DOCUMENTS

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STATE OF MAINE,

DURING ITS SESSION

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1841.

TWENTY-FIRST LEGISLATURE.

NO. 13. SENATE.

PETITION

OF

WILLIAM BOYD AND OTHERS,

FOR

AN ACT TO INCORPORATE

THE

SEBOOMOOK SLUICEWAY COMPANY.

SEVERANCE & DORR,.....Printers to the State.

PETITION.

To the honorable Senate and House of Representatives of the State of Maine, in Legislature assembled—

THE petition of the undersigned respectfully represents, that they are interested in timber lands lying on the upper waters of Penobscot River, northwesterly of the head of Moose Head Lake. That the obstructions and obstacles in Penobscot River below said lands, are so numerous and its course so circuitous and unfavorable, as to prohibit the use of that river for running the timber to market from the lands in that quarter. These causes have prevented all lumbering operations on these lands, and rendered a large amount of valuable property unavailable, to the serious injury of individual proprietors and of the State.

They further represent that these evils may be remedied and these difficulties be avoided by opening and constructing a Sluiceway for the passage of logs, from the waters of the west branch of Penobscot River into the head of Moose Head Lake or its tributary streams.

By doing which, a direct and convenient avenue would be opened, through which the valuable timber in that quarter, now locked up, may be carried to market, to the great improvement of the productive resources of the State, as well as its individual citizens.

Wherefore your petitioners pray that they and their associates and successors may be incorporated by the name of the Seboomook Sluiceway Company, for the purpose of opening

and constructing the Sluiceway as aforesaid, and of making booms at each end of the same for the purpose of turning in and securing the timber.

And that they may be authorized to take a toll upon the logs and other timber which may pass through the Sluiceway, to indemnify them for their expenses.

And as in duty bound, &c.

WILLIAM BOYD,
WILLIAM MOULTON.

JANUARY, 1839.

REMONSTRANCE

OF

JAMES CROSBY AND OTHERS,

AGAINST THE

SEBOOMOOK SLUICEWAY.

REMONSTRANCE.

To the Senate and House of Representatives in Legislature assembled—1841.

We the undersigned respectfully remonstrate against the petition of William Boyd and others for an Act of Incorporation for a Sluiceway Company, giving them power to connect the waters of the Penobscot River with Moose Head Lake. It is unnecessary here to detail the probable injury of such an enterprise to all who are interested in property on the Penobscot. Your honorable body will readily perceive from the report of those most competent men, Messrs. Gilman, Dean and Herrick, (which report accompanies this Remonstrance,) that "there is great danger if such a connection is made as the petitioners ask for, that it would divert the waters in such a quantity as would be highly injurious to those interested on the Penobscot." We are of opinion that it would so far lessen the water as to injure the "driving of logs" from a large section of country, as well as injure the mill power in said waters. We do not propose to make in this communication an argument of length against this most extraordinary

petition, but would refer your honorable body to the report herein referred to.

JAMES CROSBY,
DANIEL B. HINCKLEY,
C. C. CUSHMAN,
CHARLES STETSON,
SAMUEL VEAZIE,
ALLEN HAINES,
SAMUEL FARRAR,
ALVIN HAYNES,
HENRY WARREN,
CYRUS GOSS,
A. M. ROBERTS,
S. H. BLAKE,
WALTER BROWN,
F. F. FRENCH,
WIGGINS HILL,
ISAAC FARRAR,
I. C. HAYNES,
DANIEL P. WOOD,
G. R. JEWETT,
O. FROST,
JOHN FISKE.

REPORT

OF

WILTIAM ANSON,

UPON AN

EXPLORATION AND SURVEY

OF THE

SEBOOMOOK SLUICEWAY.

REPORT.

To the Honorable Board of Internal Improvements, Senate and House of Representatives of the State of Maine in Legislature assembled:

GENTLEMEN,

THE undersigned, appointed by the Board of Internal Improvements, under an order of the Legislature of March 21st, 1839, to make an exploration and survey of the route for Seboomook Sluiceway, has performed the duty assigned him, and respectfully submits the following

REPORT:

In the month of July last, he proceeded with his assistants to the vicinity of the section of the country to be surveyed, and making suitable preparations, commenced the proposed reconnoissance and survey. The field of operations, from the nature of the duty, was not extensive; being confined to the section lying between the head of Moose Head lake, and the north west inlet stream, on the south; and the west branch of the Penobscot river, on the north. Our first duty was to make a careful examination of the country laying within the sphere of action, in order to ascertain the most judicious and best location for the Sluiceway, and in eleven days the surveys, &c. were completed. The different localities, features and character of this section, are highly favorable to the object in view; presenting great facilities for opening the desired communication between those two waters.

