Of the Causes of Descent and subsequently of the more advanced forms of Subsidence of the Uterus.—The proximate cause of these malpositions of the womb is principally, as it appears to the author, a reduced power of the suspensory ligaments of the uterus, and secondarily a state of relaxation of the vaginal parietes. In the opinion of some writers, the latter circumstance should be deemed of itself a sufficient proximate cause of prolapsion of the uterus. But is this doctrine entitled to the credit even of plausibility? An organ susceptible of development to an almost indefinite extent as the vagina is, can scarcely have been intended to maintain a degree of contractedness sufficient to enable it to sustain the uterus in any fixed position. The vagina moreover is most ample where the hypothesis now questioned requires it should be most contracted.

The predisponent causes which we can suppose most to conduce to prolapsions of the womb are, an original slenderness and delicacy of conformation of the ligamentous and membranous tissues, on which nature has devolved the office of suspensors of that organ; feebleness of tone of the same tissues, coincident with feeble general health and delicacy of constitution from whatever cause; and the reduced functional power to which they are especially liable during the puerperal state, in consequence of the prodigious elongation and other constituent changes which they have to sustain during the latter months of gestation. That

great delicacy and slenderness of the uterine ligaments are results of original conformation, may be inferred from the fact, that virgin subjects, and even very young children, have not always escaped the miseries incident to prolapsions of the uterus. A well-marked case of this description occurred some years ago in the case of a lady's-maid, of about nineteen years of age, and of somewhat delicate health and constitution. Her mistress, perceiving her indisposition, it being accompanied with great depression of spirits, induced her, after much persuasion, to take the opinion of her own physician upon her case. She complained of a sense of great bearing down at the outlet of the pelvis together with a protrusion of a fleshy body at the vulva, which a midwife in the neighbourhood had told her must be a polypus. It was principally this information that had occasioned the extreme depression of spirits which had excited so much alarm. Upon a proper examination being instituted, it was easily ascertained that the substance presenting at the vulva was a considerable prolapsion of the uterus. The patient was the daughter of one of her master's tenants in the country, and had been very carefully and virtuously brought up. When she left the country she was in good health; but when she came to London her catamenia became suppressed, and remained suspended for many months subsequently. At length, however, that function was gradually re-established, but subsequently its periods were exceedingly tedious and painful. On these occasions the patient was often under the necessity of making use of very strong bearing-down efforts. Add to this state of things the fact, that she had been subject, during the whole of her residence in London, to a most obstinate constipation of the bowels; for the emptying of which she acknowledged that she had often made use of the most strenuous propellent efforts. It was indeed on one of these occasions, she further stated, that she first felt any remarkable pressure upon the parts forming the orifice of the vagina.

The reader will find recorded in the third volume, p. 282, of the Edinburgh Medical Essays, a case of prolapsion of the womb in a child of only three years of age. Several cases of procidentia uteri are also noticed by Mauriceau in very young and unimpregnated subjects. Observations sur les Accouchemens, etc. tom. ii. obs. xcvi. p. 70.

M. Saviard, in his Surgery, cites several very interesting cases, of which the following may be considered as having an

obvious bearing on the point of pathology now discussing: "A girl, aged twenty-five, had been troubled with a descent of the uterus, without being once reduced, for twelve years. The tumour thus formed was of the size of a melon. She was bled and purged, and the part was fomented. Then I applied myself to the reduction of the tumour, in which I found abundance of difficulty. At first I endeavoured to reduce it by myself; but not succeeding, I desired the assistance of another surgeon, who was very useful on this occasion; for, not being able to retain what I had thrust back with both my hands, his and mine alternately supported what was reduced till the reduction was absolutely completed. But, as she complained of a difficulty in making water after the operation more than she had done before, I thought proper to sound her, and found that there was a stone in the bladder. This stone, which was afterwards extracted, was very large: whence we may conclude that she had been troubled with it a long time, and that this extraneous body might have been the cause of the descent of the womb. Be that as it may, she perfectly recovered of both diseases, wearing a steel pessary however, such as I have described before." Saviard's Observations on Surgery, p. 43. It is worthy of remark, that the same able writer, in his case of Marguerite Malaure, takes occasion to state, that he had been obliged to have recourse to the use of pessaries in several other cases, both of very young and unmarried subjects, and of women of more advanced age, but devoted to the obligations of a religious celibacy. De Graaf, see Mad. Boivin and Dr. Duges' work already referred to, tom. i. p. 86. speaks of four young subjects whose virginity could not be considered equivocal, whom he had treated for prolapsus uteri by astringents and the use of pessaries.

