A TRULY VIRTUOUS WILL IS ALMOST OMNIPOTENT.

EDITED BY

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Article I.


Question assigned by the Society,

"Can the mental or physical state of the female exercise any important influence over the foetus in utero?"

When we attempt to look into the unsolved problems with which nature everywhere surrounds us, and when called on to determine the truths of nature in regard to matters, the premises or elements of which have not been fully arrayed before the mind by the facts of history or the researches of science, we know not whither to turn for imploring aid.

If we look to the thousand volumes which industry and learning have heaped around us, we find little more than a few solitary facts of observation, and the isolated, or abstract opinions of men—some truly in the course of honest research, but which, from partial data, must also be partial or imperfect. Others, which are themselves fair and legitimate deductions from the...
premises reasoned from, but which (premises) are themselves not fair and true. But still, these opinions, coming from men of influence, pass in the crowd of truths by which they are accompanied, as legitimate deductions. Others again, and by far the most numerous, the sheer imaginings of men, which cannot bear the scrutiny of the first step of a rational investigation. And again, we find homogeneous conclusions drawn from heterogeneous facts which should have been assorted and arranged separately, in order that in the reasoning process, they might fairly have yielded, each its individual, or each class their own peculiar results.

Such is the situation of the enquiry presented to your essayist. The question as presented is duplex. It includes two propositions essentially different, and connected by a disjunctive, and this is their declaratory reading:—Can the mental state of the female exercise any important influence on the foetus in utero; or can the physical state of the female exercise any important influence on the foetus in utero? These, as cannot fail at first view to be perceived, involve physiological enquiries of extremely different natures. The last is one which, although it has been from time to time contested amongst medical philosophers, and even as late as the present century, may now be considered as settled beyond the reach of controversy.

Many are the facts in point, whereby this truth is rendered indisputable. Setting aside the most rational view of the healthy, uninterrupted operations of nature in the formation and perfect development of the offspring, a whole class of foetal peculiarities or anomalies, are the indispensable results of the constitutional physical imperfections of the mother. Amongst these we may name very few out of many; such as the descent of small-pox, measles, syphilis, &c. &c. from the mother to the foetus in utero. This truth is palpable; as the offspring is, prematurely, as well as at term, brought forth under the fully developed symptoms which characterize these morbid affections; whilst in other instances, children are born of mothers who have, during gestation, labored under those diseases which, prevailing once, destroy the susceptibility of them ever after; are found to be as exempt from them as those who have suffered them after birth with all possible regularity. These facts are received as unequivocal proof that the offspring had suffered and recovered
from those diseases, in utero; and consequently, by the "important (physical) influence" exercised by the mother on the foetus in utero.

These are morbid phenomena. But there are others not less demonstrative of the truth of the proposition which these so substantially reveal; and which are found in the perfectly physiological condition of both parties. Amongst these we will name the peculiar conformation of the offspring to that of the mother in many instances—the colour of the skin, as of the white, with the East or West Indian, the Spaniard, or the African, &c. The unavoidable tendency of these facts is to establish the truth of the influence of the physiological, as well as the others did that of the pathologica1 physical state of the mother.

But there is another class of influences; or we should rather say, in the present state of the argument, phenomena, included under the general term of transcendental anatomy, which we may describe under three orders:

1. Monsters by excess; or transcendental anatomy, properly so called.
2. Monsters by default.
3. Monsters without excess or default, but with peculiarity of structure or function.

Under the first of these orders are included supernumerary parts, as fingers, toes, limbs, heads, testes, uteri, hermaphroditism* (so called), imperforate parts, disproportionate viscera, &c.

Under the 2d order, or monsters by default, we may name hare-lip, fissured palate, defect of fingers, toes, hands, feet, nose, eyes, legs, arms, head, abdominal parieties, brain, spinal marrow, uterus, &c.

Under the 3d of these orders, we may include corporeal and mental anomalies, which are neither transcendental nor in default as to quantity; as spots in the skin, albin0 skin, hair and eyes, &c., transposition of viscera, peculiarities of mind, disposition, temperament, &c. &c.

Before going farther into this argument, let us spread before us the different orders of causes and facts, as we do definitions,

*It is understood that there is no case of hermaphroditism recorded on competent authority, by an anatomist, in which the individual is capable both of impregnating and being impregnated, &c.
axioms, postulates and propositions in philosophy, which may necessarily be looked to, in order to fair reasoning. Causes may be considered, in the language of logicians, final, active, passive, remote, proximate, efficient. The several, or joint, or successive efficacy of these is to be duly considered. Again: They may be mental or physical. It is the mental only with which we have to do on the present occasion. Our facts will be applied to the argument in the progress, as occasion may require.

In regard to the causes of these human anomalies, (and animals too, for they are found in almost all orders of animated nature, as the frog, fish, fowls, quadrupeds of all kinds as well as bipeds,) we find in reviewing the labors of philosophers in the premises, that error which has, in but too many departments of science, ever retarded its progress—a disposition, arising out of the pride of human nature, which leads to a dogmatical denial, not only of opinion formed from observation, because they see not themselves the rationale; but facts on the best authority, because they know not how to make deductions therefrom.

Now in going down, in a scientific investigation, to elementary principles, we have to say that we know nothing previous, in the nature and relationship of cause and effect, to the fact of the immediate antecedence or succession of phenomena which bear, in their nature, that just proportion, one to the other, which must exist, in order to afford competence of causation to the product resulting; when all the varieties of causation, both in the active, passive, proximate and remote relations are considered; and especially, when these causes are, according to the rule of induction, ascertained and competent.

In this investigation it is admitted that there are many causes which are occult—not ascertainable in whole, or in part; in others again they are partly ascertainable and partly not: whilst in others again they are all sufficiently obvious. Still however we are not, because we know not any or all of the causation in the case; or because, knowing this, we may not understand how to reason from that which we do know, at liberty to deny the fact of an etiological nature to the case.

In the first place, it is an axiom in logic, as it is in mathematics, that there is no effect without a competent cause. But we are able in this matter to investigate a little more specially, and
determine that there are causes of peculiar nature which do operate through existing media, between mother and foetus, from which we may reason with tolerable analogy. For example, syphilis is found affecting the tegumentary or the ossious tissue of the new-born child—the mother having suffered this disease during gestation. So of small-pox, &c. Your essayist once knew a woman who herself had congenital cataracts, and who gave birth to seven children, of which we now possess one, all of whom had congenital cataracts. These are all doubtless material physical influences of the mother on the foetus in utero.

But your essayist is not unaware that there are many grounds of plausible objection to the common opinion which many professional men, with the vulgar, entertain, that maternal influences are extended to the foetus in utero. Your essayist would, however, analyze some of the most plausible and see if there is not an error in their application to the subject before us—remarking at the same time that those sayings called vulgar, because common, and because their rationale is not understood, are often sayings founded on the observations of nature's truths for successive ages: nor has man the liberty of denying their truth, except on rational demonstration.

It has been said* that a knowledge of the different kinds of the anatomical structure of monsters, affords a very strong, and indeed incontrovertible proof of the absurdity of the common notions—that the most zealous advocates of these notions will hardly contend that the imaginations of the mother can annihilate one-third, or one-fourth of the head, and adapt it to an exactly corresponding piece of another head resembling it in size, form and features—make a double vertebral column, &c. It is triumphantly asked, "how the longings, or fright of the mother can dispose of the brain, membranes, scull, scalp, &c. as in acephili?" "How can it stop up the anus, destroy the fore-arm and place the fingers on the end of the stump, annihilate the nose and bring together and confound in one the two eyes, as in a cyclops?" Again, we are asked, "how do hogs, horses, hares, &c. long?" "How does the explanation apply to trees and other vegetables in which monsters are found?"

*Rees' Cyclopaedia word Monsters.
It appears to us that results are not liable to be identical from different remote causes, as from the same, even if the proximate and immediate cause influencing be the same; and we would look fully to the etiological department of this question; because in so doing we may perceive reasons to account for results, similar or dissimilar, by similarity of the proximate; or dissimilarity from difference in some of the causes considered of minor influence, as the passive, or the remote; and in passing, we must remark that, here is a field for great error in practice; nor has it remained uncultivated. Predisposing and remote influences are generally more or less obscure; they are farther off, apparently, from the phenomena we are called on to correct, and, obscured by the glare of the exciting causes, they are lost sight of as contributors to or modifiers of the morbid phenomena. As these are indeed the great specified modifiers, no course of treatment founded on a reasoning process in which these have been omitted, or not allowed their due influence, can possibly be correct, provided this predisposition be abiding, which is generally the case. And hence it seems to us has arisen the great error of the ultra solidists in medicine, and hence, the inglorious evanescent bubble which arose from Val de Grace, and meteor-like, glittered in the firmament, and shed a false glare over the world, obscur ing for a time all rational views, until like a sweeping pestilence, it left death and destruction in its train.

We find, as we have before intimated, that writers have jumbled together facts essentially different in their nature and their indications of causation, and applied a similar causation to this heterogeneous assemblage, to try its proportionate appearance as cause; as in the triumphant description of their position just above referred to; and that, even here, they have made the application to false premises for making the test, thus:—"How can longing, or fright dispose of the brain, membranes, scull, scalp; or how destroy the fore-arm, &c.?"

These, it will be observed, are our second order of monstrosities, or monsters by default. Now, it is altogether assumed on their part, that the brain, scull, membranes, &c. of the head, or that the fore-arm was ever there to be "disposed of" or "destroyed." This assumption cannot be allowed; for nothing positive has a right to be assumed, without some evidence of the fact. It may, therefore, instead of endeavoring to shew how the
mother's longings, fright, &c. shall be made appear competent to the effect of removing these parts in default, be denied that those parts were ever there in the case which ultimated in such a deformity. But men have gone a great way to find cause, more strange than any we need find, to account for "the removal" of a part, without any evidence that the part ever did exist to be removed by such a cause. It were enough, to find cause for the present phenomena, without reaching beyond this to involve our already difficult problem in mist and confusion, before it is called forth by the facts of the case.

Although the condition of the body is known to reflect certain influences on the mind, still the great superiority of this to the mere organism, has not remained unclaimed and unestablished to this day, and to this argument. Its power of effecting physical ends through the medium of the organization over which it presides, is a proposition which none may controvert. It is therefore a remote, mental cause, of many physical effects, acting through the medium of the organism. But it is not the only cause which may bring the organism into a certain state of exuberant or of deficient functional action, no more than that traction is the only manner of applying force to move a body. Propulsion may do it as well. It may no more be considered the only cause, than that the force in moving this body must only consist of animal force, when steam may as well effect the same.

In generation, and in gestation, the foetus is developed by vascular action in effecting secretion and nutrition, and appropriation to the accomplishment of the purpose in view. This is all amply provided for in the previous developments and limitations of growth in the female, and she is physically prepared for the sustenance of the foetus in and extra utero for a certain period of her life. Thus arranged according to the regular order of nature, and the imperfect performance of the functions, the whole foetal formation and development is effected. This is all just as plain and simple as that the stomach, in a perfectly healthy state and condition, receives good diet, and digests it perfectly, and the nutriment is then regularly and rightly appropriated to the renewal or the proper development of parts. But here, the impression of profound grief, or transporting joy, or excessive anger, will impair the appetite, and the depressing passions more or less completely impair or destroy the digestive power
of the stomach, as well as excessive watching, abuses of wine or diets;—causes essentially different in their natures. When animation is concerned, the law of causation appears to differ; but it is only appearance, because we do not always know how to estimate the difference of this accessory or modifying cause.

Generation and uterine development of the foetus is but a function, as other processes in the economy, as digestion and nutrition; nor is it more entirely exempt from the power of disturbing causes than other functions. This is obvious in many ways. Let us bring to our view the facts of nature. Your essayist once had the care of a lady who had three children successively, who were born with imperfect feet. In each of these pregnancies she was seized with a flooding about the period of foetal growth at which the feet are perfected in their development. The deformities were very similar in all the cases. At the subsequent pregnancies, hemorrhage was prevented, and no more deformities occurred in the only two succeeding births. Again: It is a fact of common observation, that in the advance of the child-bearing period of woman's life, when the surplussage to which she is subject for about thirty years of her life, is less abundantly kept up, her last lactations become insufficient for the sustenance of her offspring after birth. It is in like manner often manifest that her last pregnancies are less perfectly sustained, and sometimes, from this cause alone, abortion or premature birth takes place. Here is a physical cause of that foetal imperfection which does sometimes arise in this period of life. In the other case, where there was actual loss of blood at the time for certain developements, these parts being then developing, were retarded in their progress, and deformity or monstrosity of the second order, or monsters by default, were the results. Here was again a physical proximate cause alone, so far as could be determined, or reasonably supposed; for when this cause was prevented, the resulting phenomenon was likewise.

But your essayist takes this as a postulate, the proof of which is however observable in many physiological phenomena, that mental causes are often antecedent to the physical phenomena, and indeed exert decided influence on the physical organization to the end of producing physical effects. An example is found in the condition of the pulse, and of the capillaries under the different exciting and depressing passions; as tranquil joy, highly exhilar-
erating joy, anger, fear, grief, &c. Another is found in the im-
paired appetite and digestive powers under the influence of pro-
found grief, &c. To these we might add many more, but these
are decidedly in point.

If then, those sensorial motions which we call passions, have
power to lessen, and to increase the appetite and the digesting
and appropriating powers by their influence on the organization,
so that excess or defect of nutriment may be created; and if at
the same time they may so influence the circulatory system, the
very machinery of appropriation, as to increase or decrease its
actions or appropriating functions, why may not this, as a re-
 mote cause producing a decided influence on the organism, thus,
be considered as a cause of monstrosity by excess or by default
—transcending the ordinary boundaries of nature's limits, or
coming short thereof. Who that has been in the habit of at-
tending nursing women, has not observed the injurious effects of
that milk on the child which was elaborated during fits of violent
anger? And who does not therefore regard the temper in this
view in selecting a wet nurse? Again:

The feelings of the nervous system, (of which system, surely
we know but little,) vary in health, yielding different physiologi-
cal phenomena as decidedly in the different temperaments, as
the skin does the inter-communion of sexes of different colour.
Contemplate the prominent characters of the leading tempera-
ments—the sanguine, the nervous and the phlegmatic, or the
melancholic. Are they not as widely different as the sombre-
looking, short-legged, clumsy Dutchman, and the sprightly,
shrugging, jumping, dancing Frenchman? They are not unlike
Dr. Goldsmith's Genius and Industry; the former of whom was
remarkable for being seen with brilliant eye and light step,
starting behind Industry in the ascent of the hill of science. At
the next view, he is far above—presently at the summit, and
anon, at the base; whilst Industry is laboriously trudging along
with heavy, but sure and firm step, never losing ground; and
who, by the time his competitor has passed and repassed in his
giddy whirl to the base, is found seated on the sublime summit,
firm as the rock of De Kalb. What can be more different? So
it is with temperaments. Their plans, views, feelings, tastes,
are all different—not calculated to harmonize in running along
the stream of life, unless the peculiarity of one or both should be

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wholly over-ruled by good sense and great prudence. So much is this the fact, that they are perfectly unfit to be joined in matrimony. Whilst a supposed neglect, or abstraction of mind, would be by one (the sanguine) received as fire in powder, arousing the most frantic and ruinous passion, and impelling to deeds of direst vengeance, even towards the best of friends. Another (the nervous) would receive the same with mortification of feeling, sorrow and tears; whilst the other (the phlegmatic) would pass it by as the idle wind, without feeling or regard. Whilst one, indulging the dictates of its own taste, will attire itself in scarlet, buff and gold, or its shining substitute, brass, a second seeks the more delicate and modest apparel of unconspicuous or various hues; and a third the most plain, uniform and grave apparel, regardless of, or disgusted with, those peculiarities of dress which would be calculated to render him conspicuous: so of many other peculiarities of these different healthy varieties of nervous natures. But these are physiological phenomena. Considering the human mind as an abstract entity, possessing power, but needing a channel for the communication of that power, we find an anatomical arrangement finely adapted to intermediation of this power as a remote cause; and the phenomena of the physical operations of the organism, and the physiological chain of phenomena is found to extend from a sensorial motion to the nervous system, (the same through which sensorial motions come from physical causes, or in some part of which it is generated by the operations of the mental faculties,) which nervous system is a bond of union between the mind and the organic functionaries, and through which these are influenced in their actions or conditions—perhaps action—perhaps the want of it.

We see, therefore, thus far, a train of communication of power and of susceptibility sufficient to be considered as affording the means of causation antecedent to the physical cause proximate to the effect on the foetus; for none will now deny that the foetus in utero is nourished by maternal nutrition for the chief part of its development, as there is no other source, unless we resort to the old hobby, sympathy, and say this nourishes it: and we trust the day for that has passed, never to return.
Now it is not denied that the foetus is often influenced by physical causes alone, without the least influence of mental; but if in any way, the proximate causation may come to be the same in physical kind and power, and consequently in effect, as it well may, by physical agents impairing digestion and nutrition, &c. and by the influence of the passions as we have seen, why, your essayist would ask, may we not, when we witness the same proximate phenomena in the relation of cause to the ultimate physical effect, for which we were attempting to account, conclude that these are related as remote cause and effect; as to exclude that which did operate in the line of direction, so to speak, of the phenomena? As well might we refuse to acknowledge that a grandfather belongs to the chain of causation of the existence of the grand-son, and say that his father was the only cause.

We trust we have shown a way for the operation of mental cause of the ultimate physical effects on the foetal development; and that competent causation is at hand in certain cases. Now, considering the sequence of phenomena as it really transpires in many cases, (remembering at the same time that physical causes may alone produce the same final results) we feel compelled to consider the relation to be that of cause and effect, where there is a proportionate relationship between their different phenomena in the sequence.

Here are some examples in point. I once amputated a man's arm immediately above the wrist. A lady residing in the immediate neighborhood, and who was at this time in the early months of gestation received the intelligence with very strong impressions as to the kind of misfortune. When her child was born, the arm was deficient from the same part at which that of my patient had been amputated.

Your essayist is aware that in the annals of science, those who are bold enough to advocate the opinion that foetal peculiarities of the skin, &c. may be the effect of mental impressions of the mother, are called, by way of reproach, "soi-disant philosophers;" but in philosophical investigations, he places himself out of the reach of that kind of management for getting around or over a connected train of phenomena which cannot be broken in upon by a mere rational philosophy, not founded on facts, and holds those as in ignorance unimprovable, and on ground un-
worthy of refutation, or even serious consideration, who will
dogmatically condemn and attempt to break up the evidence
which a chain of facts affords, because they cannot understand
the rationale. It is enough if the sequence of phenomena be es-
established. Nor is it repugnant to sound reasoning to find that
with a train of conspicuous phenomena, the result is not always
precisely the same, because, if A. B. and D. be a train of phe-
nomena which alone would produce a given effect, as E., then C.,
another cause may interpose somewhere in the chain, and if it
do, must of necessity manifest its effect in the resulting phenom-
ena, and another resulting phenomenon F. be produced. But
if C. be not known or noticed, it would be argued that A. B. and
D. were in this reasoning process all the antecedent phenome-
na and consequently all the causation, and that it is contended
that they produced different results under like circumstances,
which is impossible. But this is nothing more nor less than evi-
dence of the ignorance of the intervening cause C. and does not
impair otherwise, the correctness of the reasoning when all the
phenomena are known and observed.

