nature of such a question is obvious. Many thousands of miles of new line are in process of building, and other vast projects are assuming positive shape. The money markets of the world have been paralyzed, and money to the railway builder is what traffic is to the railroad operator. Therefore, we must look for some let-up in construction activity. It is inevitable. Let us hope it may be of short duration. When the war is over, we are likely to see a period of unparalleled expansion in Canada. We have the inchoate material for a development beyond our most sanguine dreams.

From the railway point of view, the recent troubled situation has been hurled upon us when we were proud of our progress and strong in our faith. Our railways had established a surprising record of growth, and great plans, expressive both of our transportation needs and our accumulating energy, were under way. In 1913 they had made an unprecedented addition to equipment, and were in a fine position to meet a swelling of traffic. Had all this happened as the result of mismanagement or miscalculation, from some cause suggesting internal weakness, the situation would be vastly different; but it came when our railway situation, viewed as a whole, was sturdy and sound. Therefore, while we may be embarrassed, we shall be able to take up again the immense work on this northern half of the American continent pretty much at the point where it suffered interruption.

NEW PLANT FOR TREATMENT OF WOODEN POLES.

The Lindsley Bros. Company are just installing at their pole yard in Nakusp, B.C., a plant for treating the butts of their British Columbia cedar poles. For the past two years this company has been operating a similar plant at Priest River, Idaho, and last year treated over 5,000 poles.

The treatment in this plant, as also in the Nakusp plant, just installed, consists in immersing the butts to a point 12 inches to 18 inches above the ground line in genuine avenerius carbolinium at approximately 200 deg. F. for a period varing from 10 to 20 minutes; the period of immersion varying with the condition of the poles and time of the year. It is found that this immersion is the most efficient and gives a penetration of the entire sapwood of the butt—the only place where decay is likely to affect the pole.

At the present time this company is treating some 7,000 poles for the Great Falls Power Company of Butte, Montana, which will be used in a 100,000-volt transmission line to be erected between Great Falls and Anaconda and designed to carry power for the electrification of the Chicago, Milwaukee and St. Paul Railway. About 4,000 of these poles, which are from 45 to 50 feet long, will be used for the main transmission line which will be of "A" frame construction with six unit, suspension type insulators. This will probably be the highest voltage transmitted anywhere in the world on wooden poles and is all the more significant as the Grand Falls Power Company have had considerable experience with steel towers. At the present time they have a 60,000-volt line and an 80,000-volt line carried on wooden poles.

This year the company have entered orders for over 12,000, their customers including some of the most prominent public service corporations in the United States and Canada, one of these being the municipal electric light plant of Ottawa, Ont.

SINKING A SEA-OUTLET.

IN the treatment of sewage in seacoast towns, it has become the custom in almost all cases to use retaining tanks at a point close to the beach. The sewage is brought to this point and there passes through these tanks, giving a liquid effluent, and holding back the solid matter which is broken up, and the natural action of putrefaction takes place.

With the objection of having solid matter washed back on the beach, removed, it only remains necessary to place the liquid effluent at such a distance from the shore, and in a sufficient depth of water to insure a perfect dilution. Here the sewage effluent, being lighter, rises to the surface, mixes with the seawater, the dissolved oxygen of which completes the purification. This has been found very satisfactory in a depth of 20 feet or more of water, and at a distance of approximately 1,000 feet from shore.

So the problem arises to construct a sea-outlet which will withstand the heavy storms occurring along the coast during the winter months, for a sum of money within reach of the average seacoast town.

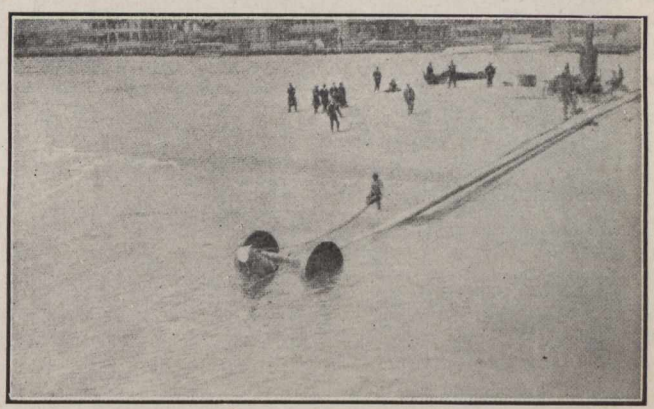

Fig. 1.—Twelve-Inch Pipe, 1,000 ft. Long, Being Submerged After Assembling on Shores.

An outfall was described by W. M. Aitchison, C.E., in a recent issue of "The Cornell Civil Engineer" that is worthy of note. It was installed April 22nd, 1913, to take care of the sewage of West Grove, New Jersey. After passing through the settling tanks in West Grove, the sewage flows through Ocean Grove to a manhole near the ocean from between the board-walk and the street, and from this manhole through the sea outlet into the ocean.

The outfall line was made up of 12-inch galvanized wrought iron pipe. The pipe came in lengths averaging 21 ft. and weighing approximately 48 lbs. per ft., with threaded joints fitting into recessed couplings.

While the material was being put on the ground a 3-drum hoisting engine was set up on the beach near the point where the pipe was to be installed. This being the anchorage of the whole operation, great care was used to have a substantial base. Eight-foot piles were driven in the sand, cross braced and capped, and the hoisting engine bolted to these caps.

For an off-shore anchorage five anchors were set at a place in a direct line with the proposed outfall, and at a distance of about 1,325 ft. from shore. The distance was determined with a light line drawn taut. The anchors were set in a line leading away from shore, the two nearest weighing 500 pounds and the remainder being somewhat lighter. These anchors were fastened together with a steel cable, and an 18-inch sheave attached to the nearest