The author thinks it quite unnecessary to go into any detailed consideration of the hypothesis of Dr. Van Paddingburg, as published by a Society of Surgeons at Utrecht, 1767; which maintains the principal proximate causes of descent of the uterus to be relaxation of the sacro-ischiatic ligaments, and that of the constrictor muscles of the orifice of the vagina. The sacro-ischiatic ligaments are not, in the author's opinion, of a nature to become the subjects of so much relaxation as could answer the purpose of this hypothesis; whereas the first degree of descent of the womb may take place without its reaching, or at least without its impinging painfully upon, the contracted outlet of the

vagina. Comment. de Rebus in Scient. etc. Supplement. 2, dec. ii. 1773. Lipsiæ, vol. ii. p. 372.

OF THE OCCASIONAL CAUSES OF DESCENT OF THE UTERUS.—Descent of the womb of the first degree has been designated by some French writers by the very term RELAXATION, without reference however to any tissue or part to which the term when so used might be supposed to apply. It is known that, in nine cases out of ten, prolapsion of the uterus is an early consequence of the events of parturition, and that it first exhibits itself under certain well-ascertained circumstances of the puerperal state; which circumstances have been observed to be, either getting up, and resumption on the part of the patient of her usual exercises and occupations, at an unreasonably early period after her delivery, or a less early resumption of those duties in a delicate or feeble state of health. The mere tyro in the anatomy of gestation must know what prodigious elongation the lateral ligaments, and indeed all the proper ligaments of the uterus, have to undergo, during the latter weeks and months of pregnancy. Essential to the success of this process would appear to be an increased succulency and vascularity of the same tissues; or, in other words, a reduction of the natural density and firmness of their texture. But during their state of extension and succulency as here supposed, they must obviously sustain a corresponding diminution of their special power as suspensors of the uterus; whilst indeed during the latter months of gestation, that power can only very slightly be called into action; the uterus at that period being chiefly indebted for its support to the incumbency of its lateral and inferior parietes upon the brim and expanded iliac surfaces of the pelvis. No sooner however is the great business of parturition accomplished, than the uterus contracts and is reduced to a volume sufficiently inconsiderable to admit of its sinking into the pelvic cavity, provided the patient were to place herself in a position calculated to favour that result. During the first days and weeks subsequently to delivery, the same process of contraction of both the uterus and its appendages, and especially its ligaments, is continued; but it is not considered as completed until after the lapse of about seven weeks from the date of the delivery. If during the currency of the earlier part of that period, and indeed during that of any part of it in a case of peculiar delicacy of constitution, the patient should be induced to sit up many hours a day, to stand for any length of time, to walk up and

down stairs, or to occupy herself in pursuits especially calculated to favour an accident of that kind, she would certainly expose herself to a very great risk of becoming a subject of descent of the womb. And what is the explanation? Why, obviously, that nature requires a part or the whole of that period to restore the uterus to its usual size in the absence of pregnancy, and the suspensory ligaments to their natural tone, dimensions, and suspending powers.

Added to the other influences of mismanagement of the puerperal state which we find reported in books, as causes of prolapsion of the uterus, we meet with many examples of VIOLENT PROCEEDINGS ON THE PART OF MIDWIVES as having been productive of that effect. A woman twenty-eight years of age, after being attacked with a malignant fever, experienced a complete procidentia of the uterus. After a tedious use of fomentations to the prolapsing tumour, and various sorts of cataplasms to the chest, and to the sacrum, etc., of which the materials, for the most part herbaceous and demulcent, are enumerated with great parade, the reporter of the case proceeds to state that he eventually succeeded in accomplishing the reduction of the protruded uterus, and that that result was so prosperous in the issue, that in the following year his patient "brought forth a strong living child, AFTER WHICH THE UTERUS CONTINUED IN ITS PLACE." Joh. Adam. Gensel, M. D., in Actis Eruditorum. Lipsiæ, 1716, p. 224.

