration of fibrinous coagula, and that what were supposed to be pus-globules were merely the white cells of the blood which had been entangled amongst the coagulating fibrine, and been set free when this substance liquefied. Mr Callender's paper shows that he has kept himself on a level with the recent researches on this subject.

Tetanus is treated of by Mr Poland; Delirium Tremens by Dr Barclay; Hysteria and Scrofula by Mr Savory; but as these subjects are on the whole more medical than surgical, and as we have not observed in the articles anything calling for special remark, we shall say nothing regarding them.

Mr Henry Lee is the author of an elaborate paper on Syphilis. As we have lately had occasion to enter fully into the consideration of this disease, we do not propose to follow Mr Lee through the mazes of this much controverted subject. Mr Lee strongly recommends mercury as the only cure for constitutional syphilis, and speaks very highly of calomel fumigations as the means of introducing it into the system.

Cancer is treated of by Mr Moore. He divides it into the scirrhous, the medullary, the melanotic, the epithelial, and the osteoid, and gives a very fair account of these varieties. In speaking of the treatment, Mr Moore gives elaborate reasons for and against operating, and arrives at the conclusion adopted by most surgeons, that when the disease is limited, and the constitution is tolerably sound, an operation may be performed, although he considers the prospect of a radical cure to be very remote. The surgeons of the Middlesex Hospital have had abundant opportunities of watching the treatment of cancer by caustics. In Mr Moore's opinion, they present two advantages over cutting operations—there is no hemorrhage, and there is little danger of their treatment being followed by erysipelas. The most manageable caustic is chloride of zinc, made into a paste with flour; but it can only be applied to a denuded surface. If the skin is entire, it must first be destroyed with concentrated nitric or sulphuric acid. "A convenient plan," says Mr Moore, "for extirpating a cancerous tumour, and one which keeps the
action of the caustic within the control of the surgeon, is to lay the paste of the chloride of zinc within a cancerous ulcer, or on skin previously destroyed by a strong acid, in the manner already described, and, through incisions deepened daily as the slough extends, to introduce fresh quantities of the same caustic, until the whole tumour is perforated and destroyed. It is then cast off, and a healing wound occupies its place. The process is a slow one, and portions of the tumour are apt to be left behind, and to require a renewal of the treatment. It is also sometimes incapable of overtaking the progress of a very rapidly growing cancer. But it is ordinarily much less painful than any other procedure, and is applicable in some cases in which a tumour is so situated that the knife could not be used. This method of treatment, which was introduced into England by Dr Fell, of the United States, was described at length, and an estimate of its surgical value offered, in a Report on the Treatment of Cancer in the Middlesex Hospital in 1857.

Animal Poisons constitute the matter of the next chapter, written by Mr Poland of Guy's Hospital. The subject is well treated of, and includes the consideration of dissection-wounds, snake-bites, hydrophobia, glanders, and farcy.

Mr Moore writes the chapter on Wounds of vessels. It contains valuable matter, but we are surprised that no mention is made of acupressure; for, whether this mode of arresting hemorrhage is ultimately to be adopted or not, it ought at least to have been noticed in such a work as this.

The remaining articles in this volume are "On Burns and Scalds," and "On the General Pathology of Dislocations," by Mr Holmes; and "On the General Pathology of Fractures," by Mr Hornidge.

We shall take an early opportunity of laying before our readers an outline of the contents of the second volume. In the meantime, we may say of the whole work, so far as it has gone, that, though too elaborate for the purposes of the student, it contains a large amount of valuable matter, and may be consulted with advantage by all who desire minute and generally accurate information on its special subjects.

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A Treatise on the Surgical Diseases of the Eye. By H. Haynes Walton. Second Edition. London: John Churchill: 1861. Pp. 686.

When the first edition of this Treatise appeared, it was reviewed at some length in the pages of this Journal (Monthly Journal of Medical Science, vol. xvi., 1853); and we concluded by saying, "It evinces much careful literary research, and bears the stamp of being the production of an observant surgeon; but its chief value in our eyes consists in its being a sound practical work—a character which
the author has successfully endeavoured to bestow upon it in accordance with its title." The present edition is a decided improvement on the former. Since that time, numerous advances have been made in ophthalmic surgery, and these, we are glad to see, Mr Walton has introduced into this edition; it shows that he is fully alive to what has been done by others in this important department.

In his preface to this second edition, Mr Walton says, "This is a new edition in the fullest sense of the word. The history of ophthalmic surgery, consisting of forty-six pages, has been omitted. Chapters II., VI., X., XXVI., XXVII., are entirely new. Chapters I., XIV., XVI., XXII., have been re-written. The remaining chapters have been either recast, or thoroughly revised in every page. I would allude particularly to the IV., V., XIII., XXIII., and XXV., as being those most changed." To some of these we shall more particularly devote our attention.

Chapter II., on the eye-douche, might as well have been omitted; there is very little in it, except a recommendation of a douche bath, made by Mr Cooper of Oxford Street. In our own practice, we find that a basin of water, and a bit of gutta-percha tube bent like a syphon, answer all purposes.

Chapters IV. and V. contain some judicious observations on injuries, and on foreign bodies in the eye. When speaking of division of the entire thickness of the eyelid, Mr Walton says he has "had little experience as yet with the fine metallic suture." We have used it very frequently, and find it infinitely preferable to the old silk stitches. For the life of us, we cannot understand what "True bone in the human eye," has to do with a foreign body; it is a new product entirely.

