meadows; lambs were calling to their mothers; a mare with a colt by her side was looking over a gate; families were wending their way to meeting, dressed in their best clothes—the men, as became the lords of creation, walking in advance of their wives, daughters, and sisters, who, carrying Bibles wrapped in clean white handkerchiefs, kept a little behind, discoursing, as Mr. Muir would have said, "about such things as they could understand." Quite at their leisure, the Presbyterians "dandered" along. They had plenty of time, for their public worship did not begin till half-an-hour after the church bell stopped. Noon was an excellent time for persons forced to come from long distances to settle down in their pews; a far better time than that at which the sexton ceased reminding the by-law-established congregation they should be toiling up the hill.

"Make haste! we shall be all behind," said Mrs. Boyle, hurrying along with short, tripping steps. "I never saw such a girl! Not an atom of life or activity about you."

"Mamma, I cannot walk so fast," ventured Berna. "I really am not well."

"You'd be well enough if it wasn't for your sinful temper," answered Mrs. Boyle, pausing by the graveyard gate for her daughter, who panted painfully up the incline.

(To be continued.)

THE MAGAZINES FOR APRIL.

SECOND NOTICE.

Macmillan's Magazine has one striking contribution, Mr. F. Harrison's discourse on "Historic London," distinguished alike by enthusiasm for the writer's theme and a fine historical sense of its intimate connection with our national life. The other papers present little worthy of special remark. Mr. Grant Allen writes in his usual pleasant, but by this time almost too familiar, style of "British Buttercups." The Nizam's investiture is described; British invalids are dissuaded from trying Australia; and Mr. Morley reveals the secret of his passionate desire to get us out of Egypt in the acknowledgment of his fear that a prolonged occupation of that country would embroil us with France.

Mr. Morley is not afraid of France, but he is wedded to French ideas, and knows that nothing would so surely obstruct their reception in England as a war. Mr. Matthew Arnold, however, in the brilliant lecture on "Numbers" which he contributes to the *Nineteenth Century*, declares that the Germanic element in the French nation has all but died out, and that nothing remains but the Latino-Gallic qualities, "some of them very advantageous ones," which go to the making of "the average sensual man." If so, a power greater than disputes about Egypt will prevent any intimate Anglo-French alliance. Mr. Arnold further declares that "in M. Victor Hugo we have the average sensual man, impassioned and grandiloquent," a deliverance which cannot fail to drive Mr. Swinburne to the verge of insanity, if we may judge by the effect produced upon him by Mr. Arnold's over-praise of Byron, as evinced by his essay on Wordsworth and Byron in the same periodical. Mr. Swinburne has unfortunately allowed himself to be drawn into vituperation of a great poet which, if unrepented of, will lower his critical reputation as much as Mr. Arnold's own has been lowered by his depreciation of Shelley. There is nothing else of much interest in the number, except the Duke of Argyll's answer to Mr. George—conclusive, no doubt—but when a Duke refutes a Socialist the refutation is an advertisement.

A somewhat heavy number of the *Fortnightly* is relieved by two biographical papers—Archdeacon Farrar's glowing and graphic sketch of Professor Maurice, and notes from various quarters on the late Mr. Hayward, contributing to the illustration of his character from divers points of view. Professor Jebb picks a good many holes in Dr. Schliemann's "Troja," but cannot get over the grand fact that what, according to him, *ought* to be found at Bunarbashi, *has* been found at Hissarlik. If he would effectually confound Dr. Schliemann, he must exchange the pen for the pickaxe. Mrs. W. Dillon discusses the ethics of dynamite with considerably more seriousness than they deserve.

The *Contemporary Review* is full of thoughtful papers. Mr. Herbert Spencer prognosticates the loss of individual liberty from the meddlesomeness of modern legislation. The Marquis of Lorne sketches a scheme for provincial legislation in Ireland which could only work if it were universally accepted. Mr. Sayce complains, too truly, we fear, of our tardiness in introducing useful reforms into Egypt. Professor Goldwin Smith maintains his old anti-imperial and anti-colonial views in opposition to Professor Seeley; and Canon Westcott points out the Christian affinities of Euripides.

