

As the wheel pit is not connected to the tail race, the hydraulic apparatus can never be flooded out.

The tunnels on each side of the wheel pit are 25 ft. deep, and vary in width from 66 to 30 ft., with a velocity of from 15 to 21 ft. a second. At a point about 150 ft north of the wheel pit the tunnels come together. At the junction the tunnel is 35 ft. wide and 25 ft. 6 in. high and tapers to a width of 23 ft. 5 in. and a height of 26 ft. 13 in., which section is carried to the edge of



PORTAL OF TAILRACE TUNNEL, WHICH DISCHARGES DIRECTLY  
BEHIND THE CENTRE OF THE HORSE SHOE FALLS, ABOUT  
150 FEET BELOW THE BRINK, AND ABOUT 8 FEET ABOVE  
HIGH WATER OF THE LOWER RIVER.

the Falls, a distance of 1,935 ft. The slope of the main tunnel is .005, making the total loss about 10 ft., and the velocity is 26 ft. a second. The tunnels have a lining 2 ft. thick throughout of concrete faced with brick, except for 300 ft. at the north end, where the lining consists of concrete rings in 6 ft. sections, which are expected to break off as the Falls gradually wear away. This is necessary, as the crest in the centre has been receding at an average rate of  $2\frac{1}{2}$  ft. a year.