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PUBLIC HEALTH

MAGAZINE

AND
LITERARY REVIEW.

Edited by GEO. A. BAYNES, M.D., &c., &c.

OCTOBER, 1876.

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PUBLIC HEALTH MAGAZINE

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VOL. II.]

OCTOBER, 1876.

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Original Communications.

THE RECENT CONFERENCE ON THE HEALTH AND
SEWAGE OF TOWNS.

BY JAMES H. SPRINGLE, C. E.

Early in the present year it was suggested by prominent scientific men in Great Britain that the Society for the encouragement of Arts, Manufacture, and Commerce, should hold a conference on the "Health and Sewage of Towns," to which all parties interested in these questions should be invited to communicate their views by reading papers and by discussion. Reports were also invited from all the towns in Great Britain as to how the sewage and excreta were dealt with in each locality, with the cost and other particulars, including population and death-rate as far as obtainable. Communications on these subjects were also invited from the principal engineers and cities on the Continent; and a large amount of valuable information was received, including a paper from Captain Liernur, inventor of the pneumatic system for removing the excreta of towns, and five separate papers on the Liernur plan, now in operation in Amsterdam, Dordrecht, Leyden, Prague, Brunn, Olmutz, and Vienna. There was also an interesting paper on sewage irrigation in the vicinity of Paris, and another on the sewers and sewerage of Florence. Papers were also read and discussed by many of the principal engineers engaged on extensive sewer works, and by

representatives of the different companies engaged in the utilization of sewage and preventing the pollution of rivers; and it may, I think, be safely asserted, that not only was there a larger amount of information collected and discussed than was ever brought together before, but information also of the most matured and recent kind.

The following conclusions of the Council on the results of this conference, which was held in London on the 9th, 10th, and 11th of May last, are, in my opinion, of great value as constituting a "platform," so to speak, of the present position of the "Health and Sewage of Towns," question, and a basis upon which further inquiries can be instituted and carried on :

"The Chairman of the Conference and the Executive Committee, after having carefully considered the information furnished from the various localities, as well as the facts brought forward during the conference, have to submit the following as the conclusions to which such information appears to lead :—

"First—In certain localities, where land at a reasonable price can be procured, with favorable natural gradients, with soil of a suitable quality, and in sufficient quantity, a sewage farm, if properly conducted, is apparently the best method of disposing of water-carried sewage. It is essential, however, to bear in mind that a profit should not be looked for by the locality establishing the sewage farm and only a moderate one by the farmer.

"Second—With regard to the various processes based upon subsidence, precipitation, or filtration, it is evident that by some of them a sufficiently purified effluent can be produced for discharge, without injurious result, into water courses and rivers of sufficient magnitude for its considerable dilution; and that for many towns where land is not readily obtained at a moderate price, those particular processes afford the most suitable means of disposing of water-carried sewage. It appears, further, that the sludge (precipitated sediment) in a manurial point of view is of low and uncertain commercial value; that the cost of its conversion into a valuable manure will preclude the attainment of any adequate return on the outlay and work-

ing expenses connected therewith, and that means must therefore be used for getting rid of it without reference to possible profit.

“ Third—In towns where a water-carried system is employed, a rapid flow, thorough ventilation, a proper connection of the house drains and pipes with the sewers, and their arrangement and maintenance in an efficient condition, are absolutely essential as regards health; hitherto sufficient precautions have rarely been taken for efficiently ensuring all the foregoing conditions.

“ Fourth—With regard to the various dry systems, where collection at short intervals is properly carried out, the result appears to be satisfactory, but no really profitable application of any one of them appears as yet to have been accomplished.

“ Fifth—The old midden or privy system in popular districts should be discontinued and prohibited by law.

“ Sixth—Sufficient information was not brought forward at the Conference to enable the Committee to express an opinion in regard to any of the *foreign systems*.

“ Seventh—It was conclusively shown that no one system for disposing of sewage could be adopted for universal use; that different localities require different methods, to suit their special peculiarities, and also that, as a rule, no profit can be derived at present from sewage utilization.

“ Eighth—For health's sake, without consideration of commercial profit, sewage and excreta must be got rid of at any cost.

“ The Executive Committee, whilst abstaining from submitting any extensive measures, have no hesitation in recommending that the prevention of dangerous effects from sewage gases should receive the immediate attention of the Legislature, and they submit the following resolutions as the basis of petitions to Parliament:—

“ First—That the protection of public health from typhoid and other diseases demands that an amending Act of Parliament be passed, as soon as possible, to secure that all house drains connected with public sewers in the metropolis and towns having

an urban authority should be placed under the inspection and control of local sanitary authorities, who shall be bound to see to the effective construction and due maintenance of all such house drains, pipes, and connections. Provisions having this object in view already exist in the "Local Management," the "Public Health," and the "Sewers" Acts; but practically they seem scarcely sufficient for the purpose.

"Second—That plans of such drains and connections be deposited in the charge of the respective local authorities, who shall be bound to exhibit them and supply copies of them to the public on payment of a moderate fee.

"Third—That the owners of houses be compelled by law to send to the respective local authorities, within a specified time after the passing of the Act, plans of all house drains on an appointed scale."

You will see from the above-mentioned "conclusions" of the Committee that the question of ventilating the sewers and disposing of sewer gases is very far from being settled. It is also satisfactory to note that the very positive recommendations of the Committee respecting house drainage and its connections with the common sewers are identical with those published last year in the "Public Health Magazine" in "Notes on Household Sanitary Matters;" and it may not be out of place to mention, in connection with the subject of sewer ventilation, that I have a number of reports from towns and cities in Great Britain where the plan of ventilating sewers by means of ventilating shafts and factory chimneys has been in successful operation for many years; while the mode of ventilation with charcoal ventilators placed in the water gullies, has gradually fallen into disuse. Even at Croydon, where a few years ago charcoal ventilators were considered to be a triumphant success, Dr. Alfred Carpenter stated at the "Conference" last May "that they had all been removed."

MONTREAL, September 9th, 1876.

Reviews.

A HISTORY OF ENGLISH DRAMATIC LITERATURE TO THE DEATH OF QUEEN ANNE. By Adolphus William Ward, M.A., 2 Vols. London: Macmillan & Co. (From C. Hill, Dorchester street).

No work, during recent times, has issued from the press, which is more deeply interesting to the student of English Literature than these volumes by Professor Ward. In the space of about fourteen hundred pages he has endeavored to trace the origin, and to sketch the most important part of the history of a literary growth, which he has long studied with no common love. He claims for his book no merit beyond that of an endeavor in the direction of completeness within definite limits: but it is to be hoped that his survey of our Dramatic Literature which terminates with the death of Queen Anne, the last of our Stuart sovereigns, will, if opportunity favors him, be continued to the present time.