Facts are too common and too well characterized to leave a
doubt—not that maternal impressions always produce anom-
alous appearances, but, that they do in many instances—that is
to say, in the terms of the question before us, they can produce
effects on the foetal developements. Women of the best intel-
ligence and observation, who feel the power of longings, or the
other strong mental impressions in a manner, of which, doubt-
less, man cannot conceive, with one consent, and in all ages
have, on observation confirmed the fact of the sequence of the
phenomena, where they have existed at all; and the physical
representation of the phenomena in the organization has, in thou-
sands of instances, been so exact a representation of the mental
configuration, that its legitimacy was no more to be disputed
than the fact is that different colours must have been concerned
in the causation of a human offspring of a colour intermediate
between white and black, because that communication was not
known in the abstract.

It would be as rational to deny that when the artist executes
a design on his canvass or marble, that his mind, or his mental
conceptions of that design had influence in the production, or
that the archetype in his mind was a cause of the result. The
chief difference is that, in one, we see, and in the other we do not, the modus operandi; and this convinces our understanding. The fitch and palette, or the hammer and chisel with the physical force of the living hand, guided by the mind of the artist, as seen in his close attention to his purpose, assure us at once of the real nature of the whole process. But we should be consistent with ourselves; for we do not know precisely the whole operation of nature in the growth and full development of a rose; but this does not make us doubt its having been produced by the natural process of growth, effected by certain causes, and so influencing its parent stock as to cause its sure and beautiful development.

Many instances are familiar to the mind of your essayist, in which the design originally drawn on the tablet of the mother’s mind has been represented in the skin of the offspring. He has seen the cherry, the mulberry, the strawberry, honey-comb, the skin of different animals represented as accurately after the avowed peculiar impression on the mother’s mind from longing, fright, &c. as the painter can detail on the canvass his mental conceptions. He has known those representations of such character as the mother had never conceived of, until the moment of receiving the strong impression during pregnancy; and so perfect in character that the peculiar representation on the skin was not distinguishable from the original prototype which had created the maternal impression.

Your essayist once delivered a finely developed child, in all parts except the head, which was, in shape, ears, eyes, colour of hair, &c. &c. the precise representation, (according to the testimony of the mother of the patient,) of a dog which had, to her very great alarm, in early pregnancy, seized the mother by her dress on her entering a yard in the country. The mother of this child never saw it, nor does she now know of the deformity. Its knowledge was limited to your essayist, the mother of the patient, and an attending female friend. The grandmother of the child who accompanied the pregnant mother at the moment of this alarm, described the dog—the shaggy and red hair of the head, &c. before seeing the child.

Your essayist knew a lady, who he thinks is yet living, when she was a child—practised in her father’s family, and saw her frequently; whose mother was, during gestation with her, and
in the early stage of it, suddenly alarmed, nearly or quite to fainting, by the unexpected appearance of a tropical dog, as they called it, which came from behind her as she was walking the street of the village in which she lived. When the fruit of this pregnancy came forth, it was a daughter, beautiful in face and general form, but whose skin wore the identical peculiar appearance of the dog by which the mother had been alarmed, even to the colour, grain of skin, the peculiar scattering bristly hair, and every other character. This peculiar skin covered by far the greater part of the body, extending over the breast and neck almost to the base of the cranium.

Your essayist has known a case of mental mark, or impression, communicated to the offspring without corporeal change, and not less conspicuous and plain, (and it could not be more clear and positive) than those above given of corporeal deformity, which comes under our third order of monstrosity, or those in which there is neither excess nor default; but having protracted this essay to a very unexpected extent, he forbears to state farther facts, many of which he has observed personally. In conclusion, your essayist will remark, that although evidently the truth that the fetus receives physical from maternal mental impressions, still nothing appears to him more difficult than to determine how many of these impressions are made; because of the manner of nutrition of the fetus in utero during the first two or three months.

Were the umbilical circulation or communication existing during this time, it would not, in his estimation, present the great difficulty which it now does. But the facts of human ovoology prove to us that until about the middle of the third month, the embryo derives its nurtiture from the umbilical and alantoid vesicles with which it is provided; for the umbilical communication with the mother is not yet perforated or completed; nor have we any reason to know that direct nervous communication exists between the mother and the embryo through the umbilical cord even when perfected.

Closer observation, however, may prove that only those impressions which happen to be made for a very short time after the umbilical channel becomes perforated, are those which take effect, as we know of many very strong ones made at other periods in pregnancy which are not followed by nevi maturni.—
Were your essayist to advance an hypothesis on this subject, he would say that, to have effect, the maternal impression must be a strong and vivid one, and must be made during that period of gestation at which the particular part of the fetus impressed is being perfected or developed.

ARTICLE II.

Extraordinary case of Rupture of the Rectum and protrusion of the Intestines through it, and their expulsion externally, per annum. Read before the Georgia Medical Society, at Savannah, Feb. 4th, 1838, by Richard D. Arnold, M. D., of Savannah, Geo.

The following strange case occurred in the practice of Dr. J. C. Habersham. As I wished to bring it to the notice of the society, I requested of Dr. H. a history of the case so far as it had been under his observation. The following letter from Dr. H. to myself, will afford the necessary information:

"Feb. 2, 1838.

"Dear Sir—I was called to visit the woman Flora, owned by Mr. Blake, on the 19th November last. She had been sent from the country under the impression that she was crazy. She complained of pain about the occipital region, had furred tongue, and on pressing the epigastrium, she said she experienced a dull sensation of pain. I applied a blister to the neck, and gave blue mass and c. oil. The next visit she was missing, and was absent from the mill two days, and when she returned, said she had been to see her friends. She continued to convalesce until about the 16th December last, when I was requested to bleed her, as she said she was again troubled with pain about the epigastrium. She got better and was assisting in the cooking department at the mill, and continued there until the 24th January last, when I was requested to see her early on that day. A woman who professed to be a midwife, had been with her all night, and told
me she was in labour. As I had not suspected pregnancy during my attendance, and as my attention had never been directed to that condition by her, I doubted her statement, and uncovering the patient, I found, to my great astonishment, a vast quantity of intestine tied and suspended on the floor in a handkerchief. The woman said that Flora had complained of being in labour when she was called to her, and they were both under that impression when I commenced the examination. As you saw her with me about a half hour after my first visit, I leave the subsequent circumstances to your own recollection.

"Yours, very truly,

"J. C. HABERSHAM."

"To. Dr. Arnold."

By request of Dr. H. I accompanied him and Dr. Richardsone to visit her while still alive. We found her lying on the floor, cold and pulseless; and protruding from the anus and lying on the floor, was an immense portion of the intestines, which upon inspection we pronounced to be small intestine and a portion of the colon. The mesentery was attached to that portion of the small intestine protruded, in an almost entire state, except where it had been torn from its attachment to the posterior parietes of the abdomen. The intestines protruded were cold and vitality had evidently fled from them. It was found that there was no rupture of the vaginal canal, and that the protrusion was posterior to it. The opening by which they protruded seemed very large. An unsuccessful attempt was then made to return the bowels—after which nothing further was attempted. She died in about half an hour afterwards.

The dissection was conducted by Dr. J. Blakely Tufts and myself, four to five hours after death, in presence of Drs. Habersham, Earle and Richardsone, and Mr. Guernsey, student of medicine. The body was that of a robust female, the muscular system very well developed. The abdominal muscles presented no peculiarity to attract attention. On cutting through them, the stomach was perceived very much distended with wind.—The greater portion of the colon also appeared in the abdomen. The peritoneum appeared highly injected.

In order to ascertain what portion of intestine had passed out, an examination was carefully commenced from the duodenum downwards, the mesenteric attachments being carefully cut and
the bowel, (as it were) unravelled. It was soon perceived that the portion of bowel protruded, involved all the small intestines, beginning from the upper third of the jejunum, and the whole of the cæcum which had been torn away from its attachments in the right iliac fossa. I now passed my finger freely from the cavity of the abdomen through the opening by which the bowels had passed externally. It was the impression, I believe, of every one present, that there had been a rupture of the perineum. What was our astonishment, when, after further dissection, we discovered that there was a rupture of the rectum upon its anterior portion, five inches above the anus; and that the intestines had passed, through the aperture made by the rupture, into the rectum and thence, externally per anum.

The intestines that had protruded were then cut off, and the rectum with the sphincter ani carefully removed. Further examination proved that there was no rupture of a single fibre of the sphincter ani, but a simple dilatation; and thus revealed the extraordinary fact of a person's having actually passed per anum the greater portion of the bowels in the body. A case similar to which no medical gentleman present had ever seen or read of.

The rectum presented a slate-coloured appearance over nearly its whole internal surface, and around the edge of the rupture the mucous membrane was quite black. In short, it abounded with marks of chronic inflammation.

The mucous membrane of the stomach was not at all unhealthy. The womb was examined, but presented nothing abnormal.

How then did this extraordinary protrusion happen? I think the explanation may be given as follows:

The fact of the rupture of the rectum is of itself a sufficient proof that there was disease of long standing in that bowel. A portion of the small intestines lay in contact with the diseased portion of the rectum, and when the coats of the rectum burst, slipped into it, and then, portion by portion was involved and then expelled; on precisely the same principles that defecation is carried on. A foreign body was felt on the mucous membrane of the rectum, and every action proper for that purpose was called into service to expel it. Hence those continued and bearing down pains which were mistaken by the sapient midwife for parturient ones.
No examination of any other cavity than that of the abdomen was made.

When the woman was first taken with pain, she tied a handkerchief very lightly around her waist.

I have not been able to find any written record of a case in any way similar to this, and hence I thought it would not be uninteresting to the society to present it to their notice.

PART II.—REVIEWS AND EXTRACTS.

Notice of Patent Laws and Letters Patent, particularly in regard to their influence on Medical Discoveries, Inventions and Improvements.

Letters Patent—Hull’s Truss—Utero Abdominal Supporter.

It is said of the science of law, that it is founded on reason and justice. That this is the intention of law-givers, we feel no disposition to controvert on the present occasion. If this be the fact, governments should have a definite purpose of justice, regulated by reason, in authorising grants of exclusive privileges, or the protection which letters patent afford for a time. If the laws of a state be intended to effect the reasonable administration of justice, it is clear that legislators have failed of their purpose in the enactment of what are called patent laws, or that there is no law more infracted and abused than those which authorize the issuing of letters patent for the protection of inventions, discoveries and so forth. To the rational consideration of this subject we would call the attention, not only of physicians, and the community at large, but of legislators, presidents and sovereigns; and we apprehend that in the investigation it will be found that the error is rather in the departure of legislators from the true line of reason and justice in the framing of the law, than in the infractions of patentees; for men rarely refuse grants of benefits or even sinecures, when these are freely offered to them.

Letters patent, or overt, are grants by a sovereign, or in the United States, by the president, under seal with his own proper signature, securing to inventors, discoverers, &c. the exclusive
benefits of such inventions, discoveries, &c., provided always, that the privilege or protection secured do not be construed to interfere with the rights of others previously enjoyed. They are so called because they are open, with the seal and signature, as testimony of the right therein secured, and in contradistinction to close rolls, or writs, charts, &c. directed to particular persons, and under seal. Patent letters secure to the patentee the sole right of profit, with the privilege of fixing the price of his invention, discovery or improvement, without any other restriction except that which the purchaser himself may impose by his refusing to purchase. Letters patent royal are then, nothing less than a relic of the ancient British statute of monopolies; and the patent laws of the United States are nothing more nor less than a perpetuation of the same on this side of the water. Let us examine briefly, how far reason and justice are regarded in these patent monopolies.

What is the reason which induces governments to grant letters patent? It is mainly the encouragement of useful enterprise, ingenuity and industry, by securing to those who labour in inventions, discoveries or improvements, all the benefits arising from such improvements. But is this a good reason, and is it all which should operate on the minds of legislators who, in enacting laws, are in a good sense, acting as arbiters of justice between two parties, the interest of, and justice to both of whom should be alike consulted, as well in this case as in the common law, operating between debtors and creditors? To secure the inventor in all he can possibly exact from the necessitous user, is as partial as it would be to secure all the claims of a creditor, immodified, unrestricted by the just offsets of the debtor. Justice therefore is alike necessary to each party, and should be so esteemed by every legislator. How is this regarded by the patent laws? Not only in securing to the patentee a just and proper reward for the time, labor and money necessarily expended in the business of experiment and construction, and the security of due reward and remuneration for the same subsequently in the promises; but, a grasping monopoly, sufficient to overwhelm the moral principle of almost any man and induce him to search as deeply as possible, not only into the full pockets of the wealthy, but the scanty ones of the poor and afflicted who may chance to need the benefits of his labor.

On examination, however, we shall find that the first bearing of this reasoning has not that force, which, at the first glance, it may seem to have. Men of genius for discoveries, inventions and improvements are, we think, always men of active minds which will operate. These operations are effected, without being led on by the promises of pecuniary reward. They are generally minds which are not sordid, not regardful of money, but
active, searching and ever observing. If such individuals have money, they expend it in supporting the operations of their genius more freely than money is expended for other things, if we except intoxicating drinks and other gratifications of the "lusts of the flesh." Moreover, it is incompatible with true inventive genius, to turn even their own valuable inventions to good money purpose. We have known such a man die in advanced age with some dozen and a half patents, many of them expire, without having turned any one of them to the purpose of his own pecuniary benefit; one of which, from its intrinsic, indispensable utility, and the extensiveness of the demand, could not, with proper attention, have failed to yield several hundred thousand dollars. He was ever most ardent and active in the accomplishment of his discovery or invention; but no sooner was it realized, than its interest appeared to be lost, and the mind engaged in the zealous pursuit of another invention. A parsimonious disposition and a very active and ingenious mind, are naturally incompatible, and there is scarcely a more difficult task than for the active minded man of genius to exercise even prudent economy. His prodigality in the use of money is proverbial,—It is indeed one of the infirmities of genius to undervalue money in all respects, and more especially in regard to its expenditure for the development of the designs of genius. Hence it is, that such persons are generally burthened with debt, and die bankrupts, or at best, men of small fortunes. The love of money must predominate over the other feelings and mental operations, in order to amass a fortune, and those fortunes accumulated by patents are generally indicative of the unworthiness of the invention or discovery; because they are not the productions of such mind as will turn it to money account. The designs of men of genius are peculiarly rich in their own view. No one else sees in them the same beauty and interest as the projector himself. They have his partiality as his own children do, in whom other people see no uncommon interest; but in whom he sees and feels peculiar value.

True genius has a force, in this way, which impels it onward to the accomplishment of its designs. The whole of the fine arts, as they are only cultivated successfully by persons of genius, generally end in abject poverty and ruin, or a bare subsistence; or at most, a moderate competence. Old age comes on after a life of great toil and effort, with but moderate supplies for this winter of life. The genius of the poet operates for the perfection of its designed verse, which cannot, in any way, remunerate him for the time, labor and money expended. The same may be said of the painter, the composer of music, &c.

The effects which result from the operations of their genius are intoxicating. Designs are pictured to them in more vivid colours than they are to others, and this created a value for them
which prepares the way for sacrifice of labor, time—everything that is valuable, to the effecting of that design, and which, when effected, is contemplated with indifference by some, a passing interest more or less deep by others—perhaps the majority; but to him, it is ever rich and glowing with interest—not the interest of the money it is worth, but the interest it possesses to the feelings of genius. He sees in his "effect," a clear and beautiful reflection of his own mind, and is enamoured of it, as the beautiful Narcissus, who saw his likeness reflected by the fountain, and, believing it was the nymph of the place, was said by some to have gazed at it until he starved. But others say that Narcissus destroyed his life in consequence of the provocation of his fruitless attempts to acquire the object which fascinated him.

So it is with true genius. Its designs are presented to the mind as the reflected image of Narcissus, and fortune, time, life—everything is sacrificed to its fulfilment. This is the true course of nature. It is the same in inventive genius in other departments. Labor may be bought, may be promoted by money; whilst genius is like the resistless power of steam—it must operate in the noblest effects, or direful explosions; and, unfortunately, the latter issue is but too common.

But notwithstanding this natural course of genius, the community receives a substantial good from its operations, and a quid pro quo in return may be always right—certainly not less so for mental productions than those of labor or cash cost. The man of genius who has expended his, valuables, (and amongst them his mental labor may perhaps be estimated as of most value—indeed it is the sine qua non of invention,) in the production of a valuable discovery or invention which it is the interest of the community to use, is entitled to a fair reward and remuneration at their hands, for his labor and expenditure. A bridge or a ferry charter is but a species of patent right; but its price is determined and fixed by the legislature; and on what basis? That of a reasonable, or if you please, a liberal reward for all the expenditures, in making and perpetuating this good to the community. Were it not so, what would be the tendency, and where the end of human avarice which, instead of being fed and cherished, should in all cases, for the best public, as well as social interest, be restrained? It would tend to, and end in this, (and we say it from a knowledge of human nature,) that extortion would be exercised to the utmost cent when the necessities of life demanded the good of a passage. The same may be said of physicians in whom great confidence is placed, when danger comes, were it not for the restraining influence of competitors which makes them willing to render their services at a fair valuation. Indeed the whole social compact is regulated more by the suppression of monopolies than the force of the moral principle. The monopoly which is granted in letters patent, is therefore calculated, as
far as the subject of it will allow, to subvert good order, equality of right and all the best interests of the social compact; is obsolete in the policy of government and should be allowed no footing as such, in a republican community intended to be civilized. It were better, if, in all cases of this kind, the government were made one party, and the inventor the other, and a price determined on a proper basis—the real value of the commodity or the invention, and paid by the government for the common weal. But if this be objected to on the ground that taxation is equal, but all who pay tax do not wish the use of the invention, which by the way is not a valid objection, the government should still be the party on one side, to determine the value of those labors, &c. to which a monopoly is to be granted, by way of rewarding or remunerating the inventor or discoverer. Instances of this are abundantly afforded in all civilized governments. There is the same propriety in it as there is in regulating the common interest in a state, by law; or the interest which a bank shall receive for the use of its money. Why is it that six, seven, or eight per cent. is fixed by law as the worth of the use of money? It is that men who have surplus capital can well afford it at this price, and the tendencies of a higher price would be but to fix and increase monopolies for the wealthy, to the ruin of others; notwithstanding these would often, from necessity of the moment, find it of more value to them. As to fortune, the happiness of a community depends much on its equal distribution; but monopolies tend now, as they did in the days of Queen Elizabeth, to that inequality which ends in one direction in oppression, want, misery and ruin; and in the other, in monied aristocracies with power and disposition to oppress and enslave the poor; and cultivate for themselves every ruinous vice and luxury. They are like electricity, which, when its equilibrium is destroyed, according to its degree, commotion is the consequence; as the gentle breeze, or the wild tornado. the rending lightning, or the engulphing, destroying earthquake. But when in equilibrium, all nature presents a scene of universal repose.

