A TRULY VIRTUOUS WILL IS ALMOST OMNIPOTENT.

EDITED BY

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An Essay on the questions—Are there any direct sedatives? And if there are, what is their mode of operation? Read before the Medical Society of Augusta, by Joseph A. Eve, M. D.

Before attempting to answer this question, it will be necessary to determine the proper signification of the term sedative. Most medical writers apply this word to depressant agents, to all means that diminish action or reduce excitement, whether the principle on which their effects are produced be negative or positive; that is, whether they act by withdrawing stimulants, as by the abstraction of blood, of caloric, &c., or by directly diminishing the excitability of the system, and rendering it less susceptible of the impression of excitants, without any depletion or the withdrawal of any stimulus. But we conceive it highly important that a distinction be made between negative and positive depressants, inasmuch as they operate on very different
principles, and are applicable to the remEDIATE management of very different states of the system and forms of disease.

We will consider the term sedative applicable only to those agents that depress excitement, restrain action, and allay pain, by an immediate effect upon the excitability; and will, in the ensuing remarks, restrict the signification of the term to those means, which, leaving in full force and operation all those excitants upon which excitement depends, whether normal or morbid, reduce it by lessening, neutralizing, subtracting, or in some way depriving the system, or some part of it, of its excitability or capability of being excited.

The state induced by the action of these agents is, properly, designated by the term sedation, which is directly opposite to irritability; the latter signifies too great susceptibility to the impression of irritants and excitants; the former, on the contrary, expresses an aptitude to be affected by them.

Having now stated fully what we understand by the term sedative, we will proceed to examine and to answer the first question, "Are there any direct sedatives?" This is indeed a difficult question, upon a most recondite and obscure subject—a subject that has given us more embarrassment and perplexity than any other in the science of therapeutics. No author whose writings we have seen, appears to entertain clear and correct views of it, or to have treated it in a satisfactory manner: we have returned from all our researches unsatisfied: if some clouds have been removed, their removal has only afforded light for the discovery of difficulties still unanswered or unanswerable—light has been evolved to render the darkness more visible. It is necessary that our knowledge of the mysterious laws and hidden springs of life should be much more profound, before the nature of sedative action can be fully and perfectly comprehended, and the whole truth be revealed in its simple and unmantrled loveliness.

Two of the best essays, we have seen, bearing on the subject of sedatives, appeared some years since in the American Journal of Medical Sciences, one by Dr. Hodge, of Philadelphia, on Sedation, and the other by Dr. Geddings, of Charleston, on Debility. These authors do not attempt to explain the modus operandi of sedative agents, but by their arguments, and by facts
and observations adduced, they prove very conclusively that there are such agents, and describe very satisfactorily the effects produced by their action.

Dr. Geddings, after speaking of negative depressants, makes the following remarks, "Perhaps a more important variety of asthenia or debility, is that which is produced by the operation of contrastimulant agents, or those causes which tend by their peculiar properties to produce a direct depression of the powers of life, independently of any negative property or quality."

"Brown (he continues) laid it down as an axiom, that all agents that are capable of affecting the organization, produced their results by a process of stimulation. In this opinion, however, he was not sustained by subsequent observations. Indeed experiments have satisfactorily demonstrated, that there are an immense number of agents that produce an impression directly opposed to that of stimulation, or that enfeeble or depress the vital forces, by an operation that is direct and unpreceded by any excitement."

Many medical writers, besides Brown and his disciples, deny the existence of direct sedatives, and contend most strenuously that their supposed operation involves a contradiction or a logical absurdity. It is difficult to conceive how any thing can act, without being active and producing action: whereas the effect of a sedative is not action, but the reverse, the suppression or reduction of action. They assert that the agents, termed sedatives, are primarily stimulant, and that the sedative effect is only the consequence of the previous action of stimulants which exhaust the excitability and thus leave the general system, or the organ or part acted on, in a state of depression: that is, they lose sight of sedation altogether, confounding or identifying it with exhaustion or indirect debility. But we contend that this is a gratuitous assumption without foundation or support; it is merely a subterfuge for our ignorance—a resort to compass a difficulty which we cannot explain. Innumerable observations and experiments have most satisfactorily established the doctrine that many substances exercise a directly depressing effect without any previous excitement.

There are some substances which are complex in their operation, possessing both stimulant and sedative properties which are
manifested either simultaneously, in succession, or upon different organs or parts. But there are some that are wholly sedative in every dose, under every circumstance, and in all modes of administration—this is certainly and most unequivocally the case with hydrocyanic acid, whose depressing influence over the vital power is so decided, that were there no other example in nature, this would be sufficient to afford an affirmative answer to the question proposed.

The subject before us is one in which we are compelled to reason from effect to cause—the nature of the cause can only be inferred from the effect produced. When depression follows the administration of a mean that neither stimulates nor abstracts stimulus, the unavoidable conclusion is, that it must act by diminishing excitability, that is, by a directly sedative effect; for there are only three modes in which depression can be produced, debility from abstraction of stimulus, exhaustion, and sedation.

Every candid physician must admit that there is an almost endless variety of substances, which, taken internally, or applied to the surface, depress the vital powers, and whose effects cannot be explained on any other principle than that of direct sedation; we therefore unhesitatingly reply in the affirmative to the first question proposed, and proceed to examine the second—"What is their mode of operation?"

This is indeed a difficult and perplexing subject—a subject that admits much more of speculation than demonstration.

"Of the several causes that act thus on the animal organism, (Dr. Gedding's remarks,) some produce their effects, as it were, instantaneously, and in a moment extinguish the powers beyond recovery; others act more tardily, and merely produce a gradual diminution of the vital energies. Even a single drop of prussic acid, merely applied to the surface of the eye of a dog, or to the tongue, produces death in three or four seconds, and injected into the veins of an animal, it extinguishes life in an instant, as by a stroke of lightning, leaving the muscles almost entirely devoid of all traces of irritability. All substances possessed of narcotic properties, enfeeble the powers of life, and produce a degree of asthenia which is sometimes alarming, and even fatal. The nervous susceptibility is annihilated; sensation is enfeebled or obliterated; the pupil is widely dilated; the eye
is insensible to light; the mind becomes incoherent, or is over-whelmed with a general stupor or coma; the pulse flutters, or is scarcely perceptible; the respiration is slow and heavy; a gen-eral coldness diffuses itself over the body; and death is gradu-ally induced by the overwhelming debility which pervades the organization." The effects of sedatives thus admirably describ-ed, almost invariably, in some degree, follow the use of a large dose of opium, tobacco, digitalis, hydrocyanic acid, cicuta, bella-donna, &c.; but how these substances operate in the production of such effects is an inexplicable mystery, upon which neither chemistry nor physiology can throw the least light. It does not at all depend on the elementary composition of the substances employed. Some suppose the produce of azote and absence of oxygen essential to the constitution of a sedative; but, with the exception of hydrocyanic acid, all sedatives contain oxygen—and further, and most conclusively against this fanciful theory, one of the most powerful stimulants in nature, ammonia, is de-void entirely of oxygen, being composed of hydrogen and azote, while one of the most decidedly sedative, carbonic acid gas, con-tains a very large proportion of oxygen and no azote.

With respect to electricity, we believe it to be one of the most important and universal agents in the production of natural and vital phenomena; but a knowledge of chemistry does not de-clare to us any mode in which sedative substances can affect this subtle fluid so as to depress the powers of life—we have no data on which to reason—the moment we attempt to explain sedative action on electrical principles, our reasoning is nothing but hypothesis, speculation, and groundless conjecture.

As sedatives diminish sensibility and action, and these depend chiefly on the brain, it has been suggested that they act primar-ily and principally on that organ; but it is asserted, in objection to this opinion, that they act locally on parts to which they are applied, in many instances without affecting the brain at all—and, farther, that some substances produce directly opposite ef-fects on different organs or systems, exciting one and depressing another—emetic tartar inflames the skin and prostrates the ac-tion of the heart and arteries—digitalis, tobacco, and many oth-er articles act differently on different organs and systems.

Cullen supposes, "that their operation is upon a matter in
common to the whole nervous system”—"that there is a subtle elastic fluid in the medullary substance of the brain and nerves, upon the motions of which all sense and vital motions depend; and by which, therefore, motions are communicated from every one part to every other of the nervous system.” His conclusion is, that sedatives or narcotics diminish the sensibility and action of the system, by lessening the mobility of this fluid. This theory is ingenious, but it is based upon a hypothesis. Who has proven the existence of this subtle fluid pervading the whole nervous system? And it is by no means proven that the operation of sedatives is confined to the nervous system.

Inasmuch as the most prominent effects of these medicines are remarked in the functions of the animal economy, which are dependent on the nervous system, it is inferred by some, and there is much plausibility in the inference, that their action falls principally on the brain and its appendages. It must be admitted that these parts are most conspicuously affected by sedatives; it does not, however, follow as a necessary consequence, that their action falls more directly or forcibly upon them; but it is simply, because they enjoy the highest degree or largest quantum of excitability, and from the functions they exercise, those of animal life, the influence of sedatives, as well as all other medicines, is more obviously and conspicuously manifested, on those, than on organs whose functions are less important.

The result of our experiments, observations, and researches is, that sedatives produce their effects by acting directly on the excitability, or irritability as it is styled by some physiologists, which is a property or principle essential to, and inherent in, all living tissues, though possessed by them in different degrees; as for example, it is greater in the nervous than in the muscular, in the muscular than the cellular, &c. The excitability is also modified in the different tissues and organs, in consequence of which modifications, they receive different impressions from the same agents, whether stimulant or sedative.

We believe that sedatives make a local impression on the part or organ to which they are first applied, which impression is by sympathy or nervous communication extending to other parts of the system, just as stimulation is communicated from the part first impressed to others more remote: many sedatives are also
absorbed into the circulation and through that medium conveyed to the nervous centres, and thence reflected throughout the organism.

As regards the proximate mode of operation of sedatives, or the rationale of the intimate changes produced, we know nothing certain—but do we know any thing more definite with respect to stimulants?

Inasmuch as excitability is not equally diffused throughout the organism, but exists in greater degree in some tissues than others, and in the same at different times, is exhausted by stimuli and re-accumulated after their action is over, there must necessarily be some provision in the animal economy for its re-accumulation and restoration when expended; it is presumable sedatives prevent or suspend this accumulation, preparation, or secretion of excitability, and thus render the system or the organ acted on less excitable, and consequently diminish action; but as to the mode in which this effect is produced, we know nothing.

Sedatives are so valuable and extensively employed in practice to allay pain, reduce inordinate action, and restrain excessive secretions, that every circumstance connected with their operation is, in the highest degree, interesting; but there are difficulties which it is perhaps impossible to explain in the present imperfect state of our knowledge. Gladly would I use my utmost exertions to remove the obscurity that involves the modus operandi of sedatives and of medicines in general, and explain their hidden and mysterious principles and modes of action—but how hopeless the attempt, when the wisdom and learning of ages have availed nothing; and in defiance of the labours of the most gifted of the sons of science, the mystery—the deep, the dark, the inexplicable mystery, still remains! And this mystery will perhaps ever remain shrouded in impenetrable darkness, beyond the discovery of man. But when we reflect how much has been achieved by untiring industry, patient investigation, and laborious application—how many of her profoundest secrets Nature has revealed to the prying eye and importunate pleadings of enterprising genius, may we not anticipate the auspicious day, when some God-like genius shall lift the curtain that veils Nature’s deepest mysteries, and reveal to the wonder-
ing world her untold secrets, and explain the essence, forms, modes, hidden springs and principles proximate of action, sense and life!

In conclusion, we have endeavored to examine attentively and candidly the two questions proposed by the Society. The first we have answered in the affirmative. With respect to the second, we have given some of the opinions of others, and advanced our own, but we would be gratified to see a more satisfactory solution.

ARTICLE II.

Mortality in Augusta, during the years 1837 and 1838. Taken from the Sexton's Book, by L. A. Dugas, M. D.

The writer has on a former occasion* expressed his regret at the very imperfect manner in which the records of the City Sexton are kept; yet for the last two years they have been more imperfect than ever. We are happy to learn that measures are about to be taken to have the subject better attended to in future. It is impossible at present to derive any accurate information with regard to the diseases which prevailed during the period included in our researches. We can, therefore, do but little more than merely to furnish the tables below.

The number of still-births, in 1827, was, whites 12, blacks 10, total 22; and in 1838, whites 9, blacks 12, total 21. These are, of course, excluded from the tables, as never having existed. Of the whites who died in 1837, thirty three were foreigners, (mostly Irish.)—and of those who died in 1838, sixteen were foreigners. The proportion of deaths to the population, estimating this at eight thousand, is, for 1837, one in thirty four; and for 1838, one in forty five.

### Summary of the Tables below.

1837—White males, 80
   " females, 50
   —130

Black males,
   " females, 58
   —104
   —Total 234.

1838—White males, 74
   " females, 13
   — 87

Black males,
   " females, 57
   — 34
   — 91
   —Total 178.

### TABLE NO. 1.—DEATHS IN EACH MONTH; WITH THE AGES.

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|        | Total 26                   | 4                   | 2                   | 21                  | 22                  | 4                   | 6                   | 2                   | 0                   | 0                | 0     | 87    |

B 2
Mortality in Augusta during 1837 and 1838. [August, 1838.]

**TABLE NO. II. DEATHS IN EACH MONTH; WITH THE AGES.**

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| Total       | 31             | 2              | 15           | 13           | 5          | 16          | 4           | 6            | 6              | 0               | 0               | 104              |
ARTICLE III.


DEFINITION. Exercise signifies, literally, to employ, and as there are innumerable substances in nature, each of which may be employed in a variety of ways, it is obvious that there must be various kinds of exercise. In the present case, I wish to restrict the term to its signification in human physiology and pathology. Exercise then, when thus restricted, signifies to employ the body, and is resolvable into natural exercise and unnatural exercise.

NATURAL EXERCISE.

Every organ of the human body has a definite and distinct function to perform, in order to give rise and continuance to that state of the system denominated perfect health. The act of performing these definite and distinct functions, in a harmonious manner, constitutes the natural exercise of the various organs; thus the natural exercise of the brain, is mentation; of the stomach, digestion; of the muscles, contraction and relaxation; of the lungs, respiration; and so on. But we know that mental manifestation is subject to derangement; that digestion may be impaired; muscular contraction and relaxation, spasmodic; and respiration, morbid. These are examples of unnatural exercise.

Natural exercise, however, may vary in degree, and still be natural in kind; thus we have deficient exercise, adequate exercise and excessive exercise. "But" it may be said, "deficient and excessive exercise, frequently gives rise to unnatural, the characteristic of deficiency or excess still continuing, so that here we have a mixture of natural and unnatural exercise, not included in your classification. My answer is, that at the point where the alteration in quality occurs, deficient or excessive exercise, properly so called, terminates, and at that point also, unnatural exercise begins—the latter being indeed somewhat modified in its characteristics, by the casual operation of the former.

All vital activity, or in other words, all exercise is the result of an adaptation of sensibility to stimulus; consequently, there
must be operative in the healthy human system, as many specific kinds of sensibility and of stimulus, as there are developed, specific modes of vital activity or exercise. In order more fully to understand this matter, let us go into detail. Sensibility, then, is a vital property which has the sole power of taking cognizance of, and responding to stimuli; it belongs exclusively to nervated matter; and in the living animal one does not exist without the other.*

It has long been known and acknowledged, that the olfactory,

* It will be observed, that a more extended signification is here given to the term sensibility, than it has usually received; but a desire to avoid confounding peculiarities which, owing to the general anatomical arrangements and connections of portions of the nervous system, occur in phenomena, with peculiarities of the original and intrinsic properties of the nervous system, I trust will be considered sufficient grounds to justify the innovation.

The presence or absence of sensibility, is usually judged of, by our being conscious or not, of the conditions or movements of a part. Now our consciousness of the conditions of an organ, evidently depends upon the anatomical distribution and connections of the nervous fibres which control its operations. If these fibres extend to the cerebrum, and are connected with the organs of perception in the brain, we shall be conscious of the impression of their stimuli, whereas, if they do not extend to, and are not connected with, the brain, we shall necessarily be unconscious of it; that, we are conscious of the impression of light upon the optic nerve, of sound upon the acoustic, and of odors upon the olfactory: we are unconscious of the healthy operations of the stomach, the intestines, the liver and the kidneys. The causes of this difference are readily found, in the anatomical connections of the nervous system.

Sensation is said to consist in impression, transmission, and perception. I believe it to consist in impression, transmission, and their result—the result always occurring at the opposite extremity of the nervous fibre, to that where the impression has been made. If this extremity be in connection with those nervous fibres which constitute the organs of perception, the latter will be stimulated by the sensation, and the phenomenon of consciousness by this means be developed—if this extremity be not thus in connection, what we call consciousness will not be developed, but some specific phenomenon of the system, the nature of which, so far as this question is involved, will depend upon the connection of the resultant extremities of the nervous fibres, the sentient extremities of which have been stimulated.

Bichat has already introduced the terms "animal and organic," to express the different sets of phenomena now under consideration, and although objected to by Gall, I think they embody our meaning more perfectly than "sensibility" and "irritability," and are, therefore, as contrasted terms, to be preferred to them. Perhaps conscious and unconscious sensibility, would be more correct than either. Descartes, Stahl, Cabanis, Cuvier, Blumenbach and Riel, therefore, are right, in stating that sensibility exists without consciousness, though none of them have explained why it does so.
the optic, the auditory, the gustatory, the tactile, motory and respiratory, are separate and distinct nerves and sets of nerves, responding to definite and distinct stimuli, and each performing an independent function. The same I believe is acknowledged to be true of all, or nearly all the nerves, of what has been called animal life; but it has yet to be generally understood, that for each definite and distinct function of the body, there is a separate and distinct nerve or set of nerves, each possessing a definite and distinct sensibility and responding to a definite and distinct stimulus.

In the daily and momentary phenomena which recur within the immediate range of our observation, nature has furnished us with keys to many of her surest operations. To observe analytically the most ordinary appearances and phenomena, is the surest method of arriving at important natural truths. Thus Newton discovered that a modification of the same force which impels an apple to the earth, retains the earth in its orbit—from the attention of Galileo, being arrested, by the regular vibrations of a lamp, swinging from the roof of the Cathedral at Pisa, sprang the first instrument which was ever constructed, for the accurate measurement of time. So, by the careful analysis of the functions of a single nerve, we may arrive at a just conception, of the method in which all nerves perform their functions.

I have before stated that all exercise or activity is the result of an adaptation of sensibility to stimulus. The sensibility of the nerve of smell, is adapted to the stimulus of certain odorous particles of matter, and the result of this adaptation is smelling. The sensibility of the nerve of vision, is adapted to the stimulus of light, and the result is seeing. Now, the sensibility of the nerves of osseous deposition is adapted to the stimulus of certain earthly particles of matter contained in the blood, and the result is, the formation of bone. The sensibility of the nerves of biliary secretion, is adapted to the stimulus of certain other particles contained in the blood, and the result is the formation of bile. This law holds good of the whole system, each function having its peculiar sensibility and each its peculiar stimulus.

Let it not be inferred from what has now been said, that I maintain the nerves to be the only active material agents in the body. All that I shall attempt to prove in this respect is, that nervous matter possesses such power, and is so distributed in all
the organs, as to enable it to direct and control their movements; other parts of the body being merely the protectors and executive agents of the nervous system.

It now becomes necessary to bestow a few remarks upon the different degrees of natural exercise, and as I have before observed, these are three in number—deficient, adequate, and excessive.

