A TRULY VIRTUOUS WILL IS ALMOST OMNIFOTENT.

EDITED BY

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An Essay read before the Medical Society of Augusta, January 10th, 1839; on the subject—Are there any signs or symptoms by which Worms can be inferred certainly to exist in the alimentary canal; and if there be, what are they? With cases. By Paul F. Eve, M. D. Professor in the Medical College of Georgia.

In examining this question, selected at the last meeting of the Society, it is proposed to examine first, what is meant by signs and symptoms; and, secondly, to consider all those produced by worms in the alimentary canal, in order to decide if there are any pathognomonic or characteristic of their presence.

First, then, what are signs and symptoms of disease?

Until recently, these two terms were considered synonymous in pathology. But, omne symptomum signum est, sed omne signum non est symptomum—every symptom is a sign, but every sign is not a symptom, is now an axiom of the profession. By the symptoms of disease are meant the phenomena or effects produced by it, and which strike the senses either of patients or physicians. They are the expressions of the suffering organs—the lights by which diseases are revealed. They are not the morbid action itself; neither can we, by the symptoms alone, de-
termine the true nature and character of a disease. But, by a knowledge of anatomy, physiology, and pathology, the physician converts the symptoms to signs of diseases. A pain in the side for instance, is a symptom of pleurisy, equally manifested to patient and physician; but the latter alone from his acquaintance with the structure of the parts affected, &c., can deduce from it a sign of this affection.

Symptoms of diseases, have very properly, been divided into the essential, accidental, and common. The essential symptoms are those which are constantly present, and determine the characters of a certain affection. The accidental, on the contrary, are those symptoms which are adventitious, and may depend upon some pathological complication or some modification of the vital forces. Lastly, the common symptoms are those belonging to a number of diseases, and are, therefore, of little value in diagnosis.

The signs of disease are, the conclusions which the physician deduces from the symptoms, respecting the past, present, and future condition of a patient. They are the legitimate results of the operations of a mind enlightened on the subject of medicine, when the symptoms of a disease have been presented to it.

The division of signs is into commemorative, diagnostic and prognostic. The commemorative signs include all the circumstances anterior to a disease, its causes, its development, &c., and is important—indeed sometimes essential to its diagnosis and prognosis. The diagnostic are those signs which ascertain the actual state of the disease and condition of the patient. These signs have, moreover, been sub-divided into the pathognomonic, the accidental, and common. The pathognomonic signs have such an intimate relationship to the disease itself, that they cannot be separated from it, and without their presence the disease is not known to exist. They are the essential and characteristic signs of disease. The accidental and common sub-divisions of the diagnostic signs, are already explained by the use of these terms in defining the symptoms of disease—they are, in fact, expressive of themselves. The last division of the signs in pathology, are those called prognostic, which enable us to predict the issue of the disease, as well as all future changes in its progress.

Having now defined what are the symptoms and signs of disease, we are prepared to consider the second division of our sub-
ject; which is, what are the signs and symptoms of worms in the alimentary canal, and are any of them pathognomonic of their existence?

The symptoms and signs of worms, produced by their presence in the alimentary canal, may be properly grouped into two classes; first, those which depend upon a derangement of the digestive organs; and, secondly, those of other organs sympathetically affected. It will be conceded by every reflecting mind, that if it be shown that none of the primary symptoms or signs of worms are pathognomonic; a fortiori, neither can any of the secondary be characteristic of their existence. With this understanding then, we hope to avoid an enumeration of the second class or sympathetic affections of worms.

In enumerating the principal derangements produced by worms in the alimentary canal, dependant upon irritation of the gastro-intestinal organs, we shall proceed from the superficial symptoms, to those that arise from the condition of deep seated parts, and are consequently more obscure. The countenance is pale, or of a leaden color; there are occasional flushes; the pupils are dilated, and there is a blueish color under the lower eyelids. There exists great itching of the nostrils, but more especially is this intolerable in the anus, in cases of ascarides. The upper lip is tumid; the saliva is increased; the breath is offensive; the tongue is foul; and there is grinding or gritting of the teeth during sleep. The appetite is exceedingly variable, sometimes there is a disgust for all food; but more commonly the hunger is excessive, particularly when the lumbricoides or tæniae exist; and though the patient may eat heartily, still he becomes thinner. The abdomen is swelled, there is nausea, sometimes vomiting, pains in the bowels, a sensation of something alive in the insides, borborigmy, colic, tenesmus, diarrhea alternating with constipation, and the stools are slimy, ropy, broken up into fragments, offensive in odor, with a want of bilious admixture. But the most certain of all the signs of worms is, the passage from the intestines of a portion of one, or of one or more. And this is the only symptom which authors unanimously agree, can at all be considered pathognomonic of the existence of worms in the alimentary canal.

It is well known, that worms may remain for years in the intestines, without producing unpleasant symptoms. Dr. Heber-
den, and Dr. Good, mention cases, wherein the lumbricoides and ascarides have thus existed for thirty years. Dr. Parr even believed they formed a part of a healthy constitution, producing only occasionally, as he termed it, an inconvenience. And Dr. Rush absolutely taught that worms acted in the intestines the part of scavengers, and that they were necessary to preserve the health of children.

Although few, at the present day, will subscribe to the opinions of Drs. Parr or Rush, yet none will deny the facts, that worms not unfrequently remain perfectly innoxious for a length of time in the intestines, and that they are occasionally passed from the healthiest children.

If we now analyse in succession each and every symptom enumerated by authors, produced by worms in the alimentary canal, we shall soon be satisfied that no one can be converted to a pathognomonic sign of their presence. Without consuming time by noticing others, let us even take up that one so generally admitted as the most certain of all, and which, in fact, is of more importance in the diagnosis of worms, than all others put together; whether local or sympathetic, their occasional passage from the alimentary canal; and what does even this symptom amount to? Why, certainly, nothing more than that worms did exist, and not that they are actually existing in the intestines. Assuredly, if the very same symptoms continue that obtained before their expulsion, then undoubtedly the probability of more being in the alimentary canal, is greatly increased. But who will pretend to admit, that this probability, great as it may be, is ever converted or amounts to a certainty? Who can determine but that the last worm discharged, is not in reality all that were in the bowels? We do contend, that all that can positively be indicated by a rigid and precise signification of this prominent symptom of worms, "their occasional expulsion either by the mouth or per anum," is, that they once existed in the intestines. And who will not admit that all the symptoms of lumbricoides, ascarides, &c. may be present in a given case, excepting the one we are now considering, and yet in reality none exist? Certainly there is a period in every case of worms successfully treated, when their passage from the bowels, even this very symptom, is not a certain sign that there are more; and this is the discharge of the last one, which, could we ascertain, would
be proof positive, that there were no more in the intestines. So much then for this supposed most certain sign of worms in the alimentary canal.

As for the other symptoms, who need be told, that itching of the nostrils and anus, gritting of the teeth, foul tongue and fetid breath, variable appetite, pains and uneasiness in the bowels, colic, slimy stool, &c. &c. are produced by other causes, than by the presence of worms in the intestines? Or, what would be thought of him, who would seriously entertain the belief, that the sympathetic symptoms occasionally observed in verminous diseases, such as troubled urine, dry cough, cold surface, headache, and a whole host of nervous affections, were the true characteristic signs of these little animals?

Have we then no essential symptom or symptoms of worms, when they exist in the alimentary canal? Certainly not. There is not one that is constant and invariably present. Worms we have seen often exist without exciting one unnatural phenomenon—without producing one symptom, be it essential, common, or accidental. Neither are the symptoms uniform or constant when they do occur. Even the one considered the most certain, is by no means essential to their existence—Many patients die without worms, without ever having evacuated even a single one.

Seeing then that we have no symptoms by which worms can be inferred certainly to exist in the alimentary canal, are there any signs from which we can deduce this fact? We have already examined that sign, and determined its true import, which has the most pretensions to be regarded the pathognomonic of the diagnostic signs of these parasites. Of the commemorative, diagnostic, and prognostic signs of worms, this is the only one which has any claims to be considered characteristic of their existence.

Dr. Wm. Stokes, the great pathologist of Dublin, says, it is a singular fact, that we have not one single pathognomonic sign of the existence of intestinal worms, except the circumstance of their being occasionally passed by stool or vomiting; almost all their symptoms are referable to irritation of the gastro-intestinal surface, and its sympathetic relations.

After the enumeration of the symptoms of worms by Professor Chapman, he remarks, taken alone, no one of the preceding circumstances will be conclusive of their existence. And in a note, quoting an intelligent writer in his Therapeutics, it is said,
the ambiguity of every symptom ascribed to worms, except that of voiding them, is well known.

The lamented Eberle observed, that none of the symptoms are certain indications of the existence of worms in the bowels—the only certain indication being the appearance of them in the evacuations from the bowels or stomach.

Brera, who has written one of the best works on verminous diseases, says, the most sure sign in the local or sympathetic affections arising from worms, is their expulsion from the mouth, or per anum.

In the article *Vers*, of the Dictionaire des Sciences Médicales, by Mérat, 57th volume, it is said that the only indubitable phenomenon which indicates worms, is the discharge of a portion, or of some of these animals from the body.

In the seventh volume of the Dictionaire de Médecine et de Chirurgie, the celebrated anatomist, Cruveilhier, writes, among the symptoms of worms, some are located in the alimentary canal, others are sympathetic; all are vague—taken separately, they declare nothing; grouped together, they form an assemblage of probabilities, which never conduct to certainty. This can only be demonstrated by the fact of their spontaneous or provoked expulsion either alive or half putresced.

If we are right in our estimate of the real value of the indication which the passage of one or more worms affords, viz: that they did exist, and not that they actually do, and that it never offers a certain and positive sign of their existence; and if this be the only one, as we have seen by the language quoted of some of the most celebrated helminthologists, that has any claims to be considered a pathognomonic sign, then are we safe in the conclusion, that there is none such.

Nor is it a small matter to decide the question under consideration. If there be no sign or symptom by which worms can be inferred certainly to exist in the alimentary canal, it ought to be admitted and publicly confessed, that greater caution might be exercised in the diagnosis, but more especially in the treatment of diseases reputed verminous. What serious errors have not been committed in practice, on account of the obscurity in determining positively the existence of intestinal worms? What practitioner has not the candor to acknowledge having been deceived on this subject? Who has not acted upon the suspicion
of worms producing a certain group of symptoms, when in reality it was afterwards made evident that none ever existed; and on the contrary, who has not occasionally been baffled in the treatment of some sympathetical or nervous affection, the cause of which has accidentally been revealed by the evacuation of a lumbricoides, a portion of tænia, &c. How many diseases have been aggravated—how many inflammations excited—and how much distress been produced, by the habitual, indiscriminate, and semi-annual drugging of children with anthelmintics, where worms never have existed? Or, who is not prepared even to admit, that where every symptom of worms have obtained, still this class of remedial agents has been most grossly abused? Hence, the importance of a correct answer to the question, are there any signs or symptoms by which worms can be inferred certainly to exist in the alimentary canal, and if there be, what are they?

Worms are said to occur in persons of feeble constitution, or in those of ill health. It is known, too, that the lumbricoides, or common round worm, and the ascarides, or thread worm, are found existing almost exclusively in children, while the tænia or tape worm, inhabits the small intestines of the adult.

With respect to the diagnosis of particular worms, it may be remarked, that there are a few special symptoms, by which we may be assisted in distinguishing one species from another. The general symptoms already described, together with vomitings, when they exist in the stomach, are those belonging to the lumbricoides. In fact, there is rather a want of peculiarity in the phenomena produced by these worms. They occasionally pass from the intestines, per anum, and are those most easy to be removed. They are most common in children from two to seven years of age, and occasionally are found in adults.

The ascarides are the easiest recognized. They inhabit the lower part of the rectum, often producing the most violent itching in the anus, and are sometimes seen by inspecting those parts. Were the speculum ani, as applicable to infants as to the adult, we might have in it the means of arriving at a pathognomonic sign of their existence. Their discovery, by stretching open the sphincter ani, is, undoubtedly, the nearest approach to a certain and positive symptom of their presence.

The tænia, we may say, is alone recognized by the passage of a portion of it, and by its existence in the adult almost exclu-
sively. In the last species of worms found in the human body, the tricocephalus, we have nothing peculiar in their symptoms—they are decidedly the least frequent of all.

Our conclusion then, from a careful review of all the symptoms and signs of worms, and from a rigid scrutiny into the value of each in diagnosis, is, that there is not one which can be considered pathognomonic of their existence in the alimentary canal.

Case first, occurred in the practice of Dr. Edward A. Eve, of this County, and is interesting, from the fact, that worms (lumbricoïdes) produced death in an adult, in a few hours, probably by exciting peritonitis.

"Agreeably to your request, I undertake to give you the history of a case, which has very recently come under my observation, in which death was caused by worms, in an adult.

On the 18th December, 1838, I was called to see a negro woman, about forty-five years of age, servant of Mr. Robert Greenwood, of this County. On visiting this patient, I found her affected with great jactitation, and apparently in great agony, complaining of severe and sharp pain about the umbilical region. Upon examination, I found her pulse small and feeble, though not unusually frequent, tongue deeply coated, temperature of the extremities low, and such other symptoms present, as indicate concentrated irritation about the stomach and bowels—flatulence, and many of the symptoms which characterise colic, being present. I found it extremely difficult to localize the disease; and upon pushing my inquiries further, into the previous history of the patient, I was informed, that she had been in the habit of eating dirt, and that, not very long since, she had passed several worms.

Treatment. To answer the two-fold indication of removing the worms, which I supposed existed from the concurrence of the symptoms and previous history of the case, and of allaying intestinal irritation, I prescribed calomel, with an occasional dose of morphine, to be followed with oil and turpentine. The following day, having seen the patient first at midnight, a wine-glass full of the decoction of Spigelia was taken every second hour during the day; from this combined course, about two hundred well grown lumbricoïdes were expelled. On my visit in the evening, the pain and symptoms of severe irritation having
subsided, together with the expulsion of so great a quantity of worms, which were supposed to be the origin of the disease, I left the patient, directing a mild course of treatment, with gentle nourishment, calculated to expel the remaining worms, and restore the tone of the alimentary canal.

On visiting my patient, to whom I was summoned in great haste the next morning, I found her decidedly in a moribund condition—extremities cold, pulseless, intellect clear, articulation not materially impaired, muscular strength sufficient to raise or turn in bed; she complained of severe pain, evacuated about six or eight worms, was drawn into the posture of a patient affected with opisthotonos, and died in about ten minutes from the time I entered the room.

Post mortem examination. About fifty six hours after death, the time of inspection in this case, the appearance of the cadaver was such, as is generally designated, very natural; the features placid, and but little altered in their expression; emaciation inconsiderable, as would be supposed from the short duration of the attack. My time being limited, the body having been brought, but a short time before night, to the grave, where I was to attend for the purpose of making the examination, I commenced by an incision sufficient to allow me to detach the stomach from the oesophagus and duodenum. After which, I removed it to a convenient place for examination, and emptying it of its contents, I discovered, not only intense inflammation, but effused blood adhering to its internal surface; and upon more particular inspection, after carefully washing out the organ, I found, in several places, severe lesions, its parietes being nearly perforated. Rapidly approaching darkness compelled me to abandon any further investigation; which I regret, more especially, since you have desired a report of the case. And I fear now, from the imperfect register of symptoms I am forced to give, from the late period at which I was called to this case, it will be very little available, in determining the certainty or uncertainty of diagnosis in verminous afflictions; for had it not been for the light thrown upon the subject, by the previous history of the patient, I would have been left in great incertitude as to the true nature of the case. It will, however, go to prove, that worms can exist in great abundance in the adult, and that
they are not harmless inmates of the alimentary canal, as some have absurdly supposed them to be."

Case second. This also was treated by another physician; and I regret much the impossibility to procure further particulars relative to it.

In this case, a negro girl, about thirteen years old, it was remarked, both by physician and attendants, that the worms were distinctly felt through the abdominal parietes, forming distinct tumours, and their motion was distinguished from that of the intestines. Near nine hundred lumbricoides were discharged, and the patient entirely recovered.

This case is interesting, as it offers a new symptom and sign in the diagnosis of worms, and this circumstance alone has induced me to present it to the professional public.

ARTICLE II.

An Essay on the following question, propounded by the Medical Society of Augusta, "What is the most common cause of abortions?" Read before the Society, at the Session of the 16th January, 1839. By M. Antony, M. D. Professor of Obstetrics and Diseases of Women and Infants, in the Medical College of Georgia.