In Chapter VI., one of the new chapters, on sympathetic inflammation of the eyeball, "abscission" is recommended in preference to "extirpation." The author says, "even a button of collapsed tissues is far better than none, and a slightly reduced eyeball is vastly superior to an empty orbit." We agree with him so far; but in extirpation of the globe it is not necessary to empty the orbit. We have found that the soft tissues which remain form an excellent stump for an artificial eye; and a patient sooner recovers from "extirpation" than from "abscission."

Very little is to be gleaned from Chapter X., on aneurism in the orbit, and intra-cranial aneurism of the carotid. Mr Walton says, "It will be an interesting subject for future investigation to ascertain the signs by which intra-cranial and orbital aneurisms may be distinguished from each other and from obstruction to the return of blood by the ophthalmic vein."

Mr Walton, in Chapter XIII., recommends, "When the staphyloma (of the cornea) "demands attention, from the deformity, from irritation, or from sympathetic influence on the other eye, the whole of it should be removed by 'abscission.'" "Unless," he says, "all be taken away, there is a chance of reproduction to a greater or less

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degree.” This we have never met with; but still we think, with him, that it is better to remove the whole. We have never found “the parts sealed up in a week.” Generally the healing process is very slow; so much so, that we prefer in many cases “extirpation” to “abscission.” We fully agree with him, “that the source of the internal or intra-ocular haemorrhage is not the central artery of the retina, as generally supposed, but the choroid,” from which the removal of the front of the eye takes away the support. In staphyloma of the sclerotica, “the course is, when practicable, to reduce the size of the eyeball, by letting out some of its contents, and to effect it with the least possible sacrifice of the ocular coats.” “But if there be complete disorganization of the interior of the eyeball, and the staphyloma be very large, or if there be several, ‘extirpation’ may be preferable.”

Chapter xiv. is on affections of the punctum, and the other excre- tory lachrymal organs. “Contraction of the puncta,” Mr Walton says, “and thereby obstruction to the passage of the secretions, is really very uncommon.” We do not think so; it is more common than is generally supposed. We frequently meet with cases where it is almost impossible to introduce a stiff bristle into the punctum, and where the watery state of the eye is cured by gradually dilating the orifice. When the punctum is closed, Mr Streatfeild’s operation of “passing a probe into the lower canaliculus by the route of the upper, which had previously been slit up, and re-establishing an aperture in the position of the punctum by cutting on the end of it,” although perhaps a somewhat difficult procedure, is worthy of attention. “To no one are we more indebted for his improved treatment of displaced punctum, and obstructed nasal duct, than to Mr Bowman. Displaced punctum, causing epiphora, “occurs under two states: simple eversion from a variety of causes, and malposition associated with some structural changes in the tarsal edge, and in the punctum.” In such cases Mr Bowman slits up the punctum and the canaliculus. Mr Walton says, “When there is displacement, and that only, the removal of this partial ectropium will generally suffice to bring the punctum into play.” His plan “is to dissect off the palpebral conjunctiva from a spot just posterior to the the canaliculus, and to regulate the amount removed by the degree of the eversion.” “When, however, with displacement of the punctum, the tarsal edge has been rounded, or so changed by chronic inflammation that perfect readaptation of parts, or at least restoration of function, is impossible,” the punctum and canaliculus ought to be slit up. We prefer Mr Bowman’s plan of slitting up the canal in all cases, and have seldom or never found it to fail in curing the epiphora.

We cannot agree with Mr Walton that obstruction of the lachrymal duct “is generally of scrofulous origin.” No doubt we often find it occurring in scrofulous subjects, but we as often meet with it in those in whom there is no evidence of struma. Mr Walton says—“The treatment of obstructed duct is threefold. Constitu-
tional means are required to conquer the cause of the disease; local treatment is needed; and, in a late stage, some mechanical measure is demanded to dilate the narrowed channel, or to open it when completely occluded." Passing over the two former, we come to the third or dilatation. Here we infinitely prefer Mr Bowman's plan of "gradual dilatation with probes of different sizes," passed into the duct through the slit-up lower canaliculus, to Mr Walton's, of first dilating for a short time only, and then introducing a style; even although the small one used by Mr Taylor be the one employed. Dilatation with probes we have used almost exclusively for several years, and we have had every reason to be satisfied with that plan of treatment; at the same time we do not deny that there are certain cases where the introduction of a style may be absolutely necessary, but they are few, and we should always bear in mind that a style is a foreign body, and as such may be the cause of serious changes in the parts through which it passes, besides being of a very unseemly appearance.

In his chapter on conical cornea, we see that Mr Walton has performed successfully Mr Critchett's operation of "iriddesis," or the formation of a linear pupil for the cure of the affection, and testifies to its value. This is another operation, for the improvement of a hitherto incurable disease, for which we are indebted to Mr Bowman. We do not like Mr Walton's method of operating for squint. It is to cut through the conjunctiva vertically opposite the lower edge of the muscle, then "introduce the hook, secure the muscle, make it prominent, and if the upper part be covered by the conjunctiva, as in all probability it will be, to push this off with the forceps, while he makes the hook-point more prominent, and, keeping the muscle very tense, divides its tendinous expansion between the hook and the eyeball with the blunt-pointed scissors." He concludes the operation by bringing the cut edges of the conjunctiva together with one or two sutures. We much prefer the sub-conjunctival operation, and we do not think his objections to it are well grounded. The aperture which is required should be quite as small as in Mr Walton's operation; there need be no uncertainty about thoroughly dividing the muscle, for, if the concavity of the hook can be brought up to near the edge of the cornea, the whole of the muscle will be certainly divided; the parts do not require to be more disturbed than in his method; and the ecchymosis is generally very trifling. In addition, by the sub-conjunctival method, we obviate any necessity for sutures; and there is not that vacancy produced at the inner corner of the eye which so frequently occurs when they are not used.

