broken bone takes place in the following order; namely, the femur, in six weeks; the tibia and fibula, in four; the fibula or tibia only, in two to three; the malleoli, in about the same time; the humerus, in four; and the bones of the forearm, either singly or together, in about three. These remarks refer to solution of continuity of the bone in the adult healthy subject; in childhood, the fragments unite much sooner; while old age, pregnancy, mercurialism, and cachectic states of the system, impede if not altogether suspend union.

Confinement to bed is perhaps the most irksome condition required of the patient under treatment for fracture of a bone of the lower extremity, not to mention the impairment of health it induces. Reference to the above table proves that this may be limited to two or three days, excepting while the fracture is complicated with injury to other parts of the body; and even then the patient may, in most cases, be placed upon a couch during the day.

The results are almost uniformly successful, the bones having united without shortening, and without deformity, in all the cases but three. Of these, one was a very severe compound fracture of the thigh, occurring to a man of weak constitution, which terminated in amputation of the limb; another was fracture of the femur close to the trochanter, and accompanied with severe contusions of the whole side of the body, in which case a cure was effected with half an inch of shortening; in the third and last, the injury, a compound fracture of the leg, had existed ten weeks before the apparatus was applied; and by this time necrosis of the bone had taken place, and the limb was greatly deformed: the modern method was only adopted, therefore, to save the limb; and in this it succeeded.

In concluding these remarks, I may observe, that every case of fracture which required mechanical aid during the time I was Resident Surgeon at the Queen's Hospital, a period of one year and nine months, was treated by the modern method here recommended, and with equally good results. I must not, therefore, omit to express my acknowledgments to the surgeons of that institution, Mr. Sands Cox, Mr. G. B. Knowles, and Mr. Langston Parker, for having permitted me to make such an extended trial of this plan.

Birmingham, August 1855.

OBSERVATIONS ON THE CORONER'S COURT, ON A CASE OF ABSCESS OF THE BRAIN, AND ON THE ADMINISTRATION OF CHLOROFORM.

By GEORGE BOTTOMLEY, Esq.

[This paper, written for the Annual Meeting of the Provincial Association at York, but not read for want of time, is now published by request of the meeting.]

I. THE CORONER'S COURT.

I BEG to call your attention to a most important portion of the medical policy of this country, I allude to Coroners' Courts. In most of the medical periodicals will be found letters from medical practitioners, complaining of the very unsatisfactory and unscientific mode of conducting coroners' inquests, which, in my opinion, arises from the total absence of all knowledge on the part of the non-medical coroner of physiology, and pathology; also ignorance of the effect and symptoms of the various poisons upon the human frame; and in the country districts the jury frequently are composed of men unfit for such a duty. The subject is one that acts most injuriously upon the public at large, and which can only be remedied by the active interference of the medical profession; I therefore consider it our duty to use the means we have in our possession, to correct the evil. Inquests very frequently take place, without any medical evidence, in many cases, where medical testimony only could have elucidated the real cause of death. In such cases the fault lies with the coroners, who (their accounts have to be submitted to the county magistrates), consequently

are very desirous of curtailing their expenses, with a desire to gain their approbation.

By the way of exemplification, I will relate the result of a few inquests that have come to my knowledge.

When the Brighton railway was under formation, I attended the men professionally. Many of them were of the lowest and most depraved characters. It so happened that two of them paid their attentions to a young servant girl; they quarrelled, and both of them shortly afterwards disappeared. This occurrence took place some short time before harvest. A public foot-path ran through a wheat field in the neighbourhood of their work; and when the wheat was cut, a body was discovered a short distance from the path, the head completely severed; it was recognised as being one of the men that had so suddenly disappeared. At the inquest no searching investigation took place that could have led to the very sapient verdict in that case, which was, that the deceased destroyed himself by cutting off his own head.

Another case was that of a tramp, an old man residing at a common lodging-house. He laboured under asthma; his cough annoyed his fellow-lodgers; they abused and illused the old man. One morning he was found dead, in a sitting posture, against the wall of his bed-room. The verdict in this case was that he *died of a fit*. From the information I subsequently obtained, I have reason to believe the man had been murdered.

