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"Je prends le bien où je le trouve."

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ARTICLE XV.

By Henry F. Campbell, M.D., Demonstrator of Anatomy in the Medical College of Georgia.

The period of Dentition has ever been regarded one of peculiar interest, as well to the pathologist as to the practitioner. That certain diseases are more apt to occur during this season, few pretend to deny; but the amount of the symptoms, due to the irritation of teething, has been variously estimated, some attributing to this cause nearly all the ills to which infancy is liable, while others ridicule the idea that a process, in itself so purely physiological and natural should be regarded ever a cause of disease.

The object of our essay is to investigate impartially this important subject with the view of determining, as nearly as possible, to what extent the organism is affected by the evolution of the teeth. In doing so, it appears to us most rational, as a primary step in the investigation, to review briefly the phenomena of both normal and anormal dentition, with the view of finding the foundation of the pathogenic theory, if such exists, in the physiology of this process.

The phenomena observed during easy or normal dentition may be briefly summed up as follows:—The salivary secretion is increased, the gums are swollen, the mouth hot, and the child evinces a disposition to press every substance within its reach.
upon the gums, in order to relieve the irritation it here suffers. Later the gums become more swollen and softer, the irritation more distressing, and, under certain circumstances, the mouth dry and slightly inflamed. The child becomes fretful; its sleep is disturbed and feverish, its bowels become loose, which latter symptom we frequently observe accompanied by nausea and vomiting. There is also described by some authors an irritation of the Schneiderian membrane, with increased secretion, marked by the child’s rubbing its nose.

Cases of anormal dentition are brought more frequently under the cognizance of physicians, and their phenomena are hence familiar to every one. The above symptoms become exaggerated—some, which in normal dentition were of trivial importance, becoming so severe as to threaten the life of the patient. Thus the gently relaxed condition of the bowels, which in easy dentition was even beneficial, is now changed to diarrhoea with distasteful torments and alarming emaciation. The salivary glands, which in easy dentition manifested their implication only by increased secretion, now become inflamed and swollen till finally their secretion is altogether arrested, leaving the mouth and tongue dry, parched and painful; and the nervous fretfulness of the normal process is often replaced by actual fever, sometimes attended by the most terrific convulsions.

We have here sketched hastily some of the more prominent phenomena of both easy and severe dentition, as we each daily observe in practice, and find reported by authors, and we do not adduce them at present as the direct results or consequences of the process, but only as its pretty constant concomitants. In referring to those symptoms hereafter in the course of our essay, we will necessarily enlarge upon and develope more fully some of their characteristics. Let us now, with a little attention, enter into an analysis of these concomitants of dentition, and endeavor to ascertain whether or not their origin may be found in the process itself. To this end, we will consider briefly the anatomy and physiology of the parts concerned in this important and often perilous process of evolution. Dentition begins early in fetal life by the formation of minute pulps in the maxillae, the deposition of calcareous matter upon these pulps afterwards occurs, and finally these rudimentary bodies, becom-
ing more and more perfect, emerge from the fibrous capsules that envelope them, and finally by the absorptive process make their appearance through the gum, and the child is said to have cut its teeth. This process is not at once uninterruptedly completed, but is from time to time resumed with but short intermissions, till, successively, all the teeth are through, the whole process occupying a period varying from fifteen to thirty months. The parts in which this slow and tedious evolution takes place soon become better supplied with blood, the vessels enlarging for this purpose, and moreover it is not unimportant to recollect they are supplied by sensitive branches of the trifacial or fifth nerve, a nerve the irritation of which is ever made evident by the most painful manifestations. Add to the above the inordinate development of the nervous system, particularly the spinal, at this period, and we have the most important physiological peculiarities which bear upon the question under consideration.

That pain frequently exists during dentition is a fact that needs no argument to substantiate; the uneasiness, fretfulness, biting and other symptoms, are all unmistakable manifestations of pain in the child, and further, we know that in the adult the appearance of the wisdom teeth is often attended with pain of the most acute character. The following case will illustrate this fact:—Some time since we were requested to extract a tooth, the young man complaining of intense pain in the lower jaw; on examination no decayed tooth could be discovered to which to refer his distress, but behind the last molar tooth on the right side there were much tumefaction and tenderness; on scarifying the part deeply the wisdom tooth was felt to grate under the lancet. He was instantly relieved of the pain, which did not return, and the tooth has since made its appearance without causing further trouble. His pain had been caused, no doubt, by the pressure of the growing tooth upon the branches of the fifth nerve distributed to the gum in which it was embedded; and in the same manner does the emergence of each successive tooth in the infant cause pain, varying in degree according to the susceptibility of the subject and number of the teeth simultaneously emerging.

In children, as in the above adult case, we constantly observe
instant relief from free incision of the gums; indeed, we could report many cases wherein the relief was so marked that the children seemed aware of it themselves, and would make no resistance whatever to the operation, but would bear up against the cutting edge of the lancet, the pressure of it affording relief.

In addition to the local results of pressure upon the nerves, as pain, heat, tumefaction, and other symptoms of inflammation in the mouth and its vicinity, we have general symptoms of a graver and more important bearing upon the welfare of the individual, a train of phenomena denominated by some authors the sympathetic disorders of dentition, and by others denied, as having little or nothing to do with the process, but treated of as merely coincident diseases, occurring at this period because the system is more irritable, and consequently more liable to disease, thus we may say evading the question and virtually acknowledging their true origin. Thus Dr. West, in his recent admirable course of "lectures on the Diseases of Infancy and Childhood," writes, "the time of teething is in reality one of more than ordinary peril to the child, though why it should be so, is not always rightly understood." And he goes on to account for it, by saying that "it is a time of the most active development of the organism—a time of transition from one mode of being to another, in respect of all those important functions by whose performance the body is nourished and built up. Statistics embracing the largest numbers, prove the dangers of this period, and warrant us in regarding the completion of this process as a fair subject of congratulation."

Among the diseases to which the system is at this time liable, we will enumerate as most important, first, those of a convulsive or spasmodic nature, and secondly, and almost as important and dangerous, those that affect the gastro-intestinal canal. That the convulsions occurring during dentition depend upon the irritation of the process for their production, we have every reason to believe, that high authority, observation and careful induction can afford. We are all aware that irritation occurring in one portion of the nervous system, is adequate to the production of sympathetic irritation in another portion, sometimes indeed very remote from the exciting cause. Thus an irritation of the nervous plexuses supplying
the womb, often gives rise to puerperal convulsions, by the
reflex action of the nerves transmitting this irritation through
a nervous centre, the spinal marrow, to certain muscles, many
of them very distant from the primary seat of the irritation.
Or, as another familiar illustration, we adduce the irritation of
the fauces in the production of vomition: here the irritation,
being made in the branches of an excitor nerve, the glossophar-
yngeal, distributed upon the mucous membrane of this region,
is transmitted to the medulla oblongata, the nervous centre
common to this and a motor nerve, the pneumogastric supply-
ing certain muscles of the pharynx, oesophagus and stomach,
and vomiting is produced. That this is true, there can be no
doubt; for whenever the fauces are in a condition to obtund
the sensibility of the glossopharyngeal nerve, whether from
tumefaction or the deposition of false membranes, it is with
great difficulty that vomition is effected, because then we are
deprived of the action of the chief excitor to the act. Since,
then, we must admit that dentition gives rise to much local
irritation, and also that local irritations can, under certain cir-
cumstances, be productive of sympathetic phenomena, through
the reflex agency of the nervous system, the conclusion is
inevitable that some at least of the convulsions occurring
during this period are directly referable to such local irritation,
for here the analogy is as perfect and entire as could reasonably
be required for such a deduction. Here the sensitive branches
of the fifth pair of nerves itself almost a spinal nerve, become
excitor to the motor filaments of the spinal nerves, by transmit-
ting to the medulla oblongata the irritation caused by the pres-
sure of the growing tooth, this irritation is thence reflected
through the spinal marrow and motor nerves arising therefrom
to the muscles, and the convulsions are thus produced.* This
theory of the origin of this irritation receives further corrobor-
tion, if we observe that the reflected irritation is first transmit-
ted through the nerves that arise successively from the nervous
centre, thus, first the motor branches of the fifth nerve itself
are excited, and those muscles moving the inferior maxilla are
convulsed; then the sixth, and the eye is rolled outward in its
orbit; thirdly, the seventh is excited, and the superficial mus-

* Todd's article on Sympathy, in the Encyclopedia of Anat. and Phys.
cles of the face, the muscles of expression, distract the features by their convulsive actions. Then in rapid succession the other nerves; the pneumogastric causing dyspnœa by closure of the glottis from spasm. Then the hypoglossal protruding the tongue; and we think it is owing to the position of the origin of this nerve that this organ is so frequently lacerated, the mascatory muscles are already in action, and on the excitation of the ninth pair the tongue is thrust between the teeth before the patient has made noise enough to attract the attention of the attendants, for it is only after the excitation of the phrenic nerve, which arises much lower down, that the diaphragm is convulsed, and the crowing inspirations are produced. But to resume: shortly after the ninth, we observe the action of the spinal accessory nerve of Willis is excited through the common nervous centre, and the head is drawn forcibly backwards upon the neck by the action of the sterno-mastoid and trapezius. Now in rapid succession all the spinal motor nerves are excited and the convulsion is general.

The above, with very little variation, will be found to constitute the order of phenomena of those convulsions that occur during dentition. The successive excitation of the nerves above-mentioned is so rapid that it is difficult to mark the exact time of its recurrence, but that it is successive is plain and perfectly observable to any one who has awaited in dread, as we have done, the advent or return of this most terrific of the many scourges that affect mild and innocent, yet too fragile childhood.

From the above considerations we are induced to conclude that convulsions are often produced by the irritation of dentition, and can be directly referred to this as the sole cause.

We arrive now at a point in this somewhat obscure and much disputed question which perhaps affords more ground for doubt than any of the foregoing, viz., a consideration of the pathogenic influence of dentition in the cholera infantum or diarrhœa so uniformly co-existant with this process. Unlike the convulsions, the analogy between which and certain known and established phenomena of the excito-motory system, which it is only necessary to refer to, and their operation is plain and intelligible, this new set of symptoms, if we refer them to the process of dentition, requires us to look yet deeper into the
mysteries of our nervous organization, and to venture still one step further on the *terra incerta* of sympathetic interpretation.

In order to apply our arguments, let us hastily review the foregoing investigation, that they may bear more fully upon this part of our question; and, firstly, we have seen that inflammation, pain, and irritation are produced locally by the process of dentition, evinced by restlessness, biting, &c. Secondly, we have seen that this local irritation can be transmitted by excito-motory influence to other and distant parts of the body manifested by convulsions. We have also endeavored to corroborate this latter opinion by a reference to the order of succession in the nerves in which this irritation occurs, and also by a comparison of these phenomena with other well understood and established analogous phenomena. Heretofore we have had to deal entirely with functions of the cerebro-spinal system of nerves; but to account for this second and more obscure part of our problem, we must look in vain to any direct anatomical connection between the fifth pair and the rest of this system of nerves. We are forced to seek out other connections, indeed somewhat more intricate and indirect, but fortunately no less legitimate and definable. We have now to consider a set of organs that, unlike the voluntary muscles, have no connection, or rather, we would say, emphatically, they have a connection, though indirectly, with the cerebro-spinal system. We mean the abdominal viscera, which we know are almost altogether supplied from the great sympathetic system of nerves. Now, in the prosecution of our inquiry it becomes necessary, to the elucidation of the question, to trace out the same connection between the fifth pair and the sympathetic or secretory, as we did between the fifth pair and the cerebro-spinal or motory nerves, and then, should we succeed, we will briefly inquire into the bearing which this connection and its possible results may have upon our question.

The connections between the fifth pair, the rest of the cerebro-spinal system of nerves and the great sympathetic, are so abundant and universal that it is only necessary to enumerate a few of them to illustrate the fact. Firstly, we have a connection in the ophthalmic or first division, by its nasal branch communicating with the ciliary ganglion; then in the superior
maxillary, or second division, are branches of communication with Meckels ganglion; again, in the sub-maxillary ganglion, with the inferior maxillary or third division. So much for the fifth itself. Then we know that every one of the spinal nerves throughout the entire chord are connected to each sympathetic ganglion of the system, thus establishing communications the most abundant and intimate between these two systems of nerves. We know also that these ganglia distribute numerous branches to all the splanchnic viscera by plexuses which accompany the arterial trunks into the minute structure of these organs.

Thus connected and distributed, this nerve presides over the important functions of nutrition and secretion, which office so characterizes it as to give it the name of the secretory system. In the physiology of the nervous system, there is no fact better established by anatomy and pathology, as well as by experiments on the lower animals, than this, that the sympathetic nerve, whatever else may be its functions, always forms a necessary element in the nutrient and secretory apparatus of all the splanchnic viscera; and further, that upon its sanity depends the due administration of these two great functions. It is the nerve for the bloodvessels; "and," remarks Todd and Bowman, "as secretion is mainly dependant on the normal nutrition of glands, it is reasonable to suppose that that function would be to a certain extent controlled by these nerves."

And as early as the year 1732, Pourfour du Petit found that the division of the trunk of the sympathetic, opposite the fourth or fifth cervical vertebra in dogs, was followed very rapidly by great disturbance of the circulation of the eye-ball, producing inflammation, flattening of the cornea, and finally destruction of this organ.

The experiments of Dupuy upon the horse, wherein he severed this nerve at the superior cervical ganglion, also corroborate this statement; general emaciation here ensued, with an anasarcous condition of the limbs and an eruption over the whole cutaneous surface.

In some experiments made by Dr. J. Reid, and reported by Todd & Bowman, in reference to the sympathetic branches supplying the eye, it was found that a section of this nerve was
to produce an immediate injection of the conjunctiva. In one case, he observes, the redness of the conjunctiva took place in a few minutes after the section. It has been already stated, continue these great authors, that a section of the branches of the fifth nerve which supply the eye, is followed by ulceration and other signs of impaired nutrition in the eye-ball. But these changes do not take place for some time after the section of the nerve—generally many days elapse—and they are attributable to the presence of irritating particles which, owing to the insensible state of the conjunctiva, are suffered to remain in contact with the surface of the eye, giving rise to inflammation and ulceration of its textures. The effects of section of the sympathetic are immediate, and are probably due to a change produced in the blood-vessels, in consequence of the withdrawal of the accustomed nervous influence.*

We have now glanced sufficiently, we think, at the anatomy and physiology of the sympathetic system of nerves, to make the application of such points as are pertinent in the solution of our pathological problem. In its anatomy, we have seen its connections with all three of the divisions of the fifth nerve by ganglia, the connexion of these various ganglia with each other, as well as with the cerebro-spinal axis; and lastly, the distribu-

* In the Medico-Chirurgical Review for January, 1845, this view of the function of the sympathetic nerve is ably elucidated in an article by Dr. T. Proctor.

"After alluding to the proofs derived from the experiments of Philip, Flourens, and others, of the non-dependence of the circulation upon the cerebro-spinal system, Dr. P., in another part of his work, thus expresses himself.

"'It is self-evident, then, that it is to the sympathetic, and that alone, that we must look for regulating the arterial system. And it will be observed that, in all parts of the animal body, where large and sudden supplies of blood are required, such as the heart, stomach, bowels, and organs of generation, we have the ganglionic or sympathetic system very fully developed, and, as far as I can judge, in ratio to the amount of blood supplied to the several organs: on the contrary, in some parts of the body, and in the extremities where the flow of blood is more regular, and not subjected to those sudden calls for large supplies of blood at irregular periods, we find this nerve manifestly decreasing in size: and, indeed, as far as we can judge with the naked eye, ceasing altogether in some parts. Still I perfectly agree with Sir Charles Bell that it is distributed all over the body; but whether its influence is confined to regulating the small arteries which supply the coats of the vessels, or whether the same influence is continued by it over the whole circulating medium of the extremities and other parts that it manifestly has over the abdominal viscera, must, I fear, be left to a more enlarged enquiry.""

