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Medical College of Georgia.

"Je prends le bien où je le trouve."

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ARTICLE XIV.

"The Philosophy of Medicine;" an Address, delivered before the Graduates of the Medical College of Georgia, on the 20th of March, 1849. By John Le Conte, M. D., Professor of Natural Philosophy and Chemistry, in Franklin College, University of Georgia.

Gentlemen, Graduates:

It is recorded of the immortal Newton that, whilst contemplating the simplicity and harmony of the laws by which the universe is governed, as manifested in the relations which his gigantic mind developed between the distant and apparently unconnected masses of the planetary system, his thoughts glanced towards the organized creation; and reflecting that the wonderful structure and arrangement which they exhibit, present in no less a degree the indications of the order and perfection which can result from Omnipotence alone, he remarked, "I cannot doubt that the structure of animals is governed by principles of similar uniformity."—("Idemque dici possit de uniformitate illa quae est in corporibus animalium.")

More than one hundred and fifty years have elapsed since this opinion of the greatest of men was promulgated. During this period, what immeasurable advances have been made in all the sciences! Astronomy has approximated perfection; in every department of the mechanical art the scale and scope of progress are as vast, as its character and attributes are substantial.
and solid; the laws of electricity and magnetic phenomena have been unfolded; chemistry has opened new fields of investigation and established new laws; and even the complex phenomena of meteorology have been partially disentangled. But while all this activity is displayed in connection with the advancement of the sciences which appertain to inanimate objects, does the spirit of the age withhold its influence from the science of life? Has the labor of its cultivators been barren and unproductive? Have they unfolded none of the laws of organization? In short, has that science, to the pursuit of which we are devoted, stood still, while its kindred of the great family of knowledge have advanced with gigantic strides? Shall we conclude that because charlatanical devices spring up, and continue to attract the heedless multitude by their cunning delusions, that the professors of legitimate science have been idle? Assuredly not. There is, in truth, no branch of knowledge which, in the conviction of those who are capable of judging, has of late years made advances more rapid and more solid than medicine. In acquaintance with the intimate phenomena of diseased processes and products, we, of the present day, have vastly outstripped our immediate predecessors; in the facility with which we recognize the existence, and in the accuracy with which we define the characters, of maladies during life, we are incomparably their superiors; in the great object of our art, that of mitigating the sufferings and controlling the ravages of disease, our capabilities have notoriously become increased and invigorated. But, above all, we have the more substantial proof that our slow and steady labor tells, in the grand truth, that the mean duration of human existence is on the increase.

But while we thus bear testimony to the great and important progress which the science of medicine has made, yet, it must be admitted by every candid inquirer, that all the zeal and industry of its cultivators have failed to establish on a solid and enduring foundation, any grand and comprehensive law of the animal economy, such as must have been contemplated by Newton in the extract which was given at the commencement of this address. Many subordinate principles of the science of organization have been based on a secure foundation; and
many more, which were at first doubtful, are daily receiving fresh confirmation; but they have been unsuccessful in unfolding laws of the highest degree of generality, such as have rewarded the labors of the students of physical science. Are we to infer from this fact, that the Creator of the universe, who has manifested the severest and most refined geometry in the construction of inanimate nature, has abandoned all law and rule in the construction of organized beings? Was Newton mistaken when he prophetically announced that, similar uniformity must characterize the structure of animated nature? Certainly not. In the ever-varying conditions of the animated world, a very superficial glance will display to us a certain degree of regularity and derangement; and the more attentively we investigate the relations which its changes present, the more stable and definite is the assurance we obtain, that they are all harmonized and controlled by fixed laws, which are but simplified expressions of those conditions of action which the Creator has imposed upon organized no less than upon inorganic matter.

Impressed with these ideas, I have thought, that the causes which have impeded the advancement of the science of life, and the consequent improvement of the art of medicine, together with those which may have conduced to its recent progress, would form an appropriate topic for to-day's consideration. It is well to premise, that the negative and positive sources of advancement are too numerous to allow of more than a cursory notice of some of the more prominent ones.

As vital phenomena have excited the attention of all classes of men, from the earliest ages of the world, and have probably formed the most ancient and universal theme of conversation and speculation, both with the learned and unlearned, we should naturally expect, that medicine ought to be one among the most advanced of the sciences; because, for thousands of years, it has been the object of the labors of so many intelligences. Unfortunately it is not so; and the reasons are sufficiently obvious to the reflecting mind. When we consider the peculiarly intricate conditions connected with every physiological problem—the large advances that must be made in many capital portions of knowledge, before one successful step can be made in this, we readily perceive, that a thousand complicated inquiries beset
the investigator at the very threshold of physiology, stimulating him to ardent investigation, and inspiring him with wholesome caution. Indeed, the complication of the processes carried on in the organized kingdom, the widely-extended circle of their agency, and the ever-varying results of their compound influences, appear to have been almost too much for the mind to comprehend as a whole; and the powers of reason have been bewildered in the inextricable labyrinth of causes and effects—of actions and reactions. This is no fault of its cultivators, who have comprised in their list the highest and most varied talents and industry, but of the inherent complexity of the subject, and the infinite multitude of causes which are concerned in the production of every, even the simplest, vital phenomenon.

But there are other reasons why medicine cannot possibly advance at a pace equal to that of the other branches of science. It is true, a vast number of observations have been made on the phenomena of life; but they are, at the same time, observations in the most restricted sense of that word. We observe the phenomenon presented to us, but cannot modify and vary it at pleasure; we cannot reproduce it at will. In a word we cannot have recourse to experiment. We are hence compelled to register facts; and, as Sir William Herschel has very well observed, we resemble a man who hears now and then a few fragments of a long history related at distant intervals by a prosy and unmethodical narrator. In recalling to mind what has gone before, he may occasionally connect past with present events; but a host of circumstances omitted, or forgotten, and the want of connection, prevent his obtaining possession of the entire story. Were we allowed to interrupt the narrator, and ask him to explain the apparent contradictions, or to clear up any doubts on obscure points, then might we hope to arrive at a general view. The questions that we would address to nature are the very experiments of which we are deprived in the science of organization. The obstacles which interpose themselves to the prosecution of this science, result more from that difficulty in the ascertainment of facts and the observation of phenomena, which is occasioned by the peculiar conditions of living beings, than from any incapability on the part of these facts and phenomena to be comprehended within laws as stable
and as definite as those of the purely physical sciences. Thus, although the structure of the human body has been carefully and minutely examined by so many thousands of Anatomists, how many points are still uncertain, and how much still remains to be discovered! The difficulties which beset the path of the physiological inquirer are still more appalling. The complexity of the combinations in which vital phenomena present themselves is such, as to baffle all attempts at analysis, while their dependence upon one another is so intimate, as almost entirely to preclude their separate examination. "Were we able to ascertain the changes which take place in the interior of the living body, with the same ease that the astronomer watches the motions of a planet, or the chemist observes the formation of a precipitate,—the very multiplicity of these changes, and the variety of conditions under which they occur, would be of essential service in the determination of their laws, instead of being, as at present, sources of doubt and embarrassment. The chemist, when desirous of establishing to which of the ingredients in a given mixture a particular effect is due, places each separately in the conditions required to produce the result: but the physiologist finds that the attempt to insulate any one organ, and to reduce the changes performed by it to definite experimental investigation, necessarily destroys, or considerably alters, those very conditions under which alone its functions can be normally performed. Take away an important and essential part of a living being, and it ceases to exist as such; it no longer exhibits even a trace of those properties which it is our object to examine; and its elements remain subject only to the common laws of matter. We cannot, like the fabled Prometheus of old, breathe into the lifeless clay the animating fire; we cannot, by a judicious and skilful arrangement of those elements, combine them into new and artificial forms so as to produce new and unexpected phenomena."—

(Carpenter's Gen. et Comp. Physiol., 2d ed., p. 3.)

Moreover, all the phenomena of life are, at present, almost wholly removed from the logic of quantity. Now, so far as the logic of quantity is applicable, so far are we certain of our conclusions, as certain at least as we are of our own existence. But when this logic cannot be applied, our conclusions are no
longer such as must be—no longer follow from our premises as necessary consequences; but are only, for the most part, such as may be; that is to say, have no more than that degree of probability which arises from the evidence we have of the truth of the phenomena or events, forming our premises. In all knowledge depending on mere observation, what we know is grounded on our own observation and experience, or on that of others. What we ourselves observe, we too often observe very imperfectly; or do not understand, when observed. But phenomena or events, the knowledge of which we are obliged to receive at second hand, on the testimony of others, and which may have been observed through the distorted medium of ignorance or of prejudice, may even have been wilfully misrepresented—of these we have a still less assurance. If the phenomenon or event be of frequent occurrence, or if its nature be such, that it is capable of being brought under our own observation; in order to remove our uncertainty, we endeavor to observe it ourselves. Such is the method we pursue in obtaining all that knowledge which is the result of mere observation. The different events succeed one another, but we know not wherefore; we see not their mutual connection. We believe that one phenomenon will, probably, follow another; because the one has generally followed the other, or because of some other probability; but we cannot discover that necessary connection between the two phenomena, which so irresistibly leads us to determinate conclusions, where we can apply the laws of quantity.—(Prout. in Bridgewater Treatise.)

In medicine, the objects to be examined are, beyond comparison, infinitely more variable and complex than in any department of physical science. And as the complicated phenomena of health and disease are made up of elements which allow of no exact measurement, the description must necessarily be clothed in the imperfect and inexact language of the senses. The imperfections of medicine as a science are consequently inherent in the subject itself.

The physician, unlike the mathematician, is not the creator of his own science; unlike the astronomer, he has no simple relations of matter to deal with; he cannot, like the chemist, make any two things which he examines or uses identical; the
objects of his study are more variable than the winds and tides, and the materials with which he works infinitely more difficult to adapt to their uses than the matter which the mechanic or the engineer presses into his service. In all his preliminary studies (with the exception of inorganic chemistry), in all his original inquiries, in all his practical applications, he encounters the varying effects and complicated phenomena of life. The human frame unites within itself all that is most wonderful in contrivance and most elaborate in workmanship. Its structure as much surpasses the most skilful work of man's hands, as its functions do the play of his most ingenious mechanism, and its products the results of his most refined chemistry. That which he knows bears no proportion to that of which he is entirely ignorant; what he sees, he sees but darkly; much of what he does, he does but guessingly. He seeks for causes, but they elude his search; they baffle him at every turn; he strives, as it were, to seize them by force, but the violence which he uses devours itself, and the tortured body dies that it may preserve the secret of its life. "Such, and so inscrutable is the body in health; disease surrounds it with new mysteries."—(Vide. Brit. and For. Med. Rev., July, 1841.)

The aspect of living nature is everywhere characterized by boundless variety, by inscrutable complexity, by perpetual mutation. Our attention is solicited to a vast multiplicity of objects, curious and intricate in their mechanism, exhibiting peculiar movements, actuated by new and unknown powers, and gifted with high and refined endowments. In place of the simple combinations of elements, all organic structures, even the most minute, present exceedingly complicated arrangements, and a prolonged succession of phenomena, so varied and so anomalous, as to be utterly irreducible to the known laws which govern inanimate matter. How are we to find law and order in such diversified combinations? How are these anomalies to be explained? Must we say that nature is capricious? Assuredly not; for these anomalies are due to the action of the very causes which give rise to the other phenomena. An isolated observer, however much he may be supposed to be endowed with perseverance and sagacity, could not possibly arrive at a plausible explanation. Overwhelmed by the multiplicity of objects, and
lost amidst the complication of phenomena, he soon becomes dismayed by the magnitude and arduous nature of the investigation. He is ready to ask, shall we ever comprehend the nature of the subtile and pervading principle, by the agency of which all the wonderful phenomena of life are produced, and which, combining into one harmonious system so many heterogeneous and jarring elements has led to the formation of this exquisite frame, this elaborate machine, this miraculous assemblage of faculties? Perhaps, we are still far from the time when we shall be able to penetrate the dense veil which nature has thrown over the interior machinery of life, and discover the long-sought clew to the mazes of this perplexing labyrinth. It may even be said to be problematical whether this time will ever come. But though the complete solution of the problem may remain unattainable, its partial solution may still be anticipated; indeed, the effort to understand the phenomena of the universe is still the highest, as it is the eternal goal of all scientific investigation. Whatever difficulties may have hitherto opposed the development of the science of medicine, it has unquestionably made very notable progress since the end of the last century; and it now advances with a slow and steady pace. Future ages will erect the edifice, of which we have laid the foundations; and we may already say, that the general plan is simple, and that its apparent complexity arises from the close connection of the parts with each other,—a connection so intimate, that it is difficult to circumscribe the limits of the phenomena. The more deeply we penetrate into the mysteries of nature, the more harmony do we detect; the more do we perceive the connection of phenomena, which, severally and superficially regarded, seemed long to resist every attempt at co-ordination and arrangement; the more do we see simplicity, order and beauty.

With these reflections, permit me to pass on to the consideration of the causes which have conduced to the recent advancement of medical science, and its kindred departments.

1. One of the most efficient causes of the recent improvement in medical science seems to me to be the virtual abandonment of all exclusive systems. Since the period when men, shrinking from the toil of severe observation and induction, yielded to the easy pleasure of fabricating à priori doctrines of disease,
systems upon systems have followed each other in endless succession, interchange and admixture. Could such systems advance true knowledge? The answer becomes easy, when the manner in which they were conceived, is for a moment considered. A few facts are observed,—it might be one, it might be two, or, with the more sober of the founders of systems, a somewhat greater number; these facts may have been observed carefully and accurately, as far as the state of general acquirement, existing at the period, permitted. But all the accuracy in the world could not increase their number—they remained but one, or two, or at best a very few. Now, in the characters and relations of this fact or these facts, a quick apprehension fancied it caught some ruling principle: the principle thus presumed to be discovered, was forthwith generalized, and made the basis of a theory, whereto all the phenomena of disease were to be referred. Disregarding the first principles of just reasoning, these men, ambitious of scanning Nature's mysteries without moving from their easy chairs, succeeded too often in persuading the multitude that they had in their theory, laid bare the secret engine whereby the phenomena of disease were worked. The general hypothesis was thus established with the pretensions and weight of demonstrated truth. Meanwhile facts went on accumulating, some supporting (either really or apparently), others as distinctly opposing, its provisions. All opposing facts, were, in the first enthusiasm for the new doctrine, set aside. But facts of this conflicting order still went on,—they were noticed in so many quarters, their learning and importance were urged by so many persons, that an impression at length arose as to the possible fallacy of the doctrine; symptoms of declining veneration for their doctrinal idol might, by a shrewd spirit, be traced in the multitude. At such a juncture there was ever a new theorist, a new dealer in first principles, to be found; seizing the propitious moment, he started the doctrine to which his reveries had led him, and had the joy to see it raised to the just-vacated pedestal. Such has been the course of things from time immemorial,—from one false system to another, men have wandered in a state of perpetual transition. The unsatisfactoriness of all such attempts, and the necessary consequence of this, a constant alteration and suc-
cession of inappropriate hypotheses, were indications of the progress which was going on towards a more genuine form of the science.

But the emptiness of all systems founded upon à priori reasoning, might be inferred from certain primà facie peculiarities, which characterize them all. While the phenomena of nature and the laws governing them have been, and will ever continue, immutable, these systems invariably bear the stamp of certain continued and changeable circumstances. In many of them may distinctly be found the impress of the marvel-worship and superstition of the dark ages, in which they were conceived; in others, the temporary impulse given to some one of the collateral sciences may be traced; in others, the peculiar social circumstances, amid which individuals have been placed, have had a striking influence upon the theories they have originated. In all—the finite, the temporary, the unstable qualities of even the brightest of man's conceptions, as compared with the infinite, the enduring, the stable attributes of nature and her laws, stand forth in impressive contrast. It would be easy to show that every system in medicine may, in respect of its origin, be placed in one or other of these categories; but I need not pause to illustrate this point, as your studies must have afforded numerous examples of the correctness of the opinion.