Deficient exercise consists in privation; adequate exercise constitutes temperance; and excessive exercise, intemperance—the first occasions craving; the second gives rise to sensations of comfort; and the third to those of fatigue.

Craving then is one of the consequences of deficient natural exercise. Natural sensibility, at first, remonstrates against being deprived of an adequate supply of natural stimulus, and if remonstrance prove unavailing, becomes clamorous in demanding it. But if reiterated appeal and demand pass unheeded, natural sensibility thus baffled, gives up the contest, and changes to unnatural, or sinks into a state of inanity.

The principal inlet of a class of natural stimuli, which is absolutely essential to the very existence of the body, leads through the stomach—I now refer to nutritious particles of matter. Without an adequate supply of these, no part of the body can long retain its natural and adequate sensibility, and no part can be naturally and adequately exercised. Without this supply, the brain cannot think, the muscles cannot contract and relax, the eye cannot see and the ear cannot hear in a natural and adequate manner. Hence the faithful advocates, and deluded followers, in this country, of the false philosophy of a deficient and exclusively vegetable diet, who during the enjoyment of vigorous health, set unnatural limits to digestion, must keenly feel the craving clamorous demands already spoken of—the lustreless eye, the pallid surface, and attenuated muscles of such of them as have been fortunate enough to escape the mad house, and have not reached the grave, are so many examples of degenerate sensibility and inanity, produced by deficient natural exercise. The records of criminal jurisprudence, in innumerable instances, present a complete history of the cravings, remonstrances, and clamorous demands of the natural sensibility of the organ of consciousness in the human brain. On referring to these records, it will be found that criminal career generally
commences in a disregard of some of the less important social or moral relations of man. The natural sensibility of the organ of consciousness, then begins to crave for its natural stimulus—as the individual progresses in his career of crime, it alternately remonstrates, demands, and clamors, until finally it gives up the contest—in the language of Scripture, becomes "seared as with an hot iron," and quietly permits the perpetration of deeds the most inhuman.

Though augmentation of natural sensibility is the immediate result of excessive natural exercise, its secondary effects are sufficiently manifest in the fatigue and debility which succeed—sensibility is diminished by each repetition of excess, until finally it becomes incapable of a natural response to an adequate quantity of natural stimulus. This constitutes one process of confirmation in bad habits.

It may, at first sight, appear anomalous, that both deficient and excessive natural exercise should produce the same result—diminished natural sensibility. It will be remembered, however, that throughout nature, a given object may generally be accomplished in a variety of ways. The same solution of the same mathematical problem, may be the accurate result of different methods of calculation; it frequently happens in chemistry, that the same compound or elementary principle may be obtained by practising different modes of synthesis or analysis; on the surface of the earth, different routes lead to the same locality. So likewise in the human system; both deficient and excessive exercise, each in a different manner, and by a different route, lead to diminished sensibility—excessive exercise being the most direct, fashionable and thronged pathway. It will, therefore, I hope, be recollected, that excessive exercise of any part of the body, constitutes intemperance.

The successive advent of new faculties and functions during infancy and childhood; the progressive development of all the faculties and functions during youth, their maturity and permanency in manhood; their gradual decline in age, and final extinction at the portals of eternity, are all; the legitimate consequences of adequate natural exercise. It gives placidity to infancy, frolic and joyousness to childhood, buoyancy to youth, vigor and might to manhood, and then commences to destroy. But even its works of desolation are not painful. Obtuse hear-
An Essay on Exercise.  

[August,

ing or indistinct vision, may be the first obvious token to the aged, of diminished natural sensibility; if however, the diminution have not been prematurely induced by deficient, excessive or unnatural exercise, it will not be painful, inasmuch as the sensibility of those organs which enable man to observe external objects, and of those which attach him to them, fail proportionately and simultaneously. External sensation becomes less and less vigilant and keen, the intellect becomes less and less active, the affections less and less strong, digestion less and less rapid, until finally when the last spark of sensibility is about to be extinguished, its possessor yields it willingly, and sinks gently to his parent earth. This constitutes the natural termination of human life.

Adequate natural exercise then, can never produce disease, nor be accompanied by pain. It is the standard of health and comfort.

We are necessarily conscious of the exercise of some organs of our body, on account of the anatomical connection existing between them and the organs of perception in the brain; continuous nervous fibres being known to pass directly from one to the other: but as there are other organs of the body, not thus directly connected with the organs of perception; there are also some, concerning the exercise of which we know nothing, except by observation. But do we not possess organs for observation? Have we not the power, and is it not our duty to exercise them? And how can we exercise them more agreeably or usefully, than by observing the effects of external agencies upon our own system? And yet many people pay as little attention to this matter, as though they were convinced, that the only essential objects to be accomplished, by exercising the digestive organs, the lungs, and the muscles, were, to appease hunger, to expand and contract the chest, and "to make one leg run races with its brother." Such persons seem never to have perceived that the digestive function was instituted for the purpose of furnishing fresh material to supply the natural waste of the body; that the object of breathing was to expose to the action of the atmosphere in the lungs, the mass of circulating fluids, thus fitting them for nourishing all parts of the system; and that the power of contracting and relaxing the muscles, was conferred upon man for useful and salutary purposes. Ignorance
of the laws and objects of exercise, among a large majority of mankind, affords the most ready and rational solution to the inconsistency of their habits. One man experiences an unusual disinclination to mental and muscular exercise, a sense of weariness and lassitude of his whole frame; but instead of attributing these disagreeable feelings to their true cause—to the breathing of the contaminated atmosphere of some crowded and ill ventilated assembly room, theatre or church, he foolishly considers them the result of an inexplicably perverse tendency of his constitution, for which he is neither to be blamed, nor held accountable. Another after indulging to excess, for a length of time at table, in high-seasoned food, and fermented or alcoholic drinks, has an attack of paralysis, rheumatism, or inflammatory fever; but because these effects do not instantaneously follow the voluntary transgression of natural law, the afflicted individual and his friends recognize in them neither salutary warning nor merited punishment, but impiously call or think them unreasonable dispensations of Divine Providence. The inhabitants of a large town or city, after allowing the daily offal of their persons and dwellings to accumulate in the private yards and alleys, the public streets and sewers, until the whole atmosphere becomes saturated with the deadly effluvia from putrifying and fermenting masses of animal and vegetable matter, are visited by the scouring pestilence; but instead of considering this calamity the inevitable consequence of their own voluntary violation of natural laws, written in legible characters on the every day face of things, they look upon it as a mysterious manifestation of Divine wrath; and instead of applying themselves vigorously to remove its causes, they flock to the churches, and vainly and wickedly implore the Almighty to suspend the operation of his own laws—to intercept the progress of the pestilence, by a direct and miraculous interposition of omnipotent power!

At the time of its creation, every animal was undoubtedly provided with a mechanism, and endowed with properties which adapted it to the medium in which it lived, and fitted it for the salutary operation of the external influences to which it was exposed; nay, further, I believe that the nervous system was originally so constructed, and so connected with its executive agents, and that its sensibilities were graduated in such a manner, as to enable it when exposed to the full influence of appro-
priate external stimuli, spontaneously to manifest all the phenomena, and develop all the functions proper to the animal. Now whereas the nervous systems of all animals of the highest and lowest, as well as of the intermediate gradations—possess some properties and some anatomical arrangements in common; and whereas there are also points of difference observable, in the properties and anatomical arrangements of the nervous systems of animals the most nearly related to each other, there are of necessity some external stimuli, to the salutary influence of which all animals are adapted; as the stimulus of oxygen, and some, which are calculated to impress favorably only a certain class or species; as the stimulus of a particular kind of food. The more numerous the points of difference in nervous structure and nervous sensibility, which exist between one animal and another, the fewer will necessarily be, the number of stimuli which they can enjoy in common. Hence what is nourishing food for one animal, becomes deadly poison to another.

The above facts should be borne constantly in mind; in performing those experiments upon inferior animals, which consist in the administration of substances for the purpose of ascertaining their effects upon the human system. For such experiments, animals should always be selected, which, in their structure and habits, are nearest assimilated to man; and even then, the inferences deducible from experimental results, cannot be extended with much certainty, to the human species—they should, therefore, be acted upon in practice with great caution.

Vegetables, it is known, are in a great degree, stationary beings; still, by the structure or tenacious vitality of their seeds, nature has in many instances, provided for their extensive distribution; and by the universal diffusion of the stimuli to which the simple structure and limited properties of nearly all vegetables are adopted, she has furnished the same plant with the natural means of subsistence, in regions very different from the place of its nativity: variation of temperature, being almost the only circumstance, which appears to set limits to the distribution of plants. The same remarks apply to the geographical distribution of those animals, which, in simplicity of structure and endowments, nearest approach the vegetable kingdom.

The wants of animals increase however, in proportion as their structure becomes more complex, and the sensibilities of their
nervous system more numerous; and inasmuch as these wants cannot all be gratified, except by subjecting each specific sensibility to the impression of its appropriate stimulus, it will be found that mountains and rivers do not form the natural boundaries of the region which any animal may inhabit, but that the presence and absence of particular stimuli, fix and circumscribe the local abode of every species of animal; each having, what may be termed, its natural sphere of adaptation, beyond which, it will not voluntarily penetrate. It may be truly said, that the several organs of any one of the superior animals, typify in their sympathies and dependencies, the whole animated world. This may in fact be regarded as one stupendous animal: the primary stimuli of which, are the unalterable phenomena of universal nature—the secondary, modifications of the first, produced by the exercise of individual organs, and giving rise to mutual relationships and mutual dependencies.

By bestowing upon man, organs, the most numerous and diversified, and properties the most refined and elevated, nature has evidently designed him for the highest destiny—we accordingly find him at the summit of the scale of animated existence. Man has a sphere of adaptation extending beyond that of other animals, and this constitutes the superiority of human destiny. Owing to difference of organization also, the sphere of adaptation of one portion, or of one individual, differs, in some particulars, from that of other individuals and other nations; and from this difference result national and individual destiny.
PART II.—REVIEWS AND EXTRACTS.

On the Remedial Powers of the Persesquinitrate of Iron. By T. C. Adam, M. D., of Lenawee county, Michigan. For upwards of five years we have been in the habit of prescribing, almost daily, the liquor ferris persesquinitate, a remedial agent first discovered and introduced to notice, we believe, by Wm. Kerr, Esq.; though Dr. Graves, in a clinical lecture, quoted in No. XXXV. of this Journal, ascribe this merit to Dr. Christison, of Edinburgh. We have derived from its use very remarkable assistance in the treatment of several diseases, especially diarrhoea, and other affections of mucous membranes accompanied by discharges; and as its virtues seem not to be so generally known in this country, as they deserve to be, we have been induced to lay before our brethren a few observations illustrative of its value as a therapeutic agent.

The formula for the preparation of this remedy, as given by Mr. Kerr, will be found in the No. of this Journal for May, 1832, p. 235.

Our first trials of this remedy were in cases of diarrhoea, and from its employment we have derived highly beneficial results. We must not be misunderstood to mean that this astringent is applicable to every case of diarrhoea, or that it has been found indiscriminately useful. We have not thought proper to administer it in every variety of this complaint; but of its beneficial effects in such cases as the following, we can speak with much confidence.

In January, 1832, a child of six months of age became our patient, on account of a diarrhoea, nearly habitual, but aggravated by dentition. Immediate relief was obtained by means of a free incision through the gums, down to the tooth or teeth. The fretfulness ceased, and the diarrhoea subsided to its usual degree. Two drops of the nitrate were then ordered three times a day, and to be continued for at least ten days after cessation of the diarrhoea. The effects of this treatment were a cessation of the habitual diarrhoea for at least eighteen months, and an improvement in ruddiness of complexion and in temper or feelings of comfort.

In April, 1832, a lady applied for advice, probably in consequence of the threatened invasion of cholera. Her bowels were very readily moved, generally tender or uneasy; she was languid and weak; pale and emaciated, and was much troubled with cold feet and profuse perspirations. She had been subject to diarrhoea from the slightest causes for several years. Intelligence of an unpleasant nature would almost invariably produce it. For her I ordered frictions with salt-water to the surface, and the nitrate, in doses of 15 to 25 drops, four times a day. After using the remedy a few days, this lady commonly improved; but from giving up its use too soon, the relief was not of long continuance.

We have generally ordered the medicine to be continued for at least ten days after the disease disappears; and have continued its use as long as four months after every threatening of diarrhoea was gone. The diarrhoea never returned for several months, if the medicine was faithfully taken for ten days or more; but, as in the cases of this lady, we have had relapses in those who neglected the usual order so soon as amendment took place. This lady's case closely resembles that alluded to by Dr. Graves in No. XXXV. of this Journal. We may remark in passing, that Dr. Graves prescribes the nitrate in much smaller doses than we have been accustomed to do. We prescribe ten drops at a dose, two, three, or four times a day, frequently twenty-five; whereas Dr. Graves gives seven, gradually increased
to fifteen drops in the course of the day; and we think we have obtained a more rapid amendment, from the larger dose.

A lady, about 30 years of age, had had diarrhœa for ten months previously to applying to me. It commenced as soon as she got up in the morning, and continued all forenoon; in the afternoon it subsided almost entirely. It was accompanied with but little pain; but there was considerable thirst. During the ten months she had tried a variety of proposed remedies in vain.—She has never been free from her complaint except for about two weeks, after having taken some purgative pills, which operated very powerfully. In constitution and symptoms, this case was exactly parallel with those referred to by Dr. Graves, in the XXXVth No. of this Journal. She took ten drops of the liq. persequinitr. ferri, gradually increased to twenty drops, three times a day. In four days she was nearly quite free from the diarrhœa; and in two weeks felt stronger and in better health than for ten months previously. For about a year, as long as we knew her history, she had no return of diarrhœa, or bad health.

A gentlemen, about 30 years of age, had recently moved to Michigan, when he applied to me on account of diarrhœa, accompanied with considerable uneasiness and griping pains. He attributed these complaints to the changes he had been obliged to make in his diet, especially to eating more pork than usual with him, and partly to the water he had to drink. I could ascertain no other causes in operation, and thought his own etiological theory probably the true one. To lessen the irritability of the mucous membrane and at the same time restrain the discharges, I could think of no medicine more likely to be effectual, than the nitrate of iron. Fifteen drops were taken three times a day in water, and on the third day he reported himself much relieved from the griping pains and uneasiness in abdomen. By continuing the use of this remedy for not more than ten days, this gentleman obtained complete relief from his "new country" complaints, which had existed upwards of six weeks before the nitrate was prescribed. From the effects of the remedy in this case, and from some similar observations in other cases, we were inclined to believe that this nitrate, like some other metallic nitrates, had the property of subduing morbid sensibility of the organic nerves. In the paper of Dr. Kerr, will be found a case remarkably confirmatory of this theory.

Since we commenced the use of the nitrate of iron, there has seldom been any long interval between our cases of children who were habitually subject to oft recurring attacks of diarrhœa, who occasionally had attacks of what mothers call worm fever—infantile remittent. In such cases diarrhœa not unfrequently alternates with constipation. It is seldom such cases are put under medical treatment, except when the remittent fever or the diarrhœa is more than usually severe. We have generally had children of this description put under our charge when they were labouring under fever. With doses of calomel and rhubarb, followed by oil in the morning, repeated every second night, and conjoined with a bland, easily-digested diet, and with attention to ablation, quietude, and warm clothing, we have usually succeeded in alleviating or curing the fever. We have, then, in a majority of cases, recommended that the child should, for some weeks, have a bland nutritious diet, consisting chiefly of well-boiled farinaceous articles, and make use of the nitrate of iron regularly. In several instances we have failed to procure a steady employment of this medicine for a sufficient length of time; in some, again, the parents have continued it, of their own accord, for upwards of two months; and in all the cases in which it was regularly administered for a period of three weeks or more, we do not know that such children were again attacked with fits of diarrhœa, or suffered from infantile fever. Of several we can affirm confidently, that they were altered subjects; formerly pale, exsanguine, peevish, delicate, and requiring much anxious attention,
they have become hale and fresh-coloured, strong, playful, and easily taken care of.

Such are the varieties of diarrhea for which we most frequently prescribed the lig. persesquinitr. ferri. They are all of a chronic nature, and the temperament of both the younger and the adult patients has had a large admixture of the nervous. This we incline to attribute to the irritable condition of the mucus membrane of the intestinal tube, and to the debilitating effects of frequent diarrhoea. Numerous cases, similar to those given, might be produced from our case-book; but our purpose is solely to indicate clearly the kind of cases in which we have employed this medicine most frequently, and in which we have found it without a rival. For this purpose we have given, we hope, sufficient narration, and avoided "vain repetitions." We will now add a few explanatory observations.

The dose which we employ in adult cases is, as we have already incidentally remark, much larger than that which Dr. Graves is reported to employ. We seldom order less than fifteen drops at the commencement; after a few days of employment of the remedy we increase the quantity to twenty-five, and thirty drops at a dose. For children we proportion the dose according to the age. We have only in one case that we recollect of, that of a Mrs. J. Dunlop, had occasion to reduce the quantity. In this case, which, by the bye, was one of recent, not habitual diarrhoea, the usual dose did not produce any alleviation of the symptoms, but seemed rather to increase the griping pains; we, therefore, reduced the quantity to seven drops, and in less than twenty-four hours, the amendment was very marked. We have administered, and we have taken as much as a hundred drops; but, lately, where the usual quantity does not produce relief in two or three days, we prefer adding a little laudanum, or employing some other auxiliary, to the employment of more than thirty-five drops. At the same time, we had never experienced any bad effects from so large a dose as even a small teaspoonful, which we have frequently known to be taken three and four times a day.

The time during which the nitrate will keep good, that is, clear and transparent, varies considerably. Dr. Graves says about a week—some of my acquaintances and correspondents say three and four weeks, while I myself have never had any become turbid in less than five or six weeks, and generally I have it quite transparent for two months or upwards. I have also used it turbid without any sensible diminution of its astringent effects. Mr. Kerr, however, thinks that when it has become turbid, it is not so powerful. It is only in a few instances that we have employed it after this change.

In cases such as we have above described—cases of habitual diarrhoea, from birth perhaps, in children, and in cases in which there seems to exist an excess of irritability in the digestive tube—we know of no medicine which produces a more beneficial, immediate effect; and certainly, in its power of preventing similar attacks in future, this remedy is without any rival, so far as our experience extends. In cases of children, we have found its long-continued employment produce the most satisfactory results.

We have endeavoured to guard against any misconception of our ideas as to the cases of morbid condition to which our remedy is particularly applicable. We meet with chronic diarrhoea in two forms—persistent and what may be called intercurrent. The former is generally the consequence of a severe acute attack; by the latter, we mean to designate such cases of this disease as consist in a tendency or predisposition, or in the frequent occurrence of slight attacks of an acute kind, the usual state being more or less normal, or rather inclination to constipation. In the majority of cases of both kinds, the proximate cause, as the pathological condition has been called, undoubtedly consists, not so much in the application of foreign irritating matter, or on fecal accumulations or morbid secretions, or on an undefined debility or relaxation of the mucous membrane, or on congestion or inflammation, so
much as on an excess in the sensibility of the organic nerves which supply the digestive tube. It is not for chronic diarrhoea—a name for a symptom not a specific condition, that we prescribe this chalybeate astringent and sedative; but when, by investigation, we have satisfied ourselves that the diarrhoea is dependent on the above named condition, we then employ this remedy in preference to opiates, or any other anti-diarrhoeal medicaments.

Having thus laboured to indicate, with precision, those forms of disease in which we have derived from the use of the *liq. persesquinitr. ferri* the most satisfactory and beneficial results, we will now briefly notice a few additional forms of disease, in which we can speak favorably of its remedial effects, though not with the confidence we feel as to our previous observations.

