PART II.
CRITICAL ANALYSIS.

I.

Medical Topography of Upper Canada. By JOHN DOUGLAS,
Assistant Surgeon 8th Regiment. 8vo. London, 1819.
pp. 126.

Medical topography, or that science which teaches the
effects of climate, locality, and other external circumstan-
ces upon health, has been too much neglected by British au-
thors. We possess, it is true, a few detached notices, principally
in the form of prefatory remarks to accounts of the dis-
eases of foreign climes, while, so far as our own country is con-
cerned, our information is miserably defective, insomuch, that
a complete work upon the subject is one of the greatest deside-
rata in our professional literature. The records of the medical
department of our army, as they are now constructed, bid fair
to supply the deficiency, as far as the stations of the troops are
concerned; but these bear so small a proportion to the extent
of the country, and are necessarily so much confined to the mil-
tary practitioners, that the profession at large can derive little
or no advantage from them. In our review of Dr Millingen's
work, in the preceding number, we transcribed from that au-
thor the principal heads of topographical inquiry recommend-
ed by him to the consideration of military practitioners, on
their arrival in a foreign country. From these, and the hints
thrown out in Dr Hennen's "Principles of Military Surgery,"
much important matter may be collected, with little expence of
either time or labour; but it is to the resident, and not the casual
inquirer, that we must look for a full development of the effects
of the topography of any district upon the health of its inhabitants.

Some faint traces of inquiry into the influence of climate, situation, and modes of living, may be found among the early English medical writers. John Kaye, more generally known by the name of "Dr Caius," in his "Boke or Conseill against the Disease commonly called the Sweat, or Sweating Sickness," 12mo, London, 1552, attributes the immediate origin of the disease to the fogs which arose from the low grounds about Shrewsbury, acted on by particular winds, and aggravated by the filth of narrow streets. This author also refers to a work of his on the climate, productions, and mineral waters of England, but there is reason to suppose that this work was never published. Andrew Borde, or, as he quaintly entitles himself, "Andreas Perforatus," published "A Compendious Regiment or Dietary of Health, made in Mount Pyllor," (Montpellier,) 1562, in which he treats on the situations best adapted for the preservation of health, on the mode of building houses, on domestic economy, and on diet. All the physicians of that period, and for a long time after, looked upon astronomy, or, more properly speaking, astrology, as an indispensable part of their profession, and, as a branch of that science, they attended much to the course of the winds and the nature of the air, and they well knew their effects upon ulcerated surfaces. With the effects of different waters, and the superior healthfulness of certain situations over others, they were also acquainted, but nothing like a regular series of observations or conclusions applicable to their own country, existed among them.

The earliest work with which we are acquainted, which has treated on the general medical topography of England, is a small duodecimo volume by Claromontius, a native of Lorrain, published at London in 1672, and entitled "De Aere, Locis, et Aquis Terræ Angliae, deque morbis Anglorum vernaculis." This little tract is dedicated to James Duke of Ormond, and in an address to the College of Physicians, which follows the dedication, the author apologizes to that learned body, that he, a foreigner, should encroach upon a province which appeared to belong exclusively to them, and he softens the severity of this tacit rebuke by the following observation: "Id vero vos, non tam negligitis quam relinquitis: propterea quod domi versantes, ea quæ externis rara videntur, vobis quotidiana sunt continuo-que usu cognita." This is a general excuse which has proved, and is likely still to continue, the bane of science; but our topographer makes another apology for his work, more particu-
larly applicable to himself, viz. his wish to inquire into the actual state of the practice of venesection in England, to discover how far the frequent employment of that evacuation was called for by the nature of the endemic diseases, and to what extent these were influenced by the climate, water, situation, &c. In furtherance of this design, he enters into a general description of the country, and from his observations, he is led to the conclusion, that, although well timed venesection is a judicious practice, yet that, upon the whole, purging is oftener required, and better adapted to the cure of the diseases incident to the inhabitants of our island. This question of the comparative value of blood-letting and purging was, in former days, not always submitted to the arbitration of the members of the medical profession alone; it often became a subject of legal inquiry, and we have in the works of Zacchias a striking example. A young man was seized with a pleurisy: the physician first called in treated the disease lightly, but on the third day, the parents of the patient being alarmed, applied to another practitioner; he decided on bleeding. The original medical adviser, who was the senior of the two, ordered a purgative. Two new practitioners were now consulted, but the patient expired on the eighth day of his disease. The opinion of Zacchias is curious enough: "If," says he, "a patient dies from the ignorance or negligence of his physician, the latter is answerable to the law; the fault is the greater, if the physician persists in his error from contempt of a physician younger than himself. It is also a most dangerous error to form exclusive systems in physic, although physicians are certainly bound to follow the ordinary practices laid down by the masters of the art, if not prevented by very cogent reasons. "Now," says Zacchias, "experience shows that the omission of blood-letting in inflammatory complaints is often highly dangerous, while, if the inflammation exists in a high degree, the administration of a purgative is a capital error; therefore, the purging physician should be prosecuted." To the general doctrine of this celebrated jurist we have nothing to object, nor shall we venture to conjecture the changes which might be produced in his opinions by a perusal of some of our modern English works, or by a sight of the graphical illustrations with which an ingenious French artist has thought proper to adorn a recent exposition of the purging code. Whether the propriety of purging was ever made the subject of legal investigation in this country we cannot say; but that it occasioned violent disputes among the faculty in the eighteenth century, is sufficiently proved by the hostilities to which the question gave rise between the learned physician-general of the Earl of Peterborough's
army, Freind, and the fanciful professor of physic at Gresham College, Woodward. *

