THE MEMPHIS DAILY APPEAL.

ESTABLISHED 1840. MEMPHIS, TENN., SATURDAY, JUNE 20, 1874. VOL. 34.—NO. 160

CONGRESSIONAL.

The senate yesterday adopted the report of the conference committee on the currency bill. The house, under suspension of rules, passed the senate bill for the relief of the East Tennessee university. There was considerable discussion in the house on the subject of newspapers, and a resolution was adopted prohibiting the publication of the revised statutes in newspapers at government expense. The newspaper postage rates were passed in the house. The postoffice appropriation bill, from the senate, was discussed in the house up to the hour of adjournment.

THE TENTH-WARD MEETING.

The proceedings of the meeting of citizens of the tenth ward favorable to the Bartlett movement, will be found in another column, and will be read with interest. The gentlemen named for delegates are well known in the ward, and, we understand, are acceptable to the voters. The formation of a Bartlett club is, however, to us the most significant part of the proceeding, which we hope will prove but the initiatory step to similar organizations in all the wards. Let us have a Bartlett club in every ward, and concentration on tickets made up of good men—the best that can be had.

BARBOUR LEWIS'S SPEECH.

The APPEAL and the present representative in congress from this district have seldom found occasion to agree. He has been intensely, sometimes offensively, Radical, and we have never yet found a reason for swerving from the Democratic principles we have through a long life defended with the ability we possess. Politically, then, we are "as wide apart as the poles," and so whenever we thought ourselves justified and the public service required it, we have not failed to remind Hon. Barbour Lewis, sometimes in no gentle tones, of his derelictions and neglect of duty. We can, therefore, with all the better grace afford to do the generous thing, and recognize the faithful performance of an important duty by him, in the delivery of a speech, for which we find room to-day—a speech that proves that Time has not left the heart of Judge Lewis untouched, and that even he has relented somewhat of his extreme views, and can recognize the exalted merit of Lee and Johnston while urging the claims of the south for a generous appropriation for the purpose of improving the navigation of the Mississippi. We can almost forgive Barbour's failure in the customhouse matter in view of a speech which does both his head and heart credit.

BARBOUR'S GREAT SPEECH.

The Delta of the Mississippi—Its Vastness, and the Immensity of its Commercial and Agricultural Interests.

Results Achieved by the Levees—What the States Have Done, and the United States Government Should Do for Them.

Reservoirs and Revetments—The Future Cost—Constitutionality of Reclaiming the Delta—Conciliation and Reconciliation of the South—Etc., Etc.

The house having under consideration the bill (H. R. No. 2998) to provide for the appointment of a commission of engineers to investigate and report a permanent plan for the reclamation of the alluvial basin of the Mississippi river subject to inundation, Mr. Lewis said:

MR. SPEAKER—The question of the reclamation of the vast delta of the Mississippi is one of life and death, as it were, to a million or more of population living immediately on the lands directly exposed to the floods. It is a vital one to the citizens generally of six or seven great States, which extend into that region, while its direct and ultimate consequences deeply concern the interests and the prosperity of all the people of that immense area geographically designated as the valley of the Mississippi, embracing twenty-one States, and seven Territories soon to be States, and comprising more than 1,256,000 square miles of territory. It is of incalculable importance, moreover, to the whole nation, and merits the earnest and anxious consideration of the national government, and especially of congress. It greatly concerns the interests of my constituents, will affect their future prosperity immensely in many ways, and I therefore feel impelled by the strongest sense of duty to ask the attention of the house to some reasons why I think it should pass the bill now before it, providing for the appointment of a mixed commission of army and civil engineers to investigate the whole question, and report some permanent and comprehensive plan for the reclamation and protection of the vast alluvial basin subject to overflow.

EXTENT OF THE DELTA.

The delta or alluvial lands of the Mississippi, according to Prof. Forshey, an eminent civil engineer, who has devoted nearly thirty-eight years to the levees and physics of the Mississippi, comprises an area of 38,706 square miles, or 24,771,840 acres, of the most fertile soil on the globe. This is an extent of territory three times as large as the kingdom of the Netherlands, twice as large as Switzerland or Denmark, larger than many other famous and historic States in Europe, and is more than equal to the combined areas of six distinguished States out of the original thirteen of our nation. I refer, of course, to Massachusetts, Connecticut, Rhode Island, New Jersey, Maryland and Delaware. Its vast capabilities will be recognized at once, when it is remembered that with a soil fully as fertile as that of the valley of the Nile, it is seven times as great in area as all the arable lands of Egypt now or at any former period of its history.

ITS CAPACITY OF PRODUCTION.

In 1860 this very region, now unhappily submerged by the present disastrous floods, produced 688,254 bales of cotton, worth $41,295,240; and 460 000,000 pounds of sugar, worth $32,200,000. Humphreys and Abbott's survey estimates the yearly capacity of this region for cotton alone, at only ten cents per pound, to be equal to $315,000,000! At the prices that have prevailed since the war this would amount to about $500,-000,000 annually. Add to this its capabilities for the production of sugar in the lower portion of the delta, or south of 31° 30', and the total amount would be almost fabulous, and nearly equal to the value of the cereal crop of the whole United States. This vast delta region, besides the grain lands in its northern portion, contains at least ten million acres of the best cotton lands in the world, and five million acres of the finest and richest sugar lands. These estimates of the delta do not include the alluvial lands of the tributaries of the Mississippi that are subject to overflow. They would greatly increase the area already mentioned.

ITS ENORMOUS NATURAL RESOURCES.

