doctrine of Leibnitz, that cerebral activity might, and did, go on independently of will and knowledge, he did not mean to affirm, also, that it was independent of consciousness. On the contrary, he maintained in all its force, albeit in another shape, the fundamental physiological doctrine of Stahl, Haller, and others; and he endeavoured to prove, by observations on himself, that, even in the most profound and apparently dreamless sleep, consciousness still continued. Now, this fundamental point involved all the cerebral or higher phenomena of the nervous system, as well as the spinal or lower, such as sensation, and consequently all those included under mesmerism and its offshoots, electro-biology, phreno-mesmerism, and spiritualism. Mesmerism and homoeopathy arose contemporaneously during the last century; both were legitimate descendants of preceding schools. Mesmer was the successor of Van Helmont, who was born at Brussels in 1577, and died in 1644, and was influenced by C. Agrippa. Van Helmont perceived in all bodies a physiological principle of movement which he termed *Blas*, very much as Von Reichenbach thinks he discovered a new force in nature which he termed *Od*. The term *Gas*, by which Van Helmont designated aeriform matter, is now in universal use. His sentient and intelligent cause, termed *Archæus*, was the antecedent to Stahl's *anima*. The fundamental dogma of homoeopathy, that like cures like, was an offshoot of the Hermetic school of medicine of the previous century, which deduced the therapeutical doctrine of signatures from the same dogma. With this was joined a mystic alchemy in the doctrine of infinitesimal potencies. These were obviously absurd; not so the therapeutical results. And, when taken in connection with the curative effects of mesmerism, they led to the consideration of two practical points; namely, the influence of the mind on and through the brain on the production and cure of disease, and the influence of "nature" in restoring to health. The new ideas thus arising have advantageously influenced therapeutical observation of late years, primarily through the labours of Sir John Forbes, who instituted careful inquiries into the alleged facts of both homoeopathy and mesmerism. A careful sifting of the latter class seems to me to lead to the conclusion, that a method of great practical and scientific importance, for artificially exciting changes in the brain, and through these on organs and tissues, has been added to science; and that the true facts serve to throw much light on the fundamental laws of life and mind, albeit not in the direction which the deductions therefrom have taken. The chief cerebral phenomena resulting from the changes thus induced by the processes of mesmerism, hypnotism, and electro-biology, are anesthesia, sleep, dreaming, somnambulism, exaltation of the faculties, hallucinations, delirium, and insanity, most commonly temporary only; some of these are physiological, some pathological, all toxicological; to differentiate them when produced artificially, we might term them dynamical. The changes induced in bodily organs and tissues have also been long known as the results of imagination. The operators and experimenters in this department, for the most part, wholly ignored the facts of cerebral pathology and toxicology. Some had little or no knowledge of the functions of the brain and the physiology of consciousness; others misapplied, or neglected to apply, the knowledge they undoubtedly possessed. Preferring to assume the existence of a new force in Nature, they examined the phenomena manifested in relation to the hypotheses they formed as to its laws of action exclusively, and wholly neglected their relations to those already well known and attributed to certain laws of life and consciousness. In this way, by rejecting the facts and conclusions of modern research, they caused the rejection of their own by modern inquirers. The most favourable example of the method are the researches into *odyle* or *od* or *odylic* force by Reichenbach, which were enthusiastically taken up by my late friend Professor Gregory.* Their labours have had, or are likely to have, the same advantageous influence on neurology and psychology that formerly alchemy and the Hermetic system of philosophy exercised on chemistry and the biological sciences.

