

minutes, and the delivery completed in ten minutes afterwards, and that I then suggested bleeding as a suitable and powerful remedy in the Crown Prince of Germany's case, and am glad to learn that a good result has followed the adoption of similar views advocated by Mr. Chesshire.

Trusting that the further discussion of this important subject may be useful,

I remain, Sirs, yours faithfully,

Pontefract, Jan. 17th, 1888. GEO. P. ATKINSON, M.R.C.S. &c.

## THE MARGARINE ACT.

To the Editors of THE LANCET.

SIRS,—I am glad to see that in your annotation on the above subject you have drawn attention to the serious defects existing in the third clause, which allow of the addition of "preservatives" and "colouring matters" to butter without limit as to quantities or other restriction. Perhaps you will permit me to state that I called special attention to this in my quarterly report to the Vestry of Kensington, dated Oct. 5th, 1887, as follows: "I believe that the passing of this Act would do much towards further preventing the sale of adulterated butter and of butter substitutes as butter, if adequate steps were taken to have samples seized and analysed, and if guilty parties were adequately punished. It is, I think, greatly to be regretted that the new Act allows of the addition to butter of 'other preservatives' besides salt, and of 'colouring matters,' without stating what these are to be, and what limits, if any, are to be allowed."—I am, Sirs, yours faithfully,

CHARLES E. CASSAL,

Public Analyst for Kensington and St. George's,  
Hanover-square.

Town Hall, Kensington, January 18th, 1888.

## THE AUSTRIAN RIVIERA.

(From our Special Correspondent.)

Abbazia, Oct. 1887.

AUSTRIA, with its southern coasts on the Adriatic, with its lofty ranges of mountains to ward off the cold northern winds, is, like Italy and France, also anxious to possess a Riviera where invalids may find shelter and renewed health. Prompt to understand the advantages health resorts enjoying a high reputation would afford, the Southern Railway Company of Austria boldly undertook to create such a place. For this purpose a little village on the Istrian coast was selected which possessed not more than 150 inhabitants. It was a name rather than a place, and there is some advantage in a pretty name; but a great advantage lies in the selection of a spot where the population is not numerous enough to have contaminated the soil or to have given rise to any other serious sanitary defects. Five years ago Abbazia was a fishing village of even less importance than Cannes when first discovered by Lord Brougham. But its topography was precisely what could be desired for a winter station, and the rich vegetation showed at once the climatic advantages of the site. Forthwith the railway company built an hotel, which is called Hotel Quarnero. The Crown Prince of Austria and the Crown Princess Stephanie visited the new station, and in a very short time it became a fashionable resort. Now there are two large hotels and an annexe.

Sheltered by Monte Maggiore, which rises to an altitude of 1396 metres, and a chain of other and smaller mountains, Abbazia is only exposed to the warm southern wind. As a rule, the sea itself is as smooth as a mirror, for there are two large islands which break the force of the sea winds; so that, altogether, the topography leaves but little to be desired. Being 2° of latitude north of Nice and the French Riviera, of course Abbazia does not possess the same luxurious tropical and semi-tropical vegetation. Nevertheless the plants are a remarkable indication of the mildness of the climate. Among the native plants, the laurel, especially the thyme laurel, assumes gigantic proportions, reaching beyond the second floor of the hotels. Here also camellias flower in the open air towards the end of January, and the blossoms are already visible. There are cedars of Lebanon, and the fruit of the arbutos is now in good eating condition. The *Yucca clauca pendula*, the *Dracæna indivisa*, the

*Gynerian argenteum* from Central Chili, magnolias some twenty-five feet high, some few specimens of the mimosa, and other semi-tropical plants, are to be found in the gardens flourishing in the open air. It is impossible to contemplate the richness of the verdure, the healthy look of all these and many other trees and shrubs, without at once recognising that the site chosen for the new health station undoubtedly possesses considerable climatic advantages.

The question then arises as to whether the sanitary conditions of Abbazia are equally satisfactory. The village is so small that of course it could not be expected to possess any system of drainage. There was therefore some danger that the water taken from local and surface wells might be contaminated by neighbouring cesspits &c. With commendable energy and enterprise, the railway company established water works of its own. Along the whole coast there are innumerable springs that burst from the soil close to the sea shore, and some even a few yards out and under the sea water. The quantity of the supply from the springs, however, varies according to the weather, and is at times apt to become brackish. Under the direction of Herr Oswald Meese, engineer of the Southern Railway Company, a pumping station was established at a distance of three kilometres from the hotel. Here, by digging down some sixteen metres, water was obtained from a spring just one metre above the level of the sea. It is therefore, as a rule, free from salt, and also thoroughly pure. An engine of eight-horse power can lift sixteen cubic metres of water per hour, and this is delivered through iron pipes into a reservoir containing 700 cubic metres, situated at an altitude of fifty metres. The reservoir is divided into two, and each half being filled separately, the water has time to deposit the earth or grit it may contain. It is then allowed to run into a larger reservoir of 1000 cubic metres, whence it is drawn for consumption. At present, the consumption of water is only eighty cubic metres per day, consequently there is a sufficient reserve of water to obviate the necessity of pumping for a considerable time. This is occasionally imperative, for, in spite of walls built round the spring, it sometimes becomes brackish for a little while. The reservoirs are very carefully constructed, the walls on the sunny side being four feet thick, and on the roof there is nearly a three-feet depth of earth to keep the water cool. Further, the ventilators are very securely guarded with perforated metallic plates, so that it is impossible for anything to be thrown into the water. There are also electric signals and means of communication on all sides, that automatically indicate when the reservoirs are full, &c. Inasmuch as the whole of the trenches for the water pipes had to be dug out of the solid rock that composes the mountain side, the expense and trouble incurred were very considerable. In building the reservoirs, there were at times as many as 300 mine explosions in the course of a day, and all the material had to be carried up the steep hill-side on men's backs. The iron came from Bohemia; the sand, for the mortar, from the Pau. Thus the water supply for the hotels of Abbazia alone cost 120,000 florins. These are facts that are well worth noting, as showing what actually has been done, so as not merely to obtain, but really to merit the name of a healthy station.

In building the Hotel Quarnero, the company were actuated by the same spirit. Each room is provided with two separate air shafts. One delivers fresh air under the stove, where, in winter, it is warmed before it gains admission into the room. The other air shaft communicates with a large stove in the basement of the hotel, which is kept burning summer and winter, day and night. This stove, with its metallic chimney, which ascends to the roof in the centre of an air shaft, produces a powerful suction which draws off the vitiated air from all the rooms. Thus the bedrooms of the hotel are ventilated when both windows and doors are shut. This is a most important advantage for invalids, as the insufficient ventilation of hotels very often counteracts the beneficial effects of a change of climate. It is, however, regrettable to add that the innovation has not been appreciated by the public. The residents of the hotel have closed the ventilators, and consequently entirely destroyed the very careful measures taken on their behalf to give them a constant supply of pure air. The cost of this ventilating system was equal to an eighth of the cost of the entire building, and was so little understood that when the company built the second and more important establishment—the Hotel Stephanie—they left the ventilation of the bedrooms to the hazard of the