Rejoice, then, gentlemen, you who start upon the career of medicine, that the day of exclusive systems has, practically speaking, passed by,—at least among the most intelligent members of the profession. Rejoice, that we are neither Pneumatists, nor Archæists, nor Animists, nor Vitalists, nor disciples of the Jatro-chemical or Jatro-mathematical creeds, nor Brunonians, nor Solidists, nor Humoralists, nor Broussaisians, nor Rasorians. Rejoice that, instead of all this, our boast is to be simple observers of Nature, who seek by patient and close investigation to ascertain the facts of our science. The history of all sciences warrants the assertion, that all myths concerning imponderable matters and special vital forces inherent in organized beings, only render views of nature perplexed and indistinct. Reason, boldly and with increasing success, now seeks to break down the ancient forms, by means of which, as with mechanical contrivances and symbols, man has still been wont
to strive to obtain mastery over rebellious nature. Let us, therefore, hail the abandonment of exclusive systems in medicine, as a propitious omen. Even the most perfect of the physical sciences, anatomy, had to pass through a similar cycle of unsatisfactory hypotheses, before any great positive discoveries were fixed and perpetuated in conspicuous and lasting truths. Well has it been said, by a talented writer of the present day, that it is "a condition of our race, that we must ever wade through error in our advance towards truth; and it may even be said, that in many cases we exhaust every variety of error before we attain the desired goal. But truths reached by such a course are always most highly to be valued; and when, in addition to this, they may have been exposed to every variety of attack, which splendid talents quickened into energy by the keen perception of personal interests can suggest; when they have revived undying from the gloom of unmerited neglect; when the anathema of spiritual, and the arm of secular power have been found as important in suppressing, as their arguments were in refuting, them—then they are indeed irresistible. Thus tried, and thus triumphant, in the fiercest warfare of intellectual strife, even the temporary interests and furious passions which urged on the contest have contributed in no small measure to establish their value, and thus to render these truths the permanent heritage of our race. Viewed in this light, the propagation of error, although it may be unfavorable or fatal to the temporary interests of an individual, can never be long injurious to the cause of truth. It may, at a particular time, retard its progress for a while, but it repays the transitory injury by a benefit as permanent as the duration of the truth to which it is opposed."—(Vide. Babbage's Ninth Bridgewater Treatise, p. 28.)

2. In the second place, the vigorous and healthy tone of recent medical progress, may be traced to the declining veneration for what have been termed "authorities" in medicine. It follows, as a natural consequence of the intellectual, and even physical, inequality of men, that some individuals become distinguished for superiority of scientific attainments. To the decision of such men, on points of science, respect is most unquestionably due. But daily experience as unquestionably
shews, that this respect may be carried so far as to amount to a positive evil. The grateful sense of their scientific worth, the acknowledgement of their mental superiority, too habitually sink into an overwrought reverence for all they say or do. That confidence which should be bestowed with gravest caution, and which should never place its objects beyond the pale of severe scrutiny—which ought to act, by the stimulus it afforded to intellectual exertion, as a means of advancing science, is, on the contrary, lavished on these men with careless prodigality, and raises them above the reach of criticism. The merest speculations, if sanctioned by them, pass current as established truths. In other words, these persons become "authorities." The results—obtained by men who have not acquired this rank, no matter by what patient investigation they may have been elaborated, no matter with what conscientious industry facts may have been sought for their foundation—run the risk of being treated as absurdities, should they chance to clash with the dictum of an "authority." Is it not obvious that any spirit, tending to give vigor and permanency to a domination such as this, must be in its nature bad; and that every effort should be made to establish in its room the love of truth for its own sake, and devotion to independent inquiry?

But it must not be imagined, that while resistance to the despotism of authorities is proclaimed, a yet worse despotism is to be admitted in its place,—I mean the despotism of untried, unproved men. As there seems to be a tendency to yield to this novel species of tyranny, it may not be improper to tarry for a moment with its consideration. The great instrument of this tyranny is one, by means of which, the most important additions to scientific pathology have, of late years, been made,—I allude to the microscope. While conceding that it is almost impossible to over-estimate the sterling value of the discoveries effected through its application by injudicious men to the minute study of diseased processes, we may be permitted to deprecate the proneness to accept, without scrutiny, statements on points of microscopical observation, no matter how untried, how unknown, the person who advances them, may have previously been. Some inexperienced observer, zealous, laborious, and conscientious, it is not doubted, but not yet grounded in habits
of severe observation, and eagerly desirous of notoriety, applies himself to the use of the microscope. Forthwith he discovers some cell, some nucleus, or some nucleolus, some molecular attraction or repulsion, which had eluded the less keen survey of his predecessors. Charmed with his success he, at once, without waiting for a series of results confirmatory of the first, publishes his discovery. Nothing, under the circumstances, could be more natural; nor, perhaps, more harmless, did he stop there. But this is seldom the case. Appearances so obvious, he reasons, cannot be without their influence on the clinical phenomena of disease,—a new view of some of these phenomena occurs to his fancy. He gives this forth with such measure of plausible illustration, as he can command. The whole looks simple at first, then possible, soon probable, and eventually, certain, to persons, who from various causes have not the means of testing the accuracy of the original observation. The evil does not rest even here. Among these persons, some are struck with the idea that so bright a discovery should not be lost to therapeutics,—they modify the treatment of some disease in harmony with the new principle; and, persuaded beforehand of the perfect correctness of that principle, invariably make the change with the "happiest effects." But, meanwhile, other microscopical observers, equally sagacious and more cautious than the first, turn their attention to the original starting point in the series of changes. They discover, and they prove, that the leader in this revolution was in error,—that the cell, or the nucleus, or the nucleolus to which he had given a local habitation and a name, are imaginary; that the molecular attraction or repulsion are mere creatures of an active fancy. The anatomical or physiological fact being inaccurate, the pathological and therapeutical notions, founded upon it, are of necessity stamped with error to the second or third powers. But these doctrines have, perhaps, meanwhile been sent forth in goodly type, and may continue to influence the clinical practice of the inexperienced, long after the primary mistake has been detected and exposed. This illustration is sufficient to show, what incalculable mischief must result from the hasty publication of inaccurate observations on many subjects, in which, it is infinitely more difficult to correct an error or false conclu-
sion, than in the example just given. Fortunately, the remedy for both of the evils we have glanced at, is sufficiently obvious: neither the "authority," nor the untried man, are to be taken at their words. They are, in each instance, to be asked for their proofs,—they must describe any alleged appearance in such a manner as to furnish evidence of their own accuracy—their descriptions must place the reader, as far as is possible, in the position of the observer, and put him in possession of grounds for forming an independent opinion.

3. In the third place, the progress of sound medical knowledge has arisen from the adoption of greater caution in the application of conclusions founded upon analogy. No one can dispute the great value of analogy as an instrument of reason; some of the most obscure points in physiology have been elucidated by labors of Naturalists, in the fertile field of comparative physiology. Thus, Dr. Edwards was enabled to arrive at many important conclusions with respect to the influence of external agents on the phenomena of life, by subjecting reptiles to treatment which would have been fatal to animals of a higher order. Yet such reasoning must be cautiously applied; for, in truth, there is scarcely any proposition, be it ever so absurd, that may not be quasi-proved by analogical argument. By reasoning thus conducted it may be shown, for instance, that the circulation of the blood in man is carried on independently of any of the motor forces, commonly recognized as accomplishing that function. For, first, in monsters deficient in brain and spinal marrow, the circulation goes forward; consequently, the nervous centres are without influence on the phenomenon. Secondly, in animals without a heart, there is, nevertheless, a very excellent vascular circulation: therefore the heart is useless in the maintainance of the function. Thirdly, experiments on mammiferous animals show that, under certain circumstances, the circulation is sustained by the simple action of a heart, without aid from the arteries, capillaries, or veins, or from muscular pressure, or from the suction exercised by the right auricle, or by the chest; therefore the arteries, capillaries, and veins, may be dispensed with in carrying on the circulation. Hence, to resume, reasoning of this kind would lead to the absurd conclusion, that the continuation of the blood's movement.
depends neither on the heart, arteries, or veins, nor on nervous influence, nor on aspiration exercised by the thorax or right cavities of the heart.

Other sciences have, like our own, felt the baneful influence of this method of establishing conclusions. Voltaire cuttlingly ridicules the pretensions of this class of reasoners. In one of his satirical tales, Micromégas, an imaginary inhabitant of Sirius, is supposed to make a voyage of discovery through the solar system in company with a denizen of Saturn: they philosophize as they go. Approaching the planet Mars, Micromégas and his companion plainly described two moons acting as satellites to that body,—moons which have certainly escaped the ken of terrestrial astronomers. "I know perfectly well," continues the author of the tale, "that Father Castel" (an astronomer of the time) "will write, and write sufficiently pleasantly, too, against the existence of these two moons; but I appeal against his decision to logicians, who reason from analogy. These excellent philosophers are perfectly aware how difficult it would be for mars—a planet so far removed from the sun—to get on with less than two of these satellites."—("Micromégas et l'Histoire des Croisades." Lond. 1752.)

But because the indiscreet use of analogy is positively detrimental to the advance of science, it by no means follows, that the use of analogical argument is to be discarded. But it is to be employed cautiously, and solely as a means of suggesting, and pointing to, questions deserving of investigation by the only sound method—that of direct observation. With these limitations, analogy is an invaluable guide to the physician as well as the naturalist.

4. Another source of recent improvement in medicine is, an increasing tendency in the minds of men, at the present day, to ascertain the intimate nature of the phenomena of diseases, and the laws governing their origin and progress; instead of speculating on the final causes of diseased actions. To ascertain the laws which govern the phenomena of disease is the goal of rational and legitimate pathological investigation. We are aware that it has been said, that the knowledge of these laws is of little value; that unless their causes are fathomed, no greater advance is in reality made than when they were
unknown; that no practical inferences, no enlarged notions of the nature of disease follow from their establishment. No greater fallacy could be imagined. What if it can be ascertained by observation repeatedly undertaken and cautiously conducted, that a given disease arises under a certain combination of circumstances;—that it affects the system generally in an assignable way, before it exercises its influence on particular parts;—that it affects certain of these parts and none others, in a certain sequence, and in none others;—endures for a certain length of time, which may, with slight oscillations, be predicted;—if it be ascertained in the same way that a fixed proportion of persons attacked with this malady will die, and that the age, sex, habits of life, assign beforehand to any given individual, with a great share of certainty, his place in one or other of the two classes,—of those to die, or those to live:—if all this can be done by the well-devised search after Laws (and it has been done in respect of several diseases,) will it continue to be, affirmed that the practical utility of their discovery is limited—that they do not vastly widen the field of true acquaintance with disease?

But there are certain men who deem that their mental endowments are of too high a stamp to be wasted on the patient toil of observation, and the induction of laws from its results. Let such men survey the field beyond their own. Let them look to the history of other sciences, and see how the illustrious among their followers thought of the investigation of Laws. Let them regard the vast intellect of Newton, disdaining all petty scholastic disputations regarding causes; and observe him devoting all his energy to establishing the conditions of the great Law he had discovered. Let them remember that, "all the human mind has produced—the brightest in genius, or the most continuous in application—has been lavished on the details of the law of gravity."—(Babbage. Ninth Bridgewater Treatise.) And the great philosophers, who follow now in the path of that immortal genius—are they engaged in the struggle to detect final causes? No; they feel that many of the discoveries of the present day point to a yet more general law than that of gravity, and expend all their wisdom in the effort to hasten its establishment. Let the medical inquirer, discontent-
ed with the search after laws, because it affords not span commensurate with his powers, ponder upon all this,—and if vanity has not placed him beyond the reach of humiliation, he must shrink abashed from the contemplation of his tiny efforts to unveil the mystery of causes.*

5. So far we have spoken of the advance of Medical Science, as the result of the surrender of systems and methods of reasoning stamped, as it appears to us, with error. Herein lie what may be termed the indirect sources of progress. The direct cause is none other than the more general adoption of close observation and induction in clinical and pathological research. Through the earnest application of these great instruments of progress in all sciences, all recent solid advancement in medicine has been effected. It has of late been understood in medical science, as it has long been understood in other sciences of observation, that:—"To begin with self-evident principles, to advance by timorous and sure steps, to review frequently our conclusions, and examine accurately all their consequences—though by these means we shall make both a slow and a short progress in our systems—are the only methods by which we can ever hope to reach truth, and attain a proper stability and certainty in our determinations."—(Hume's Essays—Academical and Sceptical Philosophy. Part I.)

6. Lastly: It is to the growing habit of counting facts—to the use of what has been termed the numerical method—that must be traced in great measure, the accuracy of existing knowledge in pathology. We are aware that this is not an

* (Note.) These remarks refer exclusively to pathological investigations, and not to physiological and anatomical researches. Indeed, final causes are involved in our fundamental conception of organization:—the parts have a purpose, as well as a law;—we can trace a determinate end, as well as laws of causation. The application of this principle, has, in the hands of Cuvier and others, contributed largely to the advancement of physiology, zoology, and comparative anatomy. But, when it is attempted to be applied to diseased processes, interminable error and confusion must arise. Can any one assign a purpose to any given diseased action? Has any organ a function other than a normal and healthy one? It appears to me, that physicians have not kept this fundamental distinction between physiology and pathology in view, with sufficient clearness and steadiness. Hence, the vast number of crude hypotheses and vague conjectures, which have been framed to account for the objects and ends of various diseased processes.
universally-admitted position; there are persons who oppose
the application of figures in the settlement of questions of all
kinds connected with pathology, etiology and therapeutics, on
the ground that morbid conditions are too complex and too
varying in character to admit of being represented by num-
bers: others hold the contrary opinion. The modes of pro-
cedure of the two parties may thus be sketched. An author,
belonging to the one, simply states that he has treated a given
malady in a certain manner with such general effects, as induce
him either to recommend that a similar line of conduct should
be uniformly pursued in its management; or to dissuade others
from following his example. The writer, who has faith in the
application of figures, tells his readers how many cases he has
treated—in how many instances he has relieved—in how many
instances he has cured, and in how many instances death has
occurred. The natural reflection upon the former mode of
proceeding is, that for the accuracy of his verdict we must trust
blindly and implicitly to the author; and the nature of that
verdict will depend, probably, more on the character of the
man, than of the facts which are presented. It is perfectly
clear, that the same result will be differently viewed by him,
according as he is of sanguine or desponding temper, vain or
modest, cautious or rash in his judgments;—according as he is
ready to accept slight evidence or requires full demonstration.
He may fancy that he always does good; or that he frequently
does good; or that he (which is rare) seldom does good; or
that he (which is still rarer) never does good;—and what fair
grounds are there, whereon his readers may either question his
accuracy or gainsay his determinations? On the other hand,
according to the second mode of proceeding, the temper and
character of the observer have no influence on the general
result. Figures have nothing to do with temperament; the
numbers 1, 10, 100, 1000, have but one meaning for all mankind.
Does not the superiority of conclusions obtained upon the lat-
ter, to those set forth upon the former, plan, as guides to prac-
tice, appear clear and self-evident? In point of fact, no man
can form a correct estimate even of his own success in the
treatment of any disease, unless by counting the instances of
his failure and the contrary. Moreover, how else can the ex-
perience of one observer be added to that of another; how else can the experiences, acquired at different periods and in different countries, be made to take part in one general result? The valuable results which have already been attained, through the cultivation of the general statistics of disease, as it affects large populations, warrant the highest anticipations in relation to the assistance which medicine will eventually receive from this source. Of what problems, regarding the health of man, may we not anticipate the solution, when the diseases of various climes, properly registered, may be compared with each other! With what certainty shall we be enabled to establish, not only the influence of civilization generally on disease, but even of particular modes and forms of social progress! In the history of the more demonstrative sciences, it will be found that it is the introduction and use of accurate numerical measures, that forms the prelude to the epoch of rapid advancement. The theory of gravitation in astronomy, that of definite proportions in chemistry, and that of luminiferous undulations in optics, are all numerical theories, susceptible of mathematical expression.