Now it is quite as easy a matter to determine the value of a discovery or an invention, or improvement of any kind, and to regulate the price for it, as it is that of money; and the governing principle is the same—a liberal remuneration for all the costs incurred; the exclusive right of manufacture and first sale being sufficient protection for the perpetuation of this benefit.—When the American government found it necessary to encourage domestic manufactures and industry by a protective tariff, the sovereign people and their intelligent representatives found it sufficient to protest so far as to secure the preference of the purchaser for domestic manufactures at a fair price. This was done by a small duty imposed on certain foreign importations. The intelligent American citizens threw at once their capital
under this protection. It was all they wanted; for it secured them the sale of the products of their own labor and capital; without dangerous competition from abroad truly, but with abundant competition at home. They obtained a good interest on the capital and a satisfactory reward for their labor; and hence mainly, came the swelling tide of wealth, which extinguished the national debt, nearly freed the people from taxation, and burthened the treasury with overflowing millions for restoration back to the people. Why then may not the protection of exclusive right of manufacture and first sale at a fair valuation of the money and labor concerned, effect all the good and prevent all the evils of a monopoly which is without restraint and as insatiable as death. On the present plan of patent rights, the community, so far as its necessities for the discovery exists, are as badly situated as it would be under monied aristocracies unlimited in their usury; the only difference being in the less demand for patented inventions than for money.

But these observations are applicable generally, to the unjust and improper grants of letters patent according to the patent laws, for all inventions, discoveries and improvements. Justice requires that there should be some proportion between the expenses of the discovery, invention, &c. and the price at which it is afforded to the community. But when we consider the proper claims of humanity, these are to be weighed in the opposite scale, as much more precious than the benefits of pecuniary interest. We see no harm, no injustice, in the protection of the right of exclusive manufacture and first sale of a medicine, or an instrument, or any thing calculated to serve the good purposes of humanity in times of distress or danger; provided the article were still afforded and at a fair price; although we should reserve our right of the free exercise of our opinion of such an individual in a community as would not yield so much individual pecuniary interest as would be afforded by a barrier of this kind, placed between the benefits he might bestow on humanity, and the exemption from pain and the prevention of danger or death; for we hold it to be the duty of members of a social compact, as of the members of civilized society, to contribute as their talent may enable them, to the general weal—the general good of the community. The social compact justly demands such a sacrifice by its constituents. The most favorable sentence therefore, which we could put on such, is the same we should on a physician who would smile at the continuance, or wish for a cause of pestilence in his community which should afflict both this, and his professional brethren, in view of the increase of his own profits, or the opportunity thus afforded him for extortion. He is destitute of humanity, and consequently unworthy of a place in the profession of medicine, who will thus limit the good which the operations of his own mind might effect.
He is indeed, no more called on for pecuniary sacrifices than other men; but possessing his knowledge of the causes of disease and the preventive and curative means, he is peculiarly called on as a good citizen, to give the free operations of his own understanding, for the general good. His doing—this constitutes his peculiar worth as a citizen in community; and his refusal should take from him all those superior claims; and more, because he alone has judgment in such matters.

But when an invention or improvement is made, the end of which is benefit to humanity, as in the discovery of valuable remedies, the claim of the community for protection against extortion, is as far stronger than that against pecuniary losses, as the desire of life is superior to that of pecuniary profit.

It is not a little strange that, although monopolies of this kind were found to be erroneous, oppressive and unjust, as long ago as the date of the great charter of the liberties of England,* and the same decision confirmed by Henry III. and Edward I., a monopoly of any description capable of exercising oppression should still be authorized by law, both in England and America; and more especially when calculated to operate against the preservation of human life. Legislators, therefore, who profess to have one spark of humanity, should look to this inconsistency, this prostitution of sacred rights, of justice and of reason, by which monopolies are created with power to drag from suffering humanity the last shilling of poverty itself, unjustly, because out of all proportion to the sacrifices made on the part of the proprietor. A fair investigation of this subject will bring every unbiased man to this conclusion:—that it is just and reasonable that even in discoveries and inventions which are for affording facilities to the accumulation of profit, or for labor-saving, &c., should be granted—it being no less than the actual exclusion of all competition in business—a benefit, without which the great mass of the community are content to go on through life, and if prudent, prosper to their heart's content. And surely, not more but less protection, should be extended to those things which have for their purpose the prevention of disease and of death.

Judging from what we know of the effects of patent rights in our own day, we are compelled to suppose that during the fourteen years of the Letters Patent Royal, the essence of peppermint, Bateman's pectoral drops and paregoric elixir, sold at prices which must have been worthy the serious consideration of the purchaser; but it would be an unreasonable man who would not be content with the means of a fortune which would be given him in the exclusive right for fourteen years, of making and vending either of these articles at the trifling price of fifty cents per dozen, as a reward for the expenditure and labor in the manufacture.

*June 19, A. D. 1215.
Under these considerations, it would become the profession, when they find a man not satisfied with the protection of his right to manufacture and sell at a price determined by the expense and labor incurred and bestowed in affording the commodity, but taking advantage of the prohibition extended to others, to refuse to the community the benefits of his labours without sponging from the pockets of the necessitous many times the real value of his productions, to contemn him as an extortioner, as disjonest, and as perfectly unworthy of their patronage.

We well remember when Hull's patent truss came to the consumer at the enormous price of fourteen dollars, which is now, with the same work and materials employed in the manufacture, afforded to the purchaser at three to three and a half dollars; and still the profit is such, that, doubtless the proprietor is prepared to manufacture any quantity that may be needed by the nation or the world, on such terms as will enable the retailer to vend them any where at three dollars, with satisfactory profit. Every dollar, therefore, which the proprietor has received over the rates at which they are now afforded at wholesale, may, to say the least of it, be justly considered as filched from the pockets of the afflicted.

We know another truss of recent invention, the cost of labor and materials in the manufacture of which does not exceed one dollar and thirty or forty cents, the retail price of which by the proprietor or his agents is fourteen dollars.

The utero-abdominal supporter appears to be running the same course. Such has been the enormous price of this article, which should not be worth more at the factory than two or three dollars, that, at their first introduction, the purchaser at retail could not obtain them at less than fifteen or sixteen dollars—a price entirely too high for enabling the practitioner or patient to experiment with an article of such doubtful utility; and drugists are therefore driven to the necessity of affording them at cost and charges.

But we have other objections to this article, besides the price which renders it unavailable in general practice. The disease, for the treatment of which it has been thrown before the community, as capable of effecting a radical cure, is one of great importance on account of its extensive prevalence, the afflicting and fatal consequences to which it tends, and the quantity of disagreeable and expensive treatment demanded for its best management. These considerations compelled us, although incredulous of its just claims to confidence, from our knowledge of the true nature of the disease and the difficulties attending its cure, to pay the enormous price demanded for them, in the wish, (we cannot say hope,) that they might be effective of some good; but our prescription of them has but confirmed our first opinion, which was that they could not cure the disease for which
they were offered; and that their only real utility would be found in their staying, in some small degree, in very few cases, the progressive or rapid increase of the disease, by partially sustaining the weight of the superincumbent viscera. This is no more in effect, and little more in convenience than the old practice we have long and often adopted, of preventing the pressure of the viscera in some degree by a bandage and compress well applied on the hypogastrium. The article then may be looked on as one for which an enormous price is demanded, because it promises a cure without the disagreeable exposure to the ordinary treatment; but which experience proves to be ineffectual and unworthy of the confidence endeavored to be created in it. We observe occasional notices of its utility by practitioners; but we are compelled to say, by an experience with it, as well as from a knowledge of the nature of the disease and the treatment, without which recovery is impossible, and which at the same time, this supporter cannot effect, that these practitioners have been deceived. They have not remarked the consequences, after the effect of novelty passed away from the patent; or they have considered the temporary palliation of distress they sometimes afford, and of which every woman will avail herself in order to avoid those other services which are generally necessary, as evidence of curative power. Women conceal this complaint as long as possible at first; and even after, on the least palliation of their urgent distresses, are disposed to consider themselves well and refuse treatment. Let not the community be deceived in this article—its price is too high to be bought without more great claims than it has to utility; nor should it even be depended on as possessing curative powers adequate to the necessities of any case which would not recover by a few days rest only.

There is one more point in patent laws which merits particular attention, and without advertting to which we feel unwilling to close this notice. Early medical letters patent were rare.—At that day the art of robbing the community out of a fortune was not so familiar to the acquaintance of the people as the latter experience of the world has made it. Applications were few, and they were doubtless well examined, and the articles were of solid merit. But now the world is inundated by thousands of secret preparations which are brought to the community under the pressure of captivating names and numerous certificates, quite sufficient for securing the confidence of the people until a purchaser and a trial are made. It is true that the same articles do not generally last longer than a steamer does in one settlement, which is a year or two; and has like him, to seek another market which has not yet learned its usefulness or injurious tendencies; but by the time it is gone, others, with new dress and pretence, are in its place. Eighteen months ago, every
chamber mantle was burthened with Jewett's Liniments, and such was the high estimate of them that some of the people were disposed to eat them. Now, scarcely a bottle of them can be procured; nor is the price advanced in consequence of the scarcity.

This proves the inutility of the article as to the real powers they possessed; for they probably consisted of little if any thing more than a little cayenne in lard. But this was sufficient. A twelve-month's run through the country, one sale to every individual who will purchase such things, and an agent for every section of the country is paid his salary of thousands for the years service, and an overwhelming fortune is accumulated for the proprietor—no matter how worthless, as to cost or merit, the article may have been.

Thus is the community, which is ignorant of every principle of medicine and all the means of judging of any thing out of the way of every day experience, imposed on, and thus made tributary to immense fortunes for the undeserving—the impostors. A safeguard should be thrown around the good people, whose innocence and simplicity lay them open to the impositions of the designing. They do not once think that a man would impose something on them which was not fully equal to the praises he bestows on it; or that he would write certificates of remarkable cures, in the name of persons who were not to be found on earth, or even in the name of the respectable, living in some distant part where the publication was never expected to reach. But these impositions and frauds are the very machinery of quack impositions. They are the sole dependance, instead of the substantial merit of the article. This is a matter of secondary consideration, or none at all. Every patentee should be compelled to make the secret of his discovery public; and if by the judicious and scientific analysis of the chemist, or otherwise, he should be detected in fraud in this, he should forfeit his letters patent and be punished additionally. Then might the common people judge for themselves of the merits of the discovery from their own knowledge of them previously; or the scientific might judge for them. Both the necessities of humanity and the prevention of fraud—not one fraud, but perpetual and increasing succession of them, demand that the rights of the community should be protected in this, as well as in such other matters as they are not able to protect themselves in.
Clinical Lecture on Laryngitis and Bronchitis. By W. Gerhard, M. D., Physician to the Philadelphia Hospital. (Published originally in the Medical Examiner.)

Laryngitis. Continuing the subject of diseases of mucous membranes, I shall, to day, consider some of the affections of an organ, the healthy action of which is most important to life,—I mean the larynx. Laryngitis may occur as an acute disease, the symptoms of which are exceedingly simple, and I shall make but few remarks upon it. It occurs both in adults and children, and is rarely fatal; its pathological characters consist in inflammation of the mucous membrane, which is injected, and thickened, to a sufficient extent, to impede respiration. The act of respiration is, in consequence, accompanied by a peculiar stridulous sound, and the tones of the voice altered, in a decided manner. Another symptom of the affection is pain, which, you know, is always present in severe mucous inflammations, although less acute and less limited than in those of the serous membranes. The membrane of the larynx is irritated by the passage of the air over it, which occasions a dull pain, of more or less severity, but not lancinating. This pain is increased by deglutition, from the action of the muscles of the pharynx.

The condition of the voice is an important point in the diagnosis; it is stridulous, which is never the case in simple inflammation of the lungs; shrillness is peculiarly characteristic of laryngeal inflammation; as the disease goes on, the voice is either lost, or resumes its tones by the recovery of the patient.

Laryngitis may be confounded with simple inflammation of the tonsils, from which it may be distinguished by the absence of the nasal sound of the voice, which, in tonsilitis, is caused by the air being cut off, at the posterior part of the pharynx, in its passage through the nose. The diagnosis of laryngitis is a very easy affair, and I shall not detain you with it any longer.

The treatment proper for acute laryngitis, is laid down by every author who has treated of the subject, and I shall not take up your time, by detailing the various antiphlogistic remedies which may be resorted to; laryngotomy, I may remark, is rarely necessary.

The croupal variety of laryngitis, or that in which a false membrane is thrown out, may be subdivided into two kinds. In the first, the formation of the false membrane commences in the pharynx, and this variety is to be recognized by examination of the throat, before the larynx becomes implicated; if it extend down into the latter, unchecked by art, the affection is mortal. In this type of laryngitis, the voice is more shrill than in ordinary cases, or the patient is aphonous. In the treatment of this variety, antiphlogistics are to be resorted to, though they are not alone to be depended on. Local applications are to be made to the pharynx, such as a strong solution of nitrate of silver, or of alum, or the muriatic acid; a sponge may be dipped in these liquids, and applied to the part, which is to be afterwards gorged with flax-seed tea. It behooves us entirely to destroy the false membrane and prevent its extending down into the windpipe, where a slight obstruction is fatal.

The last variety of acute laryngitis is the croupal, in which the secretion of the false membrane commences below, and not above, as in diphtheritis. It is rarely confined to the trachea, but extends much further into the bronchial tubes of both lungs; in this variety, the voice is stridulous and shrill, and, in young children, there is a peculiar cry; there is also cough. The respiratory sound in the chest is feeble, from the difficulty offered to the free entrance of air into the lungs; there are other signs of the affection, such as a flushed, swollen face, and dyspnoea, with incessant restlessness and jactitation. In this variety of laryngitis, so much dreaded in children, the rules
of treatment are so well laid down, and variety of opinion is so limited, that I shall not detain you by pointing them out at length. It is not to be treated as diphtheritis, or spasmodic cough. Bleedings, general and local, nauseating remedies, as tobacco externally applied, are beneficial in both varieties; but the croupal is an exceedingly difficult one to cure.

Subacute laryngitis has lately occupied much of my attention. It usually occurs in subjects afflicted with previous disease of the lungs; and, when it assumes this secondary shape, it is very apt to be mortal, if suffered to advance, for no patient can resist so extended an interruption of respiration. In these cases, it is the duty of the physician to interfere with promptness. An active depletory treatment is, however, scarcely called for; but we rely upon external irritants over the larynx. Emollient fumigations are useful; and when the disease arises in the pharynx, and passes downwards towards the larynx, as in diphtheritis, it is always proper to apply a stimulant wash to the pharynx. Tracheotomy may be resorted to, after the caustic has been ineffectually applied. Tracheotomy is a remedy of doubtful propriety; the use of it has been abandoned in genuine croup; but it is resorted to in diphtheritis, where the inflammation has not yet extended from above downwards to the bronchi, and there are indications of a sound condition of the lower part of the windpipe.

Chronic laryngitis is the most common form of the affection, and I propose to dwell upon it at greater length than upon the other varieties. This disease has been sometimes termed laryngeal phthisis; but I shall be disposed to doubt the propriety of universally applying this term, since the laryngitis often occurs before the development of phthisis pulmonalis, as was the case in a patient who has just left the hospital. Indeed, it may sometimes continue for a long period, without any signs of pulmonary disease. Now, in these cases, the original point of disease is in the larynx, although the lungs rarely escape, especially if the affection be much protracted, or if the patient be of an original tuberculous constitution.

The patient, whose history I shall make the subject of this lecture, has been very dissipated in his habits, having twice had syphilis, and been salivated severely for it each time.

The patient entered the hospital June 4th, 1838. He is an Irishman, a single man, originally a sailor, but broke his leg, and, for the last three years, has been a shoemaker. Has drunk freely from boyhood, particularly for the last two years, but has never had delirium tremens. Has had the venereal four times; has been twice salivated, the last time about the middle of last November—recovered entirely, and never before had sore throat or secondary symptoms. Never had a cold before, nor ever sick; has always been a stout, healthy fellow, excepting during a temporary illness, in a tropical climate. Began to cough in September, 1837, having been previously quite well, but after drinking hard, slept out in the grass, for several nights. Had no pain; but, nearly at the same time, had cough and hoarseness. The cough has been, on the whole, increasing, so has the hoarseness; and, since Christmas, the voice, which is naturally clear, and, during the whole autumn, has been rough, has been almost entirely lost. Soreness of the throat began about four days after the cough, opposite the depression beneath the hyoid bone. No pain at the sternum, nor any in the chest, except six weeks ago, when it was slight at the anterior part of the right axilla, and was speedily removed by a blister.

The patient went to the Camden races in October, drank very freely, and contracted gonorrhea and chancres; was slightly salivated; became more hoarse, and coughed more. Went to work at his trade, until the 22d of March; did nothing for his cough until he recovered from the venereal, a month after the infection, when he took simple remedies, as honey, &c. On the 22d of March, he entered the Pennsylvania Hospital, where he remained until two days before he came to our hospital; during that time, he
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had less soreness of the throat, and less tumefaction of the glands. The cough continued, with greater severity.

Expectoration began, before he went to the races; he spit about half a teaspoooful of blood, clotted, appearing to come from the throat. Appetite good, until about the first of March, and he drank less spirits. Bowels never loose; regular. No pain in the belly, nor uneasiness, after eating. No night sweats. Emaciation began immediately after the venereal. No sore legs. Never had epistaxis, except twice, in last winter.

At the Pennsylvania Hospital, he was leeched twice to the throat, blistered constantly for two weeks, and took some opiate mixture. Swallowed with difficulty at first, but now more readily.

At the time of his admission, his condition was as follows. Emaciation. Light chestnut complexion. Height five feet seven inches. No swelling of the limbs. Strength feeble; can readily walk up stairs, and thinks he can walk half a mile. Much dyspnæa. Pulse 100, feeble, regular; hands cool. Tongue moist; slightly coated. Appetite good. Abdomen retracted; bowels regular; one or two stools daily. Aplonia nearly complete. No pain in the throat, but some tenderness. Uvula thickened, enlarged; slight redness of the fauces only. Cough stridulous; frequent. Expectorates eight or ten ounces of puriform and nearly numular matter. He was ordered lime water and milk, the infusion of the prunus virginiana, and inhalations of laudanum and water.

