made to extract it by means of long forceps, and the stone was grasped several times, but could not be dislodged by an amount of force short of that which was likely seriously to injure the urethra. Crushing the stone was then suggested, but this plan was not entertained on account of the obstacle its fragments might prove to the flow of the urine through its proper channel, now that another outlet had been formed between the bladder and the situation of the stone. Under these circumstances, and from the extreme difficulty which in so young a subject attended the trial of other means, such as dilating the urethra, &c., Mr. Gay determined to cut down upon and remove the stone in the usual manner, and without further delay. Incisions were next made through the integuments for the escape of the effused urine; the parts well cleaned with slightly alkalisied warm water, a dose of poppy syrup given, and the child soon fell asleep. The calculus was large, and of a triangular form, which accounted for its firm position in the urethra.

Urinous fluid oozed from the wound, and Mr. Hill spared no exertion to neutralize the effects of the urine upon the subcutaneous cellular tissue by frequent ablation, and injections of warm water as far as it could be made to pass into the track which the urine had formed. In the course of thirty hours an erysipelatous flush made its appearance, the child became restless, fever supervened, and sloughing of the integuments of the scrotum, under surface of the penis, and lateral pubic regions, followed, attended with, and succeeded by, profuse purulent discharge, diarrhoea, and great prostration of strength. The lower boundary of the urethra sloughed, and the urine made its exit partly behind and partly in front of the scrotum. During these changes, which occupied a period of twelve days, the bowels were attended to, tonics, animal food, and rich broths, given, and the wound carefully kept cleansed and poulticed.

Healing commenced, and the extensive sore rapidly advanced towards cicatrization. Attention was principally directed towards the closure of the urethra, but owing to the extent of injury which it had suffered, and the want of integuments, together with the impracticability of even passing a catheter along its whole course into the bladder, the hope of materially advancing that end by artificial means was given up. The integuments (such as were left) did admit, however, of some useful adaptation, so that in the course of twelve or thirteen days more the aperture through which the stone was extracted was closed, and that (from loss of portion of the walls of the urethra) in front of the scrotum alone remained, through which the urine flowed. After another fortnight the whole had cicatrized, with the exception of the edges of the fistulous passage just referred to, which were still so widely separated asunder that their ultimately remaining in that condition was clearly unavoidable, as there were no integuments in the vicinity from which the gap could be supplied.

The child subsequently left the hospital, with instructions to the mother that he should be repeatedly brought, with the view of keeping patent the anterior portion of the urethral tube, so that at some future period the closure of the fistulous passage might be attempted.

The foregoing case is illustrative of the evils which may result from a vesical calculus unsuspectedly finding its way into and finally lodging in the urethra. The question how such results are to be obviated, naturally suggests the reply: "by extracting it from the bladder." This is sufficiently simple, but it is not equally so at all times to detect the stone in the bladder, by means of a sound, so as to justify a surgeon in cutting into that viscus. It is not unfrequently the case, that, even in comparatively so small a cavity, there is much difficulty in bringing the end of the sound into forcible collision with a stone; and both large and small calculi have eluded the most vigilant and able exploration. What are the causes of this occasional failure, and how are they to be met? Mr. Coulson, whose experience in these cases has been very considerable, refers these failures either to a sacculated bladder, to the stone being fixed between two folds of that viscus, or to its being enveloped in a cul-de-sac, formed either by a hernia of the mucous membrane through the muscular coat by rupture or separation of its fibres, or by a newly-formed cyst. In Mr. Gay's opinion, there is another and more frequent cause of failure, especially in children, than either of these—viz., the employment of too large a sound.