In *Leucorrhoea*, we have employed the nitrate of iron with excellent success. But to procure benefit, we are careful in the selection of proper cases. These we think are such as seem chiefly dependent on a laxity of fibre, or on an over-secretion without inflammatory action. The persons in whom we meet with this kind of leucorrhoea, are generally pale, exsanguine, feeble, languid. We would not administer the nitrate where there was reason to suspect any disease of the uterus. But in the former kind of cases, we have employed it very successfully, using it internally, generally, and always topically, in injection. We add to four ounces of water such a quantity of the nitrate of iron as will produce in the vagina a gentle degree of heat or smarting. The internal use is prescribed where it is probable that the system by this means may be so reborated as to aid in the cure of the local disease. Almost all the preparations of iron are useful in such cases, and we think this not inferior to any in this respect.

In several cases of *Menorrhagia*, we have found this astringent and tonic of much service. We think it may be preferred, in cases accompanied with anaemia, debility, and relaxed fibre, to any astringent in common use. We know of none equal, save a mixture, in equal proportions, of the sulphates of alumina and iron.

We have made trial of the remedial power of this medicine in such cases of almost all the diseases in which astringents are usually prescribed as we thought the most appropriate. We do not know of any case in which the nitrate enjoys a marked superiority to the common astringents; but judging from our experience, we presume it will be found a convenient and useful addition to the list of such remedies.

Dr. M. A. Patterson, of Tecumseh, informs me that he has found the nitrate of much use in the treatment of *aphthous sores*, or what is vulgarly called "canker." Our experience, though small, confirms the utility of this application of the medicine.

A gentleman, in whose house a bottle of this remedy was at a time when he had the toothache, applied a few drops *sua sponte*, and obtained relief. May the nitrate of iron not possess a sedative or anodyne effect like the nitrates of silver, bismuth, &c.?

In fine, it may be mentioned as no small recommendation of the preparation, that it is cheap and easily procurable, and as each practitioner can prepare his own, it may be depended upon as uniform and unadulterated in any important emergency. Those who have felt the deficiency, in purity and uniformity, of many of our remedial agents, will account this as not the smallest of its recommendatory qualities.

It will probably appear a hazardous experiment to publish a work upon inflammation at present. The subject is so hackneyed as to excite little curiosity or attention, and few persons would conceive it possible that any man could advance new views of its nature, or new plans of any value in its management.

But Dr. Macartney’s reputation will secure that notice which might otherwise be denied, and command a full audience and respectful attention whenever he addresses the profession. We may be satisfied that we shall meet with ingenuity and originality, and whether we are convinced or not, we are certain of pleasure and instruction.

Dr. Macartney tells us in a brief advertisement, that:

“The present Treatise contains the theory and practice, respecting the subject of inflammation, which I have taught during many years in my lectures on surgery. Its publication did not become necessary, until I had resigned my professorship in the University of Dublin, as I had annually the best means, perhaps, of promulgating and explaining my views in the form of lectures. The delay has been attended with the great advantage of enabling me to verify and improve my early opinions, by a longer experience, and by the successful practice of my pupils, who are now settled in every part of the United Kingdom and throughout our Colonies. Whatever the profession may think of the doctrines I have advanced on the subject of inflammation, the practice founded on them is at present established too extensively, and confirmed by the experience of too many individuals, to admit of controversy.

We shall run through these lectures, or this Essay, as rapidly as is consistent with justice both to the author and our readers. We shall content ourselves with noticing those parts that are either novel, or give some new turn or some striking confirmation to what has been familiar.

The work is divided into fourteen parts, or sections, in which Dr. Macartney discusses in succession—The History of Inflammation—Phenomena of Inflammation—The Real Consequences of Inflammation—The Reputed Consequences of Inflammation—The Different Modes of Reparation—Cicatrization—The Reparation of the Different Tissues—The Constitutional Causes of Inflammation—The Local Causes of Inflammation—The Proximate Cause of Inflammation—Species of Inflammation—Congestion as contradistinguished from Inflammation—The Remedies for Inflammation.

1. History of Inflammation.—Dr. Macartney presents a brief sketch of the different classes of animals, in reference to their liability to Inflammation.

In those zoophytes which present no visible nerves and a very simple nervous system, none of the phenomena of inflammation are exhibited.

Dr. Macartney alludes to the phenomena of reproduction in the articulata. The instances are numerous, the phenomena rather varied, and we do not perceive conclusive proof of the non-existence of inflammation in the class.

The class mollusca, says our author, do not seem to be capable of genuine inflammation.

Ascending to the vertebrata, Dr. Macartney does not believe it possible to produce the genuine effects of inflammation in either amphibia, or reptiles, or fishes.

“In conducting some experiments on the swimming-bag of fishes, I was surprised to find that the wounds made into the belly of animals did not inflame. I was therefore curious to know what injuries fishes would bear without producing inflammation. Having taken some living fishes from the water, I introduced pieces of wire beneath the skin and amongst the muscles of the
body; the fishes were then returned to the water, and on examining them several days afterwards, I found that no suppuration had taken place. The tracts of the wounds were pale and smooth, and only moistened with a serous fluid, and none of the usual appearances of inflammation were visible. A very common occurrence in fishes, is the existence of worms, which perforate the tunics of the alimentary canal, without producing any change of structure, except an increased vascularity around the perforations. The reproductive power of fishes is confined to their fins, which are sometimes regenerated after being lost by accident, or by a species of death which is quite different from that which is the consequence of inflammation in the higher classes of animals.

I have never seen any appearance of inflammation in reptiles after wounds or injuries. Serpents often lose a portion of their tail; and although there is no attempt made for its reproduction, it is very speedily cicatrized without inflammation. Some lizards are able to reproduce parts that are lost, though not so perfectly as in the lower classes of animals. When lizards get a new tail, it wants the vertebrae. The salamander has more power of reproduction than any other of the class, being capable, according to the statement of many physiologists, of regenerating the tail, the limbs, and the lower jaw. I have seen imperfect attempts at the reproduction of the fingers and toes in the toad and frog. In all this class of animals, there is great tenacity of life, and power of repairing the effect of injury, though not always the ability of regenerating limbs. Having had occasion to make the experiment of removing a part of the brain of a toad, it became necessary to take away a considerable portion of the skull. The wound never seemed to inflame. In a very short time it was healed, and the vacancy in the skull was made up by a substance half cartilage and half bone, leaving, however, a depression, corresponding to the quantity of brain removed.

In birds external mechanical injury produces indubitable inflammation; but the instances in which internal disorders become a cause of inflammation, are very limited and are nearly confined to febrile states and particular epidemics.

 Quadrupeds are subject to inflammation both from external injury and internal disorders; they usually shew but little constitutional sympathy with local disease.

Man is especially prone to inflammation as well as to constitutional and sympathetic disturbance.

Upon these data and premises, Dr. Macartney founds a much bolder hypothesis than will probably be suspected by our readers. This hypothesis contains the spirit of the book, and embodies the main fact, which its author endeavors to establish. Let him speak for himself.

"The history I have given of the effects of injury in the different classes of animals, proves that the powers of reparation and of reproduction are in proportion to the indisposition or incapacity for inflammation, and leads necessarily to the induction, that inflammation is so far from being necessary to the reparation of parts, that in proportion as it exists, the latter is impeded, retarded, or prevented, and that when inflammation does not exist, the reparative power is equivalent to the original tendency to produce and maintain organic form and structure; that it then becomes a natural function, like the growth of the individual or the reproduction of the species. I am aware that this opinion is opposed to universally received doctrines. The subject, I think, has never been fairly examined. The necessity of some degree of inflammation to the process of reparation has been supposed by the early surgeons, and has been received by the moderns without inquiry. The opinion arose in those rude ages of the art when nothing was trusted to nature, and the treatment of every wound was such as to induce and maintain for a certain time the most severe inflammation. The igno-
rancence of the ancients of the use of the ligature for suppressing haemorrhage, led them to employ, instead of it, strong compression, and the actual cautery in cases of wounds and after amputation; and being accustomed to see wounds ultimately heal after such barbarous treatment, they naturally supposed that inflammation and all its evil consequences were necessary; which they took care to ensure in all cases, by boiling oils, hot and irritating ointments, tents, setons, and strict and cumbersome bandages."

After proceeding to notice and partly to criticise the views of Mr. Hunter, and to point out inconsistencies between his doctrines and his facts, Dr. Macartney seizes on a passage in Sir Astley Cooper's lectures, as a fair point on which to try the issue—inflammation or no inflammation in the reparation of injuries.

"The doctrine," he observes, (that inflammation is necessary) "has been avowed by Sir Astley Cooper in the strongest language, in his Lectures on Surgery, published by Mr. Tyrrell. The passage may be taken as expressing the general opinion of the profession in this country on the question.—He says: 'Inflammation is a restorative process; no wound can be repaired without it; even the little puncture made by the lancet in bleeding, would inevitably destroy life, if this salutary process did not prevent it.'

I am well pleased, that the doctrine has thus been so clearly and unequivocally asserted, that no doubt can exist respecting the meaning of the author. It is also fortunate, that Sir Astley has selected the wound made in venesection as his example; as I shall afterwards have occasion to quote the healing of this wound, as one of the strongest and most familiar instances of union being effected, without the slightest inflammation."

We would make a few observations before we proceed any farther.

1. We perceive that confusion is already approaching from the vague sense in which the term inflammation is used by the respective parties. Dr. Macartney does not define what he means by inflammation—whether certain phenomena, as swelling, redness, &c.; or certain effects, as adhesion, suppuration, or so on. Mr. Hunter, whose want of education was so unfortunate, sometimes employs "inflammation" in one sense, sometimes in another. Yet this makes all the difference, especially in a dispute.

2. We may, nay we must conceive, that though the pathological state of inflammation be excitable in all animals, its mode will vary in the utmost possible degree. In an animal with a distinct circulating nutritive fluid, inflammation consists essentially in an abnormal afflux of that fluid to a part. How different must the phenomena be, in a creature with red blood or white, with warm blood or cold. If this be so, and reason informs us that it must, how essentially must the nature of inflammation be changed when we arrive at animals, as the polype, in which we can detect no circulating fluid at all. If there be no such fluid, it follows of course that there cannot be any partial or abnormal collections of it. Yet the purposes served by inflammation elsewhere, may be served in such animals by a different process—different in mode, but similar in object. Animals in this category cannot legitimately be compared with those which possess a true circulation, undoubtedly not with the highest of that class endowed with warm red blood.

To determine the precise points of analogy or difference, a series of experiments would be required. But Dr. Macartney communicates none. The actual effects of mechanical and chemical stimuli—the results of various lesions—the changes, if there be such, of disease, are not stated by our author, and do not appear to have been determined. Yet, in the absence of direct experiment and of positive information, we do not feel ourselves warranted in assenting to the position, that nothing analogous to inflammation occurs in the lowest animals.
3. The statement that reproduction is greatest where inflammation is least or is absent, requires something more than that naked announcement. In the simplest animal the whole body is comparatively homogeneous, and there is no decentralization of fluids or of organs. All the molecules, then, must have, loosely speaking, the same powers, and the addition of fresh molecules, is comparatively simple. But as animals rise in the scale, decentralization obtains, the parts are no longer homogeneous, their life consists in a finely adjusted balance and dependence, and the reproduction of lost parts becomes too great an effort. It is unphilosophical to imply that reproduction is less active in these creatures because inflammation is more so. The cause of both phenomena is to be sought in the decentralization of the vital powers and organs. The polype may, for aught that appears to the contrary, have inflammation in its own way, though it cannot have the "dolor, rubor, calor, tumor" of man. In the polype, increased vital energy in the molecules of the part, may constitute the essence, and give rise to undoubted effects of inflammation—in man, such augmented local action would be useless, unless combined with correlative augmented energy in the vital organs.

4. When surgeons of the present day assert and believe that inflammation heals the simplest wound, the best informed imply or understand nothing more than this:—that, after the simplest wound, an effusion of plastic material takes place, which forms first a bond of union between the divided surfaces, and afterwards is more or less identified with them in structure; that, these changes are attended with a certain influx of blood to the part; that, this appears the simplest mode of what an increased ratio constitutes the pathological state, and gives rise to the effects of inflammation: and that, the steps from this restorative adhesion to the more aggravated phenomena of inflammation are so gradual, that it is impossible to fix any positive limit between the reparative and inflammatory process.

The second chapter is on the Phenomena of Inflammation. Dr. Macartney commence by digressing to the hypothesis of the cause of animal heat. If we have observed some indications of a tendency to confident generalization in the previous chapter, those indications are rather augmented in the present one. The opinions of physiologists are daily leaning more and more on the connexion between animal heat and respiration; a connexion supported by a broad survey of the animal kingdom. But Dr. Macartney decides in the negative. It would be foreign to our purpose to enter on so important and extensive a question. We must content ourselves with stating that we do not and cannot go along with our author in several of his opinions and conclusions. We may observe that Dr. Macartney is disposed to ascribe the increased heat of inflamed parts, more to their state of local organic sensibility, than to the condition of their arteries, as regards circulation or secretion—an opinion which is certainly less intelligible than the commonly received one.

Dr. Macartney treats seriatim of the signs of symptoms of inflammation—heat, pain, redness, swelling, and altered or suspended natural secretions. On each, his remarks are ingenious. We pass to the next chapter, on the—

Consequences of Inflammation.

Dr. M. very properly observes that, what are denominated the phenomena of inflammation are the immediate effects of the augmented sensibility and circulation in the parts engaged. To these succeed, or rather, there arise out of them as a matter of necessity, if the inflammation persist for any time, a number of consequences. These he enumerates as chemosis, adema, vesication, suppuration, and the total disorganization and death of the part.

1. Chemosis.—"When chemosis, or the extravasation of the blood, takes place without a rupture of the vessels by mechanic injury, it is not designed to become organized, and therefore it remains in a fluid state. The absorp-
tion of the blood, when shed under these circumstances, is tedious. I have known chemosis arising from erysipelas of the face, remain for months before it was removed. When blood is found extravasated in an inflamed part, there are always, I think, ruptured vessels. Such effusions take place under circumstances favourable to the laceration of the small arteries; as when inflammation is very violent, or occurs in lax cellular tissue; or where parts are not yet supported by the deposition of coagulable lymph. Thus, the mucous membrane and the surface of ulcers, when highly inflamed, yield blood. The loose cellular membrane joining the conjunctiva to the globe of the eye, becomes charged with blood in severe ophthalmia, and the submucous tissue of the great intestines is similarly affected in acute dysentery.—In the first steps towards the formation of an abscess, before the parts are made solid by coagulable lymph, blood is commonly extravasated.

In some abscesses, as those of the liver, spleen, and brain, we sometimes see with the naked eye the lacerated vessels; and in the first, I have observed the biliary vessels also to be broken, and the bile mixed with blood and pus contained in the cavity of the abscess. The best evidence is to be obtained by injecting any part, in which blood has been extravasated, when the fluid injection will escape through the broken vessels and imitate the previous effusion." 24.

It will be observed that Dr. Macartney employs the term Chemosis, to signify extravasation of blood. Ecchymosis is the designation usually given to that pathological condition, and chemosis is commonly understood to mean effusion of serum into the submucous cellular tissue itself. We mention this, to prevent misconception on the part of our readers. An observation of Dr. Macartney’s would imply that he considers chemosis in the eye as purely extravasation of blood. There is some confusion in this.

2. Öedema.—This, says the Doctor, is the diffused extravasation of serum. It is usually found in relaxed and depending parts. It may occur with a very low degree of inflammation, as in some species of erysipelas. Persons are most prone to öedema in inflammation, who have the small veins full, or who have a tendency to anasarca; and the parts of the body where öedema is most remarkable, are those in which the cellular membrane is most lax, as the eye-lids, the prepuce, the scrotum, and the external labia of females. Öedema is always unfavourable to reparation, and parts once affected with it, are apt to retain some serum in the cellular membrane afterwards, giving them a bloated or tumid appearance. Where the disposition to öedema is general in the body, it is a proof of weakness, and often leads to a fatal result after severe accidents or surgical operations.

3. Vesication is familiar. It may result from simply increased irritation in the vessels of the cutis—or form inflammation in constitutions or parts which are incompetent to effect reparation; so it accompanies mortification.

4. Suppuration.—Dr. Macartney considers this as always arising from more or less of inflammatory action. His remarks upon the process need not detain us.

Speaking of acute abscess, our author offers the following rationale of the observable phenomena. In the first instance always, he says, some of the small vessels give way, and some blood and serum are poured out into the surrounding tissue. In order to separate the disorganized from the healthy structure, lymph is shed, by which the extravasation of the blood and serum, is restricted within certain limits. This lymph next acquires vascularity and organization, and then, and not before, the secretion of pus commences.—In the first stage of abscess, if the fluid be evacuated, it is well known to consists of blood and serum streaked with pus. As the lymph which is designed to compose the walls of the abscess advances in organiza-
tion, pus of a better quality is secreted; and as the contents of an abscess are proved to be, like the other parts of the body, transitory in their existence, while fresh pus is being added, the riginal contents are removed by absorption; hence, an abscess of some duration is found only to hold genuine pus. During the time that this change is taking place in the fluid contents, a similar one is proceeding on the solid walls of the abscess. On the side, the process of absorption is reducing the thickness of the parietes, while the other sides are increasing in the same proportion by the addition of new substance. There is also another remarkable circumstance attending the progression of an abscess, which was first accurately described by Mr. Hunter. On the side of the abscess that is becoming thinner, there is also a disposition to yield, or to be extended; and on the side that is growing, there is a tendency to contract. The pus of an abscess is, therefore, brought to those surfaces on which it is to be evacuated, by four processes—absorption, new growth, extension, and contraction; and as the object to be attained in this case, is the removal of fluid, the same means are employed for conducting extraneous substances out of the body.

It is not generally supposed that the effusion of lymph and its vascularization are necessary for the secretion of pus. The observation of Dr. Macartney, if well-founded, is interesting. Yet, as we see pus formed by mucous membranes, it is not impossible that other tissues when inflamed may do so by their own vessels independently of effused lymph.

**Chronic Abscess.**—When the attempt, continues our author, is made to form an abscess by weak or serofulous constitutions, and in situations where the cellular substance is lax, the progress of the disease is very different from that above described. The first extravasation is serum, which passes easily into the large cells of the cellular membrane, with little or no injury to their structure; the parietes of the chronic abscess are not composed in the beginning of organized and vascular lymph; no genuine pus therefore is found in such cavities in the first instance; the fluid they contain is serous, mixed with coagulable lymph, parts of which are found as flakes floating in the serum. As the cavities of chronic abscesses are not provoked, either by severe tension, or the quality of the contained fluid, there is no preparation made for some time to remove their contents. The collections therefore often traverse a considerable distance along muscles or under plates of fascia, before they arrive at the skin, which ulcerates very slowly; after which the cavities may inflame, their interior surface become more highly organized, and secrete genuine pus.

He proceeds to remark that sometimes these abscesses, even when of considerable size, are absorbed.

"I have known this occur several times in psoas abscess, where there was no disease of the vertebrae. In one instance a young lady had one of these languid abscesses formed suddenly above the clavicle; it descended behind the clavicle, and proceeded underneath the mammary gland until it came to the waist, where it was finally removed by absorption; the patient's constitution was strengthened during this time, which I have found in several instances effectual in causing the absorption of such collections." 34.

Dr. Macartney offers nothing now on the termination of inflammation in mortification, or disorganization of a part.