In the course of the seventeenth and eighteenth centuries, Sydenham, Wintringham, Bisset, Huxham, Sims, Millar, and others, published various works upon the state of the air, and of epidemic and endemic diseases; but the writings of all these authors fall very far short of what we should deem perfect specimens of the medical topography of the places in which they practised. That British physicians are not deficient in the talents necessary for such undertakings, is proved by the specimens which they have given, in their accounts of other countries. These are numerous: among them the names of Pringle, Lind, and Blane, are conspicuous for general descriptions; while, for special topography; Cleghorn's work on Minorca, and Irvine's on Sicily, are the most minute and the most important; the fixed residence of these gentlemen in the islands they have described, and in which they had the advantage of extensive practice as army surgeons, render their works particularly valuable.

To refer to particular instances connected with our own country: In the first volume of the Edinburgh Medical Essays and Observations, the leading articles have, with great judgment, been appropriated to a topographical account of the city; a meteorological register; a description of the instruments with which the observations in the register were made, and an account of the diseases which were most frequent during the preceding year, 1731-32. These essays are too well known to require any further notice from us. They have served as a model for numerous periodical works of later date, and the papers which they contain on the present subject of our inquiries, rank among the earliest and the best that this country has produced. In the Philosophical Transactions for 1778, Dr Haygarth published an excellent paper on the topography of Chester, illustrated with many striking medical facts on the state of disease in that city. A respectable contemporary journal (the London Medical Repository) presented us, in its first number for January 1814, a specimen of the medical topo-

* Among the curious pamphlets of the day, to which this controversy gave rise, we may name the title of one, which may mark the spirit of the combatants: "A Letter from the facetious Dr Andrew Tripe at Bath, to his loving brother the profound Greshamite, showing that the Cacoethes Scribendi is a distemper arising from the redundancy of Bilious Salts, and not to be eradicated, but by a diurnal course of Oils and Vomits. With an Appendix, concerning the application of Socrates his Clyster, and the use of clean linen in a Controversy." svo. London, 1719.
graphy of the Metropolis, and in the March number for the same year, a series of queries on a simple and comprehensive plan, for the guidance of those disposed to make medical toponomy a subject of their inquiries; but we are sorry to observe that few of its correspondents have availed themselves of these queries, or at least have made their investigations public. In a paper in this Journal for July 1817, Dr Chisholm has ably illustrated the statistical pathology of Bristol and Clifton; and Dr Hunter of Leeds has prefixed some topographical notices of that place, to his paper on the epidemic fever which some time since prevailed there. It is not our intention to particularize every detached notice that may be found in our numerous peridical works, although, from their paucity, the enumeration would not be difficult; indeed, we may venture to assert, that probably not a thousandth part of our own island has been particularly described, with a view to the influence that its situation, productions, climate, &c. have upon the health of its inhabitants, while, of its general description, we possess scarcely any thing.