The exploration of a child's bladder is seldom made but when it is almost empty; and in this state that viscus is small, its long or vertical axis not measuring more than about an inch and a quarter. The vesical termination of the urethra is on a level with the floor of the viscus, when the individual is in the erect posture, and it is important to notice, that the spaces on either side of this aperture are pouched so as to make the transverse diameter of that part greater than of the summit, and thus to give to the whole viscus, when viewed from behind, a triangular form. On examining the

muscular coat carefully, it will be seen that its fibres are strongest and most abundant towards and at its summit, and weakest around the pouched portions just described; so that on the contraction of that organ, and by the associated expulsive action of the abdominal muscles, a stone would most probably be lodged in one of these spaces.

If the parietes of the abdomen of a child two years old be reflected, and the bowels turned up so as to permit a view of the bladder, and, under these circumstances, the *smallest-sized ordinary sound* be passed into it, the end of the beak will be observed to abut against the posterior wall, before the whole of the beak has entered that viscus; and on thrusting the instrument still more forward, in order to use it for exploration, the point will be observed to catch a fold of the bladder and to carry it onwards, producing a considerable stretching of their fibres before its point can be made fairly to reach the summit. After this is accomplished, it will be observed, that if an attempt be made to turn the beak of the sound, so as to command the lower and lateral portions, the point will again become entangled, and thus the calculus may be dislodged from its position which you are endeavouring to reach by the very efforts made to accomplish that purpose.

Hence it becomes very evident, that the sound in ordinary use for the exploration of a child's bladder (and the same may be stated as applying, though not in an equal degree, to that used in the case of an adult) is ill adapted for that purpose, *from its disproportionate size*. The sound for a child's bladder should not altogether exceed six inches in length, of which one inch might be allowed for the handle, three and a half inches for the stem, half an inch for the curve, and from nine lines to an inch for the beak. The curve should not be abrupt, and the beak should form a slightly obtuse in preference to a right angle with the stem. If such a sound be used experimentally upon a dead body, it will be found to command readily every part of the bladder, without disturbing its coats; and it would be found almost impossible not to detect the smallest foreign body which might be at freedom within that cavity.

The size of the sound should increase in a direct ratio with the age of the individual to be examined.

Mr. Gay offers these suggestions to the profession, feeling assured, that on reference to the ready detection of vesical calculi, they will be found of practical utility.

THE MEDICAL PRACTITIONERS OF ASHBOURNE AND THE POOR-LAW COMMISSIONERS.

To the Editor of THE LANCET.

SIR,—I enclose you the *Derby Mercury* of this week, in which you will see a statement from the medical practitioners of this town and neighbourhood, to the poor-law commissioners, and their reply thereto; and I feel persuaded, that in the long experience you have had of the treatment the profession have met with from the administrators of the new poor-law, local or otherwise, you will scarcely find a precedent for the case I now send you.

On reading the statement of our grievances in the *Mercury*, you will at once see how shamefully we have been treated as a body; how considerate we were in our demands for remuneration; how respectfully we put our case to the commissioners, quoting your own words, a short time since used in your place in parliament, "by calling on the commissioners to step between us and the parsimony of the guardians." And I beg to call your attention to their reply, where, in my humble opinion, they—the commissioners—stand self-convicted; for they say, in a closing paragraph of that reply, "and from the practical working of the union, the commissioners wish hereafter to determine what may be the *proper remuneration* for EFFICIENT professional services, and prompt and careful attendance on the poor." Now one would suppose that this was a direct admission that they have not appointed competent officers to afford efficient relief to the poor for the current year—in other words, that they wish to experimentalize a little on the health and lives of her Majesty's liege subjects.

I must inform you, that immediately on the advertisement appearing in the county papers, for medical officers, for the several districts—which advertisement I enclose you—we held a meeting of the profession of this town and neighbourhood, at which we pledged ourselves, to a man, (resident in Ashbourne,) to refuse to accept of a district at the sum named, or even should the guardians propose giving a higher one, without the sanction of the majority of the members, to be tested at a subsequent meeting, and we signed a document to this effect; yet, will you believe, that after so doing, one of our body should be so far forgetful of the common principles of honour, decency, and honesty, as to (in the very teeth of his own signature) apply for a district at the sum