This region, thoroughly reclaimed, would soon produce for our country all the sugar it now consumes, or can hereafter consume, and for which we now pay annually to other countries $60,000,-000 in gold, besides all the exports we send them, and would give us also a monopoly of cotton production for the world. If we intend ever to have the balance of trade with foreign countries in our favor, as we ought, and to become independent of them, commercially and financially, we must carefully encourage and protect the production of the great staples of the world's commerce and manufacture in the rich delta of the Mississippi. All that is required for the amplest development of its vast and almost boundless resources is secure protection from the devastating floods. They carry ruin and desolation and death where they go. The million of planters and laborers there must be protected from their ravages, or must forever retire before them.

GREAT RESULTS ACHIEVED BY LEVEES.

Can this vast region be thoroughly protected? In the past levees have been almost exclusively relied on. Cut-offs and outlets have been sometimes suggested, and have been ably advocated by Cowdon and other writers of eminence and distinction, but have not received much favor, while thousands of miles of levees have been hopefully and confidingly constructed. They have sometimes failed to answer all the expectations of their builders, especially when unwisely located, but have done immense good, and have certainly accomplished great results. They have reclaimed millions of acres of the richest lands in the world, and have added immensely to their value. In 1860 the farm lands and plantations of the great delta which from Cairo to the Gulf is nearly six hundred miles long, and thirty to one hundred and twenty wide—were computed to be worth, for agricultural purposes alone, without levees, about $9,500,000, but with levees, $339,718,440. Levees had increased the agricultural value of the lands of the delta more than $330,000,000. Of course this does not include its numerous cities, towns and villages, nor even the houses and other buildings on the farms and plantations. It was the mere naked value of the soil for the plow and the hoe.

EXTENT AND SIZE OF LEVEES.

At that time there were in the delta over two thousand miles of levees, with an average hight of eight to ten feet, and a breadth at base of fifty to seventy feet. The width at top was usually equal to their hight. A few of the levees were of immense size. That of the Yazoo Pass, about one hundred miles below Memphis, was cut by the Federal forces during the war at a point where it was thirty-eight feet high. For a distance of twelve hundred feet it was on an average twenty-eight feet high, and in places nearly three hundred feet broad at its base. This was a very exceptional case, however.

COST OF THE LEVEES IN THE PAST—THE FLOODS.

The national government has done nothing as yet for the protection of the delta from the floods, except merely to make surveys, etc, and to donate the swamp lands to the States. Individual planters, towns, parishes, cities, counties and States, the direct sufferers, have thus far borne the heavy burdens of building the levees, and have expended immense sums upon them. Louisiana, before the war of secession, had expended more than $24,000,000, Mississippi more than $14,000,000, Missouri over $1,640,000, and Arkansas more than $1,000,000; in all about $41,000,000. Since the war Louisiana has spent about $13,000,000, and Mississippi some $4 000,000, making thus far nearly $60,000,000 since 1830 or 1840, spent on levees. It is beyond the power of impoverished and desolated States to go further in this direction unaided. The work has grown beyond their resources.

THE PROBLEM OF THE FUTURE.

To-day, when hundreds of thousands of people are houseless and homeless—their all, excepting their land, swept away by the devouring flood; their cattle, their horses, and working animals drowned or starved; hunger and famine staring them in the face; the lives of all of them only saved by the rations sent them by a beneficent government, and the supplies and funds contributed by the generous and charitable citizens of other sections of our common country—the question arises with thrilling interest, what can be done to save and protect this vast region? What hidden resources of engineering skill can be evoked? What reliable and comprehensive plans can be sought and adopted, that in future shall rescue it from floods and desolation?

This is a mighty problem that challenges the most earnest attention of the patriot and the statesman. It demands anxious but deliberate thought, profound study, and, after all that, vigorous action. It cannot be ignored. It cannot longer be trifled with or evaded. It must and will have some solution. The question is, shall the vast delta, with all its enormous gifts of nature, with all its magnificent capabilities, be for countless ages to come the home of man or the home of the alligator? Shall it be the happy abode of our people in the far-coming future, or shall it be abandoned to malaria and miasma, to waste and solitude and gloom? Shall this immense region be a living fountain of wealth to our country, the glowing Eden of production on the vastest scale of the great staples of the world's commerce, or shall it lie there wallowing in the ooze and floods for centuries, the eye-sore of the nation, the gloomy sepulcher of its hopes, its honor, and its statesmanship.

DIFFICULTIES—FIRST, AMOUNT OF WATER.

The difficulties to be overcome are confessedly very great, but by no means insurmountable. I will briefly mention a few of them. The first is the immense amount of the water. Ninety trillions cubic feet of rain-water fall, on an average, each year in the vast valley of the Mississippi. This is equal to a lake seven hundred and twenty miles long, one hundred miles wide and fifty feet deep. Three-fourths of this immense quantity is absorbed by the earth, or disposed of by evaporation, etc, so that nineteen and a half trillions is the average amount carried to the gulf by the river. The quantity varies greatly, however. Sometimes, in a low-water year it is only eleven trillions, while in one of very high floods it has risen to twenty-seven trillions cubic feet. The vast quantity of this rushing inland sea in itself constitutes a most formidable obstacle. Its discharge is larger than all of the noted rivers of Europe combined, and is equaled by only two on the globe, being a little more than two thirds that of the La Plata, and only something more than a quarter that of the Amazon.*

The enormous volume of water that comes rushing down the river with tremendous force in time of floods can never be realized by one who has not seen it.

The *variability* in the volume of water from season to season and from year to year, is a great difficulty, for were the amount always the same it would be vastly easier to calculate for and provide the forces necessary to confine it within the bed of the river.

CURVES AND PECULIARITIES OF THE MISSISSIPPI.

