obtained, is equally destructive to that better educated public opinion on sanitary matters we should anxiously cultivate.

There is at the present time not a day in which good sound sanitary work is not being done; and throughout the country thoughtful and active men are striving to promote the public weal. Our houses were never so healthful as at the present; our average life so long; never were we so free from devastating and shocking visitations of diseases; never before had we prevented so much of that which is preventable; and never was there so little of the inevitable.

To do well in the future, is better than, for the sake of action, to do imperfectly in the present, for every day we are growing up into the higher and brighter light of exact knowledge; and it is out of this alone that perfect action can be hoped for.

The writer is in favour of a ministry of health and justice, and hopes yet to see the inauguration of a system by which skilful and specially trained scientific men will be set apart as a class devoted to Public Medicine, including the prevention of disease and the whole practical aspect of Forensic Medicine.

There is in many senses a science of medical police; and the detection of crime and its exposure are not far from the detection and prevention of disease and the causes of disease; and the two form branches of the same tree loaded with beneficent fruits.

When in courts of justice, either civil or criminal, there shall be always at hand an expert whose whole life and power are used to acquire knowledge which can give the brightest and best aid to help judges and juries to a true decision in questions, to the uninstructed, obscure and impossible of solution, there will be the hope to see a complete system of correlative and mutual interdependence between the whole of the public and private medical service of the country.

It is the want of this bond of union, and a recognition of its need by creating a branch of the public service to secure controlled and systematic action, which renders the present public health medical system so imperfect, uncertain, and varied: in one district activity guided by earnest and painstaking inquiry; in the next, the festering quiescence of apathy and neglect. Under any system which is to be successful, the co-operation of the whole medical profession must be able to be calculated upon and secured. Returns of deaths are comparatively useless. They furnish valuable statistics of results; but the earliest intimation of sickness is necessary for the realisation of the aims of preventive medicine, the tracing to their cause, and suggesting means for the removal of insidious elements of danger. Effective service should have adequate reward; and this, on the part of every officer employed under a sanitary authority, should be secure against tyrannical control or unmerited dismissal.

But there is a larger constituency to be satisfied than the mere officials of a sanitary authority, and that body is the whole mass of the population, who must, to secure the result, be aiders in sanitary action through being convinced of its efficiency. It would be invaluable to have in every household a body of workers, officials paid not in cash, but in the benefits they would secure for themselves. It is no easy task to convince such a body that the action of a sanitary authority is governed by perfect impartiality when such action may press upon both their liberty and their pockets. A high-class board of appeal would be a most valuable means towards the securing of this confidence, and the constant deference of every official to personal wishes, or it may be to prejudices, so far as these did not interfere with efficient sanitary work, should be the uniform rule of action. The object should not be to defeat opposition, but to remove it.

We may fairly hope that simplified laws, greater knowledge, and more cultured administration will bring about an increase of a nation's health—a nation's wealth.

This is an object worthy of the highest and best efforts of every well-wisher to his country and his time.

LEAVES FROM MY DIARY DURING THE ASHANTEE WAR.

By ALBERT A. GORE, M.D., Surgeon-Major.
Late Surgeon 34th (Cumberland) Regiment.

II.—EN ROUTE.

THE voyage to Western Africa, as usually performed in one of the Liverpool steamers, presents many points of interest to the venturesome individual who trusts himself for the first time into these distant and unhealthy regions. He has some vague idea that they were discovered by Prince Henry's navigators once upon a time, and, if especially innocent, he may perhaps have visions of gold and lovely scenery, only too soon to be dispelled by the actual reality. Early in August last, a very

pleasant company assembled on board the Royal mail steamer *Volta*—Captain Glover, Her Majesty's Commissioner to the eastern tribes on the Gold Coast; his lieutenants, Sartorius (Bengal Cavalry), Cameron (19th Regiment), Larcom (Royal Navy); Mr. Irving, Collector of Customs, Cape Coast; two African traders; Dr. Graham, the well-known English physician of Madeira; three invalids; and the writer. We were additionally fortunate in a very pleasant companion and courteous commander, Captain French; so that everything promised favourably for our voyage. The morning was fine but dull, the hygrometer reading 62 deg. and 66 deg., at 9 A.M., in the shade. At the expiration of our journey of 4100 miles, the temperature of the air and evaporation had risen to 76 deg. and 78 deg., fourteen and twelve degrees respectively, in twenty-two days, at the same hour, showing at the same time an increase of the relative humidity from 78 to 89, or eleven degrees, saturation being 100, but a difference in the atmospheric surroundings, and also in the feelings of the individuals, which no figures can adequately describe. From a mild, healthy, August afternoon, we passed to a climate described in my notes of September 11th as "calm, hot, muggy, steamy, breezeless, and 92 deg. under the awning at noon."