The physical signs, afforded by an examination, the day after the patient's admission, were the following:—Posteriorly, there was flatness on percussion at the summit of the left side; dulness at the middle, but below it was tolerably clear. On the right side, it was clear, in the lower half, but became flat towards the summit. The respiration on the left side was cavernous at summit, bronchial at the root of the lung, for the extent of two inches; feeble, but vesicular, inferiorly. Pectoriloquy at the summit, notwithstanding the alteration of the voice. On the right side, cavernous respiration at the summit, rube at the root, vesicular at the lower half of the lung. Anteriorly, there was flatness at the summit, on both sides; contraction between the clavicles. On the left side, some vesicular sounds were still heard at the clavicle, with distinct cavernous respiration; a little crackling. On the right side, the respiration at the clavicle was cavernous, without vesicular sound, and without crackling.

I shall not occupy your attention with the details of the progress of this case, but will merely mention the symptoms at the time of the man's discharge, the 27th of June. The intermediate treatment, in addition to that mentioned, consisted in occasional doses of blue pill, with some acetate of lead and opium, for a diarrhea which came on, and which was arrested. At the time the man left the hospital, his aphonia was rather less; he was feeble, and had irregular sweats. Bowels regular. Cavernous respiration very pure, under the right clavicle; at the left, crackling, with rude respiration; loud and puerile, at the lower portion of the left lung; feeble with mucous rhonchus, at the lower part of the right. Discharged, at his own request.

I shall not particularly dwell upon the case, the history of which I have just given you, but, instancing it merely as an example of the affection under notice, I shall enter into some general remarks on the subject.

Chronic laryngitis is associated with pulmonary phthisis in several ways. The affection of the larynx may be strictly secondary, and result from the direct irritation of the spuita passing over the bronchial tubes and the mucous membranes of the larynx; this form of the disease occurs in the more advanced stages of phthisis when the spuita are more irritating than at the commencement, before softening of the tuberculous substance has occurred. In other cases, the tuberculous disease appears in the larynx nearly, if not quite as early, as in the lungs, and arises from a deposit of tuberculous mat-
ter in the follicles of the larynx. This variety is strictly analogous to the tuberculous affections of the serous or mucous membranes which so often accompany phthisis; that is, the tuberculous disease of these various organs is in reality but a part of one and the same affection, which merely shows itself in many points nearly at the same time. The third variety is the most interesting, and is the one offered by the case which I have just detailed to you. The affection of the larynx does not here seem to be originally of a tuberculous character, but may be either a simple chronic inflammation or one dependent upon a syphilitic taint. The pulmonary affection is of later date, and only appears as a consequence of the irritation which is developed in a continuous mucous membrane. Not that all cases of chronic laryngitis necessarily terminate in this way; it is only those which occur in individuals who are disposed to phthisis, either from original constitution or acquired habits.

Phthisis may not follow this variety of chronic laryngitis for a very long period after its development. In the case which forms the illustration of this lecture, although there can be no doubt as to the order of time in which the affection of the larynx and lungs appeared, there is a less distinct interval than in many patients. I have seen a number of cases in which the lungs were undoubtedly free from any appreciable signs of disease for months after the laryngeal affection had taken place. In all probability, the lungs were as free from actual as they were from all appreciable lesions, for the general symptoms of phthisis did not appear until about the period when the local signs were discoverable.

I know of no certain rule by which you can distinguish those cases of chronic laryngitis which are to pass into phthisis, from the more simple forms of the disease, in which the ulceration of the mucous membrane and the caries of the cartilages are the only lesions. You should therefore re-collect, when you meet with a case in which a careful exploration of the chest convinces you that the patient has no pulmonary affection, how very apt true phthisis is to follow chronic diseases of the larynx, and you should not give the patient to understand that his lungs are entirely out of danger. In fact, such cases are often but the prelude or the first stage of a variety of phthisis, the symptoms of which persist until the death of the patient. From a neglect of this necessary caution, or rather, from not being fully impressed with the connexion which exists between the early and the more decided stages of the irregular varieties of pulmonary phthisis, I have known physicians of high standing commit grave errors, which proved injurious to the health of their patients, as well as to their own reputation. These errors are sometimes committed by physicians who are familiar with the physical means of exploration, and who have acquired that power of diagnosis which is possessed only by those who are thoroughly conversant with the pathology of pulmonary disease; you may readily imagine how much more frequent they must be with practitioners who diagnosticate disease merely from a few of the most obvious symptoms.

There is no difficulty in the diagnosis of chronic laryngitis; but there is much difficulty in distinguishing its different varieties. For instance, if you meet with a case in which there has been pain and difficulty of deglutition felt at the region of the larynx, and an alteration of the voice which may be limited to a mere huskiness scarcely observable by any one not previously acquainted with the natural voice of the patient, you should regard the case as one of chronic laryngitis, if it persists longer than a week or two. The absence of any obvious alteration of the pharynx does not prove that the larynx is in a normal state; although, when the pharynx is diseased, the larynx rarely escapes for a long period without participating in the evil, at least to some extent. The anatomical changes, occurring in this early stage, are limited to a mere thickening of the mucous membrane, especially that covering the vocal chords; it is sometimes so slight as to disappear entirely
after death. This stage of the disease is that which is most frequently followed by phthisis, or, to be more strictly logical, we should perhaps say, that at this stage, phthisis generally supervenes.

You will find the diagnosis of the following stages still more easy than at the period of ulceration. The ulcers are most common near the vocal chord, in the variety which attends phthisis; but in syphilitic laryngitis, the epiglottis is commonly attacked and very often the cartilages of the larynx become necrosed. By depressing the base of the tongue very firmly, you can often obtain a view of the tip of the epiglottis, and thus ascertain if it present the white or greyish ulcer of syphillis. Still in the laryngitis accompanying phthisis, the epiglottis is not unfrequently ulcerated, so that this sign is not infallible. The peculiar grayish colour of the ulcerations of syphillis, and the simultaneous occurrence of ulcers on the pharynx and tonsils of a similar aspect, are better guides. But we are, after all these precautions, obliged to trust largely to the commensurative circumstances, especially to the signs of syphilitic or tuberculous disease in other organs. There will then remain a few cases of doubt; for instance, the patient whose case is mentioned today, has, undoubtedly, had syphilis more than once, and is, evidently, now laboring under a confined phthisis. In his case, I regard the laryngitis as generally of a syphilitic character, but the phthisis very speedily added a new source of irritation to the larynx.

Besides these cases of chronic laryngitis, there are others in which it is very difficult to distinguish how much of the symptoms is owing to the affection of the larynx, and how much to that of the pharynx and trachea which may accompany it. These cases constitute the annoying disease which has been sometimes called clergymen's sore throat. This designation it has received from its frequent occurrence in the members of the clerical profession. It is now rather less frequent than formerly, and is passing from out of the list of fashionable complaints, so that in a few years we shall probably scarcely hear of its appearance. In speaking of it as a fashionable disorder, I do not mean to jest about a very annoying complaint, one that is quite inexplicable, and which indirectly leads to serious consequences.

This variety of sore throat which occurs so often in clergymen, is by no means very rare in other professional men who are engaged in pursuits little calculated to promote vigorous health, and are at the same time obliged to exert their voice in addressing large audiences. There is no doubt that a feeble constitution, especially if inclined to scrofulous disorders, favors in a remarkable degree the sore throat, but, notwithstanding, I have often seen men of a vigorous, and apparently altogether firm constitution, suffer extremely from this affection. The liability of clergymen to this kind of sore throat depends upon several causes; in the first place, the duties of a clergyman in this country are sometimes unreasonably arduous. In many cases his parishioners expect that, in addition to the ordinary duties of his calling, he should take an active part in many religious societies and meetings, which make large demands upon the time that should be devoted to active exercise and cheerful recreation. The origin of the feeble constitution of clergymen in many cases depends upon still more remote causes, and arises from an absurd neglect of the ordinary rules of hygiene while pursuing their preparatory studies. When you reflect upon the influence of these sources of disease, and add to them the feeble constitution that not a few clergymen possess from original habit of body, you may understand the reason why the clergymen in our cities enjoy less perfect health than any other class of professional men. In Europe it is well known that the reverse is universally true.

The affection of which I am now speaking rarely offers laryngitis in its acute form. Indeed it generally commences in the pharynx, and extends in a secondary manner to the windpipe. Its exciting cause may be either an attack of acute fever, especially scarlatina, or it may occur as an ordinary
angina which is prolonged beyond the usual duration of these affections.—
When we examine the pharynx we find it to be red, smooth, and irregularly
elevated; the redness of the membrane extends also into the larynx, and
may be detected at the tip of the epiglottis. When these cases are either
acute or have lasted for a long period, the trachea and larynx will be found
painful on pressure, and the voice becomes feeble and hoarse.

The lungs often become tuberculous after the irritation of the pharynx has
lasted for some weeks, but you must not suppose that there is any necessary
connection between phthisis and this affection; it is a more exciting cause,
but not a frequent precursor of the disease, as is the case with true chronic
laryngitis. It is quite surprising how long these cases will last without the
lungs materially suffering, and unless the general and local signs of phthisis
are both evident, you must not conclude that your patient is in the early stage
of consumption.

**Chronic Laryngitis—Treatment.** The treatment of chronic laryngi-
tis is always a matter of great difficulty; indeed, when the case has become
complicated with tuberculous disease of the lungs, you will find no plan of
treatment of much avail. These cases of consumption are the most intract-
able, and most painful to the patient. It is of little moment whether the dis-
ease of the throat has occurred very early, or whether it is merely one of the
sequels of phthisis; in neither can you hope to succeed in arresting the
disease of the throat, if ulceration has once commenced. You have seen
enough of these complaints, to understand that a cure is scarcely possible,
when the interior of the larynx is constantly irritated by the passage of disea-
sed secretions from the lungs, and by the motion caused by either speaking
or deglutition. Still a cure does sometimes take place spontaneously, and
may be aided by a judicious treatment.

I once saw a case of most complete cicatrization of the larynx, where the
vocal chords had been completely destroyed, and the epiglottis was contracted
much within its usual dimensions. The voice, of course, was not restored,
but the patient was quite healthy, and died of a disease in no wise connected
with the larynx. If the destruction has been complete, you must not there-
fore look for entire restoration of the functions of the larynx, but for the ces-
sation of the local pain felt in coughing and swallowing, as the test of the
disease having quite abandoned its acute character. With the cessation of
the pain, there is an end of the acute form of the disease which is attended
with active inflammation; but there is a form of chronic laryngitis in which
the uneasiness is so slight as not to be felt by patients of obtuse sensations.
In these cases, the proof of entire cicatrization is very difficult of attainment.
You can only judge in an approximative manner, by the diminution of the
hoarseness of the voice, and by the cessation of the harsh, stridulous, laryn-
geal cough, as well as the disappearance of the clotted, opaque sputa, which
are formed in the larynx.

The cases that you have just seen of phthisis, accompanied with chronic
laryngitis, were not of the most favorable kind for treatment. Still, in both
cases, there were results of a very positive and gratifying character. One
patient left the hospital with the symptoms of phthisis much mitigated, and the
laryngeal affection decidedly improved. He will not recover, but the relief
which he obtained is in itself a most desirable object. The other patient
was still more decidedly benefited; he has no soreness of the throat, and
can speak almost in his natural key. These cases exemplify the only treat-
ment for affections of the larynx which I conceive to be called for; I had
almost said, which was justifiable in an advanced stage of phthisis. I di-
rected for both of them merely inhalations of laudanum and water, to be re-
peated several times a day. About a drachm of laudanum was poured on
some boiling water in an open vessel, and the patient was directed to breathe over the cup twice daily. This mode has some advantages in such cases over any inhaler; it is preferable to using any vessel with a spout, as it avoids all straining or forcing of the muscless of respiration, and at the same time the patient receives a sufficient portion of the aqueous vapour charged with alcohol and the narcotic properties of the opium. You may readily renew the heat by placing a spirit lamp occasionally beneath the vessel containing the liquid. The vapour of tar, which has been so much lauded in the treatment of phthisis, is often of great service in these cases, but is most useful in those varieties in which the inflammation extends over the pharynx, and thence into the larynx and trachea. I am not disposed to exaggerate the value of inhalations,—they have been greatly abused, or at least have been extended much beyond their value; but they certainly furnish the most direct mode of acting upon the lining membrane of the air passages, and may be managed so as to avoid all risk to the patient.

In these cases, leeches are often advisable; but they should be applied rarely and in small quantities,—for a large abstraction of blood by leeches applied over the trachea, debilitating extremely, and should be avoided at an advanced stage of phthisis. Now the very reverse of this obtains in the commencement of the very same disease; but two or three days since I prescribed leeches above the summit of the sternum for a young lady who labors under the commencement of phthisis; the relief from a most distressing sensation of tickling and itching throughout the windpipe, was immediate. I have seen similar results very generally follow in such cases, and regard the application of leeches as much more certainly useful in laryngitis and inflammation of the trachea, than in most cases of disease; but you must always carefully select the proper time and mode of application, or you will find it positively hurtful. I would give you the following practical rule: when there is soreness of the larynx and trachea, and pain on pressure, without the permanent alteration of the voice and appearance of the sputa indicative of ulceration, you may take from two to six ounces of blood, with almost certain advantage. The soreness of the larynx which accompanies the clergyman's sore throat, is nearly as certainly relieved as that which is confined to the peculiar affections of this organ. This leeching may be repeated, if you find that the patient is not rapidly losing his colour, or showing other signs of excessive loss of blood. You must not, however, expect that when extensive ulceration of the mucous membrane of the larynx has taken place, and still less when the cartilages are necrosed, that the abstraction of the blood from the neighboring parts, will cure the disease; it can no more change this state of things, than arrest the progress of white swelling when the cartilages of the knee-joint are partially eroded. There is nothing to be done, but to check as far as possible the irritation of the part by appropriate inhalations, and then trust to the gradual operation of nature in throwing off the diseased portion. In the syphilitic variety, a mercurial course may be most useful; indeed, you may sometimes succeed in curing cases of the most unpromising appearance, provided they depend upon a venereal cause.

In the late work of Trousseau and Bello, on chronic laryngitis, which obtained a prize from the Academy of Medicine, much stress is laid upon the cauteronization of the larynx. This may seem a bold procedure, and doubtless requires much skill to avoid mischievous effects; but if the operation be practised with care, these authors state that it is not very difficult, and is of great service. They sometimes touch the mucous membrane of the larynx, at its entrance, with the nitrate of silver, but more frequently sprinkle the interior of this organ with a solution of the caustic, by means of a syringe constructed for the purpose. Of course, the great difficulty in the operation consists in introducing the injection behind the epiglottis, and in preventing the caustic from disorganizing the membrane of the larynx, or irritating the adjacent bronchial tubes. I have never attempted to perform this operation,
and cannot therefore speak to you from personal knowledge of its powers; but if I were to form an opinion upon the subject, I should conclude from the remarkably beneficial effects of inhalation, that it was a useful mode of treatment in the hands of those who are skilful enough to employ it. It has one great advantage; it irritates but little the bronchial tubes.

External irritants are recommended, perhaps in part from a kind of habit which makes them always enter into the list of remedies advised for all chronic inflammations. That they are often grossly abused, no one can doubt; and we may regret that we have no means of distinguishing with certainty those cases which are really benefited by external applications, from those in which they are either useless or injurious. The subject, however, is perfectly open for observation, and may be readily settled on a rightly determined basis by a careful observation. My own experience enables me to give you the following rules as tolerably well fixed. Blisters are rarely useful; I usually avoid them, and would restrict their use to the sub-acute forms of laryngitis; I have seen little benefit, and often much injury, result from their use in the very acute and in the chronic cases. Caustic issues and setons are both troublesome and painful, and rarely of benefit. Frictions over the larynx and trachea, with a stimulating liniment, particularly one so mild as to allow of gentle and long-continued application, are much more useful; indeed, you will often find them of signal advantage in cases of sub-acute laryngitis, and sometimes of service in the more intractable chronic varieties. Weak sinapisms, frequently applied, are also useful, and less inconvenient than liniments.

There are many less important medicinal agents which I am in the habit of using; some of them you have seen me prescribe. These are chiefly the opiates and demulcents; although these medicines are regarded as mere palliatives, they are nevertheless highly important, and prevent the increase of the laryngeal affection. Nothing acts more injuriously upon the larynx, or is of more immediate injury to it, than frequent coughing, and any simple remedy which can check the constant disposition to cough, is sometimes more than a palliative—it prevents that constant motion of the larynx which hastens the progress of incurable cases of laryngitis, and is a serious obstacle to the recovery of those which are less advanced. The opiates are advantageously combined with ipecacuanha. I greatly prefer the form of lozenge; a medicine which dissolves very slowly, acts more certainly and more completely relieves the distressing sensation of tickling about the entrance of the larynx. You may give a lozenge four or five times daily, containing from the twentieth to the twenty-fifth of a grain of sulphate of morphia, with gr. l 4 to gr. ss. of ipecacuanha; to this I sometimes add a minute portion of antimony.

Whatever treatment you adopt in chronic laryngitis, you will soon find that in no disease is it more necessary to attend rigidly to those hygienic rules, which are here often so much overlooked. The larynx, from its structure and position, is extremely exposed to the causes of disease; and when its mucous coat is ulcerated, or its cartilages denuded, no cure can reasonably be anticipated, unless you protect the organ from the deleterious action of external causes, and keep it as nearly as possible in a state of rest. It is therefore a matter of absolute necessity to keep the patient as silent as possible, and to guard him from sudden changes of temperature. A damp, moist air, is often soothing to the larynx, and rather diminishes the tendency to cough; but if the air be damp, and at the same time chilly, as is the case when easterly winds prevail in this climate, patients with laryngitis nearly always suffer, and cough much more frequently than at milder seasons. A very dry, cold air, produces very variable effects; if the patient be extremely feeble, it is usually injurious, and proves directly debilitating; but if his strength be still retained, the influence of cold, dry air, is no otherwise injurious than as a direct irritant to the larynx. Extremes of heat are injurious
on other grounds,—a patient debilitated by the intense heat of summer always suffers from an increase of laryngeal symptoms—he is besides liable to profuse perspiration, which is suddenly checked by draughts of air. Now, from all these causes of disease, it will be your duty to protect the patient, more carefully, perhaps, when suffering from laryngitis, than any other disease; the extraordinary susceptibility of the larynx renders it difficult to restore it to the normal condition when seriously affected.