Under any circumstances, we are grateful to him for the immense amount of elaborate research that has necessarily been expended on the volumes lately published. They form an admirable supplement to Payne Collier's *Annals of the English Stage*; and the student who possesses both these works will be enabled to peruse our greatest dramatic poets by the light of accurate knowledge and intelligent criticism. In the small space at our command we can only indicate briefly the main points of interest in Professor Ward's volumes. The chapters on the origin of the English Drama, and the beginnings of the English

Regular Drama, contain information laboriously sifted from innumerable trustworthy sources, while the pages devoted to the consideration of the lives and works of Shakspeare's predecessors, and of the later Elizabethan dramatists, are from the very nature of the subject, no less than from the skill of the writer, full of vivid interest. The analysis of the plots, and the comments on the style and characters of the plays of the various authors, cannot fail to be of the highest value in directing students of both sexes what to select for reading, and what to avoid, in the prolific Dramatic Literature whose treasures are disclosed to their eyes.

About two hundred and fifty pages are taken up with Shakspeare and his works, and a useful account is given of the tests to be applied in endeavouring to fix approximately the chronological order of the unrivalled plays. Ben Jonson seems to be a great favourite with Professor Ward, and the reasons which justify his admiration are stated with remarkable lucidity and critical acumen.

Having recently had occasion to censure a writer for having (in his book entitled *Bacon versus Shakspeare*,) traduced the fair fame of one of Shakspeare's greatest friends and admirers, we may be pardoned by our readers for quoting from Professor Ward's first volume the following corroboration of our views: "It may indeed be questioned whether the long-prevalent notion of Jonson as a quarrelsome egotist would have maintained itself *had it not been for the perverse ingenuity which endeavoured to fasten on his memory the charge of a consuming jealousy against the greatest of all his contemporaries.* While on the one hand, we cannot permit ourselves to give absolute credence to most of the pleasant traditions concerning the personal intimacy between Ben Jonson and Shakspeare—and pleasant they nearly all are—it must, on the other hand, be asserted that the supposed proofs of Jonson's malignity against Shakspeare as a writer, have collapsed before a close enquiry into their foundation. The very fact of his having been invited to write the verses, *To the memory of my beloved Master William Shakspeare, and what he hath left us*, (which were printed with Jonson's name under the portrait of Shakspeare prefixed to the First Folio) shows the light in which

Shakspeare's old fellow-actors regarded the relation between the poets. To me, words have no meaning if these lines are to be regarded as grudging, or as anything but the tribute of true friendship and loving admiration. But it was not on these well-known passages that the attacks of Ben Jonson, as a malignant caviller against his greater fellow-poet, were founded. A diligent search was made in Jonson's plays for passages which might be construed into allusions to productions of Shakspeare, and, after a number had been found, which were regarded as indubitable sarcasms, it was argued that cumulatively they proved envy and malice, on the part of their author. With the aid of a previous essay by Gilchrist, in the same direction as his own, *Gifford, in his edition of Ben Jonson, applied his trenchant intellect to an examination of all the passages in question, and arrived at the result that the charge which they were supposed to substantiate was to be absolutely and altogether rejected. He has done the task once for all, and to his essay nothing remains to be added.*" We hope that this declaration by Professor Ward of his deliberate conviction after a careful study of the question, will satisfy Mr. King that he has been too hasty in condemning Ben Jonson, on insufficient grounds, for envy of and unkindness to his great contemporary.

Four months ago we pointed out that the author of *Bacon vs. Shakspeare* had also fallen into the error of stating that Cervantes and Shakspeare had died *on the same day*. Professor Ward, in his first volume, notices that Ticknor, in his *History of Spanish Literature*, Vol. II. p. 132, has corrected the mistake, and explained how it arose. In the June number of this Magazine, we had made the same reference to Ticknor, among other authorities that we quoted in reference to this error.

Many will doubtless wish that it had been possible within Mr. Ward's limits, to give illustrative quotations from the less accessible old dramatists. Lamb's *Specimens* will in a measure supply the needs of the ordinary student, but those who desire fuller acquaintance with this branch of literature, had better purchase Mr. Hazlitt's new edition of Dodsley's *Select Collection of Old English Plays*. At any rate, ten dollars will be well invested in buying Professor Ward's most interesting volumes.

OUR BIRDS OF PREY, OR THE EAGLES, HAWKS AND OWLS OF CANADA, by Henry G. Vennor, F.G.S, of Geological Survey of Canada. (Dawson Brothers). In cloth extra, \$12.00. In half morocco, \$15.00.

Canada may well feel proud of the place her sons are taking in the world of natural science, and her prestige will be heightened by a new work on "Ornithology," by Mr. Henry G. Vennor, entitled "Our Birds of Prey." The author is already well known in connection with the Geological Survey of Canada, so that we can receive the work as an authority. Mr. Vennor, in prosecuting his labors in the Survey Department for the last thirteen years, has had ample opportunities, none of which were neglected, for observation in regard to the habits, &c. of the birds of prey of Canada, and also for an excellent collection of specimens. He is a close and successful student of nature, so much so that his name is now a household word as a weather prophet. We heartily congratulate him on his maiden effort, and hope he will receive the encouragement and support he is justly entitled to, so that he may go steadily forward till Montreal may claim him as the Canadian Audubon. Mr. Vennor's style of conveying his information is easy and pleasant, and as free as such a work can be from professional technicalities. It can be read with equal pleasure, by the scientist and the general public. He corrects many errors that have for some time existed in this department of Ornithology. Among the full page photographs may be mentioned the following—many of which are most beautifully executed, and reflect great credit upon the artist, Mr. Wm. Notman :—

Duck Hawk, Peregrine, Pigeon Hawk, Merlin, Gyr-Falcon, Gyr-Falcon, Dawson's Falcon, Sparrow Hawk, Goshawk (adult), Goshawk (young), Cooper's Hawk, Chicken Hawk, Sharp-shinned Hawk (male and female), Red-tailed Buzzard, Hen Hawk, Red-shouldered Buzzard, Winter-Falcon—Swainson's Buzzard ; Canada Buzzard, Broad-winged Buzzard, Rough-legged Buzzard Black Hawk, Marsh Hawk, Harrier, Golden Eagle, 35 years old ; Bald-Eagle, White-Headed Eagle, Osprey, Fish Hawk, Great Horned Owl, Cat Owl, Screech Owl, Mottled Owl, Long-Eared

Owl, Short-Eared Owl, Great Gray Owl, Cinerceous Owl, Barred Owl (male and female), Sparrow Owl, Richardson's Owl (male and female) Acadian Owl, Saw-whet Owl, Snowy Owl, White Owl (male), Snowy Owl, White Owl (female), Hawk Owl, Day Owl.

Marryatt's novels are said to have made many a sailor, and we venture to predict that "Our Birds of Prey" cannot fail to gain many a student and follower to the world of natural science. We do not mean to say that the book is faultless, or that Mr. Vennor could not improve upon it, but we can say with truth, that it is the work of one who has carefully studied and successfully mastered the science he has laid before the public, and, in return, the public cannot do less than give it that encouragement that we should always accord to native talent when worthy. The letter-press and general appearance of the work are also good, and reflect credit upon Dawson Bros.