"Anna K., of the village of Schwamendingen, æt. 34, in the eleventh week after a puerperal confinement, complained of heat of her head and face, thirst, loss of appetite, etc., and also of prolapsion of the uterus; which had been produced, as she represented, by VIOLENT EFFORTS MADE BY HER MIDWIFE to extract the placenta, which subjected her to a great deal of pain and heat. By my advice she used a bath of traumatic herbs for three weeks; and by the application of a pessary she was completely cured." D. Joh. de Muralto. Ephemerid. Germanic. dec. an. 1, p. 278. Norimb. 1682.

"In the year 1681, D. D. Richter, M. D., dissected, in my presence, the body of a young woman, the wife of Andrew Thielens, who had been cruelly treated by her midwife. The patient was in labour of her first child at the time of the accident. Her ignorant attendant, rashly suspecting that there was a second child, pulled violently at the uterus, by which she completely

inverted it, and caused her patient's death." D. Christ. Seliger. in Ephemerid. Germanic. dec. ii. an. 1, p. 344. Norimb. 1682.

Next in frequency to the cases above referred to as examples of descents of the womb consequent upon mismanaged labours and neglect of proper precautions in the puerperal state, are prolapsions and protrusions of the uterus during gestation, imputable to the greater weight of the womb in that state; but generally requiring the concurrence of a previously reduced tone of the suspensory ligaments from many former gestations, labours, and abortions. From the increased bulk and weight of the uterus at that time most women become, in a slight degree, the subjects of descents of it during the earlier months of gestation. But when the organ, during the progress of its development, effects its ascent into the abdominal cavity, it acquires a security of situation above the brim of the inferior pelvis, in consequence of which it cannot readily prolapse. In ordinary cases, and in healthy subjects, and still more especially in first gestations, such is the entire amount of descent to which the gravid womb is subject. But far otherwise is the case with women whose general health and constitutional strength have been broken down by frequent and numerously-repeated gestations.

Of women who become the subjects of severe and protracted prolapsion of the womb in their first pregnancies, there are scarcely any recorded examples; excepting, indeed, from the concurrent influence of some other obvious occasional cause; as in the following case, published by Desgranges.

"A young lady, aged nineteen, when she was gone three months in her first gestation, became the subject of prolapsion of the uterus, in consequence of a fall which only brought her down on her knees. The pregnancy went on, and had the effect, for a time, of relieving the malposition of the uterus. But after delivery the womb prolapsed again. She was more or less harassed with this local affection for six years, when M. Desgranges was consulted in the case. Upon examination, he found a prolapsion of the uterus; that organ indeed protruding at the external parts, complicated with an unusual elongation of its anterior lip. This enlargement, which was of a roundish form, and smooth, having some resemblance to a glass pestle, was supposed to be of the same structure with the uterus itself. It was without pain, and without sensibility. It was, however, attended

by one very important inconvenience, viz., that it prevented the proper adjustment of a pessary, which on this account could not be worn. After enumerating a variety of pessaries recommended by authors, most of which were tried in vain in this case, the writer suggested a kind of ring pessary, made in such a way as to have two floors, the one having an ascent to the other, the anterior one lower than the posterior by a depth equal to the length of the carneous column protruding, as already described, beyond its proper local relation to the posterior lip of the uterine orifice." Communicated by M. Desgranges, graduate of the Royal College of Surgery at Lyons. Journal de Médecine, etc., tom. lix. p. 343.

For cases in illustration of the influence of gestation in producing prolapsion of the uterus in cases of predisposition to such descents, occasioned by pregnancies, labours, and miscarriages, the author begs to refer to the private notes and recollections of all his more experienced readers.

If comparatively slight accidents are competent to produce permanent malposition of the womb, as was the case in the narrative just quoted, what might we not expect as results of severer shocks, heavier falls, and of greater violence, and at the same time applied to subjects more predisposed? But, in the predisposed, even lighter occasional causes of this kind are often sufficient to produce the effect. Cases in illustration are quoted in the 4to edition.

It seems more than probable that prolapsions of the uterus are often results of a complication or of a series of several causes applied in succession. This point is well illustrated in a case reported at great length by Dr. Thomas White of Manchester in the Medic. Observations and Enquiries, vol. iii. p. 1769.

