uninfluenced by the spoons. The fascia was in places undermined, and these I opened up and scraped well out. The bleeding here, too, was profuse, but kept down with hot water and the pressure of sponges. Dressings as in the previous case were applied, and the patient was well pleased with the effect, and the speedy restoration of suppleness to his neck. He was up and about in a day or two, and well in a fortnight.

I have gone thus far, but I hope not tediously, into these five cases to show that while neither erosion nor excision is by itself a panacea for all carbuncles, the two processes combined or selected are applicable to every case, not as a matter of mere novelty or variety, but as the most effectual treatment that we can adopt, if not put off too late. Not that I doubt that any of these carbuncles, all of them, perhaps, were capable of recovery under expectant treatment, which differs little from no treatment. I am perfectly sure that all were exceedingly benefited by local extirpation; and if it be that any of them were likely, if too prolonged, to end in fatal septicæmia or pyæmia, that disaster was undoubtedly averted by the operation performed.

There is no means known to me at present of deciding in the early stages of a carbuncle whether it be likely to end in recovery or death if allowed to run a natural course; but it does seem to me that timely extirpation in some form or another, indiscriminately used, is the most certain means whereby diminished fatality is to be hoped for in the most serious cases, while minimising the discomforts of the slightest. I can look back upon several fatal cases in which I should gladly have known that excision was likely to be curative.

Just a word about potassa fusa, which I personally seldom use, but on which Mr. Page seems rather hard. If for some reason it should not be possible for me to scrape or cut out a carbuncle, I should consider it a very fair substitute to mash up the interior with sticks of potassa fusa. To be sure this would in effect be a more or less thorough erosion; but any of the gangrenous virus unremoved would have the chance of being permeated by a pretty efficient antidote, that might easily arrest further spread of the disease.

Some persons rub in caustic potash or other powerful chemicals in addition to excision, but their additional necessity is at least doubtful. Of these I consider solid nitrate of silver the best for hæmorrhagic purposes, but it causes great pain. Pure carbolic acid has the advantage of producing local anaesthesia in addition to its antiseptic qualities.

THE GOULSTONIAN LECTURES ON INSANITY IN RELATION TO CARDIAC AND AORTIC DISEASE AND PHTHISIS.

Delivered before the Royal College of Physicians of London.

By WM. JULIUS MICKLE, M.D., F.R.C.P. LOND.,
Medical Superintendent, Grove Hall Asylum.

LECTURE III.—INSANITY IN RELATION TO PHTHISIS. (Concluded from page 639.)

Some, hearing hallucinatory abuse and reviling, fancy that every old score is raked up against them, and that their delusively imagined misdeeds, known to and animadverted upon by all, occasion the finger of derision or of scorn. A few take delusions about being baffled, annoyed, or as to malevolent and injurious interference with their mind and its operations. Having links with these, but in themselves mostly of neutral emotional character, are delusions such as that new patients electrify the old, or that bells are kept ringing and electrify the air.

Third Sub-group: Morose, Angry Mania, or Cases with Delusions of Injury, Persecution, not or not yet Systematised.—Phases and times of emotional depression, though present in some examples, are far less frequent in this than in the previous sub-group, as also are suicidal tendency, apathy, and indolence. On the other hand, many are irritable, sullen, morose, moody; some are obstinate, or are given to refuse food; on the other hand also excitement predominates—excitement, usually angry, but in some alternately angry and gay; indeed at first there may be acute mania. Such patients, too, are usually restless and violent, whether merely destructive, or dangerous, or threatening, or homicidal; usually also are they fidgety, gesticulating, muttering, swearing, denouncing; some are noisy, some mentally confused.

Of many are the utterances at times voluble but incoherent, rambling, confused, irrelevant, peculiar; and their conversation may be with imaginary people. The memory is often impaired, occupation or amusement unsought, the glance furtive, the visage grimacing.

A majority are hallucinated, hallucinations of hearing being the most frequent, and those of sight coming next. A majority, again, are extremely suspicious; a majority are at times either obstinately silent or very taciturn; a few lose sleep.

Delusions.—Injuries to, or maleficent influences affecting, the patient's body are frequent subjects of the delusion; delusions of persecution, of the hostility of others, or of poisoning, are somewhat frequent; those of conspiracy are occasional.