Under the head of his treatment, M. Velpeau very correctly remarks, that

"The practitioner should turn his attention to the prevention of miscarriages; for when it has once commenced, all he has to do is, to hasten its termination." This is, however, evidently in allusion to the term abortion, being considered to mean only the actual passing of the foetus from the uterus. With this definition in view, this precept of Velpeau is perfectly correct; for hardly can a greater outrage on common sense—to say nothing about reason—be committed, than to attempt to stop a miscarriage after the ovum has commenced its passage outward. But we consider, and we presume all will concede the point, that,

accoding to the good etymology of the term, the abortion is, in
effect, as complete, the moment the foetus is deprived of that life
which is necessary for its ultimate vital existence, as it is after
its actual expulsion through the vulvo-uterine passage; for its ex-
pulsion is a mere consequence of that action which first separated-
it.* But there is a key to usefulness in these cases, on which,
the profession seem not to have taken hold; but which opens
the way to more usefulness than all anodynes, depletions, ex-

* This suggests an important practical inquiry, in order to the correct
management of a case, in which the treatment must alter to extreme oppo-
sites, by the differing stages of the disease. When the abortion has com-
cenced, that is to say, when the foetus has commenced passing away from
the uterus, we should hasten its termination. In view of this alone being
abortion, we would feel bound to reply to the inquiry of the Society by say-
ing, what perhaps few, if any, would deny, that the most common—per-
haps universal immediate or proximate cause of abortion is, the expul-
sive action of the uterus. But to prevent confusion from the endless quib-
ble about words, we have chosen to consider the uterine contractions, as
well as all evidences of excitement or action concerned in, or tending to this
result, as belonging to it; as, for example, irritation or inflammation of the
uterus; because these are the first changes of animal actions, in the chain
of phenomena which constitute abortion. They, therefore, as properly con-
stitute a part of the business of miscarriage, as do the early phenomena of
labor at term, of which uterine action is the chief, constitute the first stage
of labor. For practical purposes, it appears to us therefore, that whilst it is
consistent with the etymology of the term, abortion should be divided into
two stages. That to which Velpeau seems to allude, should constitute the
second. This stage is irremediable, and therefore should be made the best
of, by completing it. The first stage should include all the phenomena pre-
vious to the actual separation of the ovum from the uterus, and its beginning
passage off. These are, principally, irritation or inflammation, which are
the results of physical causes on the excitability of the parts concerned.
These are remediable, and therefore demand treatment extremely opposed
to that of the second. How important, therefore, is it, to determine in which
of these two stages the present case is, before adopting the first item of
treatment. The duty is therefore imperious, and the neglect of it criminal,
to determine the stage. The touch alone can determine this generally, and
with certainty, from the time the ovum enters the os uteri. Previous to
this, we have no absolute means of determining, although the placenta may be
detached; and we must therefore, include every thing previous to this entrance
into the os uteri, in the first stage, and treat it accordingly, until the evi-
dence of the second is manifest. We have, on a former occasion, alluded
to the indispensable duty of touching early in abortions, when their progress
is not otherwise plainly evinced.
pecceptions, &c. &c. which have been brought into use and most relied on. This key is found in the due and proper consideration of the etiological department of this subject. In enquiring for the most common cause of abortions, we presume those animal actions which themselves constitute abortion, are not alluded to; but such physical causes as tend to excite those animal actions concerned in accomplishing the loss of the offspring. It is presumed that the object of the inquiry is, as it should be, practical interest. It cannot therefore be considered as searching for things as causes, which are beyond the possible power of remedial means. Whilst therefore, it is true that, when abortion commences, in the sense in which Velpeau seems to mean, that is to say, when the ovum is actually separated from the uterine walls, and on its passage outward, no means can possibly ever secure the vitality and prosperity of the offspring, still the next step of retrogression, or that stage in which the placental portion of the ovum, that part through which the foetus derives its principal support, has not entirely separated, and no advance of the ovum made, outward; there is a beginning hope in the possible power of those means which tend to remove causes and correct their effects. This hope, having more reason for its sustentation, the further back we find the case in the first stage, increases according to the less advancement of those circumstances which tend to destroy hope. For, notwithstanding when the ovum is being actually separated to a considerable extent from its attachment to the uterus—even at that part of it through which the foetus derives its chief support, we mean the placenta, still, in some of these cases we have succeeded in arresting this event, by enforcing a practice, at once calculated to prevent the combined operation of causes, and to correct the effects already produced by their action. The only real adhesions of the placenta to the uterus (in the proper sense of that term,) we have had good reason to believe were indebted for their existence, to a partial separation of the placenta from the uterus being followed, in the recovery, by a cicatrix of more strength and firmness than the ordinary attachment—a strength which it were beyond the powers of uterine contraction to lacerate. These adhesions we consider evidence of the partial separation of the placenta. The less this detachment of the placenta, (and the haemorrhage is our best index to its extent,) the better is the
prospect of preventing the completion of abortion, or the final failure of the offspring. In the previous phenomena of the first stage of abortion, however, that is to say, those of uterine irritation, &c. the chance of success is still better, better yet is our chance of prevention, before the beginning of those actions which tend to effect abortion, and which are the effects of physical causes, when we know those causes which are most common, and the means of preventing their physical action on the uterus. Thus we have thought proper to give this view of abortions, before entering on the consideration of its "most common cause." We will now return to the consideration of the causes of abortion.

Much has been said by authors and teachers, on the subject of the causes of abortion, and many notions have been adopted and systematized, from the previous opinions of men, without due consideration of their natures and modes of operation. Enforced by such high names as Desormeaux, Lachapelle, Duges, Boivin, &c., they have been received, and divided into efficient and determining causes. The efficient causes are said to be, contractions of the womb; the determining causes have been divided into

1st. Predisposing, under which are mentioned certain general states of the system; as plethora, abundant and regular menstruation, great irritability, nervousness, lymphatic, of fair complexion,* weakly, sickly, who have large eyes and bluish sclerotica, persons affected with syphilis, scurvy, rickets, badly formed pelvis, organic lesions, any chronic disease, anthritic, dropsical, cancerous, badly nourished, compression of belly by lacing or other tight clothes; marshy, unhealthy countries; certain atmospheric constitutions, and many others of similar import.

2nd. Other causes are considered occasional, &c. Any of these may be found grouped up with the phenomena of abortion, as indeed are some which are classed with predisposing, and all considered causes.

We will not pretend to say there are not predisposing, as well as exciting causes; but instead of going the whole round of the particulars of each, let us ask—not what are these causes? and

* Velpeau.
content ourselves here, but what are they, and how do they act as successful ones, contributing to this fearful result? Very rarely, these operate primarily and mainly on the fetus, causing its death. They may, and do operate on the mother in predisposing her with greater susceptibility of the action of exciting causes. But it is still more frequently the case, that abortion is caused by an occasional cause, which acts through the medium of the uterine irritation, inflammation, or topical congestion which it causes, and which proves efficient, in the end, and sufficient, under any circumstances, through this medium, to accomplish abortion by its physical action on the natural and ordinary susceptibilities of the system.

It is not our purpose, in this enquiry, to determine every thing which may possibly, under some circumstances, contribute to abortion; but with views to greater practical utility, as we have found in our intercourse with such cases, to enquire into the immediate, or efficient cause of abortions, and those causes, whereof the efficient cause is the effect; for we can contemplate no cause, without beholding it somewhere in the concatenation of cause and effect—each link in this chain of concatenation being, in turn, cause, and in turn again, effect. The efficient cause of abortion, according to Velpeau's definition of the term, which we consider implied in the precept quoted at the beginning of this essay; or the proximate, or that which immediately effects the expulsion of the ovum, is uterine expulsive action. But considering this action a part of the disease, which, according to our definition we consider abortion, we look for the efficient cause, to the previous link in the chain of phenomena, or the physical phenomenon proximate to the first phenomenon in the act; so to speak, of abortion. Here, by a general division of the chain of phenomena, we would separate noxious cause from morbid effects. That cause, which is the next link in the chain of events previous to that of the action of the uterus, which commences and completes the separation, expulsion, and destruction of the ovum, is, indeed, the proximate. Its first morbid effect we observe in that excitement and uterine action, by which the ovum is separated and expelled from the uterine cavity; for it's expulsion is a mere consequence of that action which first separated it; and all must agree that the abortion is, in effect, as complete, according to the good etymology of the term, the moment the child is deprived
of that life, which, as a parasite, it derives from its mother, and which is necessary for its ultimate vital existence, as it is after its actual expulsion through the vulvo-uterine passage. But in this expulsory action we behold the effect of irritation, created in the uterine fibres in some way, and by some particular cause or causes. Starting at this point, let us reason from effect to cause, and trace back the chain of phenomena from the final effect, throughout its extent; and, in doing so, notice, as we pass, for a competent and present cause, or one which has been sufficiently present for effectual action in the production of its appropriate result. It is an axiom that effect declares causation. When we trace back the chain of phenomena from the ultimate result, abortion, through the expulsory efforts of the uterus, to the uterine irritation, or that condition of it which next preceded the expulsory action; if we enquire, as we must do, what has occurred whereby the present irritation has been effected? we may be told, nothing—that no accident has happened to which it may be attributed. But, as this is inconsistent, in fact, with sound philosophy, we must not receive it as truth, and drop the further enquiry. We know, by the above axiom, that every event must have its due and appropriate causation; therefore, the want of recognition of it does not establish the fact that it does not, or did not exist; but that our investigation has been too imperfect for its detection—that it is still the fact that it does or did exist, and that it is our duty to ascertain that particular truth.

Now the key to which we alluded in the beginning of this inquiry is, that in all such cases as these, which are generally met with in practice, (for others, though their occurrence is within the bounds of possibility, are so rare, that, for practical purposes, they need scarcely to be attended to,) there is an internal, hidden cause, the very investigation of which is of so delicate a nature, as generally to elude the detection of the accoucheur and of the patient; because she can only know its existence by the phenomena it produces; and on these she looks, as symptoms of miscarriage, instead of evidences of the action of this cause. But the unprejudiced, candid, and faithful accoucheur, who understands well the anatomy and physiology of the parts concerned, will find, on observing these phenomena or symptoms, abundant reason to know the cause of these, its effects. Soreness, pain, or bearing-down distress in the hypogastrium, pain or tenderness
in one or both groins or iliac fossæ; more or less strangury or other forms of vesical disturbance; or perhaps some ill besetting the rectum will be discovered. He then remarks that it is not until towards the fourth month, that the uterus ascends above the excavation of the pelvis, and that, after its ascent, and that increase of growth which is sufficient to prevent its easy descent again into the cavity of the pelvis, it may still, with its increased weight, press with unwonted force on the brain or superior strait.

Excluding then, all other competent causes by the deficiency of evidence of their existence, and contemplating the physical tendency of this, on the anatomy and physiology of the parts concerned, he finds some, or all of the ordinary phenomena which, from the very nature of its operation, he can now perceive, arise from a descensus uteri, a circumstance which he knows to exist, to some extent, with all females in the early months of utero-gestation. It is true that this is often harmless, and if withstood for a time, will pass off, without leaving any ill consequences in its train; and thus it occurs, that most females pass on, through the whole period of utero-gestation, without misfortune. But with others it is different. When its greatest transverse diameter happens to be below the superior strait, which is not very unfrequently the case, especially when symptoms of descensus have existed previous to the pregnancy, the uterus continues to enlarge with the growth of the ovum, until it impacts itself more or less tightly within that strait. Hence arises irritation in the surrounding parts—the neck of the bladder, the rectum, the round ligaments, the alæ uteri or lateral folds of the peritoneum, the short ligaments, &c. &c.; and not unfrequently, symptoms of compression of the nerves which traverse the excavation of the pelvis, &c.

But this is rather too promiscuous an assemblage of these phenomena: it includes those of different bearings, as to their relation to abortion; for example, strangury, tenesmus, or dysenteric feelings in the lower bowels, nervous and vascular troubles in the lower extremities—these may and often do exist for a length of time, without other misfortune than the distress they afford, and are, therefore, to be regarded accordingly, so far as we are concerned for the immediate relief of the present distres-
But at the same time we are to consider them as plainly telling us what manner of violence is being done; and that a cause is in operation which repeated observation, as well as reason assures us is liable, and constantly tends to produce an undue excitement in the uterine substance; for action and re-action are equal and contrary, and therefore is the uterus equally compressed with the same violence as it compresses the adjacent parts. But when the broad, the round and the short ligaments evince irritation, which they early do, it is to be remembered that it is no difficult matter for the irritation of these to extend, by continuity of vessels and other tissues, to the substance of the uterus. Again, the lateral parts of the uterus may, and generally will suffer irritation by the re-action on them afforded by the sharp brim of the pelvis at the abdominal strait, which is known by the name of "linea ilio-pectinea." In short, various influences are in operation, whereby the contractile organization of the uterus is liable to become irritated into expulsory effort.

The uterus is an organ possessing no small share of irritability. This should be closely scrutinized, and its excitement prevented. There is no harm, in view of abortion, so long as the expulsory effort remains unproduced; but the instant it makes its beginning, its immediate counteraction is necessary; and this is now easily done by removing the cause and correcting its effects. Here, it should be observed, that evidence of the truth of causation is derived from effects, or reasoning from effect to cause; for cause is that, which, being removed, the next phenomena which we call effects, cease; and experience constantly certifies us of the truth in this way. But we may be told that the woman had a fall, or that she underwent sudden and violent effort, &c. What, we enquire, are the physical agencies or powers we are to attribute to these violences? Mere concussion, unless it be extremely violent, is not, by any means calculated to separate the membranes, or the placental part of the ovum from its attachment within the uterus—"no more" says Velpeau, "than such things would tend to separate one bladder full of water from another which closely invested it." We have seen a young

* It is to be remembered however that, very rarely, vesico-vaginal fistula follow strangury, from this cause; and that, not unfrequently, recto-uterine abscesses, or recto-vaginal openings are consequent to tenesmus, and dysenteric distresses from this cause.
female who, on our pronouncing the existence of pregnancy, and refusing her the use of abortive means, for which she offered the most liberal reward, stepped into the yard, and, grasping a post with both hands, suddenly forced her enlarged abdomen against it with, apparently, all the powers of her arms—this violence was repeated many times before we could get to her and loose her grasp; but she remained uninjured. It is then, not immediately, by the mere violence of percussion, that accidents, as falls, excessive exertions, &c. tend, as is generally supposed, to effect miscarriage; but by these causes so operating as to produce a descent of the uterus, or strong tendency thereto. It is but justice however, to the cause of truth, to remark here, that it is sometimes the case that the violence of percussion and such like powers may, and do operate otherwise, as by severing the tender and delicate connexion existing between the uterus and the placental portion of the ovum; but these cases are extremely rare, and the distinction of this immediate mode of action from that, through the mediation of descensus uteri, is easily ascertained, by the immediate occurrence of haemorrhage. It may be still further observed that, even in those few cases in which the miscarriage is actually effected by the separation of the ovum by external violence immediately, and not through the intermedation of descensus, there is often a descensus produced simultaneously by the same accident, which, if disregarded, very often tends either to prevent conception subsequently, or to cause miscarriage in subsequent pregnancies, when such pregnancies do occur. Again: concussion and other such causes—mechanical violence of different kinds, may, and do sometimes operate also, by rupturing the membranes and causing a discharge of the waters; and this is liable to be followed by abortion of the whole ovum; but here another cause arises, which is either the undue pressure of the foetus on the uterus, exciting it to expulsory effort, or the death of the foetus, operating ultimately the same effect. In this case, however, it does not necessarily follow in all cases that abortion must be completed; but a preventive indication arises, which is, to prevent by suitable means that excitation of the uterus which results in expulsory action. This is often adopted with success, and a re-accumulation of waters takes place. And, lastly, such violences may, and do operate in such a manner on the uterus, otherwise than by causing its
depression, so as to excite inflammation, whereby abortion is sometimes effected. In the first and second of these modes of action, such causes may be considered proximate; but in the third, wherein inflammation is set up, this becomes a proximate effect in the chain of abortive phenomena, and a cause of the next phenomenon, or expulsory action; and the violence, becomes the remote cause. But the mode of action of such forces, to which we have before alluded, that is to say, by effecting some degree of descensus uteri, is abundantly more common than all others collectively; and in this case such causes* are also to be considered remote, and the descensus the proximate cause. In all these several modes of operation, whether as remote or proximate, there are often causes of an instant; not abiding, but leaving their effects, which are abortion only, or a proximate and competent cause of it; and do not, therefore, generally demand further regard in the treatment, than just to know that they are gone. There are, however, exceptions to this, the most common and mischievous of which is, the compression of the abdomen, by lacing and other tight dressing, which does not fail in those who are possibly susceptible of it, to produce descensus uteri.

Tight dressing, as lacing, as it is called, is a specimen of remote cause which is not always momentary; for, on account of the foolish—not to say criminal—sway of fashion over the intellects of some women, reason is reduced below instinct, which certainly would not tolerate the use of such an injurious a power; this cause does not pass away. Such a cause as this, would therefore demand the efficient attention of the practitioner in his attempts to secure his patient against the dangers of abortion, at least, when threatened. The same may be said of habitual laborious efforts of any kind which tend to call into violent action the abdominal muscles, and of violent coughs, &c. When, therefore, in the investigation, abiding causes of any kind are found, it would be more than unreasonable to treat the morbid effects alone, whilst the causes of these effects remain in operation. Such abiding or continuous causes demand the first attention.

