purgative effects. I cannot think we are far from the truth, if we assume that this drug acts on the articular tissues in such a manner as to modify the puerulent mischief and inflammatory condition. It is an articular sedative. From one experiment which I made on a healthy individual, it resulted that colchicum neither increased nor diminished the quantity of uric acid in the urine. The patient was given, in doses of 6.10 grains, it was during the administration of the drug 6.11 grains. The urea, on the other hand, was diminished from 380,000 grains in twenty-four hours. The acidity was somewhat diminished.

In the list of tissue sedatives, I think alkalies may be enumerated, at least when given in such quantities as to influence the blood interchangeably very much the tissue alkalies, etc., may be included, which are converted into carbonic acid in the blood. Dr. Fuller testifies to their acting in the heart and arteries. In more precise language, they that quiet the action of the heart, as shown by the great diminution in the frequency and force of the pulse. The increased action (thrombosis) of the arteries is of course only apparent, as these tubes have no other active function than that of contraction; a hard, lively pulse would indeed indicate increased arterial action, but this was not the character of the pulse in the cases referred to by Dr. Fuller. Their effect also on the inflammation of the skin is very evident in the inflamed patches of syphilitic eczema, lepra, and psoriasis. Dr. Bennett treats eczema essentially solely by alkaline lotions; and in the suppurative skin diseases, there is much evidence of the action of the potassate given the patient. In salicyl, senilis, I have found marked benefit result from the use of alkaline baths. I strongly suspect that much of the benefit produced by the administration of soda in irritable state of the stomach and intestinal canal, depends not on its neutralizing, but on calming the irritability when conveyed to it by the blood. The advantage which Dr. Owen owes to be derived from the employment of alkalies in cases where the mucous membrane of the urinary passages is inflamed and secreting mucro-pus (so rendering the uric acid, depends, I conceive, rather on the general sedative effect of these remedies on inflamed tissues, than on their rendering the urine less acid and irritating. This is rendered the more probable from a circumstance which he himself states, viz., that small doses of liquor potassae, 2 or 3 ter die, sometimes render an alkaline urine acid. They surely do this rather by a direct action on the inflamed tissue, than by rendering the urine less acid. Mannsell and Evans speak of the alkalies and alkaline earths as exercising "a decided sedative influence, especially upon the mucous membranes when in a state of irritation or chronic inflammatory action." Competent observers have assured themselves of the good effects of alkalies in the less severe degrees of bronchitis. An over use of alkalies induces a cachectic condition, "characterized by paleness, debility, and increase of the temperature and finally emaciation." (Tronseau.) The general tenor of all these statements accords very much with the view that alkalies act as tissue sedatives.

The principles given as so to affect the general system is yet a moot point. Some, and more particularly those of the Edinburgh school, seem to deny their efficacy altogether, or rather to think them injurious. On the other hand, the testimony of Tyrrell, Watson, Copland, Williams, Graves, Wilde, not to mention a host of others, is as positive as anything can be to the powerful remedial action of mercury properly administered. It is impossible to express in words the effect of mercury in the hands of a skilful practitioner. It is the most powerful of all the remedies known, and I think we are sufficiently assured by those who speak of mercury as useless or injurious. Mr. Tyrrell, writing nearly twenty years ago, has given in his work "Excellent directions as any that I know for the proper management of this powerful agent; and all that need further be added is, that, I think, that the type of disease which reigns at present, and which seems to have prevailed most, namely consumption of pestilential character amongst us, is decidedly unsuited to the beneficial action of mercury. There is now little of sthenic inflammation; bleeding and tartar emetic are but sparingly used, while quinine, strychnina, and digitalis are recommended by opium, tobacco, oil, and purgative. We must return to the ancient maxim, which is still equally in requisition in our efforts to raise and maintain fail- ing power. Remembering the tendency of mercury to destroy red blood, to cause prostration, and even fatal syncope (as in haemorrhage cases) and chang the course of its influences, especially seeing, as I do occasionally, embarrassment or partial paralysis of the heart's action from some morbidity influence telling upon the nerves. But even now, in appropriate cases, I think there is much evidence in favour of the view that mercury acts as a sedative influence on the heart and arteries. The testimony of my friend Mr. White Cooper is most express as to its good effects in irritis independent of depletion. Just at the time that the gums become affected, the red zone declines, and all the other signs of debility in the blood. A quiet, sedative, alkaline bath, I know of no other remedy that is of much avail. Now, according to my observation, the subjects of lichen agrias are generally possessed of much vigour and strength of system, so that mercury might be expected to suit their disorders. Dr. Watson states his persuasion that in the early period of acute inflammation of the ephalophen, as the mercury comes in a short time to produce its specific influence upon the gums, a great change for the better will often be perceived. The highly interesting cases published by Mr. Sally, afford valuable evidence of the good effects of mercury in conditions more or less similar. They are very parallel to those of ocular disease already published. The use of mercury in the treatment has been exercised in both. I might in passing say here how much profit I have always found from the perusal of well recorded cases, such as those just alluded to. Abstract descriptions leave the mind quickly, but well told cases remain as abiding lessons.