The accompanying Plan, is the key or index to this Report, and the routes and profiles of the Sluiceway delineated in detail, together with the general features of the country.

The distance between the lake and Penobscot river, *directly* north, is about two and a half miles ; but a little further westward, and up the north west inlet stream, the distance is much less ; being within half a mile of the Meadow pond, which lies south of the Penobscot river, and is connected with it by a small stream about 80 or 90 rods in length, chiefly formed by the *back water* flowing into it, from the river, during high water or freshets ; consequently, is on a level with the Penobscot.

The drift marks on the trees at the edge of the meadow, shewed the freshet of last spring to be about seven feet high at station A.

The stream just mentioned is deep and sluggish, and with the pond, forms a natural communication, nearly half the distance between the two waters, in the direction of the route for the Sluiceway.

The land on the east side of the meadow rises abruptly from the margin, in bold and broken ledges ; and on the opposite side, it rises in perspective by a more uniform elevation ; and on the south westerly side, the rise is gradual for some distance from the valley.

On the south west edge of the meadow, was found the most favorable spot at station A, for the head location of the Sluiceway, from which we commenced the survey of the two routes delineated on the Plan. It being desirable to ascertain the shortest distance between the two waters ; also, their relative levels, &c. we surveyed the line marked on the Plan, in the route A, B, M, S and G, from the meadow south westerly to the nearest point on the north west inlet. Distance 143 rods 9 links. After passing Quebec road to the west, the land preserves its relative level to nearly the margin of the stream at G, which station is 37 feet above the meadow level at A.

We now proceeded to survey and level the route A, B, M, C, D, E and F, for the Sluiceway, terminating on a suitable level at the inlet. From station A, on the meadow, we pursued a south westerly course, through a very uniform valley, and at station B, 35 rods, found the elevation 19 feet, 11½ inches. See Profile No. 2. Thence 28 rods, is station M, elevation 37 feet 1¼ inches—thence south easterly 43 rods to the summit level of this route, 53 feet 6¼ inches—and 17 rods more to C, on the Quebec road—thence 26 rods, 20 links to D, elevation 31 feet 11 inches, and 41 rods 5 links further is station E, elevation 16 feet 5¾ inches—32 rods 20 links more, to a *level* with station A on the meadow—thence 31 rods 10 links to the inlet at F, commanding a depression of 9 feet below the meadow level at A. Whole distance 256 rods 16 links.

An alteration of this route, beginning at station M, and running the line C, D to E, where it meets the former route, would very much reduce the summit level; but whether the increased distance of 16 rods 16 links, would prove a sufficient reason to change the line of direction, must hereafter be determined by local circumstances, and what the *action* of the logs would be on the radius of the curve.

The termination of the Sluiceway at the inlet F, is very favorable, as the stream for some distance below runs the same course with a large section of the Sluiceway, whereby the passage of the logs will be much facilitated.

The surface over which the two foregoing almost coincident routes pass, lies in a valley between the highlands, quite uniform and regular, with gradual elevation, as the Profiles on the Plan exhibit. The soil is a vegetable deposit, composed of black and yellow loom with a substratum of clay—calciferous slate, limestone, &c.

Opposite to the meadow stream in Penobscot river, lies Hawk island, about a mile in length, separating the river into two equal divisions, affording an excellent opportunity for booms, &c.

The river is about 4 rods wide on each side of the island, is nearly still water till it arrives at the Great Falls, (so called) about three quarters of a mile below. Here the river is contracted to a width of 4 rods, or so, with high precipitous banks, and rushes over a rocky ledge, making a fall of 16 or 18 feet—thence down a rough channel about 20 rods, where it again arrives at nearly level water. From these Falls, the ridge of ledge is bare of soil, and also precipitous, which traverses the country in a south westerly and north easterly direction, passing the easterly margin of the meadow before noticed ; and intersecting the summit level of the Sluiceway, at nearly right angles ; and passing on to the north west inlet. One section of the ridge crossing it above station G, and the other at the *Falls* below, which are about 20 feet.

From station F, at the outlet of the Sluiceway, there appears to be but little fall to the lake.

