

The portion of Iowa which is most deficient in timber is north of latitude 42°, especially on the dividing ridges. North of this latitude between the head waters of Three and Grand Rivers, there are distances of ten or fifteen miles without any timber; while between the waters of Grand River, the Nodaway, and the Nistinaabotona, the open prairie is often twenty miles wide, without a bush to be seen higher than the wild indigo and the compass plant. The soil, too, in this region, is generally of inferior quality to that south of latitude 41° 30'.

After passing latitude 43° 30', and approaching the southern confines of the Coteau des Prairies, a desolate, barren, knobby country commences, where the higher grounds are covered with gravel and erratic masses, supporting a scanty vegetation, while the valleys are either wet and marshy, or filled with numerous pools, ponds and lakes, the borders of which are inhabited by flocks of sandhill cranes, which fill the air with their doleful cries, and where the eye may often wander in every direction towards the horizon, without discovering even a faint outline of distant timber.

This description of country prevails for about three quarters of a degree of latitude, and between three and four degrees of longitude, embracing the water-shed where the northern branches of the Red Cedar, and the Iowa, and the eastern branches of the Des Moines, take their rise. After passing the extreme sources of the Mankota, the country again improves, both in quality of the soil and in the distribution of timber. On fairly entering the valley of the Minnesota River we again find a fertile, well watered, and desirable farming country. The second terrace of land bordering the Minnesota, may be especially cited for its fertility and advantageous position, elevated entirely above the highest freshets, and in proximity to a belt of forest which crosses the Minnesota about latitude 44° 30', and which is remarkable for its unusual body of timber, in a country otherwise but scantily supplied with wood.

The Crystal Palace at Sydenham.

The Crystal Palace rebuilding at Sydenham, is so far advanced that Messrs. Fox & Henderson have undertaken to surrender it to the company in a finished state at Christmas.

The following description of its proposed arrangements is interesting:—

The south-eastern end of the palace is so far finished that the plan of the interior decorations already begins to develop itself. A large number of gardeners and their assistants have been for some time busily arranging plants and shrubs in beds and borders of different forms: and the statue of Charles II., which forms the most prominent object in this portion of the building, is now almost embowered in plants and flowers.

No less than 12,000 camellias and a proportionate number of geraniums, pelargoniums, with orange trees and other plants and shrubs, have been already arranged in this space. They are at present in pots, but the flooring will be cut away, according to the plans marked out, the beds filled up with mould, and the plants then transferred to their future destination. The centre will be occupied by a lake extending a considerable way up the nave, and here all kinds of aquatic plants will be placed. The site and extent of this inland sea are already indicated by the brickwork, and the points at which it will be spanned by light and elegant bridges marked out. The great subject of attraction at this end of the building at present, is what is termed the Pompeian Court—a *fac simile* of a building discovered when excavating the ruins of Pompeii. Here the visitor will have an opportunity of observing the style and character of Roman architecture and embellishments upwards of 1800 years ago, reproduced in all its most minute details, and with all its original richness and brilliancy of colouring.

The building is formed of an open court, with smaller apartments surrounding it. The centre is occupied by a fountain, and groups of richly gilt winged figures support the sloping roof, the emblematic paintings and ornaments being of the most graceful and delicate character. In the large apartment opening out from the central court, termed the peristyle, there are double ranges of columns enriched with paintings, and flowers and statues, niches for the Penates, or household gods, and other accessories show this to have been the state apartment in which visitors were received and the banquet spread. It is, however, at the north-western end of the building that the greatest progress has recently been made.

The first court nearest the central transept, is devoted to the illustration of ancient Egyptian and Assyrian architecture and decoration. It will, when completed, be approached from the central nave through a large gateway bordered with shrubs and flowers, and passing up through a long range of richly decorated columns, will disclose well-

arranged groups of tombs, idols, sphynxes, and gigantic figures, one of which, seated, will be thirty or forty feet high. This court is much farther advanced than any other portion of the works, and is at present receiving its rich and brilliant colouring. Its superintendence and arrangement have been entrusted to the distinguished oriental traveller Bonomi.

