ORIGINAL COMMUNICATIONS.

PLEA OF INSANITY.

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[Read at the Anniversary Meeting of the Provincial Medical and Surgical Association, at Manchester, Sept. 14th, 1854.]

THE experience of the past few months goes very far to assure us that the time cannot much longer be delayed when our judges and law authorities shall be made to feel the necessity of discarding all their preconceived views of insanity, and the responsibility of the insane; and, at the same time, of adapting their opinions and conclusions to those principles of medical science which we, as medical men, recognise and teach. In this day, it is too much to expect that the medical body can or will allow lawyers—the members of a profession versed only in the words of man, and altogether unacquainted with the works of God—to assume to themselves the dictation of questions of medical science, or the decision of psychological difficulties. It must be seen to be nothing less than preposterous to expect even that others than those who have received a medical education, and have devoted their time and attention to the consideration of medical subjects, can possess or enjoy any ability to do justice to a question of psychology.

Among the peculiarities of the present day, I would mention that one which either expects or allows to members of the bench and bar the very doubtful privilege of telling a jury and a public what is or what is not lunacy—what the indications of a disordered mind—what shall be held responsible to the criminal law, and what else irresponsible; or, in other words, of informing the peers of this realm, as the judges have done, the specific circumstances, and so on, under which an individual charged with crime shall be held to be *sane*, and therefore *responsible*, or *insane*, and therefore *irresponsible*.

If the object of the Provincial Medical and Surgical Association be the maintenance of the rights of the profession of which we are members; if it be the promotion of scientific truth and the practical recognition of justice and humanity; then do I think that the present is a fitting opportunity for us to insist on being heard by the legislature, and not the less on an entire reform of the *plea of insanity*, in so far as it affects the connexion of crime and mental disorder. Not until the Provincial Association, composed as it is of upwards of two thousand medical practitioners—a goodly number, and of necessity not without a voice and influence in the state—or some other body of men of earnestness and intelligence, shall be induced to put their shoulders to the wheel (to use a trite phrase), will the necessary change be effected, or, in other words, shall we be spared the many contradictions, and not less the too frequent infringements of the moral law, involved in the proceedings of our courts of justice, and in the sayings and doings of our legal functionaries. Let those who are disposed to doubt this much reflect on the present position of Robert Pate, and of that unfortunate man, Thomas Provis: the former, it will be remembered, was transported in 1850 for assaulting the Queen; and the latter has just now been awarded a precisely similar fate, on account of an act of forgery, etc. The Smyth Will Case will not quickly be forgotten in Gloucestershire.

The simple fact that these two poor and afflicted lunatics are at this time receiving the treatment awarded to criminals; that they are removed beyond the reach of all remedial means, and of all those sympathies so indispensable to the relief of the disordered and afflicted mind,—is in itself more than sufficient to excuse me soliciting, as I now do, co-operation and aid in diffusing a proper and consistent knowledge of the operations of the human mind under circumstances of disease—a kind of knowledge which must go far not only to diminish crime itself, as occurring among the insane, but also to prevent the infliction of harsh and cruel punishments on those suffering from the most

fearful and calamitous of the many diseases to which man is heir.

The following questions and answers, exchanged by the peers and judges in 1843, embrace all the leading points of the law, as it affects insanity and crime. I will take this opportunity to put each of the said questions, and the reply thereto, in their proper order; submitting, at the same time, for consideration, certain remarks or criticisms on them individually; and these will show how lamentably deficient both questions and answers are in all points of physiology and pathology; and hence you will infer their total inapplicability to the object had in view in their composition by our very learned peers and not less learned judges.

Question first runs thus: "What is the law respecting alleged crimes committed by persons afflicted with insane delusion, in respect of one or more particular subjects or persons, as, for instance, where, at the time of the commission of the alleged crime, the accused knew he was acting contrary to law, but did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some supposed public benefit?"

Answer. "That, notwithstanding the party committing a wrong act when labouring under the idea of redressing a supposed grievance or injury, or under the impression of obtaining some public or private benefit, he was liable to punishment."