The phenomena of spiritualism may be taken in connection with those of mesmerism and its offshoots; but bearing more directly upon the great problems of life and mind, and more particularly on those relations of knowledge and the will to organisation which bring medical science not only into the courts of law, but into the very core of all systems of education, morals, and philosophy; so that, whether we consider the physiological and pathological bearings of these speculative schools on cerebral physiology, pathology, and therapeutics, or the number of those who follow them, amongst whom are men of high attainments, the facts they advance are worthy of special examination. It must not be forgotten that these sects have a wide-spread circle outside the profession, and influence not only religion, morals, and philosophy, but also legis-

lation and practice and the business of life. Mesmerism and spiritualism, and indeed all mysticisms, are only the outward signs and manifestations of those yearnings after the spiritual and the infinite which are the great characteristics of humanity in its higher development, and which at this moment involve the interests of millions in Europe and America. If the profession, then, mean to be the guides scientifically of these new movements, as it ought to be, the phenomena in question must have a place in the proposed new chapter. I shall, therefore, give them special consideration. The vital forces, and Nature with its *vis medicatrix*—the more special "forces" of the current schools of medicine, so constantly referred to by practitioners—must, however, be examined cursorily in their relations to other forces and systems, so as to clear up our notions of what we understand by them, and prepare the way not only for more definite generalisations as to these fundamental points of theory and practice, but for a right estimate of the facts and theories just referred to which are outside the pale.

CASE OF INTUSSUSCEPTION OF THE RECTUM.

By ROBERT VACY ASH, Esq., Grantham.

I WAS some time ago called to the following singular case.

Catherine T., aged about 6 years, was first taken ill with extreme straining when at stool. Almost in the act of defecating, the motion ceased to come; still the straining continued, with the loss of a considerable quantity of clear viscid mucus. After this had continued for two days, I was called in. On examining the rectum, in one of her straining fits, the external sphincter was found dilated to the size of a shilling; and, at the depth of about three inches, was seen a large round fleshy looking tumour. At each effort of straining, this came down and pressed on the sphincters. On passing my finger up and round this mass, it appeared to be about the size of an egg, round, hard, and fleshy to the feel, with a constricted neck, not unlike an inverted uterus. I pushed it up as far as the length of my finger would admit; but it returned on the sphincters immediately on the first effort of straining. On inquiry, I found the child had been subject "to her body coming down" since birth; so I naturally concluded it was a case of prolapsus recti of an extreme form. I ordered four minims of tincture of opium and four grains of nitrate of polish in camphor mixture every four hours, with a suppository of opium and acetate of lead at bedtime. The opium internally tended to stop the excessive tenesmus; but the suppositories would not stay up.

On the following day, I again introduced my finger and tried to slip the intussuscepted part through the neck, but failed. The sphincters were more relaxed; the mucous discharge continued. The pulse was 130, weak. There was tenderness over the left iliac fossa. I ordered hot poppy-head fomentations.

She continued in this state for some days; when one morning I discovered a greenish looking spot on the tumour. This increased in size and depth, and the surface of the mass looked of a deeper congested colour. The mucous discharge was more in quantity, and streaked with blood. She complained of extreme tenderness over the abdomen. The pulse was wiry, and 130 per minute. I ordered plenty of nourishing food, with calomel and opium at bedtime, and cold brandy and water to relieve the exhaustion and vomiting.

On the following day, I called another medical man in. After examining her, he agreed with me as to the intussusception. I then proposed an incision into the mass, thinking the hardness was caused by feces, and that, by opening up a passage, relief might be obtained. He consented, and I did so; nothing but a little blood came away. I then proposed the formation of an artificial anus. To this the friends would not agree; so we left the child suffering as much as ever.

A few days after this, I was fettered in a great hurry, and found that the child had succeeded, in one of her straining efforts, in expelling the tumour outside the anus. On carefully examining it, it looked like a lump of flesh covered with mucous membrane in a state of ulceration and congestion. After oiling it well, I replaced it, but to no purpose; it immediately came outside again. I then tried a plug bandaged tightly round the waist and between the thighs; but even this was forced on one side by the expulsive efforts of the child to get rid of the tumour. All at once the patient became easy; but soon collapse, with marked symptoms of peritonitis, came on, and the child quickly sank, never having passed a motion since the commencement of the illness.