THE PILOT AND HIS WIFE. By Jonas Lie. Translated by Mrs. Ole Bull. Chicago: S. C. Griggs & Co., 1876. (From C. Hill, Dorchester Street.)

The jaded novel-reader who longs for a fresh sensation can procure it by reading *The Pilot and his Wife*. It is the third novel of Jonas Lie, a Norwegian lawyer, and a man of independent genius, and was originally published at Copenhagen in 1874. Highly commended at the time of its publication, by the *London Spectator* and the *North American Review*, it has recently been translated, for the first time, by the wife of the famous Norwegian Violinist, Ole Bull. The book is written in a terse and picturesque style, which is fairly rendered in the English version, but its main interest and charm lie in its exquisite pathos and its subtle analysis of carefully discriminated character.

The following outline of the plot may prove interesting to our readers, though, of course, it can do no more than allude to the startlingly realistic pictures with which the book is crowded.

Far out at sea, at the mouth of Arendal Harbor, stands now the Little Torung Lighthouse, built on the islet of the same name. Wild and lonely, it rises out of the ocean, washed over by the

spray on stormy nights, and battered by sea-fowl that meet their death in dashing against the thick panes of its lantern. Long before the lighthouse was built, one solitary hut stood on the Little Torung, protected and nearly concealed by a hollow in the rock. Here lived a desolate old man, a shoemaker, who eked out a livelihood by rowing into the town with fish. All that was known about him was, that he had had a drunken son who had married disgracefully, and that, when this son was drowned, the old man and his wife had gone out to the lonely island, taking with them their orphan grand-daughter, Elizabeth. The old woman died at last, and Old Jacob lived alone with the little girl, a wild creature, with thick heavy hair about her eyes, and a shaggy dog forever at her heels. The child grew up with but little knowledge of other human creatures. Now and then a boat came out to the island on some errand, and twice she had been to see her foster-mother in Arendal ; but otherwise she and the old man lived on their desolate island, unchanged.

At last, Salve Kristiansen, a handsome young fellow of eighteen, son of a man in Arendal, comes out to the Little Torung on some message, and a new element enters into Elizabeth's existence. The first meeting between the sharp, precocious boy, who is already in great request at every dance, and the awkward, ignorant girl of fourteen, too profoundly unsophisticated to be shy, is described very humourously and graphically. At first, Salve laughs at her, but an attachment soon springs up between them : and it is agreed that when he comes back from his next voyage—for he is a sailor—they will be betrothed. He goes to Havre and Liverpool, and each time that he comes back he finds her grown, and altered for the better—more wise and more womanly. She is now often in the town, but always preserves her simplicity of mind.

There is a young naval officer, Carl Beck, who now comes on the scene. He is about the same age as Salve, but forms a complete contrast in character. Their personal qualities throughout the book are in studied opposition. One is sane, easy-going, and superficial—the other, comparatively, insane, passionate, and intense. The young officer, while sailing with a party of ladies

and friends, is benighted in the neighborhood of the Little Torung, and claims the hospitality of Old Jacob. He is struck by Elizabeth's beauty, which has developed with time, and while his *corvette* is in the harbor, he often comes out to the island to shoot. Prompted by some instinct, Elizabeth takes care never to be much in his company, unless Old Jacob is with them also.

Salve, meanwhile, has been to Boston and Quebec, winning golden opinions by his readiness and usefulness on board ship. After an unusually long voyage, he finds himself nearing the coast of Norway, when a terrific storm rises, the ship loses its bearings, and will probably in a few minutes be dashed to pieces on the rocks that start up everywhere along that frightful coast. Suddenly, through the darkness, Salve believes that he sees the lights of Elizabeth's room on the Little Torung. The captain (who is Carl Beck's father), gives up the helm to him in despair, and Salve safely pilots the vessel into Arendal Harbor, and finishes his voyage with extreme *éclat*. It is impossible to praise too highly the art and vigour of this exciting scene.

On his return, he finds Old Jacob dead, and overhears two sailors talking about Elizabeth, who, they say, has gone to live with the young Lieutenant Beck. Salve loses all presence of mind at hearing this story, which, in point of fact, has its true side. Carl Beck, in the kindness of his heart, has found a home in his mother's house for Elizabeth, left homeless and helpless; his after-thought being that he will have her educated, and in due time ask her to be his wife. Elizabeth, all this time, is waiting, sick at heart, for Salve: but when, at last, he comes to see her, and claim her promise, he is so violent that her pride is roused, and she answers him shortly and coldly. He goes mad with passion, drinks hard, assaults a man, and is put in irons till his ship leaves port.

The construction of the story now proceeds in the most ingenious way. The mother and sisters of Carl Beck have no suspicion of his wishes: but, at last, perceiving that Elizabeth's position is a compromising one, he generously offers to marry her at once. She wavers for a day. He, however, does not suspect her reasons, and to assure her of his rectitude, writes to his

father that he is engaged to Elizabeth, and tells her that he has done so. She is then forced to inform him by a note that she loves another man, and at once leaves the house. She goes to her foster-mother, and hearing of respectable people in the town who are going to settle in Holland, hires as servant to them, and sails away.

Meanwhile, it will be remembered that Carl's father is captain of Salve's ship. He has somehow taken a dislike to Salve, and when he receives the letter of his son, angrily blurts out the news to the young man, whom he knows to be Elizabeth's lover. They are lying in the roads of Monte Video. We must hurry over the scenes that follow. Salve deserts at Rio Janeiro, meets with strange adventures there, which are described most picturesquely, and finally ships as common sailor on board a kind of pirate-vessel, where every man's hand is against his neighbor. He becomes the wildest and roughest of the whole crew, and after living a lawless life for several years on American waters, at last grows weary of it all, and returns, in a softened frame of mind, to Arendal. He there learns that Elizabeth had never married Carl, and, after a severe struggle between pride and old love, goes over to Holland to find her. Then follow some charming passages, describing the life in Amsterdam, and the simple, sudden way in which the patient and faithful Elizabeth takes up the broken thread of her life. Finally, the lovers are married, and Salve becomes a pilot: but the wild life he has led has darkened his character, and he becomes the victim of an insane jealousy. It is only after great sorrow that the true story of the past is clearly developed to him by the hand of his wife, and the curtain falls on a peaceful end of all the pilot's troubles.

A more fascinating study of character has rarely been offered to the reading public, and the book deserves to be widely circulated.

PUBLIC HEALTH MAGAZINE

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OCTOBER, 1876.

BATHING—ITS NECESSITIES.

The beneficial effects, both moral and physical, of the bath, are too obvious to be enlarged upon. Gibbon says that for centuries Rome needed no physicians but the bath; and there is no doubt that the bath is a preventive as well as a remedial agent.

The skin is continually subjected to abrasion, and the processes of reproduction and decay; hence the cuticle is being constantly thrown off as effete and useless matter in the shape of very minute scales or dust, and this becoming mixed with the oily and saline matters of the skin, is sufficiently adhesive to attach itself to the surface of the body and clothing, and to attract waste particles of the dress, and dust and soot floating in the air. Unless the skin, therefore, be frequently washed, the channels of perspiration become choked, and the clothing unfit to be worn. The result of the pores of the skin being thus obstructed is impeded transpiration, by which its functions as a respiratory organ are suspended.