There are two important matters for the psychologist embraced in the preceding; the one having reference to *partial insanity* or *monomania*; the other, to the *delusions* of the insane. It is doubtless a much easier thing to declare that a partial disease of the brain (mind) does not absolve from the liability to punishment, than to fix the line of demarcation within which the guilty party shall be held punishable, and beyond which he shall escape the legal penalty. The judges are bold men; they see no difficulty in defining the marginal line of sanity and of responsibility, however difficult the psychologist may deem it. Although a slight or partial mental disturbance may tolerate or excuse a trifling offence, the same may be insufficient in itself to impel the lunatic to the commission of the highest crime; but, nevertheless, as has been remarked by Dr. Wood, formerly of the Bethlem Hospital, "where any amount of positive insanity is proved to exist, there may be a great deal more which cannot be proved." This fact must in every case be allowed its full weight.

In the report of the trial of M'Naughten, in 1843, for the murder of Mr. Drummond, it was asked by some party, in reply to one of the medical witnesses, who manifested a disinclination to attach any importance to the question of a partial insanity, "If an apple had a speck in it, however small, would it be right to call that apple a *sound* one? No person would venture to put a limit to the external phenomena or symptoms of a partial affection or disorder of the uterus or liver, the lungs or heart: who will then venture to declare that the brain is subject to other and dissimilar laws in the animal economy than the important viscera just named, or that the indications of disease affecting it may be inclosed within a given circle, and that all beyond this must be viewed as having another source or origin?"

I have always considered that on no point connected with mental pathology are there more fallacious opinions entertained than on that one of delusion, regarded as an evidence of insanity. The fact is, that delusion, so called, can be in no way the measure either of the sanity or the responsibility of an accused or guilty party. On the trial of Lieut. Pate, at the Central Criminal Court, in 1850, Mr. Baron Alderson thus expressed himself, viz.: "The only insanity which excused a man for his acts was that species of delusion which conduced to and drove a man to commit the act alleged against him. If, for instance, a man, being under the delusion that another man would kill him, killed that man, as he supposed, for his protection, he would be unpunishable for such an act, because it would appear that the act was done under the delusion that he could not pro-

tect himself in any other manner, and there the particular description of insanity conduced to the offence; but, on the other hand, if a man had the delusion that his head was made of glass, that would be no excuse for his killing a man; he would know very well that, although his head was made of glass, that was no reason why he should kill another man, and that it was a wrong act; and he would be very properly subjected to punishment for that act." In a critique on this unhappy trial, published in one of the quarterly journals at the time, I have written thus: "It happens, unfortunately for this very pretty theory of Mr. Baron Alderson's, that the delusions of the insane are of little or no importance to the question of criminal responsibility. A delusion, so called, is but an indifferent criterion of the extent of the mental disorder; it may be superadded to a very slight and but a temporary insanity; and it may not be present in disease involving the whole brain, though of long duration. It is *never* the delusion which prompts to violence, but that morbid condition of the feelings upon which the said delusion is consequent. The delusions of the insane express only the nature of the predominant feelings, and are always in harmony with the morbid affection originating them. For example, the several primitive faculties of the mind, known by the terms "self-esteem", "veneration", or "destructiveness", may take on a diseased action; and these same faculties or functions may at length become so exaggerated that the sufferer is necessarily the mere instrument of such an unhappy physical condition. Now, the first symptom of acute disorder of either of the faculties above named is expressed by an unusual and extraordinary display of either pride, religious enthusiasm, or anger: if the patient be not relieved, or what is the same thing, if the abnormal action continue unabated, it may or may not happen that a delusion will become superadded to the other indications of mental derangement, constituting, as it were, an apology for his ostentatious deportment, or fanaticism, or cruelty of disposition. A delusion, then, it is seen, is only an *effect*, and not a *cause*, of perverted feeling, or uncontrollable impulse to violence; and, on precisely this principle, it is seen that the assumed personifications, *i. e.*, delusions, of the insane, must be regarded only as a morbid colouring to their several deranged moral feelings, as a voluntary and tangible ideal of their innate, involuntary, and morbid impressions, as a mere passing and external sign of a temporary and internal excess of feeling or desire. More even than this, the whole speech and actions of the lunatic must be regarded only in the light of symptoms of the abnormal condition of the affections and propensities, which, under circumstances of health as well as disease, impart the character to man. Is it not apparent to any one who will give himself but a moment's consideration, that our likes and dislikes, be they what they may, are a part rather of our sympathies than the result of our mere knowledge of things. Love, joy, ambition, anger, pride, religion, each and all of our affective feelings and our passions, tincture and colour the intellect with their peculiar hue; and the same psychological principle which obtains in sane man obtains also among the insane of our species. This most important fact is not only proved by every-day observation, but is demonstrated by all we know of the anatomy and physiology of the brain.