In Chapter xxii, Mr Walton strongly advocates incisions of the conjunctiva in the purulent ophthalmia of adults. He says, "incisions are too generally given up. Purulent ophthalmia is often fatal to the eye, in spite of all the means at our disposal; but that freely incising the chemosis—it matters not as to the form or the
position of the cuts—is a valuable adjunct to treatment, I have no doubt. I regard it as important as incising the skin in phlegmonous erysipelas." This we have taught and practised for many years, and can confirm from our own experience the beneficial results which are thereby obtained.

Chapters xxiii. and xxv. are on cataract and artificial pupil. The former of these is perhaps the best in the book. It abounds in practical observations and sound common sense. Mr Walton, we see, in cases of hard cataract, prefers removing it by extraction. He thinks "The operation for displacement is essentially a very bad one, because the cataract is rendered a foreign body within the eye. It is only admissible when extraction would be dangerous, or is positively unsuitable, and ought to be regarded merely as a proceeding of expediency." We cordially concur with him in this, and also when he says, "The lesser degree of manual dexterity demanded for this operation" (displacement), "which is really very easy, has induced many surgeons to assign to extraction quite a secondary place, but I cannot allow that such a standard should regulate the decision. Cataract is not a disease of emergency, in which one is suddenly called on to operate, and I hold it to be the imperative duty of all who undertake the practical surgery of the eye, to qualify themselves for the efficient execution of those operations that are the most certain, and confer the most lasting benefits."

"Linear extraction" does not seem to be a favourite with Mr Walton; he says, "That it is possible for the eye to be more quickly restored to usefulness by this method than by absorption, no one can doubt; but it is more dangerous, almost beyond comparison." We also prefer the old operation by absorption; but we must confess that we have seen many cases of "linear extraction" turn out remarkably well.

In the chapter on artificial pupil various operations are described, suited to the different states of the eye demanding an operation.

The two last chapters are entirely new. One is devoted to Graefe's new operation of iridectomy for the cure of glaucoma, and the other to the ophthalmoscope. Mr Walton evidently does not hold in much estimation Graefe's operation; but, as this is still a question vexata in ophthalmic surgery, we shall not enter into it, but refer our readers to the work itself for an exposition of his views.

The subject of the ophthalmoscope might have been omitted from a surgical treatise without any loss.

Having drawn attention to some of the points which have struck us most in this edition, we would merely say, in conclusion, that, although we should have liked to see fewer inelegancies of expression, the work fully sustains Mr Walton's reputation as a careful, judicious, and thoroughly practical surgeon, and we have very great pleasure in recommending a careful perusal of it to our readers. Its pages abound in good common-sense, a thing now-a-days not frequently met with in medical works.
James M'Grigor, the eldest son of an Aberdeen merchant, having enjoyed the advantages of a good preliminary education, and obtained his literary degree, after an examination "not the most severe and searching," was much at a loss to decide upon a profession. Circumstances and associates, however, led him to choose that of medicine; and as his parents did not baulk his choice, he commenced the study of his profession in his native city. Thence he migrated to Edinburgh, and having completed his studies, went to London with the view of commencing life as a general practitioner. There, however, the commencement of the war of the Revolution excited within his breast such a military enthusiasm as determined him to enter the medical department of the army.

In negotiating the purchase of a surgeoncy with Mr Greenwood, of the army agency house of Cox and Greenwood, the young Scotchman objected to an Irish regiment, and expressed his preference for a Scotch corps. But Mr Greenwood told him with a smile that he was wrong. "Your prudent countrymen," said he, "will soon make their way in an English or Irish regiment, but in one of their own corps there are too many of them together, they stand in each other's way." And so it came to pass that the young Scotchman purchased the surgeoncy of the 88th, or Connaught Rangers, just then being raised by General de Burgh, and in which not only were all the officers Irish, but all more or less nearly related to the colonel, having raised men for their rank.¹

The regiment having been raised to its complement, it embarked for Jersey, and was there stationed at the heat of the most bloody part of the French Revolution, when Robespierre was in full sway; so that the island was full of French exiles, affording much pleasant society and agreeable diversion. But an outbreak of typhus fever, at that time the scourge of our army, and more particularly of the new levies, occupied the medical officers far otherwise than in idle gaieties; and Mr M'Grigor was very soon himself laid upon a sick bed, struck down by a very severe attack of the disease. When scarce convalescent, he was ordered to be removed from St Heliers into the country, but the difficulty was how in his weak state to have him conveyed. This difficulty was soon resolved by the soldiers, who expressed so much solicitude to carry "the Doctor," that he was