We had scarcely commenced our journey, when our floating home was met with a nasty choppy sea, making many of our number look most cadaverous and miserable from the first qualms of that most abominable of illnesses, *mal de mer*, for which the only effectual remedy is the recumbent position, if possible, in the air. This affection, because it is so common, is looked upon, as a rule, as a mere little disagreeable interlude *pour passer le temps*; but it really sometimes becomes a far more serious affair, particularly if continuous, as most lowering to the system, thus placing the unhappy sufferer in the worst possible position to resist the first advent of the many morbid influences he meets upon his arrival in Africa. A distinguished medical writer has advised that, before even the vessel moves, those who are prone to attacks of sea-sickness should at once take to their cabin, lying with the head towards the bows, until they become accustomed to the new motion, not forgetting the while a due attention to the wants of the stomach. After trying every method ineffectually, I can bear testimony to the excellence of this very simple advice, based upon physiological principles; the author arguing, with much plausibility, that the series of concussions of blood upon the brain, caused by the up-and-down motion of the steamer, act as would a severe blow, which causes emesis by reflex action. As an indirect proof of the correctness of this theory, it is well known that the rolling motion at sea is, comparatively speaking, innocuous.

On the 26th, seven days after leaving the Mersey, we sighted the gem of the Portuguese Crown, the beautiful island of Madeira, wrapped in that peculiar bank of clouds which for so long hid it from the earlier *voyageurs*. The temperature had gradually become milder, rising from 66 deg. to 74 deg. Fah. Passing the "Deserters", or Islands of Porto Santo, on our port quarter, we closed up to the bay of Funchal as the shades of evening were rapidly falling, the homeward-bound steamer *Congo* steaming by on our starboard bow most provokingly—the only opportunity of sending letters home for some time to come.

Anchoring at 8 P.M., we were just too late to obtain *pratique* that evening, the regulations of the port being as inexorable as the laws of the Medes and Persians. The Portuguese bugles could be heard sounding in the distance, and the lights in the various villas, twinkling from the sea high up the mountains, gradually faded away, one by one, as the night advanced, when the occasional splash of the wave against the guard-boat was all that disturbed the stillness of the night. A first peep at Madeira in the early morning discloses to view a most lovely island, studded with charming villas, varied here and there by one of the numerous churches or convents—that of "Our Lady", high up on a hill to the right, is a most prominent object. Our first visitors next day were the coal-lighters, followed shortly afterwards by numerous green-painted boats, with their peculiar prolonged bows, to which is attached a long rope when it is found necessary to drag them over the shingly beach, and their dark-featured crews, whose peculiar voices, ending at the termination of each sentence in a prolonged and high-noted drawl, are anything but agreeable to the ear. At 8 A.M., the health-officer arrived; and, immediately after he had given us *pratique*, a nondescript crowd of boats rushed at the gangway, the first to board us being the consul, agents of the vessel, and proprietors of the two principal hotels, Messrs. Reid and Miles. The news from the Coast brought by the *Congo* was anything but pleasant—both field-officers of the 2nd West India Regiment going home invalided, the adjutant dead, and poor Hopkins, promoted for his gallant conduct, also, just as he reached Funchal; the eighty Marines invalided to England being magnified to two hundred. Faces lengthened visibly for a moment on the quarter-deck, but only for a moment, while the countenances of our fellow-passengers expressed the greatest commiseration for those whom they looked upon as doomed to certain destruction.