The winding course of the river and the soft and yielding nature of its banks constitute another great difficulty. If the Mississippi ran straight, and could remain so (which with its soft and friable banks it could not do) there would never be any overflow. It would only have half as far to go as now, and would run at least twice or thrice as fast. So it could easily carry off five or six times as much water as it now does. From the mouth of the Missouri to the Gulf on a straight line is about 675 miles, with an average descent of about eight inches to the mile, but the Mississippi winds and curves so much that it runs 1300 miles in that distance, and thus reduces its average rate of descent to about four inches to the mile. Sometimes in running twenty-five miles round a bend it has not advanced forward a single mile. The traveler on a steamboat descending the river, and therefore of course going south, will often discover with surprise that for miles at a time he is going north. Half the time he is moving east or west. He becomes sadly bewildered, but tries to have faith that the river knows where it is going, and at least will not run up hill.

*The proportional quantity of water discharged by some of the principal rivers has been estimated as follows:

Thames	1	Indus	135
Rhine	13	Ganges	148
Loire	[illegible]	Yang-tse-Kiang	258
Po	[illegible]	Amour	166
Elbe	[illegible]	Lena	125
Vistula	[illegible]	Obi	179
Danube	6	Nile	250
Dnieper	[illegible]	St. Lawrence	112
Don	[illegible]	Mississippi	338
Volga	[illegible]	Plata	490
Euphrates	60	Amazon	1,380

WIDTH OF RIVER—IT GROWS NARROWER.

It is a strange peculiarity of the wonderful river that as it proceeds downward in its course toward the gulf, instead of growing wider, as you would expect, it actually becomes much narrower. From the mouth of the Ohio, 1080 miles above the passes, which are only a few miles above the gulf, to the mouth of the Arkansas, 670 miles above them, the average width in time of high water is 4470 feet, the depth 87. From there to the mouth of Red river, 300 miles from the passes, the width is 4080 feet, the depth 96. From Red river down to Bayou Lafourche, which is 170 miles above them, the width is 3000 feet, the depth 113. From there to the passes, or for the last 170 miles, that the river flows in a single channel, the width is 2740 feet and the depth 129. It will be observed that as the river becomes narrow it grows deeper as a compensation. The reduction of its width, however, from 4470 to 2740 feet is very striking. It has actually lost two thousand feet in width. I may mention that the river loses at least one-tenth of its mean width as the season of low water sets in. At such times its mean width from the mouth of Red river to Bayou Lafourche is 2750 feet, and from there to the passes only 2250 feet.

RANGE OF DEPTH.

The rise and fall of the waters of the river, or the difference between the highest and the lowest waters, is another and the greatest difficulty in controlling the Mississippi. At Cairo, and also at Natchez, 360 miles from the Gulf, it is 51 feet; at Memphis, 40; at mouth of Red river, 44; at Bayou Lafourche, 24; at New Orleans, nearly 15; at Fort St. Phillip, 4½; at the passes, where the river forks into several channels, only some ten or twelve miles from the Gulf, it is about 2½ feet, and at the Gulf of course nothing.

VAST AMOUNT OF SEDIMENT.

The immense amount of mud and sediment suspended in the waters of the rivers, especially during the floods, is another difficulty. Able engineers have computed that it annually carries into the Gulf in suspension enough precious soil to form a solid mass one mile square and two hundred and forty-one feet high. Others think it carries far more. The best authorities estimate the weight of the sediment so carried at more than 406,000,000 tons. But besides this immense amount, it deposits vast quantities on its banks, and all over the country overflowed in time of floods. Rushing along at such times at the rate of six miles an hour, and in the middle of its current on the surface more than seven, its madly-whirling waters are loaded with sediment. But as soon as the waters pour over its banks they begin to move much more slowly, and drop a large portion of their solid matter at once on or near the banks, and thence in diminishing quantities for miles, till they reach the swamps. In this way it comes to be a fact that the land, as you go back from the river, slopes downward for miles. The banks become in time much higher than the land farther back, the slope in the first mile being from three to twelve feet, and on an average fully seven. Hence the river runs, as it were, in the center of a vast ridge a few miles wide and as long as the river's course. In time of highest waters it rises as high as the top of this great ridge and higher, but the mass of its waters remain in its bed, which is from one hundred to one hundred and fifty feet deep.

UNDERMINING AND FALLING IN OF ITS BANKS.

But the undermining and constant caving in of its banks is the great and enormous trouble in regard to the Mississippi. Deep down below the twenty or thirty feet of surface-soil deposited at some time by the river, are vast beds of clay; beneath them are immense layers of sand, often sixty or eighty, or even one hundred feet below the top of the banks. The two, however, are often strangely intermixed and interspersed, the one with the other. The current of the river washes out the sand, and the banks, thus left without support, sooner or later give way and tumble into the waters, which speedily transport them elsewhere in the form of sediment, or oftener roll, and push and whirl them along for a mile or two, or less, until they aid to form sand-bars or islands, or new banks lower down. Niagara river works its way during the slow centuries in a somewhat similar manner up toward Lake Erie; only there it is an under stratum of soft rock or shale, instead of sand, a hundred feet beneath the bed of the river, that by degrees is washed away, and leaves the hard superincumbent rocks to fall by their own weight.

TOWNS WASHED AWAY.

Whenever the current is deflected toward either bank, as often occurs and always in concave bends, the bank assailed, if of soft and yielding material, as sand or loam, is washed away like snow-flakes before an April sun; houses, cultivated lands, farms, forests, and sometimes towns, are swallowed up! The famous town of Napoleon, Arkansas, so noted in former days, has thus been swept away. Waterproof, once a flourishing town four hundred miles up the river, has been entirely washed away since 1850, but has been rebuilt nearly a mile farther back, and therefore on much lower ground, but is again menaced with destruction. In its former location it only required a levee two or three feet high, because being then on the old bank it was on higher land than it is now. To-day it is in peril behind a levee nine feet high!

