was actively connected with the hospital and school will entertain him at a dinner to be given at the Café Royal on Wednesday, May 24th, in honour of his third year of tenure of the post of President of the Royal College of Surgeons of England. The whole number of past house surgeons of the period amounts to 130; of these 13 are dead and 20 are in various parts of the world abroad. Of the remainder scattered over the United Kingdom it is hoped that all will be present, as coöperation in the scheme has been practically unanimous. The chair will be taken by Mr. G. C. Franklin of Leicester as the senior house surgeon on the list.

THE following 15 candidates are recommended for election into the Royal Society:—Professor William F. Barrett, Mr. Charles Booth, D.Sc., Major David Bruce, R.A.M.C., Mr. Henry John Horstman Fenton, M.A., Mr. James Sykes Gamble, M.A., Professor Alfred Cort Haddon, M.A., Dr. Henry Head, Professor Conwy Lloyd Morgan, F.G.S., Mr. Clement Reid, F.G.S., Professor Henry Selby Hele Shaw, M.Inst.C.E., Dr. Ernest Henry Starling, Professor Henry William Lloyd Tanner, M.A., Mr. Richard Threlfall, M.A., Mr. Alfred E. Tutton, B.Sc., and Professor Bertram Coghill Alan Windle, M.D. Dub.

THE annual dinner of the Royal Institute of Public Health will be held in the Victoria Hall, Hotel Cecil, on Wednesday, June 7th, at 7 P.M., when the Harben Gold Medal will be presented to Lord Lister. A number of distinguished guests have accepted invitations to be present. Tickets (1 guinea, inclusive of wine) are to be obtained from Mr. Henry C. Jones, honorary secretary of the institute, 197, High Holborn, W.C.

THE annual dinner of the Indian Medical Service will be held at the Hotel Cecil on Thursday, June 8th, at 7.45 P.M., when Surgeon-General Sir W. Guyer Hunter, K.C.M.G., Honorary Surgeon to the Queen, will preside. Officers intending to be present should communicate at an early date with the Honorary Secretary, Mr. P. J. Freyer, 46, Harley-street, W.

AN inaugural dinner in aid of the foundation fund of the Medical Graduates' College and Polyclinic is announced to take place at the Trocadéro Restaurant, Piccadilly-circus, on the evening of Wednesday, June 14th. The chair will be taken by Sir John Lubbock.

H.R.H. THE DUKE OF CAMBRIDGE will preside at a festival dinner in aid of the re-building fund of the Alexandra Hospital for Children with Hip Disease, Queen-square, Bloomsbury, at the Hotel Cecil on Tuesday, June 20th.

ON Thursday, May 18th, a brass tablet erected to the memory of the late Sir B. W. Richardson, formerly President of the British Medical Temperance Association, will be unveiled at the London Temperance Hospital.

THE Prince of Wales's Hospital Fund has received a donation of £5000 from Mrs. Brydges Williams.

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on May 8th, His Grace the Duke of Northumberland, President, presiding. The following were elected members: Mr. A. Cooper, F.R.C.S. Eng., Mr. A. W. Porter, Mr. S. Stephenson, and Mr. T. Uzielli. The special thanks of the members were returned to Mr. Hugh Dewar for his donation of £200, to Mr. Thomas H. Sowerby for his donation of £5 5s., and to Mr. John H. Usmar for his donation of £50 to the Fund for the Promotion of Experimental Research at Low Temperatures.

GARBAGE-MONGERS.

BY FREDERICK WILLIAM ALEXANDER, L.R.C.P. EDIN.,
M.R.C.S. ENG.,

MEDICAL OFFICER OF HEALTH OF POPLAR AND BROMLEY.

Canned Foods.—The Significance of the "Soldering Points."—A Suggestion.

ON account of the recent revelations and convictions in regard to canned foods it may be useful and interesting to the medical profession to understand something respecting the significance of the "soldering points" upon cans containing articles of food. I know of no book explaining the subject and one cannot apply, for obvious reasons, to manufacturers for any such knowledge, so that anything learnt by attending at a police-court and chatting to experts and listening to them under examination and cross-examination may benefit the community by being made generally known. In the Journal of the Sanitary Institute, April, 1898, there is an article upon "Poisoning by Canned Foods; Hints on its Prevention," by Dr. J. Brown, medical officer of health of Bacup, which is well worth reading by everybody. Dr. Brown speaks of the plating of the cans, but he does not mention anything concerning the utility of the soldering points, although he does say: "It has been stated that some American firms reseal blown tins. The tins then have their former normal concave appearance again." Again, in hints to consumers he states: "Cans doubly sealed by soldering are suspicious."