As the beams of the rising sun gradually brightened the prospect, a fairy-like scene opened to view, terraces of perpetual verdure rising one above the other, and losing their beauty in the distance; while the perfume of the many lovely flowers was faintly perceptible to us in the bay. No written description can adequately convey to the mind an idea of the many beauties of this picturesque island. Around the steamer were crowds of boats containing vendors of the specialities for which Funchal is famed—crochet-work of all kinds, delicately made lace shawls, excellent photos, baskets, Madeira chairs, workboxes of many-coloured woods, boots of soft light-brown leather, straw hats, canary birds in pretty and fantastically shaped yellow cane cages, feather-flowers, gold rings, little goldfinches with curious tricks, piles of oranges, grapes, apples, and apricots, besides other *curios* too numerous to mention; while not the least singular were the inhabitants themselves, the more youthful of whom were quite content to visit "the mermaid at the bottom of the sea" for a small silver coin. As these Portuguese colonies close up to the coast of Africa, the race inhabiting them becomes darker and darker, until at last the distinctive characteristics of the two races become almost blended into one—a dark mottled brown, almost black skin, being all remaining to denote the former intermixture of Iberian blood.

Captain Glover was most anxious to obtain a supply of horses here to carry with him to Accra. Through the consul, he obtained six very tolerable Lisbon steeds, one only of which afterwards turned out a screw—a martyr to the "rheumatics". Bales of compressed hay were ordered, and two grooms, one of whom, it turned out subsequently, had been in the Portuguese cavalry, and flogged for his misdemeanours on more than one occasion, went into delirium tremens a few hours after we had started. He was treated successfully with large doses of opium and porter by the surgeon of the ship, *sub tegmine calti*; and was left subsequently at Sierra Leone. Travellers who wish to carry horses with them to Africa from Madeira must be most careful in making their purchases, as on such occasions every old screw found to be useless on shore is foisted upon the newcomer as being in possession of every possible virtue, although perhaps at the same moment hopelessly spavined or otherwise blemished. Spavin is usually the prevailing disease, owing to the constant exertion thrown upon the houghs in ascending the steep heights all over the place. To the uninitiated, this does not of course show, as a little previous exercise temporarily removes the lameness. Many of these horses are old troopers, marked on the flanks with the crown and royal initials. The cattle are imported from Lisbon, between which port and Madeira small steamers ply monthly. For a dollar, the equestrian can have his full of this healthy and agreeable exercise, without which the *anui* of a tropical or semi-tropical life is almost unbearable.

Next to its equable climate, Madeira owes much of its importance to its being a convenient place of call for steamers in want of coal and fresh supplies. Here can be obtained very excellent beef, vegetables, and fruit of all kinds—those invaluable esculents, potatoes and onions, growing in abundance, large quantities of which last are exported to the Western African ports at an increase of price rarely under one hundred per cent. On the return voyage from Africa, when the system has become much below par, and scorbutic, from the poor quality of the African food and watery nature of the vegetables there obtainable, one feels as if he could scarcely ever cease feeding upon the new food so agreeable to the palate.

After a *petit déjeuner* on board, we landed and breakfasted on shore, half of our party going to Miles's, the remainder to Reid's Hotel, from which last can be seen the shipping in harbour. The hotels here are models of quietness and comfort, the *cuisine* excellent, and the proprietors most obliging; while the very excellent wine obtainable is not the least of the recommendations. The arrangements are something on the pension system, villas in the mountains being attached to each establishment in Funchal, thus permitting the inmates to enjoy the purer and less heated air of the higher regions, and finer prospects; for nothing can exceed the loveliness of the view from one of these elevated terraces—the harbour far below, with its numerous vessels, fishing boats, and its peculiar rocky islet, with its ancient fort and battlements. The ascent is generally made on horseback; the return journey, by the more venturesome spirits, in a sledge, which, guided by a couple of natives, whirls one to the bottom with amazing rapidity. Upon these wooden sledges, shod with iron and drawn by bullocks, are conveyed from one portion of the town to the other all heavy articles of merchandise; while in others, made in the form of a covered-in carriage, the Portuguese *senhoras* move about in stately dignity.