AS BANKS FALL IN, LEVEES RISE HIGHER.

When the banks give way far enough back to reach the levees, they fall in of course, and their successors have to be built much higher (because on lower ground farther back), and wider in proportion, costing vastly more. If, for instance, the new levee be built on land ten feet lower than the former one was, it must be raised to a greater hight by ten feet, and will be at least seventy feet broader at its base; for the higher a levee rises the greater must be its foundation and its cross-section throughout. The solid contents of levees are, in fact, in strict proportion to the squares of their hight. Men have seen in certain localities, in a single life-time, three or four levees thus built, one after the other; each succeeding one necessarily twice as high and four times as large as its predecessor. This process cannot go on always. Something better than such a system is badly needed.

NEED OF CENTRAL POWER TO LOCATE LEVEES, ETC.

The injudicious location of levees often exposes them to destruction. Planters living near the river insist on their being built in front of their improvements, to protect them at all events, and thus they are often placed too near the crumbling bank. A great central power, like the national government, is needed, with absolute authority to determine where the levees shall be located, and how they shall be built, to make them secure and lasting. But place them where you will, if only where they are needed, you may be almost certain, if you continue to rely on levees alone, that at some future time they will be dragged into the terrible river and ingulfed beneath its waves.

CUT-OFFS.

In cases where the river has for ages, perhaps, cut away the bank on one side, making a bend of twenty or thirty miles shaped like an enormous horse-shoe—sometimes in a great flood it cuts across and makes a new channel, through which it tears its way and rushes down, a mad torrent, with fearful speed and violent turmoil. Such "cut-offs," as they are called, for a time lower the water above them, as it now has to run only a mile perhaps, or less, where it used to run twenty five; but they make an awful destruction of the bank on one side or the other, both below and above, and ingulf whole plantations, until finally they create other bends. Even the clearing out of the channel of the river by removing snags and other obstructions may change the current and cause valuable plantations to be washed away. There are petitions before the house now for compensation for great losses to producers.

TOWNS DESERTED BY THE RIVER.

As the river tears away the land on one side it builds up elsewhere. Plantations sometimes advance their fronts for miles, and towns that once were on the river's banks find it receding from them until they are left far inland high and dry. Providence and Saint Joseph are examples. They are now left far from their own landings. Natchitoches was once on the banks of Red river. Now the stream is three or four miles away from it at the nearest point on the north, and eight or nine on the east. The same thing has happened to cities in the old world. The Vistula, the Po, and the Rhine have deserted cities, once located on their banks and the seats of a flourishing river commerce. St. Louis was once threatened with such a disaster, but the vigilance and energy and public spirit of her citizens by proper action at great expense averted the imminent danger.

LEVEES ALONE WILL NOT ANSWER.

Mr. Speaker, I have now stated frankly, and as clearly and strongly as I am able in the brief time at my command, the difficulties in the way of the thorough protection of the delta from overflow. The great importance of the subject I trust will excuse my having taken more of the time of the house than otherwise would be proper. The question perhaps is new to most members not living in the valley of the lower Mississippi, and it is one on which we will all wish to vote intelligently. I have shown the vast benefit conferred by levees, and the obstacles and dangers which ever confront them. Levees alone, I think it is evident, will never fully solve the problem of the floods of the Mississippi. They go very far toward its solution, but something more is required. What more is needed is a great question, and one which the ablest engineers of the age should be called upon to investigate thoroughly, and answer clearly and without mistake if possible. But perhaps I may be permitted, with great diffidence, to offer a few suggestions. Cannot some portion of the highest waters in time of floods, the portion which overflows and ravages the delta, be withdrawn from the river for a time and retained elsewhere safe and harmless?

THEY RAISE THE WATERS HIGHER.

This question has never been fully and fairly grappled with. It astounds men of mere routine, but it is worthy of respectful consideration and of the most profound and searching investigation. It should be remembered that confining the waters of the Mississippi within and near its banks between levees necessarily raises those waters in time of floods in some places several feet higher than they otherwise would rise. So true is this that Humphreys and Abbot in their famous report say that in the great flood of 1858 the waters at Memphis would have risen six and a half feet higher than they did, if the river banks had been properly leveed opposite there and above. That is easily understood. The river at Memphis is forty miles wide to-day. If all its waters there were shut in to the width of a mile it is plain that though they would rush onward faster toward the Gulf than now, the river would rise higher there than it does even in this time of disastrous floods. But in the time of the very highest floods, if the river did not rise as high as it does by from three to five feet in the worst parts, and from two to three feet in the lower delta, there would be no destructive floods, no overflows worth naming. This is admitted by all able engineers familiar with the subject. In such cases the levees, if properly located and constructed, would be able to protect the lands behind them. When the Mississippi is already very high a heavy rise in a single one of its great tributaries will cause a desolating flood. For instance, if at such a time Red river, or the Arkansas, the Ohio, or the Missouri suddenly rise very high, a fearful overflow of the whole delta region below its mouth is certain to result.

MORSE TAMING RED RIVER FLOODS.