Added to these morbid constitutional influences as so many causes of descent of the womb, we have to notice the more direct mechanical effect of structural enlargements of that organ itself, or of its lateral appendages, or, in short, of any parts or tissues in or near the pelvis, which, by their incumbency or pressure, might add importantly to the proper weight of the uterus, and, consequently, to the actual bearing to be sustained by its suspensory ligaments. This part of our subject will come in the way of being frequently illustrated in future articles of the work.

Of the Diagnosis of Descents of the Womb.—To ensure an accurate development of the facts and principles on which the

several branches of this part of our inquiry are to be founded, it seems necessary that we should more constantly than we have yet had occasion to do, advert to the different forms of the malposition of the uterus as above distributed into three distinct stages: it being the fact that the several degrees of descent of the womb have each and singly their respective liabilities of being confounded with or mistaken for other diseases, or for displacements of natural tissues. We shall first, therefore, consider the diagnosis of descents of the uterus in their first stage. It is obvious that this form of the complaint is liable to be confounded with tumours or displacements of parts situated within the pelvis. The first degree of descent of the womb might by possibility be confounded by an inexperienced individual, and very easily by the patient herself, for an original excess of length of the vaginal portion of the organ itself. That part has sometimes been known to acquire a preternatural elongation of its tissue after the cessation of growth of other parts, without becoming the subject of a positive disease of tissue. In either case the extremity of the uterus by constant collision with the inferior and more contracted portions of the vagina, may become a source of much discomfort to its subject, and lead to the supposition of her case being one of BEARING DOWN of the womb. The objects of the diagnosis would here be to ascertain as precisely as possible the entire length of the vagina, from the rapha of its natural connexion with the neck of the uterus to its orifice; the absolute length of the vaginal part of the uterus; its proportional length to that of the vagina; and any other peculiarity of its form, besides its unusual length; such as a great narrowness either of the whole or of a part of it, and an approach to an actual pointedness of its extremity; or else either with or without a morbid condition of its structure, an excess of its dimensions in all directions; and, finally, the fact of its extremity being perforated by an aperture.

It has not unfrequently happened that AN INCIPIENT STRUCTURAL DISEASE OF THE WOMB has been mistaken for the first stage of its descent from simple relaxation of its ligaments; the patient in both cases usually complaining of pain, which she refers to the small of the back and to the sacral region of the pelvis, as well as to the parts within and in the course of the vagina; whilst she is also equally in both cases the subject of a leucorrheal discharge. Structural disease of the uterus is not a very common malady of young subjects. Therefore, in cases of this kind, when they do

occur in the more aged, we might perhaps be able, with little difficulty, to avail ourselves of the use of the speculum. But the taxis alone will, in by far the greater number of cases, enable a practitioner experienced in such duties to come to a sufficiently correct conclusion as to the diagnosis. In a case of simple descent of the uterus, he would find the inferior extremity bearing very low down posteriorly on the parietes of the vagina, or perhaps pretty directly on the very verge of its orifice. The most convenient positions for such examinations are those of standing and of half-sitting and half-lying. In the event of the case being one of incipient structural disease, the best position of the patient would be that of lying on her left side. Two principal circumstances might be often assumed in the greater number of such cases as likely to establish the fact, viz. great excess of sensibility of the uterus, or excess of its bulk. Added to excess of bulk, there might also be encountered some striking peculiarity of its morbidly enlarged tissue. The practitioner should take great pains, EVEN DURING THE FIRST EXAMINATION PERMITTED HIM, to satisfy himself of the precise condition of every part of the uterus accessible to his taxis. If he should encounter structural disease, he would be competent at once to come to his conclusion, so far at least as it might concern his diagnosis in connexion with the present inquiry.

There is one very painful condition of the uterus, viz. that which has been called the IRRITABLE UTERUS, see a description of that complaint in p. 284, which can only be distinguished from its simple descent, by an accurate knowledge of the fact and amount of the subsidence of the organ in the one case, and by the intensity and other peculiarities of the accompanying symptoms in the other. It is, indeed, a part of the descriptive history of hysteralgia, that it is accompanied by a slight bearing down of the womb; whilst, moreover, the postures of sitting and standing, and all exercises contributive to locomotion, or requiring any other active movements of the body, seem calculated to exasperate the symptoms of both diseases. Upon the whole, it may be asserted that the best pathognomonic symptom, and the one perhaps most to be relied upon in practice, is the fact, that the incipient state of simple descent of the uterus is not nearly so painful a condition of the organ as that which attends the other malady.