Silence should be enforced in all acute inflammations of the larynx; but in its chronic diseases, absolute silence is impracticable. All that we can do, is to direct the patient to speak as little as practicable, and to avoid all loud or prolonged exertion of the voice. When recovery takes place, you must permit your patient to return but slowly to his usual tone of voice and habits of speaking, otherwise he will be exposed to a continual recurrence of this most troublesome disorder.

Bronchitis. Bronchitis is an affection, which is rare during the summer months of the year. Most of the cases which occur in our wards are met with in the winter season; and they are generally engraven on some other affection, for we have few instances of pure acute bronchitis in hospital practice. In its simple ordinary form, it is too slight a disease to require much attention, and in the large majority of cases is left to the unaided efforts of nature. Patients affected with phthisis will tell you, that they labored first under a bronchitis, which may have been ordinary or secondary. They usually suffer it to run on until it reaches a stage which compels them to seek for medical relief, and they then enter the hospital. Hence in hospital practice, we see only severe and grave cases, which, in many points of view, is advantageous in the study of disease.

We have a case now in the hospital, which is rather unusual: it is not perfectly pure bronchitis, for, as I have said, that is comparatively rare, but it is complicated only with slight pleurisy. The patient is extremely stupid, and we were therefore not able to gather from him much of his anterior history. He is a stout and strong man, a labourer, born in Ireland, entered the hospital the 24th of June. He had been in the out-wards of the house from the 15th of April till the 13th of June, when he went out of the house, and went to work at Havre de Grace. He had no cough of severity until he was hurt on the 21st of June by a bank of sand falling on his breast, and principally on the left side, which became immediately painful, and soon after he became oppressed; he was not bled. Two days after he came to Philadelphia on the rail road cars, without suffering much pain, and entered the hospital on the 23d; he has been subject to colds, but never had one of any severity. On the 24th, the day after his admission, his condition was the following:

Intellect extremely dull, and memory bad; face slightly oedematous under the eye-lids; feet not swollen, voice hoarse, cough loose and hoarse, appetite lost, slight pain in the left side of the breast, chiefly under the axilla; none in the right side; this pain is increased by breathing; dyspnea caused by breathing and speaking; skin moist and cool; pulse eighty-four, quick and thrilling; respiration twenty; chest anteriorly full; percussion clear throughout anteriorly and posteriorly, but less marked on the left than on the right, and the left side not so full as the right; sonorous and mucous rhonchi on both sides, anteriorly respiration vesicular and slightly feeble; ordered

Mist. pectoral f 3 v.
Syrup scillar. f 3 i.

M. S. L s. q. h. secunda.

June 25th.—Man much oppressed; face flushed; dorsal decubitus; loose mucous cough. Pain extending over the sternum, especially towards left
Side; pulse ninety-six, rather full and resisting; tongue moist, a little whitish; cephalalgia in the morning, and at night very severe, preventing sleep. Sonorous rhonchus extending throughout the whole of the chest; mucous rhonchus in the lower third of the left side; percussion at the base of the right side a little less clear than at the left; the pain was in the right side, but the mucous rhonchus at the left. Venesection—tartarized antimony, two grains dissolved in a quart of flaxseed tea, to be taken during the day and night.

From the 25th to the 29th, the oppression and pain in the right side ceased completely; the flush of the face disappeared. The patient was cupped upon the chest after the bleeding.

June 29th.—More oppressed; sweating profuse on the 28th. No pain in the right side, which has not returned since the bleeding; cough very loose; soreness at the upper part of the sternum severe in coughing. Tongue moist; appetite bad. Chill last evening. No palpitation. Pulse eighty-four, rather feeble, regular. Respiration twelve. Impulse of the heart clear; both sounds clear, distinct, but distant. Anteriorly mucous rhonchus over the whole left side of the chest; vesicular on the right where there was no rhonchus; percussion posteriorly clear on both sides, nearly equal, a little in favour of the right; abundant mucous rhonchus at the lower portion of the left side, with sibilant less marked; no stools; no nausea for the last twenty-four hours.

July 2d.—Sweating abundant; pulse eighty-eight; still loose mucous cough; expectoration almost ceased; tongue a little dry at the edges only; one stool yesterday; perspiration decidedly acid, but less so than that of a healthy individual. Abundant mucous rhonchus in the posterior part of the whole chest, particularly on the right side extending throughout, anteriorly respiration feeble throughout. On the 3d, still cough, but more loose; less dyspnea. Sweating abundant; a little hoarseness; pain only at the thorax; urinates with difficulty and pain; costive; perspiration now alkaline; sputa decidedly alkaline; urine extremely acid; appetite lost; tongue moist; pulse sixty-four, full and soft; mucous rhonchus throughout posteriorly; the tartarized antimony continued.

July 6th.—Expectoration muco-purulent, not numular; skin cool; pulse regular, moderately frequent; on the left side anteriorly, the respiration is vesicular and pure; sibilant rhonchus at the summit of the right side, with a little rudeness of respiration; percussion clear. Balsam of copaiba gtt. v. four times a day.

July 7th.—Bad taste in the mouth; strength feeble; expectoration thick, yellow, and muco-purulent; twenty drops of elixir vitriol four times a day.

July 9th.—Respiration vesicular throughout the left side; traces of sibilant rhonchus only throughout the right side anteriorly; moist and dry rhonchi abundant; percussion sonorous; sleep interrupted by the cough; sweating profuse; anorexia; thirst; two stools in twenty-four hours; tongue a deep purple, but rather dry; strength feeble; pulse ninety-two; saliva slightly acid, although patient has not taken the elixir of vitriol for four hours; perspiration also slightly acid; treatment continued.

July 10th.—Perspiration and saliva slightly acid; urine extremely acid; took last night by mistake about twenty drops of copaí; a elixir vitriol continued. The oppression continues; anteriorly on the left side respiration clearer; mucous, with some sibilant rhonchus on the right side.

July 11th.—Cough frequent; sweating at night; drowsiness throughout the day; expectoration puriform, thick, running together; twenty drops of laudanum at night.

July 13th.—Cough at night, less during the day; skin cool; pulse eighty-eight, feeble; tongue red, smooth, and clear; appetite bad; sweating last night; one stool in twenty-four hours; pain under the right clavicle; vesicular respiration; imperfect sonorous rhonchus at the internal margin; vesi-
cular simply inferiorly; on the left side fuller, and more vesicular; no constant expiration; impulse of the heart increased; sounds clear, the second a little dull; percussion clear on both sides, less so on the right; posteriorly on the right side abundance of sonorous and sibilant rhonchi; rather feeble on the left. Dry cupa no. vii between the shoulders.

July 20th.—The following prescription was ordered:

R. Copaiba 5 f.
Tr. Opii 5 s.
Syr. Tolu 5 j.

Mucil. Acac. q. s., ut flant ½ iv., S. 5 ss. q. h. sec. nocte.

This case, which affords us a very good, although not an un complicated example of bronchitis, will enable you to learn the signs of the disease, and the difficulties which sometimes arise from its complications with more grave, though less apparent disorders. The patient was quite well until he was injured by a fall of earth; from that time he began to cough, and at his entrance the bronchitis was fully developed. Now, this is by no means the usual mode of commencement for bronchitis; and if the patient had given a less connected account of his case, I should certainly regard his statement as very doubtful. As it is, you may well hesitate before you admit entirely the account which he has given you; for his perceptions are dull, and he is therefore not capable of appreciating the slight degree of uneasiness which would arise from a previous chronic bronchitis. Of one thing, however, we are certain; that is, that the bronchitis assumed a character of much severity only after the occurrence of the accident, which the patient met with while at his work; the same external violence therefore gave rise to an inflammation of a serious and a mucous tissue.

The diagnostic characters of bronchitis are well illustrated by the present case; the rhonchi which are so well marked in the present case, and which vary from one moment to another, are, on the whole, the best signs of the disease. But you must not lay too much stress on these signs; you must remember the anatomical condition of the bronchial membrane, and keep in view the causes of the rhonchi. Now, in bronchitis, especially if the case be of moderate intensity, such as is offered by this patient, the membrane is throughout its whole extent more or less thickened and coated, with mucus of considerable tenacity. The thickening arises from congestion of the blood vessels of the membrane, and will be found to vary very much at different times of the day and in different portions of the membrane; hence the sounds will cease entirely, and be replaced by a respiration which is nearly natural, but more feeble than usual, for the mucous membrane is always sufficiently altered to prevent the respiration from returning to its full strength as long as any inflammation whatever remains. Hence I am disposed to lay more stress upon the feebleness of the respiration, particularly the irregular and varying feebleness, than upon the rhoni. The feebleness of the respiration is of course most evident, when complicated with emphysema; in the emphysematous portions of the lung there is a permanent cause for the feeble vesicular murmur; and they yield scarcely any sound, when the patient has an attack of acute bronchitis added to the chronic disease. You will find that persons afflicted with emphysema, are especially subject to bronchitis. Besides the feebleness of respiration, those of you who are good auscultators, and I am glad to say that several of my pupils deserve to be so called, must have perceived that the respiration has more or less of the character which I denominate rustling; that is, the inspiratory sound has lost, in a measure, its softness, and a rustling sound is heard during the passage of the air into the smaller tubes and vesicles. This is a very frequent sound in chronic bronchitis; it is also heard in the acute variety, if it happen to be accompanied with but little mucous secretion. By the rustling sound I do not mean the dry crepitant rhonchi, which is rarely heard in these cases, and is therefore an unimportant sign,—but I allude to a mere alteration in the tone of the respiration, no adventitious sound being produced.
You are well aware of the changes which occur in the bronchi; these are in proportion to the quantity of the secretion into the bronchial tubes, and to the degree of the thickening of the membrane. Thus you observed in the present instance that the mucous rhonchus was well marked when the spuota became abundant; now, in cases of acute bronchitis, it is important to attend to this rhonchus, for when secretion has fairly taken place, you may regard your patient as decidedly improved; but in chronic bronchitis, it is of less importance, except in cases where a chronic dry catarrh is replaced by an acute inflammation, the mucous rhonchus then becomes a very good measure of the degree of severity of the acute disease, and from its gradual subsidence we can ascertain the precise progress made by the lungs in returning to their habitual state.

You may have remarked, that the oppression in this patient was much greater than the physical signs would seem to indicate. Now, when you find this state of things in bronchitis, you may look for its cause in one of two complications; that is, emphysema, or disease of the heart. Of course I exclude complications of an acute kind, such as pneumonia, or severe pleurisy, for slight pleurisy, not more severe than that offered by this patient, does not constitute a very distressing complication. The signs of emphysema, I shall detail to you at another period; they are in part obscured by those of the bronchitis, but still a sufficient number of signs will remain for the diagnosis. The evidence of cardiac disease is rather more obscure; that is, of a moderate degree of enlargement of the heart, without either extenive valvular disease, or inflammation of the membranes. The means of diagnosis are in a great degree within your reach, but it requires much tact and some experience. In the present instance you will scarcely find demonstrable signs of heart disease; at least these are limited to a slight degree of dulness at the bronchial region, and a little confusion of the sounds of the heart; by this expression I mean that the sounds of the heart have not their usual clearness and fulness, although they are not positively so different from the ordinary standard as to be called morbid. The impulse is besides too diffused, and not sufficiently sharp; not limited to the point of the heart; it is, however, at least as forcible as in the natural state. Now, these signs, which I merely allude to, are present, without expecting you fully to appreciate their value, indicate a distension of the heart with blood, causing a laboured and slow contraction, and sometimes terminating by the formation of fibrinous coagula in the right ventricle and auricle. In more favorable cases, this distension of the heart is of little immediate danger, but may lay the foundation for future hypertrophy and dilatation.

Having now pointed out the signs which are important for the diagnosis of this case, I have but a few words to say as to its prognosis; it is almost necessarily favourable, for the complications do not threaten any immediate danger; and the patient, from his age and constitution, is nearly exempt from pulmonary phthisis, which is apt to follow chronic catarrh, in the patients who have any predisposition to the formation of tubercles from hereditary or other causes. I shall insist upon the relations between phthisis and bronchitis, and point out their distinctive characters in another part of the course.

The treatment consisted, as you know, chiefly in venesection, cupping, and tartarized antimony, followed by the balsam of copaiba. The bleeding was particularly requisite in this case, from the full, plethoric condition of the patient, and his evident tenacity to congestion of the heart and lungs. When the necessity for a remedy is as strong as in the present instance, you may expect to find that immediate relief will follow its employment. Accordingly, the patient was immediately relieved of his most troublesome symptoms, and especially of his extreme dyspnoe. I am not, however, an advocate for bleeding in ordinary cases of bronchitis; indeed, it often retards the cure,—for in all inflammatory diseases, but more especially those of a secreting mucous membrane, a certain degree of energy in the circulation is
necessary to bring about the natural termination of the disease. This termination always takes place by secretion from the inflamed surface, unless the inflammation be arrested so easily as to leave no thickening or congestion of the mucous coat. The disadvantage of bleeding is, that it does somewhat retard the process of secretion, if the bronchitis be not severe, or if the strength of the patient be not very robust; on the other hand, when the congestion is so considerable as to impede the circulation, we find it highly expedient to take blood from the arm. It removes the over large quantity of blood from the heart and lungs, allows these organs to perform their functions with comparative facility, and materially assists secretion. You have seen how materially this was promoted in the present instance, and that the patient was immediately relieved after bleeding. Cupping is less useful in bronchitis, than it is in either pneumonia or pleurisy; the relief is not proportionate to the quantity of blood taken. I use cups but rarely in acute bronchitis; I almost limit their use to those cases in which it is complicated with so considerable a degree of dyspnoea, that bleeding has failed to remove it. They are, however, more useful in the chronic variety; they should then always be applied between the shoulders, a point where you may abstraction more blood, and at the same time approach much more nearly to the bronchial tubes.

The tartarized antimony was also directed for this patient; it certainly reduced the force of the pulse, and was probably useful. You need not be startled when you hear me use the word, probably useful; I am most anxious to point out to you the best modes of treatment, and to insist most strongly upon the positive results obtained from treatment, either in the management or cure of disease; but when I do not perceive unequivocal benefit follow from a prescription, I feel myself bound not only not to conceal, but to call your attention to it. In the present instance, we can merely say that our patient improved a little while taking the antimony, uncombined with other remedies; but the medicine was not followed by the same quick resolution of the disease, as often occurs in cases of pneumonia, treated by this remedy. Nevertheless, antimony is, in general, one of our best and most certain remedies in the management of acute bronchitis.

Vegetable emetics are largely used in the treatment of bronchitis; they are most useful in the chronic varieties, or in the bronchitis of children. Squill, ipecacuaha, and nauseants of a more stimulating character, are all used. I shall speak of them in their appropriate place.

The patient is now using the balsam of copaiba, a most excellent article in sub-acute bronchitis. Of the various terebinthinate articles, none is so much used as this balsam; and where it is not resisted by the stomach, its action is more certain than that of any remedy of this class. It probably acts upon the same principle which renders stimulants effectual in the declining stage of most inflammations. It certainly is one of the most certain remedies we possess in the treatment of chronic bronchitis, especially those varieties in which the secretion from the bronchial tubes is much diminished. In the chronic mucous catarrh, its action is less certain, but often highly beneficial. Our patient will, in all probability, require no other treatment, as he is already fast approaching towards convalescence. Other modes will be appropriately mentioned, when I speak to you of the chronic forms of the disease.
Animal Magnetism.

This is a subject on which our own facts are few indeed, but as well wishers to truth, we purpose calling the attention of our readers to it. It were, in our opinion, better, had it been called Animal Electricity; and Galvanism, Galvanic electricity. Certain it is, however, that it is a subject much more worthy of scientific investigation than some others to which much of the attention of the ablest investigators has been zealously directed. The powerful shafts of ridicule, abuse and evil report, have indeed been sped at it in as deadly and inveterate a manner as if it had been a nonpareil in sin and uncleanness. But were these to be received in the place, and with the credit of demonstrable truth, what would be the lot of any man, when he frowns on the vices of the multitude; as that of intemperance, for example? or what that of the aspirant after fame, fortune and usefulness, when his successes begin to obscure the bright prospects of his competitors?* or what that of him who comes out from the world of sin, and walks in the commandments and ordinances of his Creator? It would, in many cases, at least, be that of banishment from the society, and the countenance of the wise and good, and of ruin irremediable. What ridicule and abuse have not been extended to the best of men, and even to the son of God himself? It follows therefore that ridicule and abuse are no arguments against any fact; nor is the mere unbelief of the wisest. We are not prepared to come forward with a declaration of belief in all the things which have been said of animal magnetism, for, like medicine and all other things, some of its friends have, in the fulness of their partiality and under the excitement of party zeal, and of the inflections of ridicule and slander, caressed it almost to death. But in our researches after truth, and in our adoption of facts, as true, we have found it a prudent rule of action to receive facts when given on such authority as we cannot, on a fair and impartial estimate, refuse to receive on any or every other subject. A man may dream, or imagine, or he may play the somnambule; but however unyielding his reverence for truth on other occasions, we are not called on for credence on these.

But when men who have been long before the world, and all their lives have but confirmed more and more, every confidence in their mental and moral sanity; and when, in opposition to

*Was it not said of the Father of American Medicine, our own Rush, that

'Times are ominous indeed
When quack to quack cries, purge and bleed.'

£ G
their own party opinions, and declaring themselves unbelievers, they come forward from their sense of common honesty to nature's truth, and declare facts calculated to favour their opponents, and make against their own party interests — when, we say such men come before their own party-men, as members of the Royal Academy have done, and state that they are unbelievers in animal magnetism, but feeling bound to give the clear truth, whatever may be its bearing, state that they have with their own hands extirpated molar teeth, amputated female mamme, &c. &c. without the least painful perception of the operation by the patient, we are obliged to believe the fact alleged. The truth is, that our difficulty in this matter is misplaced. Our minds have been misled by the idea of magnetism being attached to the human nature, and we have allowed ourselves to doubt, and dispute facts, which, as fair reasoners and philosophers, we had no right to do; when the difficulty was indeed only with regard to the manner of the production of these facts. We have, very unwisely, (because the principle cannot, must not, be carried out, in other matters,) allowed ourselves to deny truths, merely because we did not understand the laws by which they were revealed. They have appeared to be contrary to our ideas of the known laws of nature. Having set ourselves up as the very priests of nature, and concluding there were no other rules by which she performed her offices, but those we know, we have taken on ourselves the right of deciding that the fact could not exist, because contrary to the laws of nature! Who knows the laws of nature? Do you, reader? Do I? No. We may have learned by observation or otherwise some of them, as we may some few spots on the surface of the earth, or a few of the other world's which we behold delightfully, as brilliant in the firmament; but does it follow that there are no lands nor seas but those which we know?— or that there are not worlds beyond the utmost limits of our ocular sense, assisted by all the means of improving it, by taking advantage of the refractions and reflections of light? The truth is, that men dislike to own flatly that there are things in the world which they do not understand! It has been said, and surely with general correctness, at least, that all men desire to be thought better of in some respect than they really deserve; and that no man would be content with all his sins written on his forehead. Whilst this may be true— may be admitted as barely so, this fact will not be denied—that there are those, and they are generally the least gifted in intellect, who would have the world believe there was nothing left in nature which their intellect had not scanned and encompassed and mastered. Such are ashamed to acknowledge even a truth which is on evidence sufficient to make it as clear as the noon-day's sun in fair weather, because by so doing they would be forced to acknowledge their own ignorance of the
laws of nature concerned in its production. It has been well
said that "the undevout astronomer is mad." We may say
the same of the proud philosopher. If not mad, he who is puff-
ed with this kind of leaven is as much out of place in the study
of nature as dandyism would be in the Christian's closet.

