heard of him I found he was earning a competency by keeping a dairy.

In the year 1830 a child was brought to me to determine the sex. It was four months old. The appearances were so similar to those already determined in the previous case as not to require further notice than that the cul-de-sac was less deep. A few weeks after seeing it, inflammation of one side of the fissured scrotum occurred, ending in the formation of pus. Scarcely had this subsided, and the abscess healed, when a similar attack affected the other side; pus also formed there, and was also evacuated. The child fell gradually into a condition of cachexy, of which it ultimately died.

The autopsy disclosed an interesting genital malformation. From the bodies (*testicles?*) in each labium passed vessels having the external character of the spermatic cord and its accompanying vessels, the tube apparently being wider than natural; these met behind the bladder, and formed there at their union a triangular body, but without fibrous structure, and having a cavity within, and that cavity ending in a duct of short extent, and gradually widening out and forming the cul-de-sac that in its anterior margin received the meatus urinarius at its usual point of exit in the female—behind the pubis. The parts were removed for microscopic examination, and for that purpose placed in the hands of my late lamented friend, Dr. John Prout. His departure for Russia just immediately after occasioned the structure to be overlooked, and I am now only able to refer to it by the remembrance I possess of the facts.

Is there really ever an hermaphrodite in a being so elevated in the scale of nature as man? I have always treated with contempt any suggestions of such a state, and have been disposed, as others, to trace the phenomena of these alleged conditions to those of an imperfect male; but there exists in the museum of the school in Grosvenor-place (Mr. Lane's school formerly) a very singular preparation.

It is impossible to look at this preparation and not be satisfied, that on one side (the right) exists a body that, in its appearance and vessels proceeding from it, has all the character of the testicle; whilst, on the other (the left side), exists a body, in its external attributes, characteristic of the ovary.

I admit my conviction, that I can only view the circumstances, apparent in this preparation, as indicative of a real case of hermaphroditism.

What has given me individually a peculiar interest in this unique preparation is, that it confirms an idea that I have for many years indulged the pleasure of contemplating, and the prospect of illustrating at some convenient time. What I allude to at present is the difference that I feel warranted in asserting exists in the left from the right side of the body; the latter being disposed, throughout the chain of animal life, (when the locomotive apparatus consists of four members,) on the right, to represent the male character; on the left, the female.

I have many facts that I have collected illustrative of this idea; for example, the hare-lip is, as a rule, to be found on the left side. This fact I have been for the last twenty-five years in the habit of pointing out to my pupils; I have also to teachers of surgery and anatomy pointed out the fact, and the errors in pictorial illustrations accompanying their prelections. And I find now in lectures the right notion of this arrest of development is taken up and commented on. But as this subject admits of a very extensive illustration, I reserve its consideration for another time.

Howley-place, Dec. 1859.

LITHOTOMY BY ALLARTON'S OPERATION;

REMOVAL OF THREE STONES, TWO OF THEM
BEING ENCYSTED.

By R. STEEL, Esq., M.R.C.S.,
SURGEON TO THE BLAENAVON IRONWORKS.

DAVID S—, aged four years and ten months, the child of a miner, was brought to me for the first time early in October last. The symptoms from which he had been suffering for two years led me to suspect the presence of stone. I made an appointment for sounding him in two or three days, and at once detected a stone, which I thought to be of some size, and determined to remove it by Allarton's operation. Accordingly, on the 18th of October, I performed the operation under the influence of chloroform. The patient being placed in the usual position for lithotomy, a staff grooved on its convexity was

passed, and a straight bistoury was introduced, with its edge upwards, into the median line, about half an inch above the anus, so as to strike the groove in the staff; the knife was then carried upwards along the groove, dividing the membranous portion of the urethra, and withdrawn, cutting upwards through the integuments. The bottom of the wound was about three-quarters of an inch, and at the surface about an inch and a quarter, in length. A few fibres in front of the posterior layer of the deep perineal fascia were scratched through; a long ball-pointed wire was passed into the bladder, the ball being kept well pressed into the groove of the staff; the latter was then withdrawn, and the forefinger of the left hand, well greased, and guided by the wire, passed into the bladder by a gentle rotatory motion, without the least difficulty. On withdrawing the finger, a stone presented at the opening into the bladder, and was at once, and without difficulty, extracted by the forceps. It was of an ovoid shape, and measured one inch by three-quarters in diameter. I then explored the bladder with my finger, and on the anterior wall, high up in the pubic region, it came in contact with another stone; the only portion to be felt was a small glenoid cavity, about a quarter of an inch in diameter; the rest was firmly imbedded in a cyst. After two or three minutes' cautious manipulation with the forefinger (fortunately a long and flexible one), the stone was turned out of its bed, and fell to the fundus, and was at once removed; it measured three-quarters by half an inch in diameter. On again exploring with the forefinger, I found, to my intense annoyance, that its tip could just reach a third stone, in numerous foliated fragments, attached apparently by false membrane to the anterior wall, and well above the os pubis. The forefinger was not long enough to explore the stone, but with the middle finger I found that it was larger than the first one, that it was deeply imbedded in a kind of pouch, could not safely be got at by any instrument, and that it must be detached piecemeal by the finger. By dint of patience and great caution, this was effected. Seven or eight large fragments, about the same number of smaller pieces, a quantity of detritus and shreds of a kind of network of false membrane which had held the mass together, were, after dropping into the fundus, removed either by the forceps, the finger, or the injection of a large quantity of tepid water, patiently persevered with till I was satisfied not a fragment remained. This friable stone was found to consist of phosphate of lime.