That great and numerous obstacles exist to a general medical topography of this or any other country we are most ready to admit; but we have little hesitation in saying, that the greatest of all is to be found in the apathy of the resident medical men, from whose cordial co-operation alone any thing of the kind can be expected. "Any voluminous work, whether systematic or empirical," to use the language of a learned author (Young) in his Essay on a branch of this subject, "must unavoidably contain much useless and some erroneous matter." To after times it must be left to correct these errors and prune these redundancies; but we cannot help expressing our regret, that even the germ of a general medical topography of our island has not yet appeared among us, and that we are left with little more than the bills of mortality, from which we can extract any information of the state of the public health of a vast majority of our most populous cities and counties. From these "empirical" sources we have reason to suppose that the loss of human life varies in different proportions from 1 in 36, the average rate for Middlesex, down to 1 in 73, the calculation for Cardigan; but for many of the causes of this striking difference we are consigned to the obscurities and intricacies of conjecture.

Of the sister island the topographical notices which we possess are very defective. Dr Gerard Boate published, in 1652, a Natural History of Ireland, in 12mo, which was reprinted in Dublin in 4to, in the year 1755. In this work, which is principally descriptive of the physical geography of the country,
there are two chapters on the health and reigning diseases, more curious than useful. In the works of Dr Rutty, a great many important facts, principally upon the weather, mineral waters, and other subjects of natural history, will be found; in his "Essay towards a Natural History of the County of Dublin," he has given some interesting topographical and statistical accounts of the capital. A medical topography of Cork in particular, and of the country in general, is prefixed to Connell's "Observationes Medicinales," published in Dublin in 1746. This book, by a physician whom the learned Gaubius has styled "The Irish Sydenham," is less known than it deserves to be. We are not acquainted with any modern work in which we are informed of the important changes which must have been effected throughout that part of the empire since the days of Rutty and Connell, nor any which can be looked upon as strictly topographical, although, from the numerous excellent reports lately published on fever, we may derive much useful information on that subject.

The Royal Society of Medicine of France attached particular importance to the science of Medical Topography, and, accordingly, in the excellent preface to their Memoirs for the year 1776, we find a comprehensive plan on the subject, addressed to their members and correspondents, and to practitioners in general, with a view to collecting a general medical topography of the kingdom. In consequence of the attention paid to their proposals, the Memoirs of the Society abound with topographical notices, and accounts of the epidemic and endemic diseases of man, and the "epizooties" of the lower animals. The collections of papers from the military hospitals by Hautesierk and De Horne also abound in valuable materials, insomuch that, if they have not a complete national work, the French may, without hesitation, be allowed to possess the greatest number of contributions towards that purpose of any other European nation. Menuret's Essays on the History of the Medical Topography of the Capital leave little more to be done in that branch of the subject.

The physicians of Italy, Sweden, Denmark, Holland, Germany, and other continental states, have all contributed, more or less, to the formation of a national medical topography; and an author of the last named country has the merit of having produced perhaps the best Essay extant on a General Medico-practical Geography.*

* Fincke, Versuch einer allgemein medizinisch-practischen Geographie, Leipzig, 1792, 3 vols. 8vo. In a note to a paper on the "Recent Progress of Me-
Africa and Asia have not, so far as we know, possessed native topographers; but some tracts are extant upon the subject by Spanish, French, German, and English authors, who have visited them as travellers, or been employed in the medical service of their country. The well-known work of Bontius, Physician-General in the service of the Dutch East India Company, contains an entertaining and instructive series of dialogues, supposed to have passed between himself and his friend, Duraeus, upon the climate, food, &c. of many parts of these extensive regions; but by far the most important topographical paper that we have ever met with upon the diseases of India is a special report, Medical, Geographical, and Agricultural, by the medical officers of our own Company's service, under the presidency of Dr Ainslie, upon the epidemic fever which prevailed in the provinces of Coimbatore, Madura, Dindigul, and Tinnivelly, in the years 1809-10-11. This paper we would strongly recommend to the perusal and the imitation of all who are interested in topographical inquiry. It was published in London in the year 1816. On the occupation of Egypt by the French armies, conquest and literature went hand in hand, and the medical topography of the country was not neglected in their progress; an excellent circular letter was addressed by Desgenettes, the head of the medical-staff, to all the officers of his department; this, together with several of the answers, is published in his "Histoire Medicale de L'Armée d'Orient," and furnishes a valuable series of notices upon that interesting portion of the globe. Nor was the subject neglected by the British medical officers. Short as was their stay in the country, and embarrased as it was by every species of privation incident to the unusual duties on which they were employed, they found time for researches illustrative of the climate, topography, and diseases, and to their zeal we owe the "Medical Sketches" of Sir James Mc'Grigor, and the "Observations of Dr Dewar on Diarrhoea and Dysentery."