I will now trouble you with one more case, which I will give you as briefly as possible, merely placing before you a plain statement of facts, as follows—that a poor family who resided a few miles from Croydon, consisting of husband, wife, and four children, the youngest at the breast. The man and woman, and the three eldest children, all died in the short space of nine days. There was an inquest, which was adjourned for the purpose of making a *post mortem* examination. The verdict in this case was death from natural causes, accelerated by typhoid fever; but from the medical evidence I was led to suspect that death was caused by arsenical poisoning. I wrote to the coroner my suspicion, and requested an exhumation of the bodies, for the purpose of submitting their contents to an analytical test by Dr. Taylor, which was refused, the coroner stating he was perfectly satisfied, and he had no funds for the purpose. I then wrote to Lord Palmerston, who was at that time Home Secretary. He wrote to the coroner, requesting him to have one of the bodies exhumed, for the purpose of submitting its contents to an analytical test by Dr. Taylor. The result was that comparatively the liver contained a large quantity of arsenic; in consequence of which the inquest was again opened to hear the result of the analysis, and then a verdict was returned of death by poison (arsenic). From an interview I had with Lord Palmerston upon the subject, I had every reason to believe that he would, had he not been at that time so much engaged in the war question, have made very considerable alterations in the law relating to Coroners' Courts; making them useful, instead of worse than useless tribunals.

I therefore have reason to expect that upon proper representation being made to Government, from the medical profession, the desired object would be attained.

II. CASE OF ABSCESS OF THE BRAIN.

The following case I deem will prove interesting from its pathological character.

A gentleman, aged 43, spent nearly twenty years in Australia, many years of the time on the banks of a lake, which was supposed by his medical attendant to have occasioned a very severe neuralgic affection of the left side of the head and face, which he suffered from for upwards of four years, and not yielding to the usual remedies, he was advised by his medical attendant to come to England for change of air and climate; and, after a short residence in this country, he very much improved, and believed himself to be getting quite well. He was a fine, tall, remarkably well proportioned, and otherwise healthy man, possessing superior mental powers. He continued improving till the

month of January of the present year, when he was suddenly seized with epilepsy, without any previous symptom of brain affection. He speedily recovered from the attack; when, upon making inquiry into his previous history, with the view of ascertaining the cause of the epileptic attack, I learnt that he had had a fall the end of the year 1853 from his carriage when driving, which stunned him for a short time; he quickly recovered, and drove himself home. The next day after the epileptic seizure, he appeared almost well, but was strictly desired to keep himself perfectly still: he considered himself so completely recovered, that he pursued his usual active exercise, and did not attend to the request made. The day but one following the epileptic attack, he complained of great pain in his head, but which did not prevent him driving himself from his country residence to Croydon, a distance of six miles (in a snow storm), to the railway station, and from thence he went by rail to London, walking a long distance in London, and returning in the evening in the same way. He passed a very restless night, and got gradually worse, complaining of the most agonising pain on the right side of the head, at first over the right temple, it ultimately extended to the nape of the neck. After a few days of severe suffering he expired. During life many of the symptoms were of a very anomalous character; but a *post mortem* examination being permitted, revealed the cause of death.

In the inferior and posterior portion of the right lobe of the cerebrum, was found an abscess of the size of a small orange, which upon giving way, no doubt produced all the severe symptoms detailed, and was the immediate cause of death. The brain in other respects perfectly healthy.

Query: Did the fall cause the abscess?

III. ADMINISTRATION OF CHLOROFORM.

The administration of chloroform, in operative surgery and midwifery, being still an unsettled question in the minds of many medical practitioners, renders it important for those who have experienced its results to state them, and also the mode of administering it. I have of late invariably administered chloroform in cases of operative surgery, with a success far exceeding my most sanguine expectation. In operations for hare lip, in infants of the age of two and three months, and also in a case of osteosarcoma of the lower jaw, where a portion was removed in a man upwards of 80; and in ages between those periods, and in all kinds of constitutions. With your permission, I will narrate a few, and some that presented a vast amount of constitutional debility, as well as cases of exhaustion from the loss of blood.