The delusions as to bodily damage or injurious influence are such as that "the contents of the head are drawn out by the nose," that the sufferer is "interfered with," that "electricity plays on him," and by it he gets hallucinatory messages or "is electrified," is "worked on by spiritualism," is "placed in strange malpositions by the country he is in." Or, that he is "full of another's spittle," "a weight is imposed on the nape, chalk is thrown into his mouth and urine into his body," sees a "blue, gaseous substance inside him." His "frame vibrates" with the persecutors' movements; "the attendants threw wrong things, thus stopping his breath and nearly killing him;" "has been torn from head to foot all his life."

Similarly depressing and expressive of a sense of hostility in the environment are the ideas that voices gibe at and vex him; that the newspapers write against him; that detectives follow him; that he is surrounded by blaspheming infidels, or affected by the operation of "secret telegraphy," that he is "robbed," is about to incur evil and injury from those around; that his wife is unfaithful to him, and he therefore kept in an asylum in furtherance of an immoral object; that whilst in the army he "suffered more than any man in the world."

Nevertheless, expansive ideas may crop up in the more active and gayer mania; rarely, if ever, does this state assume a chronic character. The patient says he is a better doctor than his physician; or that "a saint put a ring on his finger;" or that, having been electrified, he can by a touch tell what others have done all day; or he says he is Christ, or has a saintship from him, or is the Trinity; "has thousands of millions of money, brought the sun back, will live 100 years."

Fourth Sub-group.—These cases are of the monomaniacal type, in some instances abortive or imperfect, in some a rapidly deteriorating psychosis. For the most part of the persecutory querulous types, occasionally they are of the hypochondriacal or of the exalted; the characters, however, are often mingled.

An example mainly taking the persecutory querulous form may be as follows: at first eccentric, silent, restless, he becomes disrespectful, morose, sullen, noisy, angry, threatening, sleepless, mutters curses, and entertains delusions of persecution and of poisoning; later he takes delusions such as that, for love of him, a rich woman had him sent from India under fictitious names, and, he being under a course of opium, she also took the opportunity "to work off his mind and brain, because work is taken off by people who are outside." He sees them, they draw themselves before his eyes, he hears them, and they annoy his mind and brain, and say that they "persecute one man;" he is that man. Day and night, but especially the latter, he hears the men who follow and annoy him, paid to do so by a woman, who also mesmerises him constantly, and keeps him in the asylum. "Opium is put into his food and brain; the time-giving and seeing of opium through the brain is destroying him." Under the delusions of injury he becomes excited.

In some cases many of the delusions are more of a neutral tint. One "has cannon balls in his head; his name is written on his forehead. The chaplain is not ordained, is a debauchee; a nurse causes death of the inmates, so does the baker;" the officials about him are "in false names," and his language is foul and threatening towards them under the delusion that they are receiving bribes from a woman to cut off his head. "Against him bad characters have a spite; day and night people talk about him, and what he has been through."

Occasionally the expansive element is relatively more marked than in the preceding examples. Thus, one "is an heir: his relations were about to shoot or poison him, and day and night they talked of doing this," their object being to give his property to

another heir; therefore he fears being killed. "Has an estate; the asylum premises belong to him," and so do the clothes worn by those in charge of him, and because of this, and of his detention in what he delusively calls his own mansion, he threatens and tries to attack. He asserts that he is "wanted in the city," is to marry a rich lady; has enormous wealth. Later on, he shouts his orders to imaginary persons in an unintelligible jargon. Or, another "sees Christ, or the devil frequently, or whenever he likes; hears God; sees Him in Heaven; needs not to work, inasmuch as God will always provide him with food."

Fifth Sub-group.—In a few cases phthisis appears to widen, deepen, modify the mental defect of a weak-minded person; as it were, to add dementia to a degree of imbecility, and bring the individual affected under notice, and into an asylum, owing to the grave loss of mind, the failing mental capacity, now obvious. Such persons are usually young (18 to 25). Hopeless as this condition may appear to one unacquainted with its true nature, or lacking experience of the kind, it is sometimes the theatre of therapeutic triumph, and under outdoor exercise, a regular life, large diet, cod-liver oil and tonics, the patient may be found to lose the marked signs of phthisis, gain greatly in body weight; and, throwing off all the supervenient dementia, return to the degree of mental capacity normal to him, such as it is. Similarly I have seen, at least temporary, mental recovery in one example presenting relations similar to the weak-minded cases just mentioned, and occurring in a youth, aged 19, the subject of moral disorder, of inveterate kleptomania, impulses to theft, also to strange acts; vertigo; and, somewhat doubtfully, of hallucinations of hearing, at times.

