# Supplement to the Daily Bee.

## REPORT OF THE STATE ENGINEER.

*To the Senate and the House of Representatives of the State of Louisiana, in General Assembly convened.*

[illegible] ...ment of the office of State Engineer, it becomes my [illegible] of the proceedings of this department during the short period [illegible] under my charge, and also to make some recommendations for [illegible].

[illegible] report of my predecessor will fully explain the operations of the [illegible] to the 31st December, at which time I entered upon the duties of my [illegible] and found the available State force to consist of ninety-six negroes, concentrated, [illegible] employed upon the locks of the Barataria and Lafourche canals at Lockport, where it had become necessary to place them in consequence of the uncertainty of white laborers, and the absolute necessity of finishing the first walls and gates next to the Bayou Lafourche before the rise of water.

The condition of the boats I found as follows: The Agnes No. 2, moored near the mouth of Bayou Lafourche, with four of the State hands, and the mate, Mr. McHatton, left on board to take charge of her. This boat is very old, indeed the oldest in the service—parts of her hull having been built, and in use eleven years. She is now rotten in many places, and requires attention to keep her afloat. She is of little service.

The Gen. Walker, at the same place, under the charge of Capt. Blackstone and three of the State hands, was found in a very unsafe condition, with her bottom [illegible] and the decay of both her sides [illegible].

The Florida, with three of the State hands, at Tigerville, in Bayou Black, had an excellent hull, but from the condition of some of her machinery, she is of little use. She can be made a good boat for service without considerable expense.

The whole State force is thus composed of one hundred and six negroes, and of this number there are not at least ten old or sickly, to be of much use; and then there are about fifteen more who have been in the service many years, and are quite old, but yet make valuable hands. The work on the lock being then thorough advanced to be perfectly safety against any risk which could be affected, I immediately gave orders to Capt. Marks to proceed with the hands belonging to the State boat Florida, amounting to sixteen to hands, to Tigerville, where the boat was moored, and commence work on Bayou Black, hoping to benefit the navigation of that stream in time for the planters to get off a part of the present crop better than they could otherwise have done. My time has been so employed with other matters connected with my office, that I have not been able to examine this bayou, and I learn from Capt. Marks that a difference of opinion exists as to the necessity of a tow-path along the bank, but as all agree on the subject of the importance of removing the obstructions to the navigation, I have instructed Mr. Marks first to work on the bayou and place it in such a condition that boats could pass, and afterwards we would examine and see about the necessity of a tow-path. This work is now going on in accordance with the above instructions.

On the 3d of December I ordered Capt. Barker to proceed with the State boat Agnes, and the crew formerly belonging to the Pioneer, amounting to twenty-two hands, to the mouth of Bayou Plaquemine, and leave her there in charge of his mate, and for him to proceed with his hands and camp up the Bayou Grosse Tête to the termination of the plank road, connecting this bayou with the Mississippi river, and work under the direction of the Engineer of the road until he received further orders. My reason for sending the force to this road was, that the Legislature by an act approved 18th March, 1850, had ordered the State Engineer to mark out and make a road for the same purpose, and near the site of the location of the present plank road, but the persons interested in the road believing that a plank road would be at much more benefit to them, determined to make one, the State Engineer promising to do as much work on it as he would have been obliged to do on the other. This promise of my predecessor seemed to me to be just and proper, and also made in his official capacity, I felt therefore bound to fulfil it; and further, I think that if they succeed in making a good road at this point, it will be of very great advantage to one of the richest portions of our State, so far as value of land is concerned.

At the same time I also directed Capt. Hardy to proceed with a portion of the State boat Gen. Walker's crew, sufficient to take her to New Orleans, where she has been well repaired and placed in good working condition. All of her front rake planks were taken off and replaced by good round white oak plank four inches thick, and her stern rake planks replaced with the best of pine, and her whole hull thoroughly caulked, machinery repaired, &c. This work occupied all the month of December, since which time she has been sent into Bayou Sorrel to work to the best advantage in the Fourth District, until further orders.

I have continued to work on the locks of the Barataria and Lafourche canals at Lockport, to the completion of the masonry, gates, and in fact all that half of the lock next to the bayou except some small iron work of little importance, and we are at present making the excavation for the foundation of the masonry for the second gate. We expect to have the excavation completed and be ready to place down our foundation by the 15th February, and finish the mason work some time in the month of March, so that the locks can be used in the spring. We have on hand a large amount of materials in the form of wrought and cast iron, together with wood work framed for gates, planks, &c., more than enough to complete the locks already commenced, all of which has been paid for.

We have used of the appropriation for the canal, from the 3d January, 1852, to 31st December, $13,8[illegible], and have on hand for the use of the canal the sum of $[illegible], which is believed to be enough to complete the locks already commenced. This work has consumed a large amount of money, to be no further advanced than it appears to be; but it must be borne in mind that a considerable portion of this sum has been expended for the materials above mentioned, and which is for the remainder of the locks; and also during the summer months when we were obliged to force off works, so as to employ white men as laborers who were often on the sick list, and when at work could not or would not perform much more than half the work of a negro force of the same number.

It may be expected of me that I should make known, to some extent at least, my opinions touching the important subject of the draining and securing from inundation our alluvial lands. So much has already been written and spoken theoretically, and without a sufficient knowledge of facts to sustain opinions advanced that I will confine myself to but few remarks on the subject, and besides the United States Government has taken hold of this matter, and if it does not aid us otherwise, will certainly place us in possession of facts, by their surveys and examinations, which will enable us to judge more correctly of our wants than we can do at present. I consider it a well settled principle that the quantity of sedimentary matter held in solution and carried along by any stream will be in proportion to the velocity of the water. We have to take care and not diminish the current of the Mississippi in its course to the Gulf. This makes me doubt the propriety of the enlarging the natural outlets, in the manner which has been proposed, of this great stream; for, as they must be permanent in their character, and taking off part of the ordinary water, they will reduce the difference in level between the points where they leave the Mississippi and the mouth of the Mississippi itself, and consequently cause a diminution of the current, and hence a deposit, and the result after all the labor might be that the capacity of all the outlets taken together with the Mississippi itself, would be exactly what it is at present.