Another step, and we pass to the perfected forms of the Greeks and Romans: and here, in a series of courts opening into each other, are placed statues and groups of figures, comprising casts from all the most celebrated works of the ancients. Among them are a large number of nude figures of Apollo, Bacchus, Hercules, Jupiter, Athleta Drosorodi, Satyrs, &c. On the opposite side of the nave, and next the terrace, is an Italian court, and one illustrative of the florid style of decoration which prevailed during what is called the Renaissance.

Beyond these is the mediæval court, which is considerably advanced, and which will exhibit specimens of Gothic architecture and decorations, many of the examples being taken from the old cathedrals of this country, and in connection with this will be a row of cloisters with quaint buttresses and groined roof, the whole forming a very perfect school for students and antiquarians. Advancing still further, we reach courts which are to illustrate the details of Moorish architecture. The pillars of the Alhambra are just rising from the floor, and the outlines of the Court of Lions, with its great central fountain, the Hall of Justice and the other gorgeous illustrations of this luxurious Oriental style are only just developed.

Great changes are taking place in the exterior, the original design having been so far departed from or improved upon, that two wings proceeding from either extremity of the building, are now in the course of construction, with the object of affording additional space. One advantage gained by these wings will be, that they will mask the lofty forcing pumps. The terrace and gardens, notwithstanding the unfavourable state of the weather, have been considerably advanced, and large quantities of trees and shrubs have been planted. The wells have been sunk, pipes for the supply of water laid down, and steam engines for the purpose of working the pumps erected in remote parts of the grounds.

The flights of stone steps conducting from the grounds to the principal entrance have been decorated with sphynxes, and two large statues have just been completed for the terraces—one is by Monti, representing Italy, a female figure, crowned with turrets, and holding in one hand a laurel crown, and in the other implements connect it with the arts. The other is by Mr. J. Bell, and represents Australia, also a female figure, bearing a crook, and extending her left hand, filled with "nuggets" of native gold. She stands upon a rock, which is also veined with gold, and a kangaroo and its young crouch at her feet. These are only the commencement of a series of similar decorations and embellishments which are designed for the grounds, and during fine weather, the arrangements are such that recreation and instruction will be judiciously combined in the open air.

A very interesting department has its temporary location in a corner of the gardens near Amerley-road. This is the restoration or reconstruction of antediluvian monsters, under the superintendence of Mr. Waterhouse Hawkins, who has undertaken to place before visitors of the palace the gigantic animals and reptiles who peopled the earth before it became a fitting habitation for man. Among the inhabitants of "the world before the flood," who are to be resuscitated, are the labyrinthodon, a gigantic frog, upward of seven feet long—the plesiosaurus, an animal of the same species, with an enormous dragon's head and jaws.

The unwieldy megatherium, the iguanodon, and other huge reptiles will also be represented, and to render the illusion more complete, they will be placed upon two islands in the large reservoir, surrounded by the shrubs, ferns and brushwood which formed their habitats. The modern section of natural history is being proceeded with in a corner of the building, and many large and fierce animals, denizens of the tropical forests, are already prepared, in the act of crouching or springing on their prey.

A numerous population is rapidly springing up, or rather settling down, around the Crystal Palace—new roads are now being formed, private houses and villas erected, and taverns, coffee-houses and hotels starting up, as if by magic, in all directions.

To the Editor of the Railway Gazette.

AMMONIA IN RAIN WATER, RIVER WATER, AND SNOW.*—SIR: As I conceive that one fact adduced on admitted authority will have more influence in the advancement of truth than a volume of demonstrative reasoning, I am induced, in reference to the papers which appeared in the *Mining Journal* of 1849 and 1851, to trouble you with the results obtained by M. Boussingault, of the French Institute. "It appears