Now, able engineers say that the floods of Red river, for instance, can all be retained by making reservoirs of the lakes near it, and drawing off the very high surplus waters into them until all danger for the lower river is past. Colonel G. W. Morse, a very eminent civil engineer, who, though a son of New England, has spent nearly forty years in professional labors and studies in the Red river region, and the great lower delta of the Mississippi, and therefore knows its topography and its peculiarities very thoroughly, has given this subject much careful study, and has gone into elaborate calculations which demonstrate that the plan referred to is easily practicable. He shows that the amount of extra water delivered by Red river during thirty days in a time of flood, if running at the rate of five miles an hour, is only about eighty-two billion cubic feet, and that by leveeing on one side only some half-dozen lakes within convenient distance from the river, they would be capable of receiving and retaining the whole of that amount until long after the season of floods was past. This alone faithfully carried out would often protect the lower delta from floods.

RESERVOIRS AND NAVIGATION.

But he shows more than this. Be it remembered that these lakes are surrounded by hills upon all sides except the one open to the river, so that one side of them only would require to be levied. This makes the work of converting them into great reservoirs very simple and easy. Colonel Morse shows that the water contained in them, after each flood, could be let into the river again in time of low water, and for eight months of the year, if for so long a period the river should be too low for navigation, could add three feet to the depth of the water in the channel, thereby insuring at least five and a half or six feet of water for navigation during the entire year, where now steamboats have to lie up in the dry season of summer and fall. As the extra supply would be required only for five or six months at the utmost, there would be a certainty of at least six feet in the channel of the river the year round. The same result could be attained on many other tributaries, and partially at least on the Arkansas by utilizing its lakes and swamps, though not to the same degree perhaps on that river. The gain to the vast region of the Red, the Arkansas, the Ouachita, the White, and St. Francis rivers, in good navigation, trade, commerce and easy communication the year round is incalculable, in addition to permanently protecting from floods ten million acres of the richest lands on the globe!

CONVERT THE SWAMPS.

The same system could be applied to the lakes and vast swamps on the sides of the Mississippi, often only two or three miles from its banks. Those swamps, with but a moderate amount of leveeing on one side, and perhaps at their lower end also, could easily be converted into immense reservoirs, capable of holding vast volumes of water. This should never be let into them until the river was running very high and was just beginning to pour over its banks. Then the surplus that would form the overflow, if not taken up, should be allowed to pass into those great reservoirs, and be retained by them until the flood season was past. The river, at time of high waters, doubles its speed (as all streams do under the pressure of freshets and floods), and should be made to carry off all that it can with banks brimful, and its current running at the tremendous rate of more than six mile an hour. Thus the mass of its waters would be hurried to the sea, while the dangerous surplus, beyond the capacity of the river to contain would be quietly poured into its immense lake and swamp reservoirs, and there imprisoned where it could do no harm. Of course, after the danger of floods was entirely past, these waters would be gradually restored to the river again through the proper opening at the lower ends of the reservoirs, having meanwhile deposited their sediment. That process would in the course of ages reclaim those swamps, which would gradually become new vast areas of wonderful and inexhaustible fertility.

RESERVOIRS WITH LEVEES, REVETMENTS, ETC.

This reservoir system, combined with the old levee system, and, in cases of weak and crumbling banks, with some species of revetment by fascines, piles, or otherwise, as practiced in Holland and other countries, would, I think, be competent to save the great delta. Neither system alone I think can do it. The union of all to some extent is indispensable to perfect success. The problem is too vast and too complicated to be solved by any one of them unaided by the others.

RESERVOIRS OLD AS THE PYRAMIDS.

Let no man tell me that the reservoir system is new and untried. Some sleepy gentleman near me calls it a wild dream. So earlier he called the ocean steamer, the railroad, and the telegraph. Many years ago Ellett and other able and gifted engineers, men of genius, not mere official routinists, proposed to make reservoirs on the tributaries and head-waters of the Ohio, to dam up its mountain streams and hold in their floods, to be drawn from in the dry seasons of the year, making it always navigable for the largest steamers. Reservoirs a wild dream! Go to India, and in the midst of the famine, now decimating her people under British rule, mark the ruins of her mighty tanks and reservoirs that ten and twenty centuries ago caught up the floods and saved the waters for the dry seasons of the year, then to be spread over the country by canals and a vast system of irrigation, giving fruitful fields and lands smiling with beauty and verdure and teeming with plenty, where now too often reigns the arid desolation of the dreary desert! So did the Moors by the same system make southern Spain many centuries ago fourfold more beautiful and productive than it is now, treeless and without its old reservoirs, a prey to the fury of floods in the spring and fearful droughts in the summer. New and untried! Go to Egypt, and there, older than the pyramids, is lake Moeris, excavated by the labor of man thousands of years ago to receive a vast portion of the surplus waters of the Nile in time of its floods, and to give them up again in the dry season to irrigate and refresh the fields, and drive back the desert that ever menaced the plains with encircling barrenness and desolation!

OBJECTIONS.

I hear but two objections urged against this bill. One is that it will lead to great national undertakings on the Mississippi and its tributaries and to enormous expense, beyond the means and resources of the government. But in the first place this bill does not propose for the government to do anything at present except to have the whole subject thoroughly examined by the ablest experts in the world, and to procure the verdict of the highest scientific wisdom as to what is needed for the protection of the fairest portion of our common country from the most terrible calamities. Surely no one can possibly be opposed to that. His vote binds him no further. Is any member afraid to learn the facts? Gentlemen are fond of "investigating," anything and everything else. Are they afraid to have the floods of the Mississippi investigated?

THE FUTURE COST.