From these several considerations, I think we may safely affirm, that modern medical science is based on a secure foundation, and that it will ultimately attain to a degree of exactness which will be sufficiently satisfactory to the mind. We have just entered upon the inductive epoch in medicine. This is the period for collecting facts, for multiplying observations, for establishing the basis of wider and higher generalizations. Nor is there any observer, however unpretending, who may not add to the stock of ascertained facts; so varied and inexhaustible are the stores of nature. The humblest contributors may rest assured, that they are imperceptibly raising an enduring structure of scientific truth.

Unfortunately, by the side of this scientific system, another is seen growing—a system of unproven, and, in part, entirely mistaken empirical knowledge. Embracing but few particulars, this kind of empiricism is the more presuming, because of its utter ignorance of the facts by which it is assailed. Shut up within itself, it is unchanging in its axioms, and arrogant, like every thing else that is restricted; whilst enlightened sci-
ence, inquiring, and therefore doubting, goes on separating the firmly established from the merely probable, and perfects itself daily through the extension and correction of its views. Instead of investigating the medium point about which, despite the apparent unfettered aspect of nature, all phenomena oscillate within narrow limits, it only takes cognizance of the exceptions to the law; it is ever disposed to presume the train of natural sequence interrupted, and to overlook in the present all analogy with the past. Such a system opposes every thing like those comprehensive views which raise our conceptions of the dignity and grandeur of nature, by the discovery of universal laws,—laws that reign in the most delicate textures that meet us on earth, no less than in the Archipelagos of thickly-clustered nebulae which we see scattered through the awful depths of space.

The general prevalence of this empiricism may be traced to the present imperfect state of the science of life. The notion of life, and of vital forces, is still too obscure to be steadily held. We cannot connect it distinctly with severe inductions from facts. In the language of a distinguished historian of science;—

"We can trace the motions of the animal fluids, as Kepler traced the motions of the planets; but when we seek to render a reason for these motions, like him, we recur to terms of a wide and profound, but mysterious import; to virtues, influences, undefined powers. Yet we are not on this account to despair. The very instance to which I am referring shows us how rich is the promise of the future. "Why," says Cuvier, "may not natural history one day have its Newton?"—(Ossem. Foss. Introd.) The idea of the vital forces may gradually become so clear and definite as to be available in science; and future generations may include, in their physiology, propositions elevated as far above the circulation of the blood, as the doctrine of universal gravitation goes beyond the explanation of the heavenly motions by epicycles."—(Vide. Whewell's Hist. of Inductive Sciences, vol. 3, p. 404, 405.)

And of all this, gentlemen, what is the object and what the end? None other than the discovery of truth, and the application of this truth to the relief of human suffering. Such are the aims of him who enters, in the right spirit, upon the study of
medical science. And can there be a nobler combination than that which practice opens to your view,—the intellect keenly laboring for the benefit of your fellow-men, and the affections deeply sympathizing in the results of the labor? And ought it not to be a high privilege to belong to a profession, of which such is the exalted mission? Is it not vividly inspiring,—ought it not, in itself, to suffice to cheer you on amid toil, amid neglect, amid ingratitude, amid worldly struggles, to remember that, by taking a position in its ranks, you have acquired the power to think, to feel, to act, for the accomplishment of things so great,—that you have insured for yourselves the enjoyment of pleasures so pure? But if admission into this profession confer such privileges, and supply such foundation for the nobler orders of happiness, a return is looked for on the part of him who enters it. Of that profession he is required to bear himself as a worthy and high-minded member; and to maintain its dignity and elevate its position, as far as his individual character, conduct, and acquirements can conduce to that end.

And let me be permitted to close this address with words of calm though bright encouragement. Let me turn to those among you, who may feel diffident of your capabilities—who are disposed to recoil from the task before you, disheartened by the modest apprehension of intellectual deficiency, and say, that the "race is not to the swift, nor the battle to the strong." It is to him who spares no toil;—who shrinks at no sacrifice of ease and momentary enjoyment;—who feels elevated by the grandeur of the end he aims at, and by his very energy spurns away difficulties, which otherwise must have thwarted and overcome him. Upon you, on the other hand, who form a higher and prouder estimate of your capabilities, who have within you the consciousness of power, I would impress the necessity of assuming and maintaining an iron and unbending will to work that power to its full;—I would bid you accept the augury of success your own bosoms have delivered, and let your lives be one unaltering effort to fulfil the prophecy.
ARTICLE XV.

Report of Operations performed under Anaesthetic Agents.

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

In December, 1847, I received from Prof. McKenzie, then residing in Paris, now on a visit to this country, the first intelligence of the new compound known as chloroform, proposed by Prof. Simpson of Edinburgh, as a new anæsthetic agent in Midwifery and Surgery. In common with others of the day, I was then engaged in testing the value of the means suggested to produce insensibility in patients subjected to operations—a proposition hitherto viewed by the profession quite chimerical. A keen edge to the cutting instrument, dexterity in the surgeon, and some suffering on the part of the patient, were the essential conditions of even good surgery at the present day. That the knife gave a little pain has ever been an admitted fact, and many an one has been doomed to measure its full extent without our power to do much to mitigate the distress of the sufferer.

Who then exercising the benevolent profession of medicine, possessing, as every one should, a kind sympathizing spirit, can remain unaffected by the fact now well established, that the state of insensibility can be safely induced during the performance of the most painful operations in midwifery and surgery? What surgeon, accoucheur or general practitioner, does not rejoice that the healing art is now disarmed of much of its terror, and of the real aggravation of human suffering by our own proceedings? The alleviation of physical pain and distress is now instantaneous, direct and complete, by the employment of means happily within the reach of every one. Nor is this all. If pain be the initiatory step to inflammation, and the prevention of one arrests the other, then we may begin to estimate the value and importance of these new anaesthetic agents.

The use of the inhalation of sulphuric and chloric ethers, and of chloroform, in midwifery and surgery, was regularly brought before the last meeting of the American Medical Association. Members of that body were not only ready, but some were quite anxious to discuss the general subject. It was thought,
However, judicious to delay definite conclusions respecting the applicability of these agents in practice, until more extensive and enlightened experience had been obtained regarding them. Willing to contribute my observations to the general fund, limited and imperfect as they are, it is proposed to furnish a statistical table presenting the result of operations performed under anesthetic agents.

<table>
<thead>
<tr>
<th>Amputations</th>
<th>Lobotomy</th>
<th>Dislocations</th>
<th>Female Mammary</th>
<th>Other Tumors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent</td>
<td>Chloroform</td>
<td>Chloroform</td>
<td>Chloroform</td>
<td>Chloroform</td>
</tr>
<tr>
<td></td>
<td>Subph. Ether</td>
<td>Subph. Ether</td>
<td>Subph. Ether</td>
<td>Subph. Ether</td>
</tr>
<tr>
<td></td>
<td>Chloroform</td>
<td>Chloroform</td>
<td>Chloroform</td>
<td>Chloroform</td>
</tr>
</tbody>
</table>

* I give the date, supposing this might be the first operation under chloroform in our country.*
Embraced in the above report are fifty-eight cases in which chloroform was alone used; of the whole number, sixty-four, there were three deaths—one on the eleventh, and the third about six weeks after the operation; all supposed to have occurred entirely independent of the induction of anesthesia. Before the class the past winter, of forty-three operations, this agent was employed eighteen times. I also removed, in the presence of the students, a large fibrous tumour from the thigh of a mule; the animal being fully in the state of chloroformisation. I have also administered chloroform in some cases of midwifery; occasionally, too, even in the

<table>
<thead>
<tr>
<th>No.</th>
<th>Age</th>
<th>Sex</th>
<th>Place</th>
<th>Agent</th>
<th>Cause</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32</td>
<td>1</td>
<td>male</td>
<td>Chloroform</td>
<td>Extraction of</td>
<td>Good</td>
</tr>
<tr>
<td>2</td>
<td>33</td>
<td>2</td>
<td>female</td>
<td>Chloroform</td>
<td>Endometriosis</td>
<td>Good</td>
</tr>
<tr>
<td>3</td>
<td>34</td>
<td>3</td>
<td>male</td>
<td>Chloroform</td>
<td>Infarction of</td>
<td>Bad</td>
</tr>
<tr>
<td>4</td>
<td>35</td>
<td>4</td>
<td>female</td>
<td>Chloroform</td>
<td>Testicle</td>
<td>Fail</td>
</tr>
<tr>
<td>5</td>
<td>36</td>
<td>5</td>
<td>male</td>
<td>Chloroform</td>
<td>Other</td>
<td>Fail</td>
</tr>
</tbody>
</table>

Prior to the report, there were forty-three operations, with eighteen cases where chloroform was used. I have also administered chloroform in some cases of midwifery; occasionally, too, even in the
extraction of teeth—in some instances producing only a partial state of insensibility, in all exercising great caution, especially with this agent. Altogether, I may have seen the anaesthetic condition induced in about one hundred cases, during the past twelve months, and in only two of this number was there any unpleasant symptoms—too profound an impression by the cumulative effects of chloroform; at least, it was greater than was expected in these instances; but in each, as is now believed, independent of its proper administration.

I believe, in some cases, the local anaesthetic effect of chloroform may answer the purpose for minor operations. I have not ventured to use these agents in cataracts, or in affections near the brain.

From the facts above stated, I can subscribe the following opinions, taken from the Monthly Journ. of Med. Sciences:

"Chloroform in Surgical Practice.—At a meeting of the Medico-Chirurgical Society of Edinburgh, Dr. Simpson asked Professor Miller and Dr. Duncan to state the extent to which they used chloroform in their public and private surgical practice.

"Professor Miller observed, that in the hospital and elsewhere the surgeons of Edinburgh have used chloroform in all their operations, with the exception, perhaps, of any such within the cavity of the mouth as were expected to be attended with much hemorrhage. And he could speak of its perfect success, and perfect certainty, and perfect safety, in the most unequivocal terms. There had been no misadventures, no failures, and now no fears of those spasms and other preliminary symptoms to which Dr. Simpson had alluded. In saying all this, he believed he was simply stating the opinion and experience of all his surgical brethren here; and that no one amongst them would deem himself justified, morally or professionally, in now cutting and operating upon a patient in a waking and sensitive state. Every professional principle, nay, the common principles of humanity, forbade it, seeing that surgery was now happily possessed of sure and safe means by which it could avoid the necessity of such cruelty. Those were strong opinions, strongly expressed, but, in answer to Dr. Simpson's question, it was impossible for him to say less.

"Dr. Duncan stated that he sincerely coincided in every part of the statement made by Professor Miller, and that, in his hospital and in his private practice, he constantly, like his other surgical brethren, used chloroform in all his opera-
tions, and even when making any painful examinations for the purpose of diagnosis. There was only one case in which he had found a difficulty in its application, viz: when operating for internal hemorrhoids, the patient not, of course, having the capability of protruding the bowel when anaesthetic.

"Professor Miller stated that, in operating for internal hemorrhoids, he had latterly been in the habit of making the patient first protrude the bowel; he then fixed the hemorrhoid with a vulsellum, chloroformed the patient, and afterwards terminated the operation."

PART II.

Reviews and Extracts.

BIBLIOGRAPHICAL NOTICES.

1. *On the Cryptogamous origin of Malarious and Epidemic Fevers.*

The little volume whose title page is given above is decidedly one of the most interesting and important productions of the day. It is interesting because of the handsome garb in which the gifted author has clothed naked facts, and important from the impulse it cannot fail to give to researches of a novel character in relation to a subject which has a direct bearing upon a very extensive class of diseases and which has been hitherto involved in the most perplexing obscurity. No study has engrossed more time and talent, from the dawn of Medical Science up to our own times, than that of the causation of fevers; and yet there is perhaps none in which so little real advance has been made. This is so true, that many of the ablest pathologists of the day have abandoned it in despair, preferring to direct their energies upon the more promising inquiry after remedial means. If the work of Prof. Mitchell accomplished nothing more than to rid medical literature of such unmeaning words as malaria, marsh miasmata, atmospheric poison, &c., much would be gained. It does more however; it opens to us a new field of observation, and one which, if properly tilled, must necessarily yield an abundant return.

The work before us consists principally of facts in relation to the production and influence upon the animal economy of fungi, which, after being carefully collated, form the basis of an exceedingly ingen-
ious and plausible theory. We cannot at present give a more satisfactory and condensed view of the work than may be derived from the caption of the six Lectures of which it consists.

"Lecture I. Theories of Malaria.—The Vegeto-animal Theory.—The Atmospheric Theory.—The Sulphur-product Theory of Daniel.—Theory of Hoffman.—Gaseous Theories.—Miscellaneous Theories.—Theory of Dr. Robert Jackson.—Theory of Dr. Ferguson.—The Animalcular Theory.

"Lecture II. Habitudes of the Fungi.—Traces, among Authors, of the Fungous Theory.—Rapid growth of the Fungi.—Their Poisonous Properties increase as the Latitude decreases.—They are found chiefly in Autumn.

"Lecture III. The Fungi are active almost exclusively at Night.—Fungiferous power of Epidemic Periods and Seasons.—Sudor Anglicanus.—The Milzbrand.—The Milk-sickness of the Western Country.

"Lecture IV. Poisonous Quality of the Fungi.—They produce Fevers.—They produce Fevers which Remit or Intermit.—They produce Fevers with Gangrene.—Fungi cause the Potato Rot.—The Fungi in the Atmosphere.—Fungi cause many Cutaneous Diseases.—They also cause Aplhæ, a disease of the Mucous Membrane.—They are found in the Stomach, in the Bowels, in the Peritoneal Cavity, are associated with Indigestion, appear in Typhoid Fever, in the Bladder, on the Pleura, in Cholera, and in Diabetic Urine.—The Fungi cause many diseases of Insects and Reptiles, as the Muscardine of the Silk-worm, &c.—They seem, according to Scripture, to produce Scalls and Leprosy.—They are found after death in Pigeons, Fowls, and other winged animals.

"Lecture V. The Fungous Theory explains the cause of the Postponement of the Effects of a Malarious Infection, and accounts for the nice Limitation of Malaria, for the Effects of Dried Air, of Damp Sheets, of Fomites.—Yellow Fever.—Cholera.—The Plague.—Localization of Peculiar Diseases.—Quarantines.—Pestential Premonitions.

"Lecture VI. Hygienic Inconsistencies of Seasons and Places, explained.—The Maremma of Italy.—Volcanic Eruptions affect the Health of the following, and not of the current year.—Fairy Rings.—Liebig’s Theory of the Cause and Non-recurrence of Diseases, refuted.—A new explanation of these, offered.—Why the first Cases of an Epidemic are most Fatal.—Why Barren Plains are sometimes Sickly.—Recapitulation."

We add the author’s Recapitulation of the most important elements of his argument.

"I began, by showing that all the usually received opinions on this subject, are liable to insuperable objections, except that which refers to the causation by organic life, and especially by animalcules, as held by Columella, Kircher, Linnaeus, Mejon, and Henry Holland.

"While I was impressed, for the reasons so ably stated by Holland,
with the greater probability of the organic theory, I prefer, for reasons
stated by myself, the fungous, to the animalcular hypothesis.

My preference is founded on the vast number, extraordinary vari-
ety, minuteness, diffusion and climatic peculiarities of the fungi.
The spores of these plants are not only numerous, minute, and
indefinitely diffused, but they are so like to animal cells, as to have
the power of penetrating into, and germinating upon, the most interior
tissues of the human body.

Introduced into the body through the stomach, or by the skin or
lungs, cryptogamous poisons were shown to produce diseases of a
febrile character, intermittent, remittent and continued; which were
most successfully treated by wine and bark.