I had never before performed Allarton's operation, and I felt misgivings that this complicated case might end fatally, and unjustly throw discredit on what I believe to be one of the most valuable improvements in modern surgery; I am, however, happy to say that the progress of the case has been most satisfactory, and may be summed up in a few words. About two hours after the operation the child seemed a little excited under the after-effects of the chloroform, but said he felt pretty well. That evening he said he was "quite mended;" but, although free from pain, he had a somewhat restless night; since which time he has gone on without any bad symptom, or any symptom whatever requiring treatment except a little cough, which he had been troubled with for some time previous to the operation. He never complained of pain but once, and that was during the passage of some urine. By the seventeenth day after the operation the wound had nearly healed; he had been passing urine freely through the urethra, for some days, but had done so a little from the first. He was very emaciated before the operation, but has been gaining flesh since; he eats heartily, sleeps well, and is delighted at being relieved from his terrible sufferings.

From this time the case ceased to require any attention; but the weather being very wet and boisterous, I would not allow him to travel home (a few miles off, and in an open conveyance) until the fifth week after the operation; at that time he had become fat, rosy, and full of spirits. I heard of him a day or two ago, and find that he continues perfectly well, and runs about as though he never had anything the matter with him.

Remarks.—I feel I cannot speak too highly of Allarton's operation: the ease and certainty with which it can be performed must recommend it to every surgeon who has had opportunities of trying both it and the lateral; while the fewer tissues divided, and the insignificant loss of blood, must render it the safer operation. That it is suited to complicated cases the above must prove. The only part of the operation in which I expected difficulty was the dilating the opening in the bladder without dividing the prostate or even the posterior layer of the deep perineal fascia: here, however, I was wrong; the finger dilated the wound and passed into the bladder with the greatest ease, nor was there the least difficulty in grasping and withdrawing the first two stones when lying free in the bladder.

I cannot omit acknowledging the kind courtesy with which Mr. Allarton furnished me with information on some points connected with his operation, when I applied to him on finding that the first edition of his work, "Lithotomy Simplified," was out of print, and the second not yet ready.

Blaenavon Ironworks, Monmouthshire, Dec. 12th, 1859.

DIPHTHERIA AT CROWLE, IN LINCOLN-SHIRE.

BY HENRY W. T. ELLIS, M.R.C.S.E., Crowle.

IN a recent leader in THE LANCET, communications were invited from medical practitioners on the subject of Diphtheria. Now, as it has fallen to my lot, in conjunction with my brother, Mr. P. S. Ellis, to see a great deal of the disease, I beg to forward a statement and summary of the cases which have come under our daily observation for the last fifteen months.

Introductory to any report on the prevalence of diphtheria in Crowle and the neighbouring villages, it is, perhaps, necessary to premise, that the district generally is below the level of the rivers Trent and Ouse at high water; and that, 1800 years ago, it formed part of an extensive forest in which the Britons took refuge from their Roman invaders, and which was subsequently destroyed by the latter. In the course of centuries, a peat moor became formed, varying in depth from one to twenty feet; but this is now, to a great extent, covered with warp, the alluvial deposit of the rivers abovementioned. The land is well drained, very fertile, and in the highest state of cultivation, the inhabitants being chiefly occupied in agriculture, and the first process of the manufacture of flax, here called line.

Crowle, with the hamlet of Ealand, containing a population of about 2500, is situated on the western and southern declivity of some rising ground called Crown-hill. As regards its geological formation, the subsoil consists of clay, sand, water-stone (a sort of crumbling rock), gypsum, and gravel of calcareous or magnesian limestone. There is a good and constant supply of water, derived from wells ten to thirty feet deep, rather hard, and, in some places, moory, silty, and undrinkable. The sanitary condition of the place and its inhabitants, as regards drainage, cleanliness, ventilation, and over-crowding, is almost unexceptionable, the people not being of the poorest.

The other villages in which diphtheria has been fearfully prevalent, and the cases in which were almost entirely attended by my brother, are Eastoft, population 550; Luddington, population 600; and Garthorpe, population 520: all on the banks of the old river Don, now partially filled up, but in places a reservoir of stagnant water. Althorpe, population 320; Keadby, population 440; and Amcotts, population 420, on the Trent, although not exempt from the disease, have been but lightly visited; but in them, as well as in Adlingfleet, there have been the strongest evidences of the contagious nature of the complaint. Taking the district generally, it is not now subject to ague, except amongst the Irish immigrants. Autumnal diarrhoea frequently prevails; fever occasionally; calculous complaints are common; bronchocele rare; scarlatina, with the exception of a few cases very recently (October), has not been seen for some years.