Among the members of the profession in the United States of America much has been done on the subject, as is fully testified by the works of Dr Chalmers, Dr Rush, and Dr Currie. A very interesting communication, by a naval surgeon, upon the medical topography of New Orleans, appeared in our Number for April 1816. It was published anonymously, but is not unworthy the name of our correspondent Dr Archibald Robert-
son, now of Northampton. The voyages and travels of Humboldt and Bonpland, which have enriched geography and natural history with so many splendid acquisitions, have added many curious, instructive, and authentic notices, to the medical topography of Mexico, a country which was formerly so little known, and of which the little that was known was so blended with fable. The "Essai Statistique sur la Nouvelle Espagne" of these authors, is a work worthy of that immense and important country, and of the names of the illustrious travellers who have described it. The "Notitias Americanas" of Don Antonio Ulloa also contain many valuable facts, particularly his 11th "Entretienimiento," in which he treats on the influence of climate and situation on the diseases of Peru.

Of the West India islands numerous topographical accounts are extant, both in works specially dedicated to the purpose, and in various periodical publications. Hillary's admirable work on Barbadoes, Hunter's on Jamaica, and the more general treatise of Dr Mosely, late Physician to Chelsea Hospital, are well known; but the most modern, and, we believe, the best accounts will be found in the papers of Dr Dickson, Physician to the Fleet, and of Dr Fergusson, Inspector of Army Hospitals.* From the pen of the latter gentleman we anticipate a work on medical topography, which, if it fulfils the hopes excited by the reading of his paper in the Royal Society of this city, noticed in our last April Number, will throw a light upon the intricate subject of Marsh Miasmata as brilliant as it is novel.

We are not aware that any account of medical practice, in that portion of the American Continent denominated Upper Canada, has ever appeared before the present, if we except a paper by Mr M'Causland, † published in the 8th Volume of the Medical Commentaries. We had previously some detached notices in the works of American physicians, by which it would appear, that, in Canada as well as in the United States, the alterations on the face of the country, consequent upon the clearing away of the woods and the improvements in cultivation, have much influenced the frequency of diseases of the febrile class, and that the winters are less severe, and of shorter duration, than at a former period. What may have been the information

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* See Johnson on Tropical Climates, second edition. Various Papers by Dr Dickson, in the Med. Chir. Journal, and Dr Fergusson's Paper in the 8th Vol. of the Med. Chir. Transactions.
† Facts and Observations on different Medical Subjects, by R. M'Causland, Surgeon of the 8th (or King's) Regiment.
on these subjects possessed by the heads of our army during the late war in that country we cannot say, but we are bound to suppose that they had sufficient to enable them to guard against medical as well as military accidents. Canada was, to be sure, our own, and we might have had the same excuse for ignorance of its topography, that Claromontius made for the College of Physicians; but after the disastrous events consequent upon our want of information, on the diseases of a country much better known, and much nearer home, which the Walcheren expedition furnished, we cannot suppose that there was any lack of inquiry. 

The conduct of our arch enemies the French, on the occasion of carrying a war into a new country, as far as regarded the health of their troops, is worthy of imitation. On the irruption of Bonaparte into Italy in 1796, a memoir was drawn up by the Inspector General of Health of the Army, and published by the Executive Directory, on the means of preserving and restoring health in that country. In this memoir were contained topographical views of the various parts of Italy,—their comparative salubrity,—their reigning diseases,—and the resources which each state, and each city and town possessed, for the support or restoration of health. To these were added special remarks on military hygiene, applicable to the circumstances of the army, the seasons and the climate, with practical notices, drawn from the best native medical authorities. So provident were the directors and their general for the health of their armies, that before they had advanced as far as Milan, the medical officers had pushed their topographical researches to the utmost extremity of the kingdom of Naples. Upon the same principle the Topographical Queries of Desgenettes, already alluded to, were circulated under a similar sanction; nor can we conceive any body of men to whom, if sufficient time is permitted to them, inquiries of this description can be more appropriately entrusted, than to the well-informed medical officers of an army; at a period of life when their mental and corporeal powers are in full vigour, and, aided by many concurrent circumstances, it becomes their interest to study minutely those subjects which either directly or collaterally may possess any influence upon health. They witness the endemic constitution of their occasional residences, and are often enabled to mark, not only the effects which local circumstances produce on new comers, but also the various shades of difference which are observable, until the constitution becomes assimilated to that of the native inhabitants. Endless opportunities for research, comparison, and analytical induction, are presented to their view,
and the value of these great sources of improvement is rarely diminished by that paralyzing influence which present or prospective independence but too frequently exerts over the talents and the industry of man.