This adhering pellicle of refuse matter forms a favorable medium for the absorption and transmutation into the body of *effluvia, miasmata, poisonous gases, and the infectious and contagious matters of disease*. Should the skin long continue dirty, the blood is deprived of one of its sources of oxygen, and one of its outlets of carbon, and matters which should be thrown out by the skin are retained in the system, and serious effects may ensue. Besides this, bathing promotes personal comfort and personal beauty.

The following table will show the ranges of temperature of the water appropriate to the respective baths—according to the common nomenclature:—

	Temp. Fahr.
Cold bath.....	33° to 75°
Temperate bath.....	75° to 82°
Tepid bath.....	82° to 90°
Warm bath.....	90° to 98°
Hot bath.....	98° to 112°

Cold bathing in this country is only suited to the healthy and vigorous, and can only be safely practised in the warmer months of the year, and in a mass of water sufficient to permit of the heat of the body being maintained by swimming or other active exercise. The cold bath, medically considered, is tonic, stimulant and restorative when judiciously taken, and when not too long continued or too often repeated.

When beneficial to the bather, he feels a pleasant glow on the surface of the body immediately following it; if a sensation of coldness or shivering ensues, it acts injuriously and should not be repeated. If the bather remains too long in the water, it has a sedative effect. The sedative effect of sea and mineral waters is much less than that of pure water, or of spring or river water.

Baths for the cure of disease, especially skin affections, are much needed here in Canada. Also those general wash-houses that are so deservedly popular on the Continent and in England are much required. The Montreal Swimming Club have had much encouragement in their undertaking. It was organised only about a month ago—and now numbers over 400 members, with the following officers:—President, His Worship W. H. Hingston, M. D.; Vice-Presidents, C. O. Perrault, Vice-Consul of France; N. Mercer, Esq., James O'Neil, Esq., Col. Frank Bond, Dr. G. T. Roddick; Treasurer, — Simpson, of the Bank of Commerce; Secretary, Mayor J. P. Fletcher.

Committee:—Col. Napoleon Labranche, 65th Regt.; Dr. Geo. A. Baynes, A. G. Lord, R. Howard, Fred. Hart, S. C. Stevenson, W. W. Beaufield; Major Kenneth Campbell, 5th Fusileers; Capt. Sully, V. V. R.; Major Gardner, 6th Fusileers;

Capt. Gordon, M. G. A.; Capt. Tees, Hussars; Dr. Laroque and Dr. Dugdale, Health Officers; W. W. Moore, M. P. McElhenny, J. Black, Mr. Turton, Adman Kingman, E. D. Gordon.

They have held a swimming tournament, giving the following prizes to the successful competitors:—

600 YARD RACE.—First prize, James Morrison, silver cup, presented by Savage & Lyman, and \$2; 2nd, W. W. Moore, \$5; 3rd, T. R. Howard, portmonnaie, presented by G. Murray & Co., and \$2.

300 YARDS RACE.—First prize, W. F. Presgrave, album, presented by Drysdale & Co., and \$4; 2nd, G. D. Gordon, \$3; 3rd, M. J. O'Laughlin, chromo and \$1.

150 YARDS RACE.—First prize, James Morrison, \$6; 2nd, T. R. Howard, \$2 and a copy of Brown's poems, presented by Mr. G. W. Clarke; 3rd, H. A. Crampton, \$1 and a copy of Longfellow's poems, presented by Mr. Charles McAdams.

100 YARDS RACE.—First prize, W. F. Presgrave, cup and \$2; 2nd, E. D. Gordon, \$3 and a Bible; 3rd, Arthur Hadrill, a knife and \$1.

50 YARDS RACE (for boys under 16).—First prize, A. P. Sanson, cup and \$2; 2nd, Arthur Hadrill, knife and \$1; 3rd, ——— Murray, \$1.

A public meeting will shortly be held to consider the advisability of forming a company to establish public bathing and wash-houses, and we recommend all our readers to join in this undertaking and subscribe for shares.

—:o:—

PHYSICAL EDUCATION.

We have great pleasure in drawing attention to Mr. Barnjum's announcement of his classes for the session 1876-77. This gentleman is doing a most excellent work among us, and Montreal may be proud of possessing such a thoroughly competent and intelligent physical educator. No city, either in Europe or on this continent, enjoys greater advantages in this respect than our own.

Physical training is of vast importance to the well being of all ; but more especially in the case of children. The training of these latter, however, involves the greatest care and caution. No mere mechanical teacher will suffice ; he must be one thoroughly versed in physiology and anatomy, and perfectly understanding the various needs of the tender forms committed to his care, possessing also a thorough love for his work, cheerful and full of ardour, and having a firm belief in the importance and reality of what he teaches.

Such a one, all who know Mr. Barnjum will admit him to be ; and the success which has attended his labours speaks volumes for the correctness of his mode of teaching. The medical faculty, we know, award him their confidence ; and for our own part, we most earnestly recommend all who value the welfare of their children to entrust them at once to his care.

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SMALL-POX AND PUBLIC VACCINATORS.

In view of the increasing prevalence of small-pox in Montreal, the Board of Health have seen fit to appoint public vaccinators, whose duty it shall be to visit from house to house, and perform vaccination upon all who are unvaccinated. The following is taken from a minute of the Board, held Sept. 23rd :—

The question of vaccination having been brought before the Board by the Mayor, it was resolved, *nem. con.*,

1st. That public vaccinators be appointed for those who are willing to submit to be vaccinated by them.

2nd. That virus be furnished to the vaccinators by the Board of Health, which holds itself responsible for the purity of the lymph used.

3rd. That cards be furnished those who are unwilling to be vaccinated by the *public* vaccinators, to entitle them to be vaccinated, gratuitously, by their family physician.

4th. That proper instructions be furnished to the vaccinators, to which they should conform.

5th. That forms of certificates of successful vaccination be furnished in duplicate to each vaccinator, one to be kept by the parent, and the other to be delivered at the Health office.

6th. That similar forms of certificates be furnished to every properly qualified medical practitioner in the city.

7th. That all properly qualified medical practitioners residing in the city, and not included in the list of public vaccinators, be requested to aid the Board by furnishing the necessary legal certificate, in order to secure complete statistics relating to vaccination; and that stamped envelopes be furnished them for the purpose. Vaccinations gratuitously performed at the offices of private medical practitioners will be paid for at the Health Department on the production of the certificate of vaccination.

8th. That a supply of pure vaccine virus be at once provided from Great Britain and Boston.

M'CAULEY'S IMPROVED ODORLESS PROCESS.

The Proprietors, Messrs. P. Hoddy & Co., of this process for removing night soil, &c., have proposed to use it in Montreal. Space will not permit us giving any extended notice of the invention this number, but we can say that the system has been endorsed by the leading sanitary authorities on the other side of line 45.