The present epidemic has prevailed to a great extent, and in a severe form, since the second week in September, 1858; and the mortality has been large; latterly, however, the cases have decreased, though not a day passes without some fresh ones. Altogether, there have been 564 attacked, and 78 deaths. The first three cases (children) occurred at an isolated farm-house, about two miles from Crowle; these all succumbed in twelve days; after the most diligent research, they could not be traced to communication with others. The next, the child of a respectable ironmonger, took place four days afterwards in Crowle, still without any evidence of infection. Sporadic cases kept happening until Christmas, when the complaint began to assume an epidemic form. At the same time, adenitis or inflammation of the glands of the neck, erythematous sore-throat, and tonsillitis, also prevailed. Both sexes, all ages and classes, have been the subjects of the disease; and in many instances it set in with great severity. The labouring population, small farmers, tradespeople, and children under twelve years of age were the principal sufferers, an infant of seven months being the youngest attacked. Amongst my brother's

patients, a clergyman, with his wife and daughter, took the disease; a little girl of my own was also the subject of it; and a draper lost his wife and both children from it.

With respect to the communicability of the disease from person to person, there have been the clearest and most irrefragable proofs, the period of incubation varying from three or four days to nearly a month. There have been several instances of a recurrence of the complaint, the second attack being occasionally fatal. Horses have also been affected by a similar disease, and many have died from it.

Diphtheria here has been invariably characterized by the presence of a white or slightly yellowish exudation on the tonsils, uvula, velum, or pharynx; in severe cases appearing also on the posterior nares, larynx, trachea, and bronchial tubes. The membrane has been of varied consistence and thickness, according to the part affected. On the tonsils and velum it seemed to consist of an increased and altered secretion of the mucus peculiar to the part, composed as it is of cells, corpuscles, and epithelial scales, and this in some instances was quickly reproduced after its removal; lower down, as discharged by vomiting or expectoration, it was evidently fibrinous, forming casts of the trachea and its bifurcation into the bronchi. In many cases the removal of the exudation caused abrasion of the surface, with bleeding points; and the membrane itself, especially from the trachea, displayed blood-corpuscles in patches, and in one instance, as examined by the microscope, a distinct fungoid growth in a state of putrefaction; the fœtor was generally very offensive. Preceding the appearance of the exudation for two or three days or more, the affected parts were swollen, highly congested, generally of a bright-red colour, but sometimes livid; frequently there was a good deal of œdema of the tonsils and uvula, seeming as if infiltrated with serum, and this appearance continued after the patch had formed. Convulsions in several cases preceded, in one accompanied, and in two followed, the removal of the disease; death ensued in the last two instances, an adult and his child. The complaint was generally ushered in by much constitutional disturbance, as evidenced by febrile excitement, vomiting, and headache, with suffusion of the eyes, followed by symptoms of depression and loathing of food. In three cases an eruption of bright-red spots or dots, small, distinct, not elevated or vesicular, accompanied the disease, and remained out three or four days; there was no desquamation. In one person, a married woman, menorrhagia ensued, and epistaxis in several, six of the latter being fatal. During the progress of the disease, the temperature of the skin became generally low, except in dyspnoeal agony, when there was, of course, sweating. In nearly all the most severe cases there was profuse and fetid muco-purulent discharge from the throat and nostrils; the submaxillary glands were frequently engorged, and in one instance suppuration followed. The urine was occasionally albuminous, but not generally. Diarrhoea proved fatal in four infants. Ulceration not unfrequently followed the removal of the exudation, and in one instance (a patient of my brother) an aperture remained in the left anterior pillar of the velum, sufficiently large to admit a quill, and causing much inconvenience. Regurgitation through the nostrils, from paralysis of the soft palate, was a frequent consequence, as well as altered voice. The nervous and muscular systems were much affected, anæmia, debility, and loss of power frequently occurring. Diplopia took place in five instances; complete paraplegia in two, the latter yielding to strychnine. Death generally happened from exhaustion or asphyxia, croupal symptoms often supervening. There has been no instance here of the disease being communicated by accidental inoculation, or the contact of the morbid secretion with a mucous or abraded surface; but in one case the exudation showed itself on the neck of a child blistered by the application of liquor ammonia, and also in a strumous girl with a scald on the foot.

As regards the treatment of the epidemic, it has essentially consisted in the use of the chlorates—the tincture of the sesquichloride of iron, chloride of potash, and hydrochloric acid, with gargles of the two last named. In many cases, a strong solution of the nitrate of silver, a drachm to the ounce, was applied to the fauces by means of a sponge. Occasionally, sulphate of copper emetics were given with advantage, as also ipecacuanha. Turpentine, internally, was tried in some, but scarcely with any good result. Gentle aperients were generally premised, and the exudation, if possible, removed by a spoon or the polypus forceps. In cases of debility, preparations of iron and quinine were administered. And throughout the progress of the disease a liberal and generous diet was enjoined, consisting of broths, beef-tea, eggs, milk, wine, porter, and brandy. Tracheotomy was in no instance resorted to. In all the fatal cases, notwithstanding prompt, energetic, and decided