It follows, then, that the uncertainty of delusions, regarded as an indication or symptom of insanity—their independence of the extent or variety of the cerebral disorder, their temporary and fleeting nature, and what is more than all, their association with the predominant morbid feelings by which the intellectual powers are so manifestly overruled, and to which they are made subservient, must assure those who will be at the trouble of thinking on this matter, not only of Mr. Baron Alderson's inaccuracy, but also of the great necessity which exists for an immediate and total extinction of the "Plea of Insanity" so called, as explained by our peers and judges.

The second question is, "What are the proper questions to be submitted to the jury when a person alleged to be afflicted with insane delusions respecting one or more par-

ticular objects or persons is charged with the commission of a crime, murder for example, and insanity is set up as a defence?"

The answer returned by the judges is to the effect, "That every man shall be considered of sane mind, unless it was clearly proved in evidence to the contrary. That before a plea of insanity should be allowed, undoubted evidence ought to be adduced that the accused was of diseased mind, and that, at the time he committed the act, he was not conscious of right or wrong. This opinion related to every case in which a party was charged with an illegal act, and a plea of insanity was set up. Every person was supposed to know what the law was, and therefore nothing could justify a wrong act, except it was clearly proved the party did not know right from wrong. If that was not satisfactorily proved, the accused was liable to punishment, and it was the duty of the judges so to tell the jury when summing up the evidence, accompanied with those remarks and observations as the nature and peculiarities of each case might suggest and require."

I conclude that the judges refer here to the fact or otherwise of a crime being committed during a lucid interval, so called. Now the brain, like the heart and lungs, or like any other portion of the animal organism, may be incurably and organically affected; but it does not follow that the symptoms of disorder affecting either one of them shall be continuous. Insanity is very commonly paroxysmal, like angina pectoris, asthma, or hooping cough; and the attack in all is alike dependent on external or accidental circumstances, over which the patient has but little or no control. The lucid interval of one liable to periodical attacks of insane violence does not constitute him either a sane or a responsible being. Inasmuch as the brains of those subject to intermittent insanity are diseased, therefore must such persons be deemed irresponsible for all those acts which are dependent on such alteration of structure. However quiet and comfortable such persons may usually be when protected from the anxieties and irritations of life, and when subject to the kind and considerate dictations of those under whose care they are placed, they are no sooner removed from such wholesome influences than the brain necessarily rebels with the stimuli offered to it. No individual under such circumstances can possibly be held accountable for his conduct. The infliction of punishment could never alter the pathological condition of the brain and its membranes which may exist.

In reference to the nature of the lucid intervals of the insane patient, the late estimable Dr. Andrew Combe has written these few words, *viz.*: "In ordinary circumstances, and under ordinary excitement, his perceptions may be accurate and his judgment perfectly sound, but a degree of irritability of his brain remains behind, which renders him unable to withstand any unusual emotion, any sudden provocation, or any unexpected and pressing emergency. Dr. Ray, the American writer and author of a very valuable work entitled *The Jurisprudence of Insanity*, affirms that the reasons why we ought never to convict for a crime, committed during the lucid intervals are, that the criminal acts are generally the results of the momentary excitement produced by sudden provocations: that these provocations put an end to the temporary cure, by immediately reproducing that pathological condition of the brain called irritation; and that this irritation is the essential cause of mental derangement; which absolves from all the legal consequences of crime." He adds, "Burdened as the criminal law is with false principles on the subject of insanity, the time has gone by when juries will return a verdict of 'Guilty' against one who is admitted to have been insane within a short period of time before the criminal act with which he is charged."

