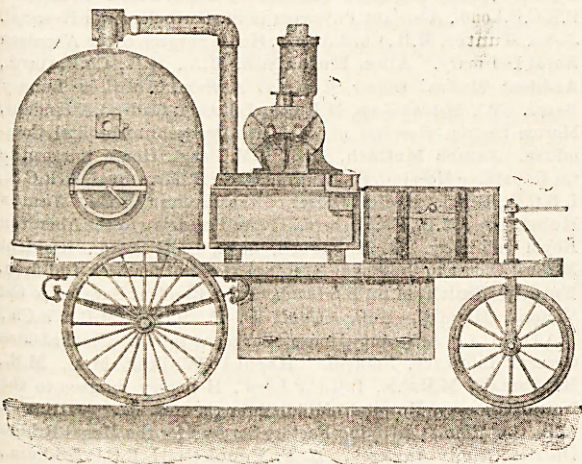


PRACTICAL DEPARTMENTS.

CLAYTON PORTABLE FUMIGATOR.

THE hindrances which exist to the satisfactory disinfection of buildings and rooms are well known; the chief of these is the difficulty in obtaining a gaseous disinfectant sufficiently powerful and penetrating to satisfy bacteriological tests without having an injurious action on perishable articles. Accumulated experience has shown the advantages for this purpose of sulphurous oxide gas obtained by burning sulphur. At the same time there are essential defects in this method as it is usually employed, by burning sulphur in an open dish, all air outlets from the room being as nearly as possible closed. In the first place, sulphur will not burn in an atmosphere containing more than about 5 per cent. of the products of its own combustion, and for rapid and efficient disinfection higher percentages than this are desirable. A further objection is that the heated gases are apt to condense on the cooler surfaces of the furniture of the room, and to bleach or otherwise damage them. These obstacles have been overcome by the Clayton Fire Extinguishing and Ventilating Company, Limited, 22 Craven Street, Strand, who have introduced an apparatus by means of which high percentages of sulphurous anhydride at the normal temperature can be rapidly introduced



into a chamber to be disinfected. The germicidal action of the sulphur gas can thus be more than doubled, while the danger of damaging oil-paintings and so forth is said to be actually lessened, as no condensation occurs. Hitherto the Clayton Fire Extinguishing and Ventilating Company have been mainly concerned with the disinfection of ships, for which they provide a single instalment for purposes of disinfecting, fire extinguishing, and ventilating. They have lately designed, however, a portable fumigator for the use of hospitals and other institutions, as well as for private house disinfection.

The apparatus, which is shown in the illustration, consists of (1) a large, dome-shaped generating chamber, in which the sulphur is burnt; (2) a blower, which draws air through the generator, and through (3) a cooler, by which it is reduced to a normal temperature, and then forces it through the (4) discharge pipe leading into the room which is to be disinfected. There is also a (5) return pipe which connects the room with the generator. As sulphur dioxide is heavier than air the return pipe should communicate with the upper part of the infected chamber while the discharge pipe opens near the floor. At the commencement of the disinfecting process the air supplied to the generator

is conveyed by the return pipe from the room which is being treated. But as soon as the atmosphere in the room contains about $2\frac{1}{2}$ per cent. of sulphur gas the return pipe is shut off by closing a trap, and, by opening a second trap, the generator is thenceforward supplied with air from the outside. The supply of sulphur gas is continued until the atmosphere of the room contains about 10 per cent., when the blower is stopped (a 3 per cent. vapour is said to be sufficient for the destruction of vermin), and the gas allowed to remain in the room from 4 to 12 hours. Penetration tests, both by litmus and by bacteriological cultures, have proved highly satisfactory, as might be expected from the high percentage of sulphur dioxide that is used. This percentage can be easily and rapidly determined at any time by means of a special burette. This consists of a graduated glass cylinder which is filled with atmosphere from the room which is being treated by means of a small piece of tubing passed through the key-hole or other small aperture. Water is then slowly passed into the tube until no more gas can be absorbed. As the sulphur dioxide is readily absorbed by water, the diminution in volume of the gases in the tube after the addition of water represents the amount of sulphur dioxide present. This can be seen at a glance by reading off the level of the added water from the graduated scale, which gives the percentage.

