

better for himself, his profession, and the public service if he had withdrawn by resignation instead of placing himself in a position to be removed for insubordination.

INDIA OFFICE.—Brevet: Deputy Surgeon-General John Lumsdaine, of the Bombay Army, to be Surgeon-General.

RIFLE VOLUNTEERS.—2nd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry): The undermentioned Surgeons are granted the honorary rank of Surgeon-Major:—Edward Liddon, M.D., and Washington Lafayette Winterbotham, M.B.

ADMIRALTY.—The following promotions and appointments have been made: Staff-Surgeons John Horrocks, Henry Dawson Stanistreet, and William Bainbrigge Fletcher to be Fleet Surgeons. Surgeon Standish T. O'Grady to Bermuda Hospital, vice Rae; Surgeon John O'Callaghan to Plymouth Hospital, vice O'Grady; Surgeon Henry T. Cox to the *Cambridge*, vice O'Callaghan; Surgeons B. S. Mends and T. J. Crowley to the *Duke of Wellington*, additional, for disposal; Surgeon A. Keess, additional, to the *Pembroke*, for disposal; Surgeon D. Lennox to the *Lord Warden*; Surgeon B. C. E. F. Gunn, to the *Asia*, additional, for disposal; Surgeons J. E. Penn and R. H. Nicholson to the *Royal Adelaide*, additional, for service at Plymouth Hospital; Surgeon P. B. Bury to the *Hector*; Surgeon J. N. Seymour to the *Impregnable*, additional, for disposal; Surgeons J. L. Barrington and J. Sagrue to the *Cambridge*, additional, for disposal; Fleet Surgeon Edward Meade to the *Asia*, vice Thomas Robert Warren to the *Penelope*, vice E. Meade; Surgeon Robert James M'Cormack to the *Frolic* (appointment of William Manley Lory cancelled).

Correspondence.

"Audi alteram partem."

THE CHOLERA AND HAGAR'S WELL AT MECCA.

To the Editor of THE LANCET.

SIR,—The following correspondence, which speaks for itself, is of such an interesting and important nature at the present time that I send this copy to you in the hope that through publication in THE LANCET the question raised may attract attention, and possibly meet with some practical consideration. In spite of the action taken in the matter by Sir Joseph Hooker and Mr. Thiselton Dyer, and by Dr. Frankland in his letter to *The Times* less than two years ago, the facts stated below have been apparently quite forgotten, and are in no way referred to among the numerous guesses that are now being made afresh concerning the momentous question of the origin and propagation of Eastern cholera. It may be at least worth while to search for the truth about cholera, even at a lesser depth than at the bottom of Hagar's well. The copy of the letters I send you has been very kindly furnished by Mr. Thiselton Dyer.

I am, Sir, yours obediently,

Upper Berkeley Street, W., Aug. 3rd, 1883.

H. DONKIN.

[COPY.]

Royal Gardens, Kew, Nov. 18th, 1881.

SIR,—I am desired by Sir Joseph Hooker to forward to you, for the consideration of the Secretary of State of India in Council, the enclosed communications from Dr. Frankland, Professor of Chemistry in the Royal College of Chemistry, South Kensington Museum. The circumstances which have given rise to these, are briefly as follows:—Mr. James Zohrab, Her Majesty's Consul at Jeddah, is an old correspondent of the Royal Gardens. On recently returning to this country, he forwarded to Kew a considerable scientific collection of dried plants made by him in the neighbourhood of Jeddah. The package also contained two bottles of water from Hagar's well at Mecca. Of these, Mr. Zohrab guaranteed the authenticity, and he expressed the wish that they should be placed in the hands of some scientific man who would take the trouble to investigate their contents. I accordingly communicated with Dr. Frankland, who probably has greater experience than any man living in the investigation of potable water. Dr. Frankland very kindly undertook the examination, and he communicated a preliminary account of the results to *The Times* for September 9th. He now desires that

the whole subject should be brought officially under the notice of the Government of India. And looking at the fact that the cholera is now raging at Mecca, Sir Joseph Hooker feels assured that, though the subject is foreign to the strict scope of this department, the Secretary of State will not deem it intrusive that his attention should be invited to the matter. I am, Sir, your most obedient servant,

(Signed) W. T. THISELTON DYER.

Sir Louis Mallet, C.B., India Office.

[COPY.]

Royal College of Chemistry,
South Kensington Museum, S.W.
November 11th, 1881.

HAGAR'S WELL, MECCA.