The work of Mr. Douglas appears to have been written partly during the period of the war in Canada, and partly since his return from that country. It is a short and spirited sketch, and, as far as it goes, is creditable to the author's talents. It is divided into six sections or principal heads. The first is on the topography of the country; in the others he treats in succession of the soil and climate,—of the services of the troops,—of the diseases which prevailed,—of the state of the wounded,—of the provincial militia and Indian nations who co-operated with the army. From the first section we shall extract an account of the town where the general hospital was situated.

"York, the seat of government, and capital of the province, is built on a level plain, along the northern bank of an extensive bay, which communicates on its west side with the lake. This bay is long and narrow, and fed by many streams from the contiguous soil, which in summer supply its waste of evaporation. It is navigable to vessels of considerable burden; and its shores in many parts are overgrown with rushes. Those winds which at times agitate the surface of the lake, seldom or never disturb its stagnant waters. The site which the town occupies appears to have been once a deep meadow, interspersed with pools of water. Some spots of ground which border upon the town are as yet in a state of nature. Even those fields which have been cultivated are not sufficiently intersected with drains to carry off the collections of water, which, in the rainy season of the year, often inundate the soil. The inhabitants of the town do not exceed six hundred, a number extremely small when contrasted with the whole population of the province. The town on its west side is defended by a fort, which is erected on a dry and level spot of ground. Here was established the general hospital, in rear of the army, to which the sick and wounded were conducted as necessity or contingency required. In sickly seasons the inhabitants of York are liable to be attacked by intermittent fever." pp. 15—17.

The general nature of the soil and climate of Upper Canada is sufficiently well known. Mr. Douglas states, that the thermometer often indicates as great a reduction of heat as is met with in any other part of the globe; but it struck us as rather singular, that we did not find any specific statement as to the degrees of temperature indicated by the thermometer; so that, from this and the actual acknowledgment of one of his correspondents, we are led to suppose that there must have been a want of those useful instruments at the military hospitals of Canada.
Before we enter into the subject of the prevalent diseases, we shall give a specimen of the mode of warfare in the country, which no doubt greatly contributed to give them their peculiar character.

"The services of the army in Upper Canada were arduous and severe. So great was the scarcity of men, both at the commencement and during the continuance of the war, that no sooner had a regiment arrived at Quebec, than it was immediately ordered to proceed on its march to the Upper Province. The route was long and tedious; the fatigues great; and many difficulties were to be overcome. This line of march, from the point of debarkation to the Niagara frontier, where hostilities were carried on, includes a distance of nearly 550 miles. The road is cut through the woods, and runs along the banks of the river St Lawrence, and the northern side of Lake Ontario, varying in its course with the undulations of the shore. It is often interrupted by deep bays, and also by numerous tributary streams which discharge their water into the river St Lawrence. In many places where the ground is low and marshy, large trees are cut down, and laid crosswise, to facilitate the passage. When a march was undertaken in spring, or in autumn, the miry state of the roads presented many obstructions. Nor were the oppressive heats of summer, superadded to the fatigues of long and forced marches, less dispiriting to the soldier. When the passage was rendered tedious from the wetness of roads, the troops were generally conveyed to the Upper Province in batteaux, from which they were often obliged to disembark when they had to encounter the rapids of the river. The hauling and poleing of these vessels against the stream was attended with much labour. The clothes of the men employed on this duty were almost constantly wet. During night their accommodations were wretched. They slept cold and comfortless in the barns and out-houses of the settlers, which are widely scattered along the banks of the river. Sometimes, when overtaken by night, a fire was kindled in the woods, around which they stretched themselves till morning.

