

which the trays containing it are placed is such that leakage of water into them in times of rain is, to some extent, all but impossible; and as, moreover, the atmosphere of the sewers is always very moist, the charcoal becomes so wet as to require removal before it has failed as a deodoriser. Upon an average the sieves have been recharged about once in three months. Those which have been in very wet situations have been re-filled much more frequently, and those in dry situations less.

Commerce of Montreal.

The number and tonnage of vessels entered inwards at the port of Montreal, up to the 21st November in each year for the last ten years, show the following figures :

	No. of Vessels.	Tonnage.
1852.....	191	45,802
1853.....	242	58,894
1854.....	275	72,305
1855.....	197	47,904
1856.....	230	69,777
1857.....	208	65,330
1858.....	191	70,183
1859.....	191	85,193
1860.....	240	118,216
1861.....	498	247,247

The enormous increase in the tonnage in 1861 shows how exceedingly prosperous has been the trade in 1861 as compared with that of former seasons.

Steam Boiler Explosions Prevented.

A correspondent of the *Mining Journal* says:—As any proposition for the prevention of loss of life unnecessarily is worthy of consideration, it may be interesting to know that Ericsson's caloric engine is now in use in 500 practical instances in the United States, the purposes to which it is applied being almost equally varied—this source of motion having been adopted for making matches and for draining mines, for making hooped skirts, for picking hair, for irrigation, and for supplying villages with water, as well as for quartz crushing, grinding coffee, and numerous other purposes. The manufacturers of Ericsson's engine claim that by the use of hot air engines steam boiler explosions would be effectually prevented, and that there are few forms of labour employing steam in which this inexplorable and safe motor, Ericsson's caloric engine, might not be advantageously employed.

Geoffrey St. Hilaire.

Late news from Europe contains intelligence of the decease of this renowned zoologist, in Paris, on the 9th ult. He was born in 1805, and was therefore 56 years of age at his death. He was the son of E. Geoffrey the celebrated French anatomist, and was a prodigy of scientific learning at 19 years of age. He was a professor of the natural sciences and published several works on anatomy and physiology, which have won for him a high position among the great names of the earth. He was one of those cool, utilitarian French philosophers, and was the first to advocate the use of horse-flesh for human food in France.

Gases given off by plants under the influence of Light.

M. Boussingault has discovered (*Comptes-Rendus*, t. liii., p. 862) that under the influence of direct sunlight, the leaves of aquatic plants give off a notable proportion of carbonic oxide and carburetted hydrogen. He thinks that this emanation of carbonic oxide may be one of the causes of the unhealthiness of marshy districts. The fact he points out is important, and the subject will, no doubt, receive further investigation.

Photographic Ware Baths.

We find continual allusion and constant praise given in the American journal to a new material for baths. "At present" observes a writer in *Humphrey's Journal*, "probably, the most popular bath is known as the photographic ware, an invention of George Mathiot, an electrotype, of Washington. The invention grew out of a want in Mr. Mathiot's business, viz., a cheap ware which will hold acid solutions, and consists simply in soaking the vessels of unglazed and porous porcelain in melted wax. Thus Mr. Mathiot killed two birds with one stone, and did a very handsome thing for photography as well as for electrotype. Such ware costs but a trifle, is neat, handy, and durable. Would not paraffin be a useful substitute for the wax? There is no compound known which is so little effected by corrosive matters."—*Mech. Mag.*

Port Dover Woollen Factory.

The Woollen Factory at Port Dover has been completed, and the works were opened on Friday, 7th February. The mill is nearly 300 feet long, and four stories in height. Its machinery is driven by a head of water of about 13 feet. The machinery for carding, spinning, weaving, and dressing, is of very superior description, and all details appear to have been attended to with judgment and practical skill. A description of this establishment will be found in the last No. of the Journal.

International Cattle Show, 1862.

The Royal Agricultural Society of England and the Highland and Agricultural Society of Scotland, have jointly arranged to conduct an International Cattle Show in London next summer, and Battersea-park has been granted for the purpose, where the necessary enclosure and buildings will be made. The show will take place during the week commencing the 23rd of June, 1862. The prizes offered by the Royal Agricultural Society, consist of money and medals.

The Ordeal Root.

At a recent meeting of the Pharmaceutical Society, Professor Bentley exhibited a specimen of the Ordeal Root spoken of by M. du Chailu in his book on Western Africa. It is there said to be in use among some African tribes as a test for witchcraft—an individual suspected of that crime being required to imbibe a strong infusion of the root. It is intensely poisonous, and if the individual dies he is supposed to have been guilty, but if, from any cause, he should survive the ordeal, he is considered innocent. The observed effects of the poison, and the character of the bark on the root, the Professor said, left no doubt on his mind that it was derived from a species of *strychnos*.