¹ A regiment, curiously enough, of which General Reid, another well-known Scotchman, was afterwards colonel, and whose reputation as a gallant soldier is as worthy of remembrance by the 88th, as his musical attainments and his munificent endowment of the Chair of Music in this university are among our countrymen.
taken by them on a litter to his country abode,—the poor fellows exerting themselves to do so with as little discomfort to the weakly invalid as possible. The order for the regiment to proceed to Holland arriving at this time, his unconquerable desire to accompany it persuaded the colonel to permit his being carried on board ship; although in the condition he then was there was little prospect for a long time to come that he could be of any service as a medical officer. But sea air and the inspiring prospect of a campaign soon set him on his feet, and by the time they reached Bergen-op-Zoom he was perfectly recovered. And much need there was for a healthy staff of medical men; for the 88th had been no long time there when, from the prevalence of typhus fever, M'Grigor and his assistant-surgeon, like the rest of the medical staff, were overwhelmed with work. After occupying Nimègue, in the retreat from that city; as is well known, our troops, raw and principally composed of new levies, broke down under the harassing marches, bad quarters, and the incessant toil to which they were exposed, and typhus fever again became general, filling the hospitals to overflowing, and creating a frightful mortality among all ranks, particularly among the medical officers. Here, again, M'Grigor became a prey to fever; and he had only just recovered and rejoined the army, during the rapid retreat through North Holland, when he was again attacked with fever, from sleeping in a bed from which the corpse of a fever patient had just been removed. Unwilling to leave him behind to the mercy of an enraged peasantry thirsting for revenge upon the army which had destroyed their farm-steadings, his brother officers hurried him on—one day laid across a horse's back, another jolted in a waggon, and, at last, left for dying, insensible to everything, and with the conviction in the minds of his friends that before long all would be over with him. But a long life of vicissitude and usefulness was still in store for the young surgeon; he revived under the influence of port-wine and bark, and took ship for England. When he reached Yarmouth he was able to come on deck, and by the time he joined his regiment at Norwich he had nearly recovered from his debilitated condition. But the chances of war were only to be exchanged for the disadvantages of home duty. A new colonel set the regiment by the ears, and it was only when M'Grigor had actually taken steps to leave the corps that the colonel made an amende honorable,—so satisfactory, however, that from that moment they became fast friends for life. But the breathing time afforded by home service did not long, in such troublous times, continue to be the lot of the 88th; the troops ordered for the West India station included this regiment, and before sailing, while detached from the regiment on inspection duty, he was carried off, in a West India transport, along with the fleet destined for the Mediterranean. The other West India transports, which made a false start, were brought back, but the "Betsy," in which he was, arrived alone at Barbadoes; and when some time
after the rest of the fleet arrived, it was found that the greater part
of the 88th had been captured by a French ship, and carried as
prisoners into Brest; while M'Grigor, who, having disappeared,
was supposed to have been killed in stepping from one vessel to
another, found himself superseded by another gentleman, whose
want of popularity with the 88th men was quite as striking as the
fondness they evinced for their old friend. "When I entered the
campency, I was first recognised by the soldiers, who shouted
and came out of their tents, and in an extraordinary manner I was
carried forward in triumph; but I attributed the enthusiastic re-
ception which I received from the men quite as much to their dis-
like of my successor as to their love to me. He came out with the
officers, but nothing could suppress the expression of their disap-
probation of him, and I heard many of the men and women ex-
claim, 'Now your master has come home, go home as soon as you
can.'"

M'Grigor accompanied the Grenada expedition, and was there
seized with dysentery, but speedily rallied again. Shortly after
the regiment was sadly thinned by yellow fever, and when the
troops were embarked for England they seemed to carry the seeds
of the disease along with them. First, the captain died before
leaving port, then the mate was seized when they had just put to
sea, and he speedily died, and sailors and soldiers both suffered.
The conduct of the ship was now left in the hands of a man grossly
ignorant of navigation, and likewise given over to beastly intoxica-
tion. Him they superseded, and conferred the command upon a
brother officer, now a soldier, but who, in early youth, had been a
midshipman. Under his conduct, after many mischances, they
reached the Cove of Cork, only too glad to land on terra firma,
though without money and without decent clothes, to enjoy the
change to fresh meat and vegetables, from salt meat, porridge, and
porter, on which they had subsisted for so long. Returning to
Portsmouth, M'Grigor obtained a short leave, ran up to London to see
old friends, rejoined the headquarters of his regiment at Halifax in
Yorkshire, paid a visit to Scotland and his friends—the first since,
as a lad, he left home to push his fortunes in the metropolis, and
again with his regiment hurried to Portsmouth to assist in quelling
the mutiny in the fleet.

Now, again, in the end of 1798, after four years of nearly con-
stant foreign service, we find M'Grigor, still surgeon of the 88th,
embarking for the East Indies. In the middle of the next year
they landed at Bombay, and were quartered at Colabah. Here it
was that his acquaintance commenced with Drs Moir, Sandwith,
Stuart, and Helenus Scott, on whose good opinion, in no small
degree, depended the successes in professional life which, from that
time, began to flow in upon him.

From this he accompanied his regiment to Ceylon, as a part of
the expedition intended for Batavia and the Isle of France—an ex-
pedition which was diverted to another destination, by the occupa-
tion of Egypt by the French troops requiring all the energies of
this country to be directed to check them in their obvious inten-
tion to meddle with our Indian possessions. To this expedition
M‘Grigor was appointed head of the medical staff, through the
kindness of his friends in the Company’s service at Bombay; and
although for a time superseded in his command by the arrival of
a senior officer from England, along with the army which had
arrived from home, he was again placed, by the express wish of Sir
David Baird at the head of the medical department of the Indian
army serving in Egypt,—a compliment which his laborious exer-
tions in behalf of the prevention of the plague, and the admirable
hygienic measures which he had adopted upon the appearance of
that deadly malady most fully justified. But of that campaign and
M‘Grigor’s eminent services, both to the army and the profession at
large, we need say nothing; his “Medical Sketches of the Expedi-
tion from India to Egypt” has long been a standard work of re-
ference; they speak for themselves and for their author. On his re-
turn to Bombay, having left his regiment at Alexandria, he was
detained for some time until the whole accounts of the medical and
purveyor’s department had been audited; and here again the gener-
osity of his friends at the head of the medical department of the
Company’s service showed itself in a marked manner by his ap-
pointment as superintendent of quarantine at Butcher’s Island.
When the quarantine establishment was broken up, he did duty
with the detachment of his old regiment the 88th, which was still
at Colabah, and with which he ultimately returned to rejoin head-
quarters in England. The voyage homewards was adventurous
in the extreme, and but for the bold face they put on, in their
almost defenceless condition, they would in all probability more
than once have been taken prisoners, for it was just then that the
temporary peace between England and France had been broken,
and privateering was carried on with every energy.