**On the Reputed Consequences of Inflammation.**

Dr. Macartney apologizes for including under the head of reputed consequences of inflammation, the *effusion of coagulable lymph*, and *ulceration.*—These, he says, are processes which, from being sometimes associated with inflammation, are ascribed to an inflammatory action, although in their own nature they are perfectly different. This is a startling assertion, particularly
when coming from a man like Dr. Macartney. Our readers will be naturally inquisitive to learn his proofs.

"It is well known," he argues, "that coagulable lymph may be thrown out by a natural and healthy action, as in the formation of the decidua uteri: that it is eminently conservative, in arraigning hemorrhage from opened vessels; in the union of all the soft parts when divided; in forming the medium of conjunction of fractured bones, and in constructing the walls of an abscess, and of an aneurismal sac. Immediately on the receipt of an injury, also, lymph is shed before there is time for inflammation to set in. The surface of a wound that does not bleed is covered by a layer of lymph, in the very moment that the injury is inflicted. The inflammation which would ensue from the opening of a serous cavity is sometime altogether averted, and almost always restrained within certain bounds by the effusion of lymph, ununiting the opposed surfaces with each other." 38.

After noticing the case of hydrocele, cured by an operation and disposing of it as an objection to his views, Dr. Macartney goes on to remark:—

"It is true, there are some cases of adhesion, which are highly detrimental to the parts concerned. Wherever freedom of motion is necessary to the functions of parts, adhesion may be inconvenient, or fatal. Thus, the iris has its office destroyed by being bound to the adjoining parts: the actions of the heart are embarrassed, by extensive adhesion between it and the pericardium; and I have known the general union of the peritoneal surfaces of the intestines cause strangulation of the whole alimentary canal, and death. It is also the agglutination by lymph, which is the most frequent cause of hernia becoming irreducible, and occasionally of the protruded parts being strangulated. The effusion of lymph in the trachea during croup, causes as much danger as the inflammation: so likewise, when the bladder and urethra are blocked up with lymph." 39.

But, he continues, the circumstance of evil occasionally resulting from adhesion is no proof that adhesion is the consequence of inflammation; and he cites the case of closure of the glottis against irrepressible gases, as analogous—a closure salutary in its intention, though actually endangering life.

Such are the grounds on which Dr. Macartney rests, in excluding the effusion of coagulable lymph from among the products of inflammation. They do not appear to us to be satisfactory.

1. Inflammation is a positive pathological state, marked by certain signs and symptoms. If, after those signs and symptoms, we find pus, or serum, or mortification, we conclude those states to be consequences of inflammation. It signifies nothing what may be the tendency of those consequences, whether salutary or pereocious to the individual. Whichever they may be, they are sequences of the state which we call inflammation.

2. So far as we can see, there are just the same grounds for considering coagulable lymph such a sequence, as for believing serum or pus to be so. A man has a sword run through his belly or his thorax. The familiar signs of inflammation follow, and we find, after death, serum, and lymph, and pus in the peritoneum. Why should we say that the first and the last are the consequences of inflammation while the second is not? Take rheumatic pericarditis, or acute pleurisy, or even inflammation of the cellular membrane. During life and after death there is every possible evidence of the existence of inflammation, and we find lymph in abundance. These are positive facts, which it appears to us impossible to disprove, and almost equally impossible to explain on any other supposition than the one generally entertained.

3. It is no answer to say that lymph is usually salutary in its operation. That may or may not be the case. When lymph is effused on a mucous
membrane, or even around it, or in the cranial cavity, it may be pernicious. And pus may be proved, by the same line of argument, to be no consequence of inflammation; for the formation of pus by an inflamed mucous membrane is infinitely more salutary than that of lymph. Were the latter the usual sequence of inflammation in the urethra, the consequences of a common clap would be formidable.

4. The argument employed by Dr. Macartney, based upon the occasional effusion of lymph as a natural action, is more serious than conclusive. Either, in those instances, the usual phenomena of inflammation precede the effusion of lymph, or they do not. If they do, then the case is one of inflammation—if they do not, then the case is obviously different from that in which they do. Neither in logic nor in reason can it be allowed, that, because in one case inflammation does not precede the effusion of lymph, while in the other it does, therefore in the latter inflammation does not produce the effusion. To make this argument available, it should be shown that, in both cases, the effusion is similar in degree and kind, and that in the latter the same circumstances exist, to operate as causes, which exist in the former.

5. The truth is, that from the simple cut, producing an effusion of the liquor sanguinis, up to the extensive and violent inflammation of peritonitis, is not a sudden jump, but a series of gradual transitions. The mere interruption of continuity of a few small vessels, and the slight stimulus of a trivial injury, give rise to the effusion of no more lymph than is sufficient to glue the edges of the wound. A more extensive lesion, particularly of certain tissues, leads to positive inflammatory action, and to the effusion of lymph in such an injurious quantity. But, as inflammation, in the first instance, is only an augmented capacity and action of the blood vessels, it is obvious that there may be any degree of it between their normal standard, and the maximum of which they are capable. We think it would be just as unphilosophical to deny that the effusion of lymph is a common consequence of inflammation, as to assert that inflammation to any amount must precede it. It is impossible to maintain the latter position, until we determine with precision the limit between non-inflammatory and inflammatory augmented action. That has not yet been done.

Ulceration or ulcerative absorption is equally denied by Dr. Macartney, the right of being a result of inflammation.

The same spirit of argument is employed by our author in this as in the former case, and mutatis mutandis the same mode of reply may be resorted to. The dispute is, perhaps, more verbal than substantial; yet as we think that Dr. Macartney's views are calculated, in many respects, to breed perplexity, we cannot avoid objecting to them. It would be uncandid not to admit that Dr. Macartney reasons with great ingenuity, that many sound and excellent reflections are mixed up with his hypothetical opinions. All we think it necessary to quote from the remarks on ulceration is the following passage—

The term ulcer is not a correct one. It expresses only a part of the history of the object, to which the name is given; or applies to that state in which the ulcerative process only is going on; perhaps, we might say, that in all instances, where either inflammation or morbid structure does not prevent it, the phenomena that belong to an ulcer, are more reparative than destructive; since in many cases of ulcers tending to cure, there is only that degree of interstitial absorption of the granulations which serves to approximate the edges of the sore, thereby diminishing the magnitude of the cicatrix. An ulcer, therefore, as it is usually presented to our observation, is the result of a compound, or rather opposed action, as the granulative, succeeds the ulcerative processes.
Of the different Modes of Reparation.

Discarding the classification generally received of union by the first and by the second intention, Dr. Macartney proposes his own. Re-union, he says, and re-organization are effected in four different ways, which may be designated in the following manner:

First, immediate union, without any intervening substance such as blood or lymph.

Second, the union by the medium of coagulable lymph, or a clot of blood.

Third, re-organization without any medium of lymph or granulations, the cavity of the wound being obliterated by a natural process of growth.

Fourth, the reparation by means of a new, vascular, and organized substance, called granulations.

Speaking of the organization of effused lymph, Dr. Macartney makes the following observations, with which we are disposed to agree, in spite of the opinions of Muller to the contrary.

"Mr. Hunter assumed, that the vessels arose in the lymph, and subsequently established their connexion with the vessels of the part, because, he observed, that vessels began to form in the membrane of the incubated egg, before they existed in the fatal chick. There is a great difference, however, between the original formation of vessels, and the acquisition of vascularity by lymph, deposited in contact with surfaces that are already organized; and it is more difficult to imagine, that vessels should commence in a clot of lymph or blood, than that they should be extended into it from the adjoining surfaces. It is also impossible to conceive that the thin layers of lymph, which unite serous membrane, or the effusion which consolidates cellular structure, do not obtain their vascularity from the adjoining parts. Further, I have seen vessels passing for a short way into a clot of blood, covering the surface of an ulcer, when the coagulum possessed no vascularity of its own. I have also succeeded in forcing injection into the coagulum formed in the cavities of the heart after death, which injection presented the appearance of red elongated lines." 51.

Reparation by the modelling process, has never, says our author, been described. However, when healthy parts are injured, although it may be to the greatest extent, if placed under the most favorable circumstances for carrying on their natural actions, the process of reparation is nearly the same as in animals of a simple structure.

"The pain arising from the injury soon ceases. No tumefaction ensues, separating the edges of the wound, and its surfaces are not only disposed to lie in contact, but even to approach each other so much, that they cannot be kept asunder by mechanical restraint; there is, therefore, no necessity for the effusion of lymph; and as there is no cavity to be filled up, granulations are not formed. The surfaces of the wound, although they come into contact, do not unite by vessels shooting across; they are smooth, red, and moistened with a fluid, which is probably serum, and present the appearance of one of the natural mucous surfaces of the body. If any parts have been killed by the injury, they are separated, by simply as much interstitial absorption as is sufficient to set them free. The wound is finally healed by the same means which determine the shape of the natural parts of the body. It gradually diminishes in extent until it is obliterated; or it may be cicatrized before the surfaces are abolished, after which the same process of natural growth goes on, until no part of the original wound is left. The cicatrix which succeeds the cure of injury by the modelling or growing process, is small, pliant, free from those callous adhesions to the parts underneath, and the morbid sensations that so often belong to those cicatrices, which have for their bases the deposits of lymph, or the new formed structures called granulations. When the modelling process or cure by natural growth goes on
perfectly, there is no inflammation in the part, and the patients are so entirely free from all uneasy sensations, that I have known instances of their being ignorant of the real site and extent of the injury, until they had examined the part with their hand, or saw it in a looking-glass." 54.

We confess that we are not familiar with the mode of reparation, and we cannot therefore offer an opinion on the fidelity, or otherwise, of Dr. Macartney's description of it.

Dr. Macartney's observations on granulation are ingenious, but do not require particular notice from us.

Passing over the chapter on Cicatrization, we pause at that on—

Reparation in Different Tissues.

Different tissues possess different powers of reparation. It is difficult to refer those differences to a general law, or to express the facts by any simple formula. But the simpler the tissue the more perfect is its reparation. It is both curious and instructive to examine the reparative process in each tissue.

A. Nervous Tissue—Vacancies in the brain are not filled up by any substance, bearing a resemblance to the cerebral tissue. The spinal marrow also is never regenerated.

All wounds of nerves heal by the formation of a hard bulb or nodule; this exceedingly firm and condensed structure is found uniting the two ends of a divided nerve, and also surrounding the part of which it had been cut in amputation; therefore, this is the natural mode of healing of a nerve, whether by the medium of the lymph or granulations. Though visible nervous filaments have been fruitlessly sought for in the nodule, sensation and voluntary motion are restored, sooner or later, beyond it. In some parts, the nerves naturally present a very condensed structure—the posterior tibial nerve, for example below the inner ankle.

"When the nerves are divided some way from the end of the stump, I have been able to trace the appearance of filaments radiating from the bulbs and proceeding to the skin. A preparation of this kind in the stump of a finger, was preserved in my anatomical collection, which is now in possession of the University of Cambridge. Professor Muller states, that his assistant, Dr. Scham, was able to dissect filaments passing from one end of a divided nerve to the other in the frog. Also, it cannot be doubted that the sensibility of granulations is caused by the extension of nervous filament into them.

I once had the digital nerve of my thumb divided by a wound. The sensation was not perfectly recovered for some years, but is now as complete as before the accident. I observed a curious fact on this occasion. I was aware, from the depth of the wound, that the nerve must have been divided, and I was surprised that the sensation was not instantly lost; but, while examining the part, the sense of feeling vanished, giving me the impression of a blast of air having passed from the thumb up my arm. This occurred in about two minutes after receiving the wound." 65.

B. Muscular Tissue.—Probably this is never perfectly restored in the higher classes of animals. The deficiency is commonly seen to be partially filled up by a pale substance, which appears to be coagulable lymph imperfectly organized.

C. Fibrous Tissue.—When tendon is divided, and afterwards united, it is by means of a newly-formed condensed substance, not possessing the true structure nor the brilliant metallic lustre of tendon, yet sufficiently strong to perform its offices. If tendinous structure do not unite, as in the laceration which occurs in a dislocation, the tendons of the fibrous tissue form a number of tags or little bulbs, by the effusion of coagulable lymph; these become
very hard, and finally smooth on the surface. It is said that the dura mater is not reproduced. A dense membrane, however, is formed, which answers a similar purpose. The only fibrous structure which is perfectly regenerated, is the periosteum.

c. Cartilaginous Tissue.—The cartilages covering the ends of bones, when destroyed, never appear to form again. In old persons, especially, the place of the cartilages of the joints is often supplied by the conversion of the osseous tissue into a substance possessing the density, hardness, and polished surface of china or white glass. Yet in false joints, the ends of the bones that rub on each other become covered with a sort of spurious cartilage.

A vacancy in the cartilages of the larynx is filled up by a tough dense cellular substance. The cartilaginous portions of the ribs are not reproduced by genuine cartilage, and the union of these parts is often confirmed by being surrounded with a shell of bone.

Dr. Macartney doubts whether the place of the fibro-cartilages is ever supplied, except by a tough cellular structure, not unlike common ligament, but wanting its brilliancy.

e. Serous Tissue.—This seems as perfectly restored as any tissue, saving, perhaps, the cellular.

f. Cutaneous Tissue.—Neither the skin nor mucous membrane appears to be perfectly restored. The villous surface is not regenerated.

g. Arterial Tissue.—The middle coat has not been observed to be regenerated. The puncture of an artery is closed by condensed cellular membrane.

h. Venous Tissue.—"The proper tissue of the veins never grows again. I have always observed that veins on which venesection had been performed, presented on the inner surface a depressed line corresponding to the incision made with the lanceet. The vacancy in veins being always closed by the cellular membrane somewhat condensed, accounts for those little pouches that are occasionally perceived over the vein, when the edges of the puncture have not been brought together after the operation of bleeding. These pouches are often seen, and sometimes of a large size, on the veins of horses, in consequence of the mode employed by farriers of pinning the edges of the wound, made in bleeding these animals, and the horse being allowed to stoop the head after the operation. There is no true venous tissue found in these pouches. 71.

i. Osseous Tissue is repaired by bone, in a manner that we need not specify. We regret that we have not space for Dr. Macartney's observations on necrosis. At a future opportunity we shall advert to them.

k. Epidermoid Tissues.—The reproduction of these, subjected to attrition, &c. as they are, is usually a process similar to that of their growth. But when the secreting apparatus is destroyed, the product cannot well be reproduced. Thus, when the capsules which contain the roots of the hairs are destroyed, the part continues bald.

"If the vascular surface which furnishes the horny substance of the nail, be completely destroyed, no new nail is usually formed; nevertheless, there appears to be sometimes a great disposition to the revival of the proper structure for secreting the nail. It reappears, in some cases, after caustic has been repeatedly applied to it, to prevent the reproduction of a nail which penetrates the skin. Two instances are recorded of a nail growing on the stump of an amputated finger; and I had a preparation of a finger, which had the last and a part of the second joint removed by amputation. The vascular structure had been produced on the stump, and a true horny nail generated; which, however, had a deformed appearance, and was very
much hooked. This preparation is now with my collection placed in the University of Cambridge.” 77

As nail is only a modification of the horny or epidermoid tissue, we cannot be astonished at the occasional production of a modification of it. We say modification of it, for it is unlikely that perfect nail could be formed without a matrix. Dr. Macartney admits, that, in his case, the nail had a deformed appearance, and was very much hooked.

We arrive at the Chapter on the—

CONSTITUTIONAL OR REMOTE CASES OF INFLAMMATION.

This contains some ingenious hints mixed with much that must necessarily be familiar. We shall only pick out one or two insulated passages for notice.

a. Speaking of sympathetic morbid sensations, Dr. Macartney remarks:

“I remember a very curious instance, in which I discovered a stricture in the oesophagus, by the person feeling an acute pain in the little finger of the left hand every time he swallowed.” 84.

b. It is well known that the suppression of natural secretion or of habitual discharges, may prove a cause of Inflammation. The explanation generally consists in supposing that the blood or the system becomes charged with the peccant matter previously evacuated. But Dr. Macartney observes, that generally speaking, the mischief occurs before there is time for the circulating fluid to become redundant, in consequence of even extensive secretions being interrupted; and in many cases, the discharge which is stopped, is so insignificant, as to quantity, as to be incapable of producing any influence on the mass of blood.

We must, therefore, he continues, adopt some other explanation for the suppression of secretion becoming the cause of inflammation, than the disturbance of the balance between the quantity of the circulating fluid, and that of the discharge which has been suspended. It is probable, that the interruption of the secreting function, in any one part of the arterial system, and especially on sentient surfaces, may, from the law of sympathy, which is so remarkable between the vascular system and these surfaces, become a direct motive to the arteries to assume, in certain places, an inflammatory state. This mode of explanation is rendered more probable, from the fact, that the removing very slight external irritation, or inflammations, which furnish very little or no pus, sometimes causes the most severe constitutional disturbance, which is removed, by the recurrence of the local irritation.

We think there can be little doubt of the correctness of this explanation. It is not the mere suppression of discharge, but the alteration or repulsion of a mode of action that affects the system. Suppose some habitual vascular excitement or congestion in a given point. If that is suddenly repressed, some other part in the vascular circle, by the operation of the perplexing law of sympathy, becomes the seat of congestion or excitement. That vascular plethora is mixed up with this, seems, however, to be proved, by the security which, under such circumstances, evacuant medicines offer.

“I have seen,” says Dr. Macartney, “the most serious diseases endangering life, induced by the cure of that slight cutaneous affection of the cheek, which sometimes is a mere efflorescence, periodically throwing off a little furfur, or forming a crust. Dr. Jenner once shewed me a red spot on his wrist, that could be covered with a sixpence; he said, whenever it faded, his stomach and general feeling of health were affected.” 87.

But in cases like Dr. Jenner’s, it is more likely that the general disturbance was due to some modification of the state of the internal organs, than to the influence of so trivial a cutaneous eruption. The latter was in all pro-
bability a symptom. When present, it shewed a condition of internal organs compatible with health. When a contrary condition of those organs ensued it subsided.

c. Dr. Macartney is eloquent on the subject of "taking cold." Of all parts of the body, he says, the back is the most susceptible of cold, thus insidiously applied, and the chilliness is sometimes even felt first along the back, although it may not have been the part immediately exposed. Perhaps this circumstance depends on the nerves of the skin of the back having so direct a communication with the spinal marrow.

Dr. Macartney follows this up.

"In the same manner, when a person is placed in the situation favourable to giving cold, the danger may be avoided, by turning the face instead of the back to the direction of the stream of cold and damp air, observing the sensation caused by the impression, and voluntarily rousing himself to a feeling of resistance. In protecting the body by clothing, the back is the part chiefly to be regarded, and hence winter waistcoats should have the back made of at least as thick materials as the front. People commonly fall into the error of clothing the front of the body warmly, and expect to escape cold by muffling the throat. The Irish peasantry more wisely, expose the throat and breast, and defend the back by a warm great coat, which they seldom close in front." 89.

So that the idea of Pat's having "his coat buttoned behind to keep his belly warm" is a libel on him. He keeps "his belly warm" by not buttoning his coat at all.

**The Local Causes of Inflammation,**

Form the subject of the next Chapter.