The whole article is full of interest and valuable suggestions, and its perusal will add much to the clearness of our pathology in many points that have heretofore been exceedingly embarrassing to practitioners.
tion of branches from these ganglia, which are conducted by the arteries into every part of every one of the splanchnic viscera. In its physiology, we find it in entire charge of the important functions of nutrition and secretion, and that where ever these processes are effected it is by the agency of this nerve alone upon the blood-vessels. And further, we have seen that pathology and experiments on lower animals establish its indispensableness to the due performance of these functions, and that whenever the supply of its innervation has been cut off from a particular part of the organism, that part immediately manifests symptoms of impaired nutrition and altered secretion.

Now we are all aware that nearly the whole of the intestinal canal, or rather that portion between the stomach and lower part of the colon, receives no direct innervation from the cerebro-spinal axis, but is entirely dependant upon the sympathetic nerve for its supply of nervous influence of whatever kind it may enjoy, whether motory, sensory, or secretory, and consequently an impairment of the function of this nerve must necessarily correspondently alter its condition so far as regards all those functions with which this nerve endows it. The alteration in these functions would, of course, depend, in a great degree, upon the amount of impairment in the source of irritation; thus, as we have seen, if the supply is entirely cut off, the functions of the arteries seem in a great measure to cease, passive congestions occur, and the parts inflame and ulcerate. Now we can also very naturally conceive of a condition of these nerves somewhat analogous to the above, yet intermediate between the entire interruption caused by section, and perfect health: a condition of embarrassed or of exalted innervation. Now this intermediate condition is exactly the state which, from the developments of the foregoing investigation, we feel that we are authorized to affirm is that which occurs in severe dentition, and that upon it is dependant the whole train of intestinal morbid phenomena observable during this process.

That this, so far, is legitimately inferable, we do not think any one will deny. Now let us enquire how far these phenomena are dependant upon dentition; and analogy with the
excito-motary system will much assist us in our argument. We have seen that local irritations can, through this system, produce convulsions by the reflex function of the nerves, the sensitive branches of the fifth pair becoming excitor to the motory spinal nerves; and so may we justly infer do these same branches, under certain circumstances, become excitor to the secretory filaments of the sympathetic, distributed so abundantly to the intestinal canal, by a transmission of this irritation through the various ganglia with which it is connected. Thus the irritation at first produces simply an exaltation of the innervation of these secretory surfaces, and consequently secretion is more active than normal, producing simple diarrhoea. A continuance of the irritation, alters the character of the secretion, and we have the various morbid discharges observable during this period. This increase and change in the secretion are effected by the agency of the altered function of the nerve upon the arteries from which these secretions are eliminated. Now when the innervation of these arteries is still further embarrased by the long continuance of the reflected irritation, the state of things nearly approaches that observed in Dupuy’s, Reid’s and Pourfour du Petit’s experiments of actual destruction of the nerve, and we have ulceration of the intestinal mucous membrane: all these phenomena being the result of various degrees of injury sustained by the sympathetic nerve.

It may here be asked, why should the branches supplying the intestinal mucous membrane become more implicated than any other portion of the sympathetic system?—and why do not similar irritations of the fifth nerve produce like results in the adult? To the first of these questions we answer, that most probably the other portions are implicated, but the manifestations of such implication are greater and graver here than elsewhere, because these are the sole sources of innervation to the viscus. The other branches are in all probability implicated, but receiving a certain amount of innervation from other sources, most of their functions not being entirely secretory, are still, though imperfectly, carried on. But in the intestinal canal the case is far different; the requisitions made upon it are of a nature that it has need for no other innervation than that of the sympathetic system. Its functions are secretion and
nutrition for the whole animal organism, and when these are impaired, its primary, indeed its only intents are altered or completely nullified. The second question is answered by the greater development of this system in the growing than in the adult individual, for the purpose of supplying the more active nutrition and secretion at that time necessary. We know that disease is more apt to occur in many parts of the body during this period; this is the general admission. Thus, according to many authors, among whom are West, Churchill, &c., pneumonia and bronchitis are more apt to attack children during dentition, than at any previous or subsequent period. Cutaneous eruptions, and many other aberrations of secretion occurring during this period, but serve to corroborate our theory of the origin of the morbid intestinal secretion. The increased vermicular action and tormina attending this affection, find a ready explanation in the fact, now well established, that the sympathetic receives both motor and sensitive filaments from the anterior and posterior roots of the spinal nerves, endowing the organs of their distribution, to a certain degree, with corresponding susceptibilities.

In conclusion, let us define the position which, at the end of our investigation, we feel warranted in assuming. They are the following: that in the anatomy and physiology, as well as in the dependant analogies of the process of dentition, we find ample ground for the opinion that the diseases pertaining to this period, may be dependant, and in many instances are entirely so, upon the local irritation attending the process being transmitted through either the cerebro-spinal system of nerves, producing convulsive diseases in the motory apparatus, or through the sympathetic, causing derangements in the secretory organs, particularly the alimentary canal, by the sway which it exercises over the arterial system, from which these secretions are eliminated. And the practical deductions to be drawn from these conclusions are,—that we should not be remiss in taking every measure to arrest or lessen this local irritation, either by free and repeated incisions of the gums, or by the judicious administration of appropriate remedies, among which we have found opiates to prove most safe and efficient. It would indeed be an improving, and not an unpleasing ex-
exercise, to trace out more fully the connexions between the local irritation and the various diseases occurring during the period of dentition, to take more extended views of the abundant analogies and comparisons afforded by this truly prolific subject; but time and the special object of our essay, do not warrant the indulgence in speculations so general and discursive.

Our object has been to trace the connexion between this process and diseases in general, only in so far as it has a bearing upon the establishment of one principal question in reference to the diarrhoea of this period. The subject has been only glanced at, and deserves a fuller and more extended treatise; wherein all the concomitant diseases of dentition, as dropsy, eruptions, and the many infantile neuroses, should be fully and carefully discussed. Such views, we would earnestly invite from some abler and more philosophic member of the profession.

**ARTICLE XVI.**

**Veratrum Viride. By Wesley C. Norwood, of Cokesbury, S.C.**

*American Hellebore.*—There is no science or art that suffers more, for want of reflection and investigation, than the science of medicine and the art of administering remedial agents to diseased animal bodies. When we reflect on the important responsibility that rests on the physician, this fact is truly a source of profound regret. It is truly surprising, how little is known and understood of the powers and properties of many remedial agents, to say nothing of the same want and deficiency in much that pertains to the grand circle of medical science in its most general and extensive import or widest range. The circumstances leading to this much to be deplored condition, would afford abundant matter for a dissertation, alone.

The powers and properties of Veratrum Viride are but little known, and the little that is known is rather taken for granted or supposed from analogy: it is certainly a powerful and efficient agent, and can be as easily and as safely managed as any other equally active and energetic remedy. We have first employed it in July, 1841. It was in the case of Mrs. T., that...
our attention was more particularly called to some of its peculiarly striking effects. She was ordered full doses in the morning. In the afternoon we were sent for in haste, as it was operating drastically: we found the skin cold; considerable moisture of the surface; paleness extreme; vomiting every fifteen minutes or oftener; the pulse beating not more than sixty, but full and distinct. The pulse in the morning, before the administration of the veratrum viride, was one hundred and thirty in the minute. The emesis, coldness and extreme paleness of the surface, great despondency, or sense of sinking and dissolution, and the great reduction in the frequency of the heart's action, led us to observe more carefully its effects from that period. The disease in which we have used it most frequently is Pneumonitis, and its varieties. Its remedial properties or powers are acrid, narcotic, expectorant, diaphoretic, emetic, and lastly, sedative, eminently reducing the frequency of the pulse, and rendering it slow, full and distinct. Its occasional effects are slight and pleasant delirium, hysteria or symptoms approximating hysteria, preternatural wakefulness, &c. We have enumerated its powers, beginning with that which is least prominent, and so on till we have reached the last, and as we believe the most energetic and valuable. It possesses a sufficiency of the powers called Acrid to relieve very moderate cases of torpor and where not sufficient for extreme cases, it renders a much less quantity necessary of such articles as ginger, grains of paradise and capsicum, than would be requisite, if veratrum viride was not administered, and by virtue of this property, it obviates any torpor that might be the result or follow from its own narcotic powers, and also counteracts some of the troublesome effects of Papaver, such as general torpor of the whole system, or of the bladder in particular. The next property in order, is its Narcotic, or if we had any appropriate term between a nervine and narcotic, we would use it; but as it is not a pure nervine, nor an intense narcotic, but more of the latter than the former, we must retain it. We have found a much smaller quantity of opium and its preparations necessary, and many of its inconvenient effects obviated, under the administration of this article, such as, starting, frightful dreams, and a continual muttering while dosing or sleeping,
which symptoms or effects are distressing to the patient, and sometimes alarming to the friends. By allaying pain, inducing more or less quiet, or even sleep, and not being accompanied with the above named disagreeable symptoms or effects, it proves itself a valuable agent in the treatment of disease. In the third place, it is Expectorant, and as decidedly so as any article with which we are acquainted, not only increasing, but materially changing the matter expectorated. When administering it we rarely find any other expectorant indicated. Under its ordinary effects, the surface is nearly always sufficiently soft or moist, and at times drenched with perspiration—or if there is no moisture, the heat is reduced sufficiently low to render any additional remedy for its diaphoretic effects unnecessary. This brings us to the more active powers of the article; and, first, it is actively and drastically emetic, when administered in single full doses, but sufficiently mild and moderate in its operation when given in small doses at short intervals, for the young, delicate or feeble to take it with perfect safety. It operates on the stomach, and produces but a small discharge of bile, but a considerable quantity of mucous or watery fluid, or perhaps both. It excites a great degree of nausea, and an unusual paleness or a contraction of the capillaries, thereby producing more or less coolness of the surface, with a feeling of sinking or exhaustion. It alone answers all the purposes that can be obtained from emetics in pneumonitis. The last and most prominent effect is a certain extensive and permanent reduction of the frequency of the pulse. It is the only article with which we are acquainted, that certainly and invariably lessens the frequency of the pulsations of the heart and arteries, and it possesses this power in a greater degree than any one, and perhaps all the articles combined for which this quality or effect is claimed. It so constantly produces this effect, that it may be administered without any fear or dread of disappointment. In Pneumonitis Typhoides the frequency and rapidity with which the blood is sent through the lungs is certainly one of the most difficult circumstances belonging to the disease to control permanently. This frequency of action or pulsation of the heart and arteries aggravates, and is more liable to keep up persistent pain and inflammation than perhaps all others em-
bodied and combined. The hurried motion of the lungs, from the rapid circulation through them, must be detrimental to an organ whose functions are so essential, and whose office is so important to the animal economy. From the great variety of remedies recommended, the conclusion is forced on us, that these motions and actions are of difficult control, or the state and condition of the system exciting them, are not counteracted by ordinary agents. But to be able to control these morbid actions and motions, or to manage or change the morbid state or condition from which they result, with a single article, that can be administered without difficulty—that is not inconvenient from bulk, nor disagreeable to the taste, nor of offensive odour or smell, is certainly not a minor consideration, and should be taken into strict account in healing this scourge of the human race. If a multitude of remedies have been found absolutely necessary to control and subdue the above motions and actions, under the usual and ordinary mode of treatment, upon what does the cure depend? Does it rest on the fact of their controlling the action of the heart and arteries and the motions of the lungs, thereby giving the vis medicatrix an opportunity of relieving the state or condition on which they depend? Or does it result from their counteracting this state and condition, the motions and actions ceasing, as a necessary consequence of this counter-agency? Or do they unitedly effect this desirable object? We know that calomel, emetics, blisters, expectorants, are resorted to in the treatment of this disease; and notwithstanding the power and activity of many of these articles, we often find it absolutely necessary to call into full requisition the whole catalogue, and after using them as skilfully and efficiently as we may, we often get along badly with many cases. But further, as all remedial agents are more or less poisonous and detrimental to a purely physiological state of the system, and if administered in health, will destroy that nicely adjusted balance of action in the various organs so essentially necessary to health, their success or power of removing disease must depend on their exciting a new disease, or a series of impressions and actions of an opposite character to the disease, and as their actions and effects are not persistent, unless frequently repeated, we have
often to continue them for some time to subdue the disease: or perhaps while the disease proper, and the disease incident, or the effects of the remedies are contending for the mastery, the great principle vitality, or instinct, if you please, resumes its place, and health is restored. By vital principle, instinct, nature, or the vis medicatrix naturee, we understand that state, condition, or principle, as expressed by Dr. Good, which tends to preserve, perpetuate and re-produce a part or parts, or a being of-like powers and properties. We believe that the veratrum viride embodies as many or more powers than any one, and perhaps all the other articles used in pneumonitis, combined; and that it is superior to all others, from the fact that it not only counteracts and excites a new series of actions, but from its possessing, in an eminent degree, the peculiar power of lessening the frequency of the pulse, and consequently the motion of the lungs and frequency of respiration, thereby giving time and opportunity to the diseased organ to restore itself.

We wish to call the attention of the profession, particularly, to this peculiarity in the effects of this article. In inflammation, there are all the symptoms that go to make up fever, and in addition, there is pain in the organ or part inflamed, and congestion and relaxation in the capillaries of the diseased part. That a cure may be consummated, the pyreptic symptoms must be subdued—the pain, with other inflammatory attendants, relieved. To effect this object, that is, to subdue pain, to remove the heat or pyreptic symptoms, to control the frequency of the action of the heart and arteries, to relieve the hurried and laborious respiration, to moderate the continued motion of the lungs, and to assist the relaxed and congested capillaries in unloading themselves, are the great ends sought to be accomplished in the cure of pneumonitis. The great duty of the physician is to subdue all diseased action speedily and with safety to the patient. We know of no article capable of meeting these indications with so much ease, certainty and safety to the patient, as the veratrum viride. By its narcotic powers, the pain and irritability are greatly moderated, if not relieved; by virtue of its emetic powers a sudden shock and impression is made on the system, and if a resolution or crisis is not produced the pyreptic symptoms are greatly abated, and in addition
to the general shock, there is a series of new actions and impressions excited which are of great service in counteracting the disease and changing the secretions and excretions. It is powerfully nauseant, thereby aiding expectoration, which, in an eminent degree, assists the capillaries in relieving themselves of their engorged condition. But, as has been already stated, its power of reducing the frequency of the dilatations and contractions of the heart and arteries, and consequently lessening the frequency of inspiration and expiration, and the continued motion of the lungs, which effects being accomplished; gives an opportunity to the relaxed and engorged capillaries to unload themselves of the unusual quantity of blood they contain, and gives, justly, to veratrum viride, the prominent position it is justly entitled to in the list of remedial agents. It does not possess the properties of colchicum. Colchicum is a *chylo-gogue cathartic*, more or less emetic, and possesses very considerable nervine powers. Veratrum Album is an emetic, and hydragogue cathartic. It usually produces more or less of a burning glow of the surface and flush of the face. The active principle of the colchicum and veratrum album, therefore, seem to differ from each other; but however unlike they may be, it does not follow that they are not adapted to, and useful, in overcoming the same disease.