first offered, and actually got himself appointed to two, including nineteen parishes, with over nine thousand inhabitants, and twenty-six thousand acres, and with a distance of fourteen miles between their extreme limits. The guardians conferred these districts on this person—Mr. Henry Greaves—knowing the line of conduct he had pursued; and Mr. Assistant-Commissioner Weale recommended him, although remonstrated with by a deputation of the medical gentlemen of the town and neighbourhood, inasmuch as the medical order of March, 1842, defined the qualifications necessary to hold a poor-law appointment in England or Wales, which qualifications Mr. H. Greaves did not possess, he being a licentiate of the Hall alone. I full well remember, that even during the present session of parliament you were good enough to move for that order which was furnished by Mr. Secretary Graham to you, and yet in so short a time afterwards was violated and set at naught by the very men who introduced it.

By giving insertion in *THE LANCET* to the foregoing remarks, with any extracts from the statement enclosed you think proper, you will be conferring a great favour on the medical practitioners, not alone of this town, but of the county at large.

I am, Sir, your obedient servant,

W. B. McEGAN, M.D.

Ashbourne, Derbyshire, April 23, 1845.

REMARKS ON THE SHAPWICK POISONINGS.

To the Editor of the Times.

SIR,—Sarah Freeman, who was convicted at Taunton Assizes of having wilfully murdered her brother, Charles Dimond, by arsenic, having paid the last penalty of the law, the circumstances connected with her case are now fairly open to any remarks which may have a beneficial tendency. She is now beyond the influence of such remarks, and as there are some important circumstances connected with the Shapwick poisonings, I beg to submit the following for consideration:—

This woman was committed to prison on the accumulated charges of having murdered Henry Freeman, her husband; James Dimond, her child; Mary Dimond, her mother; and Charles Dimond her brother. The first thing which must strike every one is, that so many murders should have been committed on members of the same family without creating suspicion in the minds of the neighbours, and more especially in that of the medical man, if any were called to the assistance of the unfortunate sufferers. As the same means of destruction were employed in every case—namely, the administration of arsenic—a poison which produces well-known and unmistakable effects, my surprise is still greater that one member after another of the same family should have been attacked with the same violent symptoms, all terminating in death, without leading to immediate and searching investigation into the cause of such fatality. At length, however, after the death of James Dimond, a child of seven years of age, her illegitimate offspring, Henry Freeman, the husband, and an old woman, her mother, the attention of the magistrates residing in the parish was aroused by the death of her brother, under very suspicious circumstances, after a short illness. An inquiry was instituted, and a *post mortem* examination made, which led to the detection of arsenic in the body of the deceased; this at once explained the mystery, and raised suspicions that the deaths of the three other unfortunate victims were caused by the same deadly agents, and other examinations were made in consequence of this discovery. The body of the child, which was buried in November, 1843, was exhumed in the month of January, 1845, and, on the stomach and other viscera being subjected to chemical analysis, unequivocal proof of the presence of arsenic was obtained. Now, a coroner's inquest had been held on the body of this very child, a few days after death, at which a surgeon gave the following evidence, (*The Times*, January 20th, 1845):—"I found no external marks of violence or abrasions of any kind; the tongue and gums appeared natural, with the exception of the tongue being dry. In the anterior part of the abdomen, decomposition appeared to be going on. I gave my opinion to the coroner that I could not discover that any hands of violence had been laid on the child. I did not know that I had ever seen the child alive, and from the evidence of Mrs. Chapple, the next-door neighbour, I supposed the child to have died from natural causes, and I told the coroner that I was quite ready to make a *post mortem* examination of the body if he would direct me. His reply was, that the magistrates were particular as regarded the expenses, and he did not order me to do so." The jury expressed themselves perfectly satisfied with the evidence adduced, and returned a verdict, without hesitation—"Died from natural causes;" and that no blame was attached to any individual. In the month of January, 1841, I directed the attention of the public, in a letter