Another disease of the uterus which might require some attention on the part of the medical attendant, to enable him con-

fidently to distinguish it from mere bearing down of the womb, would seem to be one variety at least of POLYPUS. When a polypus, or a polypoid growth, is found to be a distinct production of the interior of the uterus, and it is felt to have its stem everywhere bounded and surrounded by the parietes of the orifice of that organ, there could remain no doubt of the nature of such a case. But the variety of polypus referred to here, is that which has sometimes been known to take its origin from the labial boundary of the orifice of the womb. The diagnosis in such a case could of course be decided only BY VAGINAL EXAMINATION.

Symptoms similar to those usually attendant on descents of the uterus might be produced by OTHER VARIETIES OF TUMOURS OCCUPYING DIFFERENT PARTS OF THE PELVIS. For example, a part of the rectum might be the seat of a painful intumescence of its tissue; or morbid deposits of unorganized formations perfectly foreign to the natural structure of the part might be found encysted within the several tunics of the vagina; or other similar tumours might be discovered to be growing from the periosteum of the inside of the pelvis, etc.; not any of which could be expected to occupy their several localities without producing symptoms which would very difficultly be distinguished, WITHOUT VAGINAL EXAMINATION, from the most common symptoms incident to any considerable precipitation of the uterus. Examination per vaginam would here also be the practitioner's first duty. In all such cases the uterus would probably be found to occupy its proper situation, or at least its proper elevation within the pelvic cavity; and would of course be found remotely situated from the diseased part of the case.

The reader is already in possession of the means of coming to a satisfactory diagnosis between any stage of prolapsion of the womb and HERNIAL PROTRUSIONS, whether intestinal or vesical, into the vagina. (See p. 136 and 147.) In all these cases, whatever might be the seat of the protrusion, the orifice of the womb would be distinctly felt, either at some distance above, or at least as forming no part of, the protruding tumour.

Simple descent of the womb might possibly be confounded by a careless or inexperienced practitioner for some other malposition of the same organ, and such a blundering mistake might compromise the best interests of the patient. The uterine malpositions in question are, retroversion, anteversion, and inversion. But all these malpositions are easily distinguishable from simple prolapsion of the same viscus.

In complete inversion of the uterus, the more advanced portion of the displaced organ would of course be its fundus, where it would be needless to expect to meet with any form of structure which could give the idea of its orifice; whereas in a case of simple prolapsion, the orifice of that organ is always the most depending part.

In a case of partial inversion of the uterus, it would require great care to distinguish between a tumour of that kind, and a polypus having its base within the uterus, and only incipiently protruding through its orifice. The author, indeed, is doubtful how far it might be proper in such a case to found a final opinion on the result of an examination by the taxis alone. In a partial inversion and a protrusion to some distance, of the tumour thence resulting into the vagina, see Atlas, pl. xix. fig. 2. at b, it would be really exceedingly difficult to determine the precise character of such a case, without the aid of the speculum.

In cases of retroversion of the uterus, its orifice is found tilted up against the symphysis of the pubis, and often so high up as to be difficultly reached by the examining finger; whilst its fundus is thrown over posteriorly, so as to occupy more or less deeply the hollow of the sacrum.

In cases of anteversion of the same organ, its orifice is carried over the hollow of the sacrum, and its fundus borne forward so as to press inconveniently and painfully against the posterior walling of the bladder.

Prolapsion, or Descent of the Uterus of the Second Degree, is to be distinguished from an incipient inversion and prolapsion of the vagina; from a uterine or vaginal polypus beginning to protrude at the external orifice; from vesical and entero-vaginal hernia; from morbid growths from the interior of the vagina and the surfaces about the vulva; from cases of inverted uterus, whether accompanied or unaccompanied by rupture of the perineum; from unusual conformations of the external genitals; and from original peculiarities of situation of the uterus relatively to the pelvis and to the vagina.

This descent of the uterus of the second degree is to be distinguished from inversion and prolapsion of an inferior part of the vagina by the form of the tumour and by the characteristic difference of the tissues of the prolapsing parts. The presenting part of a prolapsed uterus is usually much narrower, smoother,

and of greater closeness of texture, than the tumour formed by an inversion and prolapsion of the vagina. The orifice at the most depending part of the former is smaller, more distinct, and transverse in its direction; whereas, in the latter case, it is circular, bounded by deep concentric ridges and furrows indicative of the contractility of its surrounding tissue, and terminating in the centre of a soft largish tumour, through which the finger may be easily passed up into contact with the actual orifice of the uterus. The usual appearance of a prolapsion of the vagina with its characteristic aperture in the centre, is very faithfully represented in the Atlas, pl. x. fig. 1.