We will now repeat, or give, rather, a condensed description of some of the leading powers of veratrum viride; and as its powers and properties are, or have been supposed to be, the same as those of veratrum album, we will contrast their effects, that others may judge of the similarity of their powers. It is actively emetic, but does not occasion a great secretion of bile, but produces free mucous or serous discharges. It induces an unusual degree of paleness and coolness, or, strictly speaking, coldness; more or less moisture of the surface; a sense of great exhaustion and dissolution; occasionally a slight and pleasant delirium; occasionally a paroxysm of hysteria, or an approximation to hysteria. During all this emesis, nausea, coldness, paleness, and delirium or hysteria, the pulse is slow, full, and distinct, and so far as it is concerned, the person would be considered in good health, if it were not for other accompanying symptoms.
We will contrast the effects of Veratrum Album and Veratrum Viride. The V. album is emetic and cathartic, whilst the V. viride is emetic, but never cathartic. The V. album excites a peculiar burning glow and flush of the face, but the V. viride produces no such symptoms. The V. album does not produce a sense or feeling of dissolution, nor delirium, nor paroxysms of hysteria, nor an approximation to it under its ordinary operative effects, whilst the V. viride does produce these symptoms in its ordinary operation. The effects of the V. album do not excite in the minds of bystanders a belief in the rapid and speedy dissolution of the patient, but the action of the V. viride usually creates such an impression. The V. album does not lessen materially and permanently the frequency of the pulse, but the V. viride does produce this change in the heart's action. The V. album does not produce paleness and coldness, nor diaphoresis, whilst the V. viride produces such symptoms in an unusual degree. The difference in the effects produced by these articles prove that they are each entitled to a separate and distinct place.

We trust enough has been said, to satisfy any reasonable mind that the powers and properties of the article under consideration are but little known, and that, instead of possessing powers and properties similar to other articles, as stated in the books, that it possesses properties and principles quite dissimilar and peculiar. Its virtues should therefore be more fully tested.

As already stated, we have used it mostly in pneumonitis of the typhoid type; but we would also use it in other types, premises venesection. Once for all, we state that we would feel as awkwardly situated and as much unprovided for the treatment of pneumonitis without this article, as we would if we were deprived of cinchona and its preparations in the treatment of intermittent and remittent fevers. We are of opinion that it will prove to be a valuable agent in the treatment of many inflammatory affections, as gout, rheumatism, peritonitis, &c.

It may be prepared for use, by digesting eight ounces of the bruised root in one pint of alcohol. We generally commence with ten drops, and increase the portion from one to five drops each time, repeating the dose every two or three hours, until nausea, emesis, or a reduction in the frequency of the pulse
takes place. We then lessen the quantity, or extend the interval, so that nausea and emesis are not excited; but take care that sufficient is given to maintain the required reduction in the frequency of the pulse. We often omit the article for the space of one day, when the pulsations fall in number under fifty or sixty per minute. For a child, from three to five years of age, we begin with two or three drops every three hours, but do not increase it at each dose beyond one or two drops, unless the symptoms are or should become so urgent as to require that the system be brought more speedily under its influence. A tea-spoonful will often operate drastically, and will scarcely have need, at farthest, to be repeated beyond the second or third portion every half hour, before its full effects will be experienced. The small dose, gradually increased, and often repeated, we have found the most efficacious. To relieve its unpleasant effects, a mustard plaster to the spine and extremities, and a little syrup of morphine and tincture of ginger or seeds of paradise, together with a suspension of the article, will be all that is necessary.

We have not exaggerated the effects produced by veratrum viride, and we are confident that we can demonstrate them at the bedside to the satisfaction of any and every one.

We could extend this article much further, but we have already spun it out much beyond what we intended.

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**ARTICLE XVII.**

**Observations on the use of the Sulphate of Quinine in Singultus and Tetanus.** By L. A. Dugas, M. D., Professor in the Medical College of Georgia.

Aware of the evil consequences of generalizing from isolated facts, and also of the tendency to over-estimate the value of new remedial agents, the cases now submitted have been thus long withheld from the press in the hope that other opportunities might be presented for repeating the treatment detailed. The writer has not since had the management of similar cases, and feels it a duty no longer to remain silent, but to lay before the profession the following facts in relation to two forms of
disease, whose usual obstinacy and fatality should plead his apology for suggesting a fair trial of the plan of treatment which in these two instances proved successful.

**Case of Singultus.**—On the 17th of February, 1848, Judith, a negro woman of apparently good constitution and about 25 years of age, (the property of Mr. J. R.,) was taken with labour and placed in charge of a midwife. The pains progressed regularly, and seemed to be effective; yet after the lapse of twenty-four hours without delivery, I was requested to see her. Finding that the head presented, but was still in the superior strait, no active measures were recommended. On the 19th, however, the same state of things continuing, the pains having lost their intensity, and the patient being much fatigued, wine of ergot was administered, with the effect of bringing the head to the inferior strait. The patient during this day suffered occasionally with hiccough, without any other symptom of prostration. During the night the singultus became persistent, and continued so without intermission, even during sleep, for seven days and nights. On the 20th, the child's head being firmly fixed in the inferior strait and the prostration of the mother being imminent, the forceps were used in vain, and delivery was finally effected by emptying the cranium. The child had hydrocephalus. Puerperal peritonitis very soon ensued with great intensity; the posterior walls of the vagina sloughed away with a portion of the rectum, giving a free passage to the faeces through the vagina; the pulse was reduced to a mere thread; the surface was bathed in a cold, clammy sweat; the abdomen was very much enlarged, and the case presented every appearance of utter hopelessness. The patient, however, recovered!

The peritonitis was principally treated by extensive blistering over the abdomen and large doses of spirits of turpentine. As this affection yielded, attention was directed to the persistent hiccough. The usual antispasmodics, opium, camphor, assa-fetida, brandy, &c., were used ineffectually; chloroform was inhaled repeatedly until the induction of coma and insensibility, without arresting the hiccough for a moment. The precipitated carbonate of iron, which I had used in several other cases
of obstinate singultus with marked success, was unavailing here. On the fifth and sixth days after delivery the pulse had become full and of good character; the patient seemed to be doing well, with the exception of the hiccough and a daily exacerbation of the febrile symptoms. Despairing of being able to arrest by remedial agents the hiccough, I prescribed, on the 25th February, quinine for the purpose of averting the next febrile exacerbation, directing 10 grs. to be given at once, and 5 grs. more two hours afterwards. The first dose had been taken only half an hour, when the hiccough ceased entirely: nor did it return until the following morning, when another dose of 10 grs. promptly arrested it again, and permanently.

The suggestion naturally presents itself, that there was perhaps a mere accidental coincidence between the administration of the quinine and the cessation of the spasmodic affection. But the repetition of the same circumstances would incline us to a different conclusion. The result was as unexpected as it was gratifying, for the prescription was made for another end. The fact, however, is valuable, and may incite others to test the same remedy more directly.

Case of Tetanus.—Sophia, a negro girl about 10 years of age, (the property of Mr. J. B. C.,) became affected with tetanic symptoms on the 10th of April, 1848, some eight or nine days after having stuck a nail in her heel. Having been called to see the case about twelve hours after its invasion, I found it in charge of Dr. Hammond, who had examined and opened the wound without giving issue to any pus—ordered an alkaline poultice to it, and morphine internally. The jaws were not "locked," for the mouth could be opened about half the usual extent; the head was drawn back; there existed a fixed rigidity of the muscles back of the neck, along the spinal column and over the abdomen, which were attended with distinct spasmodic jerks at intervals of about five or ten minutes. The expression of the countenance was anxious and the pulse somewhat accelerated. The use of morphine was ordered to be carried as far as possible, and extensive counter-irritation applied to the spine. She was kept in a state of narcotic sleep during the remainder of the day and night, and until noon
following (11th April). The symptoms still progressing, notwithstanding our efforts to control them by counter-irritants and narcosis, I stated to Dr. H. the effect produced by quinine in the case of singultus first related, and suggested its use in the present instance. Not feeling warranted in omitting the morphine, we combined the quinine with it, so as to administer every three, four or five hours, according to effect, 10 grs. sulphate quinine with $\frac{1}{4}$ gr. sulph. morphine, in solution. This treatment was soon attended with a prolongation of the intervals between the paroxysmal spasms, and a diminution in their violence. The cold sweat usually induced by excessive doses of quinine showed itself several times to a moderate degree, and in the course of forty-eight hours the spasms had entirely ceased, although the rigidity persisted and gradually wore away in the course of a week. The doses of quinine and morphine were now gradually lessened and finally entirely omitted. On the 21st of April the patient was dismissed, entirely restored.

Inasmuch as the treatment did not modify the disease until the use of quinine, we may without impropriety attribute to this agent a very important part in the successful termination of the case. If upon trial in other cases it be found entitled to confidence in the management of so formidable a disease as tetanus, it is hoped that the fact will be made known.

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**PART II.**

**Reviews and Extracts.**

*On the Prevention of Constipation.* By John C. Warren, M. D.—(American Journal of the Medical Sciences.)

"It remains, therefore, that the people at large be entrusted with the deliberative and judicial powers of government, because the members of assemblies, senates, and courts of justice, acting not individually, but collectively, prove mutually assisting to each other. In such popular tribunals, virtue and passion, reason and sentiment, courage and wisdom, are harmoniously blended into one salutary composition, in which even the grossest ingredients are not without their use; for experience teaches, that the purest nourishment is not always the best, but that fine flour is most wholesome when mixed with the coarse."—Aristotle's *Politics*, book iii., Gillies' translation, third edition, page 216. London, 1813.

This extract from Aristotle, which I have lately met with, comes to the support of a practice, adopted, by me many years before I had seen the passage. It consists in the use of un-
bolted wheat meal, and of a very coarsely ground wheat, for the prevention and cure of a constipated state of the bowels.

The retention of any of the habitual excretions produces rearrangement of the animal economy. The suppression of the cutaneous exhalations is followed by local inflammation. The suppression and retention of urine bring on a sudden paralysis of the nervous system; and the suppression and retention of the contents of the alimentary canal produce indigestion, foul breath, hemorrhoids, chronic headache, cutaneous affections, and, in fact, a vast number of diseases, which though not all arising directly from the source, may be traced to its remote and gradual influence.

Constipation of the bowels is frequent in persons of sedentary habits, especially those called by profession to constant mental occupation; while bodily activity and a correspondent inception of food protect the cultivator of the soil. The most common cause of this evil would therefore seem to be an inert state of the bowels, from want of exercise and want of sufficient stimulus from food. Weakness of the bowels, a want of sufficient mucous secretion, and, above all, a want of a sufficient quantity of healthy bile, are also common causes. The bile being the natural purgative, its deficiency will, of course, leave the intestines in a torpid condition, and thence it happens that, in persons constitutionally costive, the liver is found to be in many cases unnaturally small. Dry atmosphere predisposes to this affection, and we find, therefore, that the inhabitants of the eastern parts of the United States are more disposed to it than those of the damper climates of England and Holland. For this reason it is, no doubt, that the latter are able to make great use of astringent wines with less consequent inconvenience than the former. Our constitutions cannot tolerate them.

The use of improper articles of food is a frequent cause of constipation. Food is composed of two kinds of substance, possessing different properties; one soluble and nutritious, the other insoluble and non-nutritious. The former is taken up, in a great measure, by the absorbent vessels, and conveyed into the blood. The latter, the non-nutritious, remains in the intestines, stimulates their action, and is subsequently expelled. One of the most remarkable of the nutritious substances is fine flour, a very common article of food. This, in its varied preparations, unless contracted by some other article, is an indirect cause of costiveness; and the reason is, that its particles are in great measure absorbed. The same is true of other substances containing a considerable proportion of nutritious matter. Such are jelly, arrow-root, starch, milk, and its prepara-
tions. I knew a learned gentleman troubled with dyspepsia, who had come to a conclusion to live wholly on nutritious substances, which, being easily absorbed, he thought might be taken without inconvenience. After he had employed this kind of food for some weeks, the intestines ceased to act with sufficient energy. It was even difficult to excite them by medicinal substances, and he came near losing his life.

The insoluble part of the food is of no use for the purpose of nutrition, since every substance to be taken up by the absorbent vessels must be in a state of solution. Such are the coverings of seeds and fruits, woody fibre, etc. Skins of fruits, especially dried fruits, which have been eaten, are constantly seen in the evacuations. Seeds, as those of mustard, etc., are well known to pass through the whole intestinal tract in an unchanged state, in consequence of the insolubility of their outer coats. Hence it happened, when these articles were medicinally employed, some thirty years ago, that the intestines became ultimately filled with insoluble matter, actually plugged by them, in such a way that nothing but mechanical means were sufficient to remove the obstacle and save the patients' lives. In these instances, I relieved them, not without much suffering on their part and much trouble on mine, by breaking down the concreted substances with small pokers and extracting them with scoops and forceps. The same kind of obstruction is said to have been produced by accumulation in the intestines of the remains of undigested nuts and raisins.

A great alarm has been excited in regard to magnesia, because some persons have died from its excessive use, and the intestines, it is stated, have been found paved with it. This is all very natural. Magnesia is an earth, insoluble in the human stomach to any considerable extent. When it is taken in small quantities, and of the best quality, it unites with, and is neutralized by, the acids it meets with in the digestive tube—hydrochloric, carbonic, lactic, etc,—and salts more or less soluble are produced. But when the quality of the magnesia is bad, and the quantity great, the acids of the digestive canal are inadequate to its conversion into a salt, and, mass being thrown in upon mass, the intestines will ultimately be clogged and sometimes wholly blocked up.

The immediate consequence of the retention of excrementitious matters is the absorption and passage of part of them into the blood. For, although there seems to be a natural repugnance in the intestinal lacteals to the absorption of excrementitious matter, this repugnance may ultimately be overcome and absorption of the fecal contents of the intestines take place. The consequences will be offensive breath, dys-
pepsia, cutaneous eruptions, etc., as stated above, and an impure state of the whole mass of blood.

On the Remedies for Chronic Costiveness.—The principal of these are either medicinal or alimentary. Of the former, I shall mention only three,—aloës, magnesia, and the wine of senna produced by fermentation. The bitter quality of aloës seems to render it a proper substitute for the natural purgative, bile. A few grains of the substance of this gum in the state of powder are a mild and effectual purgative. The watery extract, or inspissated solution, in the dose of from five to ten grains, combined with an aromatic, such as a drop of oil of anise or oil of nutmeg, taken fasting, is one of the mildest laxatives I know of.

It is the common practice to take a laxative medicine at night. There are objections to this, because the stomach usually contains a quantity of food, and the medicine being intermixed with this is sometimes too much diluted, sometimes altogether buried in the alimentary mass, and thus becomes ineffectual. Another objection to taking medicine at night is its having the effect of disturbing the repose, especially if the patient be of a nervous temperament. The proper time, therefore, is when the stomach is empty, as before dinner or before breakfast.

The mildest, thou not the most certain, of all laxatives is pure magnesia. This useful preparation, as made by English chemists, may be taken in the dose of a teaspoonful in two-thirds of a wineglass of water, with the addition of four or five drops of tincture of peppermint, at night being therefore an exception in this respect to other laxatives. It is so mild that it does not disturb the night's sleep, and, combining, as it does, with the acids which have been generated in the stomach during the day, it is likely to be more completely neutralized under this circumstance, and to have a more certain effect. When the stomach is not acid, the juice of half an orange will aid its operation.

The third substance, which I have employed lately with much satisfaction, is the wine of senna, produced by the fermentation of infusion of senna with sugar, according to the process of Dr. Butler Lane. The dose of this for an adult is from half an ounce to two ounces; being slightly stimulating, it may be taken for an oppressed stomach at night. If used in the morning on an empty stomach, it should be diluted with an equal quantity of water.