But whether momentary only, or abiding, what is the effect of those remote causes? It is simply a descent of the uterus to some degree below its natural site. This effect once produced,

* Mechanical violence.

is not only too apt to abide, but is liable to constant increase in degree, as well as in irritating effects on the neighboring parts, and by re-action, on itself.

With this view of the case, the indication is perfectly plain—remove this effect, which has now become a cause—a proximate cause of irritation, the first pathological phenomenon belonging to the act of abortion. This indication may sometimes be fulfilled by horizontal rest on the side, with a moderate elevation of the pelvis, with or without regimen and other antiphlogistic measures, according to the degree of irritation already manifested. But as dangers sometimes—indeed often, speedily arise under such circumstances—that is to say, on account of irritation naturally belonging to the uterus, in consequence of pregnancy, this simple measure should not be long entrusted with the cure, without early and decided evidence of amendment. Under the necessity thus suggested, the more thorough practice of complete restoration of the uterus, per taxis, should be effected, and that, as often as an understanding and rational view of the case may demand. This proper adjustment should be combined with position and other means, according to the necessities of the case.

Observation of the uniform efficacy of this treatment—a treatment adopted in view of this cause, a phenomenon generally found on examination, to exist, assures us of the truth of the proposition we have advanced.

We would not be understood to say that this is the only cause of abortions, or that they are never effected by other causes; but we do mean to say that it will be found, by far the most usual, if not the only cause of all those which are not obviously attributable to other causes, (and these are a large proportion;) as well as of many which are apparently attributable to other causes. We mean to say, further, that although violent accidents, &c. may have instituted the troubles, and stand prominent as causes; and although they are indeed, remote causes; still the part in the chain of cause and effect which connects them with the final event—that part which explains their operation by effecting a descent of the uterus to a greater or less degree, which, in turn, becomes a source of irritation, is overlooked in common practice—the cause, (violence, for example,) has passed away; and therefore needs generally, no prescription; and, as the next phenomenon is believed to be irritation, as the im-
mediate effect of that cause; this, and this alone, generally becomes the sole object of attention and treatment. Here, it will be perceived, the effect of another interesting phenomenon, which has, in turn, become cause, is subjected to treatment, whilst its proximate or immediate cause, not being detected, continued in operation. This is one of the grossest absurdities in pathology or therapeutics.

With one more remark, we will close this enquiry.

Periodical abortions, as those are sometimes called which occur about the same period of pregnancy, are those which, as Velpeau says, occur in the same woman at nearly the same period after conception, have been, too often, the opprobrium of the accoucheur. Whenever causation is not duly and properly considered, error, either of omission or of commission, becomes unavoidable; either of which, may be alike injurious and inexcusable.

Our observation of these cases, compels us to differ essentially with our highly valued Velpeau on this subject. He says it "appears evidently connected with a menstrual, or spontaneous molimen." We will not deny the possibility of this, but its great infrequency is, with us, beyond dispute, and for these very good reasons, as we consider them—that in those cases in which abortion occurs about the same period of pregnancy, the descensus uteri is generally found to exist in some degree, sufficient to cause the symptoms, and its constant correction generally prevents an unfavorable result with as much uniformity as any other purpose is effected in practice. This proves the great frequency of the cause to which we attribute periodical abortions, and the great infrequency, at least, of spontaneous molimen. He allows it possible for it to arise from that special state of the uterus, congenital or acquired, which prevents its distension beyond a certain partial extent, corresponding with the period of pregnancy at which the abortion inclines to occur. To the possibility of this, we will again not object. As to such an acquired state, it has been again and again demonstrated by the scalpel of Madame Boivin,* and that too, as the result of descensus or prolapsus uteri; but with long and extensive observation in these cases, we have no reason to believe we have ever met with

* Recherches sur une des causes, les plus frequentes, et la moins connue, de L'Avortement.
this "special state," congenital, or acquired, in such a manner as to be necessarily perpetual, except in those disorganizations, (as extensive adhesions, &c,) resulting from disease of some kind, and generally from descensus or protrusion of the uterus.

M. Velpeau next looks to the influence of habit. These having been looked to, as common causes, have done little better, if not indeed worse than an entire omission of all etiological investigation; for they have only served to divert attention from true causation.

In conclusion, we state that the truth of the proposition herein maintained, that the most frequent cause of abortions is some undue degree of descent of the uterus from its natural site, is not only clear from an impartial view of the facts, and their relative position in the chain of cause and effect; but a practice founded on this view, reveals the truth, that the timely correction of this phenomenon rarely, if ever, fails to prevent the dreaded disaster; and at the same time, reasoning from effect, determine, the true causation.

ARTICLE III.

Medical Electricity. By M. Antony, M. D. Professor of Obstetrics and Diseases of Women and Infants, in the Medical College of Georgia.

In the former part of this volume,† we advanced the important therapeutic fact, that the positive electric or galvanic pole, which is the inducting point, produces, when a current is established through the system, sedative, or what was, in old surgery, called discutient effect; and that the negative pole, which is the point of eduction, on the contrary, exalts the excitement. These facts have been established by very many experiments and observations of our own. They are, so far as we are aware, original, and were first suggested to us by our peculiar

† See "Medical Electricity," page 12, et seq.
theory of animal life, and proved by the experience founded on
that theory, and instituted with a view to these facts.

Many years since, (we think about eighteen,) we observed in
some Medical Journal, perhaps the Boston, a brief notice of some
experiments made at Bath, in England, for the cure of epilepsy,
by the application of galvanic plates; but which experiments,
proving unsatisfactory, were, after several attempts, abandoned.
There happened at the time to be, within our knowledge, an in-
tractable case of epilepsy, in a coloured girl, about nine years of
age; a case on which we had, two years before, exhausted our
therapeutic resources, and had been followed by several other
practitioners, and finally by the various empirical means of
neighborhood prescriptions, patent medicines, &c. with no bet-
ter results. Meanwhile the epileptic-fits, which had been origin-
ally a month apart, had now become, in frequency, from eleven
to twelve daily, with very considerable impairment of intellect.

On the suggestion made by the Bath experiments for testing
the utility of galvanism, and believing we could avoid the cause
of their failure, we instituted its use in this case. To our very
agreeable surprise, the fits failed to return again. So soon as
they were found to be arrested, having always attributed the case
to worms, the infusion of Spigelia, which, as well as all other
vermifuges, had been before repeatedly used, was now adminis-
tered, and was promptly followed by the discharge of nine of the
largest lumbricaks we have ever seen. The patient commenced
to improve forthwith. The plates were applied to surfaces de-
prived of the epidermis, by the previous application of vesicato-
ries: one for the silver plate, on the back of the neck, and the
other for the zinc plate on the inner and upper part of the leg.
The plates used were nearly one inch square, and were connect-
et together by two or three annealed wires; and a thin layer
of fine wet sponge under the silver plate, and a similar layer of
fresh flesh under the zinc plate.

Fearing the return of the fits, we were unwilling, notwithstand-
ing the discharge of worms we had procured, to abandon the
galvanic current, for twelve or fourteen days. During this time
however, it was several times observed, that the sore surface on
the neck, on which the silver plate was applied, had dried, and
needed to be again and again vesicated; whilst that under the
zinc plate had continued to increase in inflammation, until it be-
came so serious a sore as to compel the abandonment of the current.

Since this experiment, many have been made with similar results; some of which being on younger children, produced gangrene at the zinc point within three or four days; whilst the sore under the silver plate dried and became well, or nearly so. These experiments may be used, and the same facts demonstrated by any one at any time. Experiments were subsequently made by connecting the insulated body with the prime conductor of an electrical machine, making the injecting point on some seat of inflammation, and the educting one, a distinct, healthy portion of the skin, to which the knob of the discharging rod was applied by an uninsulated person, for the purpose of eduction. In these experiments, the inflammation at the positive pole was reduced, whilst vesications were raised at the point of eduction. Thus was it demonstrated, that the electrical current, however produced, acted on this principle—a principle which seemed calculated to guide to the most important therapeutical results.

In view of these operations of this physical agent, we have planned a variety of instruments, and adopted several others invented by other persons, for the application of this principle to therapeutic purposes, and named them according to their particular applications and objects. It is not now a matter of inquiry, whether the electric current acts on this principle? the only question is whether or not, the instruments are well adapted to its application to the several purposes contemplated. Several of them which we had constructed, we have repeatedly applied, with satisfactory results.

We have just received from our cutler, the following instruments, constructed more perfectly than those with which we have experimented; and feel assured, by the principle we have demonstrated that, so far as the applicability of the instruments, and the immediate influence of action, by sedation in one part, or excitation in another, or revulsion, is concerned in curative indications, they will be found efficacious, convenient and easy of application—and most of them capable of being applied by the patients themselves, or their friends or nurses.

The following are the Galvanic instruments—

The Galvanic Purgative. This was originally constructed
by some of the northern cutlers, and especially used as a remedy for dyspepsia, and habitual constipation; and so far as we have learned, without the knowledge of, or regard to any guiding principle of action. It consists of a zinc cylinder and a silver plate, connected by a silver wire. We have adopted two sizes.

No. 1. Cylinder of zinc 3 6-10 inches long, and 3½-10 of an inch in diameter; with an oval silver plate 2 7-10 inches long, and 1 4-10 inches from its greatest width.

No. 2. Cylinder of zinc three inches long, and 3-10 of an inch in diameter; with an oval silver plate 2 2-10 inches long, and 1 1-10 inch from its greatest width!

Remarks. This article has been considerably in use in the United States as a remedy for dyspepsia. We have not had occasion to use it in this chronic disease, which we generally treat on another plan. But we have repeatedly used it as a purgative power, and with satisfactory results. Its most important use, under our prescription has been, in those cases of tympanites which occur in gastric and intestinal fever, with red and swollen tongue, insensibility of the bowels to purgatives generally, soreness and tumefaction of the abdomen, with hiccough. In these cases we have repeatedly succeeded in promptly reducing the abdominal tumor from flatus, the abdominal tenderness, hiccough, preternatural redness, &c. of tongue, and indeed all the symptoms of the gastro enteritic state; evidently beginning with the reduction of symptoms at the upper part of the canal, and finishing at the lower, in the manner in which this change is observed in recovery from this state, when effected by other means; but in a much shorter space of time.

Application. The cylinder is wetted and introduced into the rectum, and the plate is laid on the upper surface of the tongue. The application is continued from thirty to sixty minutes, and even longer if the bowels will bear it without excessive purgation, when it is desired to apply the principle to the inflamed state of the alimentary canal.

The Galvanic Intestinal Revellant. This instrument we have constructed on the principle on which this power acts, that is to say, the positive pole is repellant, and excitement and fluxion are produced at the negative. No case has yet offered for its use. But according to the principle of Galvanic action, it is well calculated for the correction of troublesome tenesmus, or other
irritations of the rectum, and probably in painful internal hemorrhoidal distresses. We have adopted two sizes, Nos. 1 and 2. The cylinders and plates of these are the same size as those of the Galvanic purgative, but the elements are reversed, the cylinder of this instrument being silver, and the plate, zinc.

**Application.** This instrument is applied in the same manner as the Galvanic purgative.

**Remarks.** The large size, No. 1, of both the Galvanic purgative, and the Galvanic intestinal revellant, is adapted to the use of adults, and the smaller, to that of children. As this revellant does not lead to purgative operation as the Galvanic purgative does, it may be worn at will, according to the necessity of the case. Should there be fear of unduly exciting the stomach or tongue by thus reversing the direction of the Galvanic current, the zinc plate may be applied on the neck or some other part, with a thin layer of fresh flesh interposed between it and the denuded surface to which it is applied.

**Galvanic Cutaneous Revellant.** This instrument or apparatus consists of two plates of equal area—one of silver and the other of zinc, connected together by silver wire. We have adopted three sizes, oval, the proportions of which are as follows:

- **No. 1.** Plates each three inches long and two wide, oval.
- **No. 2.** Plates 2 2-10 inches long and 1 7-10 wide.
- **No. 3.** Plates 1 7-10 inches long and 1 2-10 wide.

**Remarks.** The plates of this apparatus may be of any shape which is best calculated to suit the places to which they are to be applied. The proportion of the area of the different numbers should be about the same as those of oval shape, the dimensions of which we have just given.

This is the same instrument to which we before referred, as used in the Bath experiments in epilepsy, and as successfully applied by us in epilepsy, and in convulsions of children generally. We have, by its application, repeatedly arrested, with great promptness, perpetual convulsions, from various causes, and prevented their returns, when not perpetual. In illustration of this, we will refer to one case. A girl, eleven years old, laboring under scarlatina, had several convulsions, returning after two or three hours intervals; and there being no change in the circumstances of the case, it was believed they would continue to return. The apparatus was applied as soon as vesications
were produced. No convulsions returned for the next twenty six hours. By this time, the negative pole having become some-
what offensive, the zinc plate was removed for dressing the sore
with a fresh layer of flesh; and in the short space of time neces-
sary for washing the sore and applying the new dressing, anoth-
er convulsion as violent as the former had been, came on. The
dressing was completed, and kept several days without cleansing
again, during which time a thorough course of anthelmintic me-
dicines succeeded in causing the discharge of many lumbricales.
By this time however, the negative pole had caused a very of-
fensive ulcer, covered with a gangrenous slough. The apparatu-
sus was then removed, and the sore dressed with an alkaline poultice, which speedily corrected its ill disposition, and no fur-
ther convulsions returned.

Application. The surfaces to which the plates are intended
to be applied, should be first denuded of the epidermis, to the
size of the plates intended to be used. This may be done by
any of the vesicatories—even by hot water, when the necessity
is very immediate. The cuticle is removed. The blister to
which the positive pole is to be applied, is covered with a piece
of fine wet sponge, on which the silver plate is placed, and secur-
ed by adhesive strips crossing it in different directions. The
negative pole is applied in like manner to the other denuded sur-
face, interposing between it and the surface a thin layer of flesh
instead of sponge. We have adopted these interposing substan-
ces, from their having been thus used in the Bath experiments.
We are not conscious of any good reason why both of these
should not be of the same material—their uses being to shield
the sore from the wounding of the plates, and at the same time
to preserve a moist, conducting medium at those points of con-
tact. We continued the use of sponge and flesh as above, be-
cause we found them answer our purpose.

For the action of this current on the general nervous system,
and producing a revulsion from the great nervous centres, the
positive pole should be applied as high as possible on the spinal
column, or rather, as near as possible over the medulla oblonga-
ta; and the negative, on some convenient place on one of the
lower extremities, as the inner and upper part of the leg, a little
below the knee joint. In its application for other purposes, the
positive pole is to be applied on the point at which it is desired
to reduce the excitement, or produce a resolvent or discutient effect, and the negative on some distant part which may be most convenient.

Galvanic uterine exciter or emmenagogue. This apparatus consists of a concave zinc plate, mounted on the large concave end of a trumpet-shaped horn rod, somewhat resembling a stem pessary, having a rod of the same material proceeding from the under side of the plate, through the horn longitudinally, and terminating beyond the small end, in a button, to receive a bandage, and a loop or small hole to receive a wire; thus making this part of the Galvanic current complete, whilst, by the insulation effected by the horn, the current is the more completely directed through the os utrinx, which is intended to rest in the concavity of the zinc plate. The other part of this apparatus is a plain silver plate, corresponding in area with the concave zinc plate above described; and connected with it by a silver wire.

Of this apparatus, there are three sizes—

No. 1. The vaginal piece, exclusive of the button and loop, five inches long; and the zinc plate on the large or uterine end, one and three quarter inches in diameter.

No. 2. Vaginal piece four inches long, and its plate one and a half inches in diameter.

No. 3. Vaginal piece four inches long, and the plate one and a quarter inches in diameter.

Remarks. This instrument is constructed, as will be at once perceived, for the application of the negative or exciting pole to the os uterini itself, and is, according to the principle on which it is constructed, calculated to effect all the good possibly afforded by any means calculated to increase the action in the uterus, or determine fluxion to it. The irritation and increased fluxion to the os uteri by the application of leeches, has of late years been much depended on for restoring menstruation. This apparatus certainly has not the power of depleting by wounds as the leeches do, but has all the desirable power of excitation; and, whilst the leeches are necessarily of short application, and extremely inconvenient—necessarily requiring the assistance of another person, and sometimes that of the practitioner; this apparatus may be as well applied by the patient, as by another person, and its exciting powers continued to any desirable extent.

It is proper however to remark, that its use must be carefully
avoided in those cases in which there is engorgement of the os and cervix uteri, or any considerable irritation of them; and should never be so long continued as to exalt the action to inflammation. This could not be, we apprehend, in the space of twelve or twenty four hours, as the part to which it is applied is not divested of its natural covering. It is therefore only applicable to those cases of menstrual deficiency, in which stimulating emmenagogues are properly indicated.