The streets of Funchal, as in all other Portuguese towns, are narrow, and paved with large round boulders. The nearness of the houses to each other effectively shades the roadways, and thus renders them, except where the sun is vertical, cool to walk in. At the date of our

visit, the whole place was being furbished up, in view of the coming celebration of an important event—the completion of the laying of the telegraph cable between Funchal and Lisbon. Upon ascending the mountain roads, one passes through a series of vineries, patches of Indian corn, sugar-cane, and geraniums, cherished in England in costly greenhouses, but here growing in the open, and sweetly scenting the air all round; apricots, figs, and other fruit, hang temptingly over the narrow roadways. In the evening, a band plays upon the esplanade, when all the fashion and beauty promenade beneath the fine trees planted along its borders. In the town, there are several very excellent mercantile establishments, two or three of which are those of apothecaries, said to be the centres of all local gossip; also an English club and reading-room. Ices can be obtained surreptitiously, so that here an invalid can obtain all that can be desired.

Madeira is 1587 miles from Liverpool, and the climate is mild and equable during the English winter months. The usual frequenters generally commence to arrive in October, leaving in April or May for England. On the northern side of the island are several small towns, where the climate is more bracing, being more fully exposed to the westerly breezes. As a quiet winter residence for the delicate chested, the climate would appear to be all that can be desired, as there are no exciting causes to those intercurrent inflammatory attacks frequently associated with fresh tubercular deposits. The voyage is certainly a great drawback, but not so much as supposed, for its disagreeabilities are confined, as a rule, to the first three days, after which the steamer rolls along with only that side-to-side motion, so little provocative of sea-sickness.

Since the failure of the crops, some years since, the vine has been gradually becoming more healthy and prolific, driving out again the cultivation of the sugar cane, which, for the moment, took its place, and from which the brandy, used in fortifying the wine for foreign consumption, is made. These wines are of two kinds—ordinary Madeira, and another, something of the nature of Constantia, and said to be effective in bowel and dysenteric affections. Both are agreeable and harmless, leaving none of the after-effects so common when ordinary sherry has been taken in any quantity. A very fair table-wine can be obtained on the island for thirty shillings a dozen, the price increasing with the age, or amount of intermixture of the older with the newer vintage. The wines of five or six years back are much darker, and possess more of that peculiar flavour characteristic of good Madeira.

While here, the traveller to Africa should provide himself with some of the products or works of the island—a few dozens of the wine, some baskets of potatoes and onions, a straw hat, Madeira chair and sofa, and some pairs of the soft leather boots, all of which will be found most useful on the Coast, where such things are not only expensive, but most difficult to obtain. If he be wise, he will also make arrangements with one of the company's agents for a periodical supply of these very necessary articles, which will add much to the comfort of his temporary home in West Africa.

We bade adieu to Madeira at 4 P.M. on the 26th, not catching the stiff breeze which blows usually between there and Teneriffe for some hours, being until then under the influence of the land. Shoals of bream were swimming about us as the anchor was being catted, the waters abounding in fish, one of which, the bonita, is largely used by the inhabitants of Funchal. The flesh is not unlike freshly cut salmon, and sells for three halfpence the *kilogramme*. Forty-eight hours generally suffice to bring in view the far-famed Peak of Teneriffe, which may be seen from fifty to one hundred and twenty miles off, according to the state of the weather. Running along a ledge of volcanic rocks, having a few little villages along the water-line in the valleys between the mountains, the steamer arrives at Santa Cruz, the capital of the Canary Islands, two hundred and sixty miles distant from Madeira—a name ever to be remembered in English naval history as the scene of Lord Nelson's gallant attempt in 1795. A flag captured on the occasion is still retained in the cathedral, carefully guarded from intrusion in a glass-case. Grand Canary, at which the packets sometimes call, is nearer the African coast, which is here only fifty miles distant. Las Palmas, the capital, has long been the rival of Santa Cruz. Teneriffe has altogether a different appearance from Madeira; it is flatter round the capital, which is guarded by most formidable batteries, and has much more of the tropical look about it—flat-topped houses with green jalousies, the same narrow streets, and two very peculiar square-shaped, many-storied cathedral-steeple, whose bells appear to be ever chiming to prayers. Until the mole becomes thronged towards evening, one scarcely sees a soul about. Here the camel first appears as a beast of burden, and the cactus and Indian corn largely replace the vine. Upon the first, the cochineal insect feeds in great numbers, furnishing one of the staple articles of trade. Oratava, high up at the other side of the island, is said to be an agree-