Second Group.—Cases in which the order of incidence of phthisis and insanity was doubtful, that is to say, in which the two apparently came on simultaneously, or so nearly simultaneously that it could not be definitely stated which of them preceded the other.

Of the 106 cases already analysed with regard to the question of insanity supervening on phthisis, the order of incidence, on closer scrutiny, was found to be doubtful in a goodly number, owing to apparent approximate simultaneity. Taking the twenty-four examples most adapted for our present purpose, I have examined my notes and records of them with some interest to ascertain, more precisely than from a general impression, how far these cases, on the whole, resembled those of insanity supervenient on phthisis, and forming our first great group already discussed. In cases of insanity and phthisis coming on about simultaneously, and of doubtful order of incidence, obviously we cannot expect to find, as the initial disorder, those actively quasi-delirious symptoms and hallucinations sometimes coming on in established or advanced phthisis, and forming the clinical aspect of the first sub-group of cases of insanity supervenient on phthisis. But if we find a general likeness to the other sub-groups of cases of insanity supervening on phthisis, in those where the order of incidence is doubtful, it affords the necessary confirmation to my view that phthisis gives origin to, or assists in the causation of, many examples of insanity like those most apt to begin nearly simultaneously with the invasion of lung tubercle; or, in other words, that actual phthisis produces or precipitates a state of the constitution or of the organism similar to that which, in this second group, leads to the practically simultaneous breakdown manifest in both phthisis and insanity. We find that those under the present head show a general grouping somewhat similar to those under the preceding head; particularly do they repeat the symptoms of the second, third, and fourth sub-groups above, as may be seen in the following general summary.

Summary.—In many there is emotional depression. This may assume the more common aspects of melancholia; fear, weeping, grief for alleged, but imaginary, guiltiness of crimes; or vexation about the "abuse" he receives, and the "evidence" raked up against him; or a suicidal tendency, or attempt, may be observed. But in some the state is apathetic or stuporose; a condition more of less of *melancholia attonita*.

Even still more frequent and striking than phases of emotional depression are the cases with delusions as to bodily injury, damage, torture or detriment of various kinds; those as to persecution of manifold variety, or of plot or conspiracy against the lunatic; those as to being poisoned by food, or deprived of food; those as to hostility, annoyance, as by hallucinatory voices, whether these be reviling or not; those as to interference, threats or designs against him, adverse influences, mysterious agencies.

Usually either not, or imperfectly, systematised, the above de-

lusions of injury or persecution often tend to become fixed and systematised. Yet may expansive delusions occur in some, and when they exist are usually found alternating with depressed or persecutory delusions; as in some forms of monomania.

Sleeplessness is frequent; violent, restless, noisy, destructive states, or foul habits, may be found. Some are scowling, angry, threatening and abusive in language. Some are suspicious, some are apathetic, or confused, incoherent, or unsocial or irritable, or shy in appearance and demeanour, or act with an air of mystery or secrecy, or are discontented, malicious.

The great majority are hallucinated, hallucinations of hearing being the most frequent, those of sight next, those of other special senses sometimes observed. Usually disagreeable, the hallucinations are so, or the reverse, according to the predominant co-existent mental colouring. Visceral illusions are frequent.

Thus we see how closely the above cases, set down as examples of those in which the incidence of phthisis and insanity is nearly simultaneous, and its precise order doubtful, resemble the second, third and fourth sub-groups of those cases of insanity supervening on phthisis, of which we have already spoken, thus justifying the remarks preceding the particular description of this second great group of cases.

It will scarcely have escaped notice how large a number of the cases collected for our first two groups we eventually excluded from immediate consideration, and in how considerable a share the precise order in which phthisis and insanity came on was obscure and difficult to determine.

