

all round kept them dark, and partially confined the heat from the external atmosphere. The bottom of the egg drawers were perforated zinc, and chaff or similar material laid thereon, on which the eggs were placed. The cold water tank being underneath, and the hot water above, kept a gentle moisture amongst the eggs during incubation, ventilation taking place through the central air shaft. This machine was also exhibited at the Crystal Palace, and Mr. Shroeder, turning his attention to the construction of poultry appliances, and becoming connected with some of the gentlemen who founded the National Poultry Company, at Bromley, his name was kept prominently before the public. I know nothing of his ultimate career, and we hear nothing now of his machines, although they certainly possessed very considerable merit.

When Mr. Kennedy Geyling was manager of the National Poultry Company, I noticed at their farm at Bromley a rather curious contrivance, but I do not know the name of the inventor. It consisted of a case containing hot water, and on the hot water floated a frame of india rubber cloth, on which were placed the eggs; the whole covered with flannel and glass. Mr. Massey, the superintendent, stated that it was more curious than useful. I don't know whether any chicks were ever hatched out in it.

Mr. Brindley now brought out his incubator, consisting of an elongated wooden frame, furnished with a copper boiler, heated by a lamp or gas. From this boiler hot water flowed through metal pipes, arranged horizontally between two plates of glass, forming a hot air chamber. Under the lower glass plate was the egg drawer, lined with felt, and at each side of the lamp temporary artificial mothers for the chicks for the first few days. The hot air chamber was provided with a safety valve, acting by the expansion of mercury, but no valve can be expected to act as a *sole* regulator, for if the air is allowed to get really hot the valve, if it opens the chamber, cannot keep the heat down to the proper degree, and if the temperature gets too low it will not act.

Colonel Stuart Wortley also turned his attention to the making of an incubator, which Mr Brindley supposed to be an infringement on his patent, and a long paper warfare continued between these gentlemen, serving to keep their names and pursuits before the public. Unfortunately the National Poultry Company, through mismanagement, came to an untimely end, and Mr. Brindley and Colonel Stuart Wortley ventilated their grievances, and carried on a correspondence on the merits of their machines in the columns of the *Field* newspaper. The Colonel also wrote some able articles on artificial hatching and rearing in the *Field*.

I have now brought the subject down to the period when I left England, and for an account of various makers of incubators from the year 1873 to the present time I would refer your readers to works published in England and the States during the past year, merely premising that the subject is gaining yearly in increased interest, and automatic machines are advertised which, by means of electric batteries, &c., claim to do everything except manufacture the egg. However, if we are to credit a report coming to us from Germany, a scientific professor states that he really manufactured an egg of various compounds, but, unfortunately forgot the materials for feathers, and a nondescript sort of creature was created, minus the feathers. Probably it might not be inappropriate to designate it, in French, a *canard*.

I now propose giving extracts from the celebrated Monsieur de Reaumur's work, detailing the result of his experiments, comprising his failures and successes, believing it will prove attractive to all interested in our feathered favorites, and who propose pursuing a subject of considerable importance, not only to this country, but to the world at large, for I believe the time is not far distant when poultry farms on an extensive scale will spring up here as well as in the States and France, where money can be made as well as in other branches of farming, if properly managed. In sections of this country farms are allowed to run out, the land impoverished, and cereals not yielding a fair margin of profit to the tillers of the soil, the people must eventually either turn their attention to other pursuits or migrate to more fertile parts. When we read of the immense export of eggs that is taking place from Canada to the States and Europe, and when we know that the imports alone to England from France and Spain average nearly two million of eggs daily, and still the demand exceeds the supply, we cannot fail to perceive that it is imperative on us to do something towards supplying the deficiency, at the same time we can help renew the worn out soil of our grain producing lands by furnishing rich fertilizers, equal to the Peruvian guano, in the droppings from large poultry farms.

"The art of hatching and bringing up Domestic fowls of all kinds at any time of the year, either by means of the heat of hot-beds or that of Common fire." Such is the title of the work by M. de Reaumur, of the Royal Academy of Science, at Paris, published in 1750, and he prefaces his work by the following remarks: "It was not until I had actually hatched in hot beds and brought up a number of chickens, sufficient to stock my poultry yard, that I read, at the public meeting of the academy on St Martin's day, 1747, a memoir that gave a general idea of the methods by which I had effected it. I was invited to this research by