Its use here would save us from much of the intolerable nuisance that at present exists, and also free us from the risk that the citizens are exposed to from infection. These reasons alone are sufficient to warrant its universal adoption.

FOREIGN HEALTH STATISTICS.

United Kingdom of Great Britain, during four weeks, ending June 24th, 22,695 births and 13,197 deaths were registered in London and twenty-two other large towns. The natural increase of the population was 9,502. The mortality from all causes was at the average rate of 21.50 deaths annually in every 1,000 persons living. Other foreign cities at most recent dates, annual ratio of mortality per 1,000: Calcutta, 23; Bombay, 36; Paris, 23; Brussels, 25; Amsterdam, 22; Rotterdam, 26; The Hague, 28; Copenhagen, 25; Stockholm, 28; Christiania, 18; Berlin, 39; Hamburg, 23; Breslau, 38; Munich, 33; Vienna, 25; Buda-Pesth, 44; Rome, 27; Naples, 28; Turin, 23; Alexandria, 38.—*The Sanitarian*.

PUBLIC HEALTH IN THE UNITED STATES.
Mortality per 1,000 inhabitants, annually, from all causes and certain special causes.—(THE SANITARY).

	Deaths under 5 years.	Total No. of deaths from all causes.	Per 1,000.	By Violence.	Small-Pox.	Diphtheria.	Scarlatina.	Mensles.	Group.	Whooping Cough.	Typhoid Fever.	Typhus Fever.	Fueral Diseases.	Dysenterical Diseases.	Consumption.	Lung Diseases other than Consumption.
New York, 1,081,244—4 weeks ending July 29.....	2562	3032	28.12	119	9	76	57	20	12	24	16	3	28	3365	440	168
Philadelphia, 825,000—4 weeks ending July 29.....	1678	1938	23.61	36	39	36	23	14	17	17	6	4	6	796	211	85
Brooklyn, 506,000—4 weeks ending July 29.....	1178	1438	28.41	16	1	27	18	17	14	14	6	4	3	771	118	29
St. Louis, 450,000—month of July.....	331	638	14.10	16	1	27	18	17	14	14	6	4	3	771	118	29
Chicago, 420,000—3 weeks ending July 29.....	624	753	17.91	24	3	70	54	1	3	11	4	1	4	141	38	11
Baltimore, 360,000—4 weeks ending July 29.....	537	909	25.26	27	3	70	54	1	3	11	4	1	4	233	43	10
Boston, 342,000—4 weeks ending July 29.....	466	800	23.40	34	24	21	21	2	1	6	20	1	3	306	80	16
Chicagoland, 266,000—4 weeks ending July 29.....	297	526	19.80	11	25	8	1	2	1	6	16	1	4	462	92	31
San Francisco, 276,000—month of June.....	283	561	24.48	31	28	15	12	5	6	11	10	1	4	72	44	36
New Orleans, 210,000.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington, 160,000—4 weeks ending July 29.....	285	519	32.40	19	9	4	11	3	1	17	.....	.....	.....	132	48	16
Pittsburgh, 145,000—month of July.....	228	341	23.67	17	9	4	11	3	1	.....	.....	.....	.....	93	26	14
Newark, 126,000.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Providence, 100,976—month of July.....	142	238	23.3	8	4	2	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Milwaukee, 100,781—month of July.....	122	179	17.31	8	4	2	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rochester, 70,000.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond, 72,600—4 weeks ending July 29.....	118	207	28.11	6	2	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Haven, 69,000—month of July.....	108	168	24.36	2	2	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, 60,000—month of June.....	31	66	16.60	8	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mobile, 60,000—month of July.....	33	161	26.83	2	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dartmouth, 50,000—month of July.....	33	161	31.07	3	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington, 47,000—month of July.....	33	161	34.26	2	1	2	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, 47,000—month of July.....	75	102	21.70	2	1	2	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Worcester, 28,000—month of July.....	75	102	36.43	2	1	2	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo, 150,000—month of July.....	112	213	14.20	21	2	2	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Knoxville, 13,000—month of July.....	7	13	10.00	2	2	2	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Faterson, 39,000—month of July.....	97	155	39.75	3	10	10	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Petersburg, 20,000—4 weeks ending July 29.....	83	157	77.00	8	3	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Selma, 7,600—month of July.....	27	44	57.87	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elmhurst, 20,000—month of July.....	27	44	22.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hudson Co., N. J., 170,859—month of June.....	30	325	19.00	27	16	21	12	6	2	6	3	1	1	20	31	36
Yonkers, 17,500—month of July.....	30	430	24.57	14	7	7	9	3	1	3	17	.....	.....	42	44	22
Oakland, 26,000—year 1876.....	47	338	13.02	14	7	7	9	3	1	3	17	.....	.....	51	51	39

POPULATION AND REGISTRATION AT MOST
 RECENT ESTIMATES AND DATES.

MORTALITY OF THE CITY AND SUBURBS OF MONTREAL.—(Con.)

CLASS.	ORDER.	DISEASES.	Total by Sex.		Total both Sexes.		
			Male.	Female.			
		<i>Brought forward</i>	171	151	322		
III. LOCAL.	II. Or- gans Cir- culation.	1. Cephalitis	13	5	18		
		2. Apoplexy	2	3	5		
		3. Paralysis		2	2		
		4. Insanity					
		5. Chorea					
		6. Epilepsy	2		2		
		7. Tetanus					
		8. Convulsions		2	2		
		9. Other Brain diseases, &c.	3	2	5		
		1. Carditis, Pericarditis and Endocarditis....	9	7	16		
		2. Aneurism	1		1		
		3. Other Heart diseases, &c.					
		1. Epistaxis	8	7	15		
		2. Laryngitis and Trachitis	1	2	3		
		3. Bronchitis	3	4	7		
4. Pleurisy							
5. Pneumonia	11	2	13				
6. Asthma							
7. Other Lung diseases, &c.		2	2				
III. LOCAL.	III. Respiratory Organs.	1. Gastritis					
		2. Enteritis	1	2	3		
		3. Peritonitis					
		4. Ascites	1		1		
		5. Ulceration of Intestines					
		6. Hernia	2	1	3		
		7. Ileus and Intussusception					
		8. Stricture of Intestines					
		9. Fistula					
		10. Diseases of Stomach and Intestines, &c.	1		1		
		11. Pancreas Diseases, &c.					
		12. Hepatitis	1		1		
		13. Jaundice		1	1		
		14. Liver Disease, &c.	3		3		
		III. LOCAL.	IV. Organs of Digestion.	15. Spleen Disease, &c.			
1. Nephritis							
2. Ischuria							
3. Nephria (Bright's Disease)	1				1		
4. Diabetes							
5. Calculus, (Gravel, &c)							
6. Cystitis and Cystorrhœa	1				1		
7. Stricture							
8. Kidney Disease, &c.	1				1		
VI. Gen- erative Organs	V. Urinary Organs.			1. Ovarian Disease		1	1
				2. Disease of Uterus, &c.			
VII. Or- gans of Loco- motion	VI. Or- gans of Loco- motion			1. Arthritis			
				2. Joint Disease, &c.			
				<i>Carried over</i>	236	192	428

MORTALITY OF THE CITY AND SUBURBS OF MONTREAL.—(Cont.)

