

The Skagit News

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PROTECTING THE BANKS

. One of the most important questions for the consideration of the settlers of the Skagit Valley, is an adequate protection to the rivers banks from wash during high water. It is possible to build a levee of sufficient height to prevent overflow, but it is impossible to build a levee that shall withstand the slow undermining of the river at its base. So far, several methods have been tried but none of them are entirely satisfactory. The New Orleans Picayune of Aug. 16 has a description of a system which has been tried along the banks of the Mississippi, with the most satisfactory results. The following extract from the article will explain the system:

The system was invented by Messers. R.H.F. and N. H. Sewall. The former gentlemen being interviewed stated that their system of dikes is nothing new to the engineers and citizens at large who are interested in such work.

Mr. Sewall's idea has been before the public more or less prominently for over three years. The plan is to construct spur dikes of timber at intervals along the caving banks. These dikes project upstream at an angle of about 25 degrees. They are constructed of piling driven 80 to 85 feet into the river bottom; the water will fall into the angle formed by the dike and the bank, and be held there, forming a motionless body of water on both sides of the dike, which leaves no pressure against same. The deposit of the silt laden waters of the Mississippi will be stopped by the dike and will gradually settle, forming an accretion which will eventually create a batture¹. Mr. Sewall's method of sinking piling in constructing these dikes is exceedingly ingenious. Of course he has to use pilings over 150 feet long, and as it is impossible to

secure single sticks of timber of greater length than 80 feet, he has, therefore, devised a system of splicing which enables him to make piles of any desired length. He takes the 8x12 pile and connects it with another one, securing them by bolting on two strips of 2x8 timber; the joints of each are broken midway between the joints in the piling. On the 2x8 timbers he then bolts other strips to form a dovetail. When the dike is being built the first pile is sunk in shore, preferably at the base of the levee. The next pile is fitted into the dovetail and driven home; and the others are fitted on in the same way, each pile serving as a guide for its fellow, and the whole forming a solid sheet of wood. The dike may be prolonged to any desired distance, the end pile being anchored and guyed with wire ropes. Beyond this end pile the dike terminates in a sort of stepoff, each pile being shorter than its predecessor, till the bed of the river is reached.

In practice this step-off has not been used for reasons shortly to be explained.

Mr. Sewall has built six dikes, one at bayou Gonias, one at the head of Poland street, in this city, and four in south pace. The one at Poland street was built in 1894. Mr. Sewall says that the river here is about 50 feet deep, and the dike runs out about 185 feet; the piling is driven 80 feet below the river bottom. This dike has stood three high waters, those of 1894, 1895 and 1896, and though it is extremely poorly constructed, having been done with inexperienced labor, it stands today as solid as when put down, though the end of the dike was never completed as it should have been, owing to insufficient funds to finish it in the proper condition; but the effect it has had upon the embankment is even greater than expected, and where formerly a swift current passed, it is not filled up to a solid embankment on both sides of the dike, which is visible at low water, sufficient silt having been deposited in three years to bring about such changes.

The dike at Banyon Goula was built in 1894 also, and terminates in 115 feet of water, and the people in that vicinity have been so extremely pleased with the

¹ The word describes a sort of no-man's land between a levee and the river.

same that they have repeatedly circulated petitions to the Mississippi river commission and to congress and the state levee boards to adopt the same.

The dikes in the South pass were built by laborers under the direction of Mr. Ubadell, the engineer in charge of the jetties, from instructions by Mr. Sewall; they terminate in only 26 feet of water, but are answering every purpose intended for.

Mr. Sewall claims a few thousand dollars in dikes at Banyon Goula, for instance, will result in serving levees worth \$150,000, which, to say by the methods used by the river commission, would not cost less than \$780,000. It is for this reason that the taxpayers, now that the levees are in such magnificent condition, are doing all in their power, short of a revolution, to get the levee boards to make an effort to protect the levees.

Many leading citizens of New Orleans as well as property holders along the banks of the river, steamboatmen and citizens at large, who have investigated this system, made an appeal direct to congress to take this matter in hand, as the Mississippi river commissioners were so inactive regarding this matter, and insist upon building new levees, instead of protecting those already built, though the dikes already mentioned had stood the high waters which they stated they could not, and proved to all persons of common intelligence the system was effective and could hold the river to any channel desired."

From the foregoing it would appear that this system of levee protection, so far as tried is eminently successful. If the giant of rivers with its vast volume of water and great depth can be controlled, certainly it should be possible to secure the banks of the Skagit from wash. The break in the levee at McClimans' place through which a torrent of water is pouring at the present time gives ample illustration of the imperative necessity of some action on the part of the board of commissioners which will effectually prevent the farther encroachment of the river at this point.