able place of residence; but Santa Cruz is far behind Funchal in civilisation; the inhabitants are surly, the hotel indifferent and expensive, the food not so nutritious, and the quarantine regulations are so absurdly ridiculous, that a rumour of an epidemic of any kind having occurred at the Antipodes is quite sufficient as an excuse for not giving *pratique*. The climate is said to be drier, and more favourable for consumptives, than that of Madeira, but these several drawbacks place it practically beyond the reach of invalids. Cigars, cigarettes, made from inferior Havana tobacco, sandal-wood fans, gloves, woollen sashes, and white poodle dogs seem to be all that are obtainable. Canary wine is made here in considerable quantities from a rather rich green grape. The wine is not nearly so palatable as Madeira, having quite a different flavour—more like a Marsala than a sherry, being not unlike this latter wine in its after-effects. The cheaper qualities are quite undrinkable, causing headache, acidity of the stomach, and dyspepsia. We bade adieu to this famed island at 10 P.M., when a strong land-wind was blowing down the mountains. A few drops of rain had fallen just before. Since passing Finisterre, the weather gradually became warmer, necessitating the putting up of the awning the day previous to our arrival at Madeira, at which the hygrometer at noon in the cabin, port open, read 74 degs. and 69 degs. The difference in time being one hour and five minutes. I might have mentioned that the Madeira winter is cold; it may be also interesting to know that the population numbers about 120,000, of whom some three hundred are English or foreign invalids. The island is about thirty miles long by twelve broad, its highest peak rising to a height of six thousand feet. It is covered in many parts with fine timber and coloured woods. The people have no idea of free trade, charging a heavy import duty of from 50 to 100 per cent. on all articles brought into the Custom House, where they must be lodged in the first instance. The hire of houses varies, according to size, from £20 to £100 for the season; the women servants are slovenly, the men excellent and cleanly, working for six dollars a month, and living on very simple food—chiefly on the sweet potato and tunny fish, of both of which they are very fond. Six thousand or seven thousand pipes of wine are exported annually. The journey to the northern end of the island is rugged and toilsome. The garrison is composed of a militia regiment brought from Lisbon. They are good troops, well clothed, armed, and fed, having sixpence *per diem* to spend, free of all stoppages. They are clothed in dark brown jackets with green facings; the corps is frequently changed. The men appear cleanly, and of fair *physique*. When sick, they are treated regimentally in a hospital attached to their barracks. In Funchal, a Contagious Diseases Act is in force, the women being periodically examined and confined to certain houses and localities. The effect of the regulation is said to be excellent, the women never making any objection to its operations—taking them as quite a matter of course—while some of the outer world are sufficiently absurd to be shocked by such an excellent measure of hygiene.

ON THE PASSAGE OF RENAL CALCULI DOWN THE URETERS.*

By EDWIN MORRIS, M.D., F.R.C.S.E.

BUT few writers on Practical Medicine even allude to the passage of a calculus from the kidney down the ureters to the bladder, and those who do notice it give a meagre description of the symptoms. One writer states that "the greatest difficulty will arise in distinguishing this disease from colic". (Dr. Barlow, *Practice of Medicine*, p. 475.) He says also, in respect of distinguishing between diseases of the colon and irritation of the ureters, "the diagnosis is one that can be made only by minute investigation of each individual case, and of which it is impossible to include the whole details under any general rules".

Such, then, being our position relative to the recorded history of this truly painful complaint, it becomes the bounden duty of every practitioner who meets with well developed cases to record them for the guidance and instruction of others.

I have myself met with three well developed cases; in each instance, the passage of the calculus from the bladder was followed by an immediate subsidence of the distressing symptoms. I secured the calculi, and shall have the pleasure of showing them to you. But, before detailing the cases, you will bear with me whilst I give a cursory glance at the structures implicated in this disease. The ureters commence at the lower border of the kidneys, extending to the posterior and inferior part of the bladder, into which both ureters open. Their structure consists of an external fibrous tunic lined by a thin mucous membrane. Their average length is about eighteen inches, and their calibre about the size

of a quill. The ureters are supplied with nerves from the renal plexus and splanchnic nerves. We have, therefore, a part involved which has its peculiar function to perform, and which is composed of those living tissues which are highly susceptible of an undue stimulus produced by local irritation. We cannot, therefore, be surprised at the violence of the symptoms caused by the forced passage of a calculus through the ureters, and which are principally shown in the nervous system. The irritation and consequent pain of an organ is much more severe in those persons who are possessed of a greater irritability than in others. It is well known that some persons are able to bear pain with much greater calmness than others; hence we have in different individuals an infinite degree of modification of symptoms. The laceration of muscular structures by any detached substance which acts as a direct irritant is severely felt through the whole of the nervous system.