To be continued.

CLINICAL OBSERVATIONS ON THE TREATMENT OF FRACTURES BY THE IMMOVABLE APPARATUS.

By Joseph Sampson Gamgee, Staff-Surgeon of the First Class, and Principal Medical Officer of the Royal Irish Legion during the last war; late Assistant-Surgeon to the Royal Free Hospital, House Surgeon to University College Hospital, etc.

We have now sufficiently commented on the main features of the plan of treatment under consideration to be able to state the question at issue.

The three main features of an immovable apparatus applied to a broken limb being immediate reduction, gentle uniform compression of the soft parts to cure and prevent their swelling, and absolute and complete immobilisation of the fragments, it is necessary to determine how far these principles of action are carried out by the instruments and plaster bandages now employed, and whether the plan of treatment under consideration is applicable and specially advantageous in so large a number of fractures as materially to simplify this department of surgery. Simplicissimus veri was the favourite motto of that great practical surgeon, Mathins Mayor—a motto embodying a principle which through all time has been, and must endure, the dominant idea in sound surgical minds.

It will be necessary, before entering upon the doctrinal and experimental consideration of the question as just stated, to describe an immovable apparatus, and its mode of formation.

For this purpose, I assume having before me a simple case of broken leg in a muscular adult; the two bones broken across, or very nearly so, about the middle; no shortening; little tendency to displacement; no injury to the skin, or swelling beneath it. The fragments having been brought into perfect contact, the great of plaster is to maintain them in that position, at the same time to prevent the occurrence of complications, of which swelling is the most probable. These objects are attained by the construction of a solid casing, including the joins above and below the site of fracture, and closely fitting to every inequality of the limb. Such a casing may be constructed with bandages impregnated with plaster of Paris, or with common bandage and pasteboard smeared with starch.

1. Plaster of Paris Bandage. For the preparation of this bandage, an unflaged thin cotton texture is best suited; the wider the blocks, the more sensual is the powdering of its planes, especially as, seeing that I do occasionally, embarrassment or partial paralysis of the heart's action from some morbidity influence.
tect by a single bandage, which should be adapted to the surface of the limb with the most perfect accuracy. Reverses should be avoided, as they form ridges, likely to irritate. As the sole object of this first bandage is to cover the skin perfectly, a little practice will teach the best mode of applying it so as to secure the desideratum without chance of mischief. The plastered bandage is next applied, with the same precaution as to accurate evenness; but, as a preparatory step, the hollower, impregnated with the plaster of Paris, requires to be moistened: for this purpose, cold water should be gently poured into it at each end. In such a case as we have assumed to be under treatment—simple fracture of the left leg—the protected bandage having been applied from the toes to the middle of the thigh, it is to be covered with a layer of the moistened plaster bandage. To secure the desired solidity of the casing, and absolute immobility of the fragments, plastered bandage splints are to be applied along the sides and back of the limb as may be deemed requisite. These splints are made by supposition of two, three, or more layers of the dry plastered bandage, cut to the requisite length, from the knee to the middle of the thigh, if requisite. The layers are moistened before application, and fixed by a few turns of similarly prepared bandage. To fix the ankle, it will be found advisable to place one of these splints in front of the joint, from the roots of the toes to the lower part of the leg. In about ten minutes, the casing is as hard as stone, yet very light, and removable either with a pair of cutting pliers, or by the use of a metal bandage, and an ordinary pair of splints. Four bandages, one of which is pinnion and the other three plastered, constitute an effectual apparatus for a broken leg, under the circumstances assumed for this description. The plastered bandage will find its way of course in preference to an assistant, to the process of application itself is clean and rapid; and, when the number of minutes requisite for desiccation of the moist plaster have expired, the patient may walk about with perfect impunity. Thus a short man may walk on crutches, and a fortiori ride in a cart, or on the back of a mule, an hour after he has broken his thigh, and as soon as it has been set according to the foregoing method. Any one experimenting with this bandage will find it perfectly efficient and economical, and a contrivance it is in all cases requiring immobilisation of joints. Its originators, Mathijsen and Van der Loo, of Holland, have beenesteemed to surgeons a contrivance admirably simple, and destined, I believe, to effect a greater change in surgical practice than any innovation of modern times. In expressing this opinion, I simply desire to stimulate trials to test the value of anticipations which I have been led to entertain; I have in no manner or degree presumed to prejudice the question at issue, but rather to facilitate its solution in accordance with the sentence, Experientia docet.