The face of the country in the vicinity of the route is generally broken and uneven, as already noticed ; and directly by the route, not far from station B, at the base of the ridge, are the out croppings of the slate ledge, standing nearly perpendicular. The frequent appearance of ledge, in various parts of the ridge, establish conclusively, according to the laws of Geology, that the ledge extends throughout the whole ridge.

It is proposed to make the excavation sufficient to construct a sluice, properly timbered, not to exceed eight feet in the clear ; and to construct a strong '*Bulk head and Gate*,' at the mouth of the meadow brook ; and also, where the Sluiceway receives the water from the pond ; by which means a double power to command the water will be secured—namely, controlling with mathematical precision, the flow into the pond, and also from the pond into the Sluiceway ; so as to make it most available for the purposes intended.

The expense of the proposed work may be about 20,000 dollars ; and is enhanced in consequence of the rock formation which intersects the line of the route ; but it is worthy of re-

mark that, from the same cause, the expense of future repairs will be proportionally diminished. The timber and stone suitable for the work, are abundant on the ground.

From a full and careful examination of the route and the adjacent country, the undersigned cannot forbear stating his entire satisfaction of the complete practicability and safety of the work proposed ; as well as its great importance to the State at large.

I have the honor to be gentlemen,

very respectfully your most

obedient servant,

WILLIAM ANSON,

Surveyor and Civil Engineer.

PORTLAND, January 22, 1840.

Note to my Report of the Survey of Seboomook Sluiceway.

The courses and distances not being expressed in the *Report* of the Seboomook Sluiceway, and likewise, not marked on the *finished* Plan, were considered *unnecessary*. First, from the fact that they would have added much to the length of the Report, which was my object to make as concise as possible ; because, a great part of the line is based on a *Curve*, and mathematically speaking, *every* advance on the route, would give new data for course and distance : secondly, the Plan is furnished with a *Scale* and *Meridian*, which if properly applied, will give the courses and distances in detail on each route.

Working and sectional Plans of operation, are the proper channels to convey *all* information in the most clear and scien-

tific manner, that would be needed for a uniform, and safe performance of the enterprize. Lastly, the nature of the country is such, as not to admit, without great additional expense, any *other* routes than those described on the Plan accompanying the Report : hence, the outlines of the one, or the other, with *little* or *no* variation, must be followed.

WILLIAM ANSON,

Surveyor and Civil Engineer.

PORTLAND, Feb. 19, 1840.

REPORT

OF

JAPHETH GILMAN AND OTHERS,

ON THE

SEBOOMOOK SLUICEWAY.

REPORT.

To James Crosby, John Fiske and Isaac Farrar, Esquires:

GENTLEMEN—Pursuant to your instructions, we have examined and surveyed the proposed location for the Seboomook Sluice, designed to connect the waters of the Penobscot with those of the Kennebec, and respectfully submit the following

REPORT:

Having explored the ground between the north-west bay of Moose Head Lake and the Penobscot River, we proceeded to survey and take the levels and elevations of the route described by Mr. WILLIAM ANSON, in his Report addressed to the Board of Internal Improvements and the Legislature of the State of Maine.

Commencing at A on the level of Meadow Pond which is also the level of Penobscot River, being connected therewith by a stream called Meadow Brook, and terminating at K, on a water level of the northwest inlet 6 $\frac{36}{100}$ feet below the level of Meadow Pond. To this may be added five feet, at least, for the fall of the northwest inlet below K, giving 11 $\frac{36}{100}$ feet depression of the Lake, below the Penobscot River. Assuming a right line from A to K, for the bed or bottom of the canal, the greatest depth of cutting will be 58 $\frac{70}{100}$ feet; the average depth 28 $\frac{61}{100}$ feet, and the length of the canal between the two points A and K, 4210 feet. So that a canal with sloping banks, allowing the angle of aclivity to be 45°, the highest admissible

angle, will require the removal of 155,000 cubic yards of earth, at a probable cost of $50,000; and should rock be found, to any considerable extent, the expense would be increased. We assume the cost of the Sluice, with the booms and fixtures, at a sum not less than $55,000, and should ledge exist, to the extent assumed by Mr. Anson, the cost of the excavation, alone, would greatly exceed that sum.