Altogether, as the result of our inquiry, we are of opinion that the Clayton Portable Fumigator offers the most reliable method of general disinfection, and should prove of great value to the public departments, as well as to hospitals, asylums, and other institutions, where the need for dealing with infected apartments is likely to arise.

EDITOR'S LETTER-BOX.

Our Correspondents are reminded that prolixity is a great bar to publication, and that brevity of style and conciseness of statement greatly facilitate early insertion.]

KING EDWARD'S HOSPITAL FUND FOR LONDON.

To the Editor of THE HOSPITAL.

SIR,—I enclose a letter from Sir John Aird generously offering to increase his annual subscription to this Fund by 100 guineas a year, this sum to be specially appropriated to endowment in order to raise the fixed annual income of the Fund, from investments and other sources, to £50,000 a year.

May I venture to appeal through your columns to others who may be willing to follow his example.

Yours faithfully,

HUGH C. SMITH,

Chairman of the Executive Committee.

[COPY OF LETTER.]

14 Hyde Park Terrace, W.,

May 9th, 1904.

DEAR MR. HUGH SMITH,—In reference to your letter about the King Edward's Hospital Fund for London in the *Times* of the 28th March last. Since the meeting on March 8th at Marlborough House, when his Royal Highness the Prince of Wales, President of the Fund, made the announcement that an anonymous donor was willing to give a sum, estimated to produce £4,600 a year, if others would give the further necessary sum of double that amount by the end of this year, in order to raise the annual income of the Fund from investments and other permanent sources to £50,000 a

year, I have thought that the desired fund could in part be raised by annual subscriptions to be appropriated to this particular purpose, and that many would be willing to increase their annual subscriptions for so good an object.

I hope the idea may commend itself to the Executive Committee, and, if so, I shall be very pleased to become a subscriber of an additional 100 guineas.

Yours faithfully,

JOHN AIRD.

THE HOSPITAL OFFICERS' ASSOCIATION.

To the Editor of THE HOSPITAL.

SIR,—I have had my attention drawn to the obituary notice of Mr. Adrian Hope in which the writer expresses his belief that the late Mr. Hope was "parent" to the Hospital Officers' Association. This allusion is subject to varied meanings, one of which—the one leading the reader to regard Mr. Hope as founder of that Association—I trust, bears correction. The Hospital Officers' Association was founded and placed before the hospital public by myself; but this statement is made with all deference to the memory of a man I deeply admired—the late Mr. Adrian Hope.

J. STEPHEN NEIL.

CAISSON DISEASE AND VIVISECTION.

To the Editor of THE HOSPITAL.

SIR,—In your article, in your issue for May 7, on "Diver's and Caisson Disease," you inform us that Professor Leonard Hill has discovered, by experiments upon animals carried out in conjunction with Professor McLeod, the mode of causation of "diver's disease." We are informed that "he has found that the blood, when under pressure, dissolves a considerable and constantly-increasing amount of atmospheric gases, and that these tend to escape rapidly when the pressure is removed." You further say that "the whole secret of avoiding danger is to remove the compression so gradually that no effervescence is permitted to occur," and you conclude by saying "that the event adds yet one more to the long list of benefits conferred upon mankind by the physiologists for whose proceedings a bevy of old women of both sexes can find no words of adequate condemnation."

As one of these "old women" may I trespass on your courtesy so far as to be permitted to point out that in Osler's "Principles and Practice of Medicine" (Second Edition. 1895. P. 888) we read: "It has been suggested that the symptoms are due to the liberation in the spinal cord of bubbles of nitrogen which have been absorbed by the blood under the high pressure, and the condition found at the autopsies just referred to is held to favour this view." We find also the following suggestions for preventing the trouble: "In all caisson work care should be exercised that the time in passing through the lock from the high to the ordinary pressure be sufficiently prolonged." It is to be noted that the cause of the disease and its prevention were accurately explained so long ago as 1895, so that Professor Hill is hardly the wonderful discoverer in this particular instance which your article would have us "old women of both sexes" believe. For my part, I cannot understand where the animal experimentation in this connection has enlightened us, otherwise than by possibly confirming the truth of conclusions already arrived at by pathologists in the post-mortem room.