I do not pretend that we shall not be obliged to adopt the outlet system, as a last resort; but when such is the case it seems to me that each outlet ought to be so constructed that only the surplus water should be taken off, and whenever the river shall have fallen enough to make the levee secure, it should be below the mouths of the outlets, so as to leave a strong high water current in the river to wash out the bar that might have been formed below. This could be done both at the natural outlets and the artificial ones, by opening them wide at the river, and so barricade their mouths as not to permit the water to run over at any greater depth than should be absolutely necessary to the safety of the levee, and afterwards the water would be concentrated within the channels of the natural outlets or, permitted to spread over the lands of the artificial ones before its arrival at any of the lakes, and its deposit nearly all made on the land, so as not to fill up the lakes. I am in favor of the best levee system that can be adopted, and placed under the supervision of State officers, so that the negligence or incapacity of private individuals should not be permitted to jeopardize other interests than their own. If a good levee law were well carried out, I am in no wise convinced that we should be inundated to the extent which has been predicted. By the testimony of our oldest and most reliable inhabitants, it appears that the rise of the water in the Mississippi has not taken place at all in proportion to the extension of the levees, and in fact that the water rises no higher now than it did many years ago. This does not seem to correspond with the predictions, and there is as much evidence of the fact that we can hardly doubt its truth. The actual distance from the mouth of the Ohio to the Gulf is stated in round numbers to be 500 miles, with an average descent of about eight inches per mile. The computed length of the Mississippi from the mouth of the Ohio to the South-West Pass is 1178 miles, with an average descent of three and one-quarter inches per mile in high water.

Suppose that the river gets over the banks above, and the water comes down in a direct line with the fall augmented to eight inches per mile, and the actual distance diminished, which it can travel, to nearly one-third of what it would have been obliged to go if confined within levees, will it not get upon us sooner and raise the water higher than it would otherwise have done? This may be the reason why the water has not risen higher since the extension of levees. It will not do to say, that once the water leaves the Mississippi it never comes back again, for it must come in again at all the mouths of all the lower tributaries and at the bluffs, and without doubt the levees concentrate the water and increase the force of current, and consequently its scouring power.

The plan which I proposed last year, and which was presented by the Hon. J. W. Butler to the Internal Improvement Committee of the Senate for the relief of the Mississippi and Red River at the same time, might probably be adopted. It was to turn Red River into the Sabine, or that part of it which would otherwise overflow the banks. The distance across from Bayou Pierre Lake (which is in Red River Valley) to the Sabine does not vary much from twenty-four miles, and I presume by following up one of the creeks entering Bayou Pierre and then cutting across into Bayou St. Patrice, and thence down to the Sabine, a few miles of cutting would be all that would be required, for each of the creeks overflow up from their mouths. The figures, with regard to distances, and probable level along thus, as taken by measurement on our best maps, but of course subject to some error, as it is very difficult to measure the length of a stream in its winding course on a map of the small scale of La Tourrette's. It is, however, as fair for one river as the other, and I only expect to show that the Sabine is probably the lowest, and leave the rest to scientific investigation.

The distance by the Mississippi and Red River from the South-West Pass to Bayou Pierre Lake, will in round numbers, 600 miles, which, at an average fall of three inches per mile gives 1,800 inches as the height of Bayou Pierre Lake above the Gulf. The distance from the Shell Bank at the head of Sabine Lake to the mouth of Bayou St. Patrice is about 200 miles, which at an average fall of 3 inches per mile gives 600 inches as the height of the mouth of Bayou St. Patrice above the Gulf. These figures show that there ought to be 50 feet difference between the level of Bayou Pierre Lake and the mouth of Bayou St. Patrice; and further, by an examination of the maps, it will be seen that all the streams running into the Sabine from the east, are much longer than those going into Red River from the west, and consequently the ridge must be nearer to the latter than the former stream, and by giving the streams on each side an equal fall the Sabine must be much the lowest.

I do not propose this plan as one to be adopted without mature deliberation and examination of the difference in level. It may not be practicable. The people on the Sabine may object, and all will do so who would be injured by it. But I think the number small in comparison to those who would be benefited by it on Red River and the Mississippi. The advantage arising if the plan would work, would be almost beyond calculation.

1st. We should save the Mississippi from a very important acquisition of water, from the very stream lowest down, and which tends most to make it overflow its banks, and the outlet into the Sabine being so constructed as to take off only the overflowing water of Red River, would not diminish in any way the amount of water entering the Mississippi from that stream at any time less than an absolute overflow; so that it would [illegible] the Mississippi to fill up in proportion, as it had less water to carry, for the [illegible] only [illegible] alluvial bottom [illegible] the Mississippi from Red River [illegible] as its channel can convey.

[illegible] Red River would be, that all the alluvial bottom contained [illegible] would be saved [illegible] for it could be drained [illegible] valley, and instead of being, as it now [illegible] would become as good as any land in the world. [illegible] in Red River valley [illegible]

3rd. *Advantages to the Sabine.*—We should, for a portion of the year at least, render this stream navigable; and after a few years of inundation, we should make its whole valley as rich as that of Red River at present; for, instead of being, as it now is, a worthless soil, the deposit of Red River water would be upon it, and its character entirely changed; so that, in a few years, the State lands here would be valuable, which are at present almost valueless.

All, no doubt, can see advantages enough resulting to the State, to make it her interest to carry this plan into operation, if it is practicable; and all I ask is, that it should be well and faithfully examined. It may be best to cut in some other places than the one indicated; and it may prove, when the surveys shall have been made, that the difference in level between the two streams is not enough, so that it might require too large and expensive an excavation. There are also private interests that would be affected, and must be taken into account. I do not claim the paternity of this project, for I have heard it spoken of for many years. But I have never heard before of any reasons being given for the belief that the Sabine is much the lowest stream; nor do I think that the subject has ever been seriously considered.