On joining the headquarters of his regiment at Helsham, the
quarters in which they were, the onerous characters of his duties,
and perhaps the feeling of descent from his position of a command-
ing officer in Egypt to the routine of a regimental surgeon, all con-
duced to render the idea of a transfer to a dragoon regiment not
unpleasant. Accordingly, in 1804, Surgeon M‘Grigor left his old
regiment for the Horse Guards Blue, then quartered at Canterbury.
No doubt he felt the change, too, a sad one: to leave behind so
many friends, good and tried, who, through eleven long years, had,
as if were, composed with him the regimental family,—to leave
those men with whom he had served in every quarter of the globe,
with whom he had faced the enemy, with whom he had borne pri-
vation and sickness, and of whom—men, women, and children—there
could be but few who had not been under his care during these
eleven years. It could only be with a pang that he tore himself
from so many tender recollections of the past. But, undoubtedly, the Blues gave him a higher position, and afforded him more time for reading and study, than he possessed in the 88th. It was probably during this period of his service that his views with regard to army medical statistics first began to develop themselves. Long before this he had made, for his own satisfaction, monthly, quarterly, and annual statements of the diseases which had come under his notice; but now, on entering the Guards, he found the financial system of Mr Knight carried out with a scrupulosity which was perfectly irksome to one truly interested in the professional part of his official duties. Mr Knight had been a surgeon of the Guards in the days when the hospital was kept up at the regimental expense, and having a talent for finances, he had established a very perfect system of checks, whereby strict economy was maintained in the dieting and furnishing of his hospital. This system had first been extended to all the regiments of Guards, and on the appointment of Mr Knight to the medical board, he at once extended the system pursued in the Guards to the regimental hospitals of the whole army. Now, however excellent in itself this system of returns might be, such minute and scrupulous attention to absolute accuracy, even in the fractional part of an ounce of such things as soap, salt, oatmeal, etc., given to each patient, was surely calculated to insure the neglect of the more purely professional part of the surgeon's duties. While, accordingly, the smallest error in these fiscal returns brought down the wrath of the Medical Board upon the head of the unfortunate surgeon, entailing sometimes a very protracted and unsatisfactory correspondence, there was no notice whatever taken of the features presented by prevailing diseases, or extensive epidemics, or the influence of season or situation in inducing or modifying diseases; there were no reports upon various modes of treatment employed, or of the appearances presented at post-mortem examinations; in short, at that time the duties of surgeons were chiefly those of clerks, who acted as accountants to the public for the expenditure upon every sick man, and nothing with regard to professional matters or for the interests of science was noticed, unless there happened to be such an extraordinary mortality in some corps as attracted the attention of the Horse Guards.

His description of this period of his service, which was of course entirely passed at home, consists principally of anecdotes of various royal and important persons with whom he had the fortune to come in contact. Such anecdotes, though interesting in themselves, have no bearing upon the development of his genius or his after success. It was, however, while quartered at Windsor that Mr William Dundas offered M'Grigor the appointment of Principal Medical Officer to the new presidency which the Honourable East India Company was about to establish at Pulo-Penang, or Prince of Wales' Island, and the negotiation had actually gone so far that he had intimated to his

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friend Mr Knight, then Inspector-General of the Army Medical Board, his intention of leaving the king's service. This appointment, however, was not eventually accepted, as it was found that to carry it out much opposition would require to be overcome on the part of influential members of the Board of Directors. Hardly had M'Grigor, however, settled fairly to work again at his old post, than he received notice of his promotion to the rank of Deputy Inspector-General of Hospitals. This promotion was a very considerable one, for as the various grades of medical rank then stood, he at once gained three steps in the service at one time. Of course, such success, although not unprecedented, created considerable clamour among those over whose heads he had stepped, and very naturally made him not a few enemies among the disappointed expectants of promotion.

His first appointment, in consequence of promotion, was to the Northern or York district of England as then defined, and here he set himself judiciously to correct, as far as he could without giving offence to the Medical Board, the tendency then existing in the medical department to direct their attention exclusively to accounts and money matters. Instead of applauding exclusively those who were most accurate in their financial statements and most niggardly in oatmeal, salt, and barley, he attempted, in making his tour of inspection, to impress upon the regimental medical officer the necessity of a minute attention to the professional part of his duties, and to show what an admirable opportunity for accurate observation and the accumulation of personal experience might be found in the daily routine of his hospital. To use M'Grigor's own words:—

"I urged in every disease where one mode of practice was not successful, to have recourse to another, and to keep a full detail of the effects of the remedies resorted to. I referred him to the opinions of different authors, and recommended a perusal of their works; and furthermore, I attempted to show that a military hospital was the best for trying the effects of new remedies or modes of treatment, because there the patient was more under control and observation than any other."

