

at the rate of 7 per cent. per annum to this company on the \$2,035,000 preference shares. One fourth of this sum of 10,693½, had been applied in part liquidation of the Detroit and Milwaukee old interest account, which now stood in the balance-sheet at 6,945½. The gross earnings of the Detroit and Milwaukee Railroad for the half-year to the 30th of June last were 154,787½, and the working expenses, taxes, and insurance 53,162½ leaving the net revenue 55,165½.

CANISTER MEAT PRESERVATION.

The London Grocer says—

Canister preservation depends on the well-known fact that without the presence of atmospheric air, or at any rate its vitalizing constituent, oxygen, putrefaction cannot ensue. Under guidance of this axiom it might seem that uncooked meat might be preserved in canisters hermetically sealed. Not so, there would remain a certain amount of air surrounding the meat, and not only so, but air would be locked up in the meat fibres. Cooking is indispensable—boiling; this, too, at a very high temperature, as will in the sequel be made apparent. Canister meats are prepared both roasted and boiled, as most of us are aware; but the roasting is what we may call—not meaning any disrespect—a spurious process, one standing in the same relation to pure roasting that colored photographs do to pure photography. Let us illustrate this by an example. We have a raw leg of mutton, and we design to seal it up in a tin-plate canister under the guise and designation of roast mutton. Under these circumstances the leg of mutton is partially roasted in the ordinary way; it is then handed over to the canister preserver, to be operated upon in his peculiar fashion. He takes a canister as near as may be, to a leg of mutton in size. He adds some water—this is indispensable; he solders on a tin-plate lid, through which he makes a small hole. He then immerses the canister in a bath of chloride of calcium, but partially, the bath liquid must not actually cover the canister but leave its upper part free. This chloride of calcium bath is heated by a ramification of high pressure steam-pipes to a degree of temperature considerably above that of boiling water, and in which necessarily the fluid held by the canister is very soon brought to the boil, and a sharp jet of steam escapes through the small hole, which the reader will not forget has been made in the canister lid. For how long a time this boiling operation should be carried on is a matter of judgment with the operator—of nice judgment, too, for unlike an ordinary cook, who can see the meat, our leg of mutton is soldered down and made invisible. Of one thing be certain—if the leg be in the slightest degree raw in any part, if the last lingering trace of air be not driven out by boiling, the meat will not keep. Our particular canister-will be a waster—if good for anything at all, good for the mature market. Well aware of this, the canister cook takes care that any error he may commit shall be on the safe side. He boils the incarcerated leg of mutton too much rather than too little, and now the reader will begin to see that over-cooking is a necessity with these canister provisions. By and by the moment comes when the canister cook's judgment admonishes him to solder up the small hole, through which steam is still violently escaping. This is not to be done without the exercise of some dexterity, for solder will not bite until the escape of steam has been momentarily checked. The operator proceeds in this wise. In his left hand he holds a sponge charged with cold water, in his right hand a soldering iron. He squeezes the sponge when a gush of cold water falls upon the canister, and this treatment momentarily checks the evolution. He profits by that moment. With dexterous touch the hole is soldered, and the canister, for good or bad, as time may manifest, is sealed. Hitherto the stages of the process have not been dangerous; henceforward, until the removal of the canister from the bath danger is imminent, for, as will be evident from the conditions, the generation of steam still goes on, and, there being no aperture through which excess of steam may escape, the sides of the tin canister are violently strained. In practice it is found necessary that this heating under pressure shall be some little time maintained. It is found desirable that steam shall actually be driven into the bones of the joint under cookery. For a time there is danger; notwithstanding, our leg of mutton must actually remain where it is, and at this stage bursting sometimes happens, and accidents—in one case within our remembrance, fatal—have occurred. A manufacturer of these provisions told us that he once knew of an operator being killed by a dead turkey; the tin case which held it bursting, the scalding chloride bath was blown over the cook's head and shoulders, when the turkey was undone and he done for at one and the same moment. Such is the process of canister-cooking a so-called leg of mutton. Were the leg to have been boiled, every step of the operator we have described would have been gone through, except the preliminary semi-roasting. It is of course, desirable to know whether the operation has been successful or the reverse, and after a time this can readily be ascertained, without opening the canister, in the following way. Let the soldered contents be what they may, the canisters are stored away in a chamber heated to a degree provocative of putrefactive fermentation. Either it does or does not ensue, according to the success of the processes adopted. If it ensue, gas is evolved. Now, gaseous evolution will naturally plump out the sides of the canister, whereas, under reversed conditions, the tin-plats will remain crumpled or shrivelled. By noticing these appearances, the purchaser of canister provisions will know how to lay in his stock. He will know it to be his policy to choose the ugliest looking, the most shrivelled canisters, all that look plump and pretty owing their beauty to putrefactive gases within. It would be late in the day to explain the merits and demerits of this mode of animal food preservation. Over-cooked the meat must be; hence all this second cooking should be as much as possible avoided. When possible, we think canister provisions should be eaten cold, and when, as in the case of soups, this is incompatible with the nature and genius of soup, a simple warming up is all that can be recommended.