There is however, another very important office which this apparatus is calculated to subserve. A very large proportion of cases of menstrual irregularity are dependent, partly or entirely on the existence of descensus or prolapsus uteri; the correction of which, if timely effected, will be often found to remove the difficulty; whether it be retarded, accelerated, excessive, deficient or merely painful menstruation. This benefit is effected through the liberation of the arteries, veins, lymphatics, nerves, by removing that pressure of the uterus which tended to the impairment of their functions; and peculiarly: those of the absorbent vessels through which alone refluxion from the part can be effected. The use of the vaginal piece of this apparatus is admirably calculated to relieve this pressure, when bound to its place for a length of time, as twelve or twenty four hours, by the bandage which embraces the button or vulvar or small end. At the same time this liberation is effected, a wholesome excitation must be imparted to the circulatory organization of the part, and the more complete performance of function ensured. We suggested this apparatus, on the principle only, as this application of it has not been made. Electricity has often been successfully applied from the machine; and this fact seems to declare its utility.

Application. The uterine or large end of the vaginal piece, is introduced and carried on to the upper part of the vulvo-uterine canal; which, when it arrives there, can scarcely fail to receive the os uteri into its concave extremity. A T bandage is then to be so applied, as to receive the button of the vulvar, or small end, into a hole made in the bandage for that purpose. The bandage should receive the button before the wire is fastened to the loop. The silver plate of corresponding area, belonging to the same No. is then connected with the vaginal piece by silver wire, and may be applied on the tongue, or on a denuded place on the back of the neck. The latter will be preferable when it
is desired to continue the application more than two or three hours at a time, which we apprehend would generally be the case.

The Galvanic Uterine Revellant. This apparatus is constructed precisely as the uterine exciter just described; the elements been received only. Like the former, three sizes of this have been adopted, Nos. 1, 2 and 3.

Remarks. This apparatus is also suggested by the principle of galvanic action; by which it is peculiarly adapted to cases of irritable os uteri, engorgements of the same, &c., at the same time that, like the other, it seems for the time, as a stem pessary.

Application. This revellant is applied in the same manner as the exciter.

The Mediate Ocular Revellant. This apparatus consists of a concavo-convex silver plate, of suitable dimensions, to cover the front of the eye-ball by being placed with its concave surface on the upper palpebra when closed. From the middle of the convex or external surface, which is covered by tortoise shell or horn, or other electric, proceeds a metallic projection through the electric, and forming a button and loop, used for receiving a bandage and a wire. By means of a silver wire, the loop of this silver plate is connected with a plain zinc plate of equal area.

Remarks. This apparatus is yet untried, and is only constructed on the suggestion of the principle on which galvanism operates. It is applicable to the treatment of inflamed eyes, in which a discutient effect on the organ is desired.

Application. Apply the concavo-convex plate of silver immediately on the closed upper lid—secure it with a bandage embracing the button, and passing a silver wire through the loop or hole beyond the button, connect it with the zinc plate, which is to be placed on a denuded surface on the back of the neck. A thin layer of fine, wet sponge is to be interposed between the silver plate and the eyelid, and a piece of flesh between the zinc plate and the denuded surface to which it is to be applied.

The Mediate Ocular Exciter. This apparatus is constructed precisely as the mediate ocular revellant, except that the galvanic elements are reversed; the zinc being made concave to fit on the eye-lid, and the silver plate plain for the neck.

Remarks. This is intended for fulfilling the indication of in-
creasing the excitement of the eye; an indication, perhaps, rarely arising in practice. It was particularly on view of experiments with this indication, in amaurosis, a disease, hitherto, so unmanageable, that this arrangement of the galvanic elements was prepared for application to the eye; and is it not worthy of trial in such a disease? It will not be denied that a remedy in such cases is a great desideratum. Other cases may occur in which this action may be desirable; and we here ask the attention of surgeons who attend eye infirmaries, to the several galvanic arrangements we have constructed for application to the eyes, and should esteem it a great favor to receive reports of their results.

Application. This is the same as that of the last named, or ocular revellant, except that the concave zinc plate is placed on the eye, and the plain silver plate on the neck; the thin layer of flesh, of course, under the zinc, and that of sponge under the silver plate.

The Immediate Ocular Revellant. This consists of a very delicate, oval shaped, concavo-convex silver plate, finely polished and fitted to the forepart of the eye-ball, within the lids. It has a thin loop proceeding from the centre of the convex surface, to pass between the eye-lids, and receive the silver wire which is to connect it with the negative, or zinc plate of like area.

Remarks. This is intended for exercising, in a greater degree, the same repellant efforts designed by the immediate ocular revellant; particularly in severe conjunctivitis, and other inflammations affecting the globe of the eye. It is so constructed as to be worn with nearly the same ease with which a false eye is worn.

Application. The concave silver plate is interposed between the palpebrae and the anterior part of the ball—concave to the ball, and the greatest diameter of the oval, transverse; the loop passing between the tarsi to receive the wire. The plain zinc plate is connected to the loop by a silver wire, and is applied to the neck as in the application of this plate in the use of the immediate ocular revellant. A thin layer of flesh is interposed between the zinc plate and the denuded surface. A bandage and light compress over the eye-lids, will secure the silver plate; and strips of adhesive plaster are to be crossed over the zinc plate.
The Immediate Ocular Exciter. This instrument is constructed in the same manner as the immediate ocular revellant; the galvanic elements being reversed, so that the concave eye plate is of zinc.

Remarks. It is intended to operate in the same manner, and for the same purposes, as the mediate ocular exciter, but with more power, by being in immediate contact with the moist conjunctiva, as the silver plate is, in the immediate ocular revellant.

Application. This is applied in the same manner as the immediate ocular revellant, except that the layer of sponge is used, in this case, under the plate on the neck, which, with this arrangement, is silver.

The following are the electrical instruments, or those intended for infusing electricity into the part, or operating on that which is in it, and so modifying it as to exercise a salutary influence on such morbid affections as they are applicable to; or such as may be benefitted by modifications of the electricity of the part.

The Anodyne, or Electric Brush. This instrument is constructed of very fine steel wires, firmly inclosed at one end, in a metallic handle, having the other ends pointed and left free, to be used in the manner of a brush, which, indeed, it is. The whole instrument is about five and a half inches long—the brush part, below the handle and slider, being three inches. The brush is flat, and at the handle, where the wires are closely confined by the handle and slider, is 6-10 of an inch wide, and 1 1-2 10 thick, and contains ninety or one hundred wires. Immediately below the handle, and on the upper part of the wires, is a slider, which fits so strictly as to keep the wires in close contact. The use of this is to bring the wires into close contact, by sliding it down to the extremity, for introducing them conveniently into the case. A metallic cover then passes over the brush, and sliding on the lower part of the handle, completes the whole as a convenient pocket instrument.

Remarks. This is an improvement on the anodyne brush of Professor Hildebrandt. Instead of a round bundle of wires, illy applicable to any surface of the body, we have constructed it flat, and completed it as a neat, portable instrument, incased in silver or block tin.

Hildebrandt obtained by the use of his, in various painful affections, such results as caused him to indulge freely in its use,
and give it the name of "Anodyne Brush," from its power of relieving pain. With a rude one of our own construction, we have had experience, with very satisfactory results. One case in particular occurs to our recollection, which was the first in which we applied it. It was a case of painful stiff-neck from the effects of cold, in which the head was confined to only one precise position—the most exquisite torture arising from the least change of position. After the use of the brush over the painful muscle for ten minutes, the part to which the brush had been applied, became flushed with red color, and covered with perspiration. The lady was then requested to turn her head, which she first attempted, with great fear of extreme pain; but on making the attempt, she found, to her great surprise and gratification, that she could move it in any way, with perfect ease. She then covered the part with her cape. On making some movements of her head, in conversation a few minutes afterwards, however, she perceived some little sensation in the part, for which I again applied the brush for two or three minutes, when on trial, it was found to have disappeared, and she remained perfectly well.

Use. Heldebrandt's brush was made of copper or iron wire, and wetted with diluted acid, or a saline solution. As these improve the conducting power, they may possibly tend to heighten the effect of the brush; but on account of their corroding power, we applied the brush without their use. The manner of using it, is to place the points of the wires at the brush extremity, on the skin, in such a manner as to bring as many points as possible into contact with the surface. The brush is then gently drawn over the surface with its own weight, or perhaps a little more pressure; but not such as to give pain by scratching, or abrading the skin. This is done repeatedly in the direction from the central extremity of the nerves of the part, towards their peripheral extremity. Its use may be continued as long as may be convenient, or until the effect is completed. As the part may then be moistened, or unusually excited, it will be well, if the part be one ordinarily covered, to cover it with flannels; at least in winter.

The Electrical Box. An ample description of this box is given in the first paragraph on the twenty first page of this volume; and the appendages to this apparatus, in the two succeed-
ing paragraphs. It is therefore unnecessary to report it in this place. On the next page, we suggested the improvement of this box by substituting for the sulphur, an electric of shellac, amber, or hard sealing-wax. We have succeeded in procuring one constructed of sealing-wax, which appears at least as excitable as that of sulphur.

Remarks. This is "the box," originally invented, as we suppose, "by M. Sousselier, Lord of many manors." It is a kind of economical electrophorus, and has been found highly useful in many painful, inflammatory and nervous affections. Its mode of action will be found on the 22 and following pages of this volume.

Use. The use of the electrical box will be found at large on the sixteenth and following pages of this volume, together with its application to many particular cases, on the sixteenth and following pages, to which we again refer the reader.

Here we conclude our description of galvanic and electrical apparatus, the use of which we suggest to the profession, in the hope that they will be found of service to humanity, or will undergo such improvements, either in their construction or application as to become so.

One more new instrument we offer to the notice of the professors, which is

A Guarded Scarificator. This is a small instrument, not occupying in the pocket, more room than the handle of a common pen-knife; which, indeed, it greatly resembles. The handle of this instrument may be made of wood, bone, horn, ivory, pearl, &c., on the end of which is fixed a smooth convex guard, through the centre of which a fleam projects, which is regulated and fixed by a screw in the side of the handle, so as to cut to any depth less than three quarters of an inch. This instrument is as conveniently portable as a pen-knife, is easily cleansed and kept in order, and the fleam retracted into the handle for portage. It is so well guarded as to enable the operator to make as many incisions, and these in as quick succession as he may please. The price is considerably cheaper than the spring scarificator which, for economy or the comfort of the patient, is often substituted by the common scalpel. It has the additional advantages of being easily cleansed and kept in good order, and of changing the old for a new fleam, by the turn of one screw.
By increasing the length of the handle, this scarificator would be found very convenient for scarifying the tonsils and assuaging palatine abscesses; and as it is, it is well adapted to the purpose of scarifying deeply in those cases in which this becomes necessary.

PART II.—REVIEWS AND EXTRACTS.

Introductory Lecture, delivered at the opening of the Medical College of the State of South Carolina, November 12th, 1838. By Professor S. H. Dickson, M. D. Published by the Class.

The appropriateness, to its purpose, of Professor Dickson's composition—his accuracy as a writer, and the beautiful simplicity of his style, are too well known to need our commendation. Of all these, the Lecture before us affords a pleasing example. One thing which is common in productions of this kind, and which is peculiarly disgusting, is the mongrel language in which the ideas are often couched—a language concocted of incompatibles and obscurities, from the admixture of as many different languages, as the memory and pedantic taste of the writer enable and dispose him to jumble into words, lines and pages. Some of our books which should have been standard works, have been blighted in the very onset by being thus written in obscure, puerile language. These errors are great follies in writers, which have, of late, received wholesome rebukes by the northern reviewers, and by the failure of such productions. The good taste, sense of propriety, and sound judgment of the author now before us have borne him above these things. He ever writes with that elegance and simplicity which render his productions at once pleasing and instructive. There is also manifested in Professor D's composition, a fulness of thought, and depth of idea, which imparts to it a peculiar value. The whole ground on which he stands is fully occupied, and the strength of his views, although sometimes, at first, appalling, are still found, on examination, to be correct. We take great pleasure in laying before our readers the following excellent and beautiful extract, not only on account of its classical beauty, but for the highly wrought and correct views which he inculcates, of the labors, the acquirements,
the obligations and the responsibilities of those who devote themselves to the science of medicine.

From the earliest times, our order have set themselves with unabated zeal and untiring patience, to mitigate the sufferings of their fellow men. We have watched by the gray dawn, through the noontide heats, and all the livelong night, at the bedside of the sick, to catch the first ray of hope, to seize upon the first favorable moment in which to offer our kindly aid. While others have fled before the approach of pestilence, we have remained by the noisome couch, we have breathed the foul breath, and inoculated ourselves with the deadly secretions of disease, to wrest even from the grasp of the poison some salutary instruction. Nay! to protect and preserve the living, we dare the very vapours of the charnel-house, and inhale the revolting effluvia from the dead. Like the Prometheus of the Greek Poet, it has been our pride to struggle against Fate herself, and to traverse with unbending resolution the evil current of destiny. It is ours to stand in the breach—to arrest the contagion that infects whole nations; to check the course of the destroyer, and to put limits to the sway of the dread king of terrors. We are called upon to sustain the fainting spirit, and feed the flame of almost exhausted vitality; to restore impaired vigour and lost powers of action and enjoyment. We are expected to minister to the mind diseased;"to relieve the tortured imagination from the horrors of a gloomy delirium; to temper the violence of passion; to regulate the wildness of the will; and to seat the pacifying intellect upon a steady throne.

These scenes—such entire and unreserved immolation of self—such devotion to the call of duty; demand a firmness and courage of more inflexible grade and of finer texture, than all the other avocations of life. No transient excitement can sustain us in this protracted self-sacrifice, no love of applause, no intoxicating impulse or exhilaration of sympathetic and multiplied feeling. We labor, we suffer, we die alone. No crowd surrounds us to increase by its huzzas the animation of victory, or cheer the gloom of the grave. Yet of the thousands of our brethren who have thus like Curtius leaped into the gulph, and thrown away their lives for their fellows, not one, as we fondly believe, not one has failed to find his obscure virtue, its own rich reward; its quiet daring, its patient endurance sustained and illuminated by the delightful consciousness of doing good—by the divine luxury of benevolence. If there be one among you who does not find himself warmed and spurred forward by such examples, who does not anticipate with glowing enthusiasm the day when he may join these shining ranks as a volunteer, and if need be, a martyr, I tell him plainly, that he has mistaken his vocation—that he is not one of us—that he is not worthy to unloose the shoe-latchet of those glorious Philanthropists, to whom I have alluded, and who to the honor of our profession and of humanity, are in every age and nation so numerous, that their biography would fill another library of Alexandria. He may be gifted and useful, but it must be in another sphere. He may found a city, or improve the processes of Agriculture, or the machinery of manufactures; he may win a naval battle, or ride red-hoofed over the mournful field of conquest; but unless he can possess his soul in tranquillity amidst the busy solitude of a lazaret-house, and perform without repugnance the most menial offices of kindness to an unknown pauper, he is not, he never will be a Physician.

Let it not be supposed, that I am ignorant or forgetful of the infirmities of our nature, or unaware of the alloy and imperfection of the best human incentives to action. In the phrase with which the Persians conclude all treatises on every subject, I too would humbly acknowledge, "There is nothing perfect but God!"—but you will readily understand, that I speak of the ruling passion, the impelling motive, the master propensity. In the true Physi-
cian this must be benevolence, and can be nothing lower. Its energy may be increased perhaps, its efforts certainly may be doubled, by the stirring incitements to ambition, by the hope of wealth, by the wish to attain importance and influence in society; all these are allowable, it may be, praiseworthy, if the hand be pure and the heart be right, and every other feeling be kept subservient to the engrossing purpose, the absorbing desire of doing good. Do I require too much of the aspirant after medical honors? Surely not. Without the support of such principles as I have indicated, and of such enthusiasm as I have pronounced necessary, he will fail in the hour of trial. His weapons, if of less than this celestial temper, will shiver in his hands when he has entered upon the strife which awaits him, and finds himself jostled in fierce collision with all the difficulties which are to surround and press upon him. Nothing else can preserve him from the arrogance of dogmatism, the bitterness of rivalry, the stings of jealousy and envy, the mean subservience to popular prejudice and vulgar clamor, in which he will make shipwreck of the proverbial honor, the prisa fides of the profession, and in his anxiety to promote his own objects, and aggrandize himself forget his patients, his conscience, and his God.

It is easy to shew that I have exaggerated neither the extent of the sacrifices, the exhausting and wearisome weight of duties, nor the wide and lofty efforts demanded of the profession.