The calculi which pass with such formidable severity down the ureters are calcareous deposits from the urine, within the pelvis of the kidney, and occasionally assume such a size as to be unable to leave that cavity, producing the most agonising and disastrous results.

When a small calculus, or a piece broken off from a large one, once enters within the tube of the ureter, a violent spasmodic action is set up in its fibrous tunic, with a view of pressing on the offending extraneous irritant; and, as a rule, after hours of suffering, nature is capable of riding herself of the obnoxious substance, as the following cases will show.

We are told that "the most valuable diagnostic sign in such cases is sickness. When the pain proceeds from irritation of the kidneys, it will rarely be wanting".

CASE I. The subject of the complaint was a very healthy man between 50 and 60 years of age—a total abstainer from intoxicating drinks for years—a coach-builder by trade. W. W. informed me that, on Thursday, October 15th, 1863, he was in the enjoyment of excellent health, and had spent the evening in the company of some friends, took his supper as usual, and retired to bed at his usual time. He slept well until about 3.30 A.M., when he was awakened with a severe pain in his left side; in a few minutes, he aroused his wife and informed her of his suffering: she gave him a glass of hot water and peppermint, from which he derived no relief. He assured his wife something serious was the matter, and requested I might be sent for. I saw him very shortly afterwards. He was then perfectly calm and free from pain, and was afraid to move or even speak, fearing it might bring on the "dreadful pain". He said the pain came on in paroxysms, and was of an indescribable character, extending from the left iliac region down to, and causing a most "agonising painful nipping up of the left testicle". Upon examining the side, no tenderness could be detected, notwithstanding that he complained of much pain. A paroxysm of pain came on which caused him to draw his knees up. His face gave evidence of severe pain of an expulsive character, similar to that seen in the face of a parturient woman. The perspiration ran down his face; he prayed that I would relieve him as quickly as possible; he was continually trying to micturate, and his whole frame was in a state of the utmost excitement. Notwithstanding the absence of sickness, I told my patient he was passing a "small stone" from the kidneys to the bladder, and a sharp look-out must be kept for it. I gave him two grains of calomel and one of opium, with a mixture containing henbane, liquor potassæ, and mucilage, and ordered plenty of barley-water to be taken. After three hours of continuous suffering, he passed a small calculus, numbered No. 1 upon the card which I will send round to you; all his symptoms immediately abated; he fell into a profound sleep, lasting over two hours, waking up quite well, complaining only of a feeling of soreness about his loins and body. I saw him only a few days ago, and he tells me he has remained free from the complaint ever since.

CASE II is that of T. C., aged 58 years, and one of great severity; and, when you notice the size of the calculus passed, you will not marvel at it. As in the first case, the symptoms came on about 3 A.M., the pain extending along the right side into the right testicle, coming on in paroxysms, between which a dull aching pain always remained. As soon as ever a paroxysm came on, violent sickness was produced, which lasted as long as the paroxysm of pain. I kept a look out for the stone, and was rewarded for my assiduity by finding the calculus No. 2 passed, and had the satisfaction of witnessing a subsidence of the symptoms and a rapid restoration to health. In this, as in the first case, I gave grain doses of opium until the calculus was passed.

CASE III. All the leading symptoms attending the two cases I have already given were present in this instance, the sickness, I think, being more severe. R. M. was a robust, healthy man, and as a rule had excellent health. The attack came on soon after retiring to bed. He informed me that the pain was so severe as to cause him to be very sick. I administered calomel and opium, as in the former cases. Several hours elapsed before relief was obtained. The symptoms sud-

* Read at the annual meeting of the Midland Branch.