But in the event that the nation shall at some future time conclude to do its duty, as a great nation should, by its suffering citizens of the southwest, there is no reason to suppose that the expense of reclaiming the delta will be enormous. Humphreys and Abbot, in their report made in 1869, estimates the amount needed to construct first-class levees for the whole delta of the Mississippi to be only $38,230,000. Reservoirs, if adopted, would increase this amount somewhat, but not very largely, for then the levees would be smaller than they now are. Compared with the immense national benefits to be attained, this sum is but a mere trifle. Each nation in Europe large enough to have any rivers has expended vastly more. France has expended hundreds of millions upon the Rhone, the Loire, the Garonne, and her other streams. The Adige and the Po, in Italy, have cost from ten to twenty times what the Mississippi requires. Those rivers have been diked and leveed for many centuries. The difficulties to be overcome in the old world, where rivers come rushing down the lofty slopes of the Alps with the force and the fury of the avalanche, were in some respects far greater than those which the civil engineer has to encounter in the valley of the Mississippi. The embankments of the Rhone are far higher than any dreamed of in America. In Holland, Freisland, and Zealand the dikes are from twenty-five to thirty-five feet high.

HOLLAND, HER DIKES AND POLDERS.

We may learn much in this connection from the example of a little state in Europe, which in spite of nature has carved for itself a great name in history. Holland is a land lower than the sea, and reclaimed by the labor and skill and courage of man from the dominion of the waters. For many centuries its people have battled with their rivers, the Scheldt, the Rhine, the Maas, the Waal, the Lech, etc., and have fought back the sea. Countless levees, which have splendid, well-paved roads on their tops, confine the waters of the rivers and the lakes. Enormous dikes keep out the sea. Innumerable canals furnish drainage and navigation. The finest pastures and meadows in Europe are the Dutch polders, so called, the bottoms of former lakes that were first leveed around and then pumped into the ocean. The great lake of Haarlem, ages ago, was thirteen miles long and six wide. But from time to time the sea broke in with its vast waves and raging storms, extending its bounds and devouring the land till Amsterdam and other cities were in danger. Then the spirit of the Dutch was roused as that of our people should be to-day. They grappled with the floods, shut out the sea by mighty barriers, and then pumped the famous old historic lake dry. And where once famous naval battles were fought between the Spanish and the Dutch, centuries ago, you now behold green pastures, smiling fields, herds of cattle, and homes of men.

HER VAST WORKS AND IMMENSE RESULTS.

The government proposes now to reclaim to agriculture the famous sea or arm of the ocean called Zuyder Zee, eighty miles long and twenty to thirty wide. That great work will be done, and besides it our risk seems but child's play. Amsterdam and a hundred other cities of Holland stands were once rolled the sea, and on lands that were mere marshes for ages afterward, until man thoroughly reclaimed and beautified them. Holland in the course of centuries has expended on her dikes and levees, and in the reclamation of her soil, £300,000,000, a sum, allowing for the difference in the value of the money in former days and now larger than our national debt. And all Holland, its highlands as well as its lowlands, the whole kingdom of the Netherlands, in fact, is not one-hundredth part as large as the valley of the Mississippi, and only one-third the size of its delta. It is the manly qualities of her people that constitute her greatness, not the extent of her territory. She has suffered floods far more terrible than any our country has ever known, but she has conquered them. One of them, four and a half centuries ago, drowned one hundred thousand persons in a single night, but still she was undismayed. Each hour she is at work driving back the sea, and every day she adds seven more acres to her lands, year after year. If little Holland, a mere speck on the world's map, a land poor and desolate by nature, without a bed of coal, without a quarry of stone, without a single mine, without forests, without the rich staples of the commerce of the world on her own soil, could achieve results so gigantic and so stupendous, the American must have but the soul of a mouse who cries out that our country, with its vast extent of most valuable territory, with its rich mines of every mineral, and richer soil, reaching from ocean to ocean and grasping the unlimited wealth of half a continent, with all its grand and magnificent resources, cannot do the little that is needed for the drowning delta of the Mississippi. Have we sunk so low as that?

CONSTITUTIONALITY OF RECLAIMING THE DELTA.

Occasionally a faint suggestion is ventured that the action proposed is unconstitutional, but surely the objection cannot be made in earnest. Floods in the great delta not only desolate that portion of our land, paralyzing its industries, blighting all its prospects, and utterly ruining its people, but they inflict vast injuries upon the whole country. Every section and every State feels the shock. The farmers of the west lose by it a valuable customer for their crops. Every man in the nation will pay more for his sugar and his cotton in consequence. The floods for a long period break up the railroads and the postroutes over the vast and valuable region of our country, and make it worse than a wilderness. Postoffices fail to receive their mails for weeks. Communication by land ceases. No railroad there can ever be a success so long as its bridges and its track can be washed away by every flood. The postoffice department of the nation is drowned out in that region by every great overflow, and yet gentlemen tell us that it is unconstitutional for the government to stay the floods and save its own mails, its own postoffices, and postroads.

OBJECTORS INCONSISTENCIES!

These gentlemen find no constitutional difficulty in sending learned scientific commissions all over the world to observe the transits of Venus and the eclipses of the sun; but then they are more deeply interested perhaps in Venus than they are in their own country. They did not object to Wilkes's exploring expedition to investigate at an expense of millions antartic icebergs and the cannibals of the Pacific, but possibly they felt a warmer sympathy for them than for their brethren in the valley of the Mississippi. They seem to think that our government should be a Mrs. Jellaby, her eyes gazing afar off, forever weeping over Borriboola Gha, but forgetting and neglecting her own family. Lynch and his costly expedition might be sent six thousand miles away to explore the Jordan and Dead sea. Are those objects more national that the Mississippi and the millions of citizens who live on its banks?

THE AMERICAN EAGLE.