Not only are there, in phthisical cases of insanity, the usual difficulties often attending the attempt to attain correct information on the causation and inception of disease, as experienced by all practitioners of our art, but there is the further and unusual difficulty engendered by two factors; the one being that the mental condition of many a one precludes us from obtaining accurate information from the sufferer himself; the other, that in many of the insane the phthisical process is extraordinarily latent, fails to reveal itself in its full symptomatic aspects, and does not occasion some of the usual reactions of the organism, or at least in the customary degree. But the latency of phthisis in some of the phthisical insane forms a separate subdivision of the subject, and one which I had hoped time would permit me to take up in this lecture.

Third Group: Phthisis Supervening in Insanity.—1. Relations of forms and clinical aspects of insanity to the subsequent occurrence of phthisis. 2. Relations of phthisis to the modification of pre-existent mental symptoms.

1. Clinical Forms of Insanity in Relation to Supervenient Phthisis.—Almost any form of mental affection may become complicated by the supervention of phthisis, but some forms are particularly liable thereto. In these latter forms of insanity there are operative, and for a somewhat protracted space of time, not merely such of the general asylum influences as may foster phthisis, but also the chief causes of the mental disease which predispose to phthisis—the special habits, carelessness, neglectfulness, tendency to self-exposure, and disinclination for or refusal of food, which characterise these cases. Nor is this all; there is a still further puissant influence in the diathetic state, in that hereditary degeneration which displays itself in psychical degradation, and in a tendency to pulmonary or other tuberculosis; the diathetic influence promoting the break-down simultaneously, or successively, in different parts and organs.

Depressed or suspicious lunatics often neglect or refuse food, exercise, warmth of body, or the conditions of its maintenance; or are of depraved habits, not merely filthy, self-neglectful ones, but also sexually self-abusive; if present, the habits of night-restlessness and self-denuding, or of food-vomiting, also degrade nutrition; and this degradation of the nutrition is enhanced if refusal of food necessitates artificial feeding for a protracted space of time, especially if with co-existent disorder of the digestive organs, or if the patient is a garbage-eater, and thus dissipates his digestive powers and irritates his digestive organs by that which yields little or no sustenance. The mere disregard of, or disinclination for, food is apt, in spite of care, to lead to defective nutrition. Some of these, or other, patients persistently keep immovable in one position, vegetating there, neglectful of warmth, of comfort, of cleanliness, regardless of draughts of air or other injurious impressions. Many insane persons, also, are in the habit of covering up the head in bed at night, repeatedly rebreathing air impure and carbonised from their own lungs. The crowding or defective ventilation (if any) of asylums, the sense of confine-

ment and of surveillance, add a depressing element. Also the conditions of life in psychically degenerate families, the irregularities, imprudences, hygienic blunders, and social solecisms found in the members of such, under the home-roof, build up an inclination to phthisis, and long before the subjects thereof reach an asylum.

In relation to the present subject, I have taken about twenty cases, as sufficiently illustrative of the forms of insanity in which phthisis is most apt to occur; and of the modification undergone by the preceding mental symptoms under the effects of pulmonary phthisis. Unfortunately, I might illustrate this group by a large number of cases, but as this third and last is the least important of the three great groups—least important, that is, in relation to our present inquiry—I have thought it quite sufficient to analyse a modest number only, although under the present head would come all the cases of phthisis in the insane in more recent years under my care, save and except the 106 already referred to under the first two great groups, and except some occurring in recent months and not enumerated here, and except those with forms of mental disease already specified as being omitted. The age at death, varying from 24 to 52, was, on the average, between 36 and 37. The cases are examples of the sub-groups in which phthisis most frequently occurs; and, as under the other groups, so here, I have purposely excluded phthisical cases of general paralysis, epilepsy, or any gross organic brain disease.

1. *One Sub-group*, with supervenient phthisis, is that consisting of examples of monomania of the mingled persecutory and expansive form, the persecutory element usually predominating. In these cases, hallucinations and illusions are frequent, especially those of hearing and sight, while those of taste and smell may be present. Some of the patients have led a very irregular life, have deserted their duties, wandered hither and thither through their country or the world, come into frequent conflict with social usages, the rights of others, and with the law. The delusions have been those as to persons working adversely to the sufferer, of annoyance, and often by individuals of the other sex; of various kinds of injury; of being poisoned; of being haunted by shadows and voices, or by the devil and his wife; of carrying Mr. Punch on his back; of being transported as a convict, or affected by witchcraft, or of having all his thoughts repeated by others. Hypochondriacal monomania may exist.