AUTOPSY, twenty-four hours after death. On cutting into the peritoneal sac, a quantity of clay-coloured feces mixed up with the intestines came into view. The stench was so great, that a minute examination was impossible. I succeeded, however, in finding the ruptured piece of gut, situated just above the sigmoid flexure. The intestines

* See "Researches on Magnetism, Electricity, Heat, Light, Crystallisation, and Chemical Affinity, in their Relations to the Vital Force." By Baron von Reichenbach. Translated by Wm. Gregory, M.D., etc., Professor of Chemistry in the University of Edinburgh. London: 1850.

gave every indication of recent peritonitis. The liver was enlarged and congested. On cutting into the part of the rectum external to the anus, it seemed a solid mass of flesh; but, on looking closely into it, a small contracted canal could be traced irregularly through the tumour. Beyond this, there was nothing to indicate that it was intestine.

NOTES OF AN AUTUMN HOLIDAY IN AMERICA.

By T. SPENCER WELLS, F.R.C.S.,

Surgeon to Her Majesty's Household, and to the Samaritan Hospital.

II.—PHILADELPHIA.

WE arrived in Philadelphia on the evening of September 13th. Professor Gross called on me at the hotel, and we went together to Dr. Atlee's. Early on the morning of the 14th, we assisted Dr. Atlee to remove an ovarian tumour from a lady upwards of fifty years of age. It was a large adherent tumour, and was removed, after tapping and breaking up, through a short incision. Three bleeding vessels in the torn adhesions were stopped by acupressure, the needles being passed through the whole thickness of the abdominal wall. The pedicle was secured by a parallel clamp, such as I used in 1858, and which is still sold and known both here and in America as mine, but which I have long since abandoned; as, instead of pressing the pedicle into the smallest possible space, its effect is rather to squeeze it lengthways, and so tend to separate the opening in the abdominal wall. The wound was closed by iron-wire sutures, including the peritoneum. The acupressure-needles were removed on the following day, and the patient made an excellent recovery.

In this and the other cases in which I saw Dr. Atlee operate, I was struck by the accuracy of his diagnosis, and his coolness and determination as an operator. He differs from my own mode of operating—first, in placing the patient in the semi-recumbent instead of the recumbent position, standing in front of her between her knees instead of to one side, and not using an adhering water-proof sheet to keep her dry. He uses an ordinary trocar, and applies a loose flexible tube to the cannula after withdrawing the trocar. After trying various forms of ligature, and the *écraseur* in four cases, he has come to adopt the clamp as the best general mode of securing the pedicle. He is careful to stop all bleeding vessels in separated adhesions by applying solution of persulphate of iron, or by acupressure; but is not very careful in sponging the peritoneal cavity clean. I did not find any noteworthy difference between his plan of after-treatment and that followed by Dr. Keith and myself here. As an anæsthetic, he prefers, and always uses, one part of chloroform and two parts of sulphuric ether. He thinks the patients struggle less than when under chloroform alone, and are less sick afterwards. It certainly answered remarkably well in the four cases where I saw it used.

At twelve o'clock, we went to Professor Gross's surgical clinic at the Jefferson Medical College. The theatre is large, comfortably accommodating from three to four hundred students. It was well filled; for, although the session had scarcely commenced, Dr. Gross had invited many practitioners of the district to meet me, and he introduced me to them in a most kind manner. A revolving table is in an open space in the centre of the theatre, and the students' benches are arranged all round. There are only a few beds for operative cases connected with this clinic, a large majority of the patients being what we call out-patients. They are seen by the assistants, and the more important cases are kept for the examination of the professor in the presence of the students. One case of fibrous ankylosis of the shoulder-joint, another of ankylosis of the knee-joint, and a case of chronic disease of the bladder, served as texts for some interesting observations and important instruction to the students. The ankylosis was in each case forcibly broken up under chloroform. I have often regretted how very little use is made of the out-patient room by our own teachers and pupils, and was very strongly impressed by the practical character of Professor Gross's teaching. It is quite certain that students would eagerly seek for practical information of this kind, who can hardly be forced by any system of roll-calling, certificates, schedules, and registration, to attend the systematic courses for which they are compelled to pay, if not to attend, by the regulations of our own examining boards. A negro suffering from an abdominal tumour having been brought in, I gave a short clinical lecture on the diagnosis between uterine and ovarian tumours. A pretty full report of this lecture has been published in the *Philadelphia Medical and Surgical Reporter*, and, I have heard, in other American journals.