"But winter, with its attending storms, offered greater impediments to a march than any other season. Vehicles to forward the baggage could not always be procured. For successive days the march was at times obstructed by the falling of snow; and the drifted state of this in the woods rendered it hazardous to prosecute the journey. The faces of the men were often frost-bitten when much exposed to the north wind. Sometimes, indeed, the tear was no sooner secreted from the eye, than it congealed into an icicle upon the eye-lashes, so as to restrain their motion. Many of the wooden bridges which conducted across the streams had been burnt down by the enemy. The ice not being of sufficient thickness to support the men and baggage, delay was thus rendered unavoidable. But, more dejecting than all, such obstructions as these were sometimes accompanied with privation. When the rations of the men were expended,
the settlers could afford but little from their winter's stock of provisions. Thus want, in addition to the inclemency of winter, and the numerous impediments of a long march, increased the burden of general calamity. The night, too, proved more uncomfortable than the day. Though the men were stretched before the fire, the tenseness of the cold was severely felt. The toils of the day were not always followed by the refection of sleep. Its return seemed to be prevented by a certain degree of cold, and a deficiency of covering. The silence of the night was disturbed by the howlings of savage wolves, that prowled around the cottages. Nor was the ear less impressed by the rude winds in the forest, and the incessant noise of an impetuous river. The road, at times emerging from the woods, ran for a considerable distance along the edge of the river. Huge sheets of ice were then seen piled to an amazing height along the rocky margin of the stream. The accumulated mass, obtruding from the shore, appeared to alter the direction of the current. Rivulets descending from abrupt precipices, seemed from afar frozen to the eye. The grandeur of the scene was heightened by a variety of all those sublime objects which can engage the mind amid the general wildness of nature. Infants at their mothers' breasts supported with impunity the severity of winter.

"When the shores of the lakes were sufficiently frozen, so as to support the men and baggage, the day's march was completed with facility. Besides, it could be shortened or prolonged according to circumstances, when a choice of accommodation could frequently be obtained; yet the early completion of a route, attended with so many unavoidable obstructions, was always to be wished. Though other difficulties were to be surmounted in the field, their anticipation had as yet no power to sully the fondness of expectation." pp. 34-39.

That disease should appear among men thus exposed, is not a matter of surprise; hence we find pneumonia to have been particularly prevalent. In some it was sufficiently marked from the beginning; in others the symptoms were more obscure, and only fully developed themselves after venesection had relieved the oppressed vessels. On the appearance of the blood we have the following remarks:

"Neither the cupped appearance of the blood, nor its sизy coat, at all times corresponds to the severity of the symptoms of inflammation. The abstracted blood of one man who died of pneumonia exhibited little or no siziness on its surface. This, however, is a rare occurrence. There is truth in the assertion, that the marks of inflammation on the surface of the blood are, to a certain extent, modified by the shape and temperature of the vessel, and by the force and magnitude of the stream, as it springs or descends from the arm. In many instances the form of the coagulated mass bears a striking resemblance to the figure of the vessel which contains it. In
different cupfuls taken at the same bleeding, the relative quantity of serum to that of the crassamentum is often considerably varied. When the constitutional symptoms of pneumonia run high, the serum generally predominates. In this case the coagulated part has often been observed firm in its texture, elevated on its margins, and covered in its hollow centre with the buffy crust. The circular border of the crassamentum, when it joins the sизy coat on its external edge, assumes the colour of the arterial circulation, probably owing to its greater exposure at that part to the action of the atmosphere. The coagulated mass, which is of a dark colour on its under surface, either sinks or swims in the serum. This, however, depends on the manner in which the blood is taken from the arm. When the stream is strong, and propelled in a straight line to the cup, the generation of air-bubbles on the surface of the mass renders it partly supernatant.

"The tenacious fibrine, spread over the superior part of the crassamentum, feels tense and elastic to the touch, and not unlike the firm consistence of a muscular membrane. In this state it would appear, that the blood has acquired the property of forming a new bond of union between inflamed parts by an adventitious process of adhesion. The dissolved appearance of the blood which at times occurs in pneumonia, may seem to dissuade us against the employment of the lancet. This appearance, however, is at last overcome by repeated blood-letting. Coagulation takes place, and the crassamentum becomes coated with its inflammatory covering." pp. 56—58.

Rheumatism was, as might naturally be expected, frequent among the troops, and it often attacked the exposed parts of the body in its chronic form, without having been preceded by acute symptoms. Intermittents were also frequent, but Mr Douglas never met with them in the quartan form. The "lake fever," as it is called by the settlers, is neither more nor less than the summer and autumnal remitting fever, and doubtless took its rise from the same causes as the intermittents. Like the bilious remittent of the West Indies, it often terminated favourably on the third day. A few sporadic cases occurred which bore a striking resemblance to that disease, but differed from it in the absence of black vomit, and its less frequent fatality. Depletion by the lancet, and by calomel and jalap, and occasionally salivation, were the most effectual means of relief. Dysentery sometimes appeared, accompanied with fever of the intermittent and remittent type, but without any strong symptoms of inflammation. Cholera was occasionally met with, generally as the result of drinking bad water, or eating unripe fruits, and possibly from the sultriness of the days and chilliness of the nights in the summer season.