2. *Another Sub-group*, with supervenient phthisis, consists of cases with chiefly unsystematised delusions of persecution, ill-treatment, annoyance, injury, medical malpraxis on the sufferers; of damage, hurt, and annoy from electricity brought to bear on them; of conspiracy to annoy or injure them; or delusions leading them to claim what others wear. In some, these delusions, however, tend to become systematised and fixed.

With these are often querulousness and hypochondriacal symptoms. Hallucinations may be frequent and vivid. Occasionally patients of this sub-group may also overflow with the foulest sexual delusions and illusions.

3. *Third Sub-group*.—In some such cases chronic moral and intellectual perversions have followed acute mania, or have supervened in melancholia, now become chronic. The melancholic ideas may be on religious subjects, and such a patient may also delusionally believe himself or herself to be the subject of criminal charges. Hypochondriacal melancholia may be found.

4. *Another Sub-group* consists of stuporose cases, which, whether of the more simple or of the melancholic form, find many phthisical victims; but the stereotyped clinical features of which it is quite unnecessary for me to limn.

Dr. Clouston "long ago described what he termed "phthisical" mania or insanity, and which he regarded as being "a direct result of a strong tubercular diathesis, or tendency which was then being developed, or about to be developed, into direct tuberculosis." At one moment including "only cases which died within five or six years after becoming insane, and in which the development of the two diseases was somewhat contemporaneous," at another this "typical phthisical mania" consists of cases in which symptoms of phthisis came within five years of the commencement of the insanity, and in the majority of them within two years. Thus, in many, the order of incidence of the two was problematical; in many the phthisis came some considerable time after the insanity, which latter, therefore, could not positively be termed "phthisical." If present at all the acute stage was very short, and passed neither into a chronic stage nor into deep dementia, but into an irritable, excitable, sullen, and suspicious state; a mixture of sub-

acute mania and dementia; with want of periodicity, and of fixity of mental condition, disinclination to exertion of mind or body, and unprovoked short attacks of mild excitement;—suspiciousness the chief and most nearly characteristic symptom.

Whilst many of these cases form an important contingent of those springing, or partly so, from a phthisical or tubercular basis, nevertheless a further sub-division is requisite; and the several distinct clinical sub-groups I have described (under Groups 1 and 2) fell within my experience.

I do not take up the relation of phthisis or tuberculosis to idiocy. From his large experience, Dr. Langdon Down⁴⁵ concluded that tuberculosis is frequently a cause of idiocy, impressing special characters thereon.

2. *The Modifying Effects of Phthisis on the Clinical Aspects of Pre-existent Insanity*.—In the foregoing and similar cases of the third great group, what are the modifications of the mental state wrought by the supervention of phthisis? In about two-thirds we find some change; on the other hand, in about one-third very much the same state before and after the supervention of phthisis.

The cases where change was wrought being of the types already described, I need not state the mental symptoms preceding phthisis and compare them at length with those existent subsequently to the incidence of the phthisis; it will suffice to mention, in several cases, the new symptoms or modifications coming subsequently to phthisis, itself a complication of insanity.

New symptoms after supervention of phthisis, or modifications of previous mental state:—

Many become more quiet during the phthisis, more manageable, less dominated by delusions than previously. One gets more depression, less delusion. One becomes less hypochondriacal and less suicidal, but, on the other hand, apathetic, and makes ridiculous, childish, trivial, inept statements.

As more marked new symptoms following phthisis occurring in chronic insanity, one gets the delusion that his food is bad, that he is ill-treated or improperly dealt with; and has perversions of smell, and taste.

Another takes the new delusion as to poison being in his medicine, and, more frequently than before, has emotional depression and delusion as to hostile and injurious intentions and acts of those about him.

Another, after phthisis, takes delusions that he is annoyed by bad women; that women worry him, take his blood, force him to dirty himself, give him pain in the heart and chest disease, afflict him by the Divine power; also that he will die a martyr to the creed, and is "Israel of God."