Many cutaneous diseases, such as favus and mentagra, are proved
to be dependent upon cryptogamous vegetations; and even the disease
of the mucous membrane, termed aphthae, arises from the presence of
minute fungi.

As microscopic investigations become more minute, we discover
protophytes in diseases, where, until our own time, their existence
was not even suspected, as in the discharges of some kinds of dysen-
tery, and in the sarcina of pyrosis. We are therefore entitled to be-
lieve that discovery will be, on this subject, progressive.

The detection of the origin of the muscardine of the silk worm,
and a great many analogous diseases of insects, fishes and reptiles,
and the demonstration of the cryptogamism of these maladies, their
contagious character in one species of animals, their transfer to many
other species, nay even to vegetables themselves, all concur to render
less improbable the agency of fungi in the causation of diseases of a
febrile character.

A curious citation was subsequently made, of the fungiferous
condition during epidemics and epizootics. These moulds, red, white,
yellow, gray, or even black, stained garments, utensils and pavements,
made the fogs fetid, and caused disagreeable odors and spots, even in
the recesses of closets and the interior of trunks and desks.

These moulds existed, even when the hygrometric state did not
give to the air any unusual moisture for their sustentation and propa-
gation. Their germs seemed to have, as have epidemics, an inher-
ent power of extension.

The singular prevalence of malarious diseases in the autumn, is
best explained by supposing them to be produced by the fungi, which
grow most commonly at the same season. The season of greatest
photophytic activity, is, in every country, the period of the greatest
malarious disturbance. The sickly season is, in the rains in Africa,
in the very dry season in Majorca and Sardinia, in the rainy season
of the insular West Indies, and in the dry season of Demerara and
Surinam. Even when the vegetation is peculiarly controlled, as in
Egypt by the Nile, and the cryptogami are thus thrown into the sea-
son of winter and spring, that season becomes, contrary to rule, the
pestilential part of the year.

Marshes are a safe residence by day, whilst they are often highly
dangerous by night. In the most deadly localities of our southern
country, and of Africa, the sportsman may tread the mazes of a swamp safely by day, although at every step, he extricates vast quantities of the gases, which lie entangled in mud and vegetable mould. This point, so readily explained by reference to the acknowledged nocturnal growth and power of the fungi, is a complete stumbling-block to the miasmatists.

"The cryptogamous theory well explains the obstruction to the progress of malaria offered by a road, a wall, a screen of trees, a veil or a gauze curtain.

"It also accounts for the nice localization of an ague, or yellow fever, or cholera, and the want of power in steady winds to convey malarious diseases into the heart of a city, from the adjacent country.

"It explains also well, the security afforded by artificially drying the air of malarious places, the exemption of cooks and smiths from the sweating sickness, the cause of the danger from mouldy sheets, and of the sternutation from old books and papers.

"On no other theory can we so well account, if account at all, for the phenomena of milzbrand and milk-sickness, the introduction of yellow fever into northern ports, and the wonderful irregularities of the progress of cholera.

"The cryptogamous theory will well explain the peculiar domestication of different diseases in different regions, which have a similar climate; the plague of Egypt, the yellow fever of the Antilles, and the cholera of India. It accounts, too, for their occasional expansion into unaccustomed places, and their retreat back to their original haunts.

"Our hypothesis will also enable us to tell, why malarious sickness is disproportionate to the character of the seasons; why it infests some tropical countries and spares others; why the dry Maremna abounds with fevers, while the wet shores of Brazil and Australia actually luxuriate in healthfulness. The prolonged incubative period, the frequent relapses of intermittents, and the latency of the malarious poisons for months, can only be well explained by adopting the theory of a fungous causation.

"Finally, it explains the cause of the non-recurrence of very potent maladies, better than the chemical theory of Liebig; and shows why the earliest cases of an epidemic are commonly the most fatal."

It will be seen that we have not exaggerated the merit of Prof. M's work, and that it deserves the attentive perusal of every medical philosopher.


This is a very neat duodecimo of 552 pages, and remarkably well adapted to beginners in the study of medicine. It is more erudite
than manuals generally, but not too much so, and is fully up to the modern state of our knowledge. Indeed Physiology, under the influence of the researches now being made in organic chemistry and with the microscope, is progressing at such a pace that it has to be re-written at short intervals in order that the student may know its true position. The work before us will doubtless be extensively used as a text book in our country.

D.


Although the diseases of old age, like those of infancy and childhood, present important peculiarities, it is a little remarkable that they have not attracted the same attention. The press is continually issuing new volumes upon the affections of early life, whereas the one before us is the only monograph devoted to advanced age that has appeared in the English language during the present century. It will therefore fill a void in our medical libraries that must have been seriously felt by the practitioner. The work of Dr. Day bears the impress of research and experience, and is gotten up in good style. Its appendix contains an account of the use of the heated iron hammer or button which has of late been recommended very highly by Continental as well as by English authorities of distinction, especially in the treatment of neuralgic affections. We have no doubt that this work will be consulted with advantage by practitioners, both old and young.

D.


In every department of Medicine, and especially in that of obstetrics, during the last few years, systems on systems have appeared in constant succession; there has been a superabundance of such works; physicians have become wearied of seeing the announcement of new systems, which of all publications are, generally, least valuable to the profession and least calculated to secure permanent reputation for their authors; they are ephemeral in their nature, shining for a day and
then passing away to be succeeded and superceded by new aspirants after popular favour, laying claims or making pretensions to greater perfection, professing to post the whole subject up to the latest date, to include all the recent discoveries in science and improvements in practice.

Such publications must be but republications to a considerable extent; they must necessarily consist principally of compilations and collations from previous authors; the language may be different, but however varied the phraseology, the matter must be the same, for all facts in nature and truths in science must be forever immutable. The most valuable publications are monographs or treatises which give the opinions, or detail the practice and experience of their authors on particular subjects. Such are Collins’ Practical Treatise on Midwifery—Hamilton’s Practical Observations on various subjects relating to Midwifery—Lever’s Essay on Organic Diseases of the Uterus—Bennet’s Practical Treatise on Inflammation, Ulceration and Induration of the Neck of the Uterus, &c.—Whitehead on Abortion and Sterility—and Lee’s Clinical Midwifery, a very small but most valuable work recently republished in our country, noticed in the last number of this Journal.

It is to be regretted that Professor Meigs has employed his excellent talents so unprofitably, and expended his energies in translating the works of others and composing a general system, when he might have done so much more good and gained for himself so much more lasting fame, by concentrating his attention on some particular department, or on one or more individual subjects. We hope, if his valuable life should be longer spared and his health restored, that hereafter he will only tell us what he has seen and done himself, and give us his own observations and reflections, leaving others who have more time and less to do, and who may be ambitious to shine, by reflected light, to translate and edit the works of others or to compile systems.

But we bid the present work of Prof. Meigs a more hearty welcome than we would an entirely new system, appearing as it does in place of a third edition of his Philadelphia Practice, which was published more than ten years ago, and of which a third edition was demanded.

It is highly creditable to Professor Meigs, thus to re-write, remodel, extend and improve his former work, when his advanced age demanded rest, and his long continued arduous labors in the cause of humanity so richly entitled him to it, especially too as there could be no doubt but that a third edition, without revision or amendment, would have commanded a ready sale.
Time will not allow us to make a critical analysis of this work. In substantial merit, it will compare well with any of the systematic treatises on midwifery which have appeared within the last ten or twenty years: it is a very complete and comprehensive system, comprising every thing valuable and interesting in obstetrics, both old and new. The author gives his own opinions and views with firmness, but always acts with the utmost fairness towards those who differ from him.

We have long regarded Dr. Meigs as one of the soundest and ablest obstetric practitioners in the United States. The present work possesses much true merit: the matter is generally excellent, we take pleasure in recommending it as a valuable help, not only to students, to whom it is particularly addressed, but to those engaged in practice; it is, however, to be regretted, that in style he too often deviates from that simplicity and chasteness, which should characterize all scientific and especially medical works. It is sometimes turgid, inclining to magniloquence and savouring a little of pedantry, abounding in quotations from ancient and foreign languages. The author, in the abundance of his learning, appearing to forget that those to whom it is particularly addressed, medical students, rarely, if ever, possess the same extensive scientific and literary acquirements that he himself does. These defects of style are particularly to be regretted, inasmuch as, from his deserved popularity, they are calculated to exercise an unfortunate influence over the taste of young physicians and students, who, like other young persons, are disposed to imitate those whom they respect and admire.

It has been often remarked, that elderly gentlemen are averse to adopt or admit the value of new discoveries or improvements in practice, and to regard them as useless or injurious innovations on the good old beaten paths. Professor Meigs is perhaps less obnoxious to this charge in general, than almost any person of his age—far from this, he seems disposed to float upon the very foremost wave of improvement, or by spreading every sail and bending every oar, to outride the waves, or, as though he would after ascending the loftiest pinnacle, boldly take still a higher step; but he appears to entertain an undue prejudice against chloroform—indeed, if we did not know him to abound in the milk of human kindness, and to be most emphatically and truly the female’s friend, we would consider him deficient in sympathy for the fair sex. For our own part, although on the dark side of forty, the age opposed to innovation, we hailed with delight a discovery which promised to meliorate woman’s hard fate,
and soften the severity of the primeval curse; notwithstanding our difference on this subject, we do not, however, believe our respected friend possesses less gallantry or charity than ourselves. As our opinions respecting chloroform are already known to the readers of this Journal, having been expressed a year ago in a letter to the Editor, in which we replied to some of Dr. Meigs' objections, it would be superfluous to repeat them now, we will only add that subsequent experience has confirmed our opinion and strengthened our confidence; still we say let it always be used with caution and not in ordinary cases, but only when intense suffering demands relief.

In the employment of instruments, the author inclines more to French than British obstetrics. No one would contend more strenuously than ourselves, that the forceps should always be preferred to the crotchet, as long as there is any doubt of the death of the foetus, until they had been fairly tried, or after mature consideration rejected as inadequate, or their application deemed impracticable. But we verily believe, on the continent of Europe and in the United States, more mothers are injured and children destroyed by the unnecessary employment of embryospastic than embroyotomic instruments, inasmuch as, in practice, there is a constant disposition to resort to the former sooner than necessary, or when not required, and so great a repugnance and abhorrence to the latter, that they are deferred to the last extremity, often too long. As a gentle counterpoise to some of Dr. Meigs' views on this subject, which in the main are excellent, we would advise the student and young practitioner to read attentively, at the same time, his friend Dr. Robert Lee's Clinical Midwifery.

There are some other points in which we can not fully coincide with the author, but where we find so much to approve, we will decline further criticism, preferring that others should read and judge for themselves, hoping they may derive the same pleasure and profit that we have from the perusal.

J. A. E.

The Heart-Clot.—(From Philad. Med. Examiner.)

To the Editors of the Examiner:

Gentlemen: I beg leave, through the columns of your useful periodical, to present the statement of certain opinions I have long entertained, relative to points in pathogenicity connected with the occurrence of endo-cardial coagula; and I do so, because I consider them deserving of serious consideration by the practitioner.
These opinions are connected with certain points of practice or treatment that are, in many cases, indispensably necessary for the safety of the sick; and my sole desire in offering the communication, is founded on the hope that it may tend to prevent some disastrous events, which the want of a little reflection might allow.

I believe it is a fact, not to be controverted, that in an animal slowly bled to death, the first portions of blood extravasated, coagulate less readily than the last portions. If this doctrine is true, it follows that the coagulability of the blood left in the vessels after great hemorrhages is augmented: I have had several occasions to find that it is dangerously augmented.

To take one of the most ordinary cases of hemorrhage—I mean that occurring after labour, or in abortions—we have an instance in which, even after the arrest of the bleeding, the patient is exposed to mishap from the coagulability of the blood remaining in the vessels. Loss of blood produces a tendency to fainting, or lipothymia; during an attack of fainting, the motions of the heart are enfeebled, the diastole slow—torpid, for the blood moves languidly in both the venæ cavae, pours itself out in a slow current into the auricle, which it sluggishly distends, and sometimes is then instantly converted into a solid clot. If a clot be formed in the right auricle, it will also be formed in the *iter ad ventriculum dextrum* filling up the cone of the tri-cuspid valve; and the nucleus of it will cause the coagulum at length to occupy the cavity of the right ventricle, and extend itself to a greater or less distance along the tractus of the pulmonary artery. If the whole pulmonic side of the heart should be perfectly occupied in this way, the death of the individual would be instantaneous; and I doubt not, that many of the examples of sudden death, after delivery in hemorrhagic labours, are produced by the formation of cardio-morphous coagula which form in the instant of a state of fainting, or lipothymia. It is understood, that the young Princess Charlotte, whose death at Clermont cast a mournful gloom over the whole British Empire, died within fifteen minutes after the birth of the princess, and that there was no very considerable hemorrhage, no laceration, nor other incident that might fitly explain the suddenness of her decease. Many women are known to perish in this manner. I have been the eye-witness of instances of the kind. I have also seen a very great number of persons, who appeared to me to be in danger of perishing in the same way, but who escaped a fate so deplorable. I am aware also of instances in which women, after considerable hemorrhagic losses, have been esteemed by their physicians to be what is called doing well, during a space of from one to seven days,
but who afterwards becoming instantly extremely ill, have perished without remedy in from two to twenty days thereafter.

If a surgeon, desirous to reduce a luxated humerus, should attempt to do so, he might find the resistance of the muscular contraction so great as to prevent his success, and he would therefore probably resolve to take away the resistance of the muscular contraction, by bleeding his patient ad deliquium. The surgeon knows that the deliquium would take effect upon the loss of a much smaller quantity of blood if the patient should be placed upon his feet in a standing posture, than if he were to recline upon his bed in a low recumbency. He would bleed the man while in an erect position. This ordinary practice is conformable with the dictates of experience in all cases of fainting, for it is well known that an individual will faint more readily in a vertical than in a horizontal position; and the first idea that is obvious to any medical man in a case of fainting is this—that he shall cause the patient to be laid with the head very low, taking away for the time even the pillow. I have on many occasions, besides taking away the pillow, found myself under the necessity of elevating the foot of the bed by placing books or blocks under the lower bed-posts in order to favour the determination of blood to the encephalon; for I conceive that in all cases of fainting the brain has become oligæmic.

I may assert the opinion here, that fainting is oligæmia of the encephalon, and that a hyperæmia of the encephalic bulbs is the very converse of and absolutely incompatible with the state of swooning. To raise up a woman who has within the few days past lost a considerable quantity of blood is almost inevitably to bring on deliquium. Now, if the idea be just that hemorrhage renders the remaining blood more coagulable, then it follows, that to take the woman out of bed, or to let her sit up in bed, is to expose her to the hazard of forming a coagulum in the right auricle, which, by extension of the nucleus, may fill the ventricle, occupying the aperture of the tricuspid, and pass several inches upwards in the course of the pulmonary artery and its branches. Monthly nurses, and the ordinary attendants of the sick know nothing of these things, and they hesitate not, oft-times, to exhort or to permit the anaemical accouchée to rise and sit for a few moments for purposes that might be answered without quitting the horizontal position.

A lady was taken in labour in the afternoon. She sat in her arm-chair all night without sleeping: at five o'clock in the morning she placed herself upon the bed and the child was born in half an hour. The placenta was spontaneously and perfectly extruded, nothing being left in the womb: it was her fifth labour. Within an hour she had hemorrhage—the vagina and uterus
contained large coagula which were turned out by the physician, whereupon the hemorrhage ceased; she may have lost altogether some thirty ounces of blood. He remained near her for several hours. At mid-day, throughout the afternoon, and during the following night, she appeared to be perfectly well. At half-past nine the following morning the physician made his visit; she was without pain or the least indisposition, nor had she any symptoms, save those that appertain to the condition of a healthy accouchee. Her pulse was about 75 beats per minute; the respiration, temperature, and hue, satisfactory to the medical attendant; her complacency, physical and moral, was absolute.