A case of amputation of the leg, for spontaneous gangrene, a man aged between 50 and 60, a spirit drinker—a case of great debility. Chloroform had the effect, in this case acting as a stimulant, of improving the pulse. The patient rapidly recovered after the operation. Another, a case of removal of the entire right arm, from an accident on the railway. A young man, about 24, a labourer, was knocked down, and a loaded truck passing over his arm, completely crushed it, the humerus broken into fragments close to the shoulder, some portions of bone driven into the pectoral muscle, contusing the muscles both anteriorly and posteriorly; he lost a very large quantity of blood, and was in a complete state of syncope for upwards of twenty-four hours, when slight reaction took place. Finding, from the continued oozing of blood, that it must shortly prove fatal, induced me, before a perfect reaction took place, to operate. I put him carefully under the influence of chloroform; the soft parts surrounding the shoulder-joint being in a very lacerated and contused state, rendered the operation most difficult and tedious. It was found necessary to make a very large flap, to remove the portions of bone and other extraneous bodies that had been by great force driven very deeply in. He was not at all conscious of pain during the operation. He rapidly recovered, and, in less than three weeks, was able to walk about. Also in some cases, in females of delicate constitutions, of hernia; and in one case of difficult midwifery, arising from monstrosity, in a lady of

a very weak constitution, and whose health had previously been indifferent. The operation of turning was performed under more than ordinary difficulty. She rapidly recovered, without having experienced the least pain; and has been in better health since than before. I could relate many more cases, but I will not occupy your time longer. I am of opinion that many of my cases would, from their severity, have proved fatal, both from the accident, followed by that of an operation, had chloroform not been used.

The way I administer chloroform is upon lint, placed on a handkerchief, at first some short distance from the nostrils, allowing a free admission of atmospheric air, and gradually bringing it closer till the effect is produced, but never to the extent of interfering with the respiratory organs, or to produce the slightest stertor, or even a suffused state of the countenance.

Croydon, August, 1855.

EDITOR'S LETTER BOX.

THE NEW VACCINATION BILL.

LETTER FROM EDWARD CATOR SEATON, M.D.

SIR,—I shall feel obliged by your inserting, in the next number of the ASSOCIATION MEDICAL JOURNAL, this explanatory note with regard to the "Bill to provide for the Vaccination of the people in England and Wales", which was reprinted in the JOURNAL of the 17th instant.

This Bill has been prepared by the Small Pox and Vaccination Committee of the Epidemiological Society, to carry out the suggestions contained in their memorial to the Board of Health, printed by the House of Commons March 1st, 1855, and it was presented to Sir George Grey and Sir B. Hall by a deputation of the Society, headed by the President, Dr. Babington, at an interview, with which they were favoured on the 15th of June last.

Seeing the fearful mortality which has taken place from small pox in London this year, and the serious evils resulting generally from the present defective provisions for vaccination, the Committee entertained some hope that the Government would have legislated on the subject during the present session of Parliament. But the state of public business having, in the view of the Government, rendered this impossible, the Committee, when this was made known to them, gladly availed themselves of an offer made by Mr. Brady to introduce the measure, for the sake of having it printed by the House, and its provisions made generally known to the profession, so that suggestions might be offered, which would have the effect of making the measure more perfect when it is again submitted to the Government at the commencement of the ensuing session. For the same reason I am rejoiced that you have anticipated the request the Committee desired me to make, that you would publish the Bill, *in extenso*, in your JOURNAL.

The Committee are much indebted to Mr. Brady and to Mr. Montagu Chambers for introducing the Bill this session for the purpose above specified; but they deem it right to express publicly their opinion, as they did to Mr. Brady at the time, that the changes they propose to effect being administrative changes, involving the transference of important public duties from one department of the Government to another, and the creation of new public offices, can only be effectually carried out by the Government itself. While, therefore, the assistance of individual members of Parliament, in so great a public cause, ought to be most gratefully accepted, it is necessary that the influence of professional opinion should be brought to bear directly upon the Government.

The Committee would take this opportunity also of thanking Mr. Brady (who placed himself in communication with them in May last) for the facilities which he afforded them for laying their measure before Government, and for various suggestions which he made when the rough drafts of the Bill were read over to him, several of which were adopted, and have tended, in the opinion of the Committee, to improve the measure.

I am, etc., EDWARD CATOR SEATON, M.D.
Hon. Sec. to the Small Pox and Vaccination Committee
of the Epidemiological Society.

33, Sloane Street, August 20th, 1855.