Such excellent lessons he inculcated not merely by word, but took much trouble to win the confidence of each individual medical officer, and to interest him in the treatment of his patients. In going round the various hospitals, he examined each patient's medical history, the subordinate officer reading the particulars of the case at the bedside. He endeavoured to encourage the attentive and good medical officer by praise, while he was severe and unrelenting to the careless and bad. On the evening of his inspection he had all the hospital books forwarded to his inn, when he examined them, so as to enable him, from the way in which they were kept, to arrive at a tolerably good idea of the character, education, and attention of each medical officer. Such inspections, too, were not merely employed as a means for checking abuses, and keeping the Medical Board informed of the progress of matters in
the district, but he was in the habit of sending a confidential letter of friendly counsel to each individual who was under his command. One would have imagined that such a scrupulous attention to duty, and such energy in his efforts to benefit the service, would have attracted the warmest praise at headquarters. The authorities certainly commended all he did, but still enforced a more rigid scrutiny of the expenditure in each article of hospital consumption. In spite of such lukewarm approval, M'Grigor persevered in his good work, and it is in no small degree to his energy that typhus, which was rarely extinct at that time in any regiment, prison, or poorhouse, became so much better understood and better treated, and therefore more infrequent than previously it had been; while, by a similar enlightened direction of the attention of medical officers under his command to the subject of the character and treatment of ulcers, many good soldiers were saved to the service, many bad were punished, and the practice of malingers artificially producing sores upon the legs, with the view of obtaining their discharge from the service, has been very materially checked. These were only the commencement of greater things, which, step by step, have so completely changed the character of the army medical officer, that he is now not a mere half-educated medical clerk, and very indifferent practitioner, as he then too often was, but a health-officer for the prevention of disease, a well-educated and successful practitioner for the treatment of it, and one upon whom both men, officers, and country, may place every dependence as a man of education and intelligence, and a worthy representative of the profession to which he belongs. No doubt, now, as aforetime, unless a medical man just fresh from the schools possesses a good share of steadiness, he is very apt, on joining a corps, to be captivated with the seemingly easy life of an officer in the army, and to fall into the idle habits and pursuits of those around him,—all the more should a handsome face, a good figure, and engaging manners, make his society pleasing to his brother officers. Such a man may have no other object in life after his morning visit than to saunter along the principal promenade of a garrison town, ogling and coquetting with such silly creatures as admire his dress and equipments, or to pass the day at his club in idle gossip in the smoking-room or the amusement of the billiard-table; while his evening is spent in a perpetual round of concerts, theatre-going, and evening-parties. Such a man, of course, reads less and less every day, makes his hospital duties as light as he can, stops but a short time with his patients, and hastens away to join his brother officers in their various plans to kill time. In such a position, and with such temptations, the medical officers of the army are still very disadvantageously placed as compared with their brethren in civil life, particularly with those of narrow means, and therefore dependent for subsistence upon their own exertions. But to such men what a volume the experience of M'Grigor must speak:—
"Of this I am sure, that while the medical officer has a taste for his profession and for the study of it, and prefers that to the trivial conversation of the officers, the reflecting part of these respect him in a degree they never would were he their constant companion in all their frivolous pursuits. Still more will they respect him if he abstains from their lengthened conviviality at the mess-table, and if he is moderate in the use of wine. Of this I had seen much, and had an instance in my own case. When I entered the army, and for several years afterwards, the custom with all was to drink much wine. A bottle of port—the wine chiefly drunk—was a very common dose for each; and when there were guests, particularly when two corps of officers dined together on the arrival of a corps at a station where the other had been established, the dose was doubled, and with a proportion of sherry, claret, and champagne besides. Every young man, soon after joining, became habituated to this. It was fortunate for me that a weakness of stomach, indicated by frequent attacks of violent headache, from which I suffered from my earliest years, prevented my indulging in the quantity of wine drunk by those around me. I had, further, always a strong sense of the impropriety of this pernicious habit in a professional man, and had constantly recurrence to one expedient or other to avoid it. I had ever been very fond of tea, and much preferred it to sitting at the mess-table. As I have always been most punctual in visiting my patients in the evening, I made this the excuse on ordinary days for leaving the table early; but on gala days, when all were supposed to support the credit of the corps, by making their guests drunk, I found it more difficult to get away, more especially when I happened to be the president or vice-president for the week. On these occasions I gave orders to one of the orderly attendants of the hospital to come and say, 'A man was ill in hospital.' At length, however, this excuse became stale, and whenever the announcement was made to me of a man being ill, there was a general exclamation, 'Oh! oh! is the doctor's tea ready?' But among the majority of the officers my motive was understood, and, as I found, greatly respected by them."

Mr M'Grigor’s ability and devotion soon gained him so much credit with the authorities, that he was removed to a more extended sphere of duty—the Duke of York having decided on confiding to his charge the South-west district, then one of the largest and most important in England. To this, Portsmouth, with the Isle of Wight, was further added; and as almost all the great expeditions were equipped before embarkation at the former of these places, while the garrison in its neighbourhood was very large, and one of our great depots of prisoners of war was there, the labour entailed was necessarily very great. This and a further slice from the neighbouring district of Sussex did not, however, dismay M'Grigor. He looked upon the extent of the field, and the formidable nature of the duties, only with a single eye to the great opportunities they afforded for carrying out his plan of hospital returns. He accordingly entered upon his responsibilities with the warmest satisfaction, and with full confidence that his activity and zeal would enable him to acquit himself honourably of all his varied duties. Though his area of visitation entailed journeys from Portsmouth to Havanfordwest, and from Brighton to Weymouth and Dorchester, he earned the respect, good-will, and uniform support of all the commanding officers in this extended district. Unexpectedly and apparently overwhelming exigencies still found in him the same indefatigable energy and power to cope with circumstances. After
the battle of Corunna, our exhausted and enfeebled army, crowded in transports and men-of-war, had fallen a prey to typhus, which spread amongst them with fearful rapidity. In this condition nearly the whole fleet arrived at Portsmouth, where there was no expectation entertained of such an accession of sick, and consequently no preparation for them. Overwhelming as such an arrival must have been, M'Grigor immediately set all his energies at work in framing arrangements. The services of the medical officers of the household troops, and of the militia who were disposable, were immediately put in requisition, and such civilians in and about Portsmouth as could be obtained for this purpose, were immediately engaged; and while the ordinary hospital accommodation was quickly filled up—the Naval Hospital at Haslar was employed to accommodate 4000 sick and wounded, and the rest were disposed of in temporary floating hospitals on board transports, prison ships, etc.

