

the surface of all white bodies, and its application being limited by this objection, the plan was abandoned.

About the year 1844, attention was again called to the subject by the production in Franco of a series of casts in imitation of ivory; and about 1846 the Society of Arts, London, offered a prize which was awarded to Mr. Franchi for his specimens of casting in plaster composition in imitation of ivory. At the time the award was made the nature of the material used by him was not known; but it has since proved to be pure gelatine, and owing to the skilful use of his material some exquisite electrotype casts deposited in the Geological Museum were obtained from objects greatly under cost. Mr. Franchi has since found that he can obtain from a gelatine mould a cast in gelatine in relief without losing any of the sharpness of the original. This has enabled him to apply objects modelled on flat surfaces to cylindrical bodies, thus saving the labour and expense of modelling. One great advantage of gelatine moulds is, that casts without seams can be taken from them.

Diamond Cement, or white fish-gluo, is made of isinglass dissolved in dilute spirits of wine or common gin. The two are mixed in a bottle loosely corked, and gently simmered in a vessel containing boiling water; in about an hour the isinglass will be dissolved, and ready for use. When cold, it should be an opaque, milk-white hard jelly; it is remelted by immersion in warm water, but the cork should be at the same time loosened. After a time a little spirit should be added to replace that lost by evaporation.—*The Boston Cabinet Maker.*

DOMINION.

There are now in Nova Scotia 47 establishments for canning lobsters.

The Louisburg, C. B., telegraph line will be open for business in a few days.

Mr. Trench's party of surveyors left Victoria on the 14th August, to survey a line from Hope to Burrard Inlet.

A party from Toronto has recently been at Devil's Creek, looking for minerals. They took back several specimens of iron ore, and also some very fine specimens of marble.

The total shipping of Prince Edward Island on 31st December, 1873, comprised 280 vessels, registering 38,914 tons. Since the 1st of April, 1874, there have been built in the Island and registered at Charlottetown 23 vessels of 4,217 tons, and re-registered 18 vessels of 935 tons.

The Sackville Post says:—The Marine and Fisheries department is active in improving the shores of Albert County. Buoys are being anchored at Five Fathom Hole and at other places along the shore for the protection of mariners. The steam whistle on Cape Enrage will be in operation in a few days. The building and machinery cost about \$5,000.

The Sackville Post speaks in favourable terms of the result of Mr. Hickman's explorations and discoveries at East Springhill. It says:—"The seams are apparently regular, without fault or breakage, and, although small at first, have increased in size to such an extent as to lead to the belief that East Springhill will develop into one of the most productive districts in the country. Professor Selwyn, Chief of the Geological Survey of Canada, who has lately been visiting the coal areas of Cumber, gives a flattering opinion as to the value of Mr. Hickman's discoveries. We trust that the fullest expectations of those interested in it will be realized, because another Springhill means more wealth, more population and more prosperity for this portion of Canada.

JOINT FOR PIPES.—The following is said to be a German plan instead of the usual projecting end, the pipes have channels around them. When placed in contact end to end, a strip of soft lead is bound about them, and pressed tightly against the pipes by a wrought-iron ring. The advantages claimed are that the pipes are lighter and more easily cast, less lead is required to make the joint tight, no heat is required for applying it; it is quickly done; and especially that the joint is somewhat elastic, and will last longer in soft ground, or when heavily loaded.

RAILWAY MATTERS.

An Ohio lady, Mrs J. R. Carson, is superintendent of the Toledo, Wabash and Western Railroad.

PULLMAN CARS IN ITALY.—A fifteen years contract has been definitely closed at Milan, Italy, for putting Pullman palace cars on all trains and lines in Upper Italy. This covers the great routes of pleasure travel via the northern lakes.

The British steamer Tagus is now taking on board, at the Jersey City wharf, opposite New York, ten large locomotives, built at the Grant locomotive works, Paterson, N. J. They are for a Russian railway and are to be delivered at Taganrog, on the Sea of Azof. They are said to be splendid examples of American mechanism.

FRENCH RAILWAY CARS.—Some of the double deck cars which are quite common upon French roads, exhibit a most extraordinary small proportion of dead weight. One on exhibition at Vienna, with a capacity of 90 persons, weighed only 11.75 tons. Freight cars weighing but 10,000 lbs. carry 20,000 or even as much as 30,000 pounds.

The abandonment by the Russian Government of M. de Lesseps' railway project, for the connection of Russia with India by a line through Turkestan, is announced. The Government now favours a line communicating with China through Central Asia.

A PROPOSAL has been made to construct a tunnel through Mont Blanc. It comes from M. Ernest Stamm, an Alsatian engineer, and is intended to make a connection between France and Italy independent of Swiss territory. It is said not to be attended by greater difficulties than was the Mont Cenis tunnel.

The completion of the iron bridge over the Saco river at Biddford, Maine, affords, says the *American Manufacturer*, an admirable example of the American system of building iron bridges—that of interchangeable parts and pin connections—as contrasted with the system of connection with rivets. The bridge was built by the Phoenixville Bridge Company, and completed ready for traffic within forty days from the date of the order, at which time the iron lay in the form of puddle bar. The bridge has three spans of 133ft. each, and two spans of 100ft. each, costing about 40,000 dolrs.

The first locomotive that ran on a railroad in America was imported from England by the Delaware and Hudson Canal Company; was ordered in England by Horatio Allen, assistant engineer; was shipped from Liverpool, April 3, 1829, on board the packet ship John Jay; arrived in New York 17th of May, 1829; was sent up the river to Rondout, and arrived the 4th of July 1829; from thence was transported by canal and arrived at Honnestale, July 23, 1829; on the 8th of August made the trial trip. This locomotive was built at Stourbridge, and the boiler is now in use at Carbondale, Pennsylvania.

The Detroit Free Press of recent date says:—"Three or four nights ago, after a freight train on the Detroit and Milwaukee Road had left the junction, a stranger was found on the top of the train and when questioned by the brakeman he said that he was an old brakeman out of money, and wanted to go to Grand Rapids. He was apparently deserving, offered to do what he could to compensate for the ride, and was not put off. The brakeman did not think to tell him about the several bridges on the route, not expecting him to do much, and this fact nearly cost the stranger his life, causing him one of the closest escapes on record. About midnight the engineer discovered cattle on the track and whistled for brakes. The stranger was first up from the caboose, and in running over the cars he detected the dark form of a bridge close above him. There was no time to think or act, but instinct caused him to jump. He was not a second too soon, the bridge being almost over him as he leaped. He struck the side of an embankment, fell down and then rolled to the track. One of the wheels caught his boot heel, crushed it off close to the sole, and the man was whirled around by the shock until he lay beside the rail, and before he could move his head a piece of the brim of his hat was sheared off. When the train stopped he was at hand to climb into the caboose, not being harmed in the least.