In one, whose monomania had been of a mingled expansive and persecutory type, after phthisis the expansive symptoms fell completely into the background. The persecutory delusions and their associated illusions, hallucinations, and other sensory perversions, concerned chiefly the imaginary lizards which were put on him and ate him, and the animals which touched him. Visual, tactile, and visceral hallucinations and illusions existed, and so did the delusions of being "haunted and enchanted."

In a case with the same symptoms as the last before phthisis was marked, the expansive delusions receded entirely from the foreground after the inroads of pulmonary disease, and there were increase and augmented influence on the acts and demeanour of the patient of delusions as to malpraxis and evil workings exerted against him, and increase of the delusions of injurious influences, annoyance, and hostility, which largely replaced the exalted ones.

In another case the new symptoms were that "the angels tried to strangle him at night," thereby causing his cervical strumous adenitis and its swelling, pain, and discomfort; and that prostitutes importuned him nightly.

Another, for a time sad and freer from delusions than before phthisis, then intensely irritable; the old delusions of persecution, the hallucinations related thereto, more active than ever. And now came refusal of food and medicine.

Differently from what had previously been, the delusions of injury, after phthisis had supervened in one case, referred chiefly to ill effects of imaginary applications of electricity to him.

That the other patients are in the asylum because *he* is here, and that everything he swallows brings fresh patients in, was the chief new feature in one case.

⁴⁵ *London Hospital Reports*, vol. iii; *Lancet*, September 21st, 1867; *Lettsomian Lectures British Medical Journal*, January 23rd, 1867, page 150; *Lancet*, January 23rd, 1867; *Mental Affections of Childhood and Youth*, 1867.

In two cases I noticed the idea on the part of the patient that he had been an enormous length of time under care and was hundreds of years old.

Of the modification occurring in stuporose cases this is an example:—The subject of mental stupor, and dying phthisical, begins to speak again. What he says refers to adverse influences operating against him, and he speaks of "twenty evil spirits coming to him in the night," and of the other patients being devils who torture him. He speaks of injury, asks to be put out of his misery, writes that his brother came drunk (not so) to see him, and advises the latter "not to come in a coffin, as these are dangerous places." Finally, he takes the delusions that the attendants punish, persecute, and deprive him of strength; and, though prostrate, wishes to get up and be about.

Time fails me to speak, as I had hoped to do, of acute tuberculosis and of tubercular meningitis occurring in the insane; of the latency of phthisis in many of them; and of the alternations of phthisis and insanity. Nor can I bring before you, as I intended to do, the salient therapeutic points relating to numerous cases of cure and of prolonged arrest and vast improvement of phthisis in the insane; nor the temperature charts in my possession illustrating the effect of antifebrin therein. Nor is there space for a summary of scattered contributions in medical literature bearing on the subjects of these lectures. It remains only that I thank you for your presence here, and the courtesy shown to me.

SURGICAL MEMORANDA.

ON COMFORTABLE ARTIFICIAL LEGS.

I HAVE often during years past intended to send a note to the JOURNAL upon an important detail in the construction and comfort of artificial legs, and my intention was strengthened by the illustration and advocacy by Mr. Barwell of what is called his modified Beaufort leg in the Journal of January 10th, 1885. This leg, and others that I have seen, are secured by straps that tightly encircle the thigh, and quickly cause wasting of the soft parts around the femur, to the great discomfort of the patient.

Some twelve years or more I made use of Thomas's knee-splint, with or without a boot attached to the lower end, as a comfortable, durable, and light form of stiff artificial leg, that can be procured for from ten to twenty shillings. The patient sits upon the perineal edge of the padded ring, and the unconstricted thigh fattens on the amputated side equally with that on the other.

Mr. Joseph Critchley, 88, Upper Pitt Street, Liverpool, has since adapted to his artificial legs, for use after amputation above, through, or below the knee, the padded ring of rod-iron exactly as used for the upper end of Thomas's knee-splints. The advantage of this is incalculable, and many working men have thrown away the artificial leg of ordinary pattern, presented to them by railway companies or by private subscription, in favour of a leg made by Critchley, purchased at the patient's own cost, simply because the constricting thigh attachment of the former caused intolerable discomfort in wasting, that entirely disappeared on wearing the latter.

