

THE HENNEPIN CANAL

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The present session of Congress is confronted with the problem of an international deep-waterway. The International Commission studying the project of deepening the upper St. Lawrence River has submitted its report. The Congressmen from the Mississippi River valley and the Great Lakes are clamoring for the building of this waterway. The news columns of the cereal region are broadcasting the benefits to the grain grower such a waterway will bring about. From the current propaganda one reads that the problem of cheap transportation eastward will be solved by a thirty foot channel to the Great Lakes. To Chicago, Milwaukee and Duluth will come the seaboard advantages of Boston, New York and Philadelphia. To the student of the transportation problem which has grown with the development of production in the upper Mississippi basin, this clamor for a waterway eastward is but the latest of a series of such agitations. The experience gained through the use of the Hudson River, the Erie Canal, the line of the Great Lakes, the Erie-Ohio canals, the Illinois and Michigan Canal, and the other waterways which aided the move of population westward, seems to have left indelibly impressed on the minds of succeeding generations the conception that waterways are the solution of all transportation problems.

Within the bounds of our own state lies a not long since completed example of the application of waterways to the problem of inland transportation. Its conception, the fervor of its agitation, the marked distress of the region demanding it, the stick-to-it-iveness of the Congressmen who made it a plank in their platforms, the twenty-seven years of heckling before Congress succumbed, the building of a waterway for a people who had forgotten or had never known why it was wanted, its maintenance amid their hard roads and efficient railways, — in all this the Hennepin Canal exemplifies the effort our national government is putting forth towards solving in-

land transportation. The story of its achievement is worthy the notice of the Congressmen who support the St. Lawrence project.

In the late summer of 1834 a family moved to the region of Bureau Creek (Bureau County, Illinois) from the banks of the Erie and Ohio Canal. The succeeding autumn, a son who had helped construct the canal near the Ohio home, took his gun, and, in his own words, "viewed the country through from Hennepin (on the Illinois River) to the Mississippi River near Rock Island, and thought it was a natural pass for a canal as there was a depression all the way across with high land on either side." This reconnaissance led to a more careful reviewing of the region a few weeks later, the interesting of local influence and the agitation for a waterway to connect the big bend of the Illinois River with the Mississippi near Rock Island. Believing that there might be dollars and cents in it, the Erie Canal having paid for itself in the ten years just past, local interests financed private surveys of the proposed route. The legislature of Illinois was involved in the Illinois and Michigan Canal project, and to this body the matter of extending water transportation to the upper Mississippi was carried. Permission for the building of the canal was given but state aid was not forthcoming, so the matter was dropped.

The growth of population near the junction of the Rock and Mississippi rivers made the need for better communication eastward a more urgent one. The canal project was changed to a railroad, and the line of the C. R. I. & P. railroad was put through almost directly over the first surveyed route for the proposed waterway. Interestingly enough the exorbitant freight rates charged by this railway in carrying cargo eastward, and the example of the influence upon rail rates exerted by the Erie and the Illinois and Michigan canals, again brought about agitation for waterway extension from the Illinois to the upper Mississippi. Private and state aid having been previously sought in vain, in 1863 the project was carried before Congress by Senator Hawley of Iowa, where it became noted in succeeding sessions

as "Hawley's canal bill". The report of the senate committee to whom the bill was referred illustrates the turn which agitation for water transportation had taken, a turn not at all different from that it is taking in our present Congress. The considering committee said, "No improvement of the same probable cost would be productive of so great a benefit; and that the benefit to be produced would not be confined to the state of Illinois alone, in which the work is situated, but would directly and inevitably embrace the state of Iowa, Wisconsin and Minnesota, and indirectly affect all the states lying west of these, whose railroad lines would bring produce down to be shipped by the canal". How like the current statements we read concerning the St. Lawrence project! Suffice it to say that Congress evidenced sufficient interest to authorize surveys of the proposed route in 1870, 1874, 1882 and in 1886. These surveys having proved the feasibility of the waterway from the engineering standpoint, in answer to the clamor of state legislatures, memorials from waterways conventions, boards of trade and chambers of commerce, in 1890 Congress authorized the construction of the waterway, fifty-six years after agitation for it had commenced and twenty-seven years after the bill had been presented for consideration.

The significance of the twenty-seven years which the Hawley Canal Bill spent in Congress is not remarkable until one considers the changes in the transportation problem that had come about in that time. During this period of agitation railroad growth had been very rapid throughout the cereal region of the upper Mississippi basin. The railroads had become masters of the transportation problem through increase in mileage and through improvement of carriage facilities. This period was one in which railroads set rates unhampered by such governing influences as railroad commissions and without concern for inter-state commerce commissions. The adoption of rates truly in keeping with the service rendered, however, was coming about even at the time when the waterway was authorized in 1890. Had the whims of a slow-to-act Congress, and the political adjustments

due to party influence which brought about the authorization of the project, encountered the most meager consideration of the evident future of rail transportation, the value of the water-way as a "regulator" in its 1890 environment would have caused it to be held up for even a longer period, if not prevented the expenditure of the more than seven millions of dollars for its construction.