I would beg the best attention of members of the legal profession to the foregoing. It is but too evident that the musty antecedents and authorities of such men as Sir Simon Le Blanc and Lord Chief Justice Mansfield are even to this hour more than likely to be preferred to the conclusions of men of science earnest in the pursuit of truth, and interested

in the cause of humanity. The high legal functionaries just named were the judges who presided over respectively the trials of one Thomas Bowler and of Bellingham. These persons, it would seem, had their lives sacrificed to the fatal error, so long and so unhappily insisted on; viz., that "*should an individual reputed insane, during a lucid interval commit a crime, he must be held responsible for such and be punished accordingly.*" I may add here that a grandson of this same Thomas Bowler was a patient at the Hanwell Asylum at the time I held office there; and that others of the family had then been insane; a fact which confirms the remark made by Mr. Baron Alderson on a late occasion, in reference to the trial of Oxford, viz., "*Bowler was executed, I believe, and very barbarous it was.*"

As an evidence of the want of correct views and a right principle in so far as the plea of insanity in criminal cases is concerned, I may state here that the same gentleman, viz., Mr. Baron Alderson, asserted, when that unfortunate gentleman Lieut. Pate was put on his trial for striking our Queen, that "the commission of a criminal act by a lunatic during a lucid interval cannot absolve from responsibility and consequent punishment." Ten or twelve years, however, had passed between the trials of Oxford and of Pate; and probably there were reasons why the first named should be held to be insane, and the other sent to the hulks a convicted felon. A comparison of these two cases will furthermore justify me in bringing the subject of the plea of insanity to the attention of this Association, praying its assistance to urge the legislature to consider well these several questions and answers of the peers and judges.

The answer last cited contains other matters to be noticed. "Nothing could justify a wrong act, except it was clearly proved that the party did not *know* right from wrong," is the expression to which I would allude. From the time of Lord Hale to the present period, lawyers have persisted in measuring the responsibility of an accused party by his mere "consciousness" or "capability to distinguish right from wrong". Is it because an old gentleman—one Lord Hale—has, in days of yore, insisted on it that any person reputed partially insane, inasmuch as his reason will be equivalent to that of a child fourteen years of age, must be held amenable to the laws of his country? Is it because Lord Chief Justice Mansfield, and Lord Lyndhurst, on other and later occasions, have echoed the sentiments of Lord Hale, in so far as the plea of insanity is concerned? Is it because a lawyer of the eminence of the late Sir W. Follett repeated the testimony of Lord Hale, and asserted, in 1843, that that poor lunatic McNaughten, now in the Bethlem Hospital, was neither insane nor irresponsible, if when he shot the lamented Mr. Drummond he *knew* what he was doing, and was capable of distinguishing between *right* and *wrong*? Is it because Mr. Baron Alderson asserted at the Central Criminal Court on July 10th, 1850, that "if Robert Pate knew at the time he struck the blow, what he was doing, and, moreover, that he was doing wrong, that *then* was he responsible for his acts, and the law required that he should be punished for such," and, at the same time, took no little pains to assure the jury that "they must clearly understand that it was not because a man was insane that he was unpunishable," and that "upon this point there was generally a very grievous delusion in the minds of medical men, etc.?" Is it because Mr. Justice Erle, only last month, when presiding over the trial of that miserable woman Mary Ann Brough, who killed six of her own children whilst suffering from homicidal impulse or rather destructive mania, told the jury that "it ought not to acquit the prisoner upon the ground of insanity unless there were circumstances surrounding the act itself which left no reasonable doubt that at the time of its commission the party accused was *not* in a condition of mind to distinguish between right and wrong, or to be aware that he (she) was committing a crime?" Is it on these several accounts that we withhold the *truth* from our fellow-men, and refuse them a clearer insight into the operations of the disordered mind than they have hitherto enjoyed? Is the dictum of the once famous Lord Hale still to furnish the criterion of

either sanity or responsibility, of that man who lived and flourished in a period when physiology and pathology, and all the other ologies, were as little known as was the last new planet before the investigations of Le Verrier and Adams; or as is the fate of the illustrious Arctic voyager at this very moment? Heaven forbid it!

