



OPENING THE LAKES

TO OCEAN MERELY A MATTER OF MONEY.

No Obstacle Which Cannot be Overcome, Declares Gen. Bixby—Dams to Make St. Lawrence Rapids Big Bodies of Water.

A (Washington) writer says: "Opening the great lakes to the ocean for deep water craft is merely a matter of money. There is no obstacle in that way that can not be overcome," said Gen. W. H. Bixby, chief of engineers of the United States army.

"In the Welland canal, it is a question of making the facilities larger. In the St. Lawrence river the enlargement of the numerous canals and locks would be impracticable, because canal navigation is too tedious to pay. But the rapids in that river can be overcome by means of a series of great dams which will transform those rapids into six or eight deep lakes through which a vessel ought to pass at practically full speed."

"As you know, a project is already on foot for the construction of a dam

or dams at the foot of the Long Sault rapids by which the company asking for the right to build the dam guarantees to put in such locks and aids to navigation as the United States and Canada may require. The idea is perfectly feasible. It only requires the joint consent of the two countries, and the dams or locks proposed would transform the Long Sault rapids into a deep lake eleven miles long, entirely obliterating the rapids. Without cost to either government.

"I believe also the company claims it can develop 500,000 horse-power, and in addition to putting in locks is willing to pay a rental for the power. It may be that all the rapids in that river could be treated in the same manner, with no expense to the two governments outside of possibly some of the cost of the locks."

"But why couldn't the canals and locks around the St. Lawrence rapids be enlarged?"

"They could be. But as I said, it would not pay. It would cost too much for the excavation, and when completed navigation through them would be too slow. That would never work, and for the same reason, that a canal from Lake Michigan to the Gulf of Mexico will never be practicable.

"It would take a vessel two weeks to go from Chicago to New Orleans, and when time is money, as it surely is in running an expensive vessel, such a canal voyage would not pay. The ore fleet of the lakes has to make the trip in about ten days to realize expenses and a living profit. But if an ore boat had to creep through a series of canals at the maximum canal speed of about three miles an hour, the expense would eat up the profit and the ore fleet would have to go out of business."

"Look at the enormous expenditure for loading and unloading freight for the lake ore boats. That tells the story. The owners were willing to go to that day, because of the time it saves and the round trip it adds to each boat's capacity during the short lake season. These are things which must be considered in opening the great lakes to the sea. If the Welland canal can be improved and enlarged, as it can be, so that ships can be lifted up and down through it with ease and dispatch, and the St. Lawrence rapids turned into a series of deep lakes, as is perfectly feasible, sailing into and out of the great lakes, could be made with sufficient speed. I suggest that the entire distance at the Welland canal might be covered at one drop. Improvements at other places on the globe indicate it. But certainly it could be done with a series of locks of a capacity to take the largest ships that would come that way."

"How much does Lake Ontario lie below Lake Erie?"

"The Welland canal has a total descent of 3267 feet. To overcome this there are now twenty-five locks, though which a ship passes up to 255 feet long and drawing nearly fourteen feet of water. To pass larger vessels through requires only a larger and deeper canal and large locks. There is no engineering difficulty in the way. This canal is practically twenty-seven miles long."

"Does Lake Ontario offer any obstacles?"

"None. That is a fine deep lake, which never freezes over in the coldest winter. Neither does the St. Lawrence offer any difficulty for the first stretch of sixty-two miles from Lake Ontario to Ogdensburg. There is a deep, clear channel all the way, with a fall of only one foot."

From Ogdensburg to the mouth of the St. Regis the river is interrupted by rapids. Through this distance, about fifty-four miles, the river forms the international boundary, below that, for a further distance of about sixty-six miles, to tide water, there are more rapids, and this stretch is entirely in Canada. So that there are about 120 miles of rapids and shoals which would have to be taken care of by means of from six to eight dams, throwing those 120 miles into six or eight lakes. The total fall through this 224 miles is in the neighborhood of 224 feet. It is possible that at certain points the channel would have to be deepened, as for instance the thirty-three miles through Lake St. Francis, but, of course, extensive surveys would have to be made before any decision as to specific treatment of the river could be reached."