CLASS.	ORDER.	DISEASES.	Total by Sex.		Total both Sexes.	
			Male.	Female.		
		<i>Brought over</i>	236	192	428	
V. VIOLENT DEATHS; IV. Developmental Diseases	VII. Integumentary System.	1 Abscess.....	1		1	
		2. Ulcer.....				
		3. Skin Diseases, &c.....				
		I. Of Children.	1. Stillborn.....	1	7	8
			2. Premature Birth.....	9	4	13
			3. Infantile Debility.....	32	23	55
	4. Cyanosis.....					
	5. Spina Bifida and other Malformation....					
	II. Of Women	6. During Dentition.....	7	12	19	
		1. Paramenia.....		1	1	
	III. Of Old People	2. Childbirth.....		8	10	
	IV. Of Nutrition.	1. Old Age.....	2	8	10	
		2. Atrophy and Debility.....	5	1	6	
		I. Accidents or Negligence.	1. Fractures, Contusions, Wounds.....	1	1	2
			2. Burns and Scalds.....			
			3. Poison.....			
			4. Drowning.....			
			5. Otherwise.....	3		3
		II. Home Accidents.	1. Murder, Manslaughter.....	5	2	7
			2. Execution.....			
			III. Suicide.	1. Wounds.....		
	2. Poison.....					
	3. Drowning.....					
IV. Other.	4. Otherwise.....					
	1. Chirurgici.....					
		Not known.....	2	5	7	
		Infection purulente.....				
		Emesis.....				
		Lock Jaw.....				
		Total.....	304	256	560	

SYNOPSIS OF METEOROLOGICAL OBSERVATIONS IN AUGUST FROM MCGILL COLLEGE OBSERVATORY.

* Barometer readings reduced to sea-level and temperature of 32° Fahr.
 † Pressure of vapor in inches mercury. ‡ Humidity, relative Saturation, 100
 ° Ten inches of snow is taken as equal to one inch of water.

Mean temperature of month, 70.092. Mean of mean maxima and minima temperatures, 70.02. Greatest heat was 92.2 on the 6th; greatest cold was 48.4 on the 21st,—giving a range of temperature for the month of 43.8 degrees. Greatest range of the thermometer in one day was 25.2, on the 30th; least range was 4.4 degrees on the 19th. Mean range for the month was 18.32 degrees. Mean height of the barometer was 30.0417. Highest reading was 30.289 on the 2nd; lowest reading was 29.653, on the 25th, giving a range of 0.636 inches. Mean elastic force of vapor in the atmosphere was equal to .5190 inches of mercury. Mean relative humidity was 68.74. Maximum relative humidity was 98 on the 10th. Minimum relative humidity was 44 on the 22nd. Mean velocity of the wind was 7 miles per hour; greatest mileage in one hour was 24 on the 27th. Mean direction of the wind, W. S. W. Mean of sky clouded was 43 per cent. Rain fell on 9 days. Total rainfall, 1.98 inches.

TOTAL MORTALITY BY AGES.

Under 1 year.....	250
From 1 to 5 years.....	144
“ 5 to 10 “.....	26
“ 10 to 15 “.....	14
“ 15 to 20 “.....	10
“ 20 to 40 “.....	52
“ 40 to 60 “.....	27
“ 60 to 70 “.....	11
“ 70 to 80 “.....	14
“ 80 to 90 “.....	6
“ 90 to 100 “.....	5
100 years and over.....	..
Not known.....	1
	<hr/>
Total.....	560

TOTAL MORTALITY BY NATIONALITY.

French Canadians.....	368
British Canadians.....	165
Irish.....	7
English.....	10
Scotch.....	3
Other Countries.....	6
Not known.....	1
	<hr/>
Total.....	560

TOTAL BY WARDS.

St. Ann's Ward.....	90
St. Antoine “.....	120
St. Lawrence “.....	54
St. Louis “.....	45
St. James “.....	95
St. Mary “.....	115
West.....	1
Centre.....	3
East.....	8
Not known.....	..
	<hr/>
	531

City Hospital.....	5
Hotel Dieu.....	13
Montreal General Hospital.....	6
Other Institutions.....	..
Foundlings.....	5
Outside City Limits.....	..
	<hr/>
Total.....	560

N. B.—The foundlings and deaths outside city limits are not included in classification of diseases, ages or nationalities.

Miscellaneous Selections.

AT WHAT PERIOD ARE SCARLATINA AND MEASLES MOST INFECTIOUS?

In his annual report, for 1875, Mr. George Turner, the Medical Officer of Health for Portsmouth, enters at some length into the question as to the period at which scarlatina and measles are most infectious. He has investigated the matter very carefully, and the following are the results arrived at. He says :—

“I find, generally speaking, the child or children first attacked are those who have gone to school, *i. e.*, those who have run the greatest risk of infection, and who consequently bring the infection to the rest of the family. I have compared the dates of the commencement of the disease in these children, and the commencement of those who have probably caught the disease at home.

I visited 41 houses in which measles had occurred, and obtained 24 cases which complied with the required conditions. The average period between the cases was 15 days. If, however, from the list, one case which occurred only two days after the first is eliminated, as it is manifestly not derived from the first, if two others also be rejected in which the series stood, (date of 1st) + 7 days = (date of 2nd) + 7 days = (date of 3rd) + 15 days = (date of 4th),

since there may be a doubt about the origin of the last two cases, and lastly the case of a baby, which occurred 42 days after the first case, and only other case in the house, on the plea that the time is improbably long, the period would be reduced to 13 days. I visited 45 houses in which scarlatina had occurred, and from them obtained 17 cases which complied with the

required conditions; the average interval was 12 days. If, however, the same corrections are pursued and a case of 21 days in the following series—

(date of 1st) + 14 days = (date of 2nd and 3rd) + 7 days = (date of 4th) be reduced to 7 days, and if in the following series,

(date of 1st) + 9 days = (date of 2nd) + 7 days = (date of 3rd) + 2 days = (date of 4th) + 2 days = (date of 5th).

If the intervals 9, 16, 18, 20 days be reduced to 9, 7, 9, 11 days, then the average is 10 days. For my present purpose I shall consider the shorter periods as the most correct; they are the least favorable for my opinion.

Watson and Niemeyer estimate the period of incubation of measles at 10 days; Trousseau, Niemeyer and Cullen all give 8th to the 9th day, as the time of the commencement of desquamation, thus making 18 to 19 days. The period of this disease, which is the most infectious, is therefore not that of desquamation, and this agrees with Niemeyer, who to the question, When is measles most infectious? replies—"With our present knowledge we should say it is most infectious when the eruption is out, that probably it is not infectious in the stage of desquamation, whilst numerous cases speak for its being so during the prodromal stage."* I should hesitate to state that measles was not infectious during the state of desquamation, and should not recommend any medical man to pronounce the danger of infection passed, until after desquamation had ceased.