Under whatever latitude soldiers are exposed to hard labour in uncultivated or marshy countries, the same diseases are to be
expected. It is curious to find that a nearly similar catalogue is given on the authority of the Physician General of the Forces, who served with the English army in Ireland, so far back as the seventeenth century. Dr Boate, in speaking of what he calls the "leaguer sicknesses" in the English army, "which, since this bloody rebellion, went over into Ireland to fight that murderous nation," after enumerating the looseness and malignant fever, violent coughs, dyspnoea, sciatica, and severe stranguries which afflicted the troops, remarks,

"That those diseases had their original, not from any defect of climate, but of the cold and other hardships which the soldiers suffered in their marches; for they many times going into the fields in cold and foul weather, and sometimes marching whole days long, yet several days together, in very dirty and wet ways, where their feet and legs were continually cold and wet; besides, that they were sometimes constrained to pass through the water up as high as the knees and waist, and after all that hardship endured in the day time, to lie in the night upon the wet ground in the open air; this caused the afore-named diseases, and several others amongst them, in so great number, it being to be wondered at that many more did not fall into them. And, without doubt, in any other country of the world, where all the same causes did concur, and where an army endured the like hardships, the same effects, if not worse, would follow; so that, in this effect, the land itself is not at all to be blamed."

In the Surgical Details, Mr Douglas remarks, that the constitutional fever attendant on severe injuries was evidently modified by the influence of climate; it partook of a remittent character, and its period of attack depended on the early or late appearance of local inflammation. Recovery was often interrupted by attacks of intermittent fever, one of the most dreadful scourges of the wounded. Fowler's solution of arsenic was found to be more effectual in the cure of this fever than any other medicine. Itching of the tarsi, tenderness of the mouth, and salivation, contraindicated its further use. Sometimes it affected the bowels severely, though conjoined with opium. The dose was four drops of the solution three times a-day, which was increased according to circumstances. Before employing this powerful and valuable remedy, the stomach was emptied by an emetic, and the bowels by a gentle aperient.

Mr Douglas gives his testimony to the superiority of immediate amputation, over the consecutive performance of that operation. Hospital gangrene made its appearance only in two instances among his patients; no case of tetanus came under his notice, nor did he ever hear of the occurrence of that disease among the wounded in Upper Canada.
In his section on the Diseases of the Indians, Mr Douglas observes:

"It was rumoured at one time, that the venereal disease had spread extensively among the Indians. No case of syphilis, however, either in its primary or secondary form, ever came under my notice. The disease made its appearance only in a few instances amongst the troops, and from this circumstance the report seemed to originate. It is asserted by some who have lived and travelled in the interior parts of the country, that many of the Indian nations have a knowledge of certain plants, whose efficacy they deem infallible in the cure of every form of syphilis. An interpreter of the Souk nation, with whom I have conversed, not only corroborates this statement, but affirms, that he has seldom known the disease prove fatal to any of the Indians." pp. 121, 122.

Mr Douglas concludes this very creditable essay, by stating that more than two years having elapsed since his arrival from Canada, and no communication relating to the diseases of the army in that country having been given to the public, to supply the defect, he was induced to take up his pen. For this we are obliged; but we confess that we should have been much gratified by some more extensive views of the statistics, prevalence, and mortality of diseases in that part of the world, extracted from those documents which must necessarily abound in the hands of the senior officers who were employed in the service, or the practitioners who had long resided in the country.

To remember, and to record, are confessedly the humblest operations of the human mind; and he who may not possess talents to reason, or possessing may not choose to exert them, may yet confer essential service on science, by furnishing the materials to those who enjoy both the power and the will to make use of them. We well know that there are many in our profession who record nothing,—except the amount of their fees; who stigmatize inquiry with the title of innovation, and crush, instead of fanning into life, the generous glow of genius, while it is yet struggling for existence. To these traders we have nothing to address; but to those who cultivate the science of medicine, we would strenuously recommend the study of medical topography, as among the most important means of promoting our knowledge of disease. So far as the pages of this Journal may avail, we shall be happy to give publicity to the fruits of their researches; and it will be gratifying to us to receive from our correspondents, histories of particular epidemics in Scotland, with short notices of the districts where they occur, by which we may be enabled hereafter to display the contrast between the symptoms of the same diseases as they have appeared in different seasons, among the rich and the poor, the young and the old, the robust inhabitants of country parishes,
and the more luxurious and enervated residents of populous, rich, and manufacturing towns.