Injections.—It would not be proper to pass over injections, so generally employed abroad and so little in this country. Their application is to be preferred, when it answers, to any
cathartic. A valuable use of this remedy has been introduced by the followers of the much extolled and much denounced Broussais, on the supposition that it would extinguish inflammation of the intestinal mucous membrane. Cold injections into the rectum were proposed by them, and it was shown that cold water might be thus employed without alarming consequences. For the relief of the bowels, the prevention and cure of hemorrhoides, the mitigation of urinary and uterine derangements, cold water, in quantity from a gill to a quart, is most valuable. Fifty years ago, I first heard of a distinguished lady who was in the habit of dashing the abdomen with cold water for the relief of the bowels. This fact, considered so wonderful at the time, made a deep impression on my mind, and led me to recommend for this purpose, with excellent effect, a sponge with cold water or the hip-bath, and finally general shower-baths.

**Articles of Food.**—The most important of the remedies applicable to this case are to be found in articles of food. A few individuals have discovered something of this kind which suits the exigencies of their constitution, and carries them comfortably through life. The greater part of those subject to this derangement are obliged to temporize with their trouble and employ different substances under different conditions.

Fruits are among the most useful and agreeable of these. Fresh fruits are preferable to dried, because a large portion of the latter consists of a skin, which is with difficulty attacked by the gastric fluid. Whether fresh or dried, fruits, if used to aid the bowels, should be taken when the stomach is free from other food, especially before breakfast and before dinner. The use of fruit after a regular satisfactory meal of meat and vegetables is a common cause of cholera, and other disorders of the bowels, by bringing on the acetous fermentation. Fruits and vegetables produce their laxative effect by their acid and saccharine qualities, and also by the bulk of their effete or insoluble portions. The laxative vegetables are not very easily digested by patients who have weak stomachs, and they are often obliged to abandon them, on account of the distressing flatulence which follows their use. On the other hand, I have seen a beneficial effect from acids in some peculiar cases. Some children, after weaning, become excessively costive. I have known this state to be altered by an infusion of cranberries slightly sweetened. It is likely that any other smart acid would have the same effect. Some individuals find great advantage in drinking a glass of cold water before breakfast, and it is a practice of others to drink a cup of strong coffee, before rising in the morning. The use of these drinks must be accommodated to different constitutions.
Animal food has rather a laxative effect than the reverse, perhaps by the animal oil intermixed with its fibres. Fatty substances are uniformly laxative, but they are also uniformly unmanageable by weak stomachs. The Laplanders, and other inhabitants of very cold regions, as well as a certain number of individuals elsewhere, are able to take, in large quantities, the fat of various animals, without exciting a revolt in the stomach.

I have known individuals to use great quantities of wine, under the belief that the bowels would not move without. The laxative effect in such a case would arise from the pressure made on the intestines by the bulk of the liquid. Perhaps, again, the wine taken in this way exerts a tonic influence, which causes the bowels to throw it off; and this notion is confirmed by the fact that this practice, so far as I have seen, has uniformly terminated in dropsy, or some other chronic affection. Most of the wines I am acquainted with, when taken in moderate quantities, constrict the fibres of the intestines, and produce costiveness. This is certainly the effect of sherry, Madeira, and other strong white wines; and still more so of brandy and every form of alcohol. The use of such articles, in the way last mentioned, having a stimulating effect, is followed by indirect debility and constipation.

The cerealia were perhaps the earliest, the most general, and the most valuable articles of human food. Wheat, rye, barley, oats, and maize are employed in different countries, according to the properties of the soil and the taste of the inhabitants. Wheat seems to be more extensively used than either of the others, and is, perhaps, the most palatable and the most digestible. This grain is not used entire. It consists of, principally, two substances; the coverings, or part containing, and the flour, or part contained. In the early ages of the world, these were probably employed together; but art has been directed to their separation, and has reduced the flour, as nearly as possible, to the state of an impalpable powder.

Flour, taken apart from its coverings, has a most constipating property. Its great use by the inhabitants of towns and cities will, therefore, go far to explain why constipation is so general. The separation of the coverings from the flour, as usually practised, seems to counteract the intentions of nature, which undoubtedly destined them to be employed together.

The external skin of the grain, thus thrown away, contains various important properties; and, in stead of being in a great measure rejected, it should be altogether preserved and ground up with the flour. This substance, which is known by the name of bran, is the part which prevents the flour from producing costiveness.
About the year 1825, I began to use bread in which the bran was retained; and, after having employed it a considerable time in my own family, I ventured to recommend it to others. For some time it was ridiculed under the name of saw-dust bread; but finally, in a very slow way, it came to be employed by a large number of persons, its valuable properties were ascertained and admitted, and it has now come into general use. In a tour through Europe, about twelve years since, I found that this same bread was becoming an article of food for the upper classes in London, Paris, and Rome. Among poor people a brown bread is employed in most countries of Europe; and, probably, has been from time immemorial. In Germany, horses are advantageously fed on it while travelling.

Some years ago, it occurred to me that, as the brown wheat bread was beneficial on account of its coarseness, but was not sufficiently active in all cases, it might be well to use the wheat in a coarser state, and without making it into bread. I therefore directed some wheat to be ground in a coffee-mill, and after boiling three or four hours, a little salt having been previously added, it was found very palatable. This substance has a better effect in preventing constipation of the bowels than any article I have ever met with, after a great number of years of observation and inquiry. When the stomach is very weak, it will not bear it in sufficient quantity to answer the purpose. But for costive people in general it will produce quite a remarkable revolution, and a consequent favorable change, in the appetite and general health, when taken in the right quantity; and this I consider to be about twelve ounces for an adult. It may be used at breakfast as a part, or, when the case requires a large quantity, as the whole, of a meal, and at dinner as a substitute for puddings and vegetables. For the evening meal, I have rarely recommended it. By those who require some addition to render it savory, the substances which are employed with hominy for the same purpose, may be used, such as milk, butter, cream, or molasses. The sweet articles are not well borne by a weak stomach, especially molasses; but when they can be used without inconvenience, they add to the efficacy of the wheat.

The preparation of it consists in washing clean in cold water, then in boiling from three to four hours, adding water, from time to time, sufficient to bring it out with about the consistency of hominy or boiled rice. The longer it is boiled, the more agreeable it is, but less effectual. A moderate degree of fluidity, that is, less than that of boiled rice or hominy, renders it more laxative.

The principles on which the coarse wheat operates as a laxa-
tive are not very obvious. M. Millon has reported to the Academy of Sciences that the bran of wheat possesses various valuable properties, not before known. Whether any of these are calculated to have a purgative effect, we know not; but such may possibly be the fact. I have been led to believe, however, that the wheaten bran operates in two ways; first, by the stimulus of the edges of its branny particles; second, by mere bulk. It may be supposed to operate in the first mode by the undissolved portions of bran acting on the mucous coat of the intestines, exciting thereby the nervous energies of the parts, and producing contractions of the muscular fibres. Secondly, bulk is necessary to keep up the action of the bowels, as has been already shown in the allusion to the effect of highly nutritious substances, which, being in a great measure taken up by the lacteals, leave no mass of insoluble matter to fill the calibre and excite the action of the intestines. People who eat much food are more regular in the bowels than those who eat little; though they may be obliged to pay for this advantage by the injury done to the overburdened stomach. These ideas are supported by the fact already mentioned, that seeds and other insoluble matters have the effect of urging on the torpid peristaltic action.

Superfine flour bread, as has been stated above, is not a healthy article of food for man nor animals. Dr. Truman,* in his "Rules for Diet," says: "The French plan of eating enormous quantities of bread at dinner is unwholesome for most people, unless they take very violent exercise; a very liberal allowance of bread is always apt to induce headache, and a confined state of the bowels." Animals, so far as I have observed, do not like, and, for the most part, cannot live upon fine bread; whereas many animals, even carnivorous, can subsist on coarse wheat bread. Dogs, according to the French physiologists, die after feeding about three weeks on fine bread, but will live on coarse bread an indefinite time. Birds are very fond of coarse bread and of cracked wheat hominy, which they eat with avidity; and it agrees with them. There is reason to believe that the vertebrated animals generally can be subsisted on coarse bread, but not on fine. Many persons object to coarse bread, that it is not so agreeable as fine. This sentiment is the result of habit, for those who have been accustomed to use the coarse bread, for a reasonable time, find it sweeter to the taste, and more satisfying to the stomach, than the other. It seems then unfortunate that an article of food, which is deficient in some principle necessary to its healthy action on the animal economy, should have been so long employed, and so

widely spread among the population of cities, and, in truth, among a great mass of people elsewhere.

My authorities for these experiments, I am unable, at this time, to quote, many years having elapsed since I read them; but, as they were published in the popular journals, they are probably well known to the profession generally.

Since I have made use of the coarse wheat, I have had frequent communications on the subject with professional friends, as well as with a great number of other individuals, and find that they are satisfied of its valuable effects. This being so, it may be thought that the subject should have been brought before the public at an earlier period. The reason why I did not do this was, that it seemed too simple a matter to trouble the public with; and I also thought it very probable that a substance which I had found so efficacious, I mean the wheat hominy, and which must have been employed as food from the earliest ages, might have been recommended in some work I had not met with. The long period during which I have seen its effects not having enabled me to discover that it had any where been formally and distinctly advised, it has appeared more proper to give the public a distinct knowledge of its use, than to hold it back because it may have been recommended by other people.

I cannot conclude without repeating that, of all the articles of food which, in the course of fifty years practice, I have had occasion to recommend for the prevention of a constipated state of bowels, and its consecutive evils, this cracked wheat is incomparably the most effectual.

Medical Experience with Indigenous and Naturalized Plants, officinal and unofficinal, by the United States Pharmacopæia.

By R. P. Stevens, M. D., of Ceres, Pa.—(New York Journ. of Medicine.)

_Artemisia absinthium._ (Wormwood.) A useful tonic of considerable power in the cure of ague and fever of miasmatic districts. It has in a number of cases, and once in my own, succeeded, where sulph. quinine failed.

_Cochlearia armoracia._ (Horseradish.) A grateful stimulant in atonic dyspepsia. In this disease I have used it with the most pleasing effects. I have also used it as tonic, in the cure of intermittent fever. In my own person, I prefer it to cinchona, or its alkaloid quinia.
Calamus aromaticus. (Sweet Flag.) After many years' experience with this highly useful stimulant, I give it the preference over all other carminatives. I use it in catarrhal coughs, after the following formula:—B. Fresh calamus sliced, ℥j; sugar-house molasses, Oj; boil sufficiently to candy; then pour into shallow moulds. This medicated candy is far superior to Pease's, Jervis's, and all "other cough candies" that I have used.

Cimicifuga racemosa. (Black Cohosh.) I make great use of this plant in the treatment of articular rheumatism. I consider it especially useful where the joints are swollen. My preference is for the saturated tincture. Its powers are much increased by the combined use of iodide of potassium. I have known cases to yield to this combination, which had resisted all other treatment, and where calomel and opium, with guaiacum, had been pushed to the repeated constitutional effect of the mercury. In neuralgia of the uterus, after repeated experiments, I give it a high rank, fully equal to the tinct. of guaiacum of the Dewees formula.

Eupatorium perfoliatum. (Boneset.) I should not speak too highly of this plant, if I should say that I hold it in greater esteem than any other of our indigenous plants. In the commencement of common colds, it rarely fails, when given in full doses of the decoction, to break up the complaint; and the half frozen, trembling, coughing, sneezing patient, finds himself happily relieved from one night's dosing, and the next day ready for his accustomed business.

In epidemic influenza, when combined with Pulvis Doveri, I hardly use any other remedy. This present season, during the prevalence of an influenza, I have prescribed it in over one hundred cases, with the most happy effect.

In the influenza of 1841, '42, (Tyler Grippes, as it was facetiously termed,) I used it with the same happy effect. I consider it especially useful in removing the deep-seated pains and internal soreness, and pain in the bones, which the patient so loudly complains of. In this disease, its diaphoretic and sudorific powers are preferred to its emetic power.

In the first stages of miasmatic fever, I frequently exhibited it, to full emesis, using the decoction, and adding ipecac, if its emetic powers are not speedily enough developed.

In that slight congestion of the hepatic system, which will precede for days, oftentimes, an attack of miasmatic fever, a congestion, frequently attended with acid eructations, and a sense of fulness in the epigastrium, and tenderness on pressure in the right hypochondrium, full emesis will often restore the
function of the liver to a healthy state. During ten years' residence in a malarious district, where at first I trusted to calomel and blue mass to relieve myself of these hepatic congestions, I afterwards learned to trust to the virtues of this plant, and almost to consider it for myself a specific.

A cold infusion of it is a useful tonic, and corroborant to the stomach in its debilitated state, during convalescence from remittent and intermittent fevers. A prolonged use of the infusion, has, in a number of instances, succeeded in the cure of Pityriasis.

To my regard for this plant, full justice would require an article, and that is not my present intention.

Frasera Walteri. (Columbo.) In the summer and fall of 1838, emphatically "the sickly season," of the Valley of the St. Joseph's of Michigan, owing to the depreciation of western funds cinchona and quinia were not to be obtained, and many practitioners were driven to the forests for their tonics and febrifuges. In the powdered root of the frasera, combined with capsicum, I found a highly useful combination, in the treatment of the fevers of that season. Owing to its bulk, I neglected it in after years, and have not since made trial of it. A cold infusion of it is a grateful tonic in dyspepsia, and debility of the stomach after fevers.

Geranium maeulatum. (Cranesbill.) In the treatment of salivation, this is one of the best astringents. From its affording so immediate and decided relief to the severe pain and high irritation attending mercurial ptyalism, I am inclined to consider it as having a sedative action. In chronic diarrhoea, where a vegetable astringent is demanded, it rarely disappoints my expectations. In compounding pulvis cretae compositus, I always use the root of this plant.

Inula Helenicum. (Elecampane.) In some cases of profuse catarrhal expectoration from the lungs, I have used a decoction of this plant with benefit.

Juglans cinerea. (Butternut.) The watery extract of the inner bark of the root has proved to be a valuable article in the treatment of chronic constipation of the bowels.

Magnolia glauca. (Cucumber tree.) The fruit of this noble tree, chewed, and the juice thus expressed, I have known to cure the summer complaint; and the dried fruit pulverized, I frequently give to children with diarrhoea, with benefit.

Podophyllum peltatum. (Mandrake.) The root of this plant in powder, combined with calomel, I have long used as a
powerful cathartic, in cases of cerebral apoplexy or paralysis, arising from, or attendant with congestion of the liver. My formula is 40 grs. of the finely powdered root, with 10 grs. of calomel. I have known a full bounding pulse, 120 beats in the minute, and demanding, in the opinion of three physicians attending as counsel, immediate and efficient venesection—I say I have known such a pulse, from one dose of this combination, reduced to 80 strokes in the minute, and to be soft, easily compressed, and gradually go down to the usual standard, much to the surprise of the intelligent counsel.

Sanguinaria canadensis. (Bloodroot.) I have derived more benefit from this medicine in the treatment of scarlatina maligna, than any other disease; and I have used it in phthisis pulmonalis, pertussis, pneumonia, bronchitis, hæmoptysis, and rheumatism.

In scarlatina, I exhibit it in full emetic doses, preferring for this purpose a strong decoction. It acts more promptly than ipecac., and is not so depressing as antimony.

It removes the morbid secretions of the mucous membrane, not only of the stomach, but also of the oesophagus and fauces. By its action in this particular, it prepares the system for the exhibition of other remedies, and goes far towards breaking up the morbific impressions of the virus, which causes this fatal malady. In hæmoptysis I have received some marked benefit from it. In phthisis, I have never seen any good effects. In bronchitis, where the secretions are opaque and viscid, it promotes the secretion of mucus; renders it thinner, less opaque, and easier to expectorate.