Referring to the plans herewith submitted, for the levelling and compass work, we pass to a more definite description of the topographical features of the vicinity of the proposed line of the Sluice, necessary to a right understanding of the character of the enterprise, and of its possible, if not probable consequences to the interests of other portions of the State. And we take occasion to remark, that in view of the various and important interests, the safety of which may be involved in the project, the ruinous consequences to be apprehended from a possible diversion of the waters of the Penobscot from their natural channel, and the vexatious embarrassments to the Penobscot operators, inseparable from a work of this kind, however successfully and securely it may be constructed, or however honestly and fairly it may be managed, we feel it to be our duty to reject all loose hypothesis and unwarranted assumption as unworthy to be relied on in a case where there is the least probability of consequences so ruinous as might result from such an experiment.

Opposite to the mouth of Meadow Brook, in the Penobscot River, lies Hawk Island, rising four or five feet above the surface of its waters; or in other words rising to about one half the height of high water, composed of a light and loose alluvial, and said to be about one mile in length, extending up and down the river, from the mouth of Meadow Brook. The southerly branch of the river at this place was found to be, by admeasurement, six rods wide, and preserves its width as far as could be seen in both directions, and is nearly still water. The southerly bank of this branch of the river is composed of

the same kind of alluvial as Hawk Island, but rises, we should think, not quite so high above the surface of the water. Going from this place southerly in the direction of the contemplated canal, there is not only a gradual declination of the surface, but a gradual change of the soil, approaching more and more in appearance to a kind of vegetable deposit, until we arrive at Meadow Pond, with shores scarcely rising above the ordinary surface of its waters, and which can be termed little else than a floating bog. Continuing our course across the pond we come to another portion of floating bog, on the margin of which, about fifteen rods from the shore is a stake, being the point where Mr. Anson commenced his survey, and which is, in his opinion, about midway between the mouth of Meadow Brook, at the Penobscot River, and the termination of the Sluice, at the northwest inlet. We concur with him in this opinion. From Meadow Pond, looking in a southeasterly direction and at a considerable distance, the land commences and continues to rise gradually and finally terminates in a moderate swell, or ridge, extending in a southwesterly direction from the river, and is covered with a heavy growth of timber. Southerly, in the direction of the Sluice, the land is less elevated. Westerly from the pond, at about three fourths of a mile, or a mile distant, the land commences and continues to rise very gradually, and terminates in quite a swell. Northwesterly in the direction of the course of the Penobscot River, no definite boundaries of the low land are visible, although we can see to a point far distant. So that, in the immediate vicinity of Meadow Pond, and south of the Penobscot, there is a large extent of low land containing hundreds of acres some three or four feet below the immediate bank of the river, much of which is little else than a floating bog, inundated by every rise of water, and covered to the depth of some ten feet in high freshets, when the banks of the river, together with Hawk Island, are covered to the depth of five feet; so that, in common, ordinary freshets, the whole tract of low land,

containing hundreds, and perhaps thousands of acres, becomes one entire sheet of water. Consequently the high land through which it is proposed to make an excavation, becomes the high water bank of the Penobscot, and is the only barrier, that nature has formed, to prevent the waters of this river from mingling with those of the Kennebec.

Eighteen hundred and fifty feet of the route, between A and K, is a wet cedar swamp, and lies in equal quantities on both ends of the route, and the more elevated land is composed of a fine loam, producing a handsome growth of timber.

Southeasterly from Meadow Pond, and short of the ridge of land seen in that direction, are several isolated ledges rising very suddenly and abruptly to nearly, or quite, as many feet in height as may be contained in their respective bases, but forming no part of the ridge. Some fifty or sixty rods easterly of the line of the Sluice, and near the Canada road, which the Sluice crosses, rises almost perpendicularly to the height of twenty-five or thirty feet the end of a very sharp ridge of ledge which extends off, easterly, into the high land seen south easterly of Meadow Pond. Near the proposed line of the Sluice, and on the northerly declivity of the elevated land, through which it is proposed to cut, are to be seen three points of rock. These are several rods apart, and so situated, as to form a line parallel with the line of the Sluice. These points of rock project about two feet above the surface of the ground, and resemble cliffs, not more than one foot in thickness standing edgewise, their lengths being in the line of their range.