Regarding the period at which scarlatina is most infectious, there is much greater room for difference of opinion. Trousseau considers that the period of incubation does not much exceed 24 hours, and quotes a case in point; other French authors give 3-5 days, 8 days, 15 days, 20 days, and even 30 days. The last three may be left out of consideration. Watson says it does not exceed 5-6 days, and gives a case in which the

* Niemeyer's Textbook of Practical Medicine, Vol. II. page 525, American Translation, 1873.

period of incubation did not last 48 hours, whilst, on the other hand, Niemeyer gives from 8 to 9 days. My own opinion inclines to the shorter periods. In all cases in which infectious diseases, such as syphilis, small-pox, &c., have been inoculated, the period of incubation is well defined, and for the same disease does not vary considerably; the shortest time therefore approximates most closely to the mean duration of the incubation, for in scarlatina and measles, the exact period at which the disease was contracted cannot be ascertained. The desquamation commences on 5th and 6th days; any length of incubation therefrom up to the end of the 4th day would place the most infectious period of the disease at the stage of desquamation. Whilst Niemeyer's incubation of 8-9 days, would fix it at the period of incubation itself, I cannot claim that the desquamation stage has been proved to be the most infectious; but, on the other hand, the probabilities seem to be against the greater danger of the eruption stage.

I would remark that the question under consideration is not as to any particular stage of the disease being infectious, but as to the most infectious period, and that in all cases the children were exposed to infection through the whole course of the disease; those who were predisposed to it would therefore fall victims early, and only those who had resisted the infection for a certain time would succumb to the disquamative stage. Thus there is a tendency to error, even supposing the last stage were really the most infectious, in favor of the eruptive stage theory. Moreover, cases frequently occurred in which children exposed to infection at the commencement of the disease, were removed from the neighborhood of the invalid, and contracted the disease on being again exposed to infection, at the latter end of the disquamative period when danger was no longer apprehended. I will relate a case in point. A gentleman took his children to the sea-side on 6th of November; a girl aged 4 years was taken ill on the 7th, the medical man pronounced the case to be scarlatina; on the 8th two other children were sent back to

their home, 60 miles away; but the baby, who was at the mother's breast, remained with the invalid, and was on several occasions in her room for a considerable time without experiencing any ill effects. The little girl recovered and remained at the sea-side until January 22nd, when every precaution as to disinfection having been taken, she returned home to her brother and sister; on the 25th January the sister aged 2 years was taken ill; she was attacked with a slight sore throat, a little rash and fever; she was instantly separated from the rest. On the 26th the brother, aged 4 years, was taken ill with sickness, and a sore throat and rash, which was scarcely perceptible; and on the same day the baby, aged 3 months, who had been exposed to all the previous illness, showed a slight rash, while the under nurse, a girl of 15, had a slight sore throat. On the 8th February, the nurse who was assisting the mother with the sick children suffered from a bad sore throat and sickness, but no rash was observed. In this case the little boy and girl must evidently have contracted the disease from their sister during the desquamative period, and at the very end of it, the 76th day.

In case those who have not had the opportunity of observing scarlatina to the very close of the desquamative period may be inclined to doubt the possibility of such a prolongation of it, I will refer them to Trousseau,* where he relates that he showed his class a woman in process of desquamation on the 70th day. It might be argued that the baby escaped the infection until again exposed to the fever in the eruptive stage, but the fact also admits of the following, and in my opinion more probable, solution. Children under 6 months old contract both measles and scarlatina with difficulty. Niemeyer is the only author, to my knowledge, who has observed this remarkable fact; but I have had the opportunity of confirming this observation by four well-marked cases in the last six months. The child in question only succumbed to prolonged

* Clinique Medicale, Tome I. page 107, 3rd edition.

exposure to infection. Parallel cases are frequently seen amongst medical men attending fever hospitals. These cases, too, place the period of incubation within 2 days, while the case of the nurse, who did not contract the disease until 14 days after the little girl whom she attended, tends to fix the period of greatest infection at the stage of desquamation.—*Public Health.*

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SICK NURSING: AN EMPLOYMENT FOR EDUCATED WOMEN.

A writer on this subject, in *Chambers' Journal*, gives us a notable example of women of what are commonly called the "upper classes," who have devoted themselves to the care of the sick, the experience of Miss Florence Lees, the friend and assistant of Miss Nightingale. She was the first student of the art of nursing who entered St. Thomas' Hospital, London, under the Nightingale Fund, as it is called; and since that time she has seen considerable service in the hospitals of the Continent in the Franco-Prussian War, and is now superintendent of the Metropolitan Institution for providing trained nurses for the sick poor. In an address on "Nursing the sick," recently given by Miss Lees before the National Health Society, she explained the working of this Nursing Institution, and the great benefit derived from its operations wherever they extend. Unconnected with any particular religious creed or denomination, the object of the association is to provide nurses for the sick poor in their own dwellings. Unless in a hospital, but few of our poorer neighbors know the luxury of a nurse in illness. With the best intentions in the world, neither the ability nor the time of the relatives of the sick admits of the necessary care and attention. Medicine given just when remembered, and dirt and squalor rendered more terrible and overwhelming than usual, from the extra demand which sickness makes on the resources of every household—these conditions must be apparent to all who have ever visited the sick poor in

their habitations. The district nurse changes all this. As far as possible, after she is called in, the sick-room assumes a different aspect; cleanliness takes the place of dirt; the atmosphere of disease is purified and changed, and many are the recoveries which can be traced mainly to her beneficent influence. The want of especial nursing is felt perhaps more terribly by poor than by rich patients, so few of the former class know even how to apply the simplest remedies, to prepare a poultice or to apply a fomentation; and it is with the hope of remedying this great deficiency, that the system of district nursing is being encouraged largely in London, and has already been most successful in Liverpool, Birmingham, and other large towns.

The nurses at present employed in London as workers amongst the poor are taken chiefly from the class that would otherwise become superior domestic servants. They are lodged and boarded in a district Home, of which it is contemplated to open three, as soon as possible, in different quarters of the metropolis. Two are already in full operation, containing six nurses each, who are lodged, fed, and superintended by a district lady manager. Every nurse is required to undergo one year's training in a hospital; and most of the large hospitals arrange to receive them. In the Nightingale training ward of St. Thomas' Hospital, the probationary nurses obtain a thorough professional education. As soon as the nurse has passed her hospital year, she is placed in one of the Homes of the association, and commences her practical duties as district nurse amongst the poor of the neighborhood, directed and assisted by the lady superintendent of her Home. The expenses of training are not great, and are within the means of all but the very poor. The hospital year costs the probationer thirty pounds for her maintenance during that time, payable in two instalments, fifteen pounds on entering, fifteen pounds at the expiration of six months. Immediately on being received into the Home, and commencing work amongst the poor, the nurse receives a salary,

beginning at thirty-five pounds a year, and increasing three pounds a year till it reaches fifty pounds. As a rule, each nurse is provided in the Home with full board, washing expenses, a suitable and sufficient uniform dress, a separate furnished bedroom, and the use of a comfortable sitting-room. Every nurse is required to work eight hours a day in her district; and as a rule, unless in some cases of sickness, her duties cease after five o'clock in the afternoon. This is, of course, whilst occupied in district work, which is, in a measure, a training for more advanced positions and greater responsibilities.