In catarrh of the mucous membrane of the nares and frontal sinus, in combination with cloves and gum camphor it is a useful erthropneum. It promotes the discharge of the highly offensive mucus, imparts a pleasing sense of warmth to the whole head, and gives strength to the weak and watery eyes attending this truly distressing malady. It does not possess sternutatory powers in so great degree as hellebore, and is therefore more pleasant to use.

In all diseases of the chest, where I think best to exhibit this plant, I give preference to the tincture after the formula of Prof. Tully.

Unofficinal Plants.

Babtisia tinctoria. (Wild Indigo.) The action of this plant in full doses, is that of an emeto-cathartic, producing slight vertigo. In small doses it is laxative and sedative, leaving after its operation a soothing influence upon the bowels. In epidemic dysentery, I have used it in small doses, with a happy
effect. Yet, from its being so disagreeable to the taste of patients, I have not made any very extended trials with it.

In the treatment of Epidemics, most practitioners have found some one medicine on which they place more reliance than others; and they have also found, that in treating the same epidemic diseases, but in different seasons, they have had to change their favorite remedies. Old ones failing and new ones succeeding. Agreeably to this experience I found that in an epidemic dysentery of the summer of 1839, arising from miasmatic causes, a decoction of the root of the babtisia succeeded when all other remedies failed; since then I have used it in the same epidemic disease, and evidently having a malarious origin too, but without the same pleasing effect.

_Cucumis melo._ (Muskemelon.) I have to record one case of that body-distressing, spirit-depressing, and ennui-engendering disease—dyspepsia, as cured by the eating of this delicious summer fruit. It was the patient's only diet—the only diet his stomach would retain for many weeks.

_Cypripedium parviflorum._ (Yellow ladies' slipper.) This is the "nervine" of the Botanic and Thompsonian Physicians. There are two other varieties of the cypripedium, C. ancale and C. spectabile. I do not consider them equal to the parviflorum in useful medicinal qualities; certainly they are not equally safe. I have found them, especially when growing in dark swamps, to possess a narcotic quality, which has deferred me from their use, and which has alarmed some of my patients. But the parviflorum, when growing upon a light sandy soil,—the oak openings of Michigan for instance—has never exhibited this quality.

In full doses, it is a gentle stimulant, with a decided tendency to the nervous system, and harmonizing its disordered action.

In hysteria it is a valuable remedy. In pains of the joints following scarlatina, it has proved itself a valuable remedy: I consider it fully equal to the valerian officinalis.


My attention was first drawn to this remedy by the difficulty I experienced in treating, with the means more generally used, certain forms of diffuse inflammation of the cellular tissue. It is well known to many practitioners that the tanners are subject to a form of inflammation in the hand, closely akin to dissection wounds, and which arises from the skin being broken,
and the open surface getting inoculated from some putrid hides, &c. The men subject to this are generally cachetic or plethoric, and the inflammation very rapidly runs into extensive suppuration, requiring incisions for its evacuation. The results of the most active treatment by calomel and black draught, in very large doses, a free use of opium, cold lotions, and starvation, were not always so satisfactory as I could have wished; and thinking that if the tartar-ematic can cure pneumonia, which is a diffuse inflammation of the cellular tissue, it would in all probability be serviceable here, I resolved on trying it, and, to my great satisfaction, the first case succeeded very well. Since then I have used it some hundreds of times in nearly every possible form of inflammation of the cellular tissue, as well where this was the only structure invaded as where it was one of several attacked, and in nearly every case with the greatest success; and that I have not succeeded in more was owing—First, to the cases being too far advanced towards suppuration; but even here it proved of signal value, by preventing all further extension, and arresting the inflammation in those parts which had not gone on to suppuration, by hastening the separation of the pus, &c. Secondly, to neglect on the part of the patients themselves; their not taking the medicine from its nauseating them, or their being of a supplicative diathesis, &c.

With a view of illustrating this more fully, I have selected the following cases, which are not to be looked on as the most striking examples in favor of what I have asserted, because I think that when tried it will be found that I have in no way exaggerated the success of this treatment, but because the diseases given in these cases are often scattered widely apart in books, and not to be found under the same heading or in the same chapter; nor is it from not having cases which exemplify many other forms of inflammation that I restrict myself to these; for I have accumulated and carefully recorded a large number, and the forms are so common and so easily recognized that more might have been obtained every day, but I am in full hopes that what I have selected will be found sufficient for the purpose.

**Syphilitic Bubo.**

**Case 1.**—Mr. J. B., aged twenty-four. This gentleman came to me this morning (August 8, 1849) for advice regarding a severe pain in his groin. On examination I found the following symptoms:—A chancre is gnawing away the fraenun. In the right groin there is a large bubo; the surface is dusky red, and the swelling and pain have reached such a height, that he
can no longer go to business, and he is worn and jaded. The case is unfavorable, as three weeks ago, while in Dublin, he had a bubo from chancre, which, in spite of rest, starvation, and other rigorous means taken by the surgeon, burst, and is not yet healed. His health has given way very much latterly; his tongue is foul, and his head disturbed. The frenum was divided, the sore dressed, and he returned home. To take one grain of tartar-ematic every three hours, apply seven leeches, followed by ice, and to rest in bed.

Aug. 10th. Great improvement. The tartar-ematic to be continued in doses of a grain and a half every two hours.

12th. Further improvement: the tongue is beginning to clean; appetite restored; his head is better, and the pain and swelling rapidly giving way. The ice to be discontinued, and the bubo covered with caustic.

14th. The skin is now greatly shrivelled, which appeared to me one of the first and most incontestable signs of diminution of a swelling; the bubo smaller and almost painless. He is now able, for the first time, to leave his bed for an hour or two. To resume the use of the tartar-ematic, which he had partly given up, in doses of two grains every three hours. Every time it was thus omitted the sickness returned on its being resumed, but subsided after vomiting once or twice.

16th. Rapid diminution of the swelling; pain gone; the health improving; appetite better. He sits up nearly all day. To take forty drops of the liquor potasse three times a day in milk.

20th. Returned to business, almost well.

25th. Called to show me the chancre, which, from a hard day's work, and a good deal of wine, had partially re-opened. To be touched with caustic. The bubo, which was once so large, has now almost totally disappeared; his general health greatly improved, and this continued, for the ultimate result of the case was satisfactory.

Bubo; return, but in a less aggravated form, from suspension of the treatment.

Case 2.—Charlotte S— , a middle aged woman, applied, Aug. 16th, 1849, with a bubo and sores. The bubo evidently arises from the sores, which are of syphilitic origin. She suffered much pain from it, and it is rapidly going on to suppuration; the bowels are confined. To take half an ounce of castor oil immediately, and repeat it in a short time, if the bowels are not relieved; then to begin with the tartar-ematic, three-quarters of a grain every two hours.

23d. The severity of all the symptoms is diminished; the lump is much smaller
26th. After her last visit she thought herself so much better, that she went out, left off taking her medicine, and walked a great deal; the bubo, which had nearly gone, now rapidly increased again; but she continued to work, and poulticed the swelling, which soon burst, when a small quantity of pus, not amounting to a tea-spoonful came out. To resume the tartar-emetic.

30th. Rapidly improving. To take the liquor potassæ, thirty drops, twice a day.

Sept. 20th. Well.

**Diffuse Inflammation in and about the Elbow.**

Case 3.—B. F——, of Gray's-inn-road, Oct. 25th, applied, to-day, at the Royal Free Hospital, for advice. From the appearance of the arm, suppuration seemed unavoidable, if not already established; the patient also seemed to think so, and, with a view of promoting this, had diligently poulticed it. The inflammation was extensive; the pain and swelling very great, and extending for a considerable distance above and below the elbow-joint. It had been some time coming on, but had increased very much latterly; still it was evidently not in an acute form. To take a grain of tartar-emetic, and ten drops of tincture of opium, every three hours, and to apply a blister to the part.

Oct. 30th. She is very much better. To take three grains of iodide of potassium, and an ounce of infusion of calumbo, three times a day. The blistered surface to be dressed with zinc ointment.

Nov. 6th. Much better. Continue the iodide of potassium and the ointment.

13th. Same report. Continue the iodide of potassium.


27th. Every trace of the disease gone.

**Phlegmonous Swelling in the right Groin, and Erysipelas in the Leg.**

Case 4.—G. C——, of Camden-town, applied for relief, Aug. 14, 1849. The skin is of a deep fiery red, and the pain is very great; the blush over the swelling in his groin seems to be taking on the characters of erysipelas. He was put upon a grain and a half of the tartar-emetic every three hours; the dose to be increased so soon as the sickness yielded.

Aug. 23d. He is better; the redness is disappearing; both the swelling and the erysipelas have yielded. To continue the medicine.

I went to Camden-town, to see what had become of this
man, as he suddenly discontinued his visits; but all the people, had left, and the new-comers knew nothing of him.

Whitlow, and results of it.

Case 5.—Miss Y., aged twenty-four. The case of this patient shows strikingly the effect of the tartar-emetic. Some months ago she had rheumatic fever, which was followed by some pericarditis, and symptoms of both threaten her now from time to time. Soon after her recovery, and about the beginning of October last, a whitlow formed on the third finger of the right hand, which went on to suppuration, though she placed herself under the surgeon’s hands for it; and after a month’s continued suffering, came to London, soon after which she came under my care. I found the cellular tissue almost all suppurated and sloughed away; the extremities of the tendons loose, the third phalanx reduced to a mere shell; and detached, and the extremity of the second bare. After the third phalanx was removed, I made a vain attempt to heal the sore, by washing it well with zinc lotion, and bringing the sides together; but finding I was only losing time, I persuaded her to let me remove the whole of the diseased portion with the knife. Three days after, and while the new wound was healing kindly, she was attacked by symptoms of thecal abscess, in this finger and in the palm of the hand. Half a grain of tartar-emetic was given every two hours, the finger, as far as the palm, freely rubbed with nitrate of silver, and an ether lotion constantly applied. The medicine produced five hours’ nausea and some sickness, but the relief was speedy and effectual.

From this time no bad symptom showed itself. The tartar-emetic, persevered in for some time, was followed up by the iodide of potass., and she soon after went to the country completely cured.

Cerebral Congestion.

Case 6.—I append the following case, because, though not considered within the range of surgical practice, it is yet essentially the same as the cerebral congestion, passing often into inflammation, which follows upon concussion.

W. T., aged sixteen, applied, Aug. 23d, 1849. He had been ill fourteen days, being seized at the commencement with severe pain in the head and bowels; the latter soon gave way, but the former increased, and now presents all the symptoms of cerebral congestion, and commencing inflammation. The face and eye are flushed; the pulse is strong; some confusion of ideas, &c. To take half a grain of tartar-emetic every two hours.
Aug. 28th. He is very much better; the pulse has fallen to 96; the tongue clean; headache relieved, but still present. To continue the tartar-emetic, and apply a blister to the neck.

I afterwards learned that he completely recovered, and is now in perfect health.

I must again remark, that these few cases are only a fragment of what I have collected, but in these it will be seen that the tartar-emetic was the chief, if not the sole agent, which is the point most in question.

It has been objected to this plan by some, that the tartar-emetic is a violent and most unpleasant remedy, and that antiphlogistic treatment, with purgatives, mercury, salines, &c., relieve the patient just as soon; that the plan of poulticing, and then opening the abscesses or collections of pus is preferable; or that, as resolution is the natural termination in most of such cases, the expectant treatment is preferable. To this I reply—

1st. That the tartar-emetic is a violent and most unpleasant remedy? That, so far as I have been able to learn from the statements of the patients themselves, the sickness and nausea seldom lasted beyond the third dose, except with children; that, severe as it was, many preferred exposing themselves to it a second time to suffering the pain of a second inflammation, when they had, from carelessness, or the pressure of unavoidable circumstances, suspended the treatment, and the disease was, in consequence, once more making headway. In children, the sickness often occurred after each dose, but the good done was more than commensurate with the evil inflicted; their sickness is attended with less suffering than that of men; I have never had occasion to regret using the tartar-emetic very freely with them.

2dly. That antiphlogistic treatment relieves the patient just as fast? The method of deciding this would be to institute a complete series of experiments, and compare the results, a thing I should infinitely prefer leaving to some indifferent person to undertaking myself; for whatever the results might show, the attempt could only appear invidious. I can merely say, that in my hands this treatment was not so successful as that with tartar-emetic, for which reason I have adopted the latter, and wish now to propagate its use as much as I can. I think every practitioner will admit, that many cases of this kind go on to suppuration in spite of every effort on his part. Moreover, I have seen purgatives and mercury producing their full effect without, in any material degree, checking the advance of inflammation and suppuration, which has not appeared to be the
case with tartar-emetic, for as it established its influence, the
inflammation seemed to give way, excepting always such parts
as had already gone on to suppuration, or where a cause existed
beyond the reach of the medicine, such as a foreign body, &c. Starvation, which figures among these remedies, is one
of those things which patients, outside the hospital, will not
practise.

3dly. That the plan by poulticing and evacuating the morbid
matter is better? In numberless instances, this morbid product,
one formed, is not so easily evacuated; witness the cases
where it accumulates in spots, which the boldest surgeon hesi-
tates to invade with the knife; and again, the destructive effects
of suppuration among the tendons and sheaths of the muscles
form an additional objection to this plan. Lastly, patients,
young and old, rich and poor, have a deeply-rooted objection
to having knives plunged into them for any purpose whatever,
answering all arguments in favor of the practice with the pow-
erful engine of passive resistance: this may be a prejudice on
their part, but it is one which the surgeon sometimes finds it
difficult enough to overcome.

4thly. The expectant treatment best, resolution being the na-
tural termination, &c.? That the expectant treatment is
homicidal in pneumonia, I believe the majority of practitioners
will admit, and why it should be admissible in these less im-
portant, but strictly analogous cases, I am at a loss to conceive.
Nor can I understand how resolution can ever be the natural
termination of inflammation; it certainly is the most fortunate,
but that is a different matter. I should as soon think of taking
up the idea, that if the earth were driven from its orbit it would
naturally re-enter it, no impulse being communicated to it by
any other body; and I would oppose this opinion on the fol-
lowing grounds:-

1. Resolution cannot be the natural termination in those
cases which spontaneously go on to suppuration.
2. Resolution follows in many cases where medicine has
been freely administered, and where the body being in a non-
natural state, suppuration, and not resolution, ought to have
been looked for according to such a theory.
3. In spite of all the errors of medicine and surgery, the
calamities of homœopathists, and the national taste for quack-
ery, the far greater portion of mankind here know that such
cases get on more favorably under the doctor’s hands than
when left to nature, and to the surgeon they will turn for help
and relief, excepting, of course, those whose intellects are so
muddy, that the owners of them put themselves under the
hands of homœopathists, horse-doctors, quacks, and old wo-
men—a piece of fanatical delusion for which they often pay a heavy penalty.

4. That it is more natural to suppose that the cause which produced an inflammation capable of going on to suppuration would carry on that inflammation to suppuration, no check being interposed by art, nor the cause removed. I believe we may conclude that one or both of these have occurred in those cases where resolution has seemed to arise solely from the powers of nature overcoming the supplicative tendency of the disease.

5. If nature were capable of checking the progress of a disease, how is it that she cannot check its first advances, the body then being much sounder, and necessarily more capable of resisting a malign influence?