The importance of a good navigation in Red River has been shown by my predecessor in his report of last year, and also by his assistant, Mr. Baily, and it is therefore unnecessary for me to press its importance; and consequently, I shall only give my opinion as to the best means to be adopted for its improvement. It is highly important that we should do all we can to improve and make good the low water navigation of this river. There is not, in my opinion, the least difficulty in doing so; but as the fall of water is in many places already too great, so that it runs off too fast, we must rather check it by further impediments, than increase it by removing those which already exist.

The last Legislature appropriated a sum of money for the removal of the falls at Alexandria, which they placed at the disposal of commissioners to have the work executed; but fortunately, as I think, for the navigation of the river, the water was all the summer and fall too high for them to operate. Much difference of opinion has existed on the subject of overcoming this obstruction—some wishing to construct wing dams, and thus concentrate and deepen the water over the falls—others to cut them out altogether, or a sufficient channel through to admit the passage of boats; and others to combine the two plans; and still others, to canal and lock around the falls. I have not time at present to fully discuss these separate plans; but it seems to me if the water was raised by wing dams, that the fall (already, according to Mr. Dunbar's report 4 55 feet) would be such that steamboats could not ascend without the aid of lines; and then on their passage down, they would go with such great velocity, that the least touching on the rocks would break them in pieces. Mr. Dunbar, in his report to the Board of Public Works in the year 1841, gave expression to the same opinions, and instead of contracting, as he was fully authorized to do, to have the falls removed, submitted the matter again to the Board and Legislature, and the work for that reason has never been executed. To cut them out altogether, would lower the water above, which should not be permitted. Such plans should be adopted as would be the most permanently useful, and make a part of a great plan of slack-water navigation. The river is already worthy of it, and the vast increase of the productions above will oblige the people in a few years to have it.

According to the surveys of Mr. Dunbar, before referred to, there seems to be water enough between the upper and lower falls. We could, then, by the use of Mr. Maillefert's plan of blasting under water, remove, without much cost, the lower falls, so that the boats could run up under the upper ones, and then we should have only a short canal and locks to pass around these. I have not made any surveys or calculation of cost, as the matter was taken out of the hands of this Department by the last Legislature; but I do not believe that the cost of this work would be in any way commensurate to its advantages. If this were done we could raise the water above the falls, so as to aid in getting over the shoals further up; and these persons above could not complain that we should overflow them by raising the water, for we should have an additional channel in our canal which could be opened in high water, the capacity of which might be exactly equal to the amount which we raised the water. [illegible] be the only one which can be adopted with propriety [illegible] and drawings made so that a near calculation of the costs of the work could be arrived at. The excavation could be carried forward near the centre of the proposed canal by a part of the State force, or otherwise, at any time of the year and the lock ... before the upper and lower ends of the canal were connected with the river. [illegible] lock was properly constructed, it would require but little more work to make the navigation perfectly good as far as Shreveport at all seasons of the year.

There was considerable excitement during the last session of the Legislature, upon the subject of closing Tones Bayou, and by an act of the Legislature approved 11th March, 1852 commissioners were appointed, with power to take a portion of the State force and close the same. Having a heavy charge of the work in the Fourth District as Assistant Engineer under Mr. Wooldridge, I made an examination of that portion of Red River affected by this bayou and made a report which covers my views with regard to the part of Red River, as extract of which I herewith annex.

We are all fully aware that the land for many feet in depth in other [illegible] formed entirely of deposit [illegible]. We have [illegible] saturation of the river banks [illegible] mark, all deposit; when at other [illegible] deposit [illegible] formations of earth. We may, therefore, suppose that the bottom [illegible] time covered by lakes, interspersed with patches of [illegible] in from the adjoining hills, which tended to places have been [illegible] site sides, and made permanent lakes with hill at two outlets [illegible] the water draining the high lands above, those for use, the lowest part of these lakes and dry lands for its main course or channel, in which it did not [illegible] deposit, but as there was less current every where else than in the channel there was a constant deposit all along the sides, which finally formed banks sufficient to retain [illegible] water as would pass down in the low water season. Afterwards, as the [illegible] came down, these banks were overflowed, and a deposit made near them and near the main stream, until the banks were raised high enough to cut off [illegible] between the river and the low back lands on either side, and these lakes [illegible] have been low wood land, by stopping these outlets or drains into the [illegible] channel of the valley. In this way I conceive all the lakes in the valley of Red River [illegible] and in some cases an old lake made into two by the banks of Red River running out in the middle of it.

In this manner I believe did the river raise [illegible] swamps or lakes, and makes the high land below Grand Ecore [illegible] Old River, and Red River, leaving the low lands on the western side of the river [illegible] chain of lakes, where after the former streams had been sufficiently [illegible] water out of them, are now what is now called [illegible]. Chain of lakes having their old outlets into the low channel [illegible] was obliged to seek others along the edge of the hills [illegible] ments such as hard clay or land stone [illegible] water which drained the adjoining hills, and the floods of Red River [illegible] and the channel here was getting deeper while that of the [illegible] the Bon Dieu now carries by a much shorter course nearly all [illegible] two are fast filling up, to the water current to them. The [illegible] disappeared, and a deposit of sometimes from [illegible] the banks of the stream, by one inundation.

These natural changes may be called natural cut-offs for they are [illegible] course than the Old River, and like artificial cut-offs only cause [illegible] the land below, until the river again recovers its natural regimen. [illegible] sound, and it seems to accord with facts, it will be [illegible]

The distance from the mouth of Bayou Pierre, to its head is [illegible] by an air line. This at eight inches per mile [illegible] elevation of the land in the whole distance. The length of Red River between the two points by its meandering course, is one hundred and [illegible] on the map. The above fall of 464 inches divided by the distance [illegible] fall of 3 2/10 inches, per mile which ought, under ordinary [illegible] sufficient current.