The geological survey has made some tentative figures on the approximate water power that can be developed in the St. Lawrence rapids be-

tween Ogdensburg and Montreal. Taking a total fall of 244.63 feet, with a flow of 201,470 second feet, as a basis, the computation yields 4,880,510 horse-power. That is, this is supposed to be the net horse-power on a water wheel realizing eighty per cent of the theoretical power. If this could be sold for \$20 per horse-power per annum, a very low price, it would earn \$89,610,210 per year, or interest at five per cent on the stupendous total of \$1,792,204,200. These figures are cited simply to indicate the possibilities should the United States and Canada undertake to build the waterway and finance it as it is proposed to finance the Long Sault rapids, through the power developed.

Of course the greater share of the power would be developed in strictly Canadian territory, and the revenue would, therefore, fall to Canada, but the United States would expect to realize its returns for such assistance as it rendered out of the opportunity to reach the ocean by means of the resulting deep water channel for the largest ships."

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QUEEN MARY CONTRIBUTIONS.

The Total Sum Has Reached \$2,800.

Names of Contributors.

The following are the names which have been received with contributions by Miss F. Macdonell, Sydenham street, treasurer of the fund here, to raise money to give Queen Mary a coronation gift. Blanche Mary Nurse, Mrs. Mary Cappon, Mary DesRosiers, Mrs. Mary Clark (Battersby), May Stafford, Mary Anglin, Mary Mills, and Grace May Warren. Any other subscriptions will be accepted with thanks if sent to Miss Macdonell.

Family Cured of Eczema By Cuticura Remedies

The Cuticura treatment has absolutely cured me and family of eczema which I, my wife and two-year-old child had for eight months. It started with small pimples on the head of my child which gradually broke out in sores, and it was not long before I and my wife got the same. Our heads were one mass of sores, we could not sleep and the itching was terrible. We suffered for eight months. We tried different kinds of ointments and medicine but did us no good and soon it began to break out on our bodies until a friend who had the same trouble told me about Cuticura of which I used two sets of Cuticura Soap, Cuticura Ointment and Cuticura Resolvent, and I was surprised. After the first few days our heads began to heal and in two months we were absolutely cured of this terrible eczema."

(Signed) EUGENE POTTS, TROY, N.Y.

No stronger evidence of the value of Cuticura Remedies in the treatment of torticollis, disfiguring humors of the skin and scalp, of infants, children and adults. Sold throughout the world. Send to Potts Drug & Chem. Corp., Boston, U.S.A. for free 32-page Cuticura book on treatment of skin and scalp diseases.

"Diverting" Traffic.

Montreal Bulletin.

From Bemidji, Minnesota, comes a report that the C.P.R. is to divert transcontinental traffic from its main line north of the international boundary, to the route it has been building and buying in the states of Wisconsin, Minnesota and North Dakota. Bemidji, it may not be out of place to remember, is the town which raised so much fury a while ago because the federal government proposed to enforce prohibition in that vicinity. Whether joy induced by the abandonment of this horrible threat has anything to do with the railway rumors now emanating from Bemidji remains to be learned. This much may be put down as certain—the C.P.R. will divert or not divert through traffic from its Canadian to its American lines according as the diversion would or would not be profitable. Patriotism, contrary to what some might think, has nothing to do with the case.

Sold by all medicine dealers or by mail, post paid, at \$2.50 a box or six boxes for \$12.50 from Dr. Williams' Medicine Co., Brockville, Ont.

THE WHIG'S JUMBLE.

A Lot of News of Interest to Every Body.

Buy moth-proof bags. Gibson's, William Swaine, piano tuner. Orders received at McCauley's, Phone 775.

Save dollars by buying your trunks, etc., at Dutton's, 209 Princess street.

Four of station agent Dunn's children at Kaladar are down with scarlet fever.

Sweet pea seed. Gibson's.

H. Cunningham, piano tuner, 21 King street. Leave orders at McCauley's bookstore.

Dr. Bay Allison and family, Napanee, have left for Camden, N.J., where they will reside.

Shoulder braces, 50c. See our children's waists. All kinds. Dutton's, 209 Princess street.

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