I am, Sir, yours, etc.,

EDWARD BERDOE, M.R.C.S., L.R.C.P.E., L.S.A.

Tynworth House, Victoria Park Gate,
London, N.E., May 11th.

[Our correspondent does not appear to appreciate the difference between a mere supposition and an ascertained fact. The theory of causation which he quotes from Osler's

well-known text-book is qualified in the same paragraph by the remark that "The explanation of this condition (diver's paralysis) is by no means satisfactory." The advance which has been made from this position of doubt by Professor Hill will, we think, be sufficiently obvious to most people.—ED. "THE HOSPITAL."]

SOCIOLOGICAL SOCIETY.

To the Editor of "THE HOSPITAL."

SIR,—Will you kindly say where particulars as to the working of the Sociological Society can be obtained.

Yours truly,

GEORGE VALENTINE.

[The required information may be obtained from the hon. secretary of the Sociological Society, 5 Old Queen Street, Westminster, S.W.—ED. "THE HOSPITAL."]

MEDICAL APPOINTMENTS.

J. R. Armstrong, M.D., District Medical Officer of the Pontypridd Union. J. J. Buchan, M.B., B.Ch.Glasg., D.P.H. Camb., Medical Officer of Health for St. Helen's. L. Erasmus Ellis, M.D.Brux., M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, Brompton, S.W. H. Morley Fletcher, M.D.Cantab., F.R.C.P.Lond., Assistant Physician to St. Bartholomew's Hospital. John Hunter, M.B., Ch.B.Aberd., House Surgeon to the Aberdeen Royal Infirmary. Alex. Hutchison, M.A., M.B., Ch.B.Aberd., Assistant Medical Officer, Kingseat Asylum, Aberdeen Lunacy Board. W. Howe Lee, M.R.C.S., L.R.C.P., Medical Attendant, Morton District Hospital under North Derbyshire Hospital Committee. James McCash, M.B., C.M.Glasg., House Surgeon to the Royal Eye Hospital, Southwark. C. de Z. Marshall, M.R.C.S., L.R.C.P., District Medical Officer of the Tiverton Union. James Robertson, M.B., Ch.B.Aberd., House Physician to the Aberdeen Royal Infirmary. G. B. Sleight, M.B., Ch.B.Aberd., Resident Medical Officer to the Royal Aberdeen Hospital for Sick Children. Enid M. Smith, M.B., B.S.Lond., Senior Resident Surgeon to the Victoria Hospital, Hull. Cecil B. F. Tivy, M.B., B.Ch., B.A.O.R.U.I., Assistant House Surgeon to the Staffordshire General Infirmary, Stafford. Harold Walker, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Honorary Surgeon to the North Ormsby Hospital, Middlesbrough. R. M. Williams, M.B., C.M.Edin., Certifying Factory Surgeon for the Menai Bridge District, County Anglesey. R. F. Yencken, L.R.C.P.&S.Edin., L.F.P.S.Glasg., District Medical Officer of the Bridport Union.

ERRATUM.—Dr. J. Wilson Adam has been appointed Medical Officer to a section of the Aberdeen Town Council employes, and not M.O.H. as stated in our last issue.

"The Hospital" Institutional Library.

"Hospitals and Asylums of the World." 4 Vols., with a Portfolio of Plans, complete £12 12s.

"Burdett's Hospitals and Charities, 1904." 5s. net.

"Burdett's Official Nursing Directory." 8s. net.

"Cottage Hospitals, General, Fever, and Convalescent." 10s. 6d.

"Uniform System of Accounts for Hospitals and Public Institutions." New Edition. 4s. net.

"Hospital Expenditure: The Commissariat." 2s. 6d.

"A Legal Handbook for the Use of Hospital Authorities." 2s. 6d.

"The Cottage Hospital Case Book or Register of Patients." 10s. and 12s. 6d.

All these are published by the SCIENTIFIC PRESS, Ltd., and may be obtained through any bookseller, or direct from the publishers 28 and 29 Southampton Street, Strand, London, W.C.

Medical Appointments.

HOUSE SURGEON required at once for The Anti-Vivisection Hospital, Battersea. Testimonial to the SECRETARY. (1848)