Before summing up this paper, I may as well say a few words on the way in which I have given the tartar-ematic. To full-grown persons I have never given less than half a grain; to men, three-quarters or a full grain every two hours, and increasing the dose so soon as the sickness gives way. Where the bowels are confined, it may be combined with drachm doses of tartrate of soda; and when relaxed, with a few minims of tincture of opium; where neither of these, but much pain, with tincture of hyoscyamus; but I always think it acts best uncombined. With children it is apt to be very violent, yet one-eighth of a grain may be safely given at the commencement, and even those of tender age soon bear a dose of half a grain to two-thirds of a grain. A carminative, or minute dose of Prussic acid, which may be given to children more freely than is generally done, will assist in abating the vomiting. Placing the patient with the head lower than the hip will almost totally prevent any vomiting, but the position is difficult to enforce. The ether lotion in the acute, and painting with tincture of iodine, and blistering, in chronic cases, are most useful auxiliaries; for if patients are left to get ice, baths with cold water, &c., it is not very often they will do it. Now, in the introduction or extension of any remedy, it is always necessary to attend to three points—

1. To discover that remedy which shall most certainly cure the greatest number of cases.

2. Of two remedies of equal value, to choose that which will cure most pleasantly and safely.

3. To endeavor to deduce from its application and operation some law, or to illustrate some known principle.

1. The first point has already been discussed in the answers to the objections raised against its use.

2. Here there can be little doubt that every voice will be
raised against the tartar-emetic: for perhaps if one method could be found more unpleasant than another, it would be this; but the annoyance, great as it is, is but trifling compared with the sufferings produced by inflammation, and may, with care, be very much shortened, complete toleration being established in many cases in from five to seven hours. Those patients who have had one inflammation go on to suppuration will take, and continue to take, almost any remedy whatever rather than have a second; and those who have taken tartar-emetic once will freely take it the next time they find the inflammation coming on.

3. Let me now ask, if the facts detailed above bear out the following conclusions:—

That phlegmon and diffuse inflammation have their heat essentially and in the cellular tissue.

That they are essentially the same, whether appearing under the form of a whitlow or a pneumonia; in an abscess of the brain, liver, or limbs.

That tartar-emetic is the best of the antagonist remedies that can be arrayed against them.

It is only by referring back to laws, and basing laws on facts, that the one can be explained, and the other supported; it is only thus that the philosophy of medicine can acquire that strength which will enable it to resist successfully the scathing fang and destructive claw of old Time himself, and to battle with those agencies which blot out an art, subvert a dynasty, or sweep away a mighty nation from the records of man, and from the face of the earth.

Observations on the Causes and Management of difficult Parturition. By J. Hall Davis, M. D., Physician to the Royal Maternity Charity, and to the St. Pancras Infirmary.—(London Lancet.)

To ensure to the fairest portion of the Creator's works the greatest amount of safety, the least possible degree of suffering in her hour of trial, is the high object of our pursuit as obstetric practitioners and no department of the practice of medicine and surgery can involve more trying responsibility, demand a sounder judgment, more firmness of conduct, more profound reflection. It is my propose, in the following series of communications, to review, in a concise manner, and upon the plan of my lectures, the different kinds of difficult parturition in its more extensive signification, comprehending all deviations from "natural labour." Difficult parturition may be traced to two principal sources:
1. Any circumstance in a labour impairing or rendering abortive the due exercise of the powers of parturition.

2. Some attendant circumstance or complication of the function of parturition, calculated to compromise the safety of the mother or her offspring, or both.

And be conveniently distributed into four classes, as follows:

I. Protracted labours or impeded labours in the first degree.

II. Preternatural labours.

III. Complicated labours.

IV. Instrumental labours.

I. In Protracted Labours, the presentation of the fetus is natural—viz., by the head, but the delivery, although difficult, requiring more time, a longer endurance of pain for its completion than in easy parturition, is nevertheless safely accomplished without manual or instrumental proceedings, medical treatment in some cases being required.

In the above definition, I have purposely excluded the idea of time, having met with many exceptions to the rule adopted, after Denman, by some teachers and practitioners, where easy and safe labours have exceeded the assigned limit of twenty-four hours, and difficult labours, have occupied a shorter period.

In calculating the possibility of injury occurring from the length of a labour, we should not form our estimate from its entire duration, as I have elsewhere observed, (Contributions to the Practice of Midwifery, The Lancet, 1845,) but from the period occupied by the second stage of the process, when, the liquor amnii being discharged, more forcible efforts come into play, and the soft maternal tissues, with the child's frame, are exposed to a direct and unprotected pressure. Considerable allowances must also be made for differences of constitution in our patients.

The causes of protracted or impeded labours in the first degree are various, and so accordingly must be the method of management. They may be arranged under two heads—viz., defective parturient action, and inordinate resistance to the agents of labour.

Defective parturient action may arise from the following causes:

1. Constitutional Debility, in which the uterus and its accessory powers participate, is one of the most frequent causes of loss protracted labours. This may result from previous disease, of blood, excessive discharges of any kind, extreme poverty and its attendants, impairment of the health by intemperance, or the patient having previously borne many children. Phthisis, although an exhausting disease, is not attended by that en-
feebled uterine action which might, *à priori*, have been expected; but then the actions of pregnancy most frequently have the effect of suspending for the time the progressive encroachments of consumption upon the powers of the constitution; and the state of the parts, as Denman has truly observed, which in a common way might require the exertion of much force to dilate, corresponds with the strength such women are able to exert. The debility may further proceed from ill-adapted age (early or late) for parturition, and from a languid, indolent, phlegmatic temperament, or a nervous irritable habit.

*Treatment.*—The energies of the system and uterus must be sustained by suitable nourishment, as gruel, arrow-root, beef-tea, jelly. In some cases, stimulants, as brandy, wine, or ammonia, especially if the pulse is feeble and slow, and the surface colder than natural, should be administered, but with discretion, so as not to excite fever or inflammation. At the same time, the temperature of the room, and its due ventilation, and also the proper amount of bed clothing, should be attended to. The patient’s mind must be encouraged, and assured of a favourable termination. An occasional change of posture is sometimes useful and also gentle friction of the abdomen with a warm hand. If there has been little or no sleep for several hours or days, the patient may, with advantage, be left quiet for a refreshing sleep, should there be any disposition; otherwise we should try to promote rest by a half-grain dose of morphia, its acetate or muriate. The bladder and rectum must be relieved, if necessary. Should these means fail in rousing the dormant powers of the uterus, we may then, as I shall presently explain, administer the ergot of rye.

2. *Plethora.*—The uterus may be feeble from the effect of a gorged state of its bloodvessels partaking in a similar condition of the entire system. There are present, the general symptoms of plethora; besides headach, a pulse full and resistant, or oppressed and labouring; the injected face, eyes, and skin; the patient sleeps not, or but little in some cases, is drowsy in others; and tension, with a sense of weight in the uterine region, is frequently complained of: I have also met with puffiness of the hands and feet in these patients, with a swollen state of the os uteri and vagina, as also a varicose state of the os externum and labia, and hæmorrhoidal vessels; mostly thirst is absent, or not remarkable; bowels usually costive.

*Treatment.*—Much may be done before labour to prevent this state, by a spare diet, cooling regimen, walking exercise, and gentle aperients. During labour, the room should be kept well ventilated, and not-overheated; simply diluents taken;
everything which would promote plethora excluded, and these measures failing, a few ounces, from fourteen to eighteen ounces, of blood must be abstracted from the arm.

3. A febrile condition of the system may produce a sluggish action of the system, recognised by its more obvious characters of a hot, dry skin, thirst, scanty and high-coloured urine. The patient should be kept quiet, the bladder and bowels attended to, the room cool, and nothing be given to the patient but the thinnest cold drinks, as water, thin barley-water, or toast-and-water. I have frequently found all that was necessary for its removal, a better ventilation, removing excess of bedclothing, and preventing the repetition of stimulants given for supposed weakness of the patient. But sometimes the removal of blood from the arm will be requisite and the best judgment of the practitioner, his knowledge of his patient's constitution, must regulate the quantity. It will seldom be necessary to exceed sixteen ounces, but it should be rapidly withdrawn. The labour will after that proceed in its due course, a striking change will take place in its character, and a speedy favourable termination be the issue.

4 Depressing Emotions of the Mind.—I have witnessed many instances of the influence of the mind over parturient action. The arrival of the accoucheur, especially if sudden, and he is a stranger, his manners embarrassed, or rough, is sufficient to arrest, or much enfeeble, the action of the uterus. The mention, and discussion, of unfortunate confinements, or any indiscreet intelligence, in which foolish attendants and nurses sometimes thoughtlessly indulge, is an occasional cause of the patient's depressed spirits, and their reaction on the labour; as well as the preconceived notions some women have formed of the probable event of their labours. The obvious treatment is to support the patients's spirits during her pregnancy and labour by a cheerful unembarrassed manner, and by every kind of encouragement and assurance of a safe delivery; at the same time, however, do not run the risk of disappointing her, and so increasing her depression by fixing any precise period for the duration of her labour. Enjoin the same conduct on the nurse and attendants.

5. Irregular Action of the Uterus.—The muscular fibres of that organ act spasmodically, and in a wrong direction, bearing inefficiently, or not at all, upon the os uteri. This condition most frequently arises, through an excito-reflex action, from faecal accumulations, some cause of intestinal irritation; and in the second stage of labour I have met with it as a result of retention of urine.

Treatment.—An enema and the removal of any scybales
from the rectum, the exhibition of castor oil, or a laxative dose of sulphate of magnesia with tincture of hyoscyamus, will be requisite for the former, and the catheter must be introduced for the latter cause. The spirits of the patient, if disposed to flag, must be sustained. In many cases, nothing more will be required, in addition, than time and patience; but in a few instances opium will be necessary to subdue the spasmodic action, and thus to allow free course to the proper parturient powers, as also to secure rest, when that has been much disturbed. But this remedy should not be given till the bowels have been moved, and is rarely needed except in the first stage of labour. Chloroform by inhalation might be given with advantage in some of these cases, especially where opium disagrees as an antispasmodic; and I have derived benefit in three cases of protracted labour from its use in this way; but this remedy cannot be had recourse to in all habits, and must be used with circumspection. From analogy of its favourable action internally, in doses of ten and twenty drops in two cases of severe spasms in English cholera lately, and in others of Asiatic cholera mentioned to me by Dr. Clutterbuck, I should be disposed to administer it thus in spasmodic action of the uterus in protracted labour, as also in that attending some forms of dysmenorrhea, especially where opium disagrees with the patient.

6. Over-distention of the Uterus by excess of Liquor Amnii.—The uterus may be thus distended beyond its power of effective action. It is not a frequent cause of lingering labour. The average amount of liquor amnii in a single birth, is, I have observed, about a pint, but several pints have in certain cases been discharged. In some instances there are two distinct discharges of water, separated by an interval of several hours or days; in these, I attribute the first to a distinct collection now and then formed between the amnion and chorion. Very large collections within the amnion have been supposed to arise from an inflammation of that membrane, and a dropsy of the same. The head being presumed to present, the obvious remedy is to rupture the membranes; the os uteri should first be fully dilated, and we should have satisfied ourselves that this—(on due deliberation, and adequate time allowed,) from the large size and tense state of the uterus, and the absence of all other probable causes—is the cause of delay, since a premature rupture of the membranes may of itself protract a labour for many hours.

7. Impediment to the Action of the accessory powers of parturition.—Thus the due filling of the chest preparatory so those expulsive efforts, so important as aids in the parturient act, may
be interfered with by disease of the heart, lungs, or pleuræ. The contraction of the abdominal muscles may avail but little, or be but freely exerted, as accessory agents to the uterus, more especially during the second stage of labour, by disease within the abdomen, as ascites, enlarged liver, an ovarian tumour. Distention of the bladder, which I have mentioned under the last head, will also retard a labour in this way. Much time and patience will be required in these labours, and we must meet the different indications which present, in accordance with directions under their respective heads. Sometimes the support of the constitutional powers will be our special care; in other instances, a moderate depleptive treatment will be essential to the patient's welfare; and occasionally, as I shall hereafter specify, a recourse to instrumental delivery will be required.

8. Feeble uterine action cannot always be explained upon any known principles. The pains will fail in strength, indeed, become entirely suspended, for several hours, without any obvious reason, and yet, after a period of repose, be resumed without any interference, and all end satisfactorily. Should, however, this not happen, what is to be done? We have changed our patient's posture from time to time; advised moderate movement about the room, when not fatiguing; hot diluents: we have attended to the bladder and rectum; there is no want of confidence and courage in our patient; and yet there is no amendment. Here we may exhibit that undoubted excitant of uterine action, the ergot of rye, under certain conditions, however, which I shall here mention. I prefer its administration in the form of fresh powder, in half-drachm doses, given in infusion every quarter of an hour or twenty minutes, according to its effects. A single dose will sometimes suffice; but from two to five doses may be necessary. Sometimes the stomach rejects the whole, yet retains it sufficiently long for the intended object. The infusion may be exhibited in the form of enema when the stomach is usually irritable. The following are the conditions for its safe employment:

1. The head should present. In breech and footling cases, it is, in my opinion, objectionable, on account of the very gradual descent of the presenting parts required for the subsequent passage of the head, without risk to the child from pressure on its funis. It is improper, obviously, in transverse presentations, and also when the cord, hand, or foot, prolapse by the side of the head, unless, when feasible, they are first returned.

2. The os uteri should be fully dilated, or at the least soft and dilatable, therefore it is contra-indicated in the first stage of
labour; the vagina relaxed also, and, mostly, the perinæum likewise; for sometimes the ergot is cautiously, and with advantage, given to promote the descent of the head into gentle bearing on the perinæum, and then withdrawn, to allow that part a safe time for relaxation, and yielding, aided or not by medicines, as may be advisable.

3. A small pelvis, from whatever cause, and disproportionate size of the child, and consequently impaction of the head, forbid its use.

4. Very rarely, indeed, should it be given to primaparae, and, excepting in a recent case, in which I was consulted, I have refrained from exhibiting the ergot in first labours, much time and a slower action of the parturient powers being required in these labours than is consistent with the effects of the medicine. In that instance there was an ample pelvis, a relaxed and capacious soft passage; the hand could be passed freely around the head; the case had been lingering several hours; the patient was weary; nothing was found wanting but efficient action of the uterus to finish the labour.

5. All previously mentioned causes of uterine inertia should be absent. Where these were present, it has sometimes been usefully administered after their removal, of which I have given examples in The Lancet.

As I shall explain by-and-by, the ergot is of great service also in accidental uterine hæmorrhage and attendant inertia, after the liquor amnii has been discharged; in some premature labours and abortions; in the delivery of the second of twins; in anticipation of hæmorrhage habitual to certain patients, from inaction of the uterus after the birth of the child.

The peculiarity of its action is, that when fully developed, it is without intermission, and much more powerful than the natural contractions of the uterus; it is therefore, when improperly exhibited, capable of doing much mischief. The violent respiratory movements which it calls into play may, in predisposed persons, and when its action is strongly resisted by an obstruction, seriously disturb the functions of the lungs, heart and brain. The violent contractions of the uterus, when strongly opposed by a resisting impediment, may destroy the child by arrest of the utero-fœtal circulation from an inordinate and continued pressure; and rupture of the uterus, vagina, or bladder, exhaustion from long-continued and fruitless pains, may be, and have been, the consequence of its abuse. To The Lancet I have communicated illustrations of its action in properly selected cases. This medicine has been very much used in America, and Dr. Traske, who approves of its careful employment, cites several cases of rupture of the uterus, (A Sta-
tistical Enquiry on Rupture of the Uterus, *American Journal of Medical Sciences*, vol. xv.,) seemingly induced by its action under improper circumstances.

Dr. Robert Lee refers to a case of rupture of the uterus which occurred under the use of the ergot, the difficulty in the labour having depended on hydrocephalus of the fcetus, (*Medical Gazette*, April 7th, 1843.) About two years ago, I was informed of a recently ruptured uterus having been brought under the notice, for discussion, of the members of one of our societies, where the accident was stated to have occurred under the action of the ergot, given by an ignorant midwife in deformity of the pelvis.