addressed to the Editor of *The Times*, to the loose and careless manner in which investigations into the causes of death were frequently conducted before coroners, and clearly showed that the verdicts which juries often returned were totally at variance with the evidence adduced; and then I brought forward several examples to prove that these inquiries, which demanded the most serious attention, were too frequently mockeries and mere matters of form. The proceedings in the case of this unfortunate child are confirmatory of the truth of this opinion. If the medical man had refused to give any evidence, which every man is justified in withholding, (unless sufficient and obvious cause of death be apparent,) without being allowed the opportunity of satisfying himself, the coroner must have ordered a *post mortem* examination, which would most probably have resulted in the prevention of two or more subsequent murders.

This case affords another instance of the fearful effects of negligence in conducting a solemn judicial inquiry. If the parties whose business it was to investigate the cause of this poor child's death had faithfully and diligently performed their duty, the fact of poison having been taken would have been developed, and an immediate stop would probably have been put to these wholesale murders; but instead of a patient and accurate examination into all the facts, the coroner and jury are satisfied with a superficial inquiry. The medical testimony, often of such incalculable importance, did not in this case assist the jury in arriving at right conclusions, but was of such a vague and negative character as rather tended to mislead their minds and confirm their erroneous verdict. The coroner and surgeon mutually endeavour to exculpate each other for their remissness, the former by throwing the blame on the magistrates, the latter by professing his readiness to have performed his duty if the coroner had insisted on its necessity.

I do not think Mr. Wakley, whose acuteness and patience so eminently qualify him for the office of coroner, would have been deterred by the fear of remarks from any quarter from availing himself of every means of eliciting the truth. Nor do I think that a coroner, acting under such apprehension, can rightly understand the importance of his office, or the power with which the law invests him. If the fact which the coroner is reported to have stated be true, (and he has repeatedly made the same statement to me,) that the magistrates object to the payment of the fee for making a *post mortem* examination, the sooner such a system, so calculated to favour the escape of suspected criminals, be abandoned, the better; but I cannot imagine that the magistrates can have done more than give a salutary caution to the coroner to avoid unnecessary examinations, often so repugnant to the feelings of the survivors, which would entail a useless expense on the county. It is quite impossible to believe that the gentlemen who compose that body would willingly throw the least obstacle in the way of inquiry, and, indeed, the coroner ought to know they have no such power. The office of coroner is one of the highest importance, and involves great and heavy responsibilities, to which none but intelligent and well-qualified persons ought to be appointed. If this practice had been observed, some of Sarah Freeman's victims might now have been living, and the dreadful mortality which occurred in the workhouse of this Union a few years since might have been checked, if not entirely prevented.

Bridgewater, April 24.

JONATHAN TOOGOOD, M.D.

ON THE DETECTION OF ARSENIC.

To the Editor of THE LANCET.

SIR,—I perceive in your number for the 29th of March, (page 367,) that Dr. Ayres proposes, as facilitating the process for the detection of arsenious acid, the converting it into arsenic acid by chlorine. It is a fact, now at least well known, that almost all metals in solution, capable of combining with an additional quantity of oxygen, are peroxidized by passing through their solution a current of chlorine gas. I have been in the habit of showing this to my forensic class for several years, and as it is not every one, perhaps, who could conveniently pass through a stream of chlorine, I exemplify by the more simple mode of effecting the peroxidation by means of boiling with nitro-hydrochloric acid, aqua regia; and the intermixture of the acids should be such that is in the proportions necessary to effect the complete destruction of the two acids.

Dr. Ayres's observations are in perfect unison with the results of my own, but there are two additional matters of some moment, and which, on examination, he will find to be facts. The arsenic acid is a much more fixed one than the arsenious, and consequently less liable to be dissipated in any process requiring heat. Arsenious acid does not singly decompose nitrate of silver; the arsenic does. Hydrosulphuric acid gas equally throws down a sulphuret of the metal, as from the arsenious, the only