Such, in brief, is the description of the vicinity of the proposed line of the route, and in which we have made mention of every indication of ledge we could discover. For want of time we did not visit the falls in the Penobscot, described by Mr. Anson, and, therefore, for the purpose of giving a description of the Penobscot river, falls and vicinity, and, also, that portion of the contemplated Sluice, between the point where Mr. Anson commenced his actual survey and the Penobscot river, we shall

here copy so much of his report as relates to these subjects, together with some remarks in relation to other parts of the line of the Sluice. In relation to the river, falls, &c. Mr. Anson says: "Opposite to the Meadow stream, in the Penob- "scot river, lies Hawk Island, about a mile in length, sepa- "rating the river into two equal divisions, affording an excel- "lent opportunity for booms, &c. The river is about 4 rods "wide on each side of the Island, is nearly still water, till it "arrives at the Great Falls (so called) about three fourths of a "mile below. Here the river is contracted to a width of four "rods or so, with high precipitous banks, and rushes over a "rocky ledge, making a fall of 16 or 18 feet—thence down "a rough channel about 20 rods, where it again arrives at "nearly level water. From these falls the ridge of ledge is "bare of soil, and also precipitous, which traverses the country "in a southwesterly and northeasterly direction, passing the "easterly margin of the Meadow before noticed, and inter- "secting the summit level of the Sluiceway at nearly right "angles, and passing on to the northwest inlet. One section "of the ridge crossing it above station G, and the other at the "*falls* below, which are about 20 feet.

"The face of the country in the vicinity of the route is gen- "erally broken and uneven, as already noticed, and directly by "the route not far from station B, at the base of the ridge, are "the out croppings of the slate ledge, standing nearly perpen- "dicular. The frequent appearance of the ledge in various "parts of the ridge, establish conclusively, according to the "laws of Geology, that the ledge extends throughout the "whole ridge."

In relation to that part of the contemplated Sluice, between the point where Mr. Anson commenced his actual survey, and the Penobscot river, in various parts of his report, we find the following: "Meadow pond, which lies south of the Penobscot "river, and is connected with it by a small stream, about 80 "or 90 rods in length, chiefly formed by the *back water* flow-

"ing into it from the river, during high water or freshets; "consequently is on a level with the Penobscot." "The "stream just mentioned is deep and sluggish, and with the "pond, forms a natural communication nearly half the distance "between the two waters, in the direction of the route of the "Sluiceway."

"It is proposed to construct a strong bulk head and gate at "the mouth of the Meadow Brook, and also where the Sluice-"way receives the water from the pond; by which means a "double power to command the water will be secured, viz: "controlling, with mathematical precision, the flow into the "pond, and also from the pond into the Sluiceway, so as to "make it most available for the purposes intended."

Here we take occasion to explain some discrepancies that will appear between this and Mr. Anson's report, in relation to the depression of the North West Inlet, also, the estimated height of freshets. Mr. Anson finds the depression of the North West Inlet to be nine feet, while we find it to be between six and seven feet; and he estimates the high water mark at 7 feet, while we call it about 10 feet; which is to be accounted for in the following manner:—At the time Mr. Anson made his survey, as we are informed by one of his assistants, who was also an assistant of ours, there was a moderate rise of water in the Penobscot River, of between two and three feet, consequently the water in the pond being on a level and connected with the Penobscot River by the channel called Meadow Brook, was raised, and flowed to the point where he commenced his survey and leveling; whereas our survey and leveling, the water being fallen, commenced about fifteen rods beyond, on the pond, and between two and three feet below the point where he began. This will also account for most of the difference in relation to the estimated height of the freshet. We reckoned from the surface of the pond, as we found it, which, as before stated, was between two and three feet below the point where he estimated, the height of

the spring freshets by the drift marks on the trees, and found it seven feet. But, as will be seen, this account, however strange it may appear, supposes, what we apprehend is nevertheless true, viz: that the water in the Penobscot may rise and fall considerably, while that in the North West Inlet remains more stationary; and in accounting for this we need but little information more than is given by Mr. Anson. He says, that "Hawk Island divides the Penobscot into two equal divisions," one of which we have measured, and found it six rods wide, consequently, the width of the river is twelve rods. He also states that "it is nearly still water to Great Falls (so called) where the river is contracted to a width of four rods or so, with high precipitous banks, and rushes over a rocky ledge, making a fall of 16 or 18 feet." So that there is not only a want of fall to facilitate the passage of the water, but the channel of the river is contracted from twelve to four rods, a bare opening, in the ledge, which he says extends in both directions from the Falls. In addition to this, there is a natural rock dam stretched across the bed of the channel. Here then is a natural obstruction, preventing the free passage of the water, and sufficient to occasion an accumulation, consequently, a higher pitch above than below the Falls; while the North West Inlet being a very short and unobstructed stream, having few or no tributaries, and rather a rapid current, rises, if it rise at all, to a very limited extent.