The geography of the region between the Illinois and Mississippi Rivers determined both the general and the specific location of the waterway. The great bend of the Illinois and the eastward bend of the Mississippi near Rock Island invited connection by an artificial waterway. The depression of Bureau Creek led westward from the Illinois at a place where a lake afforded an eastern terminal harbor. Green River led westward from the slope of the morainal divide to the navigable Rock River, whose channel led directly to the Mississippi. The relation of the upper Green River to the flat divide of summit level offered the first suggestion of a to-be-impounded water supply from which the canal could be fed both eastward and westward. Later surveys set forth the feasibility of bringing southward along the flat crest of the divide a canal feeder from the upper course of the Rock River, thus assuring a cheap and satisfactory supply of the water necessary for canal maintenance. The character of the Mississippi between the mouth of the Rock River and the town of Comanche, Iowa, to the northward introduced the problem of finding a suitable western terminus, thus modifying the location of the western half of the waterway. The intervening land mass between the Illinois and the Mississippi did not offer a serious problem in canal construction. The height of the divide necessitated a rise of one hundred ninety-nine feet above river level at low water, an elevation accomplished by twenty-one ordinary locks.

[In passing it is interesting to note that in 1894 lock construction marked the beginning of the use of concrete in canal building.]

The highways of the region introduced a problem of bridge construction and highway embankments; the

streams of the region necessitated concrete aqueducts through which the canal was carried above them. The earth material encountered was mainly morainal. No rock excavation was necessary except near the upper entrance to the canal around the rapids in the lower Rock River. The position of the C. R. I. & P. railroad necessitated in many cases canal building at a higher level than originally planned, and the circumventing of the rapids near the mouth of the Rock River introduced the use of high embankments to maintain canal level with regard to flood conditions and to slack water. The swampy condition of summit level, a region overlying a former peat bog interspersed with pockets of quicksand, introduced the lining of the canal with planks and clay in order to maintain a channel. The construction of the feeder had as its most serious problem the location of the dam in the Rock River from above which the canal water could be taken. Consideration of the effect upon previous power constructions in the Rock River resulted in the locating of the dam at Sterling, and the carrying of the canal feeder southward along the divide.

Although authorized in 1890, actual construction of the canal did not begin until July, 1892, with the building of the section around the rapids in the Rock River near the town of Milan. This section, four and one-half miles in length, was opened to traffic on April 17, 1895 at a cost of \$547,229.93. A dam in the river above the rapids afforded slack water transportation from the eastern end of the Milan section of the canal to Colona, where the main line of the canal joined the Rock River. Water from the Rock River was turned into the feeder in the fall of 1907, and on November 15th of that year, the first vessel passed from the Illinois River through the entire length of the canal to the Mississippi. The actual cost of construction was \$7,319,563.39, a figure almost double the early estimates.

“Immediately upon the completion of the canal”, said its chief engineer in 1908, “people began to look for the effects its promoters had assured would result from its

construction. The country through which the canal passes is agricultural and the only large towns on the route located its western terminus. The canal affords a connection with the Illinois River as far up as it is navigable, namely to La Salle. There are many flourishing manufacturing towns on that river or near it, and it is natural to suppose that some of their products—coal, tiles, brick, stone, cement and foundry products,—would form freight for canal carriage. Grain and possibly livestock will be transported by canal. On the west the heavy merchandise of Moline, Rock Island and Davenport may supply some traffic. The effect upon freight rates which was hoped for by canal construction at the time of intense agitation,—eighteen or twenty years before completion—has been realized from other sources than water competition. Rivalry between rail lines, increase of the railroad net, and the effect of larger trainloads and more efficient hauling, had wrought the needed reduction in cost of rail carriage.” “The first practical use of the canal”, continued the chief engineer, “will probably be to pass launches, house-boats and pleasure craft from the Chicago district and upper Illinois River through to the Rock and Mississippi rivers.” The prophecy of the chief engineer has been a true one. The expenditure of almost seven and one-third million dollars in the completion of a seven foot channel between the Illinois and Mississippi in 1907 came even more than eighteen or twenty years too late. Had the waterway been builded immediately after the opening of the Illinois and Michigan Canal in 1848 instead of fifty-nine years later, its extension of navigable water westward would probably have exerted the influence expected. Such a water connection thus established between Lake Michigan and the Mississippi at Rock Island might have saved the discarding of the Illinois and Michigan Canal and have induced authorization of the enlarging of that canal as proposed several times in the days of its decline. Such a waterway might have proved through its usefulness the value of a Lakes-to-the Gulf Deep Waterway to carry water competition southward. Its economic

history might thus have been one to which the supporters of the St. Lawrence River project might point as evidencing the value of water-way competition in the carrying of the surplus products of a cereal region.

But such is not the story of the Hennepin Canal. Authorized to extend the influence of the Illinois and Michigan Canal westward years after that canal had fallen into decay, authorized to combat the restraining influence of high rail rates when those rates were steadily decreasing, it stands in all of its length of seventy-five miles, its depth of seven feet, its width of eighty feet, its thirty-seven locks with their "ever watchfully, hopefully waiting" keepers, ready for the launches, houseboats and pleasure craft that its chief engineer had prophesied,—a seven and one-third million dollar monument to the persistence of local politicians and their influence upon filling the "pork-barrel" of the Rivers and Harbors Appropriations a little more full. Yet I would not have you think the waterway a useless one. The swampy region of summit level is better drained because the canal receives its tile lines; the health of the adjacent inhabitants is somewhat improved through the bathing facilities afforded by its water section; its piscatorial content attracts the local disciples of Izak Walton; its ice in winter maintains an industry that affords the total return for the capital invested and results in an average annual income of approximately three hundred and fifty dollars; its thirty-seven locks give employment to as many keepers in these days when unemployment is a national concern, and canal maintenance augments that force materially; it staunchly maintains in the minds of its lock-keepers, if not in the minds of the cereal growers along it, visions of crowding craft going eastward, going westward in the day when the Hennepin canal is joined up with the waters of Lake Michigan by a waterway of equal section and the original plan of its conceivers is fulfilled.