THE NOR'-WEST.

The following is from the London Standard of the 14th inst. :—

"The Bishop of Columbia has lately drawn attention to the fact of Great Britain's neglected opportunity in North America. A railroad may be considered scarcely a legitimate subject for a pastoral charge, or an episcopal speech. Still, taking the position socially, politically and geographically, in which the right reverend prelate is placed, and considering all the direct and contingent bearings of the question, we are by no means inclined to assert that he has stepped out of his legitimate vocation, while we are ready to admit that we owe him patriotically a debt of gratitude for the representations he has made. On the continent of North America we find four chief railroad routes from the Atlantic to the Pacific—one completed, and three projected and likely to be carried out. Beginning north, there is the "North Pacific" line, from the extreme west of Lake Superior by Forts Clark and Alexander across one fork of the Rocky Mountains, and skirting another between Washington district and Oregon, reaching the Pacific south of Victoria. Next comes the "Union Pacific," from New York between Illinois and Iowa, through Nebraska just north of Colorado, skirting the Great Salt Lake to Sacramento and San Francisco. A branch nearly direct south approaches Denver in Colorado, and this is marked to run intersecting Colorado territory, joining the Atlantic and Pacific Railroad, and also meeting a line running parallel from the middle of the western boundary of Colorado through Kansas, Missouri, West Virginia, and Maryland, to New York. The main trunk of the Atlantic and Pacific line is marked through Indian territory, and runs through New Mexico and Arizona to Santa Cruz and San Francisco. Lastly, comes the Atlantic and Californian Railroad, connected with a network of lines in the Southern States, and running through Louisiana and Texas, to the north of the Gulf of California, and thence running up nearly parallel with the seaboard of the Pacific, between the two mountains and the coast, to San Francisco. There is a Gulf branch from this to Matagorda Bay in the Gulf of Mexico, and another into the Gulf of California,

meant to join a line bisecting Colorado and passing through New Mexico and Sonora, in fact running southward at nearly right angles through the two great southern projected lines from the Union Pacific Railroad.

There may, and indeed must, be deviations from the as yet merely projected routes. There are great difficulties in the way of some portions of them, but we may consider that on the whole we have given a tolerable notion of the way in which the United States will first, and at no distant period, develop the resources of their enormous territory by means of railroad communication. What it may hereafter be, thirty or fifty years hence, may to be beyond our powers of conception to imagine, but certainly cannot be defined or laid down.

What have we to do with this mighty network of communication save to wonder and approve, to direct thither our surplus population, and send, so far as we can, our starving thousands in search of plenty and prosperity and new life? We had occasion lately to speak of Colorado, with its magic climate, its scenery and fertility, its parks (truly people's parks), its rivers, lakes, and mines, its growing cities, its myriads of wild cattle its thriving herds of tame, its abundant game and fish, its cereals and vegetable productions, and lastly, the now easy approach to this El Dorado and earthly Paradise in one. What if we have a hitherto neglected Colorado of our own. What if we have an easier, nearer route from the Atlantic to the Pacific, a far preferable highway of commerce between East and West; between London and China, Korea, Japan, and the great Eastern Archipelago! The worthy bishop tells us that we have something of this kind and that the route is 1500 miles nearer than the United States shortest line of transit. It was, as we pointed out in a recent article, the announcement of this by British authors, some twenty years ago, which led the Government of the United States to endeavour to be first in the race, and to plan their great exploring expeditions to lay down the routes. We had the advantage and the opportunity in our own hands. During the great American civil war England might have completed her line had the farsighted counsels of patriotic Englishmen been adopted. And coupled with the project for an Atlantic and Pacific Railroad through British North America was one for securing our vast possessions; for the employment of all our convict labour, and for the absorption of all our emigrants, having the greatness, stability, and prosperity of this empire in view. The line projected many years ago ran from Halifax to Quebec, thence north of Lake Superior, between Lake Winnipeg and Fort Garry to Fort Langley, nearly opposite the Southern point of Vancouver's Island. It was ridiculed by some as impossible, because of the Rocky Mountains. But the United States engineers and our own explorers have taught us that this was but a grizzly bugbear of quid nuncs, incapable of realizing a great and patriotic design. This route leads over some of the finest climate and territory in the world, through a country capable of supplying all Europe with corn. Coal, iron, lead, copper, timber, stone, lime and brick clay, we were long ago informed, are "there deposited in convenient profusion along the banks of navigable and connected waters, extending their proffered aid in the very direction of this invited route." Even the Hudson's Bay Company's monopoly no longer bars the road to settlement and the land of plenty and promise.

It was but a phantom, when the plan was first proposed. Listen to Sir George Simpson, speaking, in 1841, of the territory between Lake St. Anne, just north of Lake Superior, and by which the line would pass to Fort Garry, which we may term the central station of the whole line, and which is very nearly between Montreal and the Pacific terminus: "The country, during our march, passed through forests of elm, oak, lime, birch, &c.,