With the best statistics we have, in hand, relative to the average duration of life of men of various classes in Germany, Professor D. next reminds the pupil of the greater brevity of the life of the physician than that of any other class of men—"not exceeding ten years of actual practice;" and that "the chance of attaining the age of 70 is, for the physician, compared with the theologian, as 24 to 33—with the agriculturist, as 24 to 40, and, even including all the contingencies of a military life, with the soldier, as 24 to 32. These conclusions are drawn from a sufficient compass of time to give them great claim to fairness. In the conclusion of the lecturer's observations on this subject however, we find the following remarks, which we confess we are unable to receive as conclusive, relative to the average duration of life amongst the graduates of the Medical College of the State of South Carolina, for the years 1834, '35, and '36; and much less, relative to that of physicians generally.

"Of the 120 Graduates who received their education here within the three years preceding the last course of lectures, we had heard of the death of eight. This gives an average duration of life after entrance on practice, of considerably less than 15 years; a melancholy result indeed, when we reflect that the subjects of this calculation were all in the very prime of youthful vigour."

In the first place, the number of deaths and the ages at which the graduates died, appear to be determined doubtfully—because, more may have died than have been heard from. And in the next place, if we suppose this uncertainty removed by positive assurance of the continuance of life with the rest, all not having died, it appears to us impossible to determine the aver-
age duration of life amongst the 120, until its termination with all of them, is taken into the statistical view.

The next subject embraced by the Professor, is a brief but proper view of the immense number and extent of resources from which the practitioner should be prepared to draw, before he can be considered duly qualified for the discharge of his professional obligations, with justice to his friends and to himself. This view embraces all philosophy—all sciences and all arts—a field which, although it be desirable, and should be cultivated in all parts to the greatest possible extent, is rather Utopian than practicable, when we consider the "vita brevis," alluded to by the Coan sage.

We cannot but admire the eclectic spirit, the merited tribute to Dr. Cullen, and the rational views of medicine contained in the following extracts.

We may spend a few moments not unprofitably, in taking a rapid survey of the actual state of Therapeutics, or the Practice of medicine; properly so called, in the several countries of the globe, and in endeavoring to ascertain the true position of our science, the ground upon which is based the art of healing, as at present understood, practised and taught. Let us inquire whether any principles are established—any doctrines received as elementary. What is the complexion of modern Medicine? Is it embodied in the shifting Kaleidoscope of theory, or shall we look for it in the vagaries of a contradictory Therapeutic? Which of all the vehement and angry disputants who fill the arena and stun us with their noise and dogmatism, shall we pronounce to be in the right, or shall we venture to declare them all equally in the wrong? What clue shall we seek to guide us through this labyrinth? These questions seem at first difficult and embarrassing, but if investigated with the proper spirit of philosophic reasoning, admit of ready solution. No one will doubt or deny that facts ascertained by experiments sufficiently clear, and repeated sufficiently often, and observed by a sufficient number of competent witnesses, must be taken as the bases of all the sciences, and of ours among the rest. The ready reception of bold assertions, the prompt credulity which entertains without proper inquiry statements and explanations confidently offered, these constitute Empiricism. The very phrase is odious to the professional ear, but we cannot escape from the alleged necessity. We must still search for, accumulate and collate facts, in order to make any advances. It is obviously incumbent on us, however, to lay down for our safeguard and direction, some rule of evidence, and establish some definite test by which we shall separate truth from falsehood, and avail ourselves of the former, while we endeavor to shut out all error and deception. And here we may pause to pay a tribute to the memory of the illustrious Cullen, to whom more than any other of our revered predecessors, the Practitioner of the present day is indebted for whatever is most clearly established in the prevailing system of Therapeutics. To Cullen we owe the "rational Empiricism," as it is styled by one of his recent eulogists,—which guides the practice and instructions of the British and American Schools of Medicine, constituting indeed the peculiar stability of that Therapeutic which has so long withstood all the stormy changes of theory, and which, admitting to be interwoven with it all the improvements of every tributary science, grows with their growth and expands as the boundaries of human knowledge are enlarged. Against this rock have beaten in vain the turbulent wave of Brownism, and Broussaisism and Hahnemannism. In contrast
with it, all the antagonist heresies are shifting and transient; nay they cannot fail ultimately to contribute to its support and confirmation. Each theorist appeals at last to facts—there is no alternative; each consents, and must consent to be judged by the observed results of the application of principles or hypotheses suggested. If, says Broussais, the most ingenious and obstinate of dogmatists, in his late forcible strictures upon the numerical plan of Louis—"if it can be proved upon experience that Tartar Emetic will relieve a Gastro Enterite, I will administer it; if Arsenic will do good, I will prescribe that."

This then, we may recognize, as the primary rule, the elementary principle of our science. We may regard the Cullenian Philosophy of Rational and Eclectic Empiricism, as established beyond the reach or prospect of further controversy. All that remains is to define exactly what is meant by the qualifying adjective 'rational,' and to lay down such rules of evidence as shall commend themselves to all men upon the universal grounds of reason, justice and truth. But we cannot set up any new methods for the examination of testimony in reference to alleged facts—we must employ the same tests which are resorted to in Logic, Law, Natural Science, Natural and Moral Philosophy. Our Empiricism will indeed be rational, enlightened and Eclectic, when it is thus guarded; storing up recorded observations, cautiously considered, duly weighed, carefully collated, and from these, by the Baconian method of deliberate induction, proceeding to infer principles and weave a tissue of doctrines. It may be, nay it must happen, that we shall be occasionally hasty in this deduction, and regard principle and doctrines as settled, which time shall overthrow by adding new, clearer, and more precise facts in opposition or illustration. But this is obviously no fault in the system; it is merely the result of the admitted imperfection of all human attainments. We know we are in the right path; we must not expect to find it free from intricacy and impediments; we must exert ourselves with energy to overcome difficulties found to lie in our way. All extremes are proverbially dangerous; they are almost universally erroneous in themselves, as well as in this, that they necessarily imply error, from excess. But the golden mean in which truth and safety are only to be found, is of course distasteful to all formers of sects and their zealous followers, who unite to attack and disparage it. Thus the rational Empiricism, in which lies the whole philosophy of Medicine, is assailed with equal violence on one hand by the Dogmatists, or ultra-scientific Physicians, and on the other by the mere Empirics, properly so called, the nostrum mongers, the men of exclusive experience and observation; and in this crusade are allied the Physiological School, with the Brunomians, the Perturbers with the Pinelians or Expectants, and the Homoiopathists with their natural enemies, the extreme Allopathists or Contrastimulators. But we defy them all! Nay more—as Eclectics, we select from the armory of each his best weapons, and make them useful in the interminable contest. From the champion of every school, we are willing to learn what he is eager and able to teach, and as in the phrase of Bacon "all error is founded upon some truth," we find instruction every where.

We have inherited too much of the practical propensities and habits of our British ancestry, to run great risk of being led far into the misty fields of Hypothesis. Permanent reputation and eminence are to be attained among us, only by direct usefulness, and an immediate application of scientific acquirements, to the purposes of philanthropy. All our successful medical works are therefore of a strikingly practical character, and so thoroughly Eclectic are we, (I had almost said by instinct) that every effort to put forward the exclusive claims of any school whatever, has not only failed altogether, but has recoiled promptly upon the head of the rash advocate who consulted so
little the genius of his compatriots. We have determined, as well in science, as in government, "to call no man master."—Our Chalmers, Rush, Irvine, Hosack, Eberle, and Physick, were all Electro-Empirics, and their successors, whether in the cold and calculating East, the ardent South, or the fertile valleys of the West, pursue the same course, and with every prospect of fulfilling the same happy destiny, of enlarging the bounds of useful knowledge, and subtracting something, each in his turn, from the vast mass of human misery.

The space already occupied admonishes us to draw this analysis to a close, which we do with regret, because our readers will thereby be deprived of many pages of this interesting and able lecture, the reading of which could not fail greatly to contribute to their pleasure. We cannot, however, take our leave of it, without extracting the following sensible and just allusion to the great mammoth quackery which now infests our country, taking advantage of the credulity of an unsuspecting populace, ignorant of medical philosophy, and of the collateral sciences, by affecting an unholy and impious alliance with sacred orders, to borrow therefrom a weight of influence for its support, which its own merits cannot afford—

While we are thus ascribing "honor to whom honor is due," let us extend our acknowledgments to the Patent School of American Physic, which surely must deserve this notice at our hands, patronized as it is even by educated men among us, who have purchased the "rights" which shall entitle them to experiment upon the lives and happiness of their helpless families and slaves, (whom heaven protect from the disastrous results!) and sanctioned as it has been by certain Legislatures in the South and West, who have thus granted a premium to indolence and presumption. Since the earliest records of Quackery, nothing has been heard of, to be compared in audacity with this Mormonism in medicine; this system, which not only treats all diseases by rule and measure, but actually claiming to be derived from heaven by the express "gift of God!" sneers at all science and learning, and in the broad light of day denounces their votaries. It is well that ignorance has been thus avowedly made its basis, as constituting the most available attempt at an apology for the tools of the shrewd old Patriarch—the only gainer by the invention. "Father forgive them, for they know not what they do!" From these Thomonians or Botanical Practitioners, we have learned that the credulity of the mass of mankind, in affairs which concern their physical health, is absolutely unbounded, and without a horizon; that the vanity of the rudest and most untaught disciple is flattered at being allowed to handle the instruments, instead of passively submitting to the skilful workman, while his conscience is quieted by the ease with which all responsibility for consequences is shifted to the shoulders of the distant patentee; that the vapor bath, with certain emetics and stimulants are empirically applicable to a greater number of cases by disease, than would have been subjected to the trial of any one less reckless than themselves; and that the most fiery cordials and alexipharmics given to a patient in fever, will not necessarily kill him, however indefinitely they may injure his constitution.
The following interesting extracts from Dr. Sigmond's Lectures on Materia Medica and Therapeutics, are taken from the American Journal of Medical Sciences, for November, 1838.

**Efficacy of Aconite in the cure of Rheumatism.** From all that has been written by a vast number of men of great practice, of watchful mind, and of the most unquestionable integrity, aconite is one of the most important therapeutic agents in certain states of rheumatism. I have had occasion to tell you that, in the very early stage of acute rheumatism, when the patient has just been seized, and where the muscular system only suffers, Dover's powder is an invaluable agent, if blood-letting has not been the first remedy, which it very often is, and that it may be considered a specific; but when the joints are tumeefied, when they are painful, and the suffering is aggravated by the slightest touch—when the swelling is diffused and elastic, and the skin is intensely hot, aconite is the most serviceable remedy with which we are acquainted. It is sometimes extraordinary, when not only the sub-cutaneous and deeply cellular tissue are affected, but even the cartilages of the knee-joint, the periosteum, and the articulating capsules are evidently the seat of rheumatic inflammation, how speedily pain is relieved, and health restored, by the administration of this agent, which Dr. Lombard has reason to consider acts specifically, and great praise is due to him for the revival of a practice which had obtained, in former days, the sanction of the greatest authorities of the continental schools. In gout its efficacy does not seem less decided.

In all the various seats of rheumatic inflammation, whether the disease have been of long or short duration, however great the agony which has been expressed, however incapable the limbs have been of bearing the slightest motion, aconite has been acknowledged to have proved of the most decided service; the testimonies in its favor are so numerous, that I have felt surprised that, in this country, it has not been a favorite; and I can only attribute it to the want of a good supply for the use of the practitioner, and certainly, the carelessness with which the herbalist has treated this remedy, has been sufficient to prevent its more frequent employment. It was not Stoereck alone who praised aconite; we find not only the German physicians, but the Swedish medical men, loud in extolling its merits, and they are generally slow, but right, in the conclusions to which they come. Rosenstein gave an interesting narrative of a young female who suffered almost tyrdown from rheumatism in the hip joint, for no less a period than eight months, but who within two weeks from the trial of this remedy, was restored to health. Blom and Odheilius, in few words, express their satisfaction on employing it at the hospital in Stockholm. Rihe has narrated an interesting case of a female who, besides suffering the most intense agony, and perfect incapability of moving her arms, had her muscles contracted and hardened, so that they almost wore the appearance of ivory.

There are many foreign writers who have added testimonials in favor of aconite, but the one, probably, that outweighs all others, is the benefit which happened to the veteran professor of Materia Medica, at Gottingen, Andreas Murray, who, in his invaluable "Apparatus Medicamnum," says, "Possem si opus esset plura rheumatismi exempla curati etiam ex propria experien-
tia addere et nominatum, ischidiis nervosae cujus ante paucos annos tormenta atrociissimispese sensi sed vesicatorio et Napello brevi discussa." When the limbs have begun to be rigid, to loose all power of motion, and even where the muscles have begun to waste away, and however apparently hopeless, from the contractions that have taken place, the case may seem, the number and variety of successful cases give us reason to anticipate a successful result from this powerful remedy.

Notwithstanding all that has, at different periods, been urged as to the va-
On Tonics. [March,

...ue of acon'tum in rheumatism, it would, probably, have been consigned to oblivion, and coelehicum would have remained the favorite remedy, had not Dr. Lombard, of Geneva, instituted his experiments, which deserve, at our hands, the warmest eulogiums.

The failures that were so often experienced from the employment of the common extract, either from the presence of too much vegetable matter diluting the active principle, or from some fault in the preparation, induced Dr. Lombard to try an extract obtained from the expressed juice of the plant, subjected to slight boiling, in order to coagulate the vegetable albumen; this was evaporated in a sand bath, treated with alcohol filtered, and then again evaporated at a moderate temperature. He obtained by these means an extract, upon whose efficacy he had, from repeated trials, every reason to depend; the volatile principles were not dissipated, as in the ordinary extracts, and the active principles underwent no modification by the application of heat. This alcoholic extract of monks'hood, Dr. Lombard agrees with others, possesses a specific virtue in dispelling rheumatic fluxions which have been determined to the articulations; he believes its power not to be confined to the immediate vicinity of the articulations, but to extend to the synovial membranes, and to essentially contribute to excite the absorption of fluid diffused within them; its action is speedily evinced, and patients have stated to Dr. Lombard, that they have felt great alleviation of their sufferings in the course of an hour; this, however, is not a general law; from twelve to 24 hours form the usual period of improvement. A certain degree of excitement of the brain attended upon its administration, marked by a degree of gaiety, great vivacity, and nocturnal visions; in no one case did he perceive any disagreeable effects arise, although he has administered as much as a drachm and a half in twenty four hours. In only one case did it act as a sudorific; he does not attempt to explain its mode of action, but contented himself with the idea, that it is a specific against rheumatic congestions. It acts upon the excretions neither by altering their appearance nor their quality. He found it not requisite to combine the aconitum with any other drug, and therefore, prescribed it alone; he began with one-fourth, or half, of a grain, which he gave two or three times a day.

This power of producing absorption at the joints has, from an early period, been attributed to aconite, and in gout it had met with the commendation of Stoerck, but it was ascribed to its sudorific agency; and its effects upon the transpiration by the skin, were promoted by confining the patient to bed, and giving him large quantities of ptisan; for this purpose, Rosenstein ordered an infusion of the flowers of the elder; sometimes perspiration was thus promoted over the whole of the body, at other times it was confined to the affected part. Gesner observed, that considerable tingling of the skin, pustules full of fluid, and desquamation, followed. The same remark that Dr. Lombard makes, as to the rapidity of its action in rheumatism, is made by many of those who, at an earlier period of its introduction, employed it. Those who had suffered for years, and, indeed, were deemed incurable, are stated to have been free from pain in an incredible short time, and to have had the swellings of the joints completely dissipated.—Lancet, August 5th, 1837.

On Tonics. I shall point out to your notice those substances, which produce gradual, yet permanent, changes upon the system, without attempting to enter upon any consideration of the theory of their action; for I believe it is not yet sufficiently matured; they seem, uniformly, to act primarily upon the stomach, and hence to be conveyed to the various tissues and organs. How they influence the living principle, I am not prepared to say; but they seem quickly to produce an increased action in the circulation, marked by a firmer state of the pulse, which is occasionally rendered more frequent. The muscular system, then, seems to derive fresh power; the excretions become
more uniformly natural, and there is firmness given to the nervous system. From their action upon the digestive organs, it would appear that the more nearly tonic medicines approximate to the aliment which would be most easily digested, and be more decidedly nutritious, the greater the influence they possess. They should never be of a nature to produce any inordinate excitement, for the reaction, or exhaustion, that would follow upon the stimulus, would be more hurtful than any beneficial influence they could exert. It is a slow, steady, and uniform operation that is required; and the greater the delicacy of constitution for which you are called on to prescribe, the more careful must you be in the quality, quantity, and mode of preparation, of your tonic. The stage of the disease, the state of the functions, and even the season of the year, must be considered before you select your remedy. Iron, of such value in some cases, is productive of mischief if the pulse be full, if any tendency to inflammatory action is present; cinchona, or its alkali, quinine, will prove a dangerous remedy if the vessels of the brain are more than usually full, and particularly if venous retardation be present; arsenic, to which we look with such confidence in the intermittent fevers of the autumn, and in periodic affections during the winter months, is inferior in value to cinchona, or to carbonate of iron, in the spring of the year. As Fodéré has justly observed, arsenic is an autumnal medicine; but it may prove deleterious in the spring. That the barks of trees should have more efficacy in the autumn, when the changes have taken place in vegetable circulation and secretion, is not, to us, a matter of much surprise; but that these substances should, in the spring, act upon the system in so marked a manner, is somewhat unaccountable; but that such is the case has been very generally observed. Some of these remedies enter into the circulation, and are capable of being detected by their usual tests; others, again, have not been discovered. Iron is soon received into the blood; and may easily be recognised; but the Peruvian bark, though it has been continued for some length of time, has not been found. Sometimes diminished susceptibility of the excretory organs follows quickly upon the use of tonics. At others, again, there is found an increased action, almost amounting to violent diarrhoea; and this is oftentimes evident upon the administration of cinchona, and seems to contraindicate its use; but this more generally occurs where proper steps have not been previously taken to remove, by gentle laxatives, any sordes that may have accumulated during the disordered action in the alimentary canal; and sometimes it is a salutary effort of nature, which, if checked, may afterwards prove an abundant source of distress and harrassment to the patient, and of difficulty and doubt to the practitioner.