When Lord Beresford, M'Grigor's old colonel, took command of the Portuguese army, desirous of organizing the medical department after the British model, he obtained permission from the Horse Guards that M'Grigor should be sent out for that purpose, with the rank of Inspector-General of Hospitals. Owing, however, to some changes connected with the retirement of the Duke of York from the Horse Guards, so much delay was occasioned, that before he could embark for Lisbon, the accounts arrived of the disastrous state of the army in Walcheren. To that pestilential swamp M'Grigor was accordingly sent, in order to replace, as chief of the medical department, Sir John Webb, who was dangerously ill, and believed to be dying. The voyage from Deal to Flushing was rendered painfully interesting to M'Grigor, by his being shipwrecked, H.M. ship Venerable having grounded on a sandbank, upon which she thumped her bottom till she sprung a leak; but, after experiencing all the painful scenes which usually accompany such disasters, they were fortunately saved by the timely arrival, in answer to their signal guns, of the boats from the fleet at Flushing. On taking a survey of the state of sickness and the position of the medical department at Walcheren, M'Grigor found that the number on the sick list nearly equalled that of those in health; while, from the number of hospitals spread over the country, the want of sufficient and competent subordinates in both the medical and surveyor's department, and the want of many essentials, particularly medical comforts and "bark," the condition of matters was just about as bad as could be. In this state of matters, hearing that bark was to be had on board a private ship, sent out on speculation by some American adventurer, M'Grigor at once purchased the whole, amounting to 1460 pounds weight, while he pressingly wrote for more from England. This, as is well known, constituted a part of the evidence elicited in the parliamentary inquiry instituted by the personal enemies of Lord Chatham and the planner of that ill-fated expedition. The effect of the Walcheren expedition and the
inquiry was the remodelling of the medical board. It appears that, when the mortality was at its height, Government decided that one of the medical board should proceed to Walcheren to report upon the state and cause of the sickness among the troops. Accordingly, Sir James Pepys was ordered to repair thither and report. In an evil hour he refused, upon the ground that he was not acquainted with the diseases of the soldier in camps or in quarters; and upon a similar plea the other two members of the board begged to have themselves excused,—none of them, in fact, having ever served in the field, or had any practical knowledge of the arrangements requisite for an army. Public outcry was naturally loud against such a state of matters; and after a board of general officers had assembled to investigate the subject, it was determined that a new board should be constituted, consisting only of medical officers who, by long service in the army, and by residence in various foreign stations, had acquired such an amount of experience as would fit them for the right discharge of the duties required by such a board. It was at first proposed that this board should consist of five members, but ultimately it was cut down to three. In the list of five recommended for appointment, M'Grigor's name appeared, sufficiently indicating, from its being placed alongside of such veteran officers as Drs Weir, Kerr, and Theodore Gordon senior, in what esteem he was held by the authorities of the day.

It was shortly after his return from Walcheren that M'Grigor met with Miss Grant (sister of his distant relative Sir James Grant), to whom he was married in 1810, and who, as he himself expresses it, "brought me the greatest happiness of my life by uniting her lot to mine." As a recently married man, the appointment to the Portuguese army under Lord Beresford, which was still urged upon his acceptance, did not present the same charms as it previously possessed. M'Grigor, therefore, obtained the appointment for his friend Dr Fergusson. He was not, however, long permitted to enjoy his conjugal felicity without interruption, ere he was ordered to join the staff of Lord Wellington, as head of the medical department in the Peninsular army. Leaving England in snow and frost, he landed at Lisbon in January 1812, golden in all the glories of the orange season. Here, after inspecting stores and accounts, he found that many irregularities prevailed, principally caused by the numbers of men and officers and their wives congregated in Lisbon. Apparently quarters, and the society of their wives, with the luxuries of Lisbon, were to them more pleasant than service in the field in an inclement season of the year. This it was which led to the recommendation by M'Grigor, and the ultimate adoption by Lord Wellington, of the system of regimental field hospitals, by which men and officers, unless so seriously ill or wounded as in all probability to require to be invalided home, were retained with their regiments. This helped to keep up the esprit du corps, and the strength of the army, which had been so seriously broken in upon
by sending all the sick and wounded to the rear. At the same
time, he cleared out the hospitals at Lisbon, Coimbra, and Celerico,
sending to the front all fit to join their regiments, and invaliding
others home, who, by the nature of their ailments, were likely for
long to be unfit for duty.

Throughout the whole of the Peninsular campaign, McGrigor
was in constant and immediate communication with Lord Wellington,
and enjoyed most thoroughly the general’s confidence. After
the taking of Badajoz, McGrigor accompanied Lord Wellington
into the town, for the purpose of ascertaining in some degree the
number of wounded there, and the nature of the wounds received.
He then proceeded to a like investigation of the casualties outside
the walls; and having succeeded in collecting a tolerably accurate
return, with this he at once proceeded to Lord Wellington, and
found him in his tent, in excellent spirits, writing the despatches.
Having given in the detail, for which he thanked him, McGrigor
said—

"I trust, my lord, you are satisfied that the medical officers last night did
their duty as well as the military officers, and that you will receive my testi-
mony that they discharged their arduous and laborious duties most zealously,
and often under circumstances of personal danger, of which they were regard-
less." He replied, that "he himself had witnessed it." I then added, "Nothing
could more gratify these officers, nothing could be a greater incentive to their
exertions on future occasions, than his noticing them in despatches." He asked,
"Is that usual?" My reply was, "It would be of the most essential service;" and I ventured to add that "really their extraordinary exertions gave them in
justice a claim to this." He rejoined, "I have finished my despatch; but, very
well, I will add something about the doctors." When the Gazette appeared,
the medical officers of the army in England saw with delight that the merits of
their brethren had been publicly acknowledged; and the example of Lord Wel-
lington has been followed after every great action that has since been fought,
and some time afterwards the navy followed the example."