Sir, I am tired of hearing the doctrine that our national government can do nothing at home, but only abroad. If American citizens suffer or are wronged on foreign soil, in Cuba or Mexico, in China or Japan, in England or Austria, the national arm is uplifted at once. The treasure of the nation is poured forth, fleets and armaments are created, armies crowd the astonished land, five millions of indignant patriots volunteer as officers, the American eagle screams angrily and fearfully; every man is ready to sacrifice everything but himself and his for his country's honor and glory. But here, in our own land, when a hundred thousand homes are desolated by the floods ten years out of every thirty or forty, and hundreds of thousands of our own citizens reduced to starvation and ruin, we are told that the government cannot interfere, cannot stretch forth its powerful arm to prevent in future the enormous sufferings of his own people, who are indifferent. This cannot be. It would be a disgrace and an infamy, making every true American hang his head with shame, if the government of this great country were indeed the only one on earth that could not protect and rescue its own people at home from ever-recuring calamity and ruin.

GREAT NATIONAL INTERESTS.

It is a national work that is to be done. It is the great engineering problem of the age. Shall the one vast inland sea of our nation, as Mr. Calhoun rightly called it, be regulated and restrained for the common good of all, or shall it be allowed to continue to desolate and blast with ruin the fairest portion of our common country? The investigations to be made and permanent plans to be decided on require the studies and counsels of the ablest engineers in the world. It is a work that should be perfected if possible. A complete success would benefit and enrich the whole nation grandly and immensely. If it is only restored and reinvigorated the sugar-planting interests of the delta it would keep at home the $60,000,000 in gold we send abroad annually for sugar, and in time enable us to resume specie payments and become financially respectable once more. It would give us an absolute supremacy in the cotton market of the world. It would speed the wings of commerce and quicken the plow, the reaper, and the mower on millions of fields and farms. It would enable the south to buy of the northwest flour, grain, and provisions to the amount of $100,000,000 to $150,-000,000 every year; and also to buy and pay for twice as much or thrice as much as heretofore of the goods and manufactures of the north and east. It would wake up our whole country to new life and energy and enterprise. As an instance of what it would do I may mention that the cotton trade of Memphis, now some six hundred thousand bales per annum, would soon grow up to three or four million bales, and a somewhat similar impulse would be given to the great business interests of the whole nation.

CONCILIATION; RECOGNITION OF RIGHTS.

I say frankly that $10,000 is too small a sum for the purposes proposed. It is unworthy of the grave importance of this commission, and I do not believe that any member wishes to cut us down to so small a sum. I trust that more will be cheerfully granted. The thorough protection and reclamation of the great delta would be everywhere regarded at the south not only as an act of justice and wise statesmanship, but as a grand and noble exhibition of kindness, of conciliation, and fraternal affection by the north. During the war the great levees were cut in hundreds of places by the Federal armies. The awful, desolating floods poured like an ocean over the vast delta, and its people have never recovered from that fearful calamity. If now the north will generously aid us with the treasure and the science and all the beneficent powers of the nation to repair the ruin it wrought, every southern heart will throb with joy at this new evidence of the fraternal feeling of the nation. The government will be known by the rich blessings it confers, and each warm-hearted, generous, impulsive son of the south will once more thank God that he too is an American; that he also has a country to love and honor. Born in the north, but loving and honoring both sections alike; proud of the achievements, the glories, and the heroism of each and all, I ask that this great measure, the beginning of a mighty work, be passed unanimously, as an offering at once of justice and of love upon the sacred altar of our common country. Pass it, and the exclamation from every true American everywhere, shall be: "We are brothers once more!" Pass this, and next year commence also to improve the navigation of the Mississippi—which can easily be done—till the mightiest steamers that plow the ocean can run from Liverpool to Memphis, right in the great heart of the south, giving us in the coming future a foreign trade like that New York now enjoys; and the west, the south, and the great valley of the Mississippi, growing into new greatness and power, with an ever-increasing prosperity, will feel that at length their rights have been justly recognized, their wishes and interests wisely consulted, and that the strong arm of the national government is indeed a protection and a blessing to them.

GREAT CIVIL ENGINEERS NEEDED.

It has been urged by some gentlemen that the commission proposed should consist of army engineers only; but this would be neither wise nor expedient. Some of the great civil engineers of our country, men of great and commanding eminence in their profession, should have a place on this board. Men are needed of the highest order of talent, men of wide-awake, active, inventive intellect, and who possess a thorough personal knowledge of the Mississippi. Men who have spent their lives in studying and confining and guiding the waters of the mighty river; men who have spent a third of a century, and some of them nearly forty years, in the labors, studies, and constant practice of civil engineering in protecting and reclaiming the great lower delta; men who, in the practice of their profession as civil engineers, have reclaimed millions of acres, until as the fruits of their labors and their toil, their study, their long years of patient thought, their science and skill and courage, they have rescued from the waves thousands of vast sugar and cotton plantations, and beheld beautiful villages, towns, and cities built on sites that but for them had remained swamps and marshes for centuries yet to come; such men surely should have some recognition on the board proposed. All the science in the world cannot dispense with practical knowledge and experience. New men will be incompetent alone until they have had many years of hard experience in learning and mastering the mysteries of that awful river just as these men have already done. No reading, no mere book-learning can give men the practical knowledge that in this case is indispensably necessary. As well learn to swim merely by reading on dry land; as well learn to manage a ship at sea by study in your closet, and then think yourself a sailor; as well expect a man to discover the north pole by reading Kane and Hall, and then staying at home, as to expect men of mere learning and science, without long practical experience, to understand the Mississippi or to discover the best means of confining its waters and reclaiming its great delta to the uses of man.

ARMY OFFICERS NOT FITTED FOR THIS WORK.