One of the striking characteristics of this class of medicines is the power that some of them possess of preventing the recurrence, at fixed intervals, of particular states of the body; and from which circumstance they have acquired the quaint, but expressive, name of antiperiodics. Amongst the unexplained phenomena attendant upon the morbid conditions of the living being, is that peculiar tendency to the return of certain marked symptoms, for several days at the same hour in the day at which they at first developed themselves; thus, an anguish fever coming on daily, will almost always commence its attack very early in the morning; whilst the tertian, which recurs at an interval of about forty-eight hours, for the most part, begins at noon; and the quartan, which exhibits itself after an interval of about seventy-two hours, is generally present much later in the day.

Several of the affections of the nervous system have a strong tendency to become periodic. The painful disorders called neuralgia, epilepsy, St. Vitus' dance, or chorea, and lunacy, have their precise intermissions and their paroxysms so evident, as to have engaged, at a very early period, the attention of medical observers; but the causes that produce this singular habit of the constitution have been very uselessly sought for. That in many of the functions of the organs periodicity may be acquired, daily experience teach-
Sub-Carbonate of Iron in Cancer, &c. [March,
es us. There is no difficulty in so regulating the excrections, both of the in-
testines and of the bladder, that the action shall only recur at expected mo-
ments; but that the whole system should be called into morbid states, as in
intermittent fever, must remain a subject for inquiry and investigation. But
over this striking habit, the tonics, both metallic and vegetable, exercise a
peculiar influence, restraining, if taken during the intervals, the worst symp-
toms of the paroxysms, and gradually preventing their recurrence. It is
probable that all the febrile diseases have their stated moments of aggravation;
and there are few of them that do not, towards evening, exhibit a de-
gree of exacerbation, during which tonics do mischief, even if, in the remis-
sion, they have been found serviceable; the proper time, therefore, of em-
ploying them, is of greater consequence to us than the inquiry into the cau-
ses of the periodic return.—Ibid. October 25th, 1837.

Sub-Carbonate of Iron in Cancer. It is chiefly in ulcerated cancer that
the carbonate of iron is found serviceable, and cures of cancerous ulcers of
the face, lip, nose, uterus, and other parts of the body are detailed in several
of the periodical publications of the day; but the claims of the carbonate, or
any preparation of iron, to the character of a specific, were after very fair
examination disallowed. That in various states of ulceration wearing a very
malignant and formidable aspect, this remedy is most advantageous, daily
practice fully confirms; that in carcinomatous ulcerations the diseased parts
very frequently acquire an aspect infinitely more healthy is also generally
allowed; that we may very often, in the most unpromising cases of open
cancer, obtain respite from the progress of disease, is all that we can expect
from this remedy; which deserves, therefore, our attention and our knowl-
dge of the circumstances that have yet been made known with regard to
its exhibition.—Ibid. November 4th, 1837.

Sub-Carbonate of Iron in Tic Douloureux. In the year 1820, Mr.
Hutchinson gave to the world the result of his observations on the cure of
tic douloureux; for which he had administered, with very great success, the
carbonate of iron. To the employment of this remedy he had been led from
a reflection upon the curative powers of arsenic, which, if this deleterious
agency was not such that it cannot be pushed beyond a certain quantity,
would be more frequently administered, and with every probability of uni-
form success. He was led to inquire whether some mineral, possessing
nearly the same action upon the system, without producing its noxious influ-
ence, might not be found in carbonate of iron; and his expectations of good
results were increased by its utility in many diseases arising from debility
and a want of a proper action in the digestive organs. He enters, in the
work he published, upon the history of this agonizing malady, and discusses
the measures that had been fruitlessly taken for its cure. He then brings
before his readers six cases in which the iron had been found efficacious.
The preparation which he has foundserviceable, under different states of the
constitution, and various periods of its duration, is this medicine, in do-
ses of two scrupules, or even a drachm, repeated two or three times a day;
and he adds, that used to this extent, it removes several other affections over
which it had been supposed to exert no power. Since the period at which
Mr. Hutchinson gave his useful observations to the public, the carbonate of
iron has been very largely tried by the profession, and occasionally with the
happiest results.

You will read, in the Lancet for 1832, a letter from Dr. Hutchinson, phy-
sician to the General Hospital near Nottingham, which he thought it neces-
sary to write in consequence of a clinical lecture delivered by Dr. Elliotson,
on the subject of neuralgia, in which he imagined the learned professor dis-
courages the employment of the medicine. In this letter he says—"Nine-
yeight unquestionable cases of tic douloureux, the full reports of which I have
now before me, many occurring in the 
anon as exciting a\textit{gree} of irrita-
tion, and others reported to us by medical prac-
tice as \textit{distinguished} by the high-est respec-
tability and attainments, all of which were cured by the use of the carbonate of iron, most after the persevering employment of other remedies, distinctly prove the fact that the disease is generally not only susceptible of alleviation, but that it may usually be cured." The cases to which he alludes are the result of the successful application of this remedy.

Dr. Elliotson's observations are practical, and will, I think, be assented to by all those who have tried the carbonate of iron. It is "one of the best remedies in this disease, but by no means a specific, and by no means so suc-
cessful, I think, as in some other nervous complaints." The case which called for the observations of Dr. Elliotson, is one of peculiar interest. You will find it in the Lancet, of December 5th, 1832.—Ibid.

\textbf{On the Therapeutic Properties of the Tinctura Ferri Sesquichloridi.} This medicine is found in our earliest pharmacopeias under the name of tinctura martis in spiritu salis marini, and was a great favorite amongst the physi-
cians of former days, and was ranked in the dispensatories "as preferable to the calces and croci of iron, being both more certain and more speedy in its effects." As a tonic, where the digestive organs, have become impaired, either from disordered function of the stomach, in assimilation, or from diminished power of excretion from the intestinal canal, it is much to be com-
med. Where much debility, arising from loss of appetite dependent upon such causes occurs, a few drops of the liquid taken in a glass of soda water for a few successive days, invigorates the system, raises the spirits, and improves the general health in a very striking manner. In females the effect of this preparation of iron is much more remarkable than in man. It seems to be particularly adapted to them in many of those states in which a deficiency of menstrual excretion, or irregularity of appearance occurs. Whilst it promotes this function, it is also serviceable in restraining hemor-
hage from the womb, although it has been supposed to be contraindicated, from its possessing the power of acting as an emmenagogue; whenever, in such cases, it produces flushed cheek; dry lips, white tongue, and tendency to cephalalgia, it must for a time be discontinued, and again had recourse to after aperients, as castor oil and the neutral salts. Twelve or fifteen drops taken daily, three times a day, largely diffused in water, will be quite suf-fi-
cient; soda water, notwithstanding a decomposition occurs, is by far the most agreeable mode of administering it, if given not more than once in in the day. It is not generally to be prescribed in combination with the alk-
alies, nor with their carbonates, nor with the carbonate of lime, or of magnesi-
a, nor should it be added to any infusion of the vegetable tonics which possess an astringent principle, as it renders it of a black color. It is decom-
polyed by a solution of gum arabic. Mr. Cline first recommended it, in the course of his lectures, in retention of urine arising from spasm at the neck of the bladder, and since that time it has been very generally administered in the dose of ten minims every ten minutes, until some relief is afforded, and generally this is preceded by a slight nausea. In states of irritation of the bladder during gonorrhoea, when the excretion of water is attended with great pain and suffering, a similar dose, more particularly if a few drops of lau-
danum, or of tincture of hyoscyamus be premised, will be found most materi-
ally to allay the excitement.

It has not been detected in the urine after being thus taken, but, as is the case with the other preparations of iron, it tinges the faces black. In pain-
ful micturition it is best given in warm water, and a warm bath likewise fa-
cilitates its operation. In a case related by Dr. Collins, of Swansea, where opium, conium, and the warm bath had failed to give relief, five minims were given every six minutes; after the third or fourth dose a cessation of the suffering occurred, and in less than half an hour water passed without
intestines some power, as the gaseous exhalation materially differ when it has been employed, and this is particularly striking in children; the odour of the dejections being very materially influenced in them, and much more offensive factor being the result, and this, in general, is a proof of the due action of the medicine, for the system, previously disordered, appears thus to rid itself of a deleterious agent.

Where the chloride of mercury is too irritating alone, it may very properly be combined with other remedies, and there is a pill which has long been known to the profession under the name of Plummer’s pill, which has been found a useful medicine.—Lancet, December 2, 1857.

On the effects of Blue Pill. The blue pill has been long much celebrated and is one of the most popular remedies of the day in the dose of four or five grains. Its high estimation, it chiefly owes to the work of the late Mr. Abernethy, entitled “Surgical observations on the Constitutional Treatment of Local Diseases,” and likewise to the practice he pursued, and the precepts he inculcated amongst a large portion of the students of medicine, who are now in the full zenith of their honourable career.

Mr. Abernethy’s mode of pursuing his mercurial course was cautious and regular. He prescribed only small doses, taking care that the error so often fallen into, of increasing the quantity, when any benefit was perceptible, should be avoided. Nothing can be more injudicious than the augmentation of the quantity of this medicine without sufficient reason. In small doses the biliary secretion is corrected, and the digestive organs are placed in a healthier condition; larger quantities exert an influence on the whole constitution, and alter the state of the nervous system; thus controlling diseases dependent on an irritable and disturbed state of the nervous function; but, in still larger quantities, it never fails to irritate and weaken the system, and thus to derange the digestive organs. Five grains of blue pill, taken at night, will not irritate the bowels, but, generally the mouth becomes affected, with a very few night’s repetition of the dose, but this often depends upon the badness of the blue pill, for a very small quantity of sulphuric acid, in the conserve of roses, will materially affect the preparation, and produce very bad consequences. It happens that whilst the secretions from the liver are materially improved, as the excretions testify, that dyspeptic symptoms supervene; in such cases the blue pill is to be discontinued, and again had recourse to at a future time. Calomel, in a very small quantity will often be the source of high irritation, where blue pill is indicated, but, as I shall have occasion to state to you, the powers of calomel, when properly administered, are essentially necessary to be trusted to.

The functions of the skin are often impaired in consequence of a disordered state of the digestive system, and these are restored to their wonted state by this remedy; the operations of the mind are enfeebled from similar causes; hence hypochondriasis, disorders of the absorbent glands, malignant tumours, and ulcerated sores, are relieved and cured, when they are connected with such disorders of the digestive organs as are remedied by the therapeutic agent which I have considered. Every system of practice is not only likely to be too much extolled, but it is also liable to be followed with too sanguine expectations, and to be pushed to a greater extent than the original founder intended, and doubtless this has been the case with the blue pill. It is capable of producing much mischief; its abuse is as formidable a cause of disease as its proper employment is certain of being a source of health. It is not any one plan, or any one particular remedy, that can be relied on, in all the complicated maladies of our nature, but there are unerring principles which are to guide us in our practice; there are certain effects produced upon the human economy by certain agents, and a knowledge of the influence of each must teach us not to circumscribe our list of remedies, nor to place undue reliance upon any drug, however powerful it may prove.
From want of such a reflection, the blue pill has been too often indiscriminately employed, and has become the source of mischief, as I shall have occasion to state to you.—Ibid. Nov. 11.

Influence of the Weather on the action of Mercury. It is always of very considerable importance to pay attention to the state of the weather, both as to the prevalence of disease, and as to the proper period at which remedies are to be administered. * * * During fine clear weather the preparations of mercury seldom affect the bowels, nor do they produce that depression of spirits, which is so often observed to accompany their use during damp moist weather. * * * During moist states of the weather mercurial preparations should be sparingly prescribed; and when, from the diseased state of the system, they cannot be dispensed with, great attention is to be paid to the clothing. To every one in damp, moist conditions of the atmosphere, flannel is a great comfort; but silk is the most useful covering to the body. * * * Patients, therefore, during the mercurial influence are much better wrapped in silk than even when confined to bed; but this latter precaution can more generally be taken, and hence the different preparations are always best administered on the invalid retiring to bed, and he should be kept there until the effects have been produced; this is more especially the case with calomel. As much mischief has arisen from the want of proper precaution, as from large doses; and the habit of the individual is always to be duly weighed and considered. Females of a delicate, nervous, irritable frame, are rendered languid, peevish, incapable of fulfilling their usual duties; they feel chilly, they easily shed tears, are sometimes almost hysterical; and though they have no actual suffering to endure, are almost as miserable as if they had it to encounter. On the other hand, the stout, robust, plethoric individual, who probably has to bear very great pain, from the nature of the disease, seems quite insensible to any unwonted effect; it, however, more generally acts upon such a constitution with greater energy, and leaves behind it a more decided state of debility, if it be persevered in for any length of time, or if it be often repeated. The inhabitants of this country are very little influenced by it, comparatively speaking, from their being so much habituated to the changes of climate; but the foreigner is not so fortunate, nor can he bear a dose which in his native air, he could take with impunity. Indeed, they have a horror of blue pill and of calomel; and I certainly have witnessed their greater incapability of bearing it here than in their own climate. I have had opportunities of comparing these points—I have seen the practice on the Continent, and I held the station of physician to the King's Theatre, under the administration of Mr. Ebers, for three or four years, and I was uniformly struck with the singular change that climate and habits of life produced upon the effects and operation of medicine. Those who could bear well full doses under ordinary circumstances, could not submit to much smaller ones here, nor could they bear in any shape or form, the administration of mercury.

The annals of practice in India, likewise show that doses of mercurial preparations are very much influenced by a dry climate. Some very highly intelligent men there have prescribed quantities, and their repetitions which, in our moist and uncertain atmosphere, would very quickly injure the constitution, and leave it in a state to be acted upon by every morbid exciting cause that might present itself. Whether all this is to be attributed to electric states of individuals, or of the atmosphere, remains to be explained. Some of the phenomena which are observed demand further inquiry; nor do I know that they have undergone much investigation.—Ibid. Nov. 25.
Injuries of the Wrist.

The following observations of Dr. Barton are of much interest, as they relate to a kind of case, of which little has been said; but which is of frequent occurrence, and for which too little has been done. We have observed this most frequently in elderly ladies, and resulting from falls by which the wrist is most easily injured. Either the inactivity, or the greater delicacy, or both, which is common with that portion of the community, may contribute to the greater frequency of its occurrence with them. It is not very uncommon to find both wrists of elderly ladies of industrious, active habits, afflicted in the manner alluded to; and he who contributes any thing to the relief of this injury, renders a very important service to humanity.

Views and treatment of an important Injury of the Wrist. By J. Rhea Barton, M. D.—Any further observations on a class of accidents, so common, and which have been so often the subject of inquiry, as that of injuries of the forearm and wrist-joints, may be deemed superfluous by those who read, but have no personal experience in surgery. But to those engaged in the active pursuits of our profession, it is well known that, notwithstanding the volumes that have been written on this subject, there yet are certain injuries involving these parts which are not fully understood, and consequently not successfully treated.

My attention was early fixed upon such cases, and through a series of years they have been particularly interesting to me; and it is my firm conviction that, up to this time, error prevails, both as to the nature and the treatment of them, that I am induced to publish my views and practice therein.

I do not know any subject on which I have been more frequently consulted than on deformities, rigid joints, inflexible finger, loss of the pronating and supinating motions, and on neuralgic complaints resulting from injuries of the wrist, and of the carpal extremity of the forearm—one or more of these evils having been left, not merely as a temporary inconvenience, but as a permanent consequence.