In the afternoon, I assisted Dr. Atlee in a very interesting case. A hard prominent tumour occupied the central and lower part of the ab-

domen. The history led to the belief that it was probably an extra-uterine foetus. Dr. Atlee made a short incision below the umbilicus, and some foetid pus escaped. On introducing the finger, bone was felt; and all the bones of a perfect foetus at about the seventh month were removed. The cavity or sac in which the bones were enclosed was not disturbed; it was sponged out with a solution of persulphate of iron, and lint was introduced to maintain a free opening for discharge. The patient suffered no ill effects, and, I heard afterwards, recovered completely.

In the evening, we met a large party both of ladies and gentlemen at Professor Gross's house—expressly and most kindly arranged that, in the short time of our visit, we might become personally acquainted with some of the most distinguished of our brethren in Philadelphia, and with ladies of their families; and, if this should chance to meet the eye of any of our friends there, I hope they will not think we can forget the city of Gross and Atlee, Wood, Meigs, Hodge, Dunglison, Dickson, Hayes, Weir Mitchell, Morton, Maury, and other "good men and true" who shared in the hearty hospitality of the professor of surgery.

Next day was Sunday; but, before church, I paid an early visit with Dr. Morton to the Pennsylvania Hospital. There is nothing remarkable in the building itself; but the wards are clean and airy, and I was much pleased with a portable ward-apparatus, devised by Dr. Morton, for cleansing and dressing wounds. In order to do away entirely with sponges, and remove other causes of impurity in the wards, and lessen the danger of contagion, all wounds are cleansed by fresh water flowing over the part, and never returning upon it. Oakum is used instead of sponge, and is thrown away after being used once. The apparatus is like a small garden-engine on three wheels, with noiseless tires. On the top is the reservoir, holding several gallons of water, and furnished with an elastic tube and stop-cock. Below and on the sides are spaces for plaster, bandages, lint, various instruments, dressings, etc. Below is a can of hot water for heating the plaster, a box of oakum, cotton-wool, old linen, and tin buckets for the soiled bandages, dirty oakum, and impure water. This is all easily and silently pushed on from bed to bed; and, when all the wounds have been irrigated and dressed, all the refuse is at once removed from the ward. I have not seen anything so convenient, and saving so much labour, in any of our own or the continental hospitals; but I am anxious to direct particular attention to this apparatus for the far more important purpose it serves in getting rid of sponges, basins, and a mode of dressing which must tend to render the air of surgical wards impure, and to convey the organic poisons of pyæmia, erysipelas, or other contagious diseases, from one patient to another. In this hospital I saw a great many fractures put up on the principle of simple extension by adhesive plaster, which is so popular in America. It struck me as a great improvement on the old-fashioned splints, pads, and rollers, which still astonish modern visitors in some of our own hospitals, and pretty generally in those of Paris; but as by no means equal to a well-applied gypsum bandage, either in simplicity, or in the immobility secured to the broken bone, without unnecessary restraint of other parts of the patient's body.

CANNES AND TORQUAY AS WINTER HEALTH-RESORTS.

By SPENCER THOMSON, M.D., Torquay.

THE Temperature Reading for December 1867 at Cannes, furnished by "R. J. L.," in the *JOURNAL* of January 11th, cannot, I imagine, fail to surprise many persons who have hitherto regarded that now fashionable health-resort as the abode of almost perpetual summer. In contradistinction to the table of the temperature at Cannes, I beg to append that of Torquay for the same month, and taken at the same period of the day. I do not think that Torquay will suffer by the contrast, even though last December was the coldest known here for many years; and I imagine, from what we hear of Cannes, and of Southern Europe generally, since the present year came in, that, so far, the contrast would be still more favourable to this locality. I may premise that the instruments which are used for the Torquay observations have been seen and approved by Mr. Glaisher, as calculated, from their situation and exposure, to yield perfectly reliable and fair results; that these results have been for years accepted by the Registrar-General; and that their accuracy is vouched for by the gentleman whose well known observations extend over a period of more than twenty years. Moreover, these observations are published weekly in the *Torquay Directory*; so that, both past and present, they can be referred to by those interested in the subject.