Another method of exciting contractions of the uterus is that suggested and practised by Dr. Radford, of Manchester,—namely, by transmitting galvanic shocks through the uterus, so as to stimulate directly its muscular structure. And, lastly, I may allude to the use of stimulating enemata, as of culinary salt and water, of turpentine, in rousing, by reflex spinal action, the torpid powers of the uterus. The rectum should previously be cleared of faecal contents by warm water or soap-and-water injections, which sometimes of themselves serve as a sufficient excitant of parturient action.

BIBLIOGRAPHICAL NOTICES.

1. *A Universal Formulary, containing the methods of preparing and administering officinal and other Medicines; the whole adapted to physicians and pharmacoutists.* By R. Eglesfield Griffith, M.D. Philadelphia: Lea & Blanchard. 1850. 1 vol. 8vo., pp. 567.

Some difference of opinion prevails among medical men as to the value of formularies beyond those of the recognized Pharmacopoeias. We are of the number of those who deem a well arranged and judicious selection of forms for the preparation and administration of medicines as highly valuable to the physician, and especially to such as are just entering upon their professional career. The advantage of such works must be obvious when it is considered how few enter upon the practice of medicine with any knowledge of the art of compounding medicines. Dr. Griffith’s Formulary we think decidedly the best of its kind, and should be in the hands of every young practitioner. The value of the work is much enhanced by the addition of much valuable information in other points of a practical nature. The "Introduction contains full tables of weights and measures—of the specific gravities of some of the preparations of the Pharmacopoeias, of
hygrometrical equivalents, an explanation of the principal abbrevia-
tions occurring in pharmaceutical formulæ, and some very judicious
observations on the management of the sick room. Appended to that
part of the work devoted to formulæ, are full directions for preparing
the diet of the sick; a list of incompatibles; a posological table of the
most important remedies; a table of pharmaceutical names which
differ in the United States, London, Edinburgh, and Dublin pharma-
copæias; some remarks on officinal preparations and directions; a
list of Poisons with the symptoms they produce, the morbid appear-
ances, tests and antidotes, and a full index of diseases and their
remedies.

There is a peculiarity in Dr. Griffith's work which we most cor-
dially approve. "In each formula the English appellations for the
articles composing it are used, and the quantities of these ingredients
are expressed in words, and not in the usual pharmaceutical signs."
This plan should be generally adopted as much less liable to error.
A slight change in the pharmacueutic sign for a drachm makes it
indicate an ounce. Such a change in a formula in Ellis' formulary,
(in a formula for hydrocyanate of potassium we believe it was,) result-
ed in the death of a distinguished physician of Macon. A notice was
sent by the publishers of the work to the various Journals, requesting
the necessary correction to be made in that formula, but the correc-
tion came too late for the unfortunate Dr. Babe.

The typographical execution of the work is good, as indeed is the
case with all the medical books published by Messrs. Lea & Blanchard.

2. The Diseases of Females, including those of Pregnancy and Child-
bed. By Fleetwood Churchill, M.D., author of the Theory
and Practice of Midwifery," "Diseases of Infants," &c., a new
American edition, revised by the author. With the Notes of Robert M. Huston, M.D., Prof. of Materia Medica and General
 Therapeutics, and formerly of Obstetrics and Diseases of Women
and Children, in the Jefferson Medical College of Philadelphia;
President of the Philadelphia Medical Society; etc., etc. Philadelphia: Lea & Blanchard. 1850. 1 vol. 8vo., pp. 632.

The works of Dr. Churchill are now so well known and so general-
lly esteemed in this country, that any commendation would be super-
fluous. That they are received with equal favor by our transatlantic
brethren is proved by the fact that the work now before us has reached
a fifth edition. The work has been enlarged by considerable ad-
ditions to the text, and notes. Dr. Huston's notes add value to the
book.

In a former number of the Journal we took occasion to express a favorable opinion of this work, and to recommend it to our readers, particularly to such as were unable to resort regularly to actual dissections. The second number contains twelve large finely executed and well colored engravings of the Hand and Wrist; the cranial, nasal, oral, and pharyngeal cavities; the superficial organs of the thorax and abdomen; the deeper seated organs of the thorax and abdomen; the principal bloodvessels of the viscera of the thoracic-abdominal cavity; the relation of the principal bloodvessels of the thorax and abdomen to the osseous skeleton, &c.; the relation of the internal parts to the external surface of the body; the superficial bloodvessels, &c., of the inguino-femoral region; and the surgical dissection of the first, second, third and fourth layers of the inguinal region in connection with those of the thigh. We have met with no work of the kind which we think equal to this, either in its scientific or artistic execution.

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**PART III.**

**Monthly Periscope.**

*Pharmaceutical Preparations of Manganese.* (American Journ.)—In our preceding number, p. 193, we gave a brief notice of the views of Mr. Hannon relative to the use of manganese as a succedaneum to steel. The *Revue Médico-Chirurgicale de Paris* for June last, contains an interesting paper by this author, on the therapeutic uses of this substance, and on its pharmaceutical preparations. The latter portion of the paper we shall here present.

**Oxide of Manganese.** This is a very good preparation, especially when obtained by the humid method; it should therefore be made only when it is wanted for use. The best mode of prescribing it is, to add to an ounce of simple syrup, half a drachm or a drachm of the hydrated oxide, with some oily emulsion, to prevent the contact of the air.

**Carbonate of Manganese** is best prepared by dissolving seventeen ounces of pure crystallized sulphate of manganese, and nineteen ounces of carbonate of soda, in a sufficient quantity of water. Double decomposition takes place; an ounce of syrup is added to every seventeen ounces of the liquid, and the precipitate is allowed to settle, in a well-stopped bottle. The supernatant fluid is then decanted off; the precipitate is washed with sugared water, and allowed to drain on a cloth saturated with simple syrup; it is then expressed, mixed with ten ounces of honey, and rapidly evaporated (the access of air being
permitted) to a proper consistence for making pills. The sugar and honey oppose the transformation of carbonate of the protoxide of manganese (carbonate manganicus) into carbonate of the peroxide (carbonate manganique,) which is but little soluble in the acids of the stomach. The dose is from four to ten pills, each four grains, every day in chlorotic cases, where iron has not succeeded. The hyperoxidation of the carbonate of manganese may be prevented by adding freshly prepared vegetable charcoal to the pills; it absorbs the carbonic acid, which is disengaged by a partial decomposition, and enables the pharmacist to dispense with the use of mucilage, which only increases the hardness of the mass.

Neutral Malate of Manganese. This is procured by treating carbonate of manganese with malic acid. It is an eligible preparation, as the base of the salt is in the form of protoxide, and the acid is easily digested. The dose is from two to four grains, in pills.

The preparations of manganese have this immense advantage over those of iron, that they can be combined with vegetable tonics and astringents, namely tannin, and the substances which contain it, as gall-nuts, rhatany, catechu, dragon's blood, kino, monesia, canella, and cinchona. These can all be combined with malate of manganese. Syrup of malate of manganese consists of, simple syrup 3xvi; malate of manganese 3i; essence of lemon 3ij; an ounce of syrup contains twenty-nine grains of malate of manganese. Pills of malate of manganese. Malate of manganese gr. xv; powder of cinchona gr. xv; honey, a sufficient quantity to make twenty pills. Lozenges of malate of manganese. Malate of manganese 3i; sugar 3xi; mucilage of tragacanth a sufficient quantity. To be formed into lozenges, each twelve grains in weight; each of which contains a grain of the salt.

Tartarate of Manganese is prepared in the same way as the malate, tartaric acid being used. It may be substituted for the malate in all the above-mentioned formulæ; and is used to prepare the following highly tonic syrup. Syrup of tolu 3xvii; extract of rhatany 3iiss; tartarate of manganese 3iiss. Dose, from four to five spoonfuls daily.

Phosphate of Manganese is best prepared by dropping a solution of phosphate of soda into a solution of sulphate of manganese. The precipitate is collected after filtration, dried, and preserved in well-stopped bottles. This preparation may be employed, like the phosphate of iron, in cancerous affections. Pills of phosphate of manganese. Phosphate of manganese 3iiss; powder of cinchona 3ss; syrup of catechu a sufficient quantity. To be divided into four-grain pills. Syrup of phosphate of manganese. Phosphate of manganese 3ss; syrup of tolu 3iii, 3iii; syrup of cinchona 3v; essence of lemon 3iiss; powder of tragacanth gr. x. This preparation must be made quickly, and preserved in a well-stopped bottle. Lozenges of phosphate of manganese. Phosphate of manganese 3i; sugar 3xii. Mix and divide into twelve-grain lozenges, each containing one grain of the phosphate.

Iodide of Manganese is prepared by digesting recently precipitated
carbonate of manganese with fresh hydriodic acid; then filtering, and evaporating, the access of air being prevented. It may more conveniently be prepared extemporaneously, by mixing together an ounce of iodide of potassium, and the same quantity of sulphate of manganese, perfectly dried, and in the state of powder. It is then made into a pill-mass with honey, and divided into pills, each containing four grains of the iodide; which should be kept in a well-stopped bottle. The dose is at first, one pill daily, gradually increased every three days, to six pills; the medicine is then omitted for eight days, after which it is resumed. *Syrup of iodide of manganese* is prepared by adding concentrated hydriodic acid to a drachm of perfectly pure hydrated carbonate of manganese, until it be entirely dissolved; then mixing with the solution seventeen ounces of a syrup of guaiacum and sarsaparilla. Doses, from two to six spoonfuls daily.

In cases where iron has not succeeded, it is desirable not to make a sudden transition to manganese, but to combine the two remedies, as in the following formula. Pure crystallized sulphate of iron $g_{xiiii}$; pure sulphate of manganese $g_{iiiiss}$; pure carbonate of soda $g_{xviiss}$; honey $g_{x}$; syrup, as much as may be sufficient to make a mass, to be divided into four-grain pills. Dose, from two to ten pills daily. The insoluble preparations of manganese should be first used, as the carbonate, phosphate, and oxide; then the more soluble preparations, the tartrate, malate, etc., may be employed. The use of this medicine should not be persevered in so long as that of iron, as its preparations are more rapidly assimilated. Manganese is not, like iron, found in the excrements of persons who take it—at least it is in very small quantity.

In the depraved state of the blood which succeeds intermittent fevers manganese is useful; it is the most certain remedy for preventing a return of the attacks. Leucophlegmasia and engorged spleen, of long duration, are rapidly reduced by the use of iodide of manganese with syrup of cinchona. The preparation of manganese should also be used in urethro-vaginal catarrh in chlorotic patients, and in chronic blennorrhcea, especially in individuals weakened and rendered anaemic by excess. The salts of manganese, with which we are acquainted, are powerfully astringent, and may be used as external applications, in all cases where other astringents are not indicated. In this respect, they possess no other peculiarity.

*Good effects of repeated Blistering in acute Endo-Carditis.* (Bul. de Thérapeutique.)—We have witnessed in the service of M. Becquerel, the good effects to be obtained by the repeated application of vaccinations. Seven patients laboring under this affection have been under our observation, and we found that on the day after the application of the blister the blowing sound lost its intensity, the pulsations of the heart became more regular, and the respiration less disturbed. This change was perceptible to the patients themselves. In proportion as
the blistered surface became dry, the morbid phenomena slightly increased, but after two, three, or four applications, the blowing sounds became weaker and disappeared, the pulse became perfectly regular, and the respiration easy. The endo-carditis was pursued with vesicataries, until not only these sounds, but even the prolongation of the first bruit, which is the beginning of the blowing sound, entirely disappeared. This medication does not prevent the employment of a tonic and substantial alimentation to sustain the strength of the patient after the fever has disappeared, but we have remarked that the resolution of the disease was more slow under the use of such means.

Mode of depriving Quinine of its bitterness.—Dr. Richard H. Thomas, of Baltimore, in a letter to the Editor of the American Journal of Medical Sciences, recommends a combination of tannic acid with quinine, as a means of destroying its bitterness, without in the least impairing its efficacy. The following is his formula for the combination:

R. Sulphate of Quinine, - ten grains.
Tannic Acid, - - two grains.
Syrup of Orange, - - two drachms.
Water, - - - six drachms. Mix.

In a letter from James V. D. Stewart, of Baltimore, to Dr. Thomas, it is suggested that the proper proportion of the tannic acid is one and a half grains to ten grains of the quinine.

Traumatic Tetanus.—In the April No. of the Western Journal of Medicine and Surgery, Dr. Emison reports a case successfully treated with the Sulphate of Quinine. The subject was a healthy and athletic young man who was accidentally wounded near the external malleolus of the left leg, by the discharge of a pistol loaded with tow. The wound did well until some three weeks afterwards, when upon exposure to bad weather, and a long horseback ride, tetanic symptoms were induced. A large poultice of hops was applied to the wound, which was nearly healed, but with dry, everted edges, and a large dose of calomel with two grains of ipecac was administered, followed by a full dose of castor oil. After the operation of these medicines, half a grain of the sulphate of morphine was given every half hour for two hours, and afterwards sixty drops of laudanum every hour. Three portions of the laudanum were given, when it was suspended. The spasms continued, and the anodyne was more freely administered, and a blister
substituted for the poultice. The condition of the patient had now become distressing, and on the evening of the second day thirty grains of quinine were given and the anodynes continued. There was a decided remission at midnight. A cathartic was given, followed by anodynes. On third day, at 6 o’clock P. M., one drachm of quinine was administered. Symptoms much mitigated, and at 6 o’clock P. M., on the fourth day, the quinine was repeated in a dose of thirty grains. The tetanic symptoms gradually yielded, and in four or five days entirely disappeared.

On the use of the Tincture of Iodine in Variolous Eruptions. By Prof. Diez Benito. Gaceta Médica. (London Lancet.)—I do not recollect where, but not long since I read of this as being used, in order to avoid the cicatrices which remain after small-pox. I had occasion to try it in civil practice; but fearing lest the cases might not terminate favourably, I was induced to suspend its use until my hospital experience might justify its adoption, and the following are the results I have obtained. I have ordered the whole of the cheek to be painted with the tincture, during the period of eruption. The regular development of the pustule has not been checked by this. After the pustules have maturated, I have perceived that from within 24 to 30 hours they become dry, if the pustule were confluent, and the whole of the cheek covered with a scab. On its falling off, the cutis appeared red and delicate. When the pustules were distinct, it was perceived that instead of leaving a depressed irregular spot, they were detached with a little epidermic scale, and not with that cutaneous erosion which is observed in other cases. But if the patient scratched himself, or if the scabs were removed by adhering to the linen, the result was not so satisfactory. The face has not appeared the same in all cases, since in some irregular cicatrices have remained, but not to the extent they would have been, had the tincture not been used.

The tincture of iodine is indeed a most useful remedy in such cases, but it does not completely fulfill the object sought for. I have never observed any ill results from its use.