The distance by Bayou Pierre is presumed to be about 75 miles [illegible] what it is by Red River; now the whole fall of 464 inches divided by 75 miles [illegible] fall to each mile of 6 18/100 which causes a very strong current, and [illegible] to the water to deepen and enlarge the channel and make it carry off more and more water each succeeding year. The situation or condition of Red River [illegible] Ecore to Shreveport now is that it has by the natural deposit raised [illegible] the middle of the valley above the low lands on each side, and formed [illegible] right and left, which being lower than the present river, will form [illegible]. The same process of making land will be carried out here, that has been performed below, and as the river by changing its course, made high the low land [illegible] so it will raise the lands along the Bayou Pierre, and finally fill up all the [illegible] deposit. The only question then is, shall we endeavor to retard [illegible] natural operation? I say retard it, or at least try to so embarrass [illegible] our purposes: my reasons for this opinion are as follows:

1st. There exists along the course of Bayou Pierre, lakes [illegible] being navigable in low stages of water, even if all the water of Red River, at some times, were forced into it, at its head.

2d. The banks are yet in many places so low that to obtain any considerable depth of water in the channel, much of land in the vicinity would be overflowed, which would require more water than the river could furnish, except when it is full. The Lakes alone connected with Bayou Pierre, and which are always nearly dry during the time of low water navigation in Red River, and which have to be filled to give navigation in that stream, cover an area of from 50 to 80 superficial miles, judging from authentic maps of the country. Now when do we have water enough in the fall season to keep them full?

3d. If we should at present make this the main navigable stream it would be so short, with so much fall per mile, that it would not only shorten the time of navigation, by letting the water off too soon, but will show perpendicular falls, that would have to be overcome by locks, or other expensive means.

4th. It would be an effectual cut-off which would have a great tendency to overflow the country below, and besides if we could keep up navigation in Red River it would be of great advantage even if Bayou Pierre was a good navigable stream. Red River at Shreveport is a fine large stream, although much water is discharged above into Bodcau Lake, and thence down into Lake Bistineau, but immediately below Shreveport it commences to discharge its waters into Bayou Pierre at its head, and by Tones also at the mouth of Loggy Bayou, and very slightly from there to the mouth of Bayou Pierre, beyond which its effects would not be perceptible.

Second, the stopping up of the outlets is proposed. This is the plan which was pursued by Mr. Shreive. He knew the consequence of leaving them open, and therefore closed them all, even Bayou Pierre itself—which was the largest. But the wants of the people induced them to get an act passed by the Legislature for the general cleaning out of this stream in order to make it navigable.

Tones Bayou was opened in consequence of the natural obstructions in the upper part of Bayou Pierre, which must always render it difficult of navigation; and nearly all the bayous leading from Red River to Bayou Pierre were opened with the intention of carrying out the wishes of the Legislature. This was the best means that could have been employed for that purpose, for the more water driven into Bayou Pierre, the sooner would it wear itself out a channel. In our operations of closing up these outlets, we must not force the water over the banks of the river; for the moment this is done, we stop the current in it, and thwart our own designs, which are to produce one.

It is a fact beyond a doubt in my mind, that whenever the water of an overflow comes down in a stream like Red River, that there is a deposit made in the channel of the stream; and although the banks are raised also, yet it overflows easily again. The reason is, that when the water breaks over in one bend it runs directly across to the next, only a few yards off in a straight line, whereas it would have to go miles around to arrive at the same point in its natural course, and fills the river up, and even turns the current up stream from there to the end of the bend—consequently there must be a deposit left around each bend of this character—and this is also the reason why the shoal water and snags are found there. The current, then, is nearly as much up stream as down, and in some places there is none at all; and for this reason, all the works which we can construct will be of no avail in high water, unless we could, by a levee on both sides, confine the water to the channel of the river.

I would therefore treat this part of the river as I would a canal, and make these outlets waste weirs, which would only hold the water to the top of the bank, and then let it escape over them. This, no doubt, would cost some outlay of money, but there is plenty of good timber near, and permanent works could be constructed. This plan, it seems to me, ought to be effectual, and I cannot see how it could injure any of the parties now interested; for below we could have the bayous open for boats to get into Bayou Pierre, when the water is high enough for navigation there, and we should not overflow the banks of Red River, for the water would be let off over our dams before that would take place.

It may not be amiss here to state, that by soundings made at the head of Tones Bayou, when the water was within two feet of the top of the bank, I found but seven and a half feet water, but running out with great velocity. This bayou, then, would not, in low water, let off but little of the water of the river, and thus operate, to some extent as a waste weir; but if it should wear down as deep as the bed of Red River, which, from the great velocity of the water it may soon do, or Red River fill up by deposit below, we may then bid adieu to all navigation from this point down to Loggy Bayou in the low water season. I have not been able to examine the materials of which the bottom of this bayou is composed, but I presume it is hard, otherwise the great force of the current through it would, before this time, have very much deepened its channel.

The next plan which I propose, is a thorough removal of all impediments to the free flow of water. I mean by this, that we shall not only remove the snags and sawyers, but that we shall take out of the way every thing which may impede the current, so that it is what we require. I think this part of the river small willow trees growing on the bank of the water's edge, and consequently encroaching on the channel by each year being made about it at all times as they impede the current. It might be well in some places to pull them up, and as we increase by these means the current, give a chance for the banks to wash.