The physician left her at 10 o'clock in the morning. Being summoned again, he reached her apartment at 1, P. M., and found her in a state, which led him to suppose that she might be near dying. The pulse was 164 per minute, very feeble and thread-like; the hands were cold, and the respiration was performed apparently by the strongest effort of her will only. The respiratory acts were performed with great violence, and without rhythm. Auscultation of the heart disclosed a feeble impulse, with great irregularity of the systolic action. She had lost no more blood beyond the ordinary lochial discharge; the vagina which was examined contained no coagulum.

When I came into the apartment at 3 o'clock, P. M., she supposed herself to be in a dying state, and asked me if I thought she would live half an hour. It is difficult to conceive of a spectacle of more extreme physical distress than that presented by this dying lady. Every respiratory act was attended with violent pain referred to a place near the lower extremity of the sternum, as in angina pectoris. Palpation of the abdomen and questions relative thereto, showed nothing abnormal there. Upon retiring for consultation, I expressed to my medical brother the opinion that the pulmonary heart was filled with a coagulum or false polypus; the prognostic, therefore, was necessarily fatal.

She had been left at 10 o'clock in the morning with a pulse at 75, and in the course of the forenoon she had been taken up from her recumbent position, and allowed to sit upon the close-stool for the purpose of evacuating the bladder of urine, immediately after which she was ill, and the physician sent for.

I made this diagnostic upon these grounds, viz: I said, there is no pathogenical principle that I know of that can explain the change of her pulse from 75 to 164, in so short a time, save that of a mechanical obstruction formed by a clot or tampon filling up the cavities of the heart. It is clear that there is no scarlatina, no variola, no fever of any kind—no attack of Asiatic
The Heart-Clot.

cholera nor other malady, that is capable of making so soon, so great a change in the action of the heart as is here observed. The patient had hemorrhage yesterday, which has increased the coagulability of her blood; she was taken out of her recumbent position and placed upright in bed, whereupon she became suddenly ill in consequence of the coagulation of blood in her auricle, and there is no power that is able to remove this tampon from the cavity of her heart; it will destroy her as effectually as would a musket ball deposited in the ventricle.

The respiration in this case was carried on, at the time of my arrival, solely by the force of the voluntary power. There seemed to be no rhythmic respiration whatever; when she ceased to breathe by her volition, her respiration appeared to be suspended altogether. As might be expected, these voluntary aspirations were not rhythmic, but interrupted, uncertain, having long intervals. The blood that came up from the inferior cava and down from the upper cava, must have passed with great difficulty between the superficies of the clot, and the paries of the heart. It must have moved in small quantities only through the tricuspid, and when distending the pulmonary ventricle, that ventricle could contain but a small portion of fluid blood, being mainly occupied by the coagulum. A similar difficulty existed as to the afflux of the blood along the pulmonary artery, which was tamponed at the time with a cylindrical clot extending several inches along the vessel and its principal branches. Under these circumstances, the quantity of carboniferous blood entering the lungs by the pulmonary artery, for aeration, could be a small quantity only; hence the violent almost spasmodic protracted efforts to aspire the air of the atmosphere; efforts which, however great, must measurably fail of the purpose of abolishing the direful sense of pulmonary oppression, or respiratory distress, or to use a more concise term, asphyxiation. The quantity of blood in the lungs was too small to receive the endowment of oxygen which is requisite to preserve any individual from a feeling of suffocation; and however thorough might have been the aeration of the small quantity that was there, however brilliant and florid may have been its arterial hue after being breathed upon, the quantity of oxygen imparted to it must necessarily be sufficient so to act upon the nervous mass, the neurine, as to hinder the conscious principle from perceiving the sense of asphyxiation. With a heart situated in this manner—with the utter impossibility of thoroughly oxygenating the sanguine mass, the innervation gradually fails—a failure which is manifested in the decadence and ultimate overthrow of the various functions. All the functions are but the expressions of the biotic force that is sent
down by the encephalic bulbs and spinal cord to the distal points of the nerve-fibrils in the organs. Every acinus of a gland is alive solely by the nervous force which comes into it by the fibril that connects it with the nervous mass, to obey whose mandate is to live, while to fail of receiving it is command to die; the same is true of every part and particle of the histological constitution.

As the encephalic bulbs certainly cease to irradiate the organs when they themselves cease to receive through the oxygeniferous streams injected into them by the carotids and vertebrals, the supplies of oxygen which alone enable them to evolve the life force, the nerve force, the *lebenskraft*, the biotic force—it follows, that the organs die in the same ratio as those bulbs fail and perish.

One is not surprised, therefore, upon observing that a person in good health, like this unfortunate lady, the right side of whose heart becomes suddenly, instantaneously tamponed by a coagulum, should fall a victim, and that speedily, not to the presence of the clot alone, but to disease developed in other parts, whose life is overthrown in consequence of the obstruction of the prime organ of the circulation. Only a few hours could pass with a large coagulum in the heart, before the pericardium would begin to be filled with serum, or the embarrassments in the pulmonary circulation seek in vain for relief, by pouring out a vast effusion of water into the cavities of the pleura; or the innervative force being withdrawn from the viscera contained within the abdomen, whose venous blood is prevented from flowing off through the pulmonary artery, there is set in motion in the peritoneal sac, a tide of effusion filling it up in the course of a few hours.

In all such cases as those of which I am speaking, the escape of the blood from the venous side of the sanguine circle is retarded, with the effect of producing enormous engorgements of all those venous branches, which usually and readily allow their products to run off through the ascending and descending cæae. Let the reader perpend for a moment the condition of that portion of the vascular system which receives the aortic injections by the cæliac and the superior to inferior mesenteric arteries; let him reflect that the whole of this torrent, which is entirely expended upon the chylopoietic and alimentary organs, is first collected by the capillary radicles of the portal vein, then distributed again among the capillary termini of the hepatic porta, whence it is a second time collected to flow off by the hepatic veins. Now, if the auricle and ventricle are tamponed by an endocardial coagulum, this whole torrent is inevitably arrested, and the cavities become immediately en-
gorge the continued injections from the aorta, leaving no grounds of astonishment as to sudden or fatal derangement of the healthy states of the tissues that are developed by it.

The time required for extinguishing the life of the sufferer is a variable time; one relative to the magnitude and extent of the coagulation. I can imagine that in the case of the Princess Charlotte, already alluded to, a coagulum was formed which filled the heart so completely, as to put an end to its action within fifteen minutes after the birth of the princess. My patient above mentioned, lived forty-eight hours after the occurrence of the accident, during which time she suffered the most inexpressible respiratory distress. She filled her pericardium with serum, while her peritoneal cavity became also the subject of a great effusion. Upon examining the heart twenty-four hours after her decease, one might feel surprised that her life could be so long protracted, since the auricle, tricuspid, and ventricle were completely tamponed with a clot which was not an enthanasial clot, but consisted apparently of a firm, whitish-yellow mass of fibrine, out of which every particle of haemoglobin had been washed away, or expressed. An enthanasial clot is, in my opinion, necessarily a red one; a pre-enthanasial one ought to be white.

A patient in this city was delivered early in the morning. Soon after the birth of the child and the delivery of the placenta, the physician descended to the breakfast room, having given strict charge that the patient should preserve the recumbent position, and be kept quiet. While at his breakfast, cries from the top of the stairway called him, for "God's sake," to hasten to the assistance of the patient. In a moment he was at her bed-side, where he found her already dead, having fallen backwards across the bed with her legs hanging over its side. He was told that she had said to her nurse, "I wish to get up,"— "The Doctor says, madam, you must not get up, if you please." "But I must get up, I will get up." She threw her feet out of the bed, and rose up sitting upon its edge; her head reeled to and fro, and she fell back and expired. No examination was made of the dead body, but I ask the reader to explain the cause of this sudden death, otherwise than by the rationale that her heart ceased to beat because it became instantly filled with an immovable clot.

Man cannot die, save by the cessation of activity in the brain, or in the heart, or in the lungs; he lives within this triangle, and can only escape at one of its angles. He must die by the brain, or by the heart, or by the lungs. It is to the last degree improbable that this woman perished solely because her brain ceased to evolve; but if it did not instantly cease to evolve, it
must have continued to be the cause of motion everywhere. If the heart, as I suppose, became instantly filled with congealed blood, so that it could no longer receive nor discharge any portion of that fluid, the nervous mass would cease to live as soon as it should have consumed all the oxygen contained within its capillary vessels at the moment of the arrest of the cardiac circulation. The patient died by the heart.

A lady was confined in a natural labour, giving birth to a healthy child, at term. She lost a considerable quantity of blood at the time of the extrusion of the placenta, which left her feeble and pale. Her physician directed her to be kept quiet. She had a good day, and following night. At the morning visit the physician found her comfortable, and her condition was satisfactory to him. Soon after he left her apartment she was seized with violent alarming illness, whereupon he was recalled, and was again present after the lapse of about an hour. Her pulse was extremely frequent, feeble, and small; it continued frequent until the moment of her death, which took place about the nineteenth or twentieth day. On the eighteenth day, I think, I saw the lady, and formed the opinion that she was perishing on account of a false polypus, clot, or tampon in the heart, established there by the imprudent early uprising after a hemorrhage. After her death a great quantity of water was found in the cavity of the right pleura, while a firm white coagulum, entirely destitute of corpuscles, was detected in the right auricle, filling up very much the cone of the tricuspid, while the ventricular end of it seemed to be torn or threshed to pieces by the cordae tendineae, which during so many days, had been vainly occupied in the endeavour to demolish it. The filling up of the pleura with serum was a natural consequence of the condition of the respiratory organs, quite as much so, but not at all more so, than was the filling up of the peritoneum and pericardium in the former case, consequences of the arrest of the circulation in the cava and its branches.

Towards the end of the year 1848, a primapara gave birth to her first child. She was tall, very slender, and delicate; the placenta was not removed; she lost a good deal of blood. Between forty and fifty hours after the birth of the child, upon being called to her succor, I removed the placenta from the cervix uteri in which it was grasped and detained. I removed it with the index finger of my right hand. The stench of it was noisome to the last degree. The putrid odour of it remained upon my hand for twenty-four hours, notwithstanding every effort to remove it. The patient was pale, and her pulse somewhat frequent, presenting the usual characteristics of the anæmical pulse. On the following day she was com-
fortable; the milk was secreted, the lochia healthy, and she was doing well, though still very pale. On the seventh day, she was placed in a chair before the fire, sitting up: she immediately felt sick, was put to bed, and I being called into see her, told her friends that she had formed a fatal coagulum in the heart. She lived about forty-eight hours after the accident; I did not examine her body. I leave the reader to judge whether my diagnostic was or was not probably correct. She had a pulse upwards of 160—the impulse of the heart—feeble—the respiration disturbed—frequent.

On a great many occasions since I have been a practitioner of medicine, I have been called to see patients, who, after hemorrhagic labours, have disobeyed my injunctions as to horizontal rest, and who being prematurely lifted upright in bed, had fainted. I have not a doubt that among those of these persons in whom I found the heart fluttering, irregular and feeble in its action on my arrival, incipient coagulation existed. I have thought as I entered the room of a patient, that her auricular blood had begun to thicken, but was driven out from the auricle before its thorough coagulation, in consequence of the startling effects of a dash of cold water upon the face, or of clapping the hands, or snatching the pillow from under the head and shoulders, allowing the head to fall so as to favour the restoration of its vascular tension or even hyperæmia, and thereby re-establishing the perfect and powerful extrication of its innervative force. The re-excitation of the innervative force of the brain would probably soon enable a heart so situated to discharge itself of the inchoate coagulum.

It is not needful that I should draw out this paper to any great length; nor that I should discuss the reasons why so many autopsies present the evidences of the endo-cardial clot of which I have spoken, without having excited in the mind of the attendant practitioner, the suspicion of its presence before the death of the patient. It appears to me, to be enough for the present occasion, to propound the question—Can a patient with a white clot in the auricle and ventricle recover? If such a clot be a small one, the pulmonary circulation, although checked, is not necessarily suspended, but the nucleus of such a clot, like the nucleus of an urinary calculus, tends constantly to increase in size, and hence a small coagulum, which strangely disturbs the action of the heart, may consist with a considerable protraction of the struggle against its fatal power over the circulation. The gradual augmentation of the volume of the clot, and its extension into the pulmonary artery and its branches must in every case lead to an inevitable dissolution. I have not the least confidence in the power of alkaline medicines to dissolve such
coagula, nor do I admit that the dull white endo-cardial coagulum so often discovered is the result of a state of endocarditis; but I rather attribute its occurrence to a temporary stasis or near approximation to stasis during a state of fainting in an exhausted patient. Its occurrence after hemorrhagic labours, or upon the almost total suspension of the circulation at the cessation of an attack of puerperal eclampsia ought not to excite surprise. If a coagulum should fill the auricle and the tricuspid valve completely and at once, the death would be almost instantaneous and the clot would be found red. If the process of its formation should be long protracted it would be dull white.

I did not design in this paper, to speak at all of the enthanasial coagulum; it is perhaps quite normal that some portions of the blood last reaching the heart, at the moment of death, should congeal there.

In regard to the diagnosis of cases in which the endo-cardial coagulum becomes suddenly constituted, as in the examples of which I have spoken, it appears to me that the medical observer, in order to make it, must resort to a method which is only to be fitly characterized as transcendental diagnosis. It is true that the feeble impulse and almost complete suspension of the sounds of the heart, might serve as quasi physical diagnosis of however little value.

By transcendental diagnosis I mean one made by a process of the mind, fitter to be called sentiment or conviction, than a regular ratiocinative progress.

To enter an apartment one has quitted only half an hour before, and to find a patient hopelessly ill with signs of imminent death, yet who had no serious symptoms of illness before—to find her making desperate voluntary efforts to breathe, without any signs of laryngeal or phrenic or pulmonic inflammation or accident—to see the face pale and ghastly—to observe her conscious sense of impending asphyxiation from loss of oxygen—without the leaden or iodic hue of a general cyanosis—These are the grounds of a diagnosis which may be called transcendental, one in which the consciousness of the physician informs him that a mechanical obstruction within the heart exists, and that such an obstruction alone can give rise to the phenomena.

In all the lingering or sudden progressions of the accidental disorders supervening in endo-cardial coagulum, no purely cyanotic manifestations have met my observation.

Writers on cyanosis mostly refer the cyanotic symptoms to the backing of the carboniferous blood of the veins into the capillaries. You, Messrs. Editors, are aware that I have maintained the opinion that cyanosis is, in its essence, not blueness
of the surface, but a state of the nervous mass produced by the absence of oxygen in the brain-capillaries.

The writers, and among them, perhaps in chief, Professor Rokitansky in his Pathologischen Anatomie, contend that cyanosis depends most commonly upon constriction of the orifices of the great vessels of the heart, preventing the venous blood from escaping from the cavae by the routes of the heart. Now, I aver that, no obstructions existing in the vessels of the heart can be more complete than that depending upon a large endo-cardial clot, or tampon; and yet I venture to say that under circumstances of such kind the victim perishes without manifesting the peculiar livor or cyanotic tinge which characterizes the forms of the malady, that are connected with open foramen ovale and imperfect action of Botalli’s valve. It is my clear conviction, that as long as the respiration can be carried on in endo-cardial clot, the blood, however small in quantity that reaches the lung passing along the superfcies of the clot, is highly charged with oxygen. While, therefore, oxygeniferous blood continues to reach the brain, the patient, though conscious of the want of oxygen in due quantity, is in a state different from that of one who injects only carboniferous or venous blood into the neurine of the encephalon.

My intention was to speak only of the white clot, the false polypus, to show the probability of its being formed under circumstances of deliquium, in the oligæmia that follows uterine hemorrhage; and thereupon show how dutiful a thing it is on the part of the attendant physician, to issue the clearest and most precise orders as to the guidance of the hemorrhagic accouchee. I believe that a woman who has lost a very great quantity of blood, and who is prematurely taken out of her recumbent decubitus, and placed upright upon the close-stool; whether in bed or not, incurs a most dangerous risk of a miserable and premature death, from the sudden formation of a heart-clot.

