

process of packing some of the Instruments which could not be left behind, and also by nearly all the Instruments having been dismantled for the purpose of final verification. Their adjustment of course occupied some time, but it is now completed, and the full observations are now made as before. The Meteorological observations have never been at all interrupted. Instruments to replace those taken away, besides others which it has been thought advisable to introduce, have been ordered from England, and are daily expected, and certain necessary repairs and alterations will be commenced as soon as the plans for them can be procured.

The Military Detachment so long employed on this service, has been permitted by Her Majesty's Government to remain here for so long a period as may be necessary to enable Mr. Cherri-man to make a report to His Excellency, of the staff that will be required, and of the steps that may be advisable to render the establishment permanently effective and complete.

We cannot conclude without congratulating the Province upon the completion of arrangements which secure to Western Canada this extensive and well appointed Magnetic and Meteorological Observatory, under a gentleman whose distinguished career at the University of Cambridge is sufficient guarantee that all the interests of Science will be as industriously and efficiently maintained as they have hitherto been, within the same walls, under that management which has given to it the wide spread and exalted reputation it now enjoys throughout the scientific world.

The Canadian Journal.

At the conclusion of the First Volume of the Canadian Journal, we have much pleasure in informing its supporters and contributors that the whole of the present edition, with the exception of a few copies, reserved for the purposes of the Institute, has been subscribed for. We may also state that it is confidently anticipated that the circulation of the journal during the year 1853-4, will be such as to cover all the ordinary expenses of its publication. In view of an extended circulation, the Council of the Institute have made arrangements for a very considerable increase in the monthly issue.

How to Preserve Potatoes from the Rot.

Thoroughly dried potatoes will always produce a crop free from disease. Such is the positive assertion of Mr. Bollman, one of the Professors in the Russian Agricultural Institution at Gorjovetsky. In a very interesting pamphlet by this gentleman, which has just reached us, it is asserted as an unquestionable fact, that mere drying, if conducted at a sufficiently high temperature, and continued long enough, is a complete antidote to the disease.

The account given by Professor Bollman of the accident which led to this discovery is as follows:—He had contrived a potatoe-setter, which had the bad quality of destroying any sprouts that might be on the sets, and even of tearing away the rind. To harden the potatoes, so as to protect them against this accident, he resolved to dry them. In the spring of 1850, he placed a lot in a very hot room, and at the end of three weeks they were dry enough to plant. The potatoes came up well, and produced as good a crop as that of the neighboring farmers, with this difference only, that they had no disease, and the crop was, therefore, upon the whole, more abundant. Professor Bollman tells us that he regarded this as a mere accident; he, however,

again dried his seed potatoes in 1851, and again his crop was abundant and free from disease, while everywhere on the surrounding land they were much affected. This was too remarkable a circumstance not to excite attention, and in 1852 a third trial took place. All Mr. Bollman's own stock of potatoes being exhausted, he was obliged to purchase his seed, which bore unmistakable marks of having formed part of a crop that had been severely diseased; some, in fact, were quite rotten. After keeping them for about a month in a hot room, as before, he cut the largest potatoes into quarters, and the smaller into halves, and left them to dry for another week. Accidentally the drying was carried so far that apprehensions were entertained of a very bad crop, if any. Contrary to expectation, however, the sets pushed promptly, and grew so fast that excellent young potatoes were dug three weeks earlier than usual. Eventually, nine times the amount planted was produced, and although the neighboring fields were attacked, no trace of disease could be found on either the herbage or the potatoes themselves.

This singular result, obtained in three successive years, led to inquiry as to whether any similar cases were on record. In the course of the investigation, two other facts were elicited. It was discovered that Mr. Losovsky (living in the government of Witebsk, in the district of Subezeg) had for four years adopted the plan of drying his seed potatoes, and that during that time there had been no disease on his estate. It was again an accident which led to the practice of this gentleman. Five years ago, while his potatoes were digging, he put one in his pocket, and on returning home, threw it on his stove (*poêle*), where it remained forgotten till the spring. Having then chanced to observe it, he had the curiosity to plant it, all dried up as it was and obtained an abundant and healthy crop; since that time the practice of drying has been continued and with great success. Professor Bollman remarks that it is usual in Russia, in many places, to smoke dry flax, wheat and rye, and, in the west of Russia, experienced proprietors prefer for seed, onions that have been kept over the winter in cottages without a chimney. Such onions are called *dymka*, which may be interpreted smoke-dried.

The second fact is this:—Mr. Wasilefsky, a gentleman residing in the government of Mohileff, is in the habit of keeping potatoes all the year round by storing them in the place where his hams are smoked. It happened that, in the spring 1852, his seed potatoes, kept in the usual manner, were insufficient; and he made up the requisite quantity with some of those which had been for a month in the smoking place. These potatoes produced a capital crop, very little diseased, while at the same time the crop from the sets which were not smoke-dried was extensively attacked by disease. Professor Bollman is of opinion that there would have been no disease at all, if the sets had been better dried.—*Gardener's Chronicle*.

MARBLED IRON AND STONE.—The manufacture of iron imitations of marble has become an extensive branch of business in New York, although it is but little more than a year old. We have before alluded to the process as being chiefly used for mantelpieces, but it is anticipated that it will hereafter be applied to many other purposes; it may be used to imitate any sort of wood, or any other polished surface, as well as stone, the closeness of the imitation depending solely on the skill of the artist by whom it is prepared. Care has, however, to be taken not to hit a hard blow upon the surface and not to scratch it. If you scratch marble, the furrow only reveals the same substance as you behold on the exterior, but with polished iron the case is very different. The same mode of giving a stony face and polish may be applied to wood, plaster of Paris, terra cotta, and other substances, as well as iron; it is far superior to scagliola in every respect, and must expel that substance from use altogether. We look to see it applied most extensively, especially in architecture. It makes very handsome pillars, pilasters, and vases for the inside of houses. A different way of producing a result similar to that above spoken of has been discovered by Professor Freund, a Hungarian chemist, for sometime resident in New York; it is chemical and mechanical, the imitations of stone being produced entirely without the pencil of a painter. The elements of the stone desired to be imitated, are chemically combined, and finally polished by grinding or rubbing with water, pumice stone, &c., much as the stone itself would be. For architectural purposes this process produces very beautiful work, far superior to any scagliola; we have seen pillars and wainscoting with all the loveliness of the finest jasper or agate.—*Liverpool Albion*.

The first vessel of the Australasian Steam-ship Company (Panama Sydney), about to commence operations in New York, will, it is stated, be a new one just completed, called the *Golden Age*. She is of 2561 tons burthen, and has capacity for 1200 passengers (200 first cabin, 200 second, and 800 third), with 1200 tons of coal, and 500 of cargo. It is expected she will curble the passage to Australia to be completed within thirty-five days from New York, and fifty days from England.