The accidents which are to be the principal subject of my remarks, usually pass either for sprains or dislocations of the wrist. Under one of these denominations, are these cases to be detected, which, though partaking somewhat of the character of sprains or dislocations, are distinguishable from either of them respectively. They may be recognized by their being accompanied by more distortion of the hand and arm than any which can arise from simple sprains of the wrist, and yet less than that which must necessarily take place when there exists a complete luxation of the carpus.

The profile of the limb under this injury is a peculiar one, distinguishing it on the one hand from the sprained wrist, and on the other from luxation.

A nice discrimination between these and the other varieties of accidents, is not a mere matter of useless refinement in diagnosis; but it is one of great practical importance, as is confirmed by the number of persons who have never fully recovered from the effects of accidents of this nature, treated without such discrimination.

In simple sprains of the wrist, though accompanied by extreme swelling, the limb will still be found to retain a characteristic outline of its natural contour. It is not marked by any abrupt and solid eminences, the swelling is rather uniform, diffuse and puffy, the hand continues on the same line with that of the forearm, &c. In complete dislocations, the nature of the injury must always be very palpable from the great bulging of the over-
lapped bones, and from the shortening of the limb, &c. Between these two injuries there is too great a dissimilarity to admit of an excuse for the surgeon who mistakes the one for the other; but he may confound with these, and it is a common fault to do so, a sub-luxation of the wrist, consequent to a fracture through the articular surface of the carpal extremity of the radius; although to this accident belong appearances exclusively its own.

It is to this peculiar injury that I wish to draw attention.

It is one of the most common injuries to which the upper extremities are subjected; and every practitioner of moderate experience will, I am sure, be able to call to his recollection the appearance which the limb presents under such circumstances, as well as the embarrassment which he has experienced in his attempts to obviate eventual deformity, to preserve the functions of the fingers, and to restore the motions of the wrist and forearm.

The similarity of manner in which this accident generally occurs, is striking. It is almost always found to have taken place in consequence of the individual having thrown out his hand to rescue himself from falling, or to ward off injuries threatening a more important part of the body. In the act of falling, for example, the hand is thus instinctively thrown out, and the force of the fall is first met by the palm of the hand, which is violently bent backward until the bones of the wrist are driven against the dorsal edge of the articulating surface of the radius, which, being unable to resist, it gives way. A fragment is thus broken off from the margin of the articular surface of this bone, and is carried up, before the carpal bones, and rested upon the dorsal side of the radius; they having been forced from their position, either by the violence, or by the contraction of the muscles alone. We have then an imperfect luxation of the wrist, depending on a fracture through the extremity of the radius. The deformity will be found to correspond with this state of the case. There is a tumor on the dorsal side of the arm formed by the bulging of the carpal bones and fragments; whilst below it, on the palmer side, the extremity of the radius projects. The degree of prominence of these parts, depends upon the size of the fragment and the violence of the injuring force. The ulna not being very intimately involved in the injury, retains its position, and serves as an abutment, against which the hand seems to rest; whilst the radius, as it has its edge broken off, allows the hand on that side to be drawn upward, and hence to render, on the under side, the styloid process of the ulna more conspicuous than natural. Crepitation cannot always be felt, sometimes in consequence of the smallness or crushed condition of the fragment; at other times, owing to the great swelling and tension; but in every such case, the distortions of the limb are to be seen, and may be removed by making firm extension and counter-extension from the hand and elbow, at the same time gently depressing the tumors already spoken of. By the employment of these means, all deformity, except that which evidently depends upon the more general swelling, may be satisfactorily removed; but the moment the extension and counter-extension are relaxed, the combined action of the flexors and extensors of the fingers, as well as those of the wrist, force the deformity to re-appear as conspicuously as before: and as often as the effort is renewed and discontinued, will the deformity appear and disappear. In this respect does this species of injury in an especial manner differ from a complete simple luxation of the wrist; which, when once reduced, must continue so after the reducing force has been withdrawn. There is no spontaneous relaxation after the simple complete dislocation has been removed; whereas, in this case it immediately succeeds the withdrawal of the force. This accident must not be confounded with those which are also of frequent occurrence, namely, fracture of the radius, or of the radius and ulna just above, and not involving the joint. It will be found on referring to the writings of Boyer, Desault, Sir Astley Cooper, Dupuytren, and many others, that this frequently happens, and that the fracture often reaches to within a few lines of the extrem-
ity of the bone; and that these cases are very frequently mistaken for dislocations, though they are in reality fractures exterior to and disconnected with the joint; the deceptive deformity being occasioned by the displacement of the broken ends of the bone caused by the action of the muscles and the weight of the hand. A very good illustration of such cases may be found in plate 12, figure 1, in Mr. Hind's folio work on fractures of the extremities. It may there be seen how powerfully the flexors and extensors act in retracting the inferior portions of the bones, and how closely the radius and ulna are drawn together through the instrumentality of the pronator quadratus muscle below, whilst towards the brachius the pronator teres is exercising its power to keep the limb in a state of pronation. Now these are consequences which do not result from the species of injury to which I refer. The fragment may be, and usually is, quite small, and is broken from the end of the radius on the dorsal side, and through the cartilaginous face of it, and necessarily into the joint. The pronator quadratus is not involved in the fracture. The radius and ulna are not materially disturbed in their relations to each other. The only important change, which takes place in consequence of this fracture, is, that the concave surface at the extremity of the radius, which receives and articulates with the three first carpal bones, is converted, as it were, into an oblique surface by the loss of a portion of its marginal ridge; commonly by the separation of an entire piece; sometimes by the crushing of its substance. The moment the cartilaginous extremity of the radius is deprived of its concave form, the united force of the carpal and digital flexors and extensors is exerted to create a complete luxation; but as the ligaments are only stretched, or but partially torn, this cannot take place. The carpal bones, therefore, only emerge collectively from their natural position, and carrying before them the broken piece, rest on the dorsal side of the radius, forming a tumor there; whilst the end of the radius itself occasions on the palmer side a prominence which is round and smooth, and differing in this from similar projections formed by the fractured ends of bones, the abruptness and harshness of which may sometimes be distinctly felt through the soft parts, and which are themselves, when pressed upon, acutely painful.

It follows, in injuries of this kind, that unless some method of dressing be adopted whereby the retraction of the hand may be permanently counteracted, and prominences repressed, the patient will recover with a crooked arm, and under a sacrifice of some of the functions of the hand. The customary modes of treating either sprains or dislocations of the wrist, or fracture of the forearm, are totally inadequate to the purpose, and should not be relied on as a treatment for these particular cases by any practitioner who has regard for the welfare of his patient, and for his own reputation. There is no professional point upon which I can more confidently express myself, than upon the errors committed in the treatment of these cases,—passing, as they commonly do, for sprains of the wrist and hence treated as such. After an unvarying success in the management of this accident for many years in the Pennsylvania Hospital, in the Blockley Hospital, and in private practice, I can strongly recommend the following plan of treatment: Two thin, but firm splints of wood, are to be prepared, of sufficient length to extend from just below the condyles of the os humeri to the ends of the fingers, and of width enough to embrace the sides of the limb. These are to be lined on one of the sides with carded cotton, or something equally soft, and wrapped with a bandage. Two compresses, each about two inches square, and composed of strips of bandage, about one yard and a half long, evenly folded up, are also to be in readiness. The arm is then to be flexed at the elbow, and one assistant is to hold it firmly above the condyles, whilst another makes extension from the fingers. The surgeon now presses the prominent end of the radius on the inner side, and the bulging carpus and fragment on the outer side, into their respective places. The roller is then to be lightly pressed
around the hand and arm, securing in its course up the limb one of the compresses precisely over the carpus and back of the hand—the other with equal precision over the palmar side of the radius just above its carpal extremity. These compresses, when properly arranged, will be found not opposite to each other, but the inner one commencing on a line opposite to that on which the outer one has terminated. These being applied, the inner splint is next placed against the limb,—the assistant shifting his hand to admit of this being done without his relaxing in the least degree the extension until the limb is bandaged to this splint, when it will be found that the extension is well maintained. The outer splint is now to be applied and secured to the arm by the return of the roller. The principal use of the latter splint is to act upon the outer compress, and by its general pressure to weaken for the time the force of the resisting muscles. By the employment of these simple means, the indications in the treatment of this accident will be found to be fully met. The arm may be carried in a sling, and the patient permitted to walk about, &c. In three or four days the limb should be undressed and inspected; and whilst held so that relaxation cannot take place, the wrist and fingers are to be bent enough to preserve the flexibility of the joints. The dressings are then to be re-applied. These operations are then to be repeated, for four or five weeks, to be repeated every day, adding to them the motions of pronation and supination.

The practice of keeping, a limb in splints, with the joints in an immovable state for weeks, even when the fracture is remote from the articulation, cannot be too earnestly; deprecated; and in cases where the injury to be repaired has involved a joint, such treatment is censurable to a high degree, as it is almost certain to destroy the mobility of it by promoting the adhesion of ligaments, the union of tendons with their thaeæ, and by obliterating bursæ—evils never to be fully repaired.

So prevalent is the error on this point, and so serious are the results of such practice, that I have settled my mind to the belief, that in very many cases of fractures, the imperfect recovery of the patient is owing to the injudicious use of splints and bandages, rather than to the complication or original difficulty of the case. For the interruption of adhesions of the ligaments, for insuring a continuance of the muscular power and offices of the tendons, and for the entire preservation of the motions of joints, it is indispensably necessary that these parts should be put into action frequently during the treatment of a fracture, in which they are interested, either from the adjacency of the fracture, or from their confinement by the splints necessarily used on the occasion. The movement of those parts by the surgeon at stated periods, is not at all incompatible with the quietude and the progressive re-union of the bone itself. The omission of this duty arises, I am persuaded, out of our knowledge of the necessity of securing rest to a broken bone, without at the same time considering that by the means we employ, and the course we pursue to accomplish it, we may entail upon our patient a calamity quite as deplorable as that of an ununited fracture or a crooked bone—namely, a stiff and useless limb. The surgeon, then, is to recollect, that in the cases made herein the special subject of notice, he has not only the duty to perform of obviating deformity of the limb, but of preserving the free motions of all the other parts, and that this can be accomplished only by daily trials of their freedom and functions.

By an adherence to the plan of treatment just recommended, and by an attentive pursuance of the means spoken of to preserve the functions of the limb, I have uniformly succeeded in restoring perfectly the arm to its natural shape and offices. I can, consequently, on just grounds, advise others to adopt the same practice.

It sometimes happens, also, though rarely, that fracture of a similar character to the one just described, occurs on the palmer side of the radius, from the application of force against the back of the hand whilst it is bent
forward to its ultimate degree. This usually happens in awkward attempts to parry the blow of a fist, from pressure in dense crowds, and from falling on the back of the hand whilst it is bent forward. Whenever the fracture takes place in front, the end of the radius projects over the wrist on the dorsal side, and the carpal bones and fragment rise out of their proper situations, and form the tumour on the palmar side, thus reversing the deformity of the arm. The principle in the treatment of this variety of the injury, is the same as in the foregoing.

Dupuytren used to trace an analogy between the ordinary fracture of the lower end of the radius, and fracture of the lower end of the fibula; and as he had founded a very successful method of treating the latter injury from the view he took of such cases, he extended his analogy to the treatment of the former by means and apparatus designed to accomplish the same ends. How far the practice may be successful when applied to the cases for which the practice was specially intended, I cannot say. Having myself found simpler means attended with success, I never adopted his practice; but for the treatment of fracture through the joint, &c., the practice would be unavailing. Neither is there any resemblance of this injury to the fracture of the fibula. It may be, however, not inaptly compared to the partial luxation of the foot, depending on fracture of the internal malleolar process of the tibia, including a portion of the articular face of the bone—an accident well known to surgeons.

Medical Examiner.

PART III.—MONTHLY PERISCOPE.

Medical Society of Augusta—Session, 10th February, 1839.

Question for discussion,

"Are there any signs or symptoms by which worms can be inferred certainly to exist in the alimentary canal; and if there be, what are they?"

Dr. P. F. Eve was the essayist, and read the essay on that subject, which is found in part first of the present number.

The discussion then ensued, in substance, as follows:

Dr. Dugas said he proposed the question now before the Society, because almost every case of infantile disease is referred to worms, to which prejudice, he conceived, a large number of deaths were attributable—mothers being led thereby to trust to their treatment for worms or for teething, according to age, &c. In consequence, the gums are cut, and the little sufferer is dosed liberally with spirits of turpentine, and other vermifuges. He had, therefore, called the Society's attention to the subject, with the hope of putting down the prejudice. He considered the case recorded by Dr. E. A. Eve, and read by the essayist, as highly interesting, but its value was necessarily much curtailed by the want of further pathological anatomy. Dr. D. concluded by
observing, that the essay was so full and complete a description of the subject, that there was no room for further remark.

Dr. Bowen said he was with Dr. Dugas. He approved of the essay, as well supporting the truth. There may, he said, be irritation, with, or without worms; and no man can distinguish from which source the irritation arises. He gave a case in point—it was of a man laboring under symptoms of dyspepsia. Dr. B. then gave the following case—A negro girl, six years old, was treated by a respectable physician of Columbia County, with fifteen drops of wormseed oil, three times a day, followed by large doses of calomel. The attending physician being one day absent, Dr. B. was called, and found tympany to great extent. He gave castor oil, which operated copiously, and reduced somewhat the distension; but no worms passed, and death ensued; after which, upwards of sixty were found in the alimentary canal, and three had passed into the abdominal cavity. No spasms occurred in this case.

Dr. Robertson rose, he said, merely to concur in the general sentiment, that there was no certain diagnostic, more than that of their actual passage. He was not only certain that there is no sure diagnostic, but that, if there were, there is no certain treatment in the event of a good diagnosis. He, therefore, treats the symptoms which occur in these cases on general principles, and with general success. Afterwards, sometimes, a few worms pass. He has observed large numbers come away without either previous symptoms of their presence, or treatment; whilst it is often the case that, with the strongest symptoms, none can be obtained. He thinks they depend on an unhealthy state of the digestive apparatus, and consequently, the best treatment is to restore the general health; which plan, he thinks, will succeed nine times out of ten. He stated a case wherein he used syrup of Stillingtonia Sylvatica for Porrigio Scutellaria; and a large number of lumbricales were produced. Dr. R. then referred to the case given by Dr. Bowen, in which three worms were found in the peritoneal cavity. He considered, that in this case, disease had run its course, and the worms had gone through the openings formed by other disease.

Dr. Dugas differed from Dr. Robertson, in thinking that worms are to be traced to a morbid condition of the canal, or of the digestion; and thinks that opinion conflicts with facts; because large numbers of persons presenting no symptoms of disease, pass great quantities of worms; whilst others, habitually diseased, never pass them. Again, he said, worms are most commonly generated at a certain early age, and not usually in adults; and with them, not under appearance of disease, but under the best aspects of health and good digestion, and vice versa. He concluded, therefore, that they are not the result of disease.
Dr. Bowen accorded with Dr. D., for worms are as commonly met with in healthy, as in unhealthy regions—children in the most healthy places, passing large quantities, without sickness. He considered them the cause instead of the consequence of intestinal irritation.

Dr. Robertson declined the explicit belief that worms originate from disease, but merely gave the opinion of some authors on this subject. But he was not disposed to retract any thing he had said, and referred to the investigations of some writers which served to prove the fact that they originate from disease of the intestines or the collateral viscera; and urged the point that functions and secretions may become disordered, as well as other effects from secretions thus disordered; and on this ground the opinion of those writers cannot be condemned. He denied that the majority of cases are in children, in proportion to their relative number; but if it be the case, it is because adults enjoy a greater immunity from disease. Some seasons, he remarked, worms are more common, and many children are often complaining, but are not noticed. He then referred to Dr. E. A. Eve's case, in which the woman ate dirt; and to the greater frequency of worms in cases of dirt eaters.

(Quere—Is this, effect, or cause?)

Dr. E. LeRoy Antony believed that there is no certain diagnostic; but looks on the cases as intestinal irritation, and considered worms as a very common cause of that irritation, especially in children. He did not believe they arose from irritation or disordered secretions, but that they were more probably the products of a kind of fermentative process, because this is known to produce verminous insects of different kinds out of the body. He thought proper to refer to Dr. Bowen's observation, of spasms produced by Spigelia. He could not conceive how Spigelia produced spasms in the case, with dilated pupils.

Dr. Bowen stated that children were often treated for the intestinal symptoms and recovered, and passed the worms sometime after.

Dr. P. F. Eve thought that worms were introduced by animalculæ or ova—and then multiplied rapidly. When generated, they produce irritation in the alimentary canal. Disease is, therefore, effect, and not cause. He was of opinion, that Dr. E. A. Eve's case died from peritonitis.