From the foregoing remarks, it may be thought I am opposed to any improvement of Bayou Pierre; but such is not the fact. I think much may be done to benefit the high water navigation of that stream without prejudice to the other; but I am opposed to any plan of operation which will enable it to take the water out of Red River to the Bayou, the Pascagoula, and various others, also into that stream, and by many bayous on the east, into Lake Bistineau, thereby diminishing the height of the water, in the river at this point, as well as its width; such succeeding outlet making it less and less until below the Pascagoula, and from there down to Loggy Bayou, it becomes very narrow, and has but little current, not enough to hold in suspension the sedimentary matter which comes in where the water was more in motion, and consequently, this part of the river is filling up more than any other. The reason of this is very plain. The water which was let out both above and below Shreveport on the east, begins to come in again at the mouth of Loggy Bayou, and raises the surface of the river, and also enlarges it, until at Grand Ecore all the water is again concentrated, and the river is at least five times as large, as from Loggy Bayou to the Pascagoula.

The only portion of the river, which is in immediate danger of filling up, is that from Loggy Bayou to Tones Bayou; for below the former, it will be kept open by Loggy Bayou and other streams from Lake Bistineau, and above the latter, there seems yet sufficient current, although that will be the next portion that will fail, if ever the upper part of the Bayou Pierre washes out.

The distance between these two bayous, by an air line, does not vary much from 18 miles, while by the course of the river, it is 54 44/100 miles, being 34 56/100 miles from Loggy to Pascagoula and from there, to Tones Bayou 19 88/100 miles. This shows that the river runs here over three miles by its channel, to get one on its general course. The distance of 18 miles at 8 inches per mile, gives 144 inches as the whole fall, which divided by the distance, 54 44/100 of water course, gives 2 64/100 inches per mile, which would be the fall of water, provided the river were not lowered, by discharges from above Tones Bayou down to the Pascagoula, and then raised by inlets from Lake Bistineau at the mouth of Loggy Bayou; but as such is the case the fall must be much less, and then by far, the greater portion of the fall must be from Tones Bayou down to the Pascagoula, for I believe there larger outlet than the other, taking the current down, from the former to the prejudice of the same below. The discharge here being great, and near the point where the river is raised by inlets from Lake Bistineau, leaves but little difference in level and consequently but slight current between the head of Pascagoula, and the mouth of Loggy Bayou. The bare knowledge of these facts, without observation of their effects, ought to induce the belief that this part of the river, must fail, unless some thing can be done to counteract the operation of the natural courses of deposit.

To carry out the plan which I propose of keeping up the navigation, in the Old River, which it is now likely to lose, I will propose and discuss the following measures; laying it down as a settled principle that the current must by some means be made so rated, that it will hold in suspension, and carry along the earthy matter which is ordinarily contained in Red River water, if even it cannot be made to carry some of that which has been already deposited on its banks and in its channel.

1st. The river may be shortened by cut-offs.

2d. The outlets may be closed up.

3d. The thorough cleaning out of all impediments to the free passage of the water.

The first plan of cut-offs would produce the desired effect, by so shortening the river and throwing the great fall into less length of stream, thereby producing stronger, and consequently greater current. But this plan has not been tried, [illegible] the ground that it lets the water down [illegible]. But I wish it to be clearly understood that I do not consider [illegible] cut off for the whole water of Red River, but only a cut-off [illegible] to counteract the effects of the great cut-off at Bayou Pierre [illegible] navigation in Red River. That part of Red River below the [illegible] is in many places not more than from 150 to 180 feet wide, and [illegible] depth. This being the case, it cannot convey one-twelfth part of the water in time of floods; and in fact when the water in this stream rises within two feet of the top of the bank, much of the swamp on either side is overflowed, and the water runs straight courses on the east through Flat River and Lake Bodcau, and on the west through Bayou Pierre and a number of lakes and channels. Of what importance, then, is the small amount of water that can be made to pass down this river [illegible] river below, when the great mass [illegible] down to shorter cut-offs than we can make? [illegible] that it may affect the health of the immediate vicinity of the cut-off [illegible]

[illegible]

[illegible] the date of my last report, up to the present day, when my connection with the improvement service ceases, and yours commences.

In the First District, Capt. Barker was employed with the steamboat Florida and her hands, from 1st January till the latter part of June, in working upon the following streams: The Amite, Bogue Chitto, Tanchipao and Notalbany. The work necessary for all present purposes on the Bogue Chitto and Notalbany, was completed. Some that was pressingly needed on the lower part of the Amite, was also performed. Owing to the stage of the water, comparatively little was done on the Tanchipao.

He was then ordered to proceed with his hands to work on Red River. An account of his work there will be found in what will be stated concerning the labor performed in the Red River District.

At the time of submitting my last report, Capt. Kent, with the snag-boat Agnes No. 2, was employed in working on the Bayou Bartholomew, in the Second District. He continued there until the latter part of January, 1852, when the water having risen too high to allow of profitable work, he proceeded to remove the rafts, which had formed of the trees cut on the banks, and in the bed of Bœuf river, during the preceding low water season. This important stream is now in good navigable condition, but as it runs through a heavily timbered country, it will need some work occasionally to remove the obstructions which will continue to accumulate for some years. In the month of February, all the streams in the Second District being too much swollen to operate on them to advantage, Capt. Kent was ordered to the Fourth District, where he was employed till the last of June, at which time he returned to the Second District, and was employed till the last of October in working upon the Bayou D'Arbonne.

He did a large amount of valuable work on the upper part of this stream, and extended the navigation for a considerable distance. The water rose too early in the fall to enable him to complete the work. There are a few miles on the lower part of the stream which should be completed at the commencement of the next low water season.

It was my intention, at the commencement of the season, to employ two of the boats, with their hands, in the Third, or Red River District. Capt. Blackstone, who was appointed in this District, in place of Capt. Larves, commenced work with the crew of the Gen. Walker, on Black Lake Bayou on the 25th of June.

Capt. Barker, of the First District, was also ordered to join him with the Pioneer, but failed to reach the seat of operations with his boat. He however reached there with his hands, and they were jointly employed on Black Bayou and Red River till the [illegible] October.