Dr. Macartney's observations are both numerous and judicious. But they are scarcely suited for our pages, containing, necessarily, much familiar matter. We may quote the following passage, with the expression of a hope, rather than a confident expectation, that Dr. Macartney's ideas may not be of too sanguine a complexion. Speaking of the effects of dead animal matter introduced into the body or merely applied to the skin, he observes—

"Every anatomical class has annually furnished examples of the effects of this species of infection, except the dissecting class of the Dublin University, during the time it was placed under my direction. Very simple means of prevention were employed, with so much success, that no severe disease from wounds received in dissection occurred, (when the proper means of prevention had been employed,) during the last fifteen years that I held the Professorship of Anatomy in that University. The means resorted to, consisted in immediately washing the wounded part, and afterwards keeping it wet for a few hours, with a solution of alum in water. Most probably, any other fluid, such as the liquor plumbi, solution of sulphate of zinc, &c., which would have the effect of coagulating the animal substance, would answer quite as well; but the solution of alum was always at hand, and, I believe, if immediately applied, would never fail in preventing infection." 104.

Dr. Macartney remarks very justly, that the two stages of decomposition in the dead body, which render the animal substance most dangerous, are that which takes place immediately after death, and the extreme degree of putrefaction. The latter is most apprehended, but it usually occasions only a diffused inflammation in the part wounded, without any serious sympathy of the constitution.

Some dead animal substances, he goes on to say, are more likely to communicate this dangerous disease, than others. The brain, in the recently
dead body, is extremely apt to produce it, even when no wound is received. The sero purulent fluid, found in the large cavities after death, (if no means of prevention be employed,) seldom fails to infect persons; and the most dangerous animal fluid is that contained in the cavity of the abdomen, after puerperal peritonitis, or the serum found in parts which have suffered diffused or gangrenous inflammation. The white cancer of the liver, and the substance of medullary tumors, are found to be very irritating, when merely applied to the hands, without a breach of surface. Dr. Macartney has several times had his hands inflamed from handling this morbid structure, even after it had for some time been preserved in spirit.

"Some persons are more susceptible of the infection from dead animal matter than others. I have heard of a student who never escaped it, after receiving a wound in dissection. I have, myself, so strong a tendency to be affected by the irritation of animal matter, that I formerly suffered more or less every year from this cause. Since, however, I adopted the means of prevention already mentioned, I never have experienced either local inflammation or constitutional illness, after wounds received in dissection. That there is no diminution of my susceptibility, is proved, by my still having red patches on my hands, which itch and smart, if I dissect a brain, without continually wetting my hands with the alum water." 107.

We have only twice suffered severely from handling dead bodies. It is singular that each time it was after examining a person who had died from scarlet fever, and in neither instance was there the slightest evidence of our having received a wound. On the second occasion, the local symptoms were succeeded by a sort of erythematous affection of the throat, a true secondary symptom.

Dr. Macartney remarks, that the secretions of the human body, when they are accumulated in foul clothes, occasionally produce a dangerous and obstinate inflammation of the hands of washerwomen. He has never seen this followed by more than common sympathetic fever. But ill-conditioned abscesses may occur, and the limb may even be lost. We have twice seen, in washerwomen, and after washing suspected linen, inflammation of the deep cellular membrane of the hand, diffusing itself along the fore-arm, beneath the annular ligament, and between the muscles. Each case proved fatal.

Dr. Macartney goes on to observe that—The dead substance of other animals, besides that of the human subject, although less dangerous, is capable of infecting somewhat in the same way. Persons who clean tripe are liable to a peculiar erysipelatous inflammation, which passes up one finger and down another. The same has occurred from paunching a hare, and horse-killers occasionally suffer severe diffused inflammation. The fluids of the recently killed animal are, however, much less irritating, than the same in an advanced state of putrefaction, and hence butchers seldom are known to suffer from wounds received in the practice of their business; although, as already observed, the greatest power of infecting, belongs to animal substances immediately after death with respect to the human subject.

Dr. Macartney does not mention, at least in this place, any special treatment for this affection. Sir B. Brodie recommends the oxymurate of mercury. We have, on several occasions, seen small doses of blue pill with saline aperients, and the application of a strong goulard poultice, remove the affection in a day or two.

We proceed to the

Proximate Cause of Inflammation.

We must pass over the Chapter on this subject. There is much in it, which, if we discussed, we must dispute; and there is also much that is certainly ingenious and probably true. We must pass, too, over the succeeding
Chapter on the Species of Inflammation, which contains nothing of consequence.

On Congestion as contra-distinguished from Inflammation.

It is obviously of great importance to distinguish, during life or after death, the two pathological states of congestion and inflammation. Dr. Macartney devotes a short Chapter to the subject, and points out some criteria which he deems decisive.

Congestion, he rightly observes, belongs to the venous system. It is caused by any mechanical impediment to the free motion of the blood in the veins; such as obstruction to the circulation of the blood in the liver, the lungs, or other important organs, or by pressure on the trunk of any vein. It is also brought on by the suppression or diminution of natural secretions, and by supplying the body with more nutriment than is expended in growth or secretion. It is sometimes induced, and always favored by dejection of mind and sedentary habits, which serve to accumulate the blood in the venous system, and to embarrass the circulation.

Every impediment to the passage of blood through the small veins, necessarily renders its passage slow. But the blood also appears to be very fluid, at least it transudes in many cases through the coats of the veins into the neighbouring cellular membrane. The blood, in congestion, is either purple or still darker; in melena, the blood poured out is black.

"The most remarkable circumstance, with respect to congestion, and the one which has not hitherto been described is, that arteries found in a congested part are smaller than their natural size." 140.

After a few other observations, Dr. Macartney goes on to remark—

"In order to ascertain the direct effect of venous congestion, on the arteries of the part concerned, I made the following experiment: I put ligatures on both the jugular veins of the rabbit; the animal died apoplectic, and upon examining the state of the vessels of the ears, I found the veins which lie towards the outer edge of the ear, greatly enlarged, and gorged with dark blood; but the artery, which runs in the centre of the ear was reduced very much below its natural size, so that it appeared as a mere line. The result of this experiment made me wish to see what would be the instantaneous effect of arresting the venous circulation. I accordingly exposed the mesentery in a young rabbit and having tied the trunks of several mesenteric veins, their corresponding arteries contracted immediately, in the most palpable manner, and to a very small size; as if taught by their organic instinct, that blood should not be permitted to go where it must immediately return.

From the description just given, congestion never should be confounded with inflammation. They are essentially different in all respects: the uniform and dark red colour of a part in a state of congestion, as constrained with the brighter red colour, and distinctly ramified arteries in inflammation ought at once to be sufficient to point out the difference between these two affections." 141.

Dr. Macartney concludes by laying down the distinction between congestion and determination of blood.

When blood, he says, is sent in too great a quantity to any part, it is because the arteries of that part dilate beyond their natural state, in consequence of some excitement of particular organs; and therefore, the sensibility, temperature, and bright red colour of the parts are increased; whereas, in congestion neither the sensibility nor temperature is augmented. Determination of blood may itself be easily distinguished from inflammation, by the general appearance, by the causes, by the absence of any of the consequences of real inflammation, and especially by the want of the peculiar
pain, which would belong to the tissue concerned, if its turgescence or fulness of blood had arisen from inflammatory action.

It appears to us, that determination of blood to an organ, is a state by no means accurately defined, or definable. If Dr. Macartney's account be correct, it is difficult to say in what determination of blood differs from the earlier stage of inflammation. Probably determination of blood is a state which may end either in inflammation or congestion, as concurrent circumstances may determine. The phenomena of several cerebral affections appear to point out a much closer connexion between the determination of blood and congestion, than Dr. Macartney is willing to allow. We proceed to the last Chapter of the work, which treats

Of the Remedies for Inflammation.

Dr. Macartney classifies these remedies under the following heads—

1st. Remedies which diminish the force of the heart, and give the disposition generally, to the small arteries to go into the contracted state.

2nd. Means that effect a diminished size of the arteries, or reduce the sensibility in the inflamed part.

3rd. Medicines that augment or reproduce the natural secretions, and thereby abate the circulation, or lessen the effusions made into inflamed parts.

4th. Counter-irritations, secretions, or impressions made in different parts from those which are inflamed.

5th. Lotions or fluids which exert sedative and astringent power.

6th. Means for affecting in an agreeable manner, the sensation of inflamed parts.

7th. Causes which produce an easy or satisfied state of feeling, on the sentient surfaces, or in the individual.

Speaking of tartar emetic, Dr. Macartney professes himself unable to understand on what grounds, the very large doses of the medicine, now so fashionable, are prescribed. Small and frequent doses, he contends, are sufficient to produce all the effects that are desirable. If one grain of tartar emetic be dissolved in a pint of water, and a table spoonful of this solution be administered every half hour or hour, an extreme degree of nausea will certainly be excited, with a reduction in the strength and frequency of the pulse, and usually some perspiration. The good effects of nausea depend on its being kept steadily up for some time. But as Dr. Macartney observes, preparations of antimony act on some peculiar constitutions as a mineral poison, producing an alarming degree of prostration and distress. He has known these medicines also, when long continued, sometimes induce tenderness of the gums, an increased flow of saliva, and a cadaverous fetor of the breath.

Cold applications.—Dr. Macartney makes some good remarks upon these. The sudden application of cold induces a re-action. But it must be remembered that it is the sudden application of cold, speedily withdrawn, which does so. If the cold be maintained, there is no re-action. Dr. Macartney advises that the cold should never be suddenly applied, nor suddenly withdrawn. The inflamed part should be, as it were, seduced to surrender its temperature willingly, until the power of resistance or of re-action be past, and in carrying it back to the natural state, the same principle should be followed.

"The best example of the power of low temperature to cause contraction of the arteries, is seen in what is called a dead finger, in which, there is neither circulation nor feeling, a fact I had the opportunity of proving lately by a direct experiment on a person whose thumb was benumbed in this manner. On making a cut into it with a pair of scissors, no pain was felt, nor did any
blood issue from the wound, until the sensibility and circulation returned: now, this extreme case never occurs in the most intense frost, but always when the atmosphere is damp, and not severely cold." 137.

We were not aware of the last mentioned fact, nor does it seem consistent with what we hear of the effects of very low temperature. Our author believes that the remedial operation of a modern degree of cold is in the majority of cases preferable. It is usually imperfectly attained by the evaporating lotions in common use. Dr. Macartney describes his ingenious method of obtaining, for the part, the uninterrupted operation of cold and moisture.

"The most easy and manageable way of employing irrigation, is to place the limb of the patient in a trough, and having laid some lint on the inflamed part, to let the water be conducted by means of a stripe of woollen cloth, from a vessel holding the water or other fluid, which may be placed on a chair or table standing beside the bed. One end of the stripe is to be inserted into this vessel: the other, which should be cut into a pointed shape, laid on the lint. The water will then proceed in the manner of a syphon continually from the vessel, not by drops falling from a height, the sensation of which is disagreeable. The water is carried off by a tube proceeding from the end of the trough, into a vessel, placed at the end of the bed. I have found that a stripe of cloth of some breadth, where it is inserted into the water, and ending in a point, where it touches the lint, answers the purpose of a syphon much better than the filaments of candle-wick, which some surgeons have employed. The patient with this apparatus is able to vary his position, which is a great comfort to him. It is obvious, that irrigation can only be used with convenience to the extremities. The water may have any degree of temperature that is desired, and if it should be wished to employ iced water, the vessel holding it may be placed at a distance from the patient's bed, or even outside the room, and conveyed by an elastic tube, on which there is a cock to regulate its admission into a smaller vessel, situate near to the bed." 150.

Our author goes on to state, that the mode of maintaining a continual accession or renewal of a fluid application, may be converted to many useful purposes. Professor Wiedeck has availed himself of it in the construction of his chair: in the back of which is placed a reservoir of fluid, from whence a tube passes underneath the seat, to the front of the chair, where it is connected by a stop-cock with a catheter, which has been previously introduced into the bladder. This catheter is double internally, or has two passages, each with an opening into the bladder, and the handle of the instrument exhibits the two distinct tubes, into one of which, the end of the elastic tube which is furnished with a cork is introduced. The fluid from the reservoir is thus conveyed by one side of the catheter, and is returned by the other, and consequently, there is a sort of stream carried through the bladder. He has used the apparatus for chronic inflammation and catarrh of the bladder. And Dr. Macartney has contrived a tube on the same plan, for transmitting a continual stream of fluid through the vagina or the rectum. Dr. M. has likewise invented a glass vessel, something like a cupping glass, but larger, with two tubes entering it, one which admits the fluid near the top, and another near the bottom that allows it to escape. This vessel was designed for cleansing foul ulcers or cancers; but might be used for the purpose of abstracting the heat, by a stream of cold water, or for administering medicated fluids to external surfaces, if flat, in the same manner as the double canula conveys them to the internal cavities. And he has further proposed, that the principle of the double passage should be extended to the tube of the stomach-pump; by which, he thinks, the effects of the instrument would be rendered more certain and speedy.

Dr. Macartney particularly insists on not applying cold too suddenly, when
we wish to get the lowering effects of cold. To obviate re-action, the temperature of the part should be gradually reduced. In all cases where hemorrhage is to be apprehended, the use of ice or iced water is most valuable, and may save the patient from the application of ligatures to small arteries. Dr. M. has treated cynanche tonsillaris by the frequent use of a gargarle of iced water, with remarkable success. The disease has been by this means arrested in a few hours. He has also found ice effectual in stopping obstinate hiccup, when all other remedies had failed.

"Ice or iced water is better for the purpose of generating a great degree of cold, than any of the frigoric mixtures. Some of the latter would congeal the part, none of them would be proper with a raw surface, and it is rarely necessary to reduce temperature in an extreme degree, without the existence of a wound. When they are proper it may be useful to know, that the mixture of five parts of muriate of ammonia, five parts of nitre, and sixteen parts of water, sinks the thermometer from 50 degrees to 10 degrees; equal parts of nitrate of ammonia and water reduce the temperature from 50 degrees to 4 degrees, and five parts of sulphate of soda, with four parts of diluted sulphuric acid, bring down the instrument from 50 degrees to three degrees." 161.

Moderate cold is generally suitable when the inflammation is not very violent, and is accompanied with heat. Irrigation with cold water, especially in the Summer months or in warm climates, is the most convenient mode of applying it. As a general rule, the feelings of the patient are a valuable test of the propriety of warm or cold applications.

Waiving the discussion of the effects of mercury, saline purgatives, and baths, we may pause and examine the operation of counter-irritants. We do so, because we are not quite certain that remedies of this description are always employed in a really scientific manner.

Counter-irritants are divisible into mere rubefacients—vesicants, or such as give rise to secretion of serum or lymph, and sero-purulent fluid—applications which induce suppuration and ulceration, as tartar emetic—and applications which first destroy the skin and cellular membrane and give rise to suppuration afterwards, as the caustic potass, &c.

Dr. Macartney observes, that the milder counter-irritations are suited to diseases near to the surface, or which are situated opposite to the skin to which the application is made. The cautery or severe caustics are only justifiable, where the disease to be counteracted has a deep situation, and has a variety of interjacent structures, as in the hip disease and caries of the vertebrae.

He remarks that all counter-inflammations should be of a kind that naturally tend to subside. This is quite obvious. If an artificial inflammation, he adds, be carried so far, as to join or communicate with the original disease, it becomes mischievous; for, it is essential to the operation of any counter-irritation, that the parts placed between it and the internal disease, should be entirely free from inflammation, although they may be very thin, and consequently the two inflammations very near each other.

"If the inflammation from the previous disease, and that induced by the surgeon, be kept perfectly separate, although near each other, the influence of the latter is very considerable in diminishing the former: nevertheless, the original disease does not appear to possess any power over the counter-inflammation, either in diminishing or increasing it. This fact is difficult to explain; indeed, the mode of operation of any counter-irritation is very obscure; perhaps it is because the artificial disease being always disposed to cease or recover, creates the same tendency in the original inflammation." 166.
It does not appear to us that the difficulty is, theoretically, so great as Dr. Macartney represents it. Counter irritation is principally used and useful for diseases characterised by increased vascular action and determination of blood. If we can set up an action and determination in contiguous vessels, it is easy to suppose that we may diminish the quantity of blood in those concerned in the disease, and consequently the diseased action itself. We see these variations in the balance of the circulation continually. A woman who is menstruating has generally a pallid face and a mottled complexion from the diminution of the vascular supply to the surface. The feet are cold when the cerebrum is oppressed with blood. The same state of the cerebrum is relieved by active purgative, which determine the blood to the lower bowels. We might multiply instances of this sort, and follow out the argument more in detail; but we think we have said enough to render it probable that the action of counter-irritants is tolerably explicable on admitted principles.

"Sinapisms are counter-irritants of more value I believe than is generally supposed; the rapidity of their action is of importance, and the redness which remains on the skin for a considerable time, is an advantage, that does not belong to any of the milder kinds of counter-inflammations. From observing the good effects of blisters in gonorrhcea, gleet, and irritable bladder, I am disposed to think that sinapisms might be more useful in those diseases. I have found sinapisms very effectual in removing the inflammation of the tonsils in some cases." 167.

Of blisters, Dr. Macartney says that, in general, they are suffered to remain too long before they are cut, unless it be in persons with strong skin. It is usually sufficient that the skin be inflamed, the serum will continue to flow at the first and second dressings. When it is designed to heal a blister soon, the water dressing should be used in place of any ointment. With some persons, he continues, blisters continue to form serum, and there is no tendency in them to heal. In one instance the blister remained open for weeks. In such cases the discharge is speedily stopped, and the blister healed, by sprinkling over its surface, a powder composed of equal parts of lapis calaminaris and cinchona, and using the water dressing over the part, to prevent the powder encrusting on it.

Dr. Macartney states that there is a plaster made by only one person in Paris, for maintaining a purulent discharge on a blistered surface, which is much preferable to savine cerate. It is paper on which there is a soft plaster very thinly spread; there are two kinds, one milder in its operation than the other, but they both keep up a secretion of pus, from a raw surface, apparently for any length of time, without inducing as much irritation as the savine cerate occasions in a few days. It is made and sold by M. Albespeyres, Rue du Faubourg St. Dennis, No. 81, Paris. The composition of the plaster is a secret.

Such are the principal remarks which Dr. Macartney offers upon counter-irritants. We would observe, that à priori it appears reasonable, and experience, we think, bears out the presumption, that the mode of counter-irritation should have a sort of physiological relation to the primitive morbid action. Thus, in diseases characterised by a tendency to effusion of serum and lymph, blisters are advantageous; inflammations of the serous and synovial membranes are examples of the fact. In chronic diseases, especially in such as are disposed to end in the formation of pus, those counter-irritants which produce a secretion of pus from the surface generally answer best; thus in ulceration of the cartilages of the joints and in caries of the vertebre, etons or issues are preferable to blisters. In the slighter morbid actions which consist of determination of blood, rubefacients are often sufficient. In the more sudden or severe determinations, which amount to inflammation, the positive abstraction of blood from the neighbourhood of
the large vascular trunks is indispensably requisite. Without pushing this view of the subject too far, we are justified in recommending it as a general principle of action, and in considering it far from useless.

Dr. Macartney proceeds to the Different Medicated Lotions.

He speaks very highly, and we cordially agree with him, of the dilute liquor plumbi subacetatis. The following, however, is a greater amount of success than we should have expected from it.

"The lead lotion never fails to cure tinea capitis, however long and obstinately the complaint might have resisted other remedies, provided the application of the lotion be properly conducted. The hair should first be cut close to the head, but need not be shaved off; water dressing or a poultice of any kind is then to be applied, merely for the purpose of cleansing the skin of the crusts, and all other impurities. There will then be seen under each crust, a red spot of the skin, denuded of its cuticle, and the villous surface exposed. The lotion should now be applied by means of lint thoroughly wetted with the fluid, and covered with a plate of Indian rubber, or a piece of oiled silk to prevent evaporation. Every time this dressing is changed, which should be very frequently at first, the head should be washed with some of the lotion, and the lint should be replaced by some that is clean, which is to be completely wetted with the lotion, and covered as before." 173.