A glance at the illustration will explain the appearance of this important improvement in the attachment and upper end of the legs, the practical value of which can be understood by those familiar with the use of Thomas's splints. For other particulars I must refer the reader to Mr. Critchley's trade advertisements and prospectuses. His cheapest artificial legs are not quite so low in price as the one described by Mr. Barwell, but they are beyond all comparison superior in practical

utility, and are more comfortable and durable than many others. They are well known and highly approved by the hospital surgeons of Liverpool, for whose poorer deserving patients the cost is without difficulty raised by private subscription.

Critchley's best artificial legs, with springs and joints for knee and ankle, are superior in my opinion to the most exquisite articles of other make, by reason of their physiological and rational fitness, while far below them in cost.

RUSHTON PARKER,
Professor of Surgery in University College, Liverpool.

TOXICOLOGICAL MEMORANDA.

POISONING BY BELLADONNA AND ACONITE.

At 6.5 P.M. on February 10th, 1888, I was called to a girl, aged 17, who had swallowed liniment instead of her medicine. The liniment was composed of equal parts of aconite and belladonna liniment, of *B. P.* strength, prepared with methylated spirit. The patient was convalescing from a third attack of rheumatic fever. She had a mitral systolic murmur, with slight accentuation of second sound over the area of the pulmonary valves.

She took two tablespoonfuls of the mixed liniment at 5.45 P.M. on the day in question. On my arrival at 6.15 the patient was delirious, the face and neck were flushed, and there were violent convulsive movements, principally of the muscles of the neck and upper limbs, though the lower limbs did not escape. I was informed that "she had been sensible till within a few minutes of my arrival, and had been putting her fingers down her throat to make herself sick," and that "this had had the desired effect." The vomit smelt strongly of spirit and camphor.

The pupils were widely dilated, and not influenced by light. The pulse was barely perceptible at the wrist. The heart's action was very turbulent and irregular, the beats being, as nearly as could be estimated, 300 per minute. The patient was throwing herself about so much that two people were required to hold her on the bed. The teeth were firmly clenched, and a gag had to be introduced before 30 grains of sulphate of zinc in warm water (a good deal of which was lost) could be poured down her throat. Any stimulus, whether of touch, light, or sound, seemed to aggravate the convulsive movements. The breathing was deep, hurried, and becoming stertorous.

6.45 P.M. The pulse was imperceptible at the wrist. There were short periods of complete intermission of the convulsive movements, and these were accompanied by apnoea. The heart's action was not so turbulent, but still irregular, and the beats 240 per minute; the face and body getting more and more anæmic; the tongue and throat were quite dry and gritty to the feel.

7.25 P.M. Heart suddenly stopped, and respiration continued only a few seconds. Hot flannels to the heart and brandy and ether subcutaneously had been employed. In one attack of apnoea the breathing was set going by artificial respiration, but in the others it began again of its own accord. Artificial respiration and stimulation of the heart after its beats failed to be felt had no effect. The temperature was taken five minutes after death; but the thermometer registered 97° F., the point at which it stood when introduced. Rigor mortis quickly supervened and as rapidly passed off.

St. Albans.

EUSTACE H. LIPSCOMB, L.R.C.P.Lond.

THERAPEUTIC MEMORANDA.

LOCAL APPLICATION OF CALOMEL IN PHAGEDÆNA.

I HAD a case of phagedænic ulceration of the under surface of the glans penis under my charge at the Station Hospital, Brighton, in August last, which defied the recognised treatments of this disease. I applied nitric acid in the most thorough manner on six different occasions during a period of eighteen days without success. I then applied pure carbolic acid, but the disease again returned. Constitutional treatment with opium was adopted throughout. For six days the patient sat in a hot water hip-bath on an average about four hours daily, without any appreciable effect on the course of the disease. The condition of the penis on the twenty-first day was as follows:—

A large ulcer existed, covering the entire under surface of the glans, moulding it like the mouthpiece of a flute, and extending to the reflected foreskin in the vicinity of the ulcer. A third of the glans had been destroyed. The surface of the ulcer was covered with a reddish grey secretion, irregularly disposed, and