I am, gentlemen, your ob’t servant,

Charles D. Meigs.

On the Effects of different Winds on the Human Constitution.

By J. C. Atkinson, Esq., M. R. C. S., &c., of Westminster.—
(London Lancet.)

My attention has been for many years turned towards extending the knowledge we already have of the influence of the winds in this country on health and disease. The subject seems to have been hitherto considered either as destitute of
much interest, or as nor presenting any point of practical utility, for I cannot find myself indebted to any particular author who has been the pioneer or forerunner in any investigations on this matter.

It will be, perhaps, proper in a preliminary way to observe, that our views in this country, of the operation of the winds, are mostly domestic and proverbial. Who does not intuitively repeat to himself the well-known couplet—

"When the wind is in the east,
It's neither good for man nor beast;"

and when he feels the sometimes keen influence of a dry breeze? What schoolboy does not recollect the story of a very rheumatic pedagogue, who always felt ill when the wind blew from that quarter? The mischievous boys, well knowing his infirmities, and his general severity of manner to them in the schoolroom at such times—

"Full well the boding tremblers learnt to trace
The day's disasters from the morning face"—determined to fix by a nail the vane of the weather-cock, which, being opposite his bed-room window, he was in the morning always in the habit of consulting, and this had the effect of making him—poor fellow!—remain in bed for one whole month.

With respect to the east wind "being neither good for man nor beast" there is no absolute truth in the common saying, which is purely an Eastern couplet, and not applicable to this country. The latter instance rather shows the power of the imagination over the body, than its real action.

There are various winds, however, possessing peculiar and distinct qualities. In southern Europe the sirocco, or south-east wind, is extremely insalubrious. It sometimes blows for several days together, to the great detriment of the whole vegetable and animal creation. The medium heat of this wind is calculated at 112° Fahr. It is fatal to vegetation, and destructive to mankind, and especially to strangers. It suspends the power of digestion; so that those who venture to eat a heavy supper while this wind prevails are commonly found dead in their beds the next morning, of what is called an indigestion. In Palermo, for instance, where its effects are strongly marked, the inhabitants—doctors included—shut their doors and windows, to exclude the air or wind. No one whose necessities do not compel him to quit the house, is to be seen while this tremendous wind continues to blow, and the streets and avenues of the city appear to be nearly deserted. Immediately on the prevalence of the tramontane, or north wind, which in a short time restores the exhausted powers of animal and vegetable life, Nature assumes her former appearance.
There is another equally pernicious wind, and of an extraordinary blasting character, which is occasionally felt in the Falkland Islands. Happily its duration is short, continuing to blow only twenty-four hours. It cuts the herbage down; the leaves of the trees are parched up; fowls are seized with cramps; men are oppressed with an interrupted perspiration, weight on the chest, and sore-throat. It has always been supposed that some mephitic vapour is generated during the prevalence of the above winds, and which produce all the bad effects above noticed in man and animals.

Before I proceed any further regarding the various winds and their operations, destructive or otherwise, it is necessary to consider what winds are. The motions of the atmosphere are subjected to the same laws as those of denser fluids. If we remove a portion of the water in a large reservoir, we see the surrounding water flow in to restore the equilibrium—if a portion, being rarefied by heat, or condensed by cold, ascends or descends, a counter-current in another part is the necessary and visible result. It is thus in the atmosphere. The eminent chemical philosopher, Dr. Priestly, ascertained that the atmospheric air is, in reality, a compound, and may be artificially produced by the union of oxygen and nitrogen gases. I admit that an atmosphere may be produced in this manner, but I deny that this is the constitution of the air as it is. The electrical powers have not been observed; for without them (the components oxygen and nitrogen possessing different specific gravities) how can the mixture remain without disturbance and rearrangement? The atmosphere, in chemical character, is pronounced to be the same in valley as it is at the highest elevation or latitude man has reached. Again, the difference between air of one country and that of another, has never been noticed as regards any of the components—viz., oxygen and nitrogen, and yet we find great differences as regards their operations on living structures and beings. To what can we attribute the variable influences of different winds, if not to something yet undiscovered—something which has wholly escaped observation? The emission of latent heat, as well as solar heat and electricity, gives rise to those changes distinct altogether from the chemical nature of the atmosphere.

The difference of the weight of the atmosphere which our bodies sustain at one time more than at another, is very considerable. On the increase of the natural weight the weather is bad, and people feel listless and inactive; but, on the contrary, when there is a diminution of the weight, the weather is commonly fine, and we feel ourselves what we call braced, and more alert and active. Hence it is no wonder that persons
Hydropathy and its Evils.

suffer very much in heat from changes in the atmosphere, especially when they take place very suddenly. Thus we all know, that when the variations of the barometer and thermometer are sudden and great, illness will inevitably prevail; and during some years this is more observed than in others. Slow changes are never followed by any epidemic disorders: the human body being naturally endowed with the power of accommodating itself to his kind of change, no injurious consequences ensue.

I will, in a future number, enter into the particular character of other kinds of winds, and their good and bad effects, advertizing fully to the winds generally prevailing in this climate, and their various influences on health and disease; and I will likewise point out, from my own experience of the uses of various philosophical apparatus, how far they are to be depended upon in conveying accurate information.


Five children, of a respectable family in my neighborhood, were attacked last month with scarlatina; all progressed well till Friday, Nov. 3rd, when one, a boy, through incautious exposure to wet and cold, was seized with inflammation, of the meninges. I saw him shortly after its commencement, in the evening, and adopted the proper therapeutic measures. The pain and screams of the boy increased during the night, and at the suggestion of an alarmed relative, who had been under this treatment, the hydropathic doctor was sent for early on the morning of the 4th. "Wet sheets, towels, and bandages were lavishly applied; cold water lavements, cold water for food, and (toujours perdrix!) nothing but cold water for food, drink, or raiment.

On my arrival I met this gentleman: "Sir," said I, "how do you expect your treatment to act?" "Derivatively," replied he; "cold water promotes absorption, attracts the morbid action to the skin, and instantly relieves the brain. The wet rollers round the loins act powerfully on the kidneys, and the lavements clear out the bowels. Taking nothing but cold water starves out the disease. Sir," continued he, "smash your bottles; you will adopt hydropathy in a week, and a splendid water-cure practice you will make." "I wish you could get rid of a toothach for me," said I, experiencing a twinge at that moment. "Sit with your feet wrapped in cloths of cold water for half an hour, and I will guarantee that you lose your toothach."

To proceed: my visits now ceasing to be professional, I con-
continued them occasionally, out of curiosity. On the evening of
the 4th, pain most acute; epileptic attacks frequent; pulse fee-
ble, &c. On the 5th, pains diminished; pupils dilated; pulse
slow and feeble; coma, insensibility, and great prostration of
strength. The treatment went on till the morning of the 10th
when, on the visit of the learned hydropathist, he shook his head
and pronounced the boy in articulo mortis, put on his hat, and
left the house.

My attendance was again requested. I found the little pa-
tient in a positive pond of water and wet clothes, bed and all
soaked. He was perfectly unconscious of all around him,
moaning and crying "Ma! ma! ma!" unconscious of his moth-
er's presence; the symptoms, previously enumerated being, if
possible, aggravated. The excretions were passed involuntari-
ly, and he had not even swallowed water for twenty-eight
hours! pulse almost imperceptible, and in every respect all but
dead. A dry bed, dry clothes, warm milk-and-water, tonics,
&c., soon revived him; a genial warmth pervaded the system,
the pupils regained their natural calibre, consciousness return-
ed, and with it a serenity and happiness of countenance, which
too plainly evidenced the advantage of the change, and his
lucky escape from this amphibious incarceration. On the 11th,
he conversed cheerfully with those around him, took pleasure
in his toys, and ate with much goût a mutton-chop for his din-
ner. He is now quite recovered.

This, Sir, is a part of the tale only, for the other four child-
ren were all hydropathed. Two had congestion of the brain,
and the other two anasarca. The two former recovered, but
one of the latter (urine becoming albuminous, bilious vomit-
ing and purging) speedily died. The above circumstances I have
related to you with the most perfect sense of candour and impar-
tiality, entertaining as I do a deep respect for the opinions of
others, however erroneous; and I must say, that my hydropa-
thic friend acted throughout with much courtesy and unobtrus-
siveness, and appeared to attend the case reluctantly, and as
though pressed against his inclination.

On the Pathological Changes in Mucous Inflammations. By

All inflammations are to be considered as alterations of the
nutritive process, by which the plasma of the blood is thown
out of the vessels in increased quantity. In inflammations of
mucous membranes, their anatomical relations cause the exu-
dation of this plasma upon a free surface. The plasma itself
may be unchanged in constitution, or its fibrine may be increased in quantity. Differences in the constitution of the plasma determine differences in the result; and thus are established three leading forms of mucous inflammation:

1. The Catarrhal Form.—In this the quantity of the blood-plasma is increased, and thrown out on the free surface. The cells of epithelium are formed in greater quantity than normal; but they do not reach their normal development, being replaced constantly by an increased succession of new ones. The richer the plasma, the more rapid is the self-development. In the so-called chronic catarrh, there are frequently found in the fluid cells quite perfectly developed, of the aspect of the ordinary epithelium. In acute cases the cells do not reach this stage of development; they do not take on the epithelial forms characteristic of the part, but are thrown off as round, more or less spherical, mostly single-nucleated cells (mucous corpuscles). In the very acute, particularly the bleomorrhagic forms of inflammation, almost all the cells are found in the earliest stages of development, smaller, more delicate, and containing often three to five nuclei; in short, possessing all the characters of the ordinary pus cell. All these forms may be considered as different grades of the epithelium cell; or, if the name epithelium be dropped, as cells developed on the surface of a mucous membrane, and whose only difference is their different degree of development.

2. The Croupous Form.—In this the plasma is not only increased, but is also altered in constitution, containing a large amount of fibrine, and coagulating more or less completely. The coagulum lies free on the surface of the membrane. This form is most frequent in the respiratory mucous membrane. The false membrane is either softened, friable (as in tracheal croup), and contains many cells; or it is of a more firm and fibrinous character (as in bronchial croup and exudation into the air-vessels, or true pneumonia), and contains the products of rupture of the capillary vessels, red and colourless blood corpuscles. In pneumonia the stage of hepatization, where the air-cells are filled with firm coagulated exudation, is generally succeeded by that of purulent infiltration, in which cells in every grade of development are formed in great abundance. In the first stages these cells have various degrees of resemblance to pus or epithelium; in the stage of resolution of the pneumonia, we find the air-cells full of granular cell and masses, or a finely granular emulsion, which are to be considered as the retrograde steps of the newly formed cells.

3. The Diphtheritic Form.—In this the exudation consists of nearly dry coagulated amorphous fibrine, and is infiltrated
into the tissues composing the superficial layer of the mucous membrane, or rather of the submucous cellular tissue; for when it projects from the free surface, it is generally covered by the epithelial layer. Where organization proceeds in this kind of exudation, it is generally very imperfect; more commonly it is entirely absent, and a superficial slough is formed. Hence this form has been rightly considered as allied to a gangrenous form of inflammation; it is, in truth, closely allied to hospital gangrene.—Archiv. für Pathologische Anatomie, &c. Band. I. Heft 2.

[We shall take another opportunity of adverting to these opinions, as well as to other views enunciated in this able journal. In the meantime, we may state that we agree in many of the author’s conclusions, although differing from him in some points; as, for instance, in regard to the constitution of the blood plasma, which we believe to be least altered where the fibrine is in greatest quantity, as in the croupous and diptheritic forms; and most altered where, as in the catarrhal forms, the inflammatory phenomena are but a slight alteration of the ordinary secreting process. We believe that the membrane, in its healthy state, possesses a power of selecting from the blood plasma a new product—mucus; that in disease the nature of this product is changed, and assimilated more and more to the plasma of the blood; in other words, that while the vessels acquire an increased power of pouring out the elements of the blood plasma, the power of the membrane to alter and select from these elements is diminished.—[Monthly Journal and Retrospect of Medical Sciences.

On the Treatment of Worms in Children. By Dr. C. West. (Medical Gazette, in Braithwaite.)

[The symptoms said to indicate the presence of worms, are most of them, Dr. West remarks, of small value; and nothing short of seeing the worms can be regarded as affording conclusive evidence of their existence. When, however, the symptoms usually enumerated continue with varying severity for several weeks together, we have reasonable ground for suspecting the presence of worms, and as Dr. West observes:]

Fortunately the treatment which the general symptoms would lead us to adopt will be in a great measure such as, if worms exist, will prove most efficacious in producing their expulsion. The capricious appetite will induce us to regulate the diet with care; the disordered and generally constipated state of the bowels will lead to the employment of alteratives, and to the occasional administration of brisk cathartics; while the absence
of febrile symptoms will probably seem to warrant the employment of some of the preparations of iron. These remedies will in many instances not have been continued long before the appearance of worms in the motions encourages us to persevere in the same treatment. The combination of ferruginous preparations with active purgatives, is a plan especially effective in cases where the lumbricoid entozoa are present, and is likewise of much service in getting rid of the ascarides which inhabit the rectum, and in preventing their production. The latter worms, however, need to be assailed in their habitations; and, from the circumstance of their living in the lower end of the rectum, this is a sufficiently easy task. Enemata of lime-water usually answer the purpose of destroying them; but, should they fail, the addition of some two drachms of the muriated tincture of iron to the clyster is tolerably sure to make it effective. In young children these ascarides sometimes not merely occasion much itching and distressing irritation about the anus, but even produce a troublesome diarrhœa, attended with considerable tenesmus. Under such circumstances, the lime-water injection should be administered daily for two or three days together; while, at the same time, small doses of the castor oil mixture, every six or eight hours will soothe the irritation of the bowels. In female children these ascarides sometimes creep up the vulva, and not merely cause much irritation there, but sometimes excite a leucorrhœa discharge, which ceases on the expulsion of the worms.

The alarming symptoms of cerebral disturbance which have sometimes been produced by worms in the intestinal canal, have resulted more frequently from the presence of the round worm than of other varieties of these entozoa. This, however, is not always the case; and in the only instance that has come under my observation, in which the occurrence of convulsions seemed clearly traceable to the presence of worms in the intestines, the small thread-worms were the cause of the symptoms. Apart from the knowledge which we have in many of these cases, that the child had previously been afflicted with worms, there is nothing in the symptoms which could enable us at once to distinguish between convulsions from this cause and those which result from some other source of irritation of the nervous system. In most instances, however, the child has passed worms frequently before the cerebral symptoms made their appearance, and not improbably was under treatment for the destruction of these parasites at the time when the nervous symptoms supervened. Even though this be not the case, the constipated state of the bowels which is almost sure to have preceded the occurrence of the convulsions,
indicates the employment of active purgatives—remedies which in most instances remove together these symptoms and their cause, although convulsions apparently induced by the presence of worms have sometimes had a fatal termination.

The taenia is, as was stated, much less common in childhood than after puberty; and in the few cases in which I have met with it during early life, I have been reluctant to try that heroic remedy, turpentine and castor oil, which is so serviceable in procuring the expulsion of tape worms in the adult. I have been accustomed to employ the decoction of the bark of the pomegranate root in $\frac{3}{4}$ doses three times a day to a child of seven years old, interrupting its administration twice in the week, in order to give a purgative of scammony and calomel. Under this plan, pursued for several weeks together, large quantities of the worm have been voided, and the children have appeared entirely freed from this very troublesome parasite. I have not yet made trial of the administration of a dose of the decoction or powder of the pomegranate bark every hour for four or five successive hours, as recommended by Mr. Breton,* who brought the remedy into notice in this country. I purpose, however, making a trial of this method on the next occasion that may offer, since the effects of the remedy, when thus administered, appear to be surer, as well as more speedy, than when it is given at long intervals.