But the application must not be suspended for one night, nor even for a few hours; the crust will re-appear if it is so. We have often used the lead poultice for eczema of the scalp, but we cannot ourselves speak positively to its utility in genuine porriago.

The next set of local remedies to which Dr. Macartney proceeds, is that which gives rise to an agreeable state of feeling in a part or in the whole of the body. The most powerful of these means is steam; Dr. Macartney describes a simple mode of applying it, for which we must refer to the work itself. The use of water at all temperatures is strongly advocated by our author, and the water dressing, already often alluded to, is his favourite method of employing it.

"The substance that I have generally made, the immediate object of application, is the finest and softest lint: and for the covering material either oiled silk or a plate of India rubber. Simple as this mode of dressing may appear, it requires to be managed with care, and attention to many circumstances, which would appear trivial, to persons unacquainted with the nature of the remedy. Two, three, or four layers of the lint should be first folded together, according to the size of the part to be covered, taking care also that the soft side of the lint is the outer one. In wetting the lint the first time it is necessary to either float it in the water before folding it, or if it be first folded, it should be pressed between the fingers, to urge the fluid into the interstices of the lint, which receive fluid with difficulty, until all the air they contain be expelled. The lint, when applied, should just contain as much water as not to drop. The oiled silk, or India rubber should project so much beyond the margin of the lint, as may prevent evaporation, which will vary according to the shape of the part on which the dressing is laid, and the thickness of the folded lint." 181.

The lint should be wetted, without any bandage, as that might rise to a feeling of constraint. It is, therefore, sometimes necessary to stitch the silk into a particular shape. As a general rule the lint should be changed three times during the day and twice during the night. In cases, where the inflammation is moderate, and the skin unbroken, the dressing will only require to be changed every twelve hours. At each time the dressing is renewed, the lint and oiled silk should be carefully washed, and when it is applied to ulcers, fresh lint should replace that taken off, the utmost cleanli-
ness being of the first importance. French oiled silk is much superior to English, as it does not adhere to the skin. When it is desirable to combine cold with the water dressing, a bladder holding iced water may be laid over the oiled silk, or where the comfort of warmth may be required, the dressing may be covered with flannel.

Dr. Macartney denounces poultices. It seems to us that he does them an injustice, when he declares that a poultice is made of materials, which, in a term far short of its renewal, become sour, and thereby render the poultice, after the first few hours, an irritating application. The greasy substances which is adhering to the skin, do not always answer the end, and soon become rancid. A poultice favours the formation of pus, and causes a throbbing or pulsating pain, and feeling of tenderness in the part, which are the natural attendants on the process of suppuration. It imbizes the pus it serves to create, and thereby becomes more irritating. A poultice, before it is many hours on, is a mixture of farinaceous substance, rancid oil, and pus, oppressing the part by its weight, and beginning to adhere round its edges to the skin, creating a sense of constriction. In proportion to his dislike of poultices is his regard for water dressing. He speaks in the most laudatory terms of it. — That he is well disposed to believe every thing in favour of it must be evident when he states that it puts boils completely under our control; that he has received numerous account of gonorrhea being cured in one or two weeks by the external application of water to the penis; that it never fails to eradicate corns, if used long enough; that ganglia are removed, and loose cartillages, he thinks, may be so too, by it; that tetanus can hardly come on when it is employed. All these are confident opinions, and evince a very strong predilection for water dressing.

Dr. Macartney offers some very good observations on, the effect of repose, proper position, change of air, exhilaration of mind, confident anticipations, and so forth. The following extract is curious.

“A new, and at first sight, a very singular mode of treating wounds and ulcers has been proposed by Dr. Jules Guyot. He published his views in the Archives Generales de Medicine, and afterwards he printed an extract from the Archives in the form of a pamphlet in 1855. The object of Dr. Guyot is simply to expose recent wounds of all descriptions, and ulcers, to hot and dry air, with the view of forcing a scab to form, by drying the clot and serum of a wound, or the pus of an ulcer. He made his first experiments on rabbits, on whom he inflicted several wounds, and afterwards placed the animals in a box having apertures, through which their heads projected. — The air contained in these chambers was heated by a spirit lamp, generally to 25 degrees of Fahrenheit, and sometimes higher. The animals were secured so that they could not move. Their wounds wept at first serum, but as they dried, their edges approached each other. In some cases no tumefaction, nor appearance of inflammation was observed; in others suppuration took place after some days, underneath the crust; but by a longer exposure to the heated air, the pus thus formed, also dried ultimately into a thin scab. After it was removed, the wound was found to have been perfectly cicatrized underneath.

Dr. Guyot was not so successful in getting ulcers in the human subject to heal in this manner. After two or three weeks' trial, he was obliged in some cases to relinquish it, the patients not being able to bear the fatigue of having the limb so long confined to a box, without any change of position; nevertheless he did succeed in curing by the process of scabbing some ulcers of long standing and of an obstinate character, although pus formed again and again under the dried films which covered the ulcers. Dr. Guyot imputes great virtue to the heat, but it would seem to be merely instrumental to the drying of the serum, lymph, or pus which may happen to lie on the wounds or ulcers.” 208.
We do not anticipate much from this. But we must quit Dr. Macartney. We think our readers will agree with us that much instruction and more pleasure may be derived from a perusal of Dr. Macartney’s volume. That gentleman has the good wishes of all on his retirement from the lecturer’s chair.

PART III. MONTHLY PERISCOPE.

Strychnia in Retention of Urine. In the Eclectic Journal we find extracted from the Medical Gazette, a case of retention of urine successfully treated with strychnia, by Edward A. Cory, M. D. The patient had been delivered a few hours previously, of a first child, after a tedious and severe labor, since which time she has passed no urine. She was in great pain, which was considerably relieved by the introduction of the catheter. The atony of the bladder however, still continued, and it became necessary to resort to catheterism twice a day for three weeks, during which period, there was not the slightest ability to void the urine. Soon after delivery, symptoms of peritonitis were evident, but were removed by an antiphlogistic treatment. Finding that the inability to pass urine continued, Dr. Corry resorted to the use of strychnia, of which he gave one sixteenth of a grain three times a day. To his surprise, after taking the second dose, the patient was able to pass her urine sua sponte, and with ease and comfort to herself. The medicine was continued until one grain had been taken. There was no return of the retention. We think the strychnia worthy of a full trial in such cases, though we must confess, that were it not for the known effects of the article in paralytic states, the suddenness of the relief, after so small a portion of the medicine, would have led us to consider it rather a coincidence than a cure.

Pathology of Porrigo. The observations of Basse and Audouin on the nature of Muscardine, a disease to which silk worms are subject, had proved that it was owing to the growth of minute fungi on the animal. Professor Schoenlein, of Zurich, has been led to examine under the microscope, some cutaneous eruptions. On the first examination of a pustule of porrigo lupinosa, he satisfied himself of the vegetable and fungous nature of the pustule. Prof. Schoenlein is busily employed in prosecuting this subject, and means soon to publish the results of his investigations.—Miller’s Arch. from London Med. Gaz.
Quinine in the Urine of individuals to whom it has been administered in large doses. By M. Quevenne. The researches of M. Pierry, on the presence of quinine in the urine, led the author of this communication to publish some analogous researches, which he has made on the urine of an individual to whom M. Leroy administered 60 grains of the sulphate of quinine during the first day of a malignant fever, 60 grains on the second, and 110 grains on the third. Two and a half ounces only of this urine being remitted to him, he was not able to subject it to all the experiments which he desired to make. After having treated this urine with various re-agents, and having submitted it to many operations which we cannot detail, M. Quevenne obtained a limpid solution which possessed in a high degree the bitter taste of quinine, and exhibited, when examined in a reflected light, that bluish aspect peculiar to the salts of quinine. This solution exposed to an air bath deposited slender bands which, upon microscopic examination, were composed of beautiful prismatic needles, entangled in each other. Some of these prismatic needles were about 15-100 millimetre and 1-400 in breadth. They were obliquely truncated at their summit. Evaporated to dryness the solution furnished a crystalline residuum very bitter and soluble in alcohol.

The author draws from his analysis the following conclusions—

1st. Quinine or its sulphate may pass into the urine of persons who make use of it.

2nd. Tannin is a most excellent re-agent to isolate vegetable alkalies, since in this instance it was able to recover a very small quantity of quinine which was dissolved in a liquid of a very complex nature.—Gazette Medicale.

On the Effect produced upon the Pulse by change of Posture. By William Augustus Guy, M. B. Cantab. There is a paper on this subject compiled with great care from many and well conducted experiments. The paper is of too elaborate a description to permit us to enter into its details, and all that we do is to present the summary given by our author, Dr. Guy, of the facts which he seems to have made out. The summary in question is short, but sufficiently explicit. Those who are anxious to become acquainted with the data upon which it has been founded, will do well to consult the original paper.

That is essentially of a numerical character.

1. In healthy males of the mean age of 27 years, in a state of rest, the number of the pulse is, standing 79, sitting, 70, and lying 67; the difference between standing and sitting being 9 beats; between sitting and lying, 3 beats; and between standing and lying, 12 beats. When all exceptions to the general rule are excluded, the numbers are, standing 81, sitting 71, and lying 66; the difference between standing and sitting being ten beats; between sitting and lying 5 beats; and between standing and lying 15 beats. The same differences expressed fractionally, are as follow, inclusive of exceptions; 1-9th, 1-20th, 1-6th; exclusive of exceptions, 1-8th, 1-13th, 1-5th.

2. The extremes are very remote from the mean results. Thus, the greatest difference between standing and sitting is 1-4th, the least 1-19th, of the frequency standing; the greatest difference between sitting and lying is 1-4th; the least 1-16th of the frequency sitting; whilst between standing and lying, the difference may be somewhat less than one-half, and as little as 1-14th, of the frequency standing. The greatest difference observed amounts to somewhat less than one half of the frequency standing.

3. The exceptions are as follow—To the general law, that the pulse is less frequent sitting than standing, there is one exception in 12 experiments: to the general law, that the pulse is less frequent lying than sitting, there are 3 exceptions in ten experiments: to the general law, that the pulse is less frequent lying than standing, there is 1 exception to 14 experiments. The
total number of instances in which 1 or more exceptions to general rules occurs, is 34, or somewhat more than 1 in every 3.

4. The effect produced by change of posture increases as the frequency of the pulse increases.

5. The exceptions to the general rule are more numerous as the pulse is less frequent.

6. The effect produced upon the pulse by change of position is due to muscular contraction.

7. Muscular contraction, whether employed to change the position of the body, to maintain it in the same position, accelerates the pulse; and the effects produced by change of posture form but a particular case of this more general law.

Signs of Undue Development of Brain, concomitant with the changes in the Form of the Head. The integuments of the skin of the head in these children have a smooth stretched appearance, and a deep flush follows every slight excitement. The veins are larger and more distinct than usual about the forehead and temples, and easily become full and turgid—as in crying; the head is apt to become hotter than the general surface, and is often bathed in perspiration, especially at night; the hair is frequently redundant and strong, but sometimes it is very deficient.

The fontanelle or open part of the head is large, its edges thin and stretched, and it varies its state of elevation or depression upon slight causes.

The mind of these children is generally premature, their affections lively, and temper quick and excitable; these qualities render them more than ordinarily interesting. They are more than commonly wakeful, or sleep lightly and are easily disturbed.

Their muscular system is sometimes well developed, as shown by fine limbs, and an early ability to walk—but this is when the brain does not deviate very seriously from a sound state—more frequently and in severe cases, the power of walking is protracted, the balancing power of the will being deficient.

A general irritability and excitability of frame (often deemed characteristic of all children—but much more marked in some than in others, as all persons acquainted with children must have observed) is almost always associated with the condition of head above described. And looking at the offices the brain sustains in the system, there can be no doubt of its depending upon and flowing from it.

At the same time, it will be obvious to every physiologist, how an opposite set of symptoms may flow from a morbid brain, dulness, heaviness, stupor, and a preternatural immobility; but such consequences are comparatively rare.” 17.

The consequences of these abnormal states are head diseases—especially hydrocephaus, inflammation of brain or membranes, paralysis, croup, &c. The causes of kphalosis, he thinks, are hereditary predisposition, and overworking of the brain itself. The author makes no allusion to the means of counteracting or curing this kphalosis, but as the pamphlet is only the fore-runner of a volume on the diseases of children, we shall look to that for more minute details. The brochure is extremely well written, but we cannot help suspecting that the “FACT,” after all, is somewhat tinged by fancy.—Med. Chi. Rev.

Ulcers on the Nipples, &c. Dr. Boehm of Berlin has found great benefit from the employment of desiccative powder—composed of one part of oxyde
of zinc and one or two parts of powdered gum arabic—sprinkled upon these troublesome little sores. It forms a crust or thin cake over the ulcerated surface, which, being thus protected from all irritation, speedily heals.—Med. Chi. Rev.

Facility with which the Natives of India recover from Serious Accidents.—In the India Journal, for April 1, 1838, we find a communication from Mr. Splisbury surgeon of Jubbulpore, from which we extract the following passage.

"Some time ago I had occasion to bring to the notice of the Medical and Physical Society two remarkable cases of wounds, showing with what facility serious accidents are gotten over by the Natives. The first was that of a grass-cutter gored by a Spotted Deer with protrusion of intestines; the second that of a woman in the very last stage of pregnancy pitched on the horn of a bullock, which perforated the cavity of the uterus; to these serious ones of the abdomen and pelvis I have to add another. A young woman about 18 was brought to me with a very extensive wound of the occiput and posterior portion of the parietal bones inflicted with a tulwar, a piece of the skull and margin was completely detached, laying bare the brain to that extent; she had likewise a severe wound of the left hand cutting through the metacarpal bone of the fourth finger, also a very slight cut on the top of the same shoulder. When brought to me she had lost a very considerable quantity of blood, her clothes being saturated, and was in a very exhausted state from the time of dressing her wounds, up to their healing, which they all did speedily, with exception of the apparently very trifling one on the shoulder; not the smallest symptoms of affection of the head took place, she never complained of headache, nor was there the slightest tendency to heat of skin, except in the injured hand for a day or two. P. nat. app. good, sleep unimpaired, adding another instance of the little constitutional irritation that takes place in natives after very dangerous wounds."


Nitrate of Silver in Gastralgia. Dr. Steinitz has found this metallic salt successful in some severe and obstinate cases of this disease, which had resisted all the ordinary remedies, such as musk, castor, morphia, hydrocyanic acid, the preparations of zinc, bismuth, &c.

It may be stated, as a remark of very general truth, that metallic salts have a very marked effect upon all nervous affections, attended with high sensibility.

The excellent affects of the oxyde and sulphate of zinc in chorea, of steel in many cases of neuralgia, cupreous salts in spasmodic croup, &c. all tend to prove the correctness of this observation.*—Med. Chi. Rev.

* Our German friends seem to be not aware that the internal use of the nitrate of silver in certain cases of gastric suffering was first recommended by Dr. Johnson the senior Editor of this Review.

It is an admirable remedy in allaying the morbid sensibility of the stomach in some forms of Dyspepsia.—Ed. Rev.
MEDICAL INTELLIGENCE.

FOREIGN CORRESPONDENCE.

Letters from Paul F. Eve, M. D. Professor of Surgery in the Medical College of Georgia.

PARIS, MAY 15th, 1839.

To the Editor of the Southern Medical and Surgical Journal:

Dear Sir—This morning I went to La Charité, visited the patients, and heard the Lecture of M. Velpeau. A man who received on Monday last a ball through the abdomen died here last night of peritonitis. Another who had a ball to pass through the middle of his left arm, without breaking the bone, was treated by bandaging from the fingers, and simple dressing to the two wounds, is doing remarkably well. I have seldom seen a wound of the kind in so good a state in so short a time. I learn there is a singular fact connected with wounds, in general, in Paris—it is this, that though erysipelas inflamation has been a very common result lately, yet no case of the kind has been followed by tetanus. I understand that lock-jaw is not now known in the hospitals of the city.

In the case last referred to, the track of the ball was not examined, and not even was a probe used. M. Velpeau stated that it was of no avail, as the subsequent suppuration would reveal whether the bone was fractured, or whether the wound contained foreign substances; and moreover, that probing, &c. would aggravate the irritation and inflammation attendant upon gun shot wounds. Notwithstanding this high authority, I cannot but believe, that it is good surgery to examine and remove all foreign substances, be these the ball itself, (though in the case under consideration, this was out of the question, since the ball had passed through the arm,) pieces of clothing, or spiculae of bone. Certainly, by a careful examination immediately after the receipt of a wound of this class, no great aggravation of it would be produced; and when foreign bodies exist in it, is it not essential that they be at once removed? In fact, would not their removal be the very best means to prevent irritation and inflammation? And as a class of wounds, gun-shot are peculiar in almost always containing foreign substances.

After the lecture, M. Velpeau operated twice for obstruction in the lacrymal sac. He overcame the resistance in the usual way, with a straight bistoury and probe, and then introduced a softened ivory bougie. He said the mode of preparing the ivory was a secret, until a German student revealed it in Paris.* They are now making urethral bougies, rectum, &c. &c.

* The Ivory bougies are made by first removing the earthy salts by an acid, and then subjecting it to tannin to acquire elasticity, firmness, &c.
of this material; the peculiar excellence of which, M. Velpeau stated to be, that it would increase one-third or one-fourth in thickness by absorbing the moisture of the canal in which it may be placed, which renders it peculiarly well adapted for the dilatation of the soft passages.

At eleven o'clock, I had the pleasure of hearing M. Magendie, who lectures every Wednesday and Saturday on Experimental Physiology. He was engaged with the fifth pair of nerves to day. After stating that this was a double nerve, one part being motor and the other of sensation, and exhibiting its minute ramifications; proving that the nasal branch of this was the olfactory or true nerve of the organ of smell, and not the first pair or the olfactory, commonly so called, he cut open the head of a rabbit, turned out a portion of the brain, and predicted that on touching with a probe a portion of the fifth nerve, the animal would cry. This was completely verified. He then cut the branch in two, and established a perfect loss of sensation in the parts to which it was distributed. He also stated that by touching the lacrimal branch of this nerve, the tears would flow as if one had opened the cock of a hydrant.

I regret to state that the climate of Paris has proven very fatal to American Medical Students. Six died during the winter of 1837-38; and yesterday the third one died since the first of last January. This I think attributable to the long continued cold of the winters, and the severe exercise the students take in the morning before breakfast: some of them not unfrequently walking two or three miles to reach the Hospitals, or to pass from one to the other. The gentleman who died yesterday was a graduate of the Charleston College, and a native of South Carolina. They have all died of pneumonia, and have generally been attended by Louis.

17th. Went to La Pitié to see Lisfranc, but was again disappointed, and learned he was not in good health. Returned immediately to La Charité, and heard M. Velpeau's lecture, and saw him extirpate an eye. He first presented the ball which had caused the death of the individual already mentioned in this letter. It entered the buttock of the right side, and was found in the left thigh. It passed through the bones of the pelvis, the rectum and a loop of the small intestines—and what was surprising the ball was not the least flattened, but retained its natural shape.