[To be continued.]

16, Upper Volturn Place, Russell Square, March 9th, 1857.

CASE OF MR. DYE SOMBE, COURT OF Chancery, Lincoln's Inn, March 6th. (Before the Lords Justices of Appeal.) Mr. Dyce Sombe was brought in support of a petition by Mr. Dyce Sombe, the administrator of the personal estate of her late husband, praying the payment out of court of a sum of money standing in the lunacy, and for the taxation of certain costs. Mr. H. Stevens, for the next of kin and the co-heiresses of Mr. Dyce Sombe, did not offer any objection to the application, but asked that some special directions should be given as to title-deeds. Mr. F. S. Morris, for Mr. Larkins, asked that before the papers in his hands were delivered over to the committee they might be examined by the Master in Lunacy, and so arranged that those which were of a private nature might be left in Mr. Larkins's hands. Among the papers, almost immemorable, were letters of Mr. Dyce Sombe, the disclosure of which might be painful, and could do no good to any one. Mr. Teed appeared for another party. Lord Justice Knight Bruce—I conclude that their being seen or being kept secret would do no good or harm to any human being. If they were handed over, in all human probability no one would be at the trouble of reading them. They might, no doubt, be posted up at the corner of the street with perfect safety. Why should the Master in Lunacy inquire with such a duty? Lord Justice Paris, suggested that the papers should be handed over; they might be examined by the party himself, and he might upon affidavit allege what were of a private confidential nature; and if the papers were of a nature which the master might consider as improper, Lord Justice Knight Bruce agreed to this, and so the order was made. It was true, said his lordship, that it was about waste paper, but even waste paper was said to be of some use.

DISEASES OF SPECIAL OCCUPATIONS.

No. 1.

THE SHEFFIELD GRINDERS.

By JOHN CHARLES HALL, M.D., Fellow of the Royal College of Physicians, Edinburgh; Physician to the Sheffield Public Dispensary, etc. [Continued from page 220.]

B. THE SHEFFIELD GRINDERS, AND THE NATURE OF THEIR OCCUPATION.

Grinders may be divided into three classes—1. Dry grinders, using only the dry stone; 2. Mixed, or those who partly grind on the dry, and partly on the wet stone; and 3. Wet grinders. The trade of a grinder is carried on in a building called a wheel. In and near Sheffield there are about ninety-six wheels, and of these eighty are steam wheels, and the remaining sixteen water wheels. Each wheel has a number of separate rooms, which vary in size and the number of the stones they contain, in which the wheels work. As a general rule, wet grinding, and the heavier branches of the trade, are carried on down stairs; the lighter branches in the rooms on the upper stories. The heavier branches of grinding are, seythes, saws, table knives, machine knives, edge tools, files, etc. The lighter branches include spring knives (pen and pocket knives), razors, scissors, forks, spindles, needles, etc. Needle grinding is not extensively carried on in Sheffield. Some of our opticians employ a good many hands in grinding glass. The rooms in which the men work in the different wheels are called halls, the literal meaning of which is a stye; and a visit to some of them would convince any of my readers that it would indeed be difficult to select a more appropriate appellation. In each room are placed a number of trouses (troughs), more or less in proportion to its length. Some rooms will contain as many as ten; some not more than two. The trough, which is made of cast metal, is received into the floor of the room, and contains the water in which the grinding stone revolves. When the stone is run dry, the water is removed from the trough. Each trough has several divisions, one for the "stone"; one for the "glacier" or "lap", and one for the "polisher". The glacier is a wooden wheel, varying in size from four inches to four feet in diameter: it is covered with leather. This is dressed all over with glue and emery; and, when this application has set, the surface is well rubbed with emery cake, which is a compound of sueet, beeswax, and emery. The lap is a wooden tool, faced with lead, on which the sides of penknives, the sides of razors, and the flat sides of the better finished scissors, are rubbed, to give them a flat surface. The effect of this will at once be evident to any one who may have a first class Sheffield knife, on comparing the pen with the pocket blade, or a razor with a table knife. The lap is coated with oil and emery.

The polisher is placed at the back part of the hull; it is a somewhat smaller wooden wheel than what has already been described, covered with leather, and is made to revolve much more slowly than either the grinding stone or the glacier. If it were made to revolve rapidly, the blades either of the knives or the razors that were undergoing the process of polishing would become heated, and their fine temper destroyed. Although the glacier revolves with considerable rapidity, the paste with which it is coated prevents this effect. A dry powder, called "creos", which is in fact an oxide of iron, is used for polishing. Boys first begin to learn their trade by polishing the different articles. Boys are apprenticed to the lighter branches at from nine to thirteen years of age, and to the heavier branches of grinding at from twelve to fourteen.