The admixture, in the *National Review*, of subjects attractive to the lovers of literature and biography, of art and of nature, with Conservative Party politics, is judiciously proportioned. Lord Cranbrook supplies, instead of a political discourse, his recollections of lively talks with "Christopher North," the late Professor Wilson of Edinburgh, on the banks of Windermere. A disciple of Izaak Walton, and more immediately of Charles Kingsley, descants upon the haunts and the capture of "Hampshire Trout," in the pleasant vein of "Chalk-stream Studies." The performances of Lear and Othello by Signor Salvini are discussed with profound admiration by Mr. W. E. Henley. Questions of urgent practical interest, the Merchant Shipping Bill, the Cattle Disease and Meat Supply, the Russian annexation of Merv, the Bengal Tenancy Bill, the relations between England and France, and the prospects of a Dissolution, occupy the larger share of attention.

The most interesting contributions to the *Atlantic Monthly* are a reasonable paper on Presidential Nominations, and reviews of two important new books, Roman's history of General Beauregard's campaigns, and Mr. Julian's "Political Recollections."

Belgravia continues "The Lover's Creed" and "The Wearing of the Green" with spirit, and has the first part of a powerful dramatic tale, by the author of "John Herring," entitled "At the Y," the "Y" being the fork of two roads leading to Plymouth, between which Ephraim has to choose in his pursuit of his young Irishwoman. "My Big Fish" is a kind of "Giant's Robe," in which a gigantic pike takes the place of the stolen novel. The *Gentleman's Magazine* has only one contribution of note, but this is the continuation of the brilliant "Philistia." The manner in which the aristocratic young lady encourages the Socialistic tutor to the verge of a proposal, combined with his utter unsuspiciousness, is very entertaining. *Tinsley* has the translation of a clever article by Edmund About on the elder Dumas, illustrating his marvellous capacity for work at four a.m., after a sumptuous supper-party. *Merry England* has an excellent tale of cats and dogs by Mr. Walter Pollock.

We have also received Time, The Argosy, Good Words, London Society, Chambers's Journal, The Month, The Army and Navy Magazine, Cassell's Magazine, All the Year Round.

Mr. Evan MacGregor, C.B., has been appointed Permanent Secretary of the Admiralty, in the room of Captain George Tryon, C.B., resigned, on promotion to flag rank.

A THERMOSTATIC NURSE.

To the Editor of THE ILLUSTRATED LONDON NEWS.

Sir,—My attention has been drawn to your issue of March 8, which contains an article on "Incubators for Infants," and an illustration of them as employed in the Maternity Hospital, Port Royal, Paris.

I crave your permission to describe an apparatus for the same purpose, which I have in use at the City of London Lying-in Hospital, the oldest hospital of the kind in this metropolis, to which I hold the appointment of consulting physician.

The term *Incubator*, as applied to infants, seeming inappropriate, this English model has been named by its inventor, Mr. Hearson, of London, a *Thermostatic Nurse*. I am led to bring it before your notice on account of the advantages it possesses over that which you have described. It is constructed on the same principle as the Champion Incubator for eggs, now so largely employed; it differs from it in being arranged with a cradle *above* the water-tank instead of having a drawer *below*, as in the case of the egg-hatching apparatus (vide Fig. 1). By the aid of the

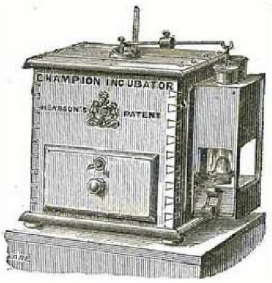

FIGURE 1.

illustrations, I hope to make its construction clear. Those of your readers who are interested in it will find it on view at 235, Regent-street, where also they will see the egg incubation carried on in all stages, even the chickens in the act of escaping from the eggs. The case of the Thermostatic Nurse is of wood (Fig. 2), divided horizontally into an upper and

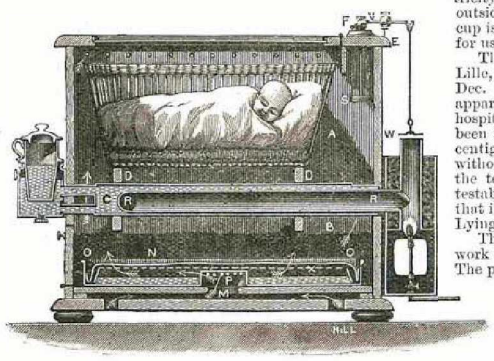

FIGURE 2.