Inasmuch as each one of the primitive faculties of the mind has its seat in the grey or cortical substance of the brain, or, in other words, its location on the cerebral surface; and inasmuch as the various emotions, affections, and propensities, equally with the intellectual powers, depend, for their healthy manifestation or otherwise, on the quantity and quality of distinct portions of cerebral matter, all being united into one homogeneous mass (the brain);—then must it follow that the peculiar nature of any given case of disordered mind (insanity) will not only depend on the portion or portions of the brain affected, but that any one or two or three of these said primitive faculties may be deranged, the remainder preserving more or less their individual integrity. A diseased "acquisitiveness" may not be expected to excite an abnormal action of "tune"; a diseased "destructiveness" does not involve "hope"; a disorder of the perceptive organs is not likely to affect those of "adhesiveness"; and so on. Consciousness, or the ability to distinguish right from wrong, or to know this from that, is then seen to be no criterion of a sound mind or of responsibility. Those among the insane who possess the physical power necessary to the commission of violence, for example's sake, know full well what is going on about them; and, in the very worst cases of maniacal excitement, the patient will commonly manifest an acute intelligence, and not unfrequently really surprise one by the force and brilliancy of his intellectual powers. Like the hysterical maiden, like the sufferer from St. Vitus's dance, like him goaded by the delirious impulses of hydrophobia, or, in point of fact, like him worn and shaken by the deadly rigors of a tropical intermittent fever, the maniac is acutely sensible of his unhappy condition, and, like those named, he is unable to restrain the external signs or indications of the disease which afflicts him. Lunatics contributed their aid to the attractions of the Great Exhibition of 1851, of which we are all so justly proud; and, if the position so generally assumed as to the state of their intellectual capacities were not untrue, this could hardly have been the case. Lunatics are most usefully and honourably employed at all well conducted establishments for their reception and cure, because their intellectual faculties are not so commonly out of health as their affections and propensities; it is a derangement of these which, in the majority of instances, marks the extravagancies and impulses of the madman. Lord Erskine himself has corroborated the foregoing; he has put his judgment on record thus: "I have found the insane not only possess the most perfect knowledge and recollection of all the relations they stood in towards others, and of the acts and circumstances of their lives, but to have been in general remarkable for their subtlety and acuteness." Again: "Reason is not driven from her seat in maniacal disorders, but Distraction sits down upon it along with her, and holds her trembling upon it, and frightens her from her propriety."

In a review of these opinions, as above set forth—and, I may add, as they appear in my contributions to mental pathology, published in 1850, in a review—contained in the *Psychological Journal*, at the time specified, the writer has ventured on their condemnation and my censure. He prefers that we should remain content with the mere surface view of the case, and so sacrifice truth to mere appearances. Nevertheless, I have yet to learn either that expediency can long continue to be tolerated even by contributors to a medical press, or that any writer, whatsoever his rank and talents, can injure his reputation or impair his prospects by an attempt to demonstrate what is true rather than what is plausible. It is but fair to conclude, that Dr. F. Winslow is not personally responsible for the critique here referred to; inasmuch as he has, not many months since, contributed a paper to the literature of insanity, called "On some Unrecognised Forms of Mental Disorder";

and these, he tells us, are "confined principally to the passions, affections, and propensities"—"the reasoning and reflective faculties remaining intact"; and by so doing, has confirmed my own views, and added the sanction of his name to views which have for long years engaged both my attention and my pen.

The third question runs thus, viz.: "In what terms ought the question to be left to the jury, as to the prisoner's state of mind at the time when the act was committed?"

The judges, for some reason or other, returned no reply to this interrogatory of the peers.

The fourth question was: "If a person under an insane delusion as to existing facts, commits an offence in consequence thereof, is he thereby excused?"

The answer to this question was: "The judges were unanimous in opinion that, if the delusion was only partial, the party accused was equally liable with a person of sane mind. If the accused killed another in self defence, he would be entitled to an acquittal; but if committed for any supposed injury, he would then be liable to the punishment awarded by the laws to his crime."

It will be seen that the first and fourth questions, with the answers appended, treat alike of the subject of "partial insanity", and of the question of "delusions". It is quite unnecessary to repeat here what has been already written on these matters.

The fifth and last question is to the effect: "Can a medical man, conversant with the disease of insanity, who never saw the prisoner previously to the trial, but who was present during the whole trial and the examination of all the witnesses, be asked his opinion as to the state of the prisoner's mind at the time of the commission of the alleged crime; or his opinion, whether the prisoner was conscious at the time of doing the act, that he was acting contrary to law? or whether he was labouring under any, and what, delusion at the time?"

Answer. "The judges were of opinion that the question could not be put to the witness in the precise form stated above; for by doing so, they would be assuming that the facts had been proved. That was a question which ought to go to the jury exclusively. When the facts were proved and admitted, then the question, as one of science, could be generally put to a witness under the circumstances stated in the interrogatory."

As the law now stands then, it is to be inferred that the physician is to tell the lawyer all he knows of the matter; but the latter may accept or reject just so much as suits his object and final purpose.