The case of his clinic, upon which he dwelt the most, was that of a man who had received a blow of the fist upon his nose and left eye, attended with emphysematous swelling. After establishing the fact that it was air diffused in the subcutaneous cellular tissue, M. Velpeau entered into the enquiry, how it was generated there, since the skin was entire, and there was no appreciable fracture, and certainly no decomposition. His conclusion was, that some of the small bones of the nose must be fractured, producing also a rupture of the Schneiderian membrane. In support of this opinion, he mentioned a case of M. Blandin, who after operating for fistula lachrymalis, or rather epiphora, was much surprised to find the face of his patient quite emphysematous on the operated side. Upon examination, however, he discovered that when this patient held his nose in blowing it, or in sneezing,
the air entered the lachrymal duct, and became diffused into the subcutaneous cellular tissue, by means of the little wound made in the operation to which he had been subjected: And another case yet more in point was cited; that of a man who fell from an eminence, and rolled down a considerable distance. Dupuytren could find no wound in the skin, nor fracture, still his face, neck, &c. were very emphysematous. A post mortem examination revealed a comminuted fracture of the internal bones of the nose.

In extirpating the eye, which he said was affected with cancer or fungus hematodes, M. Velpeau stated, that as there had been recently a good deal said about the propriety of not removing the lachrymal gland with the eye, he intended trying the experiment, and therefore left in this case that gland in the orbit. The result of this I hope to communicate hereafter.

18th. M. Velpeau performed a very serious operation this morning. It is said he was never so reluctant to operate before—and that he had done every thing to avoid it, for he apprehended the patient would die on the table. She was a very intelligent young girl of 12 years of age, who had had for six years a tumour in the axilla of the left side. This had rapidly increased during the last six months, and now threatened the loss of life. M. Velpeau made a semi-lunar incision over the tumour, and then carefully dissected it from the bottom of the axilla. The operation was well performed, and the little patient behaved with much courage. But the dressing spoiled all—the wound was crammed full of lint. The French do not believe in union by the first intention.

PARIS, MAY 28th, 1839.

To the Editor of the Southern Medical and Surgical Journal:

Dear Sir: Since the date of my last communication, I have procured the following medical intelligence which may be worthy your notice.

And first of Pied-Bot or Tendonotomy. I have seen several cases of this. One where five tendons were cut or divided by M. Velpeau. The operation had been performed five weeks, and the patient, a man of 35 or 40 years of age, could walk very well with the foot flat upon the ground. The second case was a female quite aged, having the great toe of the right foot pointed upwards, or, in other words, permanently extended. M. Velpeau divided by mistake the common tendon of the toes, which not relieving the patient entirely, he proposes to cut in a few days the proper tendon, or that of the extensor longus pollicis pedis. A third case, the same surgeon operated on, Saturday, the 25th. This also was a female aged 30, who had had for some time a permanent flexion of the right leg. The tendons of the ham on either side were divided, but without as yet straightening the limb. Indeed, it is even surmised, that the operation in this case will be worse than useless, for the knee joint seems to be involved in disease; but which of course could not be positively ascertained before the operation. There is now a girl entered yesterday to be operated upon next Saturday. Her case is the common regular club-foot.
In performing the operation, a very small knife, somewhat resembling a couching needle, is here employed. A simple puncture is made, and then the tendon or tendons are divided. I shall not neglect, before my return in the fall, to provide myself with these instruments, called Bouvier's.

The next most interesting operations I have witnessed, are the very simple ones for varicose veins. This is almost daily performed in La Charité, and with one exception, with entire success. The case that proved fatal was that of a man who had had several pins deposited under the internal saphena, and in whom, after these were removed, phlebitis supervened. It is said his blood would not coagulate. But this certainly cannot be offered against the operation itself. We need only reflect how many have died after common bleeding from phlebitis, especially in Paris. The operation consists in depositing a common pin under the vein that is varicosed, and then twisting around its two extremities a silk ligature. M. Velpeau says he prefers a circular twist to the common twisted suture, because the vein is thus compressed at three points. Sometimes but one pin is used, but most frequently there are several. For instance, in the two last cases operated upon—in one on last Saturday, two were placed under the vein (internal saphena) in the leg, and two in the thigh; and in the second, the one operated upon, last Monday, four were deposited in the region of the ham or popliteal. In performing the operation, the patient either stands up or reclines in bed. When the pins are placed, the ligatures are drawn very tight, and no dressing whatever, not even a bandage is used. Only the points of the pins are removed with the bone-nippers, and they themselves are generally withdrawn at the end of a week or ten days. It is an operation, as may well be imagined, that produces but little pain; and is indeed far superior in simplicity, safety, comfort, and celerity of cure, to any mode yet devised for varicosed veins—the patient, in fact, walks to his bed in the ward from the operating table.

On Saturday, the 25th, I went to Necker Hospital to see M. Civiale. In waiting for him we entered the wards, and met young Bevard, a very promising son of the former Professor of Anatomy in the School of Medicine of Paris. He exhibited a case where a large abscess in the parotid region had produced, from lesion of the seventh pair of nerves, ectropium of the lower eyelid. Motion of the muscles of that side of the face had been lost, but not sensation. And he mentioned another case similarly afflicted, caused by a ball entering the ear and coming out very near the eye—being one of the gun-shot wounds of the recent émeute in this city. M. Civiale, after visiting his ward of eight or a dozen patients, entered his operating room and lectured a few moments on every case, and then operated successfully by crushing up a stone in the bladder—the patient voiding the fragments before us.

M. Civiale is a very fine looking man of about forty years old. He has outlived all the opposition of his rivals, Le Roy and D'Etoile, Amussat, &c. and silenced the murmurings of calumny. I am happy to inform you that he has already reaped a handsome reward for his ingenuity and perseverance, and now lives in the first style. He is altogether one of the most polite.
French medical men I have met with, and uncommonly liberal and generous to strangers.

M. Civiale has now almost entirely all the cases of stone that occur in and about Paris, and is frequently engaged with those from a considerable distance. In lecturing he is a very plain speaker, and deals exclusively in facts. In his clinic he dwelt upon the propriety of so placing the patient as to have the fundus of the bladder the lowest point, and thus avoid the neck of this organ in the manipulation, &c. with instruments, because this was the most delicate and sensible part of it. In operating he used an instrument modified by himself, but which much resembles Jacobson’s. In the introduction of the bougie, catheter, lithotrity instrument, &c. he is par excellence, the best I have ever seen. He never uses force, but the largest sizes seem as it were to be drawn into the bladder when he operates.

On Monday the 27th I saw Velpeau perform five operations: One for varicosed veins, two amputations of fingers; and two cases of hydrocele, of course with the tincture of Iodine, his favorite injection.

On Tuesday, the next day, he removed a carcinomatous breast—the operation lasted two and a half minutes.

On the 29th, I again went to La Pitié, and fortunately met Lisfranc, who I find has failed much since 1830. I regret to say his moral character is not good among his countrymen, though he has quite a reputation as a surgeon. He is the chief of the Hospital where he has labored so long. This morning he examined the womb, per speculum, of more than a dozen cases. Since the expose of his intern, he does not operate so frequently as he once did on the neck of the uterus. He now mostly cauterizes the ulcers or carcinomatous affections of this organ. He employs exclusively, as a caustic, the nitrate of mercury; and applies it by means of a mop. In his clinic, made after the visit to the wards, he said he had in the last ten years cauterized from two to three thousand cases in this manner. It is an operation that seldom, if ever, produces any pain. He exhibited this morning a case in which he amputated the neck of the womb fourteen years ago—the cicatrix he said was firm, and the cure complete. She visited the Hospital now for some tumefaction of the uterus. Lisfranc’s principal intern, and the only one it is said whom he makes his confidant, has nearly the half of his lower jaw amputated by his master. I saw several very interesting cases in his wards. One for instance, upon which he had operated for osteo sarcoma of the inferior maxillary repeatedly, until now, he has apparently, left only the two articulating pieces of this bone. But I hasten to call your attention to his peculiar dressing for recent wounds and amputations. He presented us a case and insisted upon the superiority of removing the dressings every day, beginning with the next after the operation. He first applies a linen compress well imbued with simple cerate, but made with yellow wax, because he says it contains more honey than the white, and then succeed the lint, and a handkerchief so folded as to cover the stump. This he presents to the profession as the ultimatum of after treatment in operations. Of all subjects in the world, the French are the most obstinate in yielding to union by the first intention. They will not believe the English or Americans—and
their practice is to prevent by all means, the direct union of wounds, or of opposite surfaces after amputation, and to promote suppuration.

June 1. Lisfranc is exceedingly unpopular among his professional brethren, and no wonder—he never mentions a name with much respect, but generally alludes to other surgeons as the parrots, or such an one has as much to do with surgery as the grenouilles (frogs) have with feathers. His manners are very brusque; he is exceedingly petulant, and says whatever he pleases, even in his lectures. He has a very loud and harsh voice, and often elevates it to a very high pitch. Still Lisfranc is a great surgeon—probably the best now in Paris—certainly in his after treatment and medical department, he is the most successful.

Yesterday I visited M. Louis, and was most cordially received by him; and last night I spent with our distinguished countryman, Dr. Mott, late of New York. I find he has just returned from an extensive journey in the East and Egypt. The Doctor, as you know, left home on account of his health—an affection of the heart. He has all his family with him—wife and nine children. He informs me that his health is quite re-established; and were it not for the education of his children, he would return at once, to New York, and resume the practice of his profession, to which he says he is too much attached ever to relinquish. He expects now to return in a year or two. He is at present engaged in committing to paper his views on the practice of Surgery, and with some practice among the Americans and English. He says he will be in no haste to publish; and when he returns to America, he wishes to confine himself to surgery, in its practice and teaching.

This morning M. Velpeau operated for club-foot in the case already mentioned. He made an incision in the skin, or rather a puncture with a lancet along the side of the tendon-Achilles, then introduced Bouvier's knife, a long narrow cutting needle, and divided the tendon by directing the edge towards the bones of the legs or forwards. The divided edges separated under the skin more than an inch at once, and the foot was extended. M. Velpeau also removed the tonsils of a young man—one with a hook and bistoury, and the other with a new instrument of his own, called by him a kind of guillotine—this operated remarkably well.

Monday 3rd. Visited this morning the wards of M. Roux, at the Hotel Dieu. Saw him remove a very large ball, by a counter opening, in a man wounded on the 12th of last May. After making his visit he entered the lecture room formerly so crowded by the great Dupuytren, whose successor he is. But what a change did I behold in that room, which I had so frequently entered in 1830 and '31. Then it was frequently impossible to be seated, and often contained from 400 to 600 students, collected from all parts of the civilized world—now, will you believe, the first bench is not filled? M. Roux is undoubtedly a very respectable man, and an eminent surgeon, but more especially is he celebrated for dexterity as an operator. But as a lecturer or even as a surgeon, he is far, very far inferior to the late Dupuytren. He is from Gascony, and even his own countrymen cannot understand his speaking in public. He is very rapid in his enunciation, hesitates very much for words, and labours much with his hands, frequently pointing
or bending his monstrous nose with the right index. He is the only man I cannot comprehend, that I have met with since my arrival. After lecturing near an hour, he operated on three patients. The first was a case of polypus of the ordinary kind. This he succeeded very well in removing with forceps, and the breaking it up from its attachments, by pushing it back with his little finger. The other two operations were only tolerably performed. The one for fistula in ano required near twenty minutes, and as many cuts with the bistoury; and the other was an amputation of the leg. This too was performed directly above the ankle, for a ball which had passed through this joint. He was three and a half minutes cutting off the limb—made two incisions to complete the section of the skin, turned up the skin which was dissected with a small knife, and after sawing the bones, had recourse to the knife to divide some portion of a muscle which had not before been detached. Altogether it was an operation that would not be even creditable to a tyro. So true is it that some of the best surgeons not unfrequently perform very badly. Dupuytren once took half an hour to tie the brachial artery.

I ought not to forget that in the track made by the ball, and the counter opening for its extraction, a long strip of linen was deposited by M. Roux. The wound had been opened for more than three weeks, yet to prevent its closing too soon a seton is employed. This was French surgery in 1790, and is French surgery in 1839; and will, I fear, be the same for years yet to come.

I find the immovable bandages or apparatus exclusively employed in Paris for fractures. M. Velpeau has the starch in which the bandages are placed, or covered with, made so as to dry very quick, by subjecting it to an acid. Patients generally walk about in three or four days with crutches.

M. Velpeau, in preparing the second edition of his Medicine Operatoire, wrote to Dr. Mott requesting him to give some idea of the success of American surgeons. This Dr. Mott soon furnished, but M. Velpeau, I learn from his chief intern, M. Perischaud, does not give credit to it. He says this is contradicted by the Statistics of Dr. Norris, one of the Surgeons of the Pennsylvania Hospital. I recollect being impressed with the great error which Dr. Norris' statement was calculated to produce, by those who take it as the basis of success of amputations in the United States. It no more conveys a correct history of American Surgery on this, than it does of any other subject. No surgeon of our country will consent to its being a correct foundation of statistics in surgical practice. All it can pretend to, and all that Dr. Norris undoubtedly intended by it, was the practice of the Pennsylvania Hospital, and nothing more. I respect the surgeons of this charitable Institution, but I am sure they even will acknowledge that they erred, and that greatly, though on the side of mercy, in delaying amputations during the period referred to by Dr. Norris. Who in reading these statistics will admit them as correct, as applied to the United States? And these being the only ones yet published in our country, it is not astonishing that a man of M. Velpeau's industry and penetration, should have noticed the contradiction to it in Dr. Mott's letter to him.

June 4th. At seven o'clock A. M. I went to the wards of La Charité, and
after making the visit witnessed two operations. The Surgeons here cut very free in cases of fistula in ano—like old Boyer, they are not satisfied with a simple opening of it, but remove the whole tract of the fistula. This I saw yesterday done by Roux, and to day by Velpeau. The second operation was also performed by M. Velpeau, who remarked that he believed it was the first ever performed in Paris. The case was that of a female from the country, aged near 50, who had carried for some years a stone in the bladder. This, from all the symptoms and signs of a calculous affection, was supposed to be very large, and after considering all the various operations proposed for women, M. Velpeau decided upon the vesico-vaginal section. He stated that this operation had been performed about 20 or 30 times out of Paris, in France, during the past few years, but never, as he believed, in the city. It was without danger to the life of the patient, but was almost always followed by a vesico-vaginal fistula. Nevertheless, taking all things into consideration, he thought this a case requiring the operation, which was accordingly performed, and an immense calculus removed, thus completely verifying his diagnosis. It measures two and three fourth inches by two, and weighs three ounces.

The little girl who had the eye extirpated and the lachrymal gland left in the orbit is doing very well. From the suppuration which still flows, I can not tell if there be no secretion of tears. The other little girl from whom M. Velpeau removed the large tumour under the axilla, is also nearly well—the last week the edges of the wound have been approximated, and it has healed very kindly.

At 12 M. went to the School of Medicine, and heard M. Bérard, aïné, lecture on Physiology. He is considered one of the best speakers in the present Faculty: He was to day on Respiration. I observed that he insisted upon a fibrous tissue or muscular fibres covering the lungs by which these organs contract. He says the reason, why an opening into both sides of the chest produces death, is because the air entering into the pleura, permits the lungs to contract, and not that the atmosphere through the two wounds in the sides causes it—for the pressure of the air on the inside and outside upon the substance of the lungs, can do nothing but balance each other.

At two to four o'clock, attended the ocular clinic of Dr. Sichel, and saw him perform three operations for cataract.

There is an interesting concours now going on for the chair of Therapeutics, formerly occupied by M. Alibert. M. Trousseau, I learn, is the most promising candidate.

Some Italian quacks are now in Paris making a considerable stir about a water which cures all diseases, and more especially stops all hemorrhages. It is said they have a certificate from Lisfranc, but they failed in procuring one from Dr. Mott, although they pressed him very hard. The truth is their water does promote the coagulation of the blood, some think chemically; but all its properties are not known. There is also an Englishman here who professes to dissolve the stone in the bladder. M. Velpeau has just offered him a case now in his wards.
MEDICAL CONVENTION.

We are truly happy to perceive, by the subjoined notices, that the attention of the medical profession is again called to the importance of a Convention of its members. And although the Faculty to which we are attached had the mortification, in 1835, to fail in an effort to bring about so desirable a meeting, (see the Southern Med. and Sur. Journal, September, 1836,) we still most heartily wish success to those who now urge the call. That a concentration of the talent and views of the profession, from the numerous institutions of our extended country, on the subject of medical education, would be fraught not only with benefit to those destined hereafter to enter the portals of our schools, but also with advantage to the country at large, cannot for a moment be doubted. The fact that the usages of our governments forbid their interference in matters of special education, renders it absolutely necessary that some body should be organized by the profession itself, for the purpose of regulating the mode of instruction, the requisitions for the Degrees conferred by its Schools, and for taking such other steps to elevate its dignity, as may be advisable from time to time.

It will be observed that, according to the notices given below, two Conventions are called—the one to meet at Washington City, in January, 1840, and the other at Philadelphia, in May of the same year. We hope that both will meet at the same time and place, and would suggest that preference be given to the month of May, inasmuch as the professorial duties of those attached to Schools would preclude their attendance in January.

[From the National Intelligencer.]

MEDICAL CONVENTION.

In obedience to a resolution of the Medical Convention of the United States, assembled in Washington City, in January, 1830, public notice is hereby given, that a similar Convention will meet at the National Hotel, in the said City, on the first Wednesday in January, 1840, for the purpose of revising the Pharmacopoeia of the United States.

Each State Medical Society, incorporated Medical College, and incorporated College of Physicians and Surgeons, is requested to elect a number of delegates, not exceeding three, to attend the said Convention.

The several incorporated bodies mentioned, are also requested to submit the Pharmacopoeia to a careful revision, and to transmit the result of their labours through their delegates, or through any other channel, to the next Convention.

They are further requested to transmit to the undersigned the names and residence of their respective delegates, so soon as they shall be appointed, so that a list of them may be published, for the information of the medical public, in the month of October next.

By order of the Medical Convention, assembled at Washington, in January, 1830.

LEWIS CONDICT, M. D. President.

Morristown, New Jersey, April 6, 1839.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

At a meeting of the Medical Society of the State of New York, held February 7, 1839, the following resolution was adopted:

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"Whereas a National Medical Convention would advance, in the apprehension of this society, the cause of the medical profession throughout our land, in thus affording an interchange of views and sentiments on the most interesting of all subjects, that involving men's health and the means of securing or recovering the same: Therefore Resolved, that in our opinion such Convention is deemed advisable and important; and we would hence recommend that it be held in the year 1840, on the first Tuesday in May of that year, in the city of Philadelphia—and that it consist of three delegates from each State Medical Society, and one from each regularly constituted medical school in the United States; and that the President and Secretary of this Society be, and they are hereby instructed and required to transmit as soon as may be, a Circular to that effect to each State Medical Society and Medical School in the United States."

By order,

LAURENS HULL, M. D. President.

B. Van O'Linda, Secretary.

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LETTER FROM DR. HARLAN.—NO. III.


PARIS, April 30th, 1839.

To the Editors of the Medical Examiner.

Gentlemen,—Numerous pressing occupations, up to the present time, have effectually prevented the continuance of my correspondence. For the same reason, I have taken no notes of my daily observations, but hope, nevertheless, that some account of the general results may not prove altogether uninteresting to your readers. The weekly meetings of the national Institute—the daily exercises of the hospitals—the tri-weekly open days at the Jardin des Plantes, together with the urgent demands of Parisian society, leave me but little time for other occupations.

The Academy of Sciences, the only section of the Institute open to the public, holds its séances every Monday, at 3 P. M. The seats in the area outside those of the members, are always filled with visitors before half past 2, and those who arrive later are not admitted. This would have proved a great barrier to my attendance, had not the urbanity of my friend, Professor Blainville, of the Jardin des Plantes, secured me one of the eight chairs immediately before the President's chair, and devoted to foreign professors.—The meetings are always well attended by the members; and more memoirs are usually presented than the Academy can receive, or by the perpetual secretaries, M. Arago and M. Flourens, would be able to despatch. The crowds of savans, both foreign and native, who always claim admittance, shows the general interest that these séances excite.