DEAR SIR JOSEPH,—I have received through you a sample of water from Her Majesty's Consul, Mr. Jas. Zohrab, late of Jeddah, and labelled by him with the following note:—"The well is in Mecca. The water is regarded as holy, and large quantities are annually sent as gifts to all Mussulman countries. Most of the Mahomedan princes, especially those of India, have 'keepers of the well,' whose duty it is to send them annually water from the well." I have submitted this water to analysis, and the results which I append hereto appear to me so important as to warrant me in asking you to bring them specially under the notice of the Secretary of State for India in Council. The water is slightly turbid and has a saline taste. 100,000 parts of it contain in solution the very large proportion of 828·24 parts of solid matter, of which a considerable amount is organic and of animal origin. The water also contains an enormous quantity of nitrates—the usual product of the decomposition of animal excreta. The previous animal contamination calculated from the proportion of nitrogen as nitrates and nitrites shows that the liquid supplying this well contains in a given volume nearly six times as much animal matter as is found in the same volume of strong London sewage. This conclusion is confirmed by the presence of a very large proportion of common salt, one of the chief constituents of urine. The suspended matter in the water consists chiefly of dead bacteria.

In answer to my inquiries as to the surroundings of the well, and the authenticity of the sample, Mr. Zohrab writes me as follows:—"In reply to your note regarding the water from Hagar's well brought home by me, I beg to state that it is authentic. It was brought to me last January from Mecca by a Mahomedan gentleman in whose good faith I have implicit confidence. I may also state that several Mussulmans at Jeddah, who had frequently tasted the water at the well itself, and to whom I showed what I had, assured me it was genuine. There is no difficulty whatever for a person at Jeddah to get any quantity of the water, as the well in Mecca is free to all, and anyone may carry away as much as he pleases. I am not at all surprised at the water being heavily charged with excrementitious matter, and the reason, as I will now show, is evident. The city of Mecca, lying in a basin, contains a permanent population of about 40,000 souls, and annually during the Hadj (pilgrimage) from 100,000 to 150,000 pilgrims, who become residents for periods varying from one week to three months, crowd into it. This vast influx of strangers finds accommodation where it can; the well-to-do rent rooms, the poor live in the streets. The houses in Mecca are generally built in flats to accommodate pilgrims; each flat is provided with one or two badly constructed latrines, and there are from six to twelve of these in each house. These latrines empty themselves into pits dug outside the houses. When these get filled they are emptied into other pits, which are made in the streets or any convenient spot, and then covered over with earth. For the poor, latrines on the same principle are made in and outside the town, and the same method of emptying them is employed. This system of burying foul matter in every direction has been pursued for centuries; it is not, therefore, surprising that the ground in and around Mecca is surcharged with excrementitious matter, which rains (these are frequent in Mecca) carry by filtration into the wells. Hagar's well is not a spring, but its water is supplied by filtration—that is, by rainwater passing down through an overlying mass of foul matter. But there is yet another cause for the pollution of Hagar's well, this is the thousands of pilgrims, diseased or sound, who daily wash beside it, the water they use naturally finding its way back into the well."

Such being the surroundings of this holy well, and the composition of its water, there can be no doubt that here is

a most potent source of cholera poison, for the evidence is most conclusive that cholera is propagated by a specific poison contained in the alvine discharges of persons suffering from the disease. Hagar's well, therefore, must, according to Mr. Zohrab's description, constitute an efficient collector of the poison, and it would scarcely be possible to devise a more effective means for the diffusion of this poison throughout Mahomedan countries.

I presume that it would be quite impossible to get this well closed; but in the interests of the health of Europe and Asia efforts ought to be made to guard the water from this abominable and dangerous pollution. In the whole course of my experience I have never met with a sample of drinking water making even a distant approach to the degree of pollution exhibited by the water of Hagar's well.

I remain, yours very truly,

(Signed) E. FRANKLAND.

Sir Joseph Hooker, K.C.S.I., &c., &c.

[COPY.]

India Office, S.W., January 3rd, 1883.

SIR,—I am directed by the Secretary of State for India in Council to acknowledge the receipt of your letter of Nov. 18th, 1881, forwarding the result of an analysis of water stated to have been taken from Hagar's well at Mecca, made by Dr. Frankland, together with his report on the same. In reply, I am to inform you that a copy of these papers will be sent to the Foreign Office and to the Government of India.

I am, Sir, your obedient Servant,

(Signed) ENFIELD.

W. T. Thiselton Dyer, Esq., The Royal Gardens, Kew.

"ACUTE RHEUMATISM AS A PREMONITORY SYMPTOM OF PHTHISIS."

To the Editor of THE LANCET.