At the commencement of the low water season, it was found that the Pioneer was in such a state of decay, that it would not be safe to endeavor to operate with her during the season. I consequently had her taken to New Orleans, with a view of having her repaired; but when she was taken out of the water and examined, it was found that she could not be repaired without an expenditure of five thousand dollars. This I conceived would be more than she would be worth after she should be refitted. Indeed, a new boat would have cost [illegible] we still should have had only an old boat. As it was thought by her Captain, and by the ship carpenters who examined her, that she could be run up to the point where her force was to be employed, I directed the Captain to run her up, and use her simply for a store boat, and to employ his crew in connection with that of the Gen. Walker, one boat being amply sufficient for the purposes of both divisions of hands.

On his trip up, however, it became manifest that there was great danger of her sinking, and the Captain fearing he might loose his stores and perhaps endanger the lives of his hands, ran her ashore and abandoned her.

Her machinery was all taken out and brought to Baton Rouge and stored. There was not a vestige [illegible] as it would have been impossible to use her, even if she had reached her destination. It was the intention to abandon her at that point.

[illegible] the low water season it is always impossible to work to advantage in any of [illegible] consequently concentrated the force [illegible] the District, except the First, in the Fourth District, where most of this kind of work [illegible] during that period at work on Bayou [illegible] Sorrel and Grand River. A great deal of heavy work was done on these [illegible] with only temporary advantage. As my connection [illegible] terminated [illegible] to [illegible] from which [illegible] I should say that the quantity [illegible] which passed down the Bayou Plaquemine every high water [illegible] all the streams connected with that [illegible] permanent works are constructed [illegible] The navigation [illegible] of permanent [illegible] Bayou des Glaises [illegible] Some considerable work [illegible] Achafalaya [illegible] by Captain Hardy and [illegible]

[illegible] prevent the drift from [illegible] to the Bayou Courtableau [illegible] the piles were prepared [illegible] I had caused to be collected [illegible]

[illegible] Capt. Marks has been employed during the [illegible] had charge of the work on the canal, [illegible] the Engineer's Department, it will [illegible] there. But the canal [illegible] that I should notice.

[illegible] of the Lafourche, [illegible] but after getting [illegible] with slides of earth, [illegible] over and over again, [illegible] on the ground, in the hope [illegible] high water, but owing to the [illegible] found it would be [illegible] some white laborers, [illegible] the time, for many [illegible] New Orleans [illegible] and for [illegible] to a contract [illegible] could not be [illegible] if the works were [illegible] the consequence, [illegible] An opinion had been made [illegible] Finding [illegible] could not be continued [illegible] the work and it has been [illegible]

[illegible] part of the canal has [illegible] It was, however, [illegible] which [illegible]

[illegible] at this date, all the State force is collected at this point, and so the [illegible] to dispose of it as you may [illegible] of the public interest. For the information of the Legislature, I [illegible] a statement of the property now subject to the control of this Department [illegible] balance of the appropriation made for the current year now [illegible]

[illegible] heavy amount of machinery [illegible] Government [illegible] portion of the machinery of the Sterling, [illegible] quantity of the materials for completing [illegible] wrought iron work for [illegible] quantity of brick, rubble, [illegible] to complete the work [illegible] for the locks on the Mississippi. [illegible] Lafourche and the Mississippi [illegible] in [illegible] demand. There [illegible]

| | |
|---|---|
| [illegible] | $5,7[illegible] |
| [illegible] Internal Improvement Service | 4,0[illegible] |
| [illegible] and Lafourche Canal | [illegible] |

[illegible] of the State force to the removal of [illegible] sufficient to meet your [illegible]

Respectfully,

A. D. WOOLDRIDGE.

G. W. Morse, Esq., State Engineer.

It should be borne in mind, that there has been no appropriation for building boats for many years, and that the Florida has been built, the Walker extensively repaired, and all the other repairs of boats and machinery have been paid for out of [illegible] appropriated for the ordinary expenses of this department. It is thought that the expenses of this department are too heavy, and although the business has been carried on as economically as circumstances would permit, yet the outlay seems large in proportion to what has been or can be performed by the limited number of hands under its control. But it is obvious that, when this force is divided into small lots of fifteen or twenty hands each, and sent to different portions of the State in order to satisfy all parties, but little visible effect can be produced in any one section. Each Superintendent must be a responsible man, and must be paid as much for the management of fifteen or twenty hands as he would require for fifty or more, so that the additional expense of keeping up a large force would be but little more than the cost of feeding and clothing. We require more hand force, that our boats should not be tied up in order that the hands belonging to them should perform this kind of labor.

The boats cost an outlay of money at first, and there is constant charge for repairs, and whether at work or not, become rotten and unfit for the purposes for which they were constructed after a short lapse of time. It is economy, then, not to let them lie idle, as the capital first invested in them is lost in a few years.

[illegible] GEO. W. MORSE, State Engineer.

STATE ENGINEER'S OFFICE, [illegible] December [illegible]

Presuming that it would be more convenient for the Legislature to have every thing relative to the Internal Improvement department embraced in one document, I have concluded to address to you the following communication, and to ask of you [illegible] in your report to that body.

My object is merely to give an account of the State force since [illegible]

It cannot be expected of me that I should in the short space of one month, since my appointment to office, have made myself acquainted with the wants and requirements of the different districts into which the State is divided, and I cannot, therefore, make recommendations for works, where I have had no opportunity of personal examination. My intention, however, is to inform myself as soon as possible, of the necessities of each district or portion of the State, that my exertions may be as useful as I can make them, and in the meantime I shall, unless otherwise directed, follow out the intention of my predecessor with regard to the different works already commenced, as well as the promises which he has made to persons in the several districts, so nearly as the force at my command will permit. I have written at some length upon the wants of Bayou Lafourche and Red River, because I consider they are great and pressing, and because I thought I understood them better than those of other sections of the State.