lower compartment (A and B) by a shallow inclosed tank of water (C), which extends to within two inches of the woodwork all round, this interval being left to allow of free access of air from the lower to the upper part. Above the water tank, and supported on slips of wood (D, D), is a cradle for the reception of the infant, which is kept in view through a glass window on the top of the apparatus. This sash is hinged at the back to a portion of the cover (E), about four inches wide (Fig. 3); and affixed to this is the lever-plate

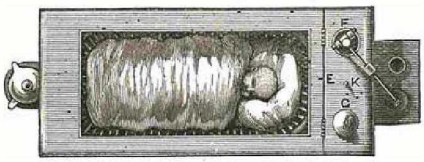

FIGURE 3.

(F), the alarum (G), and the thermometer (K), the scale of the latter being outside, under immediate observation. Through the bottom of the apparatus a hole (M), three inches in diameter, permits the entrance of a liberal supply of atmospheric air, which passes through two layers of very coarse canvas (N), kept constantly wet. This is effected by means of a metal tray (O), nearly as large as the bottom of the apparatus. The centre of this tray is raised, in the form of a cap (P), which fits over the aperture (M) through which the air enters. It is perforated all round its sides, so that the air passes through it horizontally, as shown by the arrows, instead of rising vertically. The lower margins of the holes in this raised portion are about an inch from the bottom of the tray, which is filled with water up to this level. Another tray (X) of very coarsely perforated zinc, somewhat smaller than the first, is turned upside down within it, and over this is fitted the coarse canvas (N), the edges of which are carefully tucked into the water all round. By this means the canvas is continually absorbing the moisture, while it receives a regular supply of heat from the bottom of the large water-tank; thus the air entering is uniformly moistened and heated. Outside the apparatus is a gas-flame, the heat from which passes through a flue (R, R) shaped like the letter U, so as to twice traverse the length of the water-tank, by which means the water is heated.

The temperature of the entering air naturally varies considerably from hour to hour, and from day to day, and this would of necessity exert a powerful influence on the internal temperature were it not for an arrangement planned to counteract it. And in this *modus operandi* lies the great merit of Hearson's apparatus, incubator and thermostatic nurse alike. A hermetically sealed metallic capsule (S), two inches square, containing a small quantity of a liquid which boils at 90 deg. Fahr., is fixed in the space at the head of the cradle; in the centre of the upper part of this capsule is a button having a cup-shaped depression, in which rests the lower end of a stiff wire which passes out through the top of the apparatus, where it comes in contact with a light lever (V) which is pivoted to the brass plate (F). From the free end of this lever hangs a little damper (W), which rests on the top of the chimney under which the gas-jet burns. It will be at once understood that as soon as the temperature in the compartment (A) reaches 90 deg. Fahr. the liquid in the capsule (S) will boil and generate a vapour, which will cause the hitherto flat capsule to expand into the shape of a pillow, thus raising the wire rod, which, acting on the lever (V), at once lifts the damper (W) off the chimney, allowing the heat from the flame to escape by that outlet, and preventing the further heating of the water. On the other hand, if the glass lid of the apparatus be raised, cold air will immediately enter, and so the capsule will cool, assuming its flattened form. As it collapses the wire falls, and the damper descends upon the chimney, obliging the whole of the heat generated from the flame to pass through the water-tank, until that which has been lost has been replaced, when the damper will be lifted by the expanding capsule to such a height as shall utilise the precise amount of heat required to maintain the temperature in the chamber (A) uniform. If a higher temperature than the boiling-point of the liquid within the capsule be desired, this can be obtained by moving the weight (T) along the lever towards the end to which the damper is attached; the further it is placed in this direction the greater is the heat produced.