The fact is, that true wisdom, like true piety, tends to teach
one how small a portion of the Creator's wisdom he has in the
one case as the other does how little of the purity of His Master
he possesses—both leading directly to the spirit of teachableness
of a little child.

Soi-disant philosophers thank their stars, or rather their schools
or teachers, that they are not, as some other men, ready to be-
lieve a fact, without knowing whence or how it came; just
as the proud pharisee did his God, for not being as the publican
who felt and acknowledged himself a sinner before God. This
phariseeism is as inadmissible, and as much opposed to truth
and reason in philosophy in one case, as it is to genuine piety in
the other: in both cases tending only to prove that pride, instead
of teachableness and humility, possesses the mind and heart.

If somnambulism and clairvoyance are possible to human na-
ture, and it is beyond dispute that they have occurred in the
human system under certain morbid influences, they are but
phenomena, and the successors of certain antecedents or causes;
and the production of the same phenomena by the agency of
men is nothing more than the simple fact, that man has learned
to imitate by art, those effects which nature, by the operation
of her own laws, without man's assistance, develops. Compe-
tent causes produce them, and what the difference, whether these
causes are brought into operation by, or without the agency of
man, except that man has learned so much of nature's ways as
to design, and then execute, with like effect. Nor is all this
more strange than that he should have reasoned out the fact that
a western continent existed, that he should learn how to produce
water by effecting a combination of its original elements, or that
he should make the canvass or the bleak marble declare and
perpetuate the history of men, or that he should reveal to the in-
tellectual eye the abstruse principles of physiology and pathol-
ogy, and operate on these principles, though ever hidden and
intactible, with his remedial agents as with implements, and
thus for a time, disarm sovereign death of his powerful and de-
structive weapons. Before the days of Franklin and of Rich-
man, who thought of arresting the vivid lightning in its destruct-
tive flight and subjecting it to the use of children as a plaything?
When phenomena so strange as the truths which are before the
world on the subject of what has received the name of animal
magnetism are presented, it becomes the solid student of nature
to look well to them; and rather to investigate their rationale,
than deny the assertions of the most credible witnesses.
We have said that, in producing at will the phenomena of somnambulism and clairvoyance, man has only learned to apply by art, causes, and by them, operate effects, which unassisted nature does. For some of nature's doings in this way we refer the reader to the authentic accounts of a goodly number of our northern professional brethren, for the facts of somnambulism and of clairvoyance arising in cases of disease under their own care—facts which he has no more right to dispute than he would the statement of a respectable physician of Charleston that black vomit had occurred in some case of fever during the present season. We have also learned from an unprofessional source, but not less to be depended on for that, the fact, that somnambulism and decided clairvoyance have been recently displayed, as the operation of disease on a female in a neighboring state, and that these phenomena were often repeated and with considerable regularity, for a length of time. We are satisfied that the facts of this case can be given on testimony which no southerner, at least, will pretend to deny, and we trust that this case will be reported, as it should be, at an early day. The lady has, we understand, entirely recovered her health, and is not conscious of any thing which passed on the occasions of her somnambulism; but having been told that the peculiar phenomena of her case excited much curiosity, is most absolute in not allowing her most intimate friends to say any thing to her on the subject.

In cases of this kind in philosophy, one of three courses has to be adopted: we must make a flat denial of the facts alleged, or pass them by in silence, or give loose to our investigating powers, in order, if possible, to develope the true philosophy of the case. The first of these courses is that generally adopted by those who are denominated "the unbelieving" on the subject of animal magnetism, so called. The second—it is not a little amusing to observe how silent philosophers generally, and physiologists particularly,* are on the subject of a lady in a northern state, who exhibited in her own person very strange and rare electrical phenomena for several months in succession following the aurora borealis which appeared in the early part of the last year—a case, which, for its strange nature, is a very good parallel with clairvoyance. The third and only other cause is that which but few adopt; for it is considered hazardous, and is known to be troublesome to exert one's self for the support or explanation of phenomena so at variance with the common course of events and the known operations of moral or physical causes, as the phenomena of animal magnetism, and the electrical phenomena of the lady to whom we just alluded.

We have ever been of the opinion that the solution of the strange problem of animal magnetism would be found in the

*Except Professors Silliman and Mussey and Dr. Hosford.
laws of electricity, and in this opinion we have recently received support from some of the facts of M. Sousseller which we have noticed in the French manuscript to which we had occasion to refer in our last No. when writing on the subject of medical electricity. The following are some of his observations on this subject. After treating on the manner of applying electricity in the treatment of many diseases, M. Sousseller commences his ix. chapter, "on the manner of treating by touching," thus:—

Abbé Nollet, and several physicians and druggists, tried, about the year 1742, to treat patients and particularly paralytics, by electricity; but they only thought of the use of sparks and shocks. These wise men would soon have been undeceived, had they reflected that nature, which is continually working for our good, does not affect the body by sparks and shocks. They would then have studied the means of obtaining, dividing and distributing the electric matter at their will. When thunder strikes a person, it is a spark coming out of a cloud, and entering the earth, whilst the man inter-vening between the two is stunned. When a person draws a spark from the conductor, or is submitted to the electric bath, the volume of matter is not great enough to wound; but when he is exposed to the shock, it is the same matter accumulated in the lejyden bottle in a large quantity, which passes from one arm to the other in its return to the earth. When this same force is applied to a quire of paper all the leaves will be pierced through. If you give the shock to the branch of some delicate plant, the branch will die a few days after.

Still I am aware that this abominable plan of treating epilepsy and other complaints, is continued in use. Numbers of unfortunate persons who are afflicted, seduced by recommendations, expose themselves to a miserable death in thus satisfying the cupidity of a man who ought not to be ignorant of the fact, that the matter which pierces a number of leaves of paper, also pierces through the breast. Let such a man keep a list of the persons he attends—let him look over it two years after, and if then he find one half alive, it will be a great deal, and he will be able to see in what condition the others will be. I know that the answer is that some persons are cured by thunder; a thing that is not impossible. It might have happened that the column of matter having passed through the body of the patient, had relieved, or even cured him; but I know a person of good constitution, having never had a pain in the breast, who every time he receives the shock, spits blood immediately after. Frequent shocks are calculated to destroy the best constitution.

As to M. Mesmer, having no relation in the capital by whom I could acquire any other knowledge of his operations, but by his views and purposes which were spread before the public, which often appeared opposed and contradictory to the principles I knew, I had no way of imitating his method but by knowing its effects. If they told me he gave a fever or a looseness, they added, he could cure the one or the other at his own desire. At length, however, a person of my acquaintance, on her return from Paris, came to visit me, and told me, that having suffered fever and pain, with spitting of blood, she was advised to take, for her physician, a scholar of M. Mesmer. This physician assuring her that her illness would not be of long duration, placed his hand upon her liver, where he held it about ten minutes; after which, he passed his thumb along her body, from the top of her head down to her feet; which operation he repeated about fifteen times; always turning his hand in another position each time.*

*We understand the writer to mean, that in returning the hand to the head after each pass, as it is called, the ends of the fingers and the thumb are turned off from the body. Ed.
This physician told her that she would perspire so much that she would wet three or four linens; after which, she could eat a pottage. He advised her to dissolve some cream of tartar in boiling water, and drink to her thirst. This person certified to me that, after that operation she felt no more the pain in her side—that she had sweated a great deal—had eaten the pottage, and the next day was clear of the fever. She kept her room, however, and continued drinking the solution of the cream of tartar.

M. Sousselier, pleased with this effect of Mesmer's medication, adopted the following plan to discover its nature and the manner of using it:

M. Mesmar announced that the agent which he made use of could be reflected by looking-glasses. I knew that some persons had experienced some peculiar sensations on having an iron rod, a stick, or a sword, placed near the body, whether touched by it or not, and that others again had felt nothing. I rightly imagined that the sparkling electric matter was not suited for these trials; if therefore made a small resinous cake of electrophore upon a piece of wood, four inches in diameter, and a little more than an inch in thickness. I prepared a small pointed iron rod, and had made a pair of silk socks. Some days after, I put on my socks and silk stockings over them—put my little rod in my pocket and charged my resin cake, which I wrapped five or six times with silk stuff. In this situation I put it in my bosom, with the bottom turned towards my body, so that I could remove the stuff on the side next the skin, that I might receive the matter and be able to communicate it. Thus prepared, I went into the parlour, where there was a young man about twenty years of age, in good health, and apparently, a strong constitution. I begged him to stand up before a glass, with his face at the distance of about fifteen inches. I requested him to fix his eye on the glass, as I wished to direct a rod opposite his right eye in the glass. I then took the small rod, and directed it exactly towards the right eye in the glass. I then asked him if he felt any thing in his right eye: he answered that he felt a coldness which he did not in the other. After four or five minutes, seeing the coldness did not increase nor diminish, I caused him to stand off some paces, and standing up, I presented the point of the rod near his body. On moving it in various directions, it was not long before he told me that it seemed to him that he had dust in his mouth, which filled up more and more. I kept him in that situation six minutes; and fearing that I should make him suffer, I told him to set down; which he had no sooner done than he told me, with an air of impatience, to “take away the harm I had given him”—that “he could neither spit or blow his nose.” I told him he had nothing to fear, for in a quarter of an hour he would not suffer, which was the case. A few days after, I proposed another experiment, but he refused to undergo it.

The little cool wind he felt in his right eye, was the same matter with which I was impregnated, and which escaped to him by the point of the rod. This goes through the glass but slowly, and is thrown back by the mercury upon which it has no known effect.*

A young girl whom I had attended and cured of a convulsive hiccough, had suffered a return of that troublesome disease a year after. She returned to my treatment which did not appear to produce the desired effect. I caused her, with her mother, who came with her, to spend a day in my wife's apartment, with a physician who was near me. I prepared myself in the manner before mentioned, and then rejoined the company; when I caused her to stand up in the middle of the floor. I removed the silk without being

*This passage seems to shew the writer's ignorance of electrics and non-electrics.
perceived, in order to place myself in communication with the bottom of the resinous cake. In that situation, I put my hand upon her stomach without questioning her. It was not long before she told me that I made her suffer a great deal in the stomach. I asked her if the pain was so acute that she could not bear it still for some time? She replied that, if it increased any more, she could not stand up. I then withdrew my hand and made use of my rod, by passing the point at the distance of an inch, from the forehead down to the lower part of her legs, and repeated the same process, taking care to turn the point of the rod in another direction as I brought it back to the head. I had not repeated this operation the third time before she told me she could name to me, with her eyes shut, every part where I presented my rod—that she felt it every where, but more particularly at the stomach, where the pain was more acute. I took this patient in preference for this experiment, because I knew her nerves were very sensitive.

M. Sousselier next gives the case of his own son, laboring under what he called "fever and putrid looseness;" which was as follows:

My son, sixteen years of age, was taken sick in the month of April, 1783. The fever was violent, and attended with great weariness and entire weakness. As the measles were then prevailing in the part of the country where I lived, I thought it best to advise no remedy. The physician who attended was of the same opinion. But a putrid looseness came on, which increased daily. On the seventh day of his disease, his pulse was so bad and his sense of fatigue so great, that I judged that danger was near. The physician proposed to me to purge the patient, which I refused to do—telling him at the same time, that I would attend him in my own way; but that, in order to a better judgment on the effect of the treatment upon a disease of this kind, I would not commence until the next morning.

Early on the morning of the next day, on entering his room, I found that he had passed a very bad night, without any change of his pulse. Prepared as before mentioned, I put my hand upon his liver for ten minutes, and passed my rod about a dozen times from his head to his feet, in the course of the day, but perceived no change whatever, in the disease. The next day I repeated the same thing; and in the evening found his pulse better, and a moisture on his skin, which never was the case before. From this moment, I received the greatest hope. The third day I continued my own method; and by night, the perspiration was restored and the looseness considerably diminished. On the fourth day, it ceased almost entirely and the fever was nearly subdued. On the fifth, his appetite returned and he became convalescent, when I discontinued my services. But being taken, three days after, with an indigestion and violent fever, I repeated my proceeding—three or four days after which, the child was cured.

The next, and last case of this practice of M. Sousselier, which we shall give, is one of rheumatism:

I went to the house of one of my relations, (says M. S.) who was attacked with rheumatism, which was so severe as to confine him to his bed, without sleep or rest. This relation did not at all believe in magnetism, but consented to my offer of my own powers. After having touched him ten minutes, he was somewhat relieved. The next day the patient told me that he had slept well and suffered less. I repeated the course. On the third day he arose, suffering very little. I touched him again; and on the fourth day he walked out, in good health.

It was from these experiments that M. Sousselier, believing the effects wrought were by the power of electricity, invented "the box," a description of which was given in our last number.
It is evident, we think, if reliance may be placed on the statements of M. Sousselier, (or the manuscript, which we believe to be the minutes of a gentleman of that name,) that electricity is imparted in the common process of magnetising, as it is called. Considering, however, the many circumstances attending the operations of animal electricity, many things are to be considered in explaining all the real phenomena of animal magnetism to which M. S. appears to have been an entire stranger. For example, he appears to be entirely ignorant of the fact of the generation, or rather the de-latentizing of electricity in the animal system; a fact which the writer of the present article feels, stands on an immovable basis, and is constantly and easily demonstrable. This ignorance caused him, in addition to insulating his body with silk stockings and thick silk socks, to charge or rather excite an electric, and place it in communication with his body, under the belief that this would, and did, impart to him the extraordinary charge with which he operated. Had he understood the fact of human or animal origin of sensible electricity, he would have been led to observe that the insulation alone, in suitable weather and circumstances, would have sufficed to impart to him all the powers he really had under the application of the electric; for we well know that this electric, placed in contact with his skin, could not continue to generate new and successive supplies, but imparted its whole charge at the first moment of contact; and this again, was equalized with other things on the first touch of the insulated body. But we may conceive the fact very different, when we consider that, as really as in the Silurus Electricus, the human body has within itself all the apparatus necessary for the development of sensible electricity necessary for all the common, and even extraordinary electrical powers or phenomena which the system presents, whether physiological or pathological; it is easy to conceive that successive powers may as well be offered as successive sparks from a prime conductor; and this is evidently the case in those rapidly successive contractile efforts which make up the common sensible action of a muscle, or common muscular movements. Looking into this doctrine, and contemplating the various structures and temperaments of different human beings, and their various conditions in life, we find that the electric power of these differing individuals, must differ essentially; hence the greater magnetizing powers of some, than others. Nor would it be straining the known laws of electricity too far to suppose that, as this fluid ever tends to equilibrium, and as the electricity in one body often influences that of another, and as the influence of the mind on the organism is sufficient to influence the electrical phenomena presented in the same, so different phenomena may be induced in different individuals by the same extraneous influence: or by the same internal extraordinary impulse, as in the opera-
tion of the magnetizer in the production of clairvoyance, &c. in some and not in others; and the same phenomena resulting from morbid action or condition. We should be pleased to see M. Sousselier's experiments repeated on his own plan, and also with the application of the electric cake or plate to the body.

If there be truth to any extent, in the phenomena said to occur under either the operations of Mesmer and his followers, or Sousselier, which may influence disease in a salutary manner, or even mitigate the severity of capital operations of any kind, medical philosophers are culpably negligent of duty in failing to know the fact, and to avail themselves of its benefits. We shall be pleased to receive any well authenticated facts affirmative of the truth of such power. Negative facts could not always be so satisfactory, not because of any partiality on the subject which we would favor, but because, judging from our opinion of the differing peculiarities of the human subject, experiments failing to produce the results searched for, could not be conclusive, as different individuals differ immensely in their natural electrical powers. This is evident in the different opposing temperaments, as the sanguine and melancholic, &c. And still more—one well authenticated fact establishes more truth than ten thousand attempts which fail to produce the same can contravert.

In conclusion, we insert from the Lancet and, subsequently, the American Journal, the following facts from the pen of Dr. Sigmond, a gentleman whose observations and instruction in medical science are received by all; whose judgment seems to be of the best cast, and whose statements of facts, no one will venture to question.

Animal Magnetism.—It would appear from our Journals that animal magnetism is making decided progress in London, and that some very distinguished men of that capital have become converts to a greater or less extent, to its verity.

It is to be hoped that now so many able men have their attention directed to the subject, that whatever modicum of truth there may be in this supposed power, will be established, and that the great amount of fallacy which is mixed with it will be fully and irrefragably exposed.

In the meantime the following extract, from a communication to the Editor of the Lancet on the subject, by Dr. Sigmond, will be read with interest: "I entered the field of inquiry as a skeptic, and as such, after my inquiries, I remain, as to the belief that any individual is in possession of a power, save that which the strong mind exerts over the weak one, by which he can exercise a preternatural effect over the human frame. I totally disbelieve the existence of any fluid which can, at the will of an operator, be made to pass from his body into that of another, and thus, at his command, produce unwonted sensation. "In the course, however, of my imitations of the operations I have seen performed by others, I have observed certain most singular phenomena to arise, with which I was previously unacquainted, and which, I think, are of some value; and which, by the cautious investigation of the highly intellectual men who are constantly seeking to add to the means of prolonging life, and rendering it happier, may yet be found to lead to some physiological and
psychological facts. I merely wish to state what I have observed, and to offer to show that certain consequences result from a peculiar kind of manipulation, which may easily be acquired, and which, if practiced with dexterity, in some instances, might be productive of considerable influence in different conditions of the body.

"Some weeks since the Baron Du Potet de Sennevoy, did me the honor to invite me to be present at a trial of his magnetic power at the University College Hospital. I there saw him perform a series of actions upon different individuals, and he, in two instances, produced what may be termed artificial sleep upon two females, and this was the full extent of his success; his other attempts were failures. The successful cases, however, arrested my attention; they seemed to be the result of simple means, nor could there, at least I thought, be a doubt that the same power existed in any individual who chose to exert it. This species of magnetism, I must observe, differed very materially from what I had seen practised many years since by a pupil of Dr. Mainéduc, at Bath; it had less pretension, and was much more practicable. From the little opportunity I had of judging of the Baron Du Potet, I drew the conclusion in my own mind, that he felt an honest conviction that he was possessed of a peculiar faculty, and most distinctly did I acquit him of any intention of playing upon the credulity of those by whom he was surrounded; but I feel that I have a right, with the same candour, to say, that I do not think that he is aware how he produces the extraordinary effects that followed his manipulations.