It is believed that a new and better route than the old one for steamboats has been discovered from Grand River into Grand Lake in the Attakapas country. I am having maps made out on a large scale of the different streams, and intend, at my first leisure time, to make such surveys and examinations of the new route as will enable me to decide upon its merits. Judging from the appearance of these streams on the maps, there seems but little doubt that a short space of time will make great changes in their natural condition; it would, therefore, be most proper to expend our labor here in such a manner as will in the end be most permanently useful.

Before closing this report it will not be improper to state that in order to carry out the work expected and required of this department effectually, the force must be augmented, both in negroes and boats. As before mentioned, we have but two boats in the service, and one of them, the Florida, only useful where there is but little current. Two more boats could be built without a heavy expenditure of money, as we have on hand all the machinery which would be required for them; that of the old Pioneer, with some little repairs, would answer perfectly well for one, and that which ought to be taken from the Agnes, would answer as well for the other.

[illegible] the water [illegible] the same time, [illegible] been known. [illegible] the 13th or 18th [illegible] and on the 23d we hear that the water was six inches higher than ever [illegible] and besides on the 18th I went down the bayou ten or twelve miles [illegible] in the morning there was a slight southerly wind, yet it soon [illegible] veered around to N. W. and was quite chilly. In view of the statements above I think it highly important that some measures should be immediately adopted for the relief of the people interested in the lands on or near this bayou. As to the matter whether the U. S. Government ought to perform the work or not, I have nothing to say; but whatever is done should be done quickly, for every year's delay renders the task much more difficult.


[illegible] can find [illegible] money [illegible]

Of interest to Merchants, Clerks, Teachers, Students, and all Men.

JUST PUBLISHED—A new and complete set of rules by which all the fundamental operations of Arithmetic may be performed in an incredibly short space of time. To become a master of them, will require no more than a couple hours' study of the good sound mind; and the student will thereby be enabled to Add, Subtract, Multiply, or Divide, in any sum or number of however many figures, more accurately, (in fact, beyond the possibility of an error,) and in less than one-fourth the time required in the old system.

These Fundamental Rules are followed by an explanation into the properties of numbers, which gives further facilities for other operations.

There are also embraced in the work, Rules for the Calculation of Interest, which will work out the interest of any sum upon any sum, with the utmost accuracy, and a simplicity and quickness fully equal to all the other operations by this, and vastly superior to all methods in the old plan.

Together, these form the most complete treatise on the Science of numbers ever issued—and are incalculably valuable to all men from their never-failing accuracy, and to business men from the immense amount of time they save from the most wearisome detail of business life. Particularly would they be to the hands of Merchants and Clerks, Teachers and Students, and Young men generally.

ORDER EARLY!

The copies of the few remaining hundreds of the present edition are being hurried off at a price greatly reduced from that ($5) at which the balance were sold, in order to make room for a new edition to be gotten up in magnificent and costly style immediately upon closing out the present one.

Every purchaser is bound (as a matter of just and equal protection to the copy-righter) by his sacred pledge of honor, to use the processes for the instruction of himself only, and to impart the information obtained from them to no one.

To obtain the Processes it is necessary to give such a pledge, with the price, Three Dollars, enclosed in a letter post paid, directed to S. HAY MAXWELL, Fincastle, Washington County, Maryland. The Processes will be forwarded post-paid, to the given address. Be particular to write the name of Post Office, County, and State, distinctly; with those neglecting this, mistakes frequently occur.

Those preferring it, can order copies of the forthcoming edition, which will be ready about the holidays. The price will be $5; orders sent before its issue will be filled as soon as the copies are ready.

Local Agents Wanted.

In every town, and all through the country, great numbers of copies of these Rules can be disposed of by any one who will only take the trouble to make them known. They comprise that which business men and everybody, has long felt the want of, and will gladly obtain. The nature of the business allows any one to act as Agent, and to convey success a large reward. As before explained, the business requiring privacy, orders from Agents are filled in separate sealed envelopes for delivery through their hands. When a number of three copies or more are ordered with the remittance at one time, 25 per cent is allowed to be retained as the Agent's fee; and 50 per cent on orders for eight copies or more.

RECEIVED per ships Columbiana, Co[illegible] and steamship War Frontier, from New York, Sea Eagle and Eastern Queen, from Boston, and daily expected by ship Hurt [illegible] from Philadelphia, a complete and well selected assortment of drugs, medicines, chemicals, perfumery, &c., which the undersigned offers to his city and country customers on the most liberal terms.

[illegible]

E. A. MOUGIN, Druggist, Cor. Dauphine and Customhouse sts.

TOWNSEND'S COMPOUND EXTRACT OF SARSAPARILLA and COPAIVA; Tarrant's effervescing Seltzer Aperient; Brown's Essence of Jamaica Ginger; Dr. Wistar's Balsam of Wild Cherry; Dr. Davis's Wild Cherry and Tar; Radway's Ready Relief; Whitehead's Essence of Mustard; Smith's Vegetable Table Syrup. English Toothbrushes—a great variety. Mougin's celebrated "Elixir Dentifrice," for whitening the Teeth, strengthening the gums, and preserving the purity of the breath. Constantly on hand and for sale by E. A. MOUGIN, Druggist, Cor. of Dauphine and Customhouse sts.

VETERINARY HOSPITAL, For all kinds of Domestic Animals and Farriery Shop.

On Bourbon, bet. Dumaine and St. Philip sts, No. 25[illegible]. M. DELREY, Veterinary Surgeon, graduate of the Veterinary school of Paris, in order to comply with the wishes of several owners of animals, and [illegible] to Bourbon street, where he has established a new veterinary Hospital for the reception of sick animals. A Farriery shop conducted by skillful farriers, wherein American and French iron works are manufactured and under the immediate superintendence of the Veterinary Surgeon, completes the important establishment.