From what has been stated, it will be seen, that the proposed sluice is to commence on the south bank of the southerly division of the Penobscot river, at the mouth of Meadow Brook, and traverse Meadow Brook and Pond to the base of the elevated land which divides the waters of the two great rivers of Maine, and which is properly, as before stated, the high water bank of the Penobscot. Through this bank it is proposed to cut a channel sufficient for the purpose of sluicing timber out of one river into the other. In other words, to remove this natural barrier, or a portion of it, and supply its place with an artificial structure.

You have made it our duty to inquire not only as to the safety of such a work, but whether it can proceed without endangering the interests of other portions of the State. In other words, whether, with a due regard to the various and important interests identified with the preservation and safety of the Penobscot river, it can be suffered to proceed. Such an inquiry can be satisfactorily answered, only by first ascertaining the kind of earth through which the excavation is to be made. If it be any thing else than a solid rock, or ledge, of sufficient elevation and lateral extent, to prevent the waters of the highest freshets from overflowing, or cutting around it, an immediate and irremediable diversion of the waters of the Penobscot would seem to be one of the possible consequences, and that a final diversion of much the largest portion of its *available* waters would be the probable consequence, we can entertain no doubt.

In view of all the facts and circumstances in the case, it is difficult to arrive at any other conclusion.

The channel called Meadow Brook, according to Mr. Anson's statement, is deep, and with the pond forms a natural communication nearly half the distance; and there appears to be a natural obstruction in the channel of the Penobscot, at the Falls, so as to prevent the free passage of its waters in that direction. Then according to our leveling there is the depression of the North West Inlet, below Meadow Pond, which, with the fall of the stream below the sluice, makes between eleven and twelve feet.

In addition to these facts, we have the flowing of the Penobscot over a large extent of low land, rising to the height of ten feet, making, with the depression of the Lake, between 21 and 22 feet head and fall. But this is not the whole of the case. Not only the execution, but the whole control of the work may be entrusted to men deeply interested, and who, after having sunk the whole line of the channel a little below the high water mark, might, considering it a safe experiment, conclude to try what virtue there is in water. Having a

ten feet freshet, consequently a ten feet head of water above where they were allowed to cut, by the bill that was passed the Senate at the last session of the Legislature, together with an abundance of fall, and wishing to ascertain the difference in the cost between an excavation by manual labor and one effected by the help of water, they might conclude to delegate their trust to that powerful agent; and this being done, who could arrest its progress in time to prevent a ruinous diversion of the waters of the Penobscot? And in such a case, who could calculate the measure of damage to other portions of the State? But, supposing that in the course of events the proposed charter, if granted, should change owners, and the execution and management of the work fall into the hands of other men, not only less honest, but less scrupulous in regard to the safety and preservation of the Penobscot, and not only entertaining all the opinions and notions of the former owners, but an additional one, that an enlargement of the channel of the sluice to the size of the Penobscot river would add much to its utility for the purposes intended; in such a case, who could suppose that in such men, with such facilities ready at hand, a disposition would be lacking to use the means necessary to the accomplishment of an object so desirable? It is also worthy of remark, that the same consequences which we apprehend might result from these supposable cases, may all result from accident; such, for instance, as the blowing or breaking away of a bulk head or dam. Mr. Anson, whether for the purpose of allaying any apprehensions of danger we cannot say, speaks of controlling with mathematical precision the flow of water into the pond, by means of a strong bulk head and gate, at the mouth of Meadow Brook; but we can by no means regard him as treating the subject seriously, so far as this proposition is concerned; there being but very little bank, and that such as would be incapable either of opposing any resistance to high water currents, or of sustaining a bulk head and gate, provided the water could be controlled with mathematical precision, by means of such a structure five feet or more beneath its surface.

But there is another view of the subject. It is said there is a ledge intersecting the line of the sluice, and this statement appears to be founded upon the following portion of a paragraph in Mr. Anson's Report: "From these Falls the ridge of ledge "is bare of soil, and also precipitous, which traverses the "country in a southwesterly and northeasterly direction, pass- "ing the easterly margin of the meadow before noticed, and "intersecting the summit level of the sluiceway at nearly right "angles, and passing on to the Northwest Inlet. One section "of the ridge crossing it above station G, and the other at the "Falls below, which are about 20 feet." In relation to which, while we would not be understood as saying any thing that might imply an intention on the part of Mr. Anson, either to deceive or state an untruth, we must be allowed to say, that if there ever was a statement, purporting to be a statement of facts, so worded as to be admirably well calculated to produce a false impression, what we have here copied from his report is of that character. The idea it conveys appears to be this: That a precipitous naked ridge extends from the Falls in the Penobscot to the Northwest Inlet, passing the easterly margin of the meadow, crossing the line of the proposed sluice, and constituting the elevated land through which it is proposed to cut a canal, the soil of which land he informs us, in another part of his report, is composed of a black and yellow loam, with a substratum of clay, calciferous slate, lime-stone, &c.