Articles of food which are to be canned as a rule are par-boiled to allow for a certain amount of swelling before being put into the can, and as further cooking, with sterilising, is done whilst in the can it is essential for the soldering to be done strongly, and when fixing on the top of a can in order to seal it down it is necessary to have a hole in this piece of metal forming the top to allow of the escape of the expanded air and the steam generated by the soldering process, otherwise the solder will spit and will not flow properly to form a good and neat joint. When the top has been soldered on and the prick-hole shut with solder the can is placed in a water bath or a steaming apparatus. The temperature being raised the contents expand and cause the cans to "blow," which means that the ends of the can become convex. The can is then taken out of the apparatus and the prick-hole is unsoldered by the application of a hot iron, when about one cubic inch of heated air escapes. The hole is soldered up afresh and the can put back again into the water-bath or steaming apparatus and the sterilising and cooking processes completed. In evidence it was pointed out that for blowing purposes during the bathing and steaming processes, instead of unsoldering the prick-hole, some firms prefer making a second hole either at the side or at the other end of the can. The reason one understands for this is that when cans are hot and their prick-holes have been unsoldered and the contents are steaming out the holes cannot be soldered up again so neatly, hence the blow-hole is made at the other end, which is made the bottom of the can when labelled, or the hole is made on the side and is covered afterwards by the label.

In unsoldering or making a second hole to relieve pressure in order to create a vacuum, it may be necessary on account of the contents of a can having shifted and blocking up such a hole, and thereby preventing the air escaping, to make another hole with a "rod," which may account for more than one soldering point. With some canned foods it will be noticed that inside the can immediately under the soldering point is a small metallic plate, the object of which is to obviate the necessity of making another hole as this plate prevents the contents of the can blocking up the soldering point which when unsoldered allows the can to blow so as to obtain a vacuum. In the steaming apparatus on shelves certain foods are cooked in the cans with the blow-hole unsoldered, but when the water-bath is used the cans are packed together and they are completely soldered down. It was pointed out in evidence by an expert that the blow-hole is not really necessary, but firms do this in the first or low-heat stages of the bathing or steaming processes to allow air

to escape so that when the cooking and sterilising are completed and the cans have cooled down the ends of the can become concave. This is done to satisfy the public who like to see concave ends when purchasing.

It is well known that dishonest canned-food dealers prick or unsolder cans which are "blown" or "springy" so as to allow of the escape of the gases produced by putrefaction which by pressure are causing the ends to become convex instead of concave and one is afraid that the steam blast is also used which may have the effect of stopping putrefactive changes for a time but the ptomaines would remain. A tinned can which has been bathed or steamed loses its lustre and is lacquered over where it will not be covered with a label for the purpose of improving its appearance or preserving it from decay.

In the cans (they were all flat ones) of putrid lobster which came into my hands there was not only the prick-hole upon the top but under the label there were two or three pricks and another one in the side immediately opposite these. The tins had been re-labelled, portions of the old label being distinctly seen. The defence stated that the re-labelling was due to the cans coming from America and the old label being taken off. It would be interesting to know whether such is the universal practice. The explanation of four holes upon the side was not at all satisfactory. With condensed milk and, I believe, with jams and syrups, it is not absolutely necessary to have "soldering" and "blow-holes." In some well-known brands neither "soldering" nor "blow-hole" is to be found. It would appear that the reason for this is that milk, and also jams and syrups, are already cooked and are poured hot into the can through a small aperture called the "stud-hole" and form a body in the tin leaving scarcely any air-space and the can being hot the small stud is quickly and lightly soldered down and in many instances by the help of machinery. The soldering is lightly done because such cans have not to undergo pressure by any further cooking of their contents. The sugar is a preservative in itself. When the cans become cold they will as a matter of fact have concave ends. The stud end of a can is generally made the bottom and the metal of the top end is fluted or beaded on the surface to strengthen it. For the defence it was stated that a blown can of condensed milk after being pricked could not be resoldered, but several blown cans were produced which had been recently pricked and resoldered exceedingly cleverly by experts engaged by the prosecution.

The question of how long foods hermetically sealed will keep was raised during the hearing of the summonses and whether the heat of a shop would not affect the contents of a can. Dr. Brown in his article states:—"Fortunately, having had canned foods, including meats, soups, rabbits, oysters, &c., of from 20 to 30 years old, I found that the tins, though rusty outside, were perfectly good inside; none were blown." One of the experts for the prosecution told me that his firm had now canned meat quite good which had been through the Crimean War. An expert stated in evidence that one plan adopted by his firm to test whether the sterilising process had been properly carried out and whether the contents of cans were good before sending them out was to place them in a heated room or chamber in order to see if the cans became blown.