SIR,—I observe in your issue of July 14th a communication from Dr. Pollock, relating to the cases reported by me in the preceding number of THE LANCET under the above title. Dr. Pollock summarily disposes of my cases by saying that they are probably mere instances—common enough he believes—of phthisis and rheumatism coexisting in the same individual, the more marked symptoms of the former passing into abeyance during the attack of rheumatism, and kindling again with increased severity on the subsidence of the latter. The essential feature, however, of my cases is the distinctly precursory nature of the rheumatism. Until the attack of rheumatism there had been no indications in any of these cases pointing decidedly to the existence of phthisis. But soon after that, as on a pre-arranged signal, the hitherto latent foe openly advanced to engage its hapless victim. These cases therefore present an essential difference from those, frequently observable, in which one active disease, being temporarily eclipsed as it were by another, resumes its wonted activity on the withdrawal of the suppressing agent. Dr. Pollock refers to the well-known dormant effect which pregnancy produces on the progress of phthisis, and adds, with less true logic than what Coleridge would call "juggle of sophistry," "but it is not asserted that pregnancy is a premonitory symptom of phthisis." We all know that sneezing is a premonitory symptom of measles, and it is not unfamiliar to us that the inhalation of snuff causes sneezing, but it is not asserted that snuff is a premonitory symptom of measles. The value of sneezing, however, as a premonitory symptom of measles remains unimpaired. Dr. Spenser Smyth, on the other hand, in giving the outlines of a case somewhat similar to those reported by me, is not unfavourably disposed to the view that the affection of the joints was caused by tubercular deposit. The value of acute rheumatism, or, more correctly, the group of symptoms simulating acute rheumatism, as a premonitory symptom of phthisis must depend entirely on whether or no it is caused by tubercular deposit. If by tubercular deposit, the affection of the joints is a forerunner, an early phase, and therefore a true premonitory symptom, of phthisis, the disease at first temporarily settling in the joints, which it afterwards leaves for its permanent abode, the lungs. If not caused by tubercular deposit, we may then justly consign these cases to the class of curious coincidences.—Yours faithfully,

J. ALFRED AUSTIN, M.D.

Tongue, Sutherlandshire, July 30th, 1883.

ON THE NECESSITY OF EXPOSURE OF SOFT CHANCRES WITH REGARD TO TREATMENT.

To the Editor of THE LANCET.

SIR,—Too often one sees in hospital practice a condition of sloughing phagedæna which has extended around the corona and involved the glands, with a history of its having begun as a small sore. These cases are much worse where the prepuce is long, for the pent-up putrescent discharge finds no escape owing to the œdema, and the mischief commencing as a chancre involves the opposed surfaces of mucous membrane, and sooner or later the whole glans and foreskin are one sloughing offensive mass. Besides several others which have lately been admitted, there are now under treatment here three patients the subject of extensive sores of the penis.

In the first case phimosis had existed one week; there was a fetid discharge from the orifice; no sore felt on external manipulation, but a large ragged ulcerating surface, covered by a detached slough, was exposed by an incision through the prepuce; this ulceration surrounded the neck of the glans, and had invaded the tissues nearly down to the urethra. Again, in the second case we had to deal with a sore of the corona, and another at the urethral orifice; both these had the appearance of extending, and were completely hidden by a long œdematous foreskin.

The third case was characterised by sloughing phagedæna of the penis and fore part of the scrotum, with brawiness of the perineum and pubic region. Here multiple incisions were made, tension relieved, and the sloughs removed. The surface of the penis was black and gangrenous. The above patients are up and about the ward, and shortly will take their discharge.

The plan advocated is simply to slit up the prepuce upon a director with a curved sharp bistoury, without anæsthetic. The fear sometimes entertained that the recently cut surface may become specifically affected is practically groundless, so long as it is kept clean. The form of local application is second in importance to the prevention of coaptation of the opposed mucous surfaces.

As gonorrhœa is so frequently concomitant with chancre, it is obvious that this can only be diagnosed and treated with certainty by completely exposing the orifice of the urethra. The formation of bubo with its long-lasting sinus is obviated, the local treatment of sore greatly hastened, and the prevention of cicatricial tissue between the glands and prepuce prevented by the above operation, and I think the results are superior to circumcision, because the incision is not so long in healing, and the organ rendered by no means more unshapely than by the complete removal of the foreskin.

The object of these brief remarks is not to claim any novelty or originality in the treatment, but to enforce the importance of exposing the mischief early, so that it can be treated locally with the best possible result.

I am, Sir, yours obediently,

Kensington Infirmary, July, 1883. PERCY POTTER, F.R.C.S.

"FITS" OF AN UNUSUAL KIND.

To the Editor of THE LANCET.

SIR,—An account of the following case, which is under my charge in the European Station Hospital here, will, I think, be interesting to your readers.

J. C—, aged twenty-eight, gunner R.A., was admitted to hospital on Feb. 28th, suffering from ague, which was cured in a few days by the administration of sulphate of quinine. As he was suffering from general debility, anorexia, and anæmia, and was unable to perform his duties, he remained in hospital till March 14th. On that day he told me that for three months he had been subject to fits, which he thus described: first there was a rushing sound or sensation in the back of his head, then he lost all power of motion, his eyes closed, and he was unable to speak, and although he could hear people talking he could not make out what they said. These fits always occurred when he was in bed lying on his left side or back, and he was sometimes able to put them off by jumping up or turning when he felt them coming, but they usually came when he was asleep. When found in a fit his body is covered with cold perspiration, and when revived