Gun-Shot Wound—Ball in the Hip Thirteen Months. By G. Kimball, M. D., Prof. of Surgery in the Berkshire Medical Institution, Mass.—(Boston Med. and Surg. Jour.)

George Church, a soldier of the Massachusetts Regiment during the late campaign in Mexico, was shot down in the battle of Molino del Rey, on the 28th of September, 1847. He was taken into Hospital the evening of the same day, and fell under the charge of one of the chief surgeons, Dr. Satterlee. It was found, upon examination, that a wound had been received in the hip—that a musket ball had entered just anterior to the great trochanter, and made its way, apparently upwards and forward, towards the anterior superior spinous process of the ileum. Attempts were immediately made to extract it, but they were unsuccessful. The wound healed very slowly, and it was not till nearly the end of five months that he was able to leave the hospital. He then returned home to Massachusetts, and gradually became so far restored as to be able to engage moderately in the common duties of farm-

ing. In the course of a few months after this, some 10 months from the date of the wound, he was seized with a violent paroxysm of epilepsy. Three weeks after, he was seized with another, still more violent; and thus they continued returning at intervals of every two or three weeks, till the latter part of October, 1848, when, at the suggestion of Dr. Guiteau, of Lee, his attending physician, he came to Pittsfield for the benefit of a surgical consultation. The result of this consulta-
tion, was an unanimous conclusion that the epilepsy had been induced by the wound in the hip—that a ball or some other foreign body, lodged there at the time the wound was received, was implicating some important nerve—and an operation, with the view of its dislodgment, afforded the most reasonable chance of relief. This operation, however, was not pressed with much earnestness. The efforts of the army surgeon, to the same end, had proved abortive in the first instance; and the present circumstances of the case, certainly gave no very flattering assurance that a second attempt would be more suc-
cessful. However, the proposition was readily embraced by the patient, and the operation accordingly performed on the 28th of October.

A fistulous opening, sufficient to admit a common-sized probe, indicated the original course of the wound, to the extent of some three inches, and in a direction as before stated, to-
wards the anterior superior spinous process of the ileum. As a most critical examination of the part, had hitherto afforded no idea of even the probable location of the ball, it was thought best to endeavor to reach it by tracing, if possible, this fistula through its entire course. A grooved probe was accord-
ingly introduced, and pushed forward till it came in contact with the surface of the ileum. Upon this, a straight bistoury was introduced to the same extent, and the fistula, thus far, laid freely open. Its further continuation and direction were now detected, though with difficulty, from its course having been so entirely changed. A long probe being introduced into this new branch of the fistula, it was made to pass some 8 inches backwards and downwards, making its way along the surface of the bone, just under the crest of the ileum, till it reached the ischiatic notch, when it fell directly upon the ball, which was situated, it would seem, very near to, if not in con-
tact with the sciatic nerve. An attempt was now made to bring into service, the ball forceps, but the length, the narrow-
ness and unyielding callous walls of the fistula, rendered them quite useless. It seemed necessary, therefore, to lay open this passage still further, and it was accordingly done to the extent of some 5 inches. Again the forceps were introduced, the ball
readily laid hold of, and a good deal of force applied; still it refused to yield. A bistoury was now passed into the bottom of the fistula, and the callous tissue immediately embracing the ball, carefully divided at several points, so that upon a third application of the forceps, it was brought away with comparatively little force.

This operation, undertaken with a good deal of reluctance, and, in view of the circumstances of the case, with serious misgivings as to its success, has been most satisfactory and gratifying in its results. From the day it was performed to the present time, there has been no return of epilepsy; and the patient's health, which has previously been most seriously impaired, has now become so far restored as to make it safe to pronounce him perfectly well.

PART III.

Monthly Periscope

Extraction of a glass goblet from the Rectum. — Case reported by W. S. W. Rüschtenrügger, M. D., U. S. Navy, Fleet Surgeon for the East India Squadron. While recently on a visit to Canton, I derived the history of the following case from the notes and verbal explanations of the Rev. Peter Parker, M. D., Chief of the "Ophthalmic Hospital," &c., under whose notice it fell. The case seems to be so unusual, that I avail myself of Dr. Parker's consent, and submit it for publication. The first case affords us a glance at the debauchery practiced by a portion of the Chinese population about Canton.

On the records of the hospital, the case numbers 23,930. Glass goblet extracted from the Rectum. — In the evening of the 1st March, 1848, a young man, very respectable in appearance, solicited Dr. Parker's aid for his father, whom he had brought to the hospital. With many expressions, indicative of his sense of shame and mortification, he related that Loo, his father, then sixty years of age, had spent the preceding night in one of the "flower boats," or floating brothels on the river, with a prostitute. Under the insane excitement or intoxication produced by the combined influence of drinking spirituous liquors, and smoking opium, the lecherous sufferer, in mischievous frolic, forced a glass goblet, of the form and size indicated in the accompanying diagram, into the vagina of the companion of his sports. In the course of the night, Loo fell into a state of unconsciousness, when the woman sought her revenge. She carefully insinuated the base of the goblet within his anus, and then placing the end of her opium-pipe—a cylinder about an inch in diameter, and a foot and a half in length—at the bottom of the goblet on the inside, suddenly pushed it into the rectum, entirely above the sphincter.
Twenty-four hours had elapsed since its introduction. An angle of about a half inch of the rolled lip of the glass had been broken out by efforts made by friends to remove it.

Such was the report of the case when brought to the hospital for relief.

On examination, the glass was found firmly fixed in its position; it was very difficult to pass the extremity of the finger beyond its lip, betwixt its outside and the rectum. In Dr. Parker's opinion, it was impossible to extract it entire; and, therefore, though anticipating difficulty and danger in the operation, he determined to break it down. By means of forceps, such as used by obstetricians in breaking up the foetal cranium, commencing on the side nearest the pubis, he broke up the goblet and extracted it piece by piece, carefully guarding the parts by folds of cotton cloth as he proceeded, and removing the small sharp fragments which fell, with a teaspoon. After the bowl, or bell portion was removed, the most difficult part of the operation remained to be performed, for the hemorrhage was free, and the base of the goblet, with the sharp points of the sessile stem, resulting from the fracture, was high up in the rectum, and firmly embraced in a transverse position. Assisted by the bearing-down of the patient, the edge of the base was reached by the point of a finger, and with difficulty turned edgewise, guarding against fractured points by pledgets; then, by pressing the smooth side, or bottom of the glass against the rectum, it was at last extracted. Remaining fragments were sought for, and the intestine thoroughly washed out. To arrest the hemorrhage, which was considerable, strong solutions of sulphate of copper, and of alum, were injected, and temporarily confined in the rectum, by pressing a sponge against the anus. For a time the bleeding ceased; but during the night, several ounces of coagulated blood were evacuated; afterwards, there was no more hemorrhage.

The operation occupied an hour and a half. An opiate was administered, and the patient placed in bed. The general treatment consisted in rest, laxatives, and light diet; the rectum was occasionally injected with tepid water, and solutions of nitrate of silver.

On the fourteenth day the case was discharged, cured.*

[Quinine in Cholera.—Dr. Little says, (London Med. Gaz., Dec. 15th, 1848,) from all he has witnessed of malignant cholera, he is impressed with the belief that, it is more nearly allied to fevers than to any other nosological class, and, consequently, he considers, that quinine administered before the suprvention of decided collapse in the large doses required to arrest malignant intermittents, say in doses of half a drachm and upwards, deserves a trial.—[Ibid.]

Employment of Nux Vomica in the Diarrhoea of Exhaustion.—Dr. Nevins mentioned, at the meeting of the Liverpool Medical and

* This patient should have been made insensible, and the tumbler turned by means of the hand introduced into the rectum.—[Ed. S. M. & S. Journ.
Pathological Society, the benefit derived from the employment of nux vomica in the treatment of the diarrhoea from exhaustion, chiefly observed in pauper patients, and especially children. In these cases he had repeatedly found no benefit from astringents and ordinary tonics, but the patients had rapidly improved under the use of the following prescription: Alcoholic extract of nux vomica (not officinal, but prepared by most wholesale druggists), gr. ss; rhubarb, gr. ss; saccharated carbonate of iron, gr. j; blue pill, gr. ss; opium, gr. ¼, made into a pill, and taken three times daily. In many cases he omitted the opium altogether.

He attributed the benefit to the influence of the nux vomica, which by stimulating the nervous energy of the bowels, enabled the lacteals to absorb the nutriment from the food, and the large intestines to retain the faeces; whilst, at the same time, the iron acted as a permanent tonic; and the very small doses of rhubarb and blue pill improved the character of the secretions, without acting as an aperient. Improvement was generally perceptible in a few days, and he seldom had occasion to continue the prescription more than a fortnight.

Mr. Taylor, of the Liverpool workhouse, confirmed this account from his experience of many cases in the same class of patients in whom he had tried it, on Dr. Nevin's recommendation.—[London Medical Gazette.

Lemon Juice in Rheumatic Gout.—Dr. Owen Rees narrates the case of a girl, aged 18, suffering from rheumatic gout in all her joints, who was treated successfully by lemon juice, in the dose of half an ounce three times a day. In his remarks on the case, he states that he has in many other cases seen marked and rapid relief from the same plan. He first had recourse to lemon juice from a belief that vegetable acids, from the large quantity of oxygen they contain, contribute to effect the transformation of the tissues generally, and moreover, from the idea that the supercitate contained in the juice, by its transformation contributed to the alkalinity of the blood.

[Nutritive Properties of Bran.—M. Millon has communicated to the Academy of Sciences the result of some interesting investigations of his concerning the ligneous matter of wheat, whence it would appear that bran is a very nutritive substance. Though bran doubtless contains from five to six per cent. more ligneous substance than flour, it presents more nitrogenous matter, twice as much fatty matter, and moreover two distinct aromatic principles, one of which possesses the fragrance of honey; and these are both wanting in flour. Thus, by sifting this wheat impoverished in nitrogenous matter, fat, fecula, aromatic, and sapid principles, in order to free it from a small proportion of ligneous substance. M. Millon, therefore, thinks that bran and meal ought to be ground over again and mixed with the pure flour, and he has found, by repeated experiments, that this mixture yields a superior kind of bread, and free from the inconveniences of that
bread which, in some countries, and particularly in Belgium, is made with coarse meal.—[Lancet.

**Distinction between Syphilitic and Scrofulous Affections of Bone.**

By M. Ricord.

**Syphilitic Affections of Bone.**
1. Very rare with young people.
2. Syphilitic precedents.
3. Compact texture of bones attacked.
4. Superficial part of the bone.
5. Little tendency to hyperostosis.
6. The pains which precede the development of the affection increase, and become very intense, until they decrease again, and entirely disappear in the latter periods of the disease.
7. A tendency to circumscription.
8. Exostosis.
9. Tendency to ossification and eburnation, but very little suppuration.
10. A chain of syphilitic symptoms, either concomitant or antecedent.

Syphilis may, however, be superadded to scrofula; we must then, in combating any lesion, endeavor to find out to which of the two diatheses it is mostly owing, and select our therapeutic means accordingly.—[Ibid.

**Scrofulous Affections of Bone.**
1. Very frequent in youth.
2. Scrofulous precedents.
3. Spongy or cancellated texture of bones attacked.
4. Deep parts of the bone.
5. Much tendency to hyperostosis.
6. The tumefaction precedes the pain, but the latter soon increases, and becomes more and more intense as the disease advances.
7. A tendency to diffusion.
8. Hyperostosis.
9. Tendency to softening, to suppuration, caries, and necrosis, and not to ossification.
10. A chain of scrofulous symptoms widely differing from those of syphilis, either concomitant, or antecedent.
11. Very difficult cure, often incomplete, and sometimes impossible.

**Collodion in Burns.**—Dr. Payne, dentist, Montreal, appears to have suggested the use of collodion in burns,* and Dr. Crawford, of the same city, employed it in the case of a young gentleman who met with a severe burn of the face and hands. The burn thus treated was covered with a thin glazing, or varnish, which completely excluded the air. The pain almost instantly subsided, and if the exclusion of air be the chief desideratum in such cases, this remarkable fluid will more conveniently and effectually produce it than any other remedy. Its utility in burns has been confirmed by other practitioners.—[Ranking's Abstract.

Anæsthesia from the local Application of Chloroform.—Mr. Higginson communicated to the Liverpool Medical and Pathological Society, the case of a lady, aged 25 years, in labour with her first child: the perineum had long been on the stretch by the head, which was tumefied by the pressure: the pain was great with each uterine contraction, but was referred entirely to the perineum, no pain being apparently felt from the uterine contraction itself.

About half a drachm of chloroform was poured upon a handkerchief in the ordinary manner, but instead of being applied to the mouth, it was held in almost immediate contact with the perineum. The pain immediately ceased, though the uterine contractions continued in full force; and the first intimation the patient had of the progress of the labour, was hearing the child cry. Her mind was not at all affected, nor was intellectual consciousness in any degree diminished.

He had observed the same thing, though in a less degree, when the chloroform had been applied to the sacrum in another case.

He had also applied this agent to the os uteri of a patient suffering from very severe dysmenorrhœa, by means of a sponge placed in a curved glass speculum, which was introduced into the vagina. The pain almost immediately abated, and on its return, after some hours, the patient re-applied it herself with similar benefit.

Dr. Watson mentioned some cases confirmatory of its good effects when locally applied. He had painted it over a swelled testicle, with speedy relief to the pain, and had applied it along the course of the spine with a similar result in a case of acute spinal tenderness, which had not been relieved by other treatment. He had also applied it to the surface of a large mammary abscess prior to opening it, which was afterwards done without suffering to the patient; and also to the vulva of a woman before cauterizing the orifice of the urethra. It had relieved the cramp and collapse in a case of English cholera, when laid upon the epigastrium, and had abated the pain almost immediately when painted round the edge of a surface to which potassa fusa had been applied for the purpose of forming an issue.—[Lond. Med. Gaz.

A new mode of removing Nevi.—J. C. Christophers describes (Lond. Med. Gaz., Dec. 1848) a method of applying a simple ligature to strangulate and remove nevi, which, he says, he has employed in six cases, and in all with perfect success, and without any untoward accident occurring. His method is as follows:

1st stage.—Take a piece of strong silk, well waxed, about half a yard long, and dip the moiety of it in ink to dye it, the more readily to distinguish the ends after it is divided; thread a needle with the same, leaving the ends equal, and pass it under the centre of the part to be removed. This done, cut the ligature in the middle, leaving the needle attached to the inferior or black half of the ligature; take the same and pass it through the skin, immediately below the part to be strangulated. Thread the needle with the superior or white half of the ligature, and pass it through the skin in an opposite direction to the black ligature, immediately above the part to be strangulated. Remove the needle.
2d stage.—Tie tightly the two ends of the black loop that includes the inferior half of the nævus. Tie in the same manner the two ends of the white loop that includes the superior half of the nævus. The four ends remaining, two black and two white, are now to be tied alternately and tightly, the one to the other, and the operation is completed. The whole mass to be removed is by this means completely and entirely enclosed in a double circle, both from within and without, and is most effectually and permanently strangulated. The pain, he says, of this operation is trifling.—[Amer. Journ. of Med. Sci.

Lateral Transfixure of the Chest by a Scythe Blade, followed by complete recovery. By E. Q. Sewell, M. D.—The subject of this extraordinary case was a youth 18 years of age, who had been mowing, and had taken the scythe off the handle, and was carrying it home to have it sharpened. Whilst walking, he happened to step on a log, when his foot slipped, and he fell on the scythe blade, the point of which entered under the right axilla, between the third and fourth ribs, passed horizontally through the chest, and came out through the corresponding ribs of the opposite side, making a small opening. The wound on the right side was about two and a half to three inches long, that on the left, about one inch. The poor lad lay still, until his brother, who was with him, with admirable presence of mind, drew the scythe slowly out, observing with much caution as he did so, the curvature of the blade. The effusion of blood was not excessive, and the patient walked home with his brother’s assistance. There was, it is said, no spitting of blood. The patient entirely recovered.—[British American Journal, and Ibid.