Having once obtained by this means the temperature desired, the same may be kept up for an indefinite period with scarcely any appreciable variation, and without any attention to the apparatus. Indeed, when once adjusted, it should be left alone, *as it is automatic in its working*, and in this feature lies the great superiority of the English over the French apparatus. In the latter it is necessary to change the stone bottles every two hours, and fill them with boiling water; imagine the labour and difficulty of keeping this up day and night, and the impossibility of maintaining a uniform supply of heat by such means will be apparent. In the Thermostatic Nurse, so long as the automatic regulator is in order, and it is difficult to conceive how it can go wrong, it is impossible to overheat the interior; if, however, from any unaccountable cause the capsule should get damaged, and the temperature should rise to any predetermined degree which is considered undesirable, it may be so arranged that as soon as it attains this heat a bell will be rung automatically. This alarum (G) sounds on the spot, but it may be easily made to ring by electricity at any desired distance. It should be mentioned that outside the apparatus, near the foot of the cradle, a feeding-cup is placed, the food within which is kept warm and ready for use by means of the hot water in the tank.

The Thermostatic Nurse is not untried. Dr. Eustache, of Lille, France, has one in the Maternité, and he writes on Dec. 27, 1883: "For the whole month during which the apparatus has been in action in the ward of my lying-in-hospital I have noted that the variations of temperature have been absolutely insignificant, ranging from ½ to ¼ of a degree centigrade. By night, as by day, the apparatus has stood without perceptible variation at 32 deg. centigrade, which was the temperature I asked for. What constitutes the incontestable superiority of this almost absolute heat controller is that it is automatic." There is also one in use at the Brussels Lying-in Hospital.

The Thermostatic Nurse, like the Champion Incubator, will work with oil, and maintain the same regularity as with gas. The price of an apparatus to hold a single infant is £6, to hold two infants £10. It can easily be arranged that they shall be obtained on hire if there be any demand for such.

Those of your readers who are interested in the subject should obtain a treatise upon it by Monsieur A. Auvard, Interne à la Maternité de Paris, entitled "De la Couveuse pour Enfants." It is reprinted from the *Archives de Tocologie*, and is published by Messieurs A. Delahaye et E. Lecrosnier, Place de l'Ecole-de-Médecine, Paris.

It records the treatment of 145 infants by means of the so-called "Incubator," and the following successful results are mentioned:—The mortality of infants weighing at their birth less than 2000 grammes (a little over 4 lb.) which was found to be ordinarily about 66 per cent, was reduced by the employment of the Incubator to 38 per cent; while infants suffering from œdema, or a serous infiltration of the tissues, caused by the low state of vitality at birth and the effects of the external temperature, who, under ordinary circumstances, died at the rate of sixteen out of twenty, were reared in the Incubator in the proportion of seventeen out of the twenty-one infants so treated.

I hope, in course of time, to be able to record in the Medical Journals my experience of the employment of the Thermostatic Nurse in the City of London Lying-in Hospital. At present my personal knowledge of the apparatus is confined to the working of the Champion Incubator, which, as has been already stated, is precisely analogous. For the purpose of observation, I have had one of these in operation for several weeks in my house, hatching eggs, and I am able to testify that, notwithstanding the extraordinary variations in the temperature of the external air from day to day during the last fortnight, the temperature in the egg drawer has kept almost without variation, between 103 deg. and 104 deg. Fahrenheit. The lower the temperature of the external air the hotter is the water in the tank.

On the top of a portico in Grosvenor-street is one of Hearson's Foster-Mothers, containing the chickens I have hatched; they are in a perfect state of health, have been revelling in the sunshine of the past week, keeping out in the air while it lasted, and retiring later in the day to their sleeping chamber kept always heated by the oil lamp.

I am yours faithfully,

CLEMENT GODSON, M.D.

9, Grosvenor-street, London, W., March 22, 1884.

The Board of Trade have awarded a piece of plate to Captain Thomas J. Greenbank, master of the American ship Martha Cobb, of Rockland, U.S.A., in acknowledgment of his humanity in standing by the British barque Grecian, of Dundee, which was in a sinking condition, for several hours in a very heavy sea, and finally rescuing the crew. The Board have awarded a gold medal to Mr. Dominick Gardiner, the second mate of the Martha Cobb, in recognition of his gallantry in taking the command of a small boat and making two trips to the Grecian for the purpose of taking off the crew.—The Board have awarded their silver medal to Mr. R. Firman, master of the steam-ship Whitehall, of London, in recognition of his humanity in standing by the barque Mod Rhiwan, of Carnarvon, which was in a sinking state, and sending a small boat in a heavy sea to the rescue of the ship-wrecked crew. The Board have also awarded their bronze medal to the two men who manned the boat in acknowledgment of their gallant conduct.