Miss Lees tells us that nursing the sick is by no means a cheerless or depressing occupation; she thinks that no brighter or happier group of women-workers can be found than the nurses in her Home; and we can well imagine that the deep interest that must arise in the mind of every woman engaged in so good a work, must greatly elevate and purify the character of the nurse herself. Miss Lees is anxious to induce gentlewomen to join her staff of nurses, and to qualify themselves by the prescribed training, and by the experience gained in district nursing, for the entire charge of special cases amongst those who can afford to make skilled nursing a remunerative employment for women.

Miss Merryweather, who until lately had the charge of the district nurses at Liverpool, and is now lady superintendent of the Westminster Hospital training-school for nurses, is most anxious to induce ladies to join her ranks. The difficulties existing in the way of the intimate association of different classes of women in the training Home—at present too small for all requirements—may, it is hoped, be removed by the erection of a suitable building, and the inauguration of a fund in memory of the late lamented Lady Augusta Stanley, than whom none more fully appreciated and encouraged the idea of trained and skilled sick-nurses. We can well understand how valuable an assistant the anxious surgeon or physician might secure in a

well-trained, cultivated, and intelligent lady-nurse. It is often highly desirable, for the sake of change of air, to send a patient to a distance from her medical attendant; but lest matters should go wrong, and for lack of some friend whose knowledge is equal to the necessity of the case, the change is announced to be impracticable. We will suppose that a lady equal in social standing with the doctor himself, possibly with the patient also, has been engaged at the early stage of the illness, has, with the doctor, watched the progress and symptoms of the disease, and has taken her place as nurse and companion to the patient. Her education and experience are such that the doctor can with confidence trust her to keep a watchful eye on his patient, to note every changing symptom, and to keep him informed daily—hourly if need be—of the minute details of the case on which his treatment is based. In the charge of such a nurse, the most anxious medical man might trust his patient to remain at a distance, feeling sure that the state of the pulse, temperature of the body, and every changing phase of disease, would be accurately communicated to him by letter or telegram, and so enable him to regulate his visits intelligently and according to necessity, and not by the caprice of an excited and nervous patient, or an ignorant and terrified nurse. Such skilled attendance would undoubtedly command liberal payment; and we can well imagine that many who now toil their lives away as governesses—vainly striving to teach that which they never knew, and to exercise a vocation for which they were never fitted—might have experienced a very different fate, and spent happy and useful years, had it not been for the fixed idea which until lately remained unchallenged, that educated and refined women who required to earn their living must of necessity be governesses or nothing.

It is right to say that recently the committee of the Nightingale Fund have afforded increased facilities for gentlewomen wishing to qualify themselves in the practice of hospital nursing, and a limited number of such probationers are, as we have

already stated, now admitted to St. Thomas' Hospital upon payment only of the cost of their maintenance during their year of training. These candidates are supposed to enter with a view of ultimately taking superior positions in public hospitals and infirmaries. These lady probationers—whose ages should not be less than from twenty-six to thirty-six years—receive instructions from the medical instructor and the hospital "sisters" or chief nurses in the wards, and serve as assistant-nurses during their year of probation. The lady superintendent of the Nightingale Institution at St. Thomas' Hospital is at all times accessible to written inquiry, and to personal visits on Tuesday and Friday between ten and twelve o'clock. It is difficult to imagine an occupation for our daughters and sisters more entirely in harmony with the character of a true woman, or more beneficent in its object, than that of tending their afflicted fellow creatures.—*Public Health.*

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DR. BATTY TUKE ON INSANITY.

On Friday last, Dr. Batty Tuke delivered his second lecture on Insanity, in the hall of the Royal College of Physicians, Edinburgh. After some introductory remarks, in the course of which he reiterated, as the general text of his lectures, the definition of insanity as a morbid condition of the brain, resulting from defective formation or altered nutrition in its substance, induced by local or general morbid processes, Dr. Tuke went on to speak of idiocy, which, he said, was the insanity of non-development. The psychical symptoms of this form of insanity were stated to be imperfect development of the intellectual and moral faculties. It had been subdivided into intellectual and moral idiocy; but a case of pure intellectual idiocy or pure moral idiocy was never found; it was a matter of degree, and the differentiation simply depended on which of the faculties was most in abeyance. It was comparatively seldom in these days of lunatic-asylums that the intellectual idiot came under the cognisance of the law as an accused person; and, when he did so, the case did not often present much difficulty. The cases in which the medico-legal difficulty arose were those where there was non-development of the moral faculties, where the intellect appeared to be in some respects not much below the average, and where the person was able to ful-

fil many, if not all, of his civil duties, but was prone to acts incompatible with the recognized laws of society. This ran through all degrees, from mere eccentricity to pronounced idiocy. One common form of it was habitual lying, and there were well-authenticated cases in which habitual stealing was the most prominent symptom. This was a condition which presented more difficulties to the jurist than to the pathologist or psychologist. Given a child born under circumstances adverse to the development of his brain, and who, as he grew up, evinced symptoms of not being as his fellows were in regard to his moral nature, although his intellectual faculties might be but slightly imperfect, was not the pathologist, he asked, bound to connect such a peculiarity with the physical condition? Passing on to speak of idiopathic mania and melancholia, which are so often attributed to over-excitation of the brain, Dr. Tuke remarked that the most violent emotion very rarely caused insanity directly. Acute insanity was not the outcome of a few minutes or hours of functional disturbance, it was the result of brain exhaustion, which, in its turn, was the result of loss of sleep. There was a sequence of symptoms leading on to explosions of madness, as steady, in nine cases out of ten, as the course of symptoms in any recognised fever; only the stages were not marked off into distinct periods of time; and even this might be due to the fact that the disease had not as yet been thoroughly studied. The lecturer proceeded to show how the brain-cells, when not recuperated by rest, underwent degenerative physical changes, and, with the view of shewing that the sequence of symptoms corresponded with those changes, he gave the history of an interesting case which had come under his notice, and whose bearing he promised to discuss more in detail in the next lecture.—*Public Health.*

Books and Pamphlets Received.

“Dictionary of Hygiene and Public Health,” by Alexander Wynter Blyth, M. R. C. S., F. C. S., &c., &c. (Charles Griffin & Co., London).

“Manual for Medical Officers of Health,” by Edward Smith, M. D., LL.B., Lond., F. R. S. (Knight & Co., London).

“On Tracheotomy, especially in relation to Diseases of the Larynx and Trachea,” by W. Peyin Thornton. (J. & A. Churchill, London).