On the external use of Iodine in Croup.—Dr. Willige speaks of having had remarkable success in the treatment of urgent cases of croup by the external application of iodine to the larynx and trachea. He recommends that tincture of iodine should be smeared with a feather over the front part of the neck, corresponding to the larynx and trachea and their immediate neighborhood; and that this should be repeated several times, with intervals of about four hours, until redness and irritation of the skin is induced. In most cases this is followed by subsidence of the distress of breathing, of the spasms of the glottis, and of the other bad symptoms. He mentions the particulars of three cases in which, by this means, he succeeded in averting impending death.—[London Med. Gaz., from Schmidt’s Jahrbücher.

The advantages of Chloride of Gold as a Caustic. By M. Chavannes.—MM. Récamier and Légrand signalized the advantages of the chloride of gold as a caustic many years ago—and our author confirms their statements from observations made chiefly in the treatment of lupus and syphilitic tubercles and ulcers. M. Chavannes maintains that the chloride of gold destroys less than the other caustics, and, when the crust separates, cicatrization is found in a forward state of advancement. The cicatrix which remains after the use of this chlor-
ide, is said to be less marked than when other caustics are employed. It is prepared thus: gold leaf one part, hydrochloric acid three parts, nitric acid one part.—[Monthly Révros., from Gaz. Méd. de Paris.

Fracture of the Penis.—A young man, native of Canton, applied to Dr. Parker for relief. He had been married about eight months. On the nuptial night, he met with insurmountable difficulty in his attempt to establish sexual intercourse with his bride, and in an effort, on that occasion, sustained a severe, and most probably, irreparable injury, which caused great pain. Since that night, erection of the penis is limited to about half an inch of its root, the extremity of the organ, with its glans, hanging flaccid.

On examination, a well-defined, transverse space, through the corpora cavernosa, about a half inch from the pubis, the site of fracture, was found to separate the penis into two parts.

No attempt was made to remedy this serious misfortune.—[American Journ. of Med. Science.

Rupture of the Femoral Artery.—Dr. S. Parkman exhibited the artery, torn at the point of its passage through the adductor magnus tendon; a cart loaded with coal had passed over the lower third of the thigh; there was no external wound or abrasion of the skin; but the sudden ecchymosis, and the cessation of pulsation below the knee rendered the nature of the accident perfectly clear. The integuments were rendered very tense by the effusion of blood through the whole thigh. The limb was amputated above the injury. Besides the artery, the gracilis, sartorius and semi-tendinosus muscles were completely ruptured, and the effusion of blood very considerable. The bone was injured.—[Ibid.

On the action of Proto-sulphate of Iron in the treatment of Chancre, Gonorrhoea, &c.—The whole class of caustic agents, when applied to the Hunterian chancre, (though the potassa fusa cum calce be used, till the ulcer be "punched out," as recommended by M. Ricord,) form an eschar with pus still secreting; in fact, the morbid cells have not been destroyed. The alkaloids and hydro-carbons are equally inefficacious.

If a chancre be perfectly freed from its eschar and the enclosed pus, at the bottom of the excavation may be observed minute white points or germs, secreting, slowly, the morbid virus. If, now, the proto-sulphate of iron, minutely pulverized, be dropped into this excavation, the parts will instantly assume a charred appearance, the metal is absorbed into the tissue, the morbid cells or germs will instantly cease to secrete pus, the cleared cavity will shortly granulate, and a smooth surface, without induration, will be the result of the use of the proto-sulphate of iron. The chancre is destroyed.

It is known to chemists, that the proto-sulphate of iron absorbs large volumes of oxygen and nitrous oxide gases.

The proto-sulphate of iron, I have observed to be the most power-
ful agent for arresting decomposition in animal and vegetable substances. Inflammation and decomposition in the living tissue is likewise arrested by it.

In gonorrhœa, we have now an agent arresting the morbid cellular action in the salts which should be used in solution super-saturated. In leucorrhœa, and in simple ulcers, the morbid action is arrested or peroxidized by this metallic salt.

Large doses of this salt have been exhibited in obstinate diarrhoea, with great benefit.

The action of this salt will produce a great change in superseding mercury in the treatment of diseases of specific origin.—[Med. Exam.

Tetanus.—Dr. Wilson is on these grounds inclined to refer the disease to augmented excitability of the true spinal system, of a purely functional character, and makes known in the following propositions, with which the memoir concludes.

1st. That tetanus depends on irritation, direct or indirect, of the excito-motory system, by which it becomes surcharged with motor influence, and that inflammation in or about the cord, or any appreciable lesion, is not an essential condition of the development of the disease.

2d. That while we have ample evidence, physiological and practical, that opium is ill calculated to fulfil the indication in tetanus, namely, to diminish the excitability of the true spinal cord, until our views become improved, and the knowledge of our anti-tetanic agent ceases to be a desideratum, we are not justified in altogether discarding the use of the drug.

3d. That our grand object in the treatment of tetanus should be to support the patient's strength, with a view to compensate the vital powers for their great exhaustion, consequent upon the expenditure of force in the violent muscular contractions.

4th. That as the removal of the exciting cause, once that the first evidence of irritation propagated to the spinal cord becomes manifest, does not, in the least degree, check the progress of tetanus, or abate the violence of its symptoms, all operations in traumatic cases are not only unnecessary but injurious.—[Dublin Quar. Jl. of Med. Sci.

Collodion and Asbestos for Toothache.—Mr. Robinson, a distinguished dentist of London, says that he has frequently applied collodion in severe cases of toothache arising from exposure of the nerve. The method he adopts, is to make the patient first wash out his mouth in warm water, in which a few grains of bicarbonate of soda has been dissolved. He then removes from the cavity any foreign substance likely to cause irritation. After drying the cavity, he drops from a point, the collodion, to which has been added a few grains of morphia; after which, he fills the cavity with asbestos, and saturates with collodion. * Lastly, over this he places a pledget of bibulous paper. In a few seconds the whole becomes solidified and forms an excellent non-conductor of heat and cold to the exposed nerve. By occasionally renewing this, he has been enabled to effect a more durable stopping than with gold.—[Med. Times.
MEDICAL INTELLIGENCE.


It was our pleasing duty to herald in advance the forthcoming of the work, the title of which is given above. From the proof-sheets confided to us by the author, we selected the article on the sources of bilious Remittent Fever, which we were gratified to see re-published, or noticed, in several of the Medical Journals of our country. Time has not permitted us to review the book of Dr. Fort: that, we are promised, will be done by another and able pen; all that remains for us, in this second notice of it, is to say that it meets our highest expectations.

The work is dedicated to the Physicians of the State of Georgia, as the author states, as a grateful acknowledgment of the kindness, respect and confidence, which he has experienced at the hands of every one of them, with whom he had the honor of becoming acquainted; and to show that he had a great reliance in their ready acquiescence in this attempt, to give to the science of Medicine, a wider range in the mental operations of the age.

The typographical execution of this volume is peculiarly accurate; the binding is very neat and good; and it is altogether well gotten up, for a State where very few books are published. From the title page it will be perceived that the work is not strictly a scientific one, or one designed alone for physicians, but that its range is far wider, being adapted to families and the general reader. We learn there is every prospect of the author reaping a rich return for the labor bestowed upon his book.

Proceedings of the State Medical Convention, held in Macon, March, 1849; and Constitution of the Medical Society of the State of Georgia. Macon: Printed by S. Rose & Co. 1849.

We have been furnished a very neat pamphlet of 39 pages containing the above proceedings. To the action of the Physicians assembled at Macon last March, is appended, the Introduction as also the code of Medical Ethics adopted by the American Medical Association. This we consider very wise on the part of the publishing committee, and doubt not the dissemination of this excellent manual of the duties of Physicians to their Patients and of the obligations of Patients to their Physicians, will do much good at this period of medical improvement. It ought to be known and faithfully carried out by every member of the healing art.

In the proceedings of the Medical Society of Georgia, and not published in our last No., we notice a resolution adopted by it respecting this Journal. It is as follows:—Resolved, That we have the utmost confidence in the integrity and faithful ability with which the Southern Medical and Surgical Journal is conducted, and most cheerfully recommend it to the patronage of the medical profession. We return our sincere thanks to all those who kindly voted for it, and express the hope to see the Journal, in other and able hands, become the medium of professional intercourse and medical intelligence in this and the adjoining States.
Opinions of the Medical Press, on the subject of the discontinuance of this Journal.
The editorial courtesy with which we have always been treated, with scarce an exception, ever since we assumed the management of this publication, has placed us under great and repeated obligations. But the very kind and flattering manner in which the announcement of our withdrawal from the duties of Editor has been noticed in some of our exchanges, has called forth our warmest sympathies and heart-felt gratitude.

We are happy to state that Mr. McCafferty, the publisher of the Journal, is not only willing, but anxious to continue the work, upon the same terms as heretofore issued; but the editor, from severe domestic affliction, still continuing unabated and without now a hope of relief; from heavily increasing professional labour, &c., still considers it his duty to retire after the completion of the present Volume, at the close of the year. Arrangements will be made for carrying on this Journal.

"We copy the following from the Buffalo Medical Journal:—

* * * "The able editor of the Southern Medical and Surgical Journal, Professor Paul F. Eve, has given notice that the Journal will be discontinued after the present year, owing to want of adequate patronage. He states that the privilege of laboring for his readers during the past year,* has required from his own pocket an outlay of $900, and he very reasonably concludes that the luxury of serving the medical public on these terms is too expensive to be longer indulged. That a periodical of such merit as the Southern Medical and Surgical Journal should require more than the gratuitous services of the editor to secure ample support, is a stigma upon our southern brethren which we sincerely hope they will not consent to bear. We anticipate that the effect of the notice referred to, will be to secure a list of paying subscribers, that will not only justify the continuance of the work, but furnish a complimentary testimonial to the value of the editor's past labors."

"We cordially adopt these sentiments. We hope and believe better things of the physicians of the South, than that they will suffer a journal so faithfully edited as that of which Professor Eve has had charge, to fail for want of pecuniary support."—[Western Journal of Medicine and Surgery.

"Southern Medical and Surgical Journal.—This excellent periodical, we learn from the last number, will probably be discontinued, after the close of the present volume, for want of adequate support. It has been conducted, under the auspices of Prof. Eve, with great ability, and untiring industry, and we call upon the profession of the South to rally to its support."—[New Orleans Medical and Surg. Journal.

"Southern Medical and Surgical Journal.—We learned with much regret and no little surprise, that this Journal, which is certainly an honor to the south, is likely to die for want of patronage. The able Editor informs us that its publication for the last year, aside from his editorial labors, was attended by an expense of $900, to himself. With all due respect to our southern brethren, we do say that this is a shame. We feel almost a personal interest in the matter, for if we cherish one desire more than another, it is to see our profession elevated and improved. We know that well conducted Medical Journals are an important, nay an indispensable means, to this end, and we hope to see them established and sustained wherever there is room for them. Foreign and distant Journals are important, but every physician ought in duty bound, to support first with his patronage and so far as he can, his pen, those published near his own locality. We sincerely hope that the Editor's plain statement of facts will be so effectual, that his Journal will hereafter add as much to his purse as it already has to his reputation. With that we are sure he would have abundant cause to be satisfied."—[Ohio Medical and Surg. Journal.

*(Correction.) The last volume of the former series. Ed. S. M. & S. Journ."
MEDICAL MISCELLANY.

Essays on Infant Therapeutics.—Prof. John B. Beck, of New York, has had his valuable papers recently published in the medical journals throughout our country, issued in pamphlet form, entitled, "Essays on Infant Therapeutics," &c., and has had the kindness to send us a copy.

Dr. Cross' Prescription for Cholera.—Gum Opium, gr. ½; Cayenne Pepper, gr. ii.; Calomel, gr. iv. Made into pill. Give one every two hours, (varying according to circumstances.)

To remove Stains of Silver.—Dr. Parsons, of Bristol, England, proposes to remove stains of nitrate of silver by a solution of corrosive sublimate in muriate (hydrochlorate) of ammonia.

Iodide of Potash in Paraplegia.—Dr. Sandras, in the Bulletin Général de Thérapeutic, recommends the use of Iodide of Potash in certain cases of Paraplegia.

Dean of the Faculty of Paris.—Prof. Bérand has succeeded the deposition of Prof. Bouillaud. The former Dean, the celebrated Orfila, was displaced from office because he had appropriated money designed for another object; and Bouillaud was made to resign because of his bitter hostility to his predecessor. Bérand, is Professor of Physiology, and is one of the most eloquent, talented and amiable of the Faculty.

Sugar Anti-aphrodisiac.—M. Provencal, in the Bulletin Général de Thérapeutic, says, experience has proven to me that sugar in pound doses arrests the venereal ardor more effectually than camphor.

Mode of administering Cod-liver Oil.—Chew orange peel both before and after swallowing the dose.

Fainting during the Inhalation of Chloroform.—Prof. Laugier operated at La Petie upon a student of Pharmacy for Fistula in Ano. Chloroform was employed. Insensibility promptly occurred, and the operation terminated without the patient manifesting pain. All at once the young man exhibited a profound syncope. For four minutes he was without pulse and respiration. He was taken to the open air and artificial respiration attempted. Every one around him was in the greatest anxiety. Happily this state of fainting passed off, and the patient speedily recovered.

Two New Anaesthetic Agents.—Dr. Nunneley, of Leeds, England, announces in the Med. Times, a new agent, having all the good properties of chloroform without any of its danger. This is the Chloride of olefiant gas, Holland oil, or the oil of Holland Chemists. Prof. Simpson also states that coal tar naptha is an anaesthetic agent as powerful as chloroform, and a great deal cheaper. The effect is as rapid and complete, but not so agreeable in odor. It probably owes its anaesthetic property to benzole.

The Wealth of Quacks.—It is said that the united fortunes of the five principal quack-doctors of London is over 5,000,000 of dollars.

Two voices at the same time in the same individual.—Dr. Pettigrew, Professor of Physiology at St. George's Hospital, exhibited a Mr. Richmond who possesses the marvellous faculty of producing at the same time two different sounds, distinct and perfectly harmonious. The acute voice is of a nature soft and melodious. Mr. R. emitted a base note accompanied with a tremolo.

An Epidemic Voluntary Mutilation.—Two regiments in Africa, one French, the other belonging to the Foreign legion, lately presented the sad effects of the power of imitation. A soldier shot himself through the wrist—in 20 days thirteen others exhibited the same mutilation. The colonel of the regiment immediately determined to break up his encampment, and marched to the quarters of another regiment distant 21 to 24 miles. What was his astonishment on arriving there to learn that eight cases of the very same mutilation had just occurred there. It is asserted that there had been no recent communication between the two regiments.
March of Improvement—change of the figures marking time.—It is proposed by a writer in the London Lancet to continue the figures of watches and clocks from 12 to 24. In telegraph despatches, in noting cases, &c., he argues, it will be economy in time, be more accurate, &c. For instance, 16 o'clock would indicate by that figure alone what we now have to express by 4, P. M.; then the confounding of A. M. with P. M. would be entirely avoided. He says, too, the additional figures can be arranged on watches and clocks now in use.

The Author of Etherization—Dr. Jackson.—The French Academy of Sciences have awarded to Dr. Jackson, of Boston, the acknowledged discoverer of etherization, Chevalier of the National order of the Legion of Honor.

Another Test for Chloroform.—This is Albumen. The white of egg will be coagulated by the alcohol which chloroform may contain. A single drop may thus be analysed.


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9 Fair days. Quantity of Rain 2 inches. Wind East of N. and S. 9 days. West of do. do. 17 days.

* The first rain since 12th February.