We shall take an early opportunity of compiling a comprehensive plan for such memoirs. In the mean time we shall content ourselves with pointing out a few authorities which we would recommend as examples for imitation to such of our readers as may be disposed to concur with our views. We have already mentioned some valuable papers, and have referred generally to some of the best authors. Of these we may particularize "The Account of the Climate of Pennsylvania, and its Influence upon the Human Body," by Dr Rush, in the first volume of his Medical Inquiries and Observations; and his "Account of the Natural History of Medicine among the Indians," and of the "Influence of the Political and Military Events of the Revolution," to be found in the same volume; his "Inquiry into the Influence of Physical Causes upon the Moral Faculty," in the second volume; his view of the "State of Medicine," in the fourth volume; and the accounts of the various diseases of Philadelphia dispersed throughout the collection of his works published in that city. We would also recommend the attentive perusal of Dr Currie's "Historical Account of the Climate and Diseases of the United States of America." Besides these, Wilson on Climate, Woolcomb on the Frequency and Fatality of Diseases, Mansford on Consumption, Domier on Malta, Gourlay and Adams on Madeira, and Clarke's Medical Notes, will furnish much useful information in themselves, and will suggest many subjects for inquiry and elucidation. The second edition of the work of Dr Johnson on "Tropical Climates" will also be found to contain a large and concentrated mass of topographical information connected with these countries, while his work on the "Influence of the Atmosphere" may be advantageously consulted on our own. Ramazzini's work on the Diseases of Artificers, to which is added a small tract by Hoffman on Climate and Situation, has long been naturalized in our language by James's translation, and is not only useful, but, we had almost said, indispensable, to those who make medical topography, in its fullest extent, their study.

We confess that we feel considerable difficulty in adding to this catalogue, not from any paucity of materials, but because so many of them are completely beyond the reach of the general reader; we may, however, mention, that, in the French language, in addition to the books we have already noticed, the works of Foderé will be found to contain many valuable hints. The Italian work of Sarcone, Director of the Swiss Military Hospital at Naples, on the diseases of that city, is one of considerable value in every point of view. In the German language
works on topography abound. We have already noticed that
of Finke on Medical Geography, to which may be added the
writings of John Peter Frank, Schnurrer's Geograph. Nosologie,
and especially the "Jahrbuch der Staatsarzneikunde," or Annals
of State Medicine, of Kopp.

Those who have access to large libraries we must refer to the
list of books given in Parr's Medical Dictionary, article Topo-
graphy, and to the Literatura Medica Digesta of Plouquet,
title "Topographia Medica." We must observe, however, of
this, as well as of Dr Parr's catalogue, (which is so close an
imitation as to have copied even the typographical errors,) that
a number of the works quoted are almost, if not altogether, un-
attainable in this country, many of them having been publish-
ed as inaugural dissertations at foreign universities,—many be-
ing references to books which in their turn refer to others with-
out entering into particulars,—while many, if attained, will in no
degree repay the labour of procuring, or the drudgery of per-
using them, as we have ourselves painfully experienced. For
a less voluminous, but more judicious selection, we would in
preference recommend the learned work of Dr Young "On
Medical Literature and Practical Nosology." Under the va-
rious heads of Climate, Employments, Habits, Clothing, &c.
the references are sufficiently numerous, while the original es-
say which that distinguished philosopher has given upon the
"Medical Effects of Climates," will be found not less remark-
able for the clearness of its style than for the correct statement of
the facts, and the justice of the conclusions deduced from them.

II.—III.

Systems of Surgery.

II. The First Lines of the Practice of Surgery: designed as an
Introduction for Students, and a concise Book of Reference for
Practitioners. By SAMUEL COOPER, late Surgeon to the Forces,
&c. &c. 4th Edition. Vol. I. London, 1819. 8vo. Pp. 663.

III. A System of Pathological and Operative Surgery, founded
on Anatomy: illustrated by Drawings of Diseased Structure,
and Plans of Operation. By ROBERT ALLAN, Fellow of the
Royal College of Surgeons of London and Edinburgh &c.
&c. Edinburgh, 1819. 8vo. Vol. I. Pp. 496.

The examination of systems, whether of Medicine or Surgery,
does not strictly accord with the plan which we have laid