

insula Ship Canal and Ship Railway, and the projected Ship Canal via Lake Champlain.

A sketch of the railroad history will be briefly given.

The Map Plate II shows the present and proposed routes.

ST. MARY'S FALLS CANAL.

(Commonly called the Sault Ste. Marie.)

As early as 1837, the project of building a ship canal around the Falls of St. Mary's River was discussed in the Legislature of the State of Michigan. The matter was brought before Congress in 1840, but was opposed, one of its opponents—the distinguished Henry Clay—speaking of it as “a work beyond the remotest settlement in the United States, if not in the moon.” This was only half a century ago.

The first step taken by the General Government of the U. S. towards the improvement of this water-way was in 1852, 750,000 acres of public land being donated to the State of Michigan, to enable it to construct the canal, and a right of way 400 feet wide granted through the Military Reservation at the Falls of St. Mary's River, on which to build the work. The conditions were that the canal should be at least 100 feet wide with a depth of 12 feet, with locks 250 feet long and 60 feet wide. The canal was opened to commerce in 1855; the locks (two in number) were 220 feet long and 70 feet wide. In 1882 nearly \$2,500,000 had been expended on the canal and its approaches. The prism of the canal had been changed from a uniform width of 100 feet to a width varying from 500 feet at the upper entrance to 108 feet at the narrowest part and 270 feet immediately below the locks, and the depth from 12 feet to 16 feet at a mean stage. A new lock had been constructed 515 feet long and 80 feet wide with 17 feet of water on the miter sills. These dimensions, however, proving inadequate for the rapidly increasing size and draught of vessels, Congress in 1886 provided for a still larger lock, based upon a navigation of 20 feet depth through the canal and its approaching channels. The new lock is to be 800 feet long between the gates and 100 feet wide, with 21 feet depth of water on the miter sills. The estimate for an enlargement of the canal and the construction of this lock is \$4,738,865. The lock overcomes a height of 18 feet. This lock is now under construction.

ST. CLAIR RIVER IMPROVEMENTS.

The next obstruction to be overcome is between Lake Huron and