The Autobiography contains much pleasant chit-chat and anec-
dote for the general reader, with many most useful hints to the
military surgeon, interspersed through the rapid sketch which it
gives of the ever-memorable Peninsular War. After the battle of
Toulouse, McGrigor, having obtained leave, made a short tour by
Carcassonne, Narbonne, and Montpellier, at the last of which places
"the Society of Medicine made him a member, with," as Larpent
says, "such fine speeches, that, even though he only half under-
stood them, they raised his blushes." His object in this tour was,
if possible, to have a view of the French military hospitals. Jealousy, and apparently the desire to conceal the disastrous state
in which their army really was, prevented McGrigor from accom-
plishing the object of his journey. He accordingly again rejoined
the army at Toulouse. Here it was that the army medical officers,
who during the campaign had been under his command, surprised
McGrigor by the information that they had in his absence entered
into a subscription for a service of plate, of the value of L.1000,
which was afterwards presented to him in London. This gift was
all the more valued by him, as it was voted and presented at a time when the donors of it had ceased to be under his control—when, in fact, they could expect neither further approbation nor advantage from serving under him. It was, therefore, not unnaturally regarded by him as the most gratifying incident of his life.

The army having been broken up—part sailing for America, part for England—Mc'Grigor, returning home by Paris, renewed his acquaintance with Barons Larrey and Desgnettes, whom he knew in Egypt, and was introduced by them to the Baron Percy, of whom he says, "The appearance and manner of this gentleman were more pleasing than those of his confrères, and in giving information he had a singular appearance of openness and candour." On reaching London, he was met by his wife and son. Here he was detained, having to furnish information to the War Office and purveyor's department with reference to the sanctioning of charges and the winding-up of accounts. Shortly after his return, however, he was placed upon a specific retiring allowance of L.3 per diem, and was knighted. This latter honour was not, however, quite to Mc'Grigor's mind, as he thought, after the magnitude and importance of the services in which he had been employed, and from the repeated mention he had received in despatches, that a baronetcy would have been conferred upon him. The Duke, however, advised him to "take the knighthood in the meantime."

Another chapter more concludes the autobiography. Professional zeal led Sir James Mc'Grigor to return to the study of anatomy and chemistry, as two subjects which had made gigantic strides in the course of the twenty years' active service in which he had been engaged. His old friend, Dr Helenus Scott of Bombay, joined him in renewing his student days in the class-room of the Hunterian School in Windmill Street, and these two might daily be seen among the most attentive and diligent pupils of Wilson and Brande.

Being now an unoccupied man, Sir James was urged by many of his old and influential friends to commence practice as a consulting physician in the metropolis; and having acquired a name, from his services in the Peninsula and elsewhere, his success could have been in no respect doubtful.

His country had still, however, further services to require of him as a public man; for shortly after, before he had even matured his plans for entering upon practice, the Duke of York signified his intention to appoint Sir James Director-General of the Army Medical Department, in place of Mr Weir, who was about to resign on account of his enfeebled state of health. The complimentary character of the offer, and the way in which it was made, with the opportunity it afforded him for carrying out his long-cherished scheme for employing the reports and returns of the medical officers of the army to advance the progress of science, were too great a temptation to admit of a refusal. He was quite aware of the irk-
some nature of the duties he was about to accept; he knew full well that it would gain him much ill-will; his friends were still apprehensive lest his health should break down under the confinement which the nature of his duties entailed; "yet he saw before him the great and much-desired opportunity for elaborating his plans for the amendment of the executive and working systems of the medical department of the British army, the serious need of which he had long been impressed with, and which his experience and judgment had enabled him to devise." With this crowning acknowledgment of his ability upon the part of those in power, in 1815, terminates the Autobiography. What remained of his military life was probably wanting in that same stirring incident and constant variety of circumstance which had characterized his earlier years. Besides, what was interesting in it probably bore too closely upon the interests and characters of others to admit of its being made public,—his official conferences and correspondence requiring, no doubt, in many instances, a discreet reserve and honourable secrecy. Such confidences a man of sterling honour like Sir James was not likely to betray.

For thirty-five years Sir James continued to render "the most effective service to his country, not only in appointing to the army gentlemen of high professional attainments, but also in making available the results of their experience to future generations." During that period, an amount of accurate information of the most valuable description, bearing upon the hygiene of our troops in every climate and station, has been elaborated under his fostering care and encouragement. The Chatham Museum of Comparative and Pathological Anatomy has grown into a collection in some respects unrivalled; the Library of Medical Works has become a monument to its founder, around whose original gift has grown up a collection of more than 10,000 volumes. The Army Medical Friendly Society, originated by the same judicious and warm-hearted man, now distributes a means of support to no less than 120 widows of medical officers left without suitable provision. Another institution originated by Sir James, called the Army Medical Benevolent Fund, distributes relief to the more necessitous families of medical officers, and fulfils the humane object of its founder. After these monuments of his wisdom, charity, and benevolence, need we do more than mention that in 1831 he was created a Wonet; that he bore on his breast many marks of the esteem of his own and other sovereigns; that he was thrice elected Lord Rector of Marischal College, Aberdeen? Handsome and elegant in person, eminently pleasing and kindly in his address, generous and indulgent, yet strict, and severely uncompromising, Sir James M'Grigor, after seven years of retirement from office, was taken away from among us, leaving behind him, in the memories of all who knew him, a fond recollection of a truly honourable and upright man.