"I immediately determined to investigate the subject, and for that purpose tried a great number of experiments; but I was most unwilling, for a great length of time, to make my observations at all public, because I thought that I might be accused of seeking notoriety by investigating a subject which rather belonged to the community than to the profession, and which seemed to be addressed to the popular feeling so easily excited, rather than to the calm and dispassionate consideration of the followers of science.—Finding, however, that two distinguished members of the profession, Dr. Elliotson, and Mr. Mayo, thought the subject worthy their attention, I persevered in my observations; and, added to this, I was invited by an illustrious individual, whose regard for the medical profession, and for every thing connected with it, I have, from my official position, had opportunities of witnessing and admiring. Earl Stanhope not only attended the Baron in his visits to the hospital, but desired the energies of his highly cultivated mind to an examination of the merits of the system, and he did me the honor to express his wish that I should prosecute the labours I had commenced. As a lecturer, too, I thought this a subject intimately connected with therapeutic powers, and as, by the publicity of your Journal, I am standing before the profession, I have felt that I am not intruding myself by giving the result of my experiments. These have been performed, of course, with the full certainty that I possessed no peculiar power which could be productive of any effect that might not attend upon the exertions of any other individual. The extent of my examination has been such as to satisfy me that I can produce a sleep of a very unusual character, by certain manipulations which do not require me to be in actual contact with the person upon whom the operation is intended to be performed; that I have acquired a certain degree of experience, by which I know how to accommodate the manipulations for the purpose required; and that I can communicate to another individual, in a short space of time, all the information necessary for the production of this sleep.

"I commenced my series of experiments by imitating the actions of the Baron Du Potet. My first subjects were of the uneducated class; but I found them so prone to believe in the marvellous—so anxious for extraordinary results, that they deceived both themselves and me. I have since tried the same manipulations upon the higher classes, and though I find them
much more sensitive to every impression, and their nervous system more easily acted upon, and although occasionally, the imagination has led some of them away, yet I have succeeded in giving a very peculiar sleep, amounting almost to stupor, to a vast number of individuals. I have constantly found females much more susceptible of the influence than men; nor does it produce upon them all precisely the same state of sleep. For while in some it is a sort of trance, during which, as often occurs in that unnatural state, pain is scarcely felt, in others it produces hysteria, convulsions, and I have likewise known fainting occur. The most remarkable case that has fallen under my observation, and which, while it excited in me great anxiety and the deepest interest, has taught me to prosecute my researches with extreme caution, has occurred to me within the last two days. I was enjoying the hospitality of a most amiable family in Fitzroy-square, when animal magnetism became the topic of conversation, and I related the trials I had already made. One of the young ladies proposed to become the subject of experiment, to which I very willingly assented; for, having on former occasions attended her during momentary sickness, I was fully aware of the natural strength of her constitution, and the absence of that nervous temperament which renders this system totally inapplicable. I began what are technically called "the passes." They, as is not unusual, excited laughter and incredulity. I proceeded, for about five minutes, and then stopped and inquired if any sensation was produced, and the answer was, "a slight sleepiness;" and ridicule was again thrown upon the subject. I commenced the manipulations; I observed the eyelids falling, and at last they closed; but, as the same incredulous smile remained, I persevered for three or four minutes, when I, almost doubting whether any influence had been produced, inquired what the feelings were; to this no answer was returned. I found my young friend was in the most complete trance I had ever yet witnessed as the result of my magnetism. The stupor was most profound; and I then tried the usual means to arouse her, but they were vainly exercised. After a few minutes I found the hands become icy-cold, the face lost its natural hue, and became perfectly pallid; the extremities became quite cold; the respiration was imperceptible; the stimulus of light did not affect the eye; on speaking to her a faint smile was excited, and a quivering of the lower jaw, which seemed to indicate a wish but an incapability of answering; the pulse became gradually feeble, whilst the external appearance altogether bore such a decidedly deathly cast that naturally some apprehension was excited amongst her family, by whom she was surrounded. Of course I could not but feel a certain degree of anxiety and regret that I had produced such a state, and much uneasiness at the thought that I had inflicted a moment's alarm to my kind friends. These feelings were however, less acute, from the full knowledge I entertained that the family had long reposed the most perfect confidence in me, and that no member of it had that nervous susceptibility, which would have embarrassed me had any untoward accident presented itself.

"I placed the perfectly unconscious subject of this distressing scene in a horizontal position, and directed the application of warmth and friction to the extremities. Circulation and animal heat were gradually excited, but she presented a most singular appearance of suspended animation. In this condition she remained more than four hours, for I had commenced a little after ten in the evening, and it was about half-past two, that, on some slight effort being made to rouse her, she uttered some of the most piercing shrieks I have ever heard; there were convulsive efforts to raise the limbs; the face, too, became convulsed; she opened her eyes and stared wildly around; she was placed in the upright posture, and seemed sensible. Advantage was taken of this circumstance to carry her to her apartment; before, however, she could reach it, she fell into a profound slumber, but its character was more natural. She was placed in her bed, appearing perfectly compo-
sed; the countenance had acquired its natural hue; the respiration was perfectly easy, and the pulse natural. In this state she remained during the whole of the day, until 9 o'clock in the evening, once only opening her eyes, and addressing a few words to an anxious and affectionate sister who never left her side. In the evening the young lady joined her family perfectly restored to her wonted cheerfulness. She expressed no complaint whatsoever. She stated that the feelings that first came over her were those of extreme quiet and repose,—a species of ecstacy—a gradual languor seemed to steal over her; that she heard something passing around her; felt an inclination, but an utter impossibility, to reply. The first waking up she, however, described as almost terrific. It was as if she was bursting from a narrow and confined space, and as if she arose from interminable darkness. The lesson that I have thus learnt will not be lost upon me.

"It is upon the respiration that my efforts are directed, and the principle is percisely that which is called "stealing the breath away," besides which by the undulations of the air caused by the movements of the hands an unusual cold is produced which very much assists the effect. The art seems to me to consist in obliging the individual again to inspire, by the nostrils, the carbon he has already expired, whilst the currents of air caused by the extended fingers produce some effect upon the facial nerves, thus inducing the eyelids to fall down. Association of ideas is very strikingly evidenced by those who have been once magnetised, for then the slightest quantity of manipulation is necessary; the patient evidently having acquired a habit of inhalation by the nostrils. It is from the centre of the nose downwards that the effect is most speedily induced, and that the drawing of the hand downwards from the brow, so as to effect the eyes, I find to be quite unnecessary towards producing the effect. I do not consider the process I have employed by any means perfect; and I have little doubt, when the attention of the profession is drawn to the subject, that considerable improvement may result; at the same time I am persuaded that the manipulations may be the cause of very great alarm. I have now exercised this art upon nearly a hundred persons, and with very general success in the fairer part of creation; I have quieted delirium and given sleep where it has been for many nights vainly solicited. I have magnetised in the presence of many medical men who have been in attendance on the Baron Du Potet's lectures, and they have declared that the sleep appears identical with that he produces, and that it is proved by the fact that animals may be sent to sleep by the same movements. I am very anxious that the members of the profession should try the same process."
Successful operation for permanent adduction of the Thigh.—
On page 671, vol. II. of this Journal, in giving the account of
M. Lutens' operation for retraction of the leg, we mentioned
that a case of similar nature had been recently presented to the
Professor of Surgery in the Medical College of Georgia—that
he had determined on making a section of the disorganized
flexor longus femoris, which was the cause of the functional
impairment; and that the patient was then in preparation for
the operation. This patient recently returned to the city, pre-
pared for the operation, which was performed by Dr. Eve on
the forenoon of Tuesday the 9th (Oct.) inst. To-day, (15th
Oct.) availing ourself of the politeness of Dr. Eve, we saw the
case at the first entire dressing, full six days after the operation,
and had the pleasure of witnessing a complete adhesion, except
some part of the superficial integuments; with restoration of
free abduction of the thigh—restoration of the proper length of
the limb, which, by the fixed inflexion of the thigh on the lower
part of the pelvis, as we had before witnessed, was more than
an inch shorter than the healthy side, when extended together;
and a partial, but improving restoration of the rotary motion of
the limb. Animal ligatures were used in this operation on two
small vessels, but have not in the least interrupted the adhesive
process. Nothing now remains of the wound but the cicatiza-
tion of a part of the superficial integuments, which will be com-
pleted within a day or two. Thus has the operation proved not
only perfectly safe, but successful. Nothing short of new dis-
eease, or extreme imprudence of the patient, can cause ultimate
ill success. We found the patient to-day, out of bed, and occu-
pying a chair with perfect ease.

We hope soon to favor the profession with the details of this
very interesting case, from the pen of the operator.

The following facts were communicated to the Editor by
Paul F. Eve, M. D., &c.

Spontaneous Rupture of the Uterus during delivery—On the
27th of last July, I was requested by my friend Dr. Burt of Edge-
field district, S. C., to meet him in consultation at Mr. D.'s, 18
miles from Augusta. On arriving there at 1 o'clock, P. M., I
learnt that a stout well made negro woman, aged about twenty-
one years, had been several hours in labor. The doctor having
been called to another patient, had left her at day-light. The
old woman in attendance, stated that an arm of the child had been down, with the hand out, for some hours—that the labour pains had been very strong until about sun-rise, since which time they had ceased, and the patient was easier. I found her with sick stomach and occasional vomiting of bile, pulse very frequent and feeble, and the abdomen tender to the slightest touch.

Upon touching, I felt a hand of the child with the cord in the vagina, which receding upon the slightest effort at introduction, was followed by my hand into a very relaxed cavity. Feeling the edge of the ruptured womb, I took it at first for the placenta, but on following the child with my hand, I was soon undeceived. There was no pulsation in the umbilical cord. I brought down the feet and by turning completed the delivery—the only impediment to it being the re-passage of the child's head through the rupture, into the vagina. The placenta was found in the fundus of the womb and easily removed. I again introduced my hand to be assured of the exact nature of the case before me, and distinctly traced the rupture, which was transverse and just above the os tinece. Dr. Burt having arrived during the delivery of the child, I was anxious he should examine the patient, but from her exhausted state and unwillingness to submit, he in kindness desisted.

There were no marks of violence upon the arm or hand of the child, and nothing had been given to increase labor pains. There were no disproportions between the head of the child and the pelvis of the mother. The patient had had three living children, and the child now delivered was of the ordinary size, or perhaps a little larger, weighing about eight pounds. The only difficulty in the case was the presentation of an arm and an umbilical cord. From this cause then, the uterus was ruptured.—Our unfortunate patient died in 24 hours after delivery.

We hasten to correct the errors of carelessness, or of translation, contained in the following notice of Dr. Physick, especially as we have some reason to apprehend that the notice taken by the Editor of the Gaz. Méd. de Paris was from the obituary contained in the 5th No. of the II. vol. of this Journal, to which we refer the reader.

"Necrology.—The Dean of American Surgeons, Dr. Physick, Professor in the College of Georgia, has just died at a very advanced age. Dr. Physick merited the title of the Father of American Surgery, of Dupuytren of America. The Medical Societies of the United States have resolved that all their members wear mourning for thirty days."
We have translated the above notice from the 25th No. Tom. vi. (June 23d, 1838,) of Gazette Médicale de Paris. This forcibly recalls to recollection the first time our French brethren had occasion to refer to the name of the late illustrious American surgeon, Dr. Philip Syng Physick—it was then published Dr. Philip Syng, Physician of Philadelphia.

We must inform our French brother, the Editor of the Medical Gazette of Paris, that Dr. Physick was never in Georgia, that we know of, and our Medical College was certainly never honored by his name among its professors.

**A singular anomaly of the mammae of a woman, presented to the Medico-Chirurgical Society of London. By Dr. Lee, Prof. of Obstetrics in St. George Hospital.**

A woman, aged 33 years, had just been delivered, before the full term of her first child. Her mammae having become excessively painful and enlarged, she consulted Dr. Lee. Upon examining them, this practitioner found *four mammae*, instead of two, with as many nipples, two on each side. The inferior or pectoral mammae are very well developed and normally situated—their nipples, their areolæ and their glands offer nothing peculiar. Near the anterior edge of the axilla of each side, and above those just described, is another mammae of one-sixth of their volume. The nipples of these two latter are small and flat, but give an abundance of milk upon the slightest pressure of the fingers—this fluid escaping by several small holes as in the common breast. In pressing the milk from the inferior mammae, there flows at the same time a small quantity from the superior nipples, and when this fluid escapes from the first, the others constantly swell and harden. The woman suckles her child alone by the inferior mammaæ; the superior are not servicable, because of the smallness and flat state of their nipples.

After this fact, Mr. Stanley reported another analagous to it. A female entered St. Bartholomew Hospital to be disembarrassed of two inconvenient tumours which she had on each side of the axilla. Upon an examination, it was discovered that these two tumours were nothing else but two supernumerary mammae without nipples; in the place of nipples there were orifices from which flowed an abundant quantity of milk. The woman nursed at this time; the child's mouth was applied to these mammae, but it could not take them on account of their smallness. The patient left the hospital without being subjected to any operation.

[Gazette Médicale de Paris.]
Aneurisms in both popliteal regions; ligatures to the two femoral arteries; cured. By Gwynne Bird, Surgeon to the Swansea Infirmary.

David Philips, a porter, aged 38 years, very robust and a great drinker, was admitted the 3d Jan. 1837, to be treated for two aneurisms which he had, one in each ham. This disease declared itself two years ago in the right, and since only some weeks in the inferior extremity; at least, the attention of the patient was only directed to it at these periods. That in the right had rapidly increased lately.

Mr. Bird found in the right ham, a considerable tumour completely filling the popliteal space and even extending beyond it laterally. In the left ham, the tumour was less considerable and less firm, its volume being about the size of an orange. They both exhibited the ordinary characteristics of aneurisms.

Shortly after the patient entered the infirmary, the tumour of the right side, made progress, threatening to become diffused and to burst. Mr. Bird requested a consultation, and an operation was decided upon by Messrs. Rowland and Cohen.

Operation.—The 7th Jan. the femoral artery was tied after the manner of Hunter. Every thing went on well; the ligature came away on the 13th day; the wound cicatrized; and the tumour was effaced.

The 7th of March Mr. Bird tied the femoral artery of the opposite limb, and the pulsations in the tumour were completely arrested; but two or three days afterwards they re-appeared, although a little less strong than at first. The ligature of this artery came away near the seventh week, preserving its ring made by the knot and proving that the vessel had been tied and obliterated at the place of the wound. The return of pulsation in the tumour could only consequently be explained by the intervention of some anastomosing branch communicating with the aneurismal sac. The wound cicatrized, but the tumour became as large as before the operation.

It was determined to wait before attempting another operation: the patient rose from his bed, walked pretty well, and finally left the hospital the 4th of May, with the promise to return from time to time, in order that his case might be watched. He gradually resumed his former occupation; the first tumour had entirely disappeared, and the other, instead of augmenting, remained at first stationary, then its volume and pulsations gradually diminished, and at last it has completely vanished.

On the 14th Jan. 1838, this individual after a careful examination, was declared radically cured.

From the above, the Editor of the Medical Gazette of Paris, remarks, that it can be said with truth, that the treatment of
A new means of curing Intussusception in Infants.—Dr. Mitchell, who has had occasion to meet several times with cases of intussusception; in one of this nature, having tried all the usual remedies without success, had recourse to the following expedient:—He introduced into the rectum, as high as possible, a gum elastic catheter, then adapting the nose of a common bellows, he distended the intestine by a large quantity of air, which loosened the strictered portion of the digestive tube. The symptoms of strangulation disappeared as by enchantment, the bowels were freely opened and the child was cured. This, however, is the only case in which this means has been tried.

It must not be disseminated that great difficulties exist in the employment of this remedy in infants, on account of the equivocal state of the diagnosis. If it is true, however, that the vomiting of stercoraceous matter, as Dupuytren has established, is a certain sign of intussusception, then we would be sufficiently authorised to employ the means proposed by Dr. Mitchell. It is but right besides, to recollect that the same mode has been recommended by O'Beirne (and before him, by Hauff, Busch and Kohler) against strangulated hernie.

Tomato.—The editor of the Boston Medical and Surgical Journal has been gravely asked for his opinion upon the medicinal virtues of this plant, by a correspondent, who says "there seems to be a prevalent opinion that the tomato is the matchless sanative," &c. We hope this enquiry was not gravely made by any physician; for we think it quite bad enough for the common people, who are not willing to trust in the opinion and advice of men of medical science, to be gullied and hoaxed out of
their money and their lives, by gulping down every imposition which the thousands of imposters are daily pressing on their attention. "If I must tell you," said a travelling agent, when pressed by us, not long since, to know why he was so anxious to see certain druggists for whom he was in search,—"if I must tell you," said he, "I have eighty or an hundred of Jewett's physicks to put off on the people here, and I must do it, as I get a fat salary for my services, and I must be faithful to my employer." And accordingly, ten days had scarcely elapsed before almost every mantle-piece was burthened with bottles of Jewett's Liniments, for different purposes; and the rude composition of hog's lard, cayenne, &c. sold to the people, at something like seventy-five cents per ounce—a speculation nearly or quite equal to the sale of Thompson's Book of 37 1-2 cts. for $20. No great harm has been done by this, because it was an external application. We found a few persons, intelligent on other subjects, attempt its internal administration; but without much success in promoting its consumption in that way. It is now done, and we apprehend no agent will be seen travelling through these parts again for "putting off" that article.

We know not whether to consider it amusing or provoking—perhaps both, by turns, to see the cheat put upon the people on the subject of the tomato. For the character of the country, it is a great pity that there is no more common sense amongst the common people, on such a subject. A year or two ago, some of the "Reformers," as they call themselves—half brothers of Thomsomians, published in their little periodical, that the tomato was found to possess all the virtues—the medicinal virtues of calomel, without its ill tendencies. The editors of newspapers were stupid enough to catch this genteel touch of the reformers, and make a little more of it than was originally intended. The reformers knew it had no medicinal virtues, and asserted that calomel had none, and upon the very plain axiom that things which are equal to the same are equal to one another, made their assertion that the former possessed all the medicinal virtues of the latter. The unsoundness of their assertion relative to calomel not being examined, the tomato comes to be asserted to have the virtues which calomel is known to have. Seeing the turn this matter took with the people, some guessing spright, or some western reformer, essays to put forth the "tomato pill" to supply the place of calomel, without its ills, and medical men perhaps are induced to enquire, or rather request, that observations be made on the article "tomato," as a medicinal agent, and report the results. Now, we will venture to say, that this pill will take the round of these united States, before one tenth part of the people will remember that they themselves have all their lives lived on raw tomatoes, tomato sauce, pickles and catsup, &c. in all quantities, without any other effects than those of a light,
trifling vegetable. Let citizens look and blush at their credulity—and let physicians who ask for observations and reports on its medicinal powers, draw themselves into a nut-shell, and finally disappear from the professional walks, as a "vanishing scene."

