

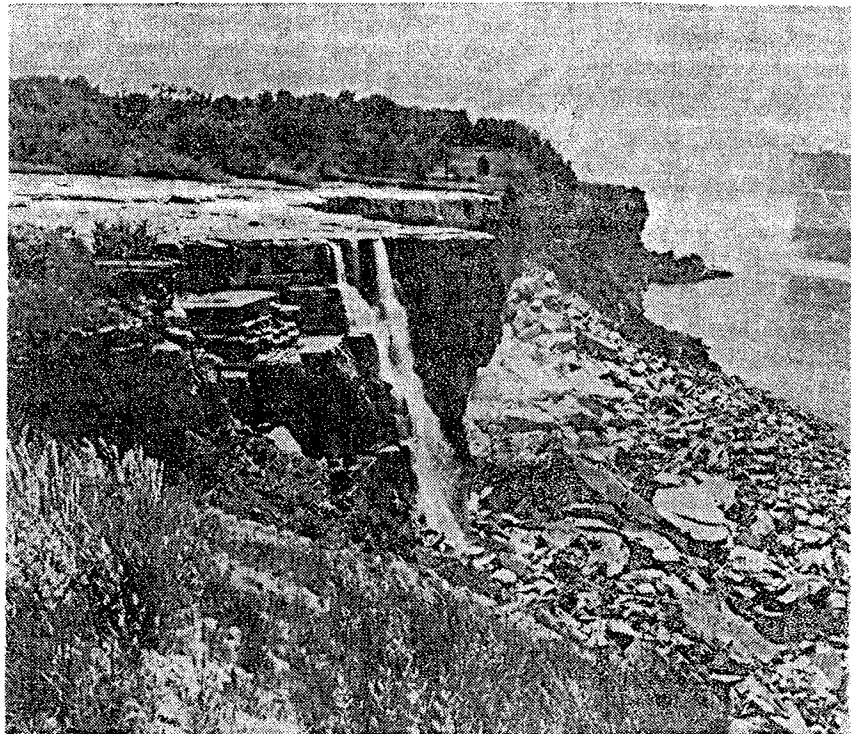
## WHEN THE FALLS WERE DRY

In 1848, a unique spectacle occurred which some people considered to be a harbinger of the end of the world: water ceased to flow over the Horseshoe Falls. After an exceptionally cold winter, the thick ice on Lake Erie had begun to break up during a warm spell in March. On March 28 and 29, strong easterly winds drove huge amounts of ice across Lake Erie. The swift current then drew the ice into the mouth of the Niagara River, where it began to pile up. Reinforced by cold winds, the ice formed a dam between Buffalo and Fort Erie, cutting off the flow of water into the river and over the Falls for a period of thirty hours.

The change in the water level of the river began at about midnight on March 29, 1848, and by early morning, the entire river bed from Fort Erie to the crest of the Falls was exposed. Amongst the first to notice this alteration were the owners of the flour mills along the river bank, whose water wheels were demobilized as a result of the dry conditions. Many incredulous individuals flocked to the river and cautiously ventured onto the river bed, some crossing to Goat Island and beyond. Residents of Chippawa found muskets, bayonets, swords and other military equipment on the bed, which was thought to have been discarded by American troops after the Battle of Chippawa, during the War of 1812. Some business-minded youths drove a logging cart onto the bed and removed a number of large pine timbers, over 12" square and 40 to 60 feet long, which were on the river bed just off Three Sister's Islands. On the night of March 29, hundreds of people were reported to have carried lit torches across the brink of both the Horseshoe and American Falls, whilst the U.S. Cavalry rode back and forth.

The river bed remained dry until the afternoon of March 30, when the winds which had caused the ice to pile up reversed direction. As the ice began to disperse, the flow of water in the Niagara River soon returned to normal. However, for those who witnessed the silencing of the Falls, the experience was an amazing and unforgettable one which would never again be repeated.

The Horseshoe Falls have never again been silenced by the wind and ice, and an ice boom installed in Lake Erie in 1964 will ensure that it never does. The flow of water over the American Falls, however, was cut off once again, from June 12 to November 25, 1969. On this occasion, the American Falls were dried artificially, to permit geological studies of the face of the Falls. A 600 foot cofferdam was constructed of 27,800 tons of rock and earth to prevent water from flowing towards the American Falls. Once the face of the Falls was exposed,



*The American Falls in 1969 when they were artificially dried.*

loose stones were sandblasted away, and a sprinkler system was installed to water the shale layers which would deteriorate unless kept moist.

Over the next six months, geologists studied the rock formations of the cataract to determine what action could be taken to stop the erosion of the falls and prevent rock slides. A walkway was constructed on the river bed to accommodate the tourists, who were predicted to increase by about one million people while the Falls were dry. At 10:05 am on November 25, 1969, the first scoop of earth and rock was removed from the cofferdam. The first gush of water came through at 11:05 am, and by mid-afternoon, the water was once again flowing over the American Falls with its usual force.

Although the Horseshoe Falls have never frozen over, the American Falls have done so a number of times, as they receive only a tenth of the water in the Niagara River, and are much shallower than the Horseshoe Falls at their crest. In 1909 and 1936, the flow of water over the American Falls ceased completely, and it has also slowed to a trickle on a number of occasions during severely cold winters.



*The frozen American Falls of 1909.*