The tumour formed by A HERNIAL PROTRUSION OF THE BLADDER occupies, principally, one side of the vagina at or near its orifice, and is sometimes seen even to protrude through it; whilst the other side of the vagina is found perfectly healthy and unoccupied; the vaginal part of the uterus in the mean time being felt either at some little distance above the tumour, or merely resting upon it, and in no other way connected with it than by simple apposition.

In like manner ENTERO-VAGINAL HERNIA is to be distinguished from prolapsion of the womb by the easily ascertainable fact of the coexistence of their subject tissues in one and the same person, and also by their respectively different localities.

MORBID GROWTHS from inferior portions of the vagina, and from the surfaces about the vulva, are to be distinguished from prolapsion of the uterus by their characteristic difference of tissue, by the coexistence of both tissues in the same person, as in the former case, and by the absence in the parasite growth of all appearance of aperture at its most depending part.

Cases of totally inverted uteri accompanied by rupture of the perineum, may easily be distinguished from prolapsions without inversion of the same organ, by the absence in the former case and the presence in the latter of an orifice at the most depending part of the prolapsing viscus, as also by other circumstances which it will be more particularly our duty to notice when we come to treat of inversion of the uterus as a separate subject.

A very low congenital position of the uterus relatively to the pelvis and to the vagina should be distinguished from subsequent prolapsion of the former organ by vaginal examination. A correct ascertainment of either of these cases, as also of all structural

enlargements and peculiarities of conformation of the external genitals, will be found easily attainable by means of the taxis, or, at all events, by the eye, without the aid of the speculum.

PROCIDENTIA, OR THE THIRD STAGE OF PROLAPSION OF THE UTERUS, is to be distinguished from prolapsion complicated with inversion of the same organ, by the inferior vaginal portion of the womb being perforated in the usual way by its characteristic orifice in the former case, and by the absence of all appearance of aperture in the prolapsed viscus in the latter: not to add also that in the latter case the tumour is broadest, and in every way largest at its extremity; whereas, in a case of procidentia without inversion, the tumour is usually largest about its middle. Again, in a case of procidentia of an anteverted uterus, two roundish depressions situated laterally and rather low on either side of the tumour, will serve to decide the nature of the case beyond all possibility of doubt, by identifying themselves with the uterine orifices respectively of each Fallopian tube. See these appearances exceedingly well represented in the Atlas, pl. x. B. fig. 2. at b and c.

Procidentia of the uterus, whether at the same time inverted or not, will be tolerably easily distinguished from polypi and other morbid growths, by the former being found to possess their natural feeling upon being touched, and even frequently a morbid excess of sensibility to pressure and pain; whereas, fungöid and parasite growths from the same surfaces are almost always devoid of sensation.

A considerable protrusion of the rectum was once mistaken for a case of procidentia with inversion of the uterus. The tumour first presented itself contemporaneously with the birth of a large child. The portion of protruded intestine was of such a magnitude and so tensely distended, as to have had the effect of concealing all the passages from the pelvis. The author, however, soon learned that the after-birth had not been removed, and he found the placental portion of the umbilical cord prolapsing from between the person of the patient anteriorly and the mass of inverted intestine-looking substance which occupied the space, as already described, between the nates and the superior parts of the thighs. The umbilical cord was firmly taken hold of by the left hand, whilst the right was gradually and very cautiously carried up along it into the vagina, which was found widely developed and empty. At that moment the placenta

could not be reached without causing more pressure upon the tumour than was convenient. There was no discharge of blood, and the uterus could be distinctly recognised through the parietes of the hypogastrium. These facts went incontestably to prove that the placenta was still attached to the uterus, and that the uterus itself occupied its proper situation, under its then circumstances, within the abdominal and pelvic cavities. In its feel and form, and character of tissue, the protruded body furnished unequivocal proofs of its proper nature and source; to the latter of which it was in a few minutes very satisfactorily traced, and in about half-an-hour afterwards it was equally satisfactorily reduced.