What could have been Mr. Anson's motive in so wording this portion of his report, we are unable to tell, but after a careful examination of the ground, finding that no such ledge exists, we are satisfied that it could never have been his intention to convey such an idea. If Mr. Anson, after describing the ledge at the Falls, had said there was a circuitous ridge of land commencing near the Falls, passing easterly of the meadow, intersecting the line of the sluice, passing on to the Northwest Inlet, and also that there were ledges in the easterly margin of the meadow, he would have stated, what we apprehend is not

very far from the truth, and that such an idea and such only was what he intended to have conveyed, is evident, not only from the fact that there is no such ledge, but also from an examination of the next paragraph but one, of his report, wherein he says : "The face of the country in the vicinity of "the route is generally broken and uneven as already noticed, "and directly by the route not far from station B, at the base "of the ridge, are the out-croppings of the slate ledge standing "nearly perpendicular. The frequent appearance of the ledge "in various parts of the ridge, establish conclusively, accord- "ing to the laws of geology, that the ledge extends throughout "the whole ridge." Here we find him making the geological deduction from the frequent appearance of ledge, "that the "ledge extends throughout the whole ridge." Why this inference, if (as has been supposed) the whole ridge itself be a precipitous naked ledge ? Supposing the ridge, of which he speaks, as intersecting the sluiceway and the precipitous naked ridge of ledge at the Falls, to be the same, not only the necessity but the sense of the inference is destroyed, so that his geological deduction would amount to no more than this, viz : The frequent appearance of ledge in various parts of the *ledge*, establishes conclusively, according to the laws of geology, that the ledge extends through the whole ledge ! His whole story, therefore, about a ledge in the vicinity of the sluiceway, is this : He saw a precipitous naked ledge at the Falls, a number of ledges in the easterly margin of the meadow, another, fifty or sixty rods east of the sluiceway and near the Canada road, and some indications not exactly at the base, but on the northerly declivity of the ridge of land through which it is proposed to cut a canal or sluice. And from these appearances, as he terms them, judging according to the laws of geology, he *infers* a ledge beneath the surface of the ground, intersecting the line of the sluice, and extending throughout the whole ridge or elevated ground, through which it is proposed to cut. So that at best it is but an *imaginary* ledge.

However correct Mr. Anson's conclusions may be, it appears to us that in order to prevent a diversion of the waters of the Penobscot, he tacitly, if not fully, admits the necessity of such a ledge as we have described, by his laborious attempts, and, as we think, incorrect conclusion, to establish its existence. And should any further evidence of such an admission be necessary we think it may be found in that part of his report where he says, "the expense of the proposed work may be about "$20,000, and is enhanced in consequence of the rock forma- "tion which intersects the line of the route, but it is worthy of "remark that from the same cause the future repairs will be "proportionally diminished." Here, he not only alludes to the ledge as no longer doubtful, but seems to contemplate, were it not for the ledge, a gullying or wearing away of the sluice to such an extent, at least that to repair it would require a sum equal to the difference in the cost of excavating a canal through a loamy soil and a solid rock.

The correctness of Mr. Anson's conclusions can be satisfactorily tested only by an actual excavation, and inasmuch as such excavation might be the means of producing the catastrophe which should be strictly guarded against, it appears to us that it would be trifling to an unjustifiable degree with vastly more important interests to allow or suffer it, and would be allowing speculators to experiment, at the risk of others, upon no better security than the naked possibility that no material mischief would result from it.

