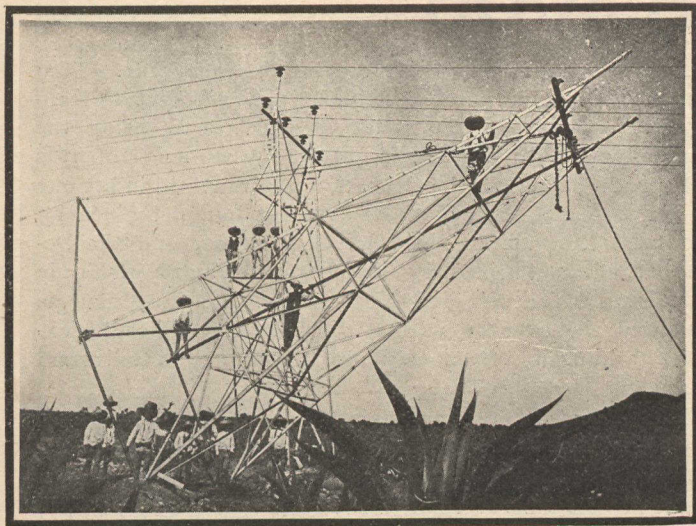




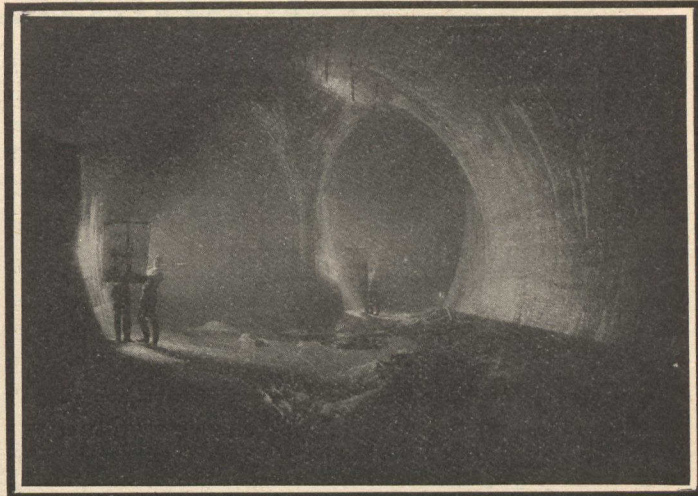
Upending a Transmission Tower in Mexico.

Niagara to points in the United States and Canada, makes other feats look like child's play. In the case of the Electrical Development Company, for example, a huge coffer dam had to be built across the stormiest part of the river, where the mass of water from a thousand miles of great lakes appears to gather force for its final plunge over the cliffs. Hence each rock-filled wooden crib had to be sunk into its place with infinite care. For two years the work went on until the dam was a solid reality and Niagara was obliged to turn aside. The erection of this structure was absolutely necessary, because it was found that 14 acres had to be reclaimed in order that a concrete gathering dam 20 feet high might be built for the purpose of diverting the water of the river into the wheel-pit where the turbines are placed.

But it was "down below" that the most gigantic toil was required. Through 160 feet of rock the excavators forced their way to make chambers for the turbines and to form the tunnel that extends from the centre of the river. The water of the Niagara River thus pours into the deep wheel-pit from which the revolving turbines rotate a shaft, which in turn revolves the electricity producing generators. Half a mile away from the power house is situated the transforming house. The current, when generated, is carried in ducts at a voltage of 12,000 volts to this house. It is there raised to 60,000 for long-distance transmission to the transforming house at Toronto.

Not many citizens realised what it meant when the words, "They are all ready at Niagara," were uttered on the night of November 19th and a room in Toronto was straightway flooded with light. But we are only at the beginning of Niagara illumination and industrial force. The old saying about setting the river on fire has been reversed in this western hemisphere, and we are going to use the greatest current in the world for setting Ontario towns alight and turning the wheels of a province. Canadian brains and dollars have accomplished no more remarkable results than the conveying of Niagara's energy by eighty miles of steel towers to the capital of Ontario.

A great controversy is now going on in Ontario and in Quebec, as to whether the private companies which have commenced the work of hydro-electric development are not likely to reap too rich a harvest. It is the old quarrel in new form. The users of power in the manu-



Bullnose, where two small tunnels join and make the main Tail Race Tunnel, which is 33 feet across.—Electrical Development Company, Niagara.

facturing centres of the two provinces are vitally interested in getting their supply at a low rate; and they are appealing to municipalities and governments to assist them. The fight is a merry one, but a satisfactory solution to all concerned will no doubt be found.

A Modern Miracle

THE Spirit of the River was exceeding sad, for there were strange sounds and sights on the borders of the stream and she wondered why so many human beings went to and fro, hammering and hauling, piling stones and raising towers of steel. In the ages that the Spirit had dwelt in the River, sleeping beneath the coverlet of ice in the winter, laughing between the verdant banks and foaming over the cliff during the fragrant midsummer days, she had come to believe that the human race is made of hurry and unrest, because there were ever crowds, blackening the bridges, clanging in cars along the shore, buying their foolish bargains at the places where bright, painted paddles and fluted shells are sold to the passer-by.

But in her heart the Spirit had been proud of the crowds and the clamour because it was the beauty of the River that had drawn them by its rainbow lure, and the noisiest of all the human creatures was silent for a moment when he saw the snowy splendour of the cataract or the upflung fury of the rapids.

A change had come that chilled her to the heart. The clamour no longer paused on the banks but entered the torrent that she had deemed no human thing might brave. Strange tools pierced the rocks, huge stones were patiently piled against her strength and at last she realised with shrieks of helpless wrath that man was no longer content to marvel but intended to chain.

Then in the long winter night there came the Spirit of the Wind, sweeping her sorrow away by a vision of what was to be. For the Spirit of the Wind told of a myriad twinkling lights, where before there had been darkness, of a million turning wheels where before there had been desolation, and the Spirit of the River no longer hated the man-forged chains, but saw them in the moon-rays as a link which joined the force of the waves and the far-off mountain streams with the power that sheds the light and sets all the wheels awhirl. Therefore, she cried in triumph to the December sky: "Behold, I am greater than ever has been dreamed."



Dam, Forebay and Sluice-gates—Electrical Development Company, Niagara.