**Rheumatism cured by Vapour Bath of Camphor Fumes.**—A laboring man, 22 years of age, had long suffered from attacks of flying rheumatism, but, as the pains were not severe, he neglected to use any remedial means.

Exposure to wet and cold brought on a smart attack of the disease in its acute form; and for this he had to undergo a vigorous antiphlogistic treatment by general and local bleedings, blisterings, &c. The active symptoms were speedily subdued; but the patient continued to experience dull gnawing pains, increased by motion, sometimes in the loins, and at other times in the thighs and legs. Various means were used without much effect; and the physician was therefore induced to give a trial to the ingenious proposal of employing a vapour bath of camphor fumes, as recommended by M. Dupasquier in the *Revue Médicale* for 1826. The patient was made to sit on an open-seated stool, under which was placed a chafing-dish. A plate of iron was then put on this dish, and, the patient being enveloped in a blanket, a small spoonful of powdered camphor was thrown every five minutes, on the heated plate, until about half an ounce had been used. The vapour speedily induced a copious perspiration, and this was promoted by putting the patient into a warm bed, and giving him copious dilute drinks. The first, and even the second, fumigation did not produce any very decided relief; but by the fourth day (for the treatment was repeated daily) the pains were greatly abated, and the freedom of motion much increased. Considerable debility followed the employment of this medication; but by appropriate means the strength of the patient was speedily restored, and he remained free from his rheumatic pains.—*Jour. des. Con. Med. Chirurg.*

**On Antimonial Suppositories as a means of restoring the Hemorrhoidal Flux.** By Dr. A. Troussseau.—The physicians of past ages, have, perhaps, too much exaggerated the importance of hemorrhoids in the scale of pathological phenomena, while those of our own time are fallen into the contrary extreme.

It cannot be denied that the suppression of the hemorrhoidal flux, when habitual, may be productive of general disorders among men, almost as serious as the suppression of the menses in women. Moreover, it is as generally admitted, that with certain persons who have, not only regularly, but at indeterminate periods, a draining or hemorrhoidal flux, the existence of this pathological condition is attended with a state of general good health; although it may remain for a long time uncertain and variable, provided the hemorrhoids do not manifest themselves as soon as usual. Observation shows, also, that persons who have had hemorrhoids for a long time, suffer generally, if this flux entirely ceases. And it often happens that there is a call for its restoration.

Many means have been advised to effect this indication. The warm local baths, mustard foot baths, leeches to the part, suction applied to the lower part of the large intestines, purgatives and cupping glasses to the part. Of all the means which we have made use of, only one has succeeded in any satisfactory manner. This is the application of cupping-glasses. This
means was entirely forgotten, when a student of the Medical Faculty of Paris restored it to honor, and I am able to bear witness to its effects on him.

He had had hemorrhoids till the age of twenty years, and always enjoyed good health. This flux now ceased, when he became subject to violent pains in the stomach, and continual disorders of the digestive organs. He consulted M. Andral, while attending the Hôpital de la Pitié, and this physician made use of every means advised by authors for restoring this flux. Nothing succeeded, and the disease remained stationary. The young patient then conceived the idea of applying a cupping glass to the part. During this application the circumference of the anus enveloped the hemorrhoidal tumours, which for eight days were swollen and painful. From this time his health was re-established. A month after this he experienced a slight return of gastric disorder; and one day, while attending my visit to the hospital, he spoke to me of the relief which he had obtained the previous month from the sufferings which he now began to feel again, and offered to let me witness the prompt appearance of the hemorrhoids under the operation of the cupping glass. I accepted the invitation with alacrity, and at the same time I placed him upon the bed of one of the patients, and in the presence of more than forty physicians and students I applied a cupping glass to the fundament. A minute did not elapse when the tumours made their appearance, and becoming united, they acquired the size of a small pigeon’s egg ten minutes after the application of the instrument. The same means were made use of the following day, and the hemorrhoidal flux continued for a week, and was followed by a cessation of the disorders of the stomach. M. Andral also saw this young physician, and can testify with me to the great rapidity with which the tumours became swollen.

After this I had only one opportunity of locally applying cupping-glasses for recalling hemorrhoidal flux. This was with a female afflicted with erratic rheumatism, which to me appeared to be caused by the suppression of habitual hemorrhoidal flux. I succeeded in pulling up the hemorrhoidal vessels by means of the cupping-glass; but the tumours disappeared soon after the application of the instrument. What prevents my using this remedy more frequently is this: in the first place, patients, especially women, have a great aversion to it; secondly, I have conceived that a much more simple remedy, and the employment of which can never be the subject of serious objection, will answer the same end, I allude to antimonial suppositories.

As I had never succeeded with aloetic suppositories, I thought by substituting in the place of aloes one of the most energetic irritants I might attain the desired end. Now, tartrate of antimony, applied locally to the skin or mucous membrane, creates an inflammatory action very powerful and persisting, I therefore preferred this article. I mix with a drachm of butter or lard, from two to six grains of tartrate of antimony. The suppository, being introduced within the sphincter of the anus, melts quickly, and the tartrate of antimony remaining in contact with the mucous membrane, excites a lively local irritation, a species of tenesmus, as a necessary consequence. When the suppository contains only a grain, or half a grain of the tartrate, it can be retained for twelve hours without the necessity of going to stool; but when a greater quantity of it is made use of, the patient experiences a heat at first slight, but afterwards scorching, and attended with painful pulsations at the part; there is a necessity of frequently going to stool. The arterial pulsations increase at the same time that the circumference of the anus protrudes, and pustules, similar to those excited by tartar emetic on the skin, now appear; bluish tumours arise, hard and painful, permitting occasionally a large quantity of blood to transude. These are the true hemorrhoidal tumours, perfectly evident with those who have had them already, and only apparent with those who have not had them.—Journal des Connaissances Medico-Chirurgicales, Sept. 1836.
Method of treating Intermittent Fevers, in the Infirmary of Clinical Medicine of the Surgical School of Lisbon. By Prof. Lima Leitao.—Ague is of very frequent occurrence among the laborers in the flooded or marshy grounds bordering on the Tagus. The following divisions comprise the varieties observed: 1st. intermittents proceeding from gastro-duodenal phlogosis; 2nd. those arising from inflammation of the liver, of the spleen, or both conjointly; 3d. such as proceed from phlogosis embracing simultaneously, wholly or in part, the gastro-duodenal mucous lining, the liver, and the spleen; 4th. intermittents not arising from inflammation.

1. The symptoms of the cases referred to the first division are thus described. If, during the intermission, the following phenomena are observed—redness of the margin of the tongue, with a white or slightly yellow coating on its surface; more or less thirst; an obscure feeling of pain or weight in the epigastrium, even when pressure is not applied; a sense of heat in the urethra and rectum in passing urine and feces; nausea, or vomiting of mucus or bilious matter; a pulse without being decidedly febrile, yet not that of health; then, according to the author, there exists inflammation of the mucous membrane of the stomach, duodenum, or both. This form of the disease Dr. L. has observed exclusively in persons of the sanguineous, or bilio-sanguineous temperament; of youthful and adult age; of a constitution not yet broken down, and in first attacks of ague. He does not remember to have observed it in the quarters of Portugal; but only in Quotidian, and double and single tertians. For its cure he recommends, repose in bed; a diet of light broth; beverage lightly acid and edulcorated (agridoce) or mucilaginous, according to the taste of the patient, taken tepid; and emollient poultices. After the second paroxysm, or after twenty-four hours' repose in the hospital, whatsoever number of paroxysms besides the second may have occurred prior to the patient's admission there, leeches are applied to the epigastrium, followed by poultices. The number of leeches is proportioned to the age of the patient, twenty-four being the mean number. Dr. L. thinks the paroxysm the most suitable period for their application. Should the symptoms above described have disappeared in the apyrexia next ensuing, but should the paroxysm follow with the same or nearly the same intensity, a grain of the sulphate of quinine is given every three hours, every two hours, or every hour (according to the type of the disease) during the intermission. After each dose of the medicine Dr. L. gives some mild mucilaginous or sugared beverage, and very little other sustenance is taken. It is important that the apyrexia be perfect, and that the indications of local affection have ceased before administering the sulphate of quinine, otherwise there is risk of converting the disease into the remittent or continued form.

Should the inflammation resist the first application of leeches, they must be repeated a second or even a third time, till it is removed. If the paroxysm does not recur after the application of the leeches, or if it be much diminished in intensity and later in coming on, no sulphate of quinine is administered; and, in the latter case, it is observed, that after one or two fits more and more slight, the disease ceases. The author thinks that convalescence is more speedy and relapse less liable to take place in these, as it were, spontaneous recoveries, than where the sulphate is employed.

2. In the second division, comprising cases in which the liver, the spleen, or both conjointly are affected, the author recognises the phlogosis of the liver (should there not be enlargement) by obtuse pain, heat, and tension, increased by pressure; yellow tinge of the face and eye; yellowish furred tongue; bilious vomitings and dejections, &c. When the liver is enlarged, the local symptoms are referred to the left lobe. If the spleen suffers, it presents analogous local symptoms; both organs are often simultaneously affected. The remedies of this form of the disease are the same as those of the preceding, with this difference, that general blood letting is found
more serviceable than leeches, or, at least, should precede their employment. Two bleedings of eight ounces each are generally sufficient. Dr. L. has seen intermittents of this division and of all types, yield to depletion alone by general, followed by local blood-letting; and this successful result from depletion solely has been more manifest in the diseases of this than the preceding division.

3. The third division, comprising intermittents connected with inflammation of the gastro-duodenal lining, and of the liver and spleen conjointly, is marked by a combination of the symptoms of each of the preceding diseases. The malignant intermittents, observed by the author in eastern Africa, belonged to this class. The treatment consists of the methods employed for the other two divisions combined, that is bleeding, general and local, excepting in nervous temperaments, when he has recourse only to the latter. He thinks this kind of case very suitable for the emetic method of employing sulphate of quinine. In the malignant intermittents of eastern Africa, he derived much advantage from frictions of tincture of bark, and from sprinkling blistered surfaces with powdered bark and camphor.

4. The fourth division, consisting of cases unattended with local inflammation, he treats as he does those of the preceding, except that bleeding is omitted.

The author subsequently gives a practical commentary on the 59th aphorism of the 4th section of Hippocrates, "tertiana exacta in septem circuitibus ad summum judicatur." Having tried its truth, he found the patient, solely from the influence of low diet and repose, escape the seventh paroxysm in some cases and the eighth in others. The examples in which this fortunate result took place, belonged principally to his fourth division; but a proportion of them to his first, or that comprising the complications with gastro-duodenal inflammation. These spontaneous recoveries, wheresoever they occur, Dr. Leitao regards as the most favorable, the general health being the least disturbed, convalescence most prompt, and relapse very rare.—B. and F. Med. Rev. from Journal da Sociedade das Ciencias de Lisboa, Feb., April, 1836.

New method of curing Stammering.—Dr. Voisin was afflicted with an impediment in his speech, for the cure of which he tried every plan, but without success. Finally, chance led him to the discovery of a method which he has adopted with advantage. He was reading a paper before a society, and wishing to do so with some energy, he happened to look into a mirror which was opposite him, and he perceived that he rested the border of his right hand upon his chin, in a manner so as to depress the inferior maxilla and hold the mouth half open. The idea immediately suggested itself that this instinctive and mechanical movement might contribute to his reading more promptly and easily. In fact, upon ceasing the pressure, the difficulty of expression was quickly reproduced; but upon replacing his hand the freeness of articulation immediately returned. Endeavoring to give an account of this, he observed: 1st. That the mouth was kept half open, the distance between the teeth being a line or a line and a half. 2nd. That the tongue, abandoned to itself, in the state of repose placed itself against the inferior dental border, whilst during pronunciation it is projected forwards and upwards, but is withdrawn almost immediately behind the alveolar arch. 3d. That a medium pressure is necessary upon the chin; this should be sufficiently strong to resist the muscles which move the inferior maxilla, without impeding its movement of elevation, so strong as to prevent perfect approximation. To produce this pressure, and, at the same time, make it excusable, it is necessary to use a certain delicate art, so that the manoeuvre may not appear forced, but on the contrary almost natural.
This pressure should be made with the external border of the right or left hand indiscriminately, the thumb applied upon the chin and the fingers free. Since he has made the discovery he finds he frequently takes the position without thinking of it, and has observed the same in other individual afflicted with impediment of speech. This habit does not appear to be peculiar to stammerers, since it is frequently assumed by timid persons when speaking in public. Dr. V. has only had an opportunity of trying it in two individuals, but the effect surpassed his expectations.—B. and F. Med. Rev. from Bull. de l' Acad. Roy. de Mèd., Sept., 1837.

Treatment of Erysipelas by Raw Cotton.—The efficacy of cotton in the treatment of burns, and the analogy between the inflammation of the skin produced by heat, and of erysipelas, has led M. Reynaud to employ the cotton in the latter disease; and he has found the application equally beneficial. In erysipelas, as in burns, M. R. says, the cotton calms pain, as it were by a charm; a mild and moist warmth takes the place of the itching, the formation, the sharp and biting heat which so much increase the pain; the swelling gradually diminishes, the redness disappears, the skin becomes flaccid and wrinkled, and without becoming covered with those furfuraceous scales, which characterizes the termination of erysipelas, and which sometimes continue during a long period. All that separates are a few slight layers of epidermis, and this is speedily effected. The general excitement ceases with the local phenomena, the fever diminishes, and in simple cases the organic functions return to their normal state, without the necessity of any other treatment. A circumstance of great advantage in the use of cotton is, that it is equally fitted for, and produces analogous effects, in all forms of erysipelas, whether idiopathic or traumatic, whatever may be its situation, on the face, body, or limbs; whatever may be the depth of the tissues which are affected; for in the cases which are collected, are some of phlegmonous erysipelas greatly amended and others entirely arrested by the simple application of cotton. The result, M. Reynaud would thus explain,—that the cotton acts by exciting in the diseased part a moderate warmth, a sort of vapour bath which keeps up a constantly equable temperature, a proper degree of humidity, by keeping the diseased part from contact with air and light, two powerful excitants of the cutaneous system. Cotton does not suffice in all cases; no more than other remedies does it enable the surgeon to dispense with general means, but it lends to these a great assistance; it hastens the resolution, and when the termination cannot take place, it still serves to limit the inflammation, and to arrest its progress.

The method of applying the cotton is very simple. Raw cotton which is well carded must be selected, in order that it may be free from all foreign substances which it sometimes contains. A layer sufficiently thick to protect the diseased part from the light and air must then be applied, taking care always that the cotton extends some inches beyond the limits of the inflammation. A compress and a few turns of a bandage will keep the cotton applied. A linen mask is well fitted for the face. The cotton should be removed every twenty-four hours to judge of its effects, or, if there is no contra-indication, it may be allowed to remain during the whole course of the treatment. If the cotton should adhere too strongly to the skin, in a case where there is slight exudation, it may be removed by applying over it an emollient poultice. The author has added to the previous remarks, several cases of various forms of erysipelas treated with cotton; to which it is unnecessary to call the attention, otherwise than to state that seven are cases of simple erysipelas of the face and extremities; that one is of traumatic erysipelas; the ninth of erysipelas complicated with a miliary eruption; four of phlegmonous and one of gangrenous erysipelas.—Jour. des Connaiss. Med. Chirurg., Feb., 1837.
Consolidation of Fractures.

Causes which retard the consolidation of Fractures.—The Archives Générales for August, contains an interesting article on this subject, by M. Louis Fleury.—Two indications must be fulfilled, observes M. F., to insure the perfect consolidation of fractures: 1st Placing the broken ends in contact. 2nd. The maintaining them in this position. The former is done with facility, but there are some difficulties in accomplishing the latter. At the present day, most surgeons are of opinion that complete immobility of a fractured limb, joined to strong pressure on the soft parts, are the best means of maintaining the fragments in position, and of obtaining a quick and regular consolidation. Unfortunately, these means are frequently unsuccessful; and, notwithstanding the care used in their application, the callus is frequently thrown out in an irregular manner, or perhaps never formed at all. What, then, are the causes which prevent or retard the consolidation of a fracture? Authors have enumerated a great number, but seemed to have overlooked a very important one. Scrofulous and venereal affections, old age,—rents in the periosteum,—formations of pus,—cold applications,—all, undoubtedly, exercise a prejudicial influence. But, by far the most frequent of all the causes, is the apparatus used with the view of favoring the consolidation, which it prevents by the compression it exercises upon the vessels of the limb; whether this compression is inevitable, as in the moveable apparatus, or produced voluntarily by the surgeon.

If a fractured thigh be placed in a thick layer of soft materials, the effects of the compression cannot be very appreciable; for, in this case, although the capillary circulation and the small arterial branches are more or less restricted, still the large vessels continue free. The same does not occur in the forearm or leg, where compression, ever so slight, interrupts the course of the blood, not only in the superficial vessels, but also in those which supply the fractured bone and periosteum. In order to obtain a rapid and regular consolidation, we must be careful not to apply more splints than are absolutely necessary, and not to bind these too tight by means of bandages. In following an opposite method, we wait, sometimes three, four, or six months, for a union which has not yet commenced. It is then that the surgeon, eager at each dressing to reaply the apparatus, with more care, that is to say, to augment the number of splints, surrounds the limb more exactly, &c., finds himself deceived; and the more he renews his efforts, by the same means, the greater is the distance separating him from his object.

The following case, one of four reported, exemplifies the beneficial results of this practice.

Case. C. D., aged 41 years, had a fall on the 15th of February, 1836, broke his right leg, and entered the same day the Hospital of St. Louis. The fracture was complete, situated immediately above the internal malleolus, and complicated with a deep excoriation and extensive ecchymosis. The wound was dressed with cerate, the rest of the leg covered with charpie dipped in the white of egg, and the ordinary apparatus for fractures of the leg immediately applied. The member was maintained in absolute repose during six weeks. On the 10th of April, the apparatus was removed, the wound was found cicatrized; the ecchymosis had disappeared, but the consolidation had not commenced. The apparatus was reapplied, and a more generous diet ordered. On the 30th of April, the consolidation was a little more advanced. The splints and anterior cushions were then removed, and the limb sprinkled with spirits of camphor. From this period the callus rapidly solidified; by the end of the month of May, it was very resistant, almost inappreciable to the touch, and the patient quitted the hospital.