The remarks I have made shew that the "plea of insanity" is, at the present, anything rather than what it should be; and that its various parts are not only in a sadly disjointed state, but that each one is terribly at variance with the facts of psychological science. On a future occasion, I may endeavour to show how so objectionable a state of things may be remedied, and how the plea of insanity and medical philosophy may be made to harmonise, and thus promote the ends and objects of law and justice.

To conclude: It can hardly be doubted that it rests with medical men themselves, whether or not the present miserable, defective, and unphilosophical "plea of insanity", shall continue to disgrace the statute book of this great empire; whether or not the lunatic shall remain longer exposed to the risk of being treated as a criminal, denied the means of relief and cure, and so hurried into a premature grave, his name and family disgraced. It rests, I think, with this Association, to decide whether or not the sufferer from cerebral disease shall remain exposed to the risks of "the last and most fearful penalty of the law", as the execution of that miserable man, Nathaniel Mobbs, was termed; or whether they shall be treated with that ease and consideration they so much require, and surrounded with those affectionate sympathies they so certainly need.

To realise the full force of the preceding remarks, each one here should remember that his brain may one day give

way; that it may yield to the pressure of external circumstances, over which he may lose all control; that he may, one long, add one to the long list of sufferers from mental disorder; and, if not himself, his wife, or son, or daughter. In either case, how dreadful the bare idea of one near and dear to him being exposed, not so much to disease, though this is bad enough, but to the horrors of crime and its penal consequences.

In the hands of members of this Association, I leave these my reflections: may they not be passed lightly by. If, as far as we ourselves are concerned, they be rejected, let the claims of those dependent on us—as all our patients are dependent on their medical advisers—encourage this Association to a trial of its earnestness and strength in so good a cause.

Northwoods, September, 1854.

THE PLASTER OF PARIS BANDAGE.

By JOSEPH SAMPSON GAMGEE.

A VERY useful method for the construction of a simple and efficient fracture apparatus was devised a few months since by Messrs Mathijssen and Van de Loo of Holland, and has very recently been advocated by Prof. Pirogoff of St. Petersburg, as especially applicable to military practice. My own observations of its effects are the basis of this communication.

The best material for making the bandages is unglazed, open calico. It is spread on a table, and dry powdered plaster of Paris is rubbed over it for several minutes, until the meshes are well and evenly filled with it. The bandage thus prepared is rolled, and just previously to application sufficient water is dropped into the extremities of the roll to moisten the plaster, but not enough to soak through it and thereby wash it out. The surface of the limb having been previously protected by a common bandage or stocking, the moistened plastered bandage is carefully applied; in a few minutes a very firm and accurately fitting casing is the result, rendering displacement of the fragments an impossibility and allowing of the patient's movement, even to a considerable distance without pain and inconvenience. This bandage being light, not brittle, and easily cut up, obviates the well grounded objections to the plaster of Paris apparatus of Dieffenbach, as advocated by Mottray in his dissertation "*De cruzibus fractis gypso liquefacto curandis*".

In army practice, I anticipate that the plaster of Paris bandage will be found to possess some advantages over the starched apparatus; but the principles of its application and mode of operation are the same. Careful adherence to them, and a resolution to put them to the test of enlightened experience freed from the shackles of routine, will, I firmly believe, ere long result in banishing the multifarious and inefficient contrivances rich in wood and leather splints, straps and buckles, hooks and screws, bolts and hinges, which have been prolifically devised for the treatment of fractures.

More than a year has elapsed since I wrote, "That the system I advocate does possess real advantages in a large number of cases, can no longer be matter of doubt. Whether or not all my anticipations respecting it admit of realisation, is a question well deserving further clinical observation for its solution." The results of such observation, and it has been extensive, have convinced me that my most sanguine expectations may be realised. Even more remarkable cases are now recorded in my note-books than the one of Henry Parfit, who, thirty-six hours after an oblique fracture of the lower end of the femur, with an inch and a half shortening, walked about the ward on crutches, and, nine weeks afterwards, walked seven miles with the sole aid of a stick, and could bend the knee to a right angle. I am well aware that the objectors to the method are many; but I have no hesitation in stating that not one who has employed it properly can adduce testimony against its merits. The treatment of fractures being one of the subjects which I have sedulously investigated during my recent visits to