The great engineers of the world are not the mere products of schools. They cannot have too much learning, of course; no man can. Scientific training even in our governmental schools is valuable, but too often it fails utterly to produce original thinkers. It makes of a man's mind a mere reservoir instead of an ever-living fountain. Its product too often is a mere placid mud-puddle or a simple duck-pond of knowledge, rather than a seething volcano of thought and intellectual energy. West Point will never make a great inventive engineer; the Almighty alone can do that. The other day a gentleman told the house that any army officers would do for this commission; that they all had studied engineering of some kind at West Point. As well tell us that any one of the middies who graduated at Annapolis was perfectly competent to take the place of Farragut at Fort Saint Phillip and Mobile, or of Nelson at Aboukir and Trafalgar! As well say that any graduate of West Point could have filled the place of Sherman or of Grant, of Johnson or of Lee in our late war, or could have shown a Napoleon how to be a great general.

VAST IMPORTANCE OF THE WORK.

The reclamation of the delta of the Mississippi is a task as stupendous as the greatest victories in war, and requires the very highest trained talent, intellect, and genius. It requires great experience and consummate knowledge of the river, its floods, its mysteries, and its laws. Great rivers in their courses have their laws which they obey just as much as the planets in their orbits; but their dynamics and their laws are the most obscure, the least known, and the most difficult of all branches of physical science.

A SPLENDID EXAMPLE.

The Soolina Pass commission, which was appointed by the great governments of Europe a few years ago to open the Danube to the navigation of the world, and which accomplished that most difficult undertaking so splendidly and with such brilliant success, was a mixed commission—two army engineers and two distinguished civil engineers. We will do wisely to make a similar selection, and of men equally able and gifted. They have a great work to do.

The telegraph from Canada informs us that Mr. Ray's pony trotted eighty-one miles in eleven hours and twenty minutes, in a continuous heat, on an average of about eight and a half minutes to the mile. Weston walked his first hundred and fifteen miles on an average of twelve minutes to the mile, or less than one-third slower than the gait of a fast trotter. The comparison serves to show the pedestrian's wonderful speed and endurance.

REMOVAL.

The APPEAL is now published at 282 Second Street.

MASONIC.

THE Executive Committee of the Masonic Picnic wishes the Chairmen of the different Committees to report at Exposition Building THIS EVENING, June 20th, at 8½ o'clock.
R. CREIGHTON,
Chairman Executive Committee.
je20

OFFICIAL DRAWINGS

EXTRA CLASS.

Morning—Class No. 85.

67 | 42 | 51 | 73 | 54 | 44 | 13 | 26 | 27 | 53 | 46 | 7 | 72

Evening—Class No. 86.

68 | 42 | 53 | 32 | 54 | 2 | 76 | 23 | 24 | 17 | 33 | 62 | 52

Memphis, this 19th day of June, 1874.

Attention, Knights Templar.

EVERY Sir Knight who intends to participate in the exemplification of the drill on the 24th inst., at James Park, is hereby ordered to report promptly at the Exposition Building THIS EVENING at 8 o'clock, SHARP. Unless there is a full attendance this evening the drill on that occasion (24th inst.) will be abandoned.
By order J. M. PETTIGREW, E. C.
T. J. BARCUS, Recorder. je20

MASONIC NOTICE.

PENN CHAPTER No. 22 R. A. M., holds a special convocation, at Masonic Hall, Gayoso Block, this (SATURDAY) evening, at 8 o'clock, for work in the R. A. M. degree.
All R. A. M.'s in good standing are fraternally invited.
A. J. WHEELER, H. P.
JOHN J. WELLER, Secretary. je20

NINTH WARD MEETING.

THE citizens of the Ninth Ward, in favor of the Bartlett Resolutions, will meet at Wagner's Corner SATURDAY NIGHT, 20th inst., at 8½ o'clock, to nominate Delegates.

Peabody Hotel.

This house will be kept open during the entire year as heretofore, notwithstanding any reports to the contrary.
For the summer months special rates will be given, whereby guests may arrange for board and rooms at reduced prices.
Baggage checked to all points.
Special attention given to ladies and families traveling without escort.
O'BANNON & MORRIS, Proprietors.
je17

A GRAND
MASONIC PICNIC
WILL BE HELD
AT JAMES PARK,
Under the Auspices of
KILWINNING LODGE, No. 341,
—ON—
WEDNESDAY, JUNE 24, '74

Tickets, for Lady or Gentleman, 50 cents

Programme, with list of Committees, will be published Sunday morning.

NOTICE.

ALL persons indebted to the late firm of S. B. Robbins & Co. will please make immediate payment to me. The entire lot of Furniture, Bedding, Carpets, Crockery, Tableware, etc., etc., will be sold cheap for cash only.
CHARLES L. LOOP,
je18 58 North Court street.

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Trustee's Sale.

NOTICE IS HEREBY GIVEN, That on Thursday, 9th day of July, 1874, between the hours of 10 o'clock a.m. and 2 o'clock p.m., on the premises, being lot No. 108, on the south side of Union street, in the city of Memphis, under and by virtue of a deed of trust to me executed on the 14th day of October, A.D. 1873, by J. E. Kirtland and E. M. Kirtland, and duly recorded, and for the purpose of satisfying an unpaid balance of the debt to C. C. Graham thereby secured, I will expose to sale to the highest bidder, for cash in hand, the improvements upon said lot No. 108, and the lumber, doors, sash, blinds, cedar posts, and stock of every kind in and comprising the lumber yard on the said Kirtland, or so much thereof as shall be necessary to pay and satisfy the sum of two hundred and sixty-three dollars and six cents of principal and interest of the debt secured by said deed remaining due and unpaid, and the expenses of sale, etc.
J. A. HAYES, JR., Trustee.
June 18, 1874. je19