Among the numerous interesting memoirs to the reading of which I have listened, none has so much riveted my attention as the account of the Photogenic discovery of M. Daguerre—the first annunciation of which was considered as fabulous. M. Daguerre's office, adjoining his splendid diorama near the Boulevard, was daily beset with the curious, demanding to know the truth of this new power of fixing an image,—the inventor was obliged, in self-defence, to close his doors,—this was just before my arrival in Paris, and previously to the reading of the memoir before the Academy of Sciences, where this highly important and interesting discovery occasioned much dis-
Medical Intelligence.

1839.

Discussion and debate. I, however, enjoyed the rare opportunity of inspecting the portfolio of M. Daguerre, through the kind attentions of Mr. Walsh, by whom I was introduced. Whilst examining the unique productions of M. D.'s portfolio, and listening to his explanations, I felt as in the presence of a superior power. Among the principal productions of this new process presented to our admiration, I must mention 1st, a view of the great gallery joining the Louvre to the Tuileries; 2d a view, of l'Isle de la Cité, and the Towers of Notre Dame; 3d, views of the Seine, and several of its bridges; 4th, views of some of the Barrières of the Capital; 5th, views on the Boulevards; 6th, interior of the Chambers, with statuary, furniture, &c. These designs were of different epochs, from four years to four weeks, and were done at different seasons, and at various hours of the day, some by the light of the sun, some during a shower of rain, and some within door with a moderate light;—nothing could equal the beauty, accuracy, and perfection of these designs, which were equally magnificent when viewed by a magnifying glass, especially all immovable objects. The process will not succeed with objects in constant motion; as an example, we observed a pair of carriage horses, in which one of the animals was headless, that part having been in continual motion. In answer to my question, what time was required for the entire process, M. D. stated that he could prepare his sensitive paper in two hours, and complete the design in from five to ten minutes,—or, continued he, "I only prepare the paper, and hold it up to nature, and she executes the drawing."

The time necessary for the execution of a view, when a great power of tone is expected, varies with the intensity of light, consequently the process is affected by the seasons, and even by the time of day, and by climate; in Egypt, for example, a view could be executed in one-third less time.

The process of M. Daguerre not only exacted the discovery of a substance more sensible to the action of light than any hitherto known to philosophers and chemists, it was also necessary to possess the means of depriving this substance of this new property at will, and M. D. has the merit of accomplishing this also. When his designs are once completed, they may be exposed to the direct rays of the sun, without undergoing any alteration. The extreme sensibility of M. D.'s preparation is not the only character which distinguishes his discovery from those imperfect attempts formerly made to draw profiles on a layer of muriate of silver, which salt being white, is blackened by exposure to light, the white portions of the images becoming black, whilst the black portions on the contrary, remain white. Upon the prepared screens of M. D., the drawing and the object are both similar—the white corresponding to white, the demi-tints to the demi-tints, the black to the black.

To demonstrate the extreme sensibility of M. D.'s preparation, he has succeeded in producing an evident white impression from the image of the moon, thrown through the focus of a moderate lens upon one of his prepared screens. A similar experiment was once made with the muriate of silver, without any effect, by MM. Laplace, Arago, and Malus.

The modus operandi in producing these designs, when the paper is once prepared, will be readily understood by all who are familiar with the camera obscura originally invented by Porta; every one has admired the neatness, truth of colour, form, and tone, with which exterior objects are reproduced upon the screen placed in the focus of the large lens which constitutes the essential part of this instrument, and have admired only to regret that these beatiful impressions could not be preserved. These regrets, together with the poetical expression—"fleeting as a shadow"—are henceforward without an object—M. D. having invented an artificial retina upon which the optical image leaves a perfect and lasting impression; or, in the language of M. Arago, "in the chambre noire of M Daguerre, light itself reproduces the forms and proportions of exterior object with a precision almost ma-
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thematical,—the photometrical relations of the various white, black, and gray parts, are exactly preserved,—but the red, yellow, green, &c., represent the demi-tints, for the new method creates designs, and not coloured pictures."

But, such designs! There is nothing in the arts that bears any analogous approach to them; the water is real water, the sky and clouds represent realities, the perspective and shading are the perfection of nature.

The invention of M. Daguerre is the result of the assiduous application and labour of many years, during which he had as collaborator, M. Niépce, of Chalons-sur-Saône, recently dead. Some declarations as to priority have been published by Mr. Talbot, of London, but he has failed in establishing his priority, and results of his process are not similar to those of M. D.; in Mr. T.'s impression the white portions of the image are black, and the black are white.

I regret to add that this inimitable portfolio of M. Daguerre, together with the splendid painting constituting his diorama, was reduced to a mass of smoking ruins in three days after our visit; the premises took fire at 2 P.M., whilst M. Daguerre was only visiting Professor Moss's, examining his Electro-Magnetic Telegraph, and as M. D.'s property was not insured, his prospects, at present, are ruinous.

My object in the present letter being to communicate results, rather than details, I must not enlarge further on other numerous and interesting memoirs presented to the Academy of Sciences; there is no subject, more or less related to science, that does not, some time or other, come under discussion at its séances. A curious fact was stated recently in a statistical memoir, viz; only one case of disease out of thirty occurs among the prostitutes of Paris—one of the happy results of the sanitary laws, which exact a weekly surveillance of medical inspectors; but even this three and a half per centage is enough, in such a town as Paris, to fill two large hospitals,—and the disease in question is indubitably a prevalent one among the "gentlemen" of Paris. These, probably, obtain this proof of "attachment" from a class of society "above suspicion."

An "epizootic" or epidemical disease prevailed among the cows last winter in the neighbourhood of Paris; it was characterized by a contagious, vesicular eruption on the udder; it formed the basis of several memoirs of the professors of the Veterinary School at Alfort. The disease was never fatal, nor did it communicate any deleterious qualities to the milk, and it is only referred to now to show how much attention is paid to this interesting department of science by the savans of Paris. It is also recorded that the cows at Passy have recently been affected with the "cow-pox." The opportunity of fresh revaccination was improved with happy effect, he vaccine thus obtain being much more active. The question was started also whether or not the cow was originally affected with this disease by inoculation from the human subject. I presume the experiment will sooner or later be made to inoculate the cow with the natural small-pox matter, and the modifying results noticed. We often listen to instructive memoirs on comparative anatomy, (especially fossil osteology,) geology, geography, rural economy, &c. &c., which, together with a very important memoir on the diseases of the silk worm, which destroys millions of worms in this country and which consists in the growth or development of a species of cryptogamous vegetable of the genus Muscardine—the subcuticular adipose matter of the worm—we must refer to another opportunity.*

* Inasmuch as silk culture appears to have taken root at last in our country, and will soon, no doubt, add greatly to its agricultural resources, I may here remark, that excellent memoirs on the Muscardine, by Professor Audouin, have been communicated to the Academy of Sciences, and which were subsequently
Parisian hospitals and French surgery might be presumed, *a priori*, to be the first objects of attraction to a practical surgeon; but I cannot but confess that a longer acquaintance with them, a more extended course of investigation, and a more familiar intercourse with their most eminent teachers of surgery, have in no small degree lessened the admiration with which I once viewed the éclat generally attributed both to the men and the institutions, published in the "Annales des Sciences Naturelles" for October and November, 1837, January, 1838, and in the "Comptes Rendus" for the 22d April, 1839—M Bassi, of Lodi, was the first to announce, in 1835, the cause of this pestilence, so long the dread of the silk cultures of Italy and the South of France. When a colony of this useful insect is attacked, its ravages are instantaneous and general; none of those attacked have any chance of escape.

After numerous experiments, M. Audouin has arrived at the following conclusions, viz.:

1st. That the Muscardine may be spontaneously developed, and in all places, when certain combined circumstances favour this development.

2d. That it is not a disease confined to the silkworm, but that it is general, and may be exclusively peculiar to the class of insects.

3d. That the disease, or Muscardine, may be propagated not only from silkworms to insects of very different species, but that, having spontaneously arisen among one of these species, it may, when transmitted to the silkworm, produce in them the same disease which shows itself in silk establishments, (magnaneries,) and which is designated under the name of "Muscardine."

4th. That during this transport, which may be indefinites varied by operating upon insects of orders, families, genera, and species, different or alike, the cryptogamous plant, and the disease which it produces, experience no change.

5th. That if the dissemination of the sporules in the air, be the means which nature employs for the reproduction of the plant, its artificial development may, nevertheless, be produced by inoculation of certain of its parts—its thalli, for example—in the adipose tissue of the insect; that is to say, in the same soil in which the sporules have already vegetated.

6th. In fine, by this artificial mode of infection, the cryptogame invades the adipose tissue much more rapidly, which occasions more promptly the death of the animal.

Subsequently, the following letter from a well-known agriculturalist, M. Poidbard, of the department of the Rhône, was communicated to the Academy of Sciences:—"There has resulted from the repeated experiments and observations which I have made in my magnanerie, (silk establishment,) a very important remark, viz. a magnanerie, annually infested by the Muscardine, may, nevertheless, be made to yield a good harvest, by anticipating the period of the invasion and development of the disease by accelerating the education of the worms, which will allow them time to finish their cocoons before the germ of contagion has made progress enough to occasion a general mortality.

The following are the experiments on which my opinion is founded:—

1st. The silkworms of the white race, named Sina, whose term of existence does not exceed thirty days, reckoning from birth to the completion of the cocoon, have been constantly less injured than those of the yellow race, whose term of existence extends ten days longer.

2d. The most precocious of the worms of the white race, were in no way affected by the disease.

3d. Those a little tardy were affected, in small numbers.

4th. The more backward perished in much greater proportions.

5th. Finally, the yellow silkworms, much more tardy, were nearly all destroyed.

It has been incontestably proved, that contagion is one of the most constant characters of the Muscardine.

I am convinced, Messrs. Editors, that you will not consider the above extracts foreign to the purposes of a medical journal; you know too well the extent to which the investigation of the diseases of the inferior animals has tended to the elucidation of the philosophy of life and disease in our own species.
stutions. It is true, we cannot too much admire the long-continued and laborious application by which they have attained perfection, as anatomists, and the consequent manual dexterity in operations, so universally admitted as a distinguishing characteristic of French surgeons,—and here their dexterity or superiority ends. Not only so: this dexterity itself has been obtained at the expense of principle, and at the expence of life; thousands are annually consigned to a premature grave by operations not always necessary to be performed at all, or improperly timed, or performed in cases that must terminate fatally, with or without operations. The mortality occurring at the Hôtel Dieu, perhaps one of the best, is absolutely frightful in amputations alone; the surgeons admit a loss of ninety-five per cent.; and one of the interns admitted, that during his residence for one year at the Hôtel Dieu, not one case of recovery occurred after amputation! I esteem M. Roux, the surgeon-in-chief of this extensive institution, as a personal acquaintance, and would not heedlessly detract from his hard-earned reputation; and in thus alluding to the results of my own personal observations, I have the interest of science only in view.

M. Roux possesses a grave, earnest, and decided character; but, like most others of his profession here, he is over-fond of displaying his manual dexterity. I have heard him beseech a patient to submit to an operation, as if it was the greatest favour conferred upon the operator; the operation once performed, the patient is pretty much consigned to his fate, for the after treatment of French surgeons I consider little better than no treatment at all. The constitutional demands, the habit, diathesis, or idiosyncrasies of the patient, are almost universally and entirely overlooked, and hence, together with the foul air of the hospitals, the dreadful mortality of these pesthouses. On the very first coup d'œil of the wards of these hospitals, nothing but disastrous consequences could be anticipated from one hundred to one hundred and fifty human sufferers, crowded together, side by side, and exhaling each the noxious effluvia peculiar to the gorgon form of diseases which afflict the inhabitants of rooms constructed on the worst possible principles for the purposes intended, and in which ventilation was not thought of, and where classification of disease has never been attempted. The unhappy effects of a foul atmosphere, in cases of wounds, are familiar to every professional reader, as a remarkable instance of which, we may refer to the Dutch army at Batavia when attacked by the British navy, when every case of solution of continuity, however slight, resulted in gangrene. As a lecturer, M. Roux is animated, though by no means eloquent. During a private visit I held with him at his house the other day, he complained seriously, and lamented the state of French surgery of the present day in comparison with its former state; no one surgeon now he said, could obtain half so many operations as formerly,—there were so many hospitals, and then each institution was “si partagé,” “si isolé,” there being eight or ten surgeons to each, and then almost every department of surgery being pursued in particular by some surgeon of eminence, that but few opportunities, comparatively, were left now-a-days for the surgeon of a general hospital to show his skill. Only seven cases of lithotomy occurred in his own wards last year. Thus the diseases of the eye, the ear, hernia, club-foot, affections of the bladder and urinary organs, venereal disease, &c. &c., have each a hospital devoted exclusively to themselves. M. R. is on the most familiar terms with his patients. In going his daily rounds from 7 to 9 A. M. he has always something funny, encouraging, or coaxing, to say to them all; for one he has a poke in the ribs with his finger, for another a box on the ear, &c. I have seen him make a convalescent reel with a blow on the side of his cheek, for asking him for something good to eat—all in the best possible humor. He sometimes becomes very affectionate, and kisses a patient on whom he has just inflicted a severe operation; and this salute, the students say, always prognosticates the death of the sufferer.
M. Roux mentioned to me Physick, Warren, and Mott, as the only American surgeons with whom he was acquainted; and judging from them, said he wondered at the large and rapid fortunes that were accumulated by American surgeons—a consummation which he feared would never attend the efforts of Parisian surgeons.

In person, M. Roux is rather beneath the ordinary stature, of a sanguine-phlegmatic temperament—features blunt and ill-favored—one eye projects from its socket, and has a cast in it. When earnest in discourse, his countenance is especially contorted.

Dr. Blandin is also attached to the Hôtel Dieu. He has lately been coaxing his stumps to heal, by the application of warm air after amputations, the stump being enclosed in a glass cai'see, and air heated to the natural temperature of the body caused to pass constantly through it, is left without further dressing. Healing by adhesive inflammation, until within the last few years, was unknown in Parisian hospitals; from time to time some of the surgeons have attempted the adhesive process, but they are by no means fully aware of its importance. These stumps appeared to be granulating well, which may probably be accounted for by the simple circulation of air thus artificially produced. He has not yet published his results. It appeared to me rather an empirical practice.

Previously to leaving the Hôtel Dieu for the present, I must allude to Professor Breschet's method of operating for the radical cure of varicose veins. Your professional readers are already familiar with the construction of his instrument, consisting, briefly, in two parallel pieces of steel, brought together by screws, so as to press upon the included veins; the pressure is continued for several days, the patient keeping his bed; the integuments included above and below the veins slough; the veins are involved in the inflammation, and their sides adhere, obliterating their calibres. I have seen but one case involving the cord on both sides, in which the cure was apparently completed, the instrument being used on one side at a time.

On contrasting this operation with the method practised by M. Velpeau, of La Charité, I gave the preference to the latter; it is less tedious, less complicated, less dangerous, and, what is no inconceivable advantage, it is applicable to enlarged veins in any part of the body. M. V.'s method consists, simply, in passing a strong needle beneath the vein, and applying a ligature in circles, and not the figure of eight ligature. In a few days numerous veins are thus obliterated.

I have not been so forcibly impressed with any surgical improvement, since my arrival in Paris, as that of the treatment of fractures on the plan of Suetin and Velpeau, by means of "Dextrine" bandages. In my opinion, nothing but prejudice, superannuated or personal, can prevent the universal application of this method by all who are acquainted with it. Some of the Parisian surgeons have thus neglected it. At La Charité all other plans have long since been banished; and Velpeau and his assistants deserve much credit for the very great dexterity with which they so successfully treat all cases of fracture. There is, at present, a patient under treatment for fracture of the tibia and fibula, who was permitted to walk the ward in five or six days after its application. The same occurred since our arrival here, in a case of fracture of the os femoris, where the patient walked in 15 days after the application of this bandage. These precocious efforts in similar cases are not, however, advisable. Its application to the treatment of fractured thigh is more effectual than any of the other methods, besides being so much more agreeable to the patient, and so much more speedy in its results, and so little troublesome to the surgeon, one single application being generally sufficient, especially if, before applying the bandages, sufficient time is allowed to permit the subsidence of all tumefaction; for this purpose, the patient is permitted to rest in any easy position for three or four days, when, if the bandage does not become loosened by the subsequent
atrophy of the limb, a single application will suffice for the cure—but even in
case of reiterated application, it is less troublesome than the usual method.

The following is Velpeau's method of application in fractures of the os
fenoris: the limb is in the first place enveloped in a common roller; a piece
of bandage is then crossed over the ankle, for the purpose of extension, and
over these is placed another roller, thoroughly impregnated with the prepared
paste; compresses of coarse paper, similarly soaked, are applied over the
fracture, and other prepared rollers applied over these,—coarse paste-
band compresses, softened by similar soaking, are also applied, and kept in
position by other rollers. The extension is now made by tying the bandage
from the ankle to the foot of the bedstead, (which are all of iron in these
hospitals) and counter-extension is made by a strap passed between the
thighs, and made fast to the bedstead above the head. The bandages har-
den in few hours, and the limb is incased in a solid coat of mail.

Experiments have been made with numerous adhesive materials, such as
starch, glue, paste, gum, &c., as substitutes for the, "Dextrine" bandages
now used exclusively at La Charité, all the others having been proved less ef-
fectual; gum arabic bears the nearest approach to it, but this is too expen-
sive. The "Dextrine" is made by boiling starch in dilute nitric acid, and
when separated from the liquor and dried, the powder costs about thirty
cents a pound. One great advantage which this powder possesses over
starch is, that it may be made into a paste with cold water, the former re-
quiring boiling water. A very excellent and cheap substitute for linen or
muslin bandages has been found in coarse paper, cut into suitable length and
breath, and soaked in this paste previously to their application; there can
be nothing more effectual than a Scultet's bandage thus applied,—a method
of economizing by no means beneath the notice of Parisian hospital sur-
geons, especially since a recent ordonnance of government, which obliges
them to substitute paper for linen compresses—the savings thus accruing to
be devoted to the gilding of that magnificent temple, the Madeleine church!
A more detailed account of this "Dextrine" may be found by referring to
"Orfila's Chemistry."

M. Velpeau has been most unfortunate in the loss of patients in La Cha-
rité, in which hospital the mortality has been greater than in any other estab-
lishment. In addition to the usual causes which have gained for this hospi-
tal so mortifying a distinction, there has prevailed during the last winter
and present spring an erysipelatous diathesis, which has desolated its wards,
—so that a puncture of a nail, the simple operation of extirpating a small
ganglion from the neck of a healthy subject, the operation for the radical
cure of varicocele, and amputations of all kinds, fractures, &c. I have seen
terminate fatally in numerous cases; and yet M. Velpeau continued his
operations, and appeared astonished himself at their want of success, and is
far from taking advantage of the best means of averting the evil; his con-
stitutional treatment is worse than nothing. A patient was admitted with a
wound in the heel by a nail; erysipelatous inflammation followed, and was
continued to the ankle-joint, producing suppuration, irritation, and death.
No measures were resorted to in order to rally the powers of a broken con-
stitution; and in the autopsy and lecture on this subject, M. V. expressed
his inability to explain his want of success in the treatment of the case, and
viewed the death of a patient from the simple puncture of a nail as an oppor-
brum to surgery! But human life, it is said, is of very little account with
French surgeons. M. V. operated five times successively for disarticulation
of the knee, and in every case his patients died.