On the other hand the Board of U. S. Engineers, in reporting on this work shortly after the suspension of the Goodyear contract, said:

"It was thought by the Company's engineers that the old Government jetty acted as a dam to prevent further deepening. This jetty was therefore blasted out over a length of about 500 feet. This blasting was followed by an advance of the inside contours."

"There does not seem any probability that the jetty, as now constructed, will of itself secure and maintain any considerable increase of depth in a navigable channel of proper width."

Notwithstanding this guarded prediction the Welker report shows a progressive deepening from the eight and a-half feet, said to be the least depth, to fifteen feet, in a little more than a year with no additional work done at the site—and the latest reports, after the plan is said to have been completed (in 1906), are that the depths reach to from eighteen to over twenty feet entirely across the bar, which it is now proposed to destroy by a return to the original project of 1887, as recommended by the Board of U. S. Engineers for the purpose of maintaining a channel which is already *self-created* and readily navigable.

APPENDIX "B."

COPY OF OPINION OF JUDGE ADVOCATE GENERAL

As based upon the communication of the Chief of Engineers as to the appropriation made for the express purpose of removing the old Government jetty obstructing the channel scour at Aransas Pass, Texas. It reads:

December 17, 1900.

"Respectfully returned to the Secretary of War.

The River and Harbor Act of Mar. 3, 1899, contains the following item:

"Improving Aransas Pass, Texas. For dredging and other improvements of Aransas Pass Harbor, sixty thousand dollars; Provided, that the Secretary of War is hereby authorized to contract for the removal of that portion of the old Government jetty in said harbor from the end nearest to the curved jetty constructed by the Aransas Pass Harbor Company to the wreck Mary, in such manner as to in no wise interfere with the curved jetty now located in said harbor; And provided further, that said contract shall not be let by the Secretary of War, nor said work done, until the said Aransas Pass Harbor Company shall have properly released and surrendered all rights and privileges heretofore granted to it in said harbor by Congress, also the jetty constructed in said harbor." (30th Stats. 1128.)

In 4th endorsement hereon the Chief of Engineers says:

"The requirement as to removal of old Government jetty was introduced in the item by Congress and in accordance with the requirement a contract was entered into in January last, with Charles Clark & Co., but in the opinion of the Engineer officer in local charge of the work it would be to the interest of the work to postpone removal of the Government jetty as contemplated by the act and contract made in accordance therewith

until other and more important work had been accomplished. The District Engineer officer, Captain Riche, recommends that, instead of removing the old jetty at this time, the available funds be applied to repairs to what is known as the "curved jetty," and to dredging, surveys and contingencies, etc. He proposes to annul the present contract for removing the old jetty, no work having been done under it and the contractor being willing, and to make, without advertising, a new contract amounting approximately to \$75,000 in its stead, on terms considered by him very reasonable and advantageous, covering the work of jetty repair and construction considered essential at this time."

The matter has been referred to this office for opinion.

"1. Whether in view of the language of the act the removal of the old jetty can be postponed, and the money appropriated be applied to the work of jetty repair and construction proposed by Captain Riche."

"2. Whether it would be legal to abandon the present contract, by mutual consent, and substitute therefor a new contract with the same parties, covering the new work, without inviting competition by public advertisement."

"In my opinion the act is not to be construed as requiring the removal of the portion of the old Government jetty specified therein, but as authorizing its removal. An appropriation of sixty thousand dollars is made generally "for dredging and other improvements of Aransas Pass Harbor," and this is followed by the provisions that "the Secretary of War is hereby authorized to contract" for the removal of the portion of the jetty referred to. There appears to be nothing in the act which limits the expenditure of the appropriation, or any portion of it, to the removal of this jetty; and I am of opinion that the entire appropriation can be expended for other improvements. No objection is seen therefore to a supplemental contract with Charles Clark & Co. providing for the termination of the existing contract for the removal of the jetty, provided such action is deemed for the best interests of the United States."

As to the second point it was ruled that it could not be legally done without public advertisement.

The case as presented makes the opinion of the District Engineer superior to the decision of Congress as to the necessity of removing the obstruction which the Government itself had previously placed across the channel and which it persistently declared was not acting as an obstacle, even after a survey involving over 500 borings showing rock in place at depths of from eight to thirteen feet, had been made but not published.

It is a fact that the River and Harbor Committee in executive session called the writer before it and asked him what the cost of the removal of that obstacle would be, stating that it was the desire of the Committee to make a test of this method, and if the prediction of fifteen feet resulted from this part of the work, after the removal of the obstacle, then Congress would complete the work upon this plan, but that the whole matter was contingent upon the taking up of this obstacle. It was stated to the Committee that it could be done for \$50,000, and the Committee made it

\$60,000 to cover any possible contingency, and voluntarily inserted the proviso that the curved jetty in said harbor should in no wise be interfered with, so that the work might be conducted strictly in accordance with the design of the inventor.

The authority to apply the money to the jetty, conferred by the official opinion upon the allegation that more important work of "repairs" was required, and the release of the contractor after a delay of more than a year of inactivity, and the execution of a contract with him to build up the *inner* end of the jetty first, in violation of the proper method of procedure and while the old jetty still remained to obstruct the passage of the currents seaward, resulted in great injury to the channel by rolling the bar forward and creating a shoal by subsequently leaving a breach of about 1600 feet in the center of the work, for several years, thus enabling the currents to escape and the drift to enter the channel, still further delaying results.

All this was the sequence of the failure to execute the provisions of the act of 1899 in accordance with the expressly stated purpose of Congress. The old Government jetty was not removed until 1904, and even then a rocky lump remained with less than seventeen feet depth, which was only taken out in 1906, thus finally, after many years of delay, enabling the currents to operate freely upon the channel. The results which have followed, notwithstanding these most serious delays and unusual obstructions, have no precedent in the annals of harbor improvements in the world, either as to economy or results, yet it is now proposed to obliterate them by the immediate return to the original two-jetty plan of the Government, before the unaided currents of this feeble tidal inlet have had sufficient time to establish a permanent regimen, as agreed upon when the plan was taken over by Congress.

L. M. HAUPT.

APPENDIX "C."

MEMORIAL AND BRIEF SUBMITTED TO COMMITTEE ON COMMERCE, U. S. SENATE, FEBRUARY, 1902.

Improving the Entrance to Aransas Pass, Texas, by Natural Methods.

COMPARATIVE SUMMARY OF RESULTS AND COST.

Prior efforts by Government and others. *No results.* Cost, \$657,885. The "Haupt" plan, partially built by the Aransas Pass Harbor Co., *increased depth nine feet.* Cost, \$235,000. Cost, per foot of depth gained, \$26,111, which is unprecedented.

COMPARATIVE PROPOSITIONS.

The Government proposes to build *two jetties and dredge a twenty-foot channel, which will not be self-maintaining*; without guarantees or time limit-