On the use of Chloroform in Ophthalmia. (Ibid.)—In a soldier who suffered from chronic inflammation of the palpebrae, accompanied by great intolerance of light, and epiphora, which had resisted, with remarkable pertinacity, the usual treatment recommended in such cases, the idea occurred to me of dropping into each eye a drop of chloroform, and from the first day he obtained so much relief, that he could look steadily at the light for some moments when for two months before, a variety of remedies had been uselessly applied. I have not effected a complete cure, as the patient could not be persuaded to remain sufficiently long in the hospital; but I hope that the professors who may have many ophthalmic cases under their care, will adopt this treatment in such as they may deem opportune, especially in those cases of extreme sensibility of the retina.
Treatment of Gleet. By C. Johnson, M. D. (American Jour.)—Having for several years used a solution of nitrate of strychnia with excellent success as a topical application, in chronic ophthalmic catarrh, I was induced to apply the same remedy by injection to the urethral lining. I discovered that its effect was singularly beneficial in gleet not depending upon stricture, accompanied or not by disease of the prostate gland, which, if neglected, terminates in hypertrophic enlargement. Farther experiment proved to me the efficacy of the internal administration of nux vomica in arresting the morbid urethral or prostatic discharge. Quinine was used with it as an adjuvant, and hyoscyamus added with a view of soothing irritation of the vesical neck, although that agent has been supposed to control the action of strychnia. The effect of this treatment has been such as to rob vexatiously enduring gleets of their annoying persistence, and to create the hope that others may derive equal pleasure from its employment.

R. Strychnia, gr. ij; Acid. nit. fort. gtt. iv; Aquæ ʒij. Ft. sol.

S. Inject one drachm thrice a day after urination.

R. Ext. nucis vomicæ, gr. xij; Sulph. quinia, Ext. hyoscyami, aa gr. xxiv. M.

In pil. No. xxiv. divid. S. Two pills to be taken an hour before each meal.

I also recommend the use of lean meats, and abstinence for a fort-night from salted and smoked meats, and from saccharine articles of diet in the usual proportion.

Radical Cure of Corns.—In the number of L’Abeille Medicale of the 15th April, M. B. Matton proposes a mode of curing corns without a resort to cutting instruments. He advises that the feet be soaked in water for a short time, and the most projecting part of the corn be taken off with a penknife, or with the fingers; a stick of nitrate of silver moistened at the free extremity is then to be pressed slightly over the whole surface of hardened cuticle, and even a little beyond on the sound skin. The part to which the caustic is applied should then be well dried, and let alone for ten days. A very slight and hardly perceptible vesication takes place, which however is soon absorbed. At the end of eight or ten days, by making some slight tractions with the fingers, or a pair of dissecting forceps, from the circumference to the centre of the eschar, we may remove, without the slightest pain, the hardened epidermis, so completely as to leave no trace behind. M. Matton pledges himself that those who try his plan will be certainly and radically cured.
**Concentrated Tincture of Capsicum, a remedy for Chilblains and Toothache.** By A. Turnbull, M. D. (American Journal of Pharmacy.)—My plan of treatment is simply to saturate a piece of sponge or flannel with the concentrated tincture of capsicum, and to rub well over the seat of the chilblains until such time as a strong tingling or electrical feeling is produced. This medicine possesses an extraordinary power in removing congestion by its action upon the nerves and circulation.

This application ought to be continued daily until the disease is removed; relief will be experienced on the very first application, and frequently there will be a total removal of the disease after the second or third. This of course depends upon the severity of the case. This embrocation when rubbed, never produces excoriations if the skin is not broken.

The manner of using it for toothache, is by putting a drop or two of the tincture on cotton, and applying it to the part affected—the relief will be immediate. The following is the formula:

*Tinctura Capcici Concentrata.*

- B. Capici Baccarum, . . . ʒiv.
- Spiritus Vini Rect., . . . ʒxij.

Macerate per dies septem et cola.

It may also be made with advantage by displacement.

[The fluid oleo resinous extract obtained by acting on capsicum with ether, and evaporating the ether, must possess yet stronger claims as a remedy in toothache, inasmuch as it is much stronger than capsicum weight for weight.—Edv. Am. Jour. Pharm.]

**New Adhesive Agent.**—M. Mellez, in an article published in the Bulletin de Thérapeutique of March 30th, recommends very strongly an adhesive preparation made of Shell lac dissolved in alcohol by the aid of a moderate heat. The relative quantities of the articles should be sufficient to give the preparation the consistence of jelly or something approaching to it. It should be kept in a broad-mouthed bottle, corked, to prevent desiccation. When wanted for use, it is to be spread upon strips of cloth of suitable size and form. M. Mellez enumerates as its merits, contraction during its evaporation; impermeability to air; absence of all irritant action on the wound or skin; intimate adherence to the skin; resistance to the action of water, greasy matters, or the secretions from the wound; and absence of any need of heat. In all these respects he asserts that it is superior to the collodion. It does not dry quite so quickly as the latter article, but it dries with sufficient rapidity to avoid any tax upon the patience of the surgeon. It does not require that the parts to which it is to be applied should be so thoroughly dried as does the collodion. It is also a much cheaper article. He asserts that from his observation he feels au-
authorized to state that it is the most reliable and easy to manage of all the adhesive agents; that its agglutinative power resists the action of liquids, and the moderate movements of patients, even when its application lasts for weeks; that in drying it approximates the edges of the wound submitted to its action; that the short time which elapses before the wound begins to cicatrize gives ground for a suspicion that it does something more than afford a mechanical protection; and that in the treatment of fractures, especially such as are complicated with wounds, it is in every respect preferable to dextrine.

**Chloride of Sodium in diseases of the eyes.** (Journ. des Connais. Médico-Chirurgicales.)—Dr. Berroit, Professor in the Faculty of Montpellier, has reported two very interesting cases of ulceration of the cornea in which this article was successfully employed. In one case ulceration of the cornea existed on both sides, which were treated with calomel, general bleeding, and frictions with mercury and belladonna, without benefit. Three applications of solid lunar caustic were made at intervals of seven days, but the effects were rather injurious than otherwise. On the twelfth day the use of a collyrium of chloride of sodium was begun, and on the morrow, the photophobia had disappeared, which permitted a full examination of the ulcers. The collyrium was continued until the twenty-fourth day, at which time the ulcers had cicatrized. In the other case, which was of a scrofulous character, the ordinary treatment had been pursued for three months, without effect. Under the use of the chloride of sodium, a cure was effected by the twenty-first day. Dr. B. refers to many other analogous cases, and adds moreover, that he has employed this remedy with satisfactory results in chronic inflammation of the lachrymal sac, complicated with engorgement.

**Treatment of Puerperal Mania.** By F. Churchill, M.D. (Dublin Journal.)—The treatment of puerperal mania is very simple as regards the materials, yet requiring calmness and judgment in their application.

1. Those who regard it as any modification of phrenitis, of course recommend blood-letting, with more or less liberality. Now, from what I have said as to the nature of the disease, it will be clear that for these cases it is inadmissible, or, if ever used, it must be with extraordinary caution, and by means of leeches, in cases where there is strength and quickness of pulse, and flushing of the head and face. I have, however, never found it advisable; and Esquirol, Haslam, Gooch, Burrowes, and Pritchard, are all opposed to it. The last named author remarks: "If we consider that the greatest danger to
be apprehended for patients laboring under puerperal madness arises from a state of extreme exhaustion, that many women die from this cause within a short interval from the commencement of the disease, and that, if they survive this period, the healthy state of the mind is in most instances restored, it will be evident that our chief endeavours must be directed to the present support of life.” “Blood-letting, as a general remedy for puerperal madness, is condemned by all practical writers, on whose judgment much reliance ought to be placed.”

2. When the stomach is overloaded, when indigestible food has been taken, or even for the purpose of lowering the pulse by the shock of vomiting, emetics have been found useful. They must, however, be used with caution, when the face is pale, the skin cold, and the pulse quick and weak. Dr. Gooch prefers ipecacuanha to antimonials. Dr. Burrowes recommends nauseating doses of tartar emetic, with the saline mixture and digitalis, for the purpose of reducing the violence and fury of the patient; and Dr. Beatty informs me that he has derived great advantage from tartar emetic.

3. From the almost universally disordered state of the bowels, great relief is afforded by one or two brisk purgatives of calomel, followed by castor oil or Gregory’s powder. The stools are dark-colored, and highly offensive; and in addition to the advantage of clearing out the bowels, purgatives act admirably as derivatives from the head.

4. After the bowels have been freed, the greatest benefit will be derived from narcotics. Denman prefers small and repeated doses of opiates, but Gooch, Burrowes, and Pritchard recommend full doses, and with this I concur: ten grains of Dover’s powder, twelve drops of black drop, or an equivalent of the other preparations of opium. If opium disagrees, hyoscyamus may be given; and should sleep be induced, repeated small doses may be administered; when the head is very hot, and face flushed, we should postpone the exhibition of opium, and we must guard against constipation.

5. The head may be shaved, and a cold lotion applied; if the delirium continue, a blister may be applied, but it is not generally necessary.

6. In protracted cases, or when the patient is exhausted, nourishing diet, broths, &c., and even tonics, must be allowed; ammonia, with cinchona; oil of turpentine, &c.

7. As uterine inflammation not uncommonly arises in the course of, or follows puerperal mania, a close watch should be kept for the earliest symptoms, and if they appear, calomel in small and repeated doses, or mercurial inunction, should be added to the other remedies, with such other local applications as may be deemed advisable.

8. It will be necessary to keep the most careful watch upon the patient; the nurse, who ought, if possible, to be one familiar with such attacks, should never leave the room; friends ought to be absolutely refused admission; the apartment kept slightly darkened, and the entire house perfectly quiet.

9. When the mania disappears and the patient is convalescent, a change of air and scene is most advisable.

* On Insanity, p. 313.
American Medical Association.—The third anniversary meeting of the American Medical Association was held at Cincinnati on Tuesday, the 7th May. We learn from Prof. P. F. Eve, who represented the Medical College of Georgia on that occasion, that the meeting was highly interesting, and that the delegates were cordially welcomed and hospitably entertained by their Western brethren. The meeting was organized by the election of Dr. R. D. Mussey, of Ohio, President; and Drs. Johnson of Mississippi, Lopez of Alabama, Norris of Pennsylvania, and Brainard of Illinois, Vice-Presidents; Dr. Hays of Philadelphia, Treasurer, and Drs. Stillé and Dessaussure, Secretaries. More than five hundred delegates and other members were in attendance, and twenty-five States were represented.

On Thursday evening, the 9th, a splendid supper was given to the Association by the physicians of Cincinnati, at which over five hundred guests were seated.

The following named gentlemen have been appointed Chairmen of the several Standing Committees for the ensuing year:

- Dr. Dowler, of La., on Medical Science.
- " Flint, " N. Y., " Practice.
- " Hooker, " Ct. " Medical Education.
- " Reyburn, " Mi. " Medical Literature.

The next meeting of the Association will be held in Charleston, S.C., on the first Tuesday of May, 1851.

National Medical Convention for revising the Pharmacopæia of the United States.—The fourth decennial convention for revising our national pharmacopæia, met in Washington City on Monday, 6th May. Delegates from a number of colleges and societies were present. We perceive that no society or college South of Washington, or from the West, was represented. Dr. G. B. Wood, of Pennsylvania, was elected President; Dr. Joseph Mau ran, of Rhode Island, and Dr. Simons, of S. Carolina, Vice-Presidents; and Drs. Lindsay and Foreman of the District of Columbia, Secretaries. A committee appointed to prepare a plan for the revision and publication of the pharmacopæia, recommended the appointment of a committee of revision, con-
sisting of nine members, of which three should form a quorum, to meet in Philadelphia as soon as practicable, and to publish the work after revision. This plan was adopted. Dr. Wood was added to the committee, and appointed its chairman. A dinner was given to the Convention by the medical gentlemen of Georgetown and Washington.

**Demonstrative Midwifery.**—We are surprised to learn, that an effort made by the Professor of Obstetrics in the Buffalo University to give his class clinical obstetrical instruction has been denounced by certain physicians of Buffalo as "wholly unnecessary for the purposes of teaching, unprofessional in manner, and grossly offensive, alike to morality and common decency." The plan adopted by the Professor, which has elicited this rebuke, was to introduce a parturient female into the apartments of the Janitor of the College, and to permit each member of the graduating class separately to examine the case. This was done in the presence of the Professor and of the wife of the Janitor. If this course violates decency and outrages virtue, then the practice of midwifery should at once be surrendered by medical men. This we presume is not desired by the fastidiously decent and virtuous gentlemen whose sensibilities have been so much shocked. That unprofessional persons should make objections to obstetrical demonstrations is no more surprising than that they should object to dissections, but that medical men could be found ready to arouse or minister to popular prejudice against an important means of imparting professional knowledge, admitted to be indispensable in every other department of practical medicine, must be a subject of profound regret to every one who has the usefulness of his profession at heart. Obstetrical demonstrations may be a novelty in this country, but in France they are common, and though conducted in a manner far more repulsive than that of the Professor at Buffalo, they are encouraged for the valuable instruction they afford.

**On the proportion of Graduates to the Population** By Prof. Geo. Tucker. (Medical Examiner.)—On the first of June 1848, the population of the United States—adding to the ordinary increase a reasonable allowance for the accessions from the acquired territories of Texas, California and New Mexico, and an unprecedented number of immigrants since 1840—was probably not less than 22,000,000. Let us, however, suppose it to be 21,500,000. With this population, what is the probable number of physicians? I have been in the habit of estimating one for every 800 persons. Dr. Mitchell, guided by the number in Philadelphia, supposes one for 700; but the proportion is
always greater in the cities than in the country. Taking then the former ratio, the whole number of practising physicians in the United States is 26,875. On comparing the number of free white adults in the census of 1830, with that of 1840, and deducting from the latter the intervening gain from immigration, it would seem that the annual diminution by death in that class is about 2 per cent. For reasons with which I will not trouble you, I suppose the proportion of deaths in your profession to be greater than the average. Let us, however, assume it to be the same, and the annual reduction from this cause will be 537.

But the annual addition to the population requires a correspondent addition to the number of physicians. The yearly increase by natural multiplication appears to be about 2.8 per cent., which in a population of 21,500,000 amounted in 1848 to 602,000, to which 200,000 may be added for immigration. That year, indeed, the number of immigrants was considerably larger. The whole addition to the population being thus 802,000, would consequently require 1002 physicians.

Further deductions must be made for those who quit the profession for other occupations, or because they are weary of it; for those who have obtained the degree of doctor of medicine but have never practiced; and for a small number who, having graduated in two schools, have been reckoned twice. I do not add to this list, those who practice in foreign countries, since the number of physicians who migrate to this country is probably equal to those who leave it. I have no data for estimating this class of deductions; but Dr. Mitchell reckons it at 2 per cent., and you think that estimate not too high. This would take off 537 more, or at 1 per cent. 268.

The additional number of physicians annually required to supply the wants of the country was then as follows:

From deaths, 537
From increase of population, 1002
From withdrawals, &c., at 2 per cent, 537

2076

If, however, we reduce the last head to only 1 per cent., the number would be 1807, so that if the annual number of medical graduates had not exceeded 1500, as the report of that committee assumed, we find that after allowing the widest range for possible error, the annual supply is from 20 to 35 per cent. less than the annual demand. This deficiency, which has since increased, was of course supplied from the large class of uneducated and half-educated practitioners who are still suffered to sport with the health and lives of the credulous multitude.

Resignation of Prof. Chapman.—The venerable and distinguished Professor Chapman has resigned his professorship in the University of Pennsylvania. He has been connected with the medical department of the University for more than thirty years.
Dr. Samuel Henry Dickson has resigned his professorship in the University of New York, and has been elected to the professorship of the Institutes and Practice in the Medical College of South Carolina. Prof. Geddings has been transferred to the Chair of Surgery in the same institution.

Female Medical Schools.—At the late session of the Pennsylvania Legislature a Female Medical College was chartered, which is to go into operation next October. A Female Medical School was to have been opened in Boston during the present spring.

METEOROLOGICAL OBSERVATIONS, for April, 1850, at Augusta, Ga. Latitude 33° 27' north—Longitude 4° 32' west Wash. Altitude above tide, 152 feet. By Dr. Paul F. Evz.

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