E. Delrey receives subscriptions for shoeing and treatment of horses, together or separately.

His intercourse and correspondence with traders [illegible] the North, West and this city, enable him to give information to persons who wish to purchase horses and mules.

He keeps, for that purpose, a register book in his office, for the sale, purchase and barter of domestic animals.

Consultations from 12 M. to 3 P. M.

A. Sturzenegger & Eiermod, 44 Bienville, Corner of Chartres street, RECEIVED by the vessels Robert Kelly, Atlas, Gertrude and Globe, and offer for sale at moderate prices

246 Cases Dry Goods.

[illegible]

Damaged Goods.

HAVE [illegible] goods per ship Connecticut from Havre, in a damaged condition, we inform the public that we will sell them at prices which will be adapted to the times. Among the damaged articles are to be found, French Hats, and mousseline [illegible]. The sale of these articles will be conducted for cash. N. LAROUSSINI & CO., Bell Store, on Levee, between the two Markets.

FRENCH PICKLES.—Landing per Bay State from [illegible], anchovies, capres, [illegible] pickles, for sale by DUNTZE & IKEN, 80 and 95 Royal, cor Conti st.

F. LEVERRIER, Chartres Street No. 76, informs the public that he has just received an assortment of [illegible] at the low prices at which these articles are sold [illegible] cheaper at his store than at any other in New Orleans.

Cognac Pellevoisin.

DARK BRANDY, 4th proof; 25 half, 40 quarter, [illegible] proof pale brandy; 21 quarter [illegible] 4 half, 18 quarter, [illegible] under the Custom House locks, for sale by THE FAILLY BLANCHARD & CO., 24 Customhouse street.

[illegible] the sale of the above brandy.

[illegible] 16 boxes [illegible] for sale by H. DE GOER & GIFFLARD.

150,000 YARDS imperial bunting ex ship Rockwell from Liverpool, for sale by H. DE GOER & GIFFLARD.

LANDING ex ship Columbus from London, and for sale by the undersigned:—20 small boxes Gloster cheese, 12 Stilton cheese, 10 pounds Cheshire cheese. FAURES & NORMAN, 33 and 35 Royal st.

IN store and for sale by the undersigned: 1 [illegible] Limburg cheese [illegible] Chipparey [illegible] FAURES & NORMAN, 33 and 35 Royal st.

LANDING ex ship Ocean from Bremen, and for sale by the undersigned:—20 kegs Holland herrings; 20 small kegs salt sardelles, 40 Westphalia hams. FAURES & NORMAN, 33 and 35 Royal st.

PORK—[illegible] bbls mess pork, for sale by SECCOMB, VOORHIES & CO., 35 Tchoupitoulas st.

LANDING ex ship Bay State from Bordeaux, and for sale by the undersigned—100 casks good vin ordinaire, [illegible] white Wine; 100 [illegible] V. LAMBERT, 32 Magazine st.

HOSIERY.—[illegible] dozen ladies gray cotton stockings [illegible] LION, PINSARD & CO., 63 and 65 Royal street.

Valentine Laces.—Ladies will find at the store of the undersigned a choice assortment of Valenciennes Laces of the latest and finest patterns of the season, for sale by LION, PINSARD & CO., 63 and 65 Royal street.

SARDINES—100 boxes Sardines [illegible] Co., of Nantz, landing ex [illegible] from Bordeaux, for sale by [illegible]

FRUITS IN JUICE [illegible] of Nantz, landing ex [illegible]

[illegible]

PARISIAN STORE. No. [illegible] Bourbon st.

R[illegible]

[illegible]

[illegible] will find at his store, Masonic Hall [illegible]

WHITE Wine [illegible] superior quality, for sale by [illegible] ROCHEREAU & CO.

[illegible] FORET & GIRAUD, 78 Levee st.

CEMENT—[illegible] Louisville Hydraulic Cement, [illegible] for sale by A. LAFORET, [illegible]

C[illegible] casks [illegible] for sale by EUG. ROCHEREAU & CO., 17 and 19 St. Louis st.

[illegible] WHISKEY.—For sale, to arrive ex ship [illegible] daily expected, [illegible] WILLIAMSON, ZARATIN & CO., 30½ Poydras st.

MARTINI [illegible] WILLIAMSON, ZARATIN & CO., 30½ Poydras st.

[illegible] WILLIAMSON, ZARATIN & CO., 30½ Poydras st.

PORT AND MADEIRA WINES.—[illegible] PAUL-[illegible] & CO., [illegible]

SARSAPARILLA.—[illegible] SECCOMB, VOORHIES & CO., 37 Bienville st.

REFINED SUGAR.—[illegible] SECCOMB, VOORHIES & CO., 35 Tchoupitoulas st.

LANDING ex ship Pelican [illegible]

[illegible]

DRY GOODS. DRY GOODS. RED STORE, [illegible]

JOS. N. ROBERT & CO.

[illegible]

Madeira Wines.

THE Undersigned having been appointed Agents for Messrs. Welsh, Brothers, of Madeira, are prepared to receive orders for their wines, either direct from the island, or from the London Docks. EUG. ROCHEREAU & CO., 17 and 19 St. Louis street.

Molasses on Plantation.

FOR SALE—Two very superior crops, one about [illegible] and the other 25 miles below the city. For particulars apply to JUAN Y DE EGANA, 47 Bienville st.

JUST RECEIVED:

10 Cases Fancy Quiltings; 10 do new styles French Jaconet, 25 do American Prints, new styles, suitable for the city trade, and for sale by ROBERT BROTHERS & CO., Cor Magazine and Common sts.

IN store and for sale by the undersigned: [illegible] CHARLES CAVAROC, [illegible]

IN store and for sale by the undersigned: [illegible] LANATA, DANDOLO & CO., [illegible]

FOR SALE [illegible] LANATA, DANDOLO & CO., [illegible]

COFFEE—[illegible] FORET, GIRAUD, [illegible]

[illegible]