Dr. Dugas declared his firm belief, that animals do not generate spontaneously; but that they are produced by eggs, as in bots, which in spring, and in summer and autumn are passed off in chrysalis form. He therefore concluded, that at certain times, children carry into the alimentary canal, ova or animalculæ, which multiply—hence their greater frequency in some seasons.
Dr. E. LeRoy Antony did not believe that peritonitis is always the cause of death in these cases; because this (peritonitis) must have a certain time more than is often allowed in the case. He considered that death in these cases is often, perhaps generally owing to injuries suffered by the nervous tissue—hence the opisthotonos in Dr. E. A. Eve’s case. He thought the bottles had been well accounted for, but inquired how gentlemen would account for worms in the middle of a nut, as a chestnut for example?

Dr. Dugas replied that the punctures were made when the nut was in its early stage, but growth obliterated the aperture.

Dr. M. Antony’s opinion accorded with that of the gentleman who had gone before him, that there was no absolute diagnostic of worms in the first passages, generally available for practical purposes, which, he apprehended, was the object of the enquiry before the Society. He differed, however, with some sentiments which had been offered in the course of the evening—particularly that of worms being the effect instead of the cause of disease, and of their incoercive tendencies in the intestinal canal; for although he had often found them remain incoercive for a length of time, and notwithstanding the difficulty, and often the impossibility of distinguishing the symptoms from those of other mechanical and chemical irritants, still he considered them so frequently the cause of intestinal, vascular, or nervous irritation, and so suddenly destructive was their tendencies in other cases, that he conceived that good was done by the empirical practice used by the common people, of treating all suspected cases for worms; and he knew no better plan for the use of those who had no medical judgment. He knew them to be so ample a cause of some of the most dangerous diseases, that he thought it the less of the two evils, to treat suspected cases for worms, at the risk of its inefficacy, rather than delay for the development of other causes. At any rate, he considered it far more prudent to treat cases, the symptoms of which render it probable that they are worm cases, with vermifuges, than to omit their use; not only on account of the real probability of worms in such cases, but likewise on account of the often immediate dangers of neglecting those offending causes, as he knows them to be. The idea of their being effects of disease, is calculated to, and often does, lead to a passive course of treatment relative to them; but he considered it limited reasoning on the case to allow that idea, this influence, even were it correct: for, whether effects or causes of some morbid phenomena, they are not the less calculated to be causes of others, and of some which are so severe and rapid in their course, as to preclude the hope of remedy. Such, particularly, were those cases where perpetual convulsions were produced, which often ter-
minate only in death. [Such, also, were those cases of violent convulsions which terminate in a profound apoplexy, followed by death; and which are not unfrequent with children of such conformation and habit as to favor apoplexy. It would, he considered, be easily seen, that, under such circumstances, besides the doubt of their sufficiency for correcting these conditions, the very administration of most remedial means is precluded. Such, also, were those cases in which mechanical injuries of the intestines are effected by worms, and such injuries thus arising are now beyond controversy; pathological anatomy establishes abundantly this fact. He would give a case: A. girl, sixteen years old, was left by a travelling party under his care. She had been sick for many days, but no accurate history of her case could be obtained. He found her very torpid and lethargic—comatose, pulse small and quick, and not very much increased in frequency—skin dry, with diarrhoea, and very considerable emaciation—tongue clean and red—abdomen tympanitic. He administered vermifuges only, by which, during the first day, two large lumbricales were evacuated. Next day the girl died. On examination of the abdominal viscera, no mark of disease was observable, except two perforations through the whole of the coats of the intestines, about the size of, and much resembling, buck-shot holes. Much engorgement was found about the wounds, and extended from each, six or eight inches, up and down the intestinal tube, affording a grumous and bloody aspect, beyond which, it vanished into a moderately increased vascularity of the canal, diminishing in degree in proportion to the distance from the wounds. Here it would be preposterous to conclude, as had been supposed, and may, for aught we know, have been the case with Dr. E. A. Eve's case, that other primary disease had run its course and caused ulcerations. These openings were not of the character of ulcerations produced in the progress of typhoid fevers, but were evidently recent wounds, as proved by their appearance in every respect. There were also, but two, corresponding with the number of worms; for none were found in the canal on dissection; nor was there any other wound, and the ecchymosis or engorgement evidently extended from these wounds as primary foci of irritation, just as it would have done from any other mechanical injury which might not have sooner produced death. He had observed similar effects in kind, in a number of other cases, and had often observed them in the intestines of swine. When such results of the action of worms occur, it is obvious that all remedial means will prove fruitless; and even from slighter wounds from this cause, in which only the villous lining is wounded, recovery is often extremely tedious, and the patient seems to become dwarfed by the permanent impairment of the functions of digestion and nutrition, for many years, and even for life. Under these views then,
he considered that, in the want of unequivocal evidence of the presence of worms, the symptoms which render them probable should be treated with the best vermifuges; not omitting, however, regimen and other treatment demanded by the other characters of the case. He further remarked, that we have no certain vermifuge power; and consequently, cases were often considered as not occasioned by worms, because these were not brought away by our best vermifuges. He had found cases which resisted all vermifuges, repeatedly and freely administered, at various times—even one in which epileptic fits had first occurred monthly, and which had continued, under the use of vermifuges, and all other plans of anti-epileptic treatment, until the fits had come to recur eleven or twelve times a day, and in which worms were never obtained until a galvanic current was established through the system: on which, nine of the largest lumbricales he had ever seen, were at once brought away by the use of Spigelia—the fits ceasing immediately on establishing the galvanic current. He considered, therefore, that practitioners too often overlooked worms as a cause of disease.

Here the regular discussion of the evening closed.

Dr. Dugas then read the following interesting case.

Premature parturition—The infant weighing but seventeen ounces—lived twenty-four hours. Phillis, a young negro woman, had a severe attack of remittent fever, during which, she was repeatedly threatened with abortion, having violent uterine contractions, which were usually quieted by opiates. She was discharged well on the 18th September, and continued so until the 2nd October, when, about an hour before day, she was taken with nausea, vomiting, and violent labor pains, soon followed by a discharge per vaginum. I gave her an opiate, but in an hour after, she was safely delivered of a girl weighing seventeen ounces, and which lived four and twenty hours! The little infant opened her eyes, cried, sucked a "sugar teat," would gape, and indeed seemed disposed to live on. She, however, gradually became less vivacious, and finally died.

When called to see the mother, I found the fundus of the uterus nearly or about as high as the umbilicus, which had led me to estimate the pregnancy as one of six months; but, from the calculations of the mother and grandmother, as well as from the child's development, it could not have exceeded five and a half months.

The Society then adjourned.
Voluntary Power of the Iris.

The following very curious and interesting case, manifesting the extension of volition to the Iris, is extracted from a letter from our excellent and talented friend Dr. Henry Hull, dated Athens, January 23d, 1839—

"Mr. H. a highly respectable and worthy gentleman of S—possesses the very unusual, if not unprecedented power, of contracting and dilating the pupils of the eyes at will, in a strong light. Although it may not be so to others, this is to me, new; as I have ever regarded the contraction of the Iris as purely sympathetic, resulting from irritation of the retina; and its dilatation, as the result of the absence of this irritation. In this case, the power to dilate, as well as contract, was indubitably voluntary: this I witnessed. How do you account for it?"

The idea of the voluntary control of the Iris, especially under the presence of its appropriate stimulus, light, we admit is a novel one. There are many instances in which some persons have a free voluntary control over certain muscles which others have not; such instances are common with regard to the platysma myoides, the attollens aurem, the occipito-frontalis, &c. And we have believed that much of the difference in the physical powers of individuals—their peculiar activity in the performance of movements which, to others, are impossible, was attributable to an original or acquired command of some muscles not at all subject to the will in others, or an unusual increase of the powers of volition over those ordinarily subject, in a limited degree, to the control of the will. The management of the voice, as in singing, ventrilloquism, &c. faculties so peculiar to some, may perhaps, be accounted for on this ground. The language of the face, so to speak—its great difference of expression in different individuals, as being fixed as in death, in some cases, whilst in others, it moves and speaks in every part, may be accounted for in like manner. But the peculiar structure of the Iris, the purpose designed to be effected by it, which is chiefly the regulation of the admission of light to the retina, &c. are such that we are barely able to consider it in the light of a muscle; and when considered so, we have, with Dr. Hull, considered it as necessarily sympathising with the retina, and consequently, supplied with nerves from those which are peculiarly subject to excitation by light. We should be pleased to see the opinions of physiologists on this subject.
Robert H. Copeland.

We have recently received from Dr. Bean, the following minute description of this curious example of monstrosity. We have delayed noticing it for some time, in the hope of seeing for ourselves, this singular phenomenon; but he has not, according to appointment, visited Augusta; and as the persons whose names are attached to the following statement, afford assurance of its truth in every particular, so far as ample inspection could enable them to describe, we feel unwilling to detain it longer from the medical public. We consider it confirmatory of the proposition which we recently advocated in this Journal, on the subject of maternal influence.

A Physiological Phenomenon, or the Snake man; Robert H. Copeland.—This most singular being, perhaps, has not a parallel in medical history.—He is now about 20 years old of ordinary stature and intellect. His deformities and physical peculiarities are owing to a fright his mother received from a large Rattle-Snake attempting to bite her, about the sixth month of her pregnancy. For several minutes after the snake struck her she believed herself bitten just above the ankle; and so powerfully was her mind affected, that, when she was delivered, the child's will was found to have no control over his right arm and right leg; which are smaller than his left extremities. He can use his right leg now, sufficiently to walk in a hobbling manner, but cannot retain it stationary, without the aid of the weight of his body. His right hand has the usual number of fingers, but they are smaller than those of his left hand. The wrist joint is looser than usual, and his hand stands at an angle with his arm. His front teeth are somewhat pointed, and incline backward, like the fangs of a snake. The right side of his face is sensibly affected; his mouth is drawn considerably farther on the left side; his right eye squints, has several deep grooves radiated from it, and has a very singular appearance, much resembling a snake. But perhaps the most extraordinary circumstance on record, is, that his right arm, when not restrained will draw the lower part to about a right angle with the upper and sometimes two or three, but most commonly, only the fore finger will project, curved at the first joint, much resembling a snake's head and neck, when in the attitude of striking; and the whole arm will strike at an object with all the venom of a snake, and precisely in the same manner, for two or three, and some times for four or five strokes, and then the arm assumes a vibratory motion, will coil up and apply itself close against his body. During this period, his right foot and leg become excited, and if not restrained, will strike also. His face is also excited; the angle of his mouth is drawn backward, and his eye snaps more or less, in union with the strokes of his hand, whilst his lips are always separated, exposing his teeth, which, being somewhat pointed like the fangs of a snake, causes his whole visage to assume a peculiar and snaky aspect.—During infancy and childhood, the whole shape of the snake, even to its fangs, was printed on the anterior of his leg; but as he grew up, it became gradually obliterated, till now there is only a small depression where the snake's head was imprinted. The sight of a snake fills him with horror, and an instinctive feeling of revenge; and he is more excitable during the season of snakes; and even conversation concerning them excites him, and his arm appears more anxious to strike than when no such conversation is going on. All the above phenomena are perfectly independent of his will, as hundreds can testify who were acquainted with him long before he had any idea.
of exhibiting himself publicly. This singular being was born in Carolina, and moved to Georgia in the year 1829; where he has since remained, performing such labor as he could with one hand, and by unremitting exertions has maintained his wife and an increasing family. His physical peculiarities being considered only in the light of a common deformity, he never thought of exhibiting himself publicly; till it was suggested to him by a medical friend in 1837.

We the undersigned, Physicians and others, after carefully examining Mr. Robert H. Copeland, do certify, that the above description of him is substantially true.

JACOB STOKES, M. D.
ADDISON BEAN, M. D.
F. E. MANSON, M. D.
A. V. MANN, M. D.
SAMUEL C. ELLIOTT, M. D.

Of McDonough, Henry county.
Hon. WM. SEGAR, M. D. of Henry co.
JAS. LOVE, Sheriff of Henry county.
JACOB MARTIN, Attorney at Law, Zebulon, Pike county.

New Treatment for Pterygium.—Dr. Brand, of Jonzac, (Charente Inferieure,) has successfully treated a case of pterygium, in which this morbid growth extended a line and a half on the cornea, by passing over its surface from its apex to its base, a pencil of solid nitrate of silver. After this application the eye was immediately bathed in cold water and then a compress wet with this liquid placed upon the organ. In three days the slight inflammation caused by the cauterisation disappeared; the caustic was then again applied, and the cauterisation repeated every three or four days; the pterygium under this treatment gradually diminished; the cornea recovered its transparency without the slightest cicatrix, and in a month the affection was entirely removed. Journal de Medicine et de Chirurgie Practiques, Oct. 1837.

Impropriety of operating for Fistula of the Anus in phthisical subjects.—Last year a tuberculous patient, affected with fistula of the anus was admitted into M. Lisfranc's wards. Two years previously, this patient had been operated on for fistula by a surgeon of Paris, but this disease returned. M. Lisfranc refused to repeat the operation, saying that the patient was most fortunate in his complaints returning, for his death from phthisis would in all probability have succeeded his cure. This surgeon added that he had often seen natural emunciories prolong the life of phthisical patients for a greater length of time than those established by art.—Journ. de Connaiss. Méd. Chirurg., August, 1837.
MEDICAL INTELLIGENCE.

We have just received the prospectuses of two new publications, which, from the references to their contents, we should expect to meet with extensive patronage. The first is a translation from the third edition of a treatise on the Diseases of Infants, by C. M. Billard, Docteur en Médecine de la Faculté de Paris, &c. &c.

A good work on this subject, founded on long and minute observation, we consider still a desideratum, notwithstanding several late publications of interest by some of our most talented practitioners. It appears that Dr. Billard founded his treatise on recent Clinical observations and investigations in Pathological Anatomy, made at the Foundling Hospital at Paris, under the superintendance of M. Baron. It is translated from the French, by James Stewart, M. D. late Physician to the New York Orphan Asylum, and one of the Consulting Physicians of the Northern Dispensary of the City of New York. The situation of the author in the Hospice des Enfants Trouvés, enabled him to examine the condition of many thousands, and to extend his anatomical researches to many hundreds of children in the course of a year—opportunities abundantly calculated to give to the work the deepest interest. The author professes to exhibit the peculiar character of the symptoms of infantile diseases, and to consider them in relation to the alterations which the organs have undergone—to have passed each apparatus under review, and to have studied the varieties of form and appearance of each, with reference to their healthy and their pathological conditions; and to have drawn no conclusions until the symptoms and the nature of the lesions have been duly considered.

The translation has been submitted to the inspection, and received the unqualified approbation of, Isaac Hays, M. D., Editor of the American Journal of the Medical Sciences, Philadelphia; of John W. Frances, M. D. late Professor of Obstetrics, Diseases of Women and Children, and of Forensic Medicine, in the College of Physicians and Surgeons, New York; Richard K. Hoffman, M. D., one of the Surgeons of the New York Hospital, and others.

The work is to contain 600 pages, neatly bound in sheep. Price to subscribers will be three dollars. The work was to have been published in the course of the past winter. Subscribers names are requested to be forwarded to the publisher, George Adlard, 46, Broadway, New York.

The other new work is published by the same publisher, and is entitled Medical and Physiological Commentaries. The work will be comprised in two volumes, each consisting of at least 600 pages, and the price to subscribers, six dollars, for the two volumes. By Martin Payne, A. M. M. D. Professor of the Theory and Practice of Medicine in the University of New York, and author of Letters on the Cholera Asphyxia of New York.
The following, amongst others, are the topics to which the author professes to have given his attention.

Examination of subjects relating to obscure and controverted questions in Pathology and Medicine.

The Pathology of Venous Congestion.

The Philosophy of the Operation of Blood-letting—its practical application, and the philosophical and practical distinctions between General Blood-letting, Cupping, and Leeching.

General Views of the Treatment of Inflammations and Venous Congestion.

The existing Theories of Inflammation, and how far Inflammation is concerned in structural changes.

The Humoral Pathology, and an examination of opinions thereon.

Examination of Views in relation to the Laws of Vitality.

Inquiry into the comparative merits of the Hippocratic and the Anatomical Schools.

Examination of M. Louis' Works on Typhoid Fever, Blood-letting, and of his Numerical System of Inductions.

Examination of Marshall Hall, on Blood-letting, and Irritation from the Loss of Blood.

The Philosophy of Animal Heat, especially in reference to the Induction of Dr. Edwards, with some new experiments.

The Laws which govern Venous circulation.

The application of Chemistry to the Philosophy of the Vital Functions, and their results.

The theory of Digestion, &c. &c.

The topics of each of these works, are of the greatest interest to the profession, good treatises on which, written under the guidance of rigid induction, should be in the hands of every member. Induction is, fortunately, becoming so much the order of the day, that we presume these treatises would scarcely be offered to the public at the present time, without this as a shield to defend them through the reviewing ordeals of the present day. We have not had the good fortune to see either of the works; but so far as we can judge from the prospectus of each, which is now before the public, we feel disposed to commend them to the attention of practitioners and students.