The suggestion one would like to make is that no can should have more than one "soldering point" and that that "point" should be either at the top or at the bottom of the can and should never be in such a position as to be liable to be covered by any label, and before leaving the factory a metallic plate with the name of the firm and the date of sending out should be soldered over the "soldering point." With cans which are filled through stud-holes and whether there be a "soldering point" or not the whole stud and soldering should be covered over with a plate as above. Imported canned foods should have the names of the importers printed legibly on the label and such persons should be made answerable for the above requirements. I quite agree with Dr. Brown that "terne-plated" cans should be forbidden for all goods, but especially for fruits. He suggests a non-metallic coating for cans. By "terne-plated" is meant an alloy of lead and tin by which iron cans are plated.

I must apologise for so lengthened a communication, but I thought that there might be some useful information to afford, as canned foods are indeed "cans of mysteries," and without opening cans those having the care of the public health cannot pass an opinion respecting the contents as cans which have been "blown" are "doctored up."

LORD CROMER'S ANNUAL REPORT.

WHEN Sir John Lubbock selected his Hundred Best Books there were not wanting critics to aver that the list could be improved upon, but we venture to say that no such difference of opinion is possible in the case of Viscount Cromer's century of Anglo-Egyptian Administrators. In his last annual report to the Marquess of Salisbury Her Majesty's Agent in Egypt says:—

"Without going into any elaborate analysis of the figures I may say that the rehabilitation of Egypt, in so far as it has been due to British influence since the occupation, has been carried out by a body of officials who certainly do not exceed 100 in number and might possibly, if the figures were rigorously examined, be stated somewhat lower."

It is surely not too much to add that never before in the history of the world have grander or more solid results been achieved by fewer workers. So desperate, indeed, was the situation that Lord Cromer, whom no one can accuse of addiction to hyperbole, himself describes it in the following terms: "It would be difficult to exaggerate the ruin which would have overtaken not only the population of Egypt but all who are interested in Egyptian affairs if the régime of the pre-reforming days had been allowed to continue in existence but a few years longer."

Lord Cromer's Hundred have wrought what is well-nigh a miracle, but, as his lordship points out, they "have been selected with the greatest care."

This year the report is divided into two parts, the first—which occupies only seven or eight pages out of the whole 54—referring exclusively to the Soudan and the second to Egypt proper. It was, of course, absolutely necessary that the Soudan should be reconquered, but if this had not been the case it might have been better for several urgent projects which for lack of funds must needs remain in abeyance. The cost of the Soudan campaigns was £E.2,354,354. Last year the Egyptian Treasury had to make good a Soudan deficit of £E.200,000, and in the estimates for the current twelvemonth a sum of £E.332,000 is set down for a similar purpose. Egypt is not only a poor country, but she is also terribly hampered by debts and charges which are out of all proportion to her resources. The gross revenue for 1898 was £E.11,348,000, or nearly a million sterling in excess of the estimate; but after deductions on account of tribute to Turkey, interest to bondholders, and other unprofitable but preferential payments, "the real out-of-pocket expenditure for administering Egypt and the Soudan is about £E.3,750,000." Under these circumstances, with only between 30 and 35 per cent. of income available, it is no wonder that Cairo and Alexandria should remain practically unsewered and that amongst a thousand other sanitary requirements almost as important such a thing as a pure water-supply should be unknown throughout the country, even in the great provincial towns with from 20,000 to 40,000 inhabitants.

That the Egyptian bondholders are entitled to the money they receive as interest cannot of course be disputed; the charge, although extremely onerous, is equitably unavoidable; but such is far from being the case with regard to that mentioned in the following passage which we feel confident no true Briton can read without a feeling of resentment. "Broadly speaking, it is no exaggeration to say that internationalism imposes an extra charge of about £1,750,000 a year on the Egyptian treasury." With a fair share of this million and three-quarters sterling, in addition to his present inadequate budget, what sanitary ameliorations could not the able and energetic Director-General of the Sanitary Department be able to accomplish.

But notwithstanding crippled resources and the obstruction due to the capitulations a considerable amount of medical and sanitary work was accomplished during the year under report. About 22,000 in-patients were treated in the Government hospitals, being an increase of 1500 over 1897 and of about 10,000 over 1887. The number of dispensaries in the provinces rose to 46 and the income derived from them to £E.2800. These institutions date from 1887 when eight were opened as an experiment. The successful vaccinations numbered 351,000, the lymph in nearly half the cases being provided by the new Vaccine Institute at Cairo. In 1896 small-pox caused 2475 admissions to hospital with 544 deaths, and the following year 2057 admissions and