But, for ourselves, we are disposed to place but little confidence in Mr. Anson's assurances in relation to the ledge, and quite as little in his endorsement for the safety of the enterprise. Instead of regarding the facts recited as indicative of an uninterrupted ledge beneath the surface, and intersecting the line of the sluice, we regard them as indicative of what would be nearly or quite the reverse. At the Falls, a mile below the line of the sluice, is a precipitous naked ledge, over and through which the waters of the Penobscot flow, by

means of a broad fissure or opening in the rock, and which ledge extends, according to Mr. Anson's statement, south-westerly and north-easterly from this place. Some fifty or sixty rods east of the line of the sluice, and near the Canada road, rises very suddenly and abruptly, as before stated, the end of a sharp ridge of ledge, extending off easterly, and, for aught we know, joining the ledge at the Falls. In the easterly margin of the meadow, one hundred rods or more from where the line of the sluice crosses the elevated land, are a number of isolated, and, for aught that appears, disconnected ledges, rising so suddenly and abruptly, and at such distances apart, that, if they were transferred and placed in the line of the sluice, and on the most elevated ground, preserving their present distances from each other, and their respective lines of declivity below as above the surface of the ground, down to the required depth of the canal, they would, unless we are very much deceived, afford as good a passage for the waters between them, as is now afforded to the whole Penobscot by the opening in the ledge at the Falls. On the westerly side, and not far from the line of the proposed sluice, and on the northerly declivity of the elevated land, are what Mr. Anson calls the out-croppings or perpendicular cliffs of the slate ledge; these so far as they can be regarded as indications of ledge, indicate a ledge not crossing, but parallel with the line of the sluice, and not a horizontal, but a perpendicular ledge.

Such, and such only is the evidence of an uninterrupted ledge beneath the surface and in the proposed line of the sluice. However these facts may appear to more philosophic minds, well versed in the laws of geology, to us they by no means appear conclusive.

The ledge near the Canada road certainly affords no evidence of an unbroken ledge at the Falls; nor does that at the Falls prove the unbroken condition of the ledges in the easterly margin of the meadow; and why it is that these ledges, affording no evidence of the unbroken condition of the one or the other,

should furnish such *conclusive* evidence of, not only a ledge, but a continued unbroken one, in the vicinity of the proposed sluice, is more than we with our limited knowledge of the science and laws of geology can tell.

We have yet to learn that because there is a ledge at the Falls a mile below, it necessarily follows according to the laws of geology, that there is, in the immediate vicinity of the proposed sluice, beneath the surface, a continued and unbroken ledge. And we have also to learn that there are any laws, either of geology, or of the mind, that would either require or justify such an *inference* where there is no appearance of anything of the kind, from the mere fact that there were a number of precipitous isolated ledges a half mile, or mile distant! Should there be any such laws of geology, why are they so untrue to themselves, or to the science, as to allow of the opening in the ledge at the Falls, and not in this only, but hundreds of similar instances in our rivers, as well as in the numerous instances where very deep wells are sunk by the side of almost perpendicular walls of slate?

In relation to the out-croppings, or perpendicular cliffs, we can only say that we can see nothing in their appearance to justify Mr. Anson's conclusion; because, so far as they can be regarded as indications, just so far they are indicative of a ledge of entirely a different character; and the same is true of all the appearances combined. So far, then, are we from acquiescing in Mr. Anson's opinion or conclusions, that perpendicular cliffs and broken fragments of rock, together with precipitous, isolated, apparently disconnected ledges, indicate a continued, unbroken ledge beneath the surface, we regard them as indicative of a broken, disconnected assemblage of spurs and fragments, with intervening chasms, and deep and broad fissures, through which the water would soon make for itself a sufficient passage.

Of the presence of a continued, unbroken ledge, intersecting the line of the proposed sluice, there is no proof; but, on the contrary, strong reasons to doubt its existence; and, in case

of the absence of ledge, it is our decided opinion that the place of the natural barrier cannot be adequately supplied by an artificial structure, even if it were in accordance with the real interest of the petitioners or proprietors that it should be done, and we could rely upon their fidelity in the execution and preservation of the work.

We hasten to a close of this communication, already protracted beyond what we intended, by adverting to but one of the objections to the proposed work; we mean, the unavoidable embarrassments and losses to which it must inevitably subject those who would bring their timber down the Penobscot. By practical lumbermen this objection will be better understood than we can describe, but it presents itself to our minds as of no trifling importance. It will be readily perceived, that in order to the availment of the sluice, it will be necessary to maintain a boom across the north branch of the river, at the head of Hawk Island, and another across the south branch, at some point below the Meadow Brook. Without such booms the sluice would be of but little or no use, and their erection and maintenance, it seems to us, would amount to a prohibition of lumbering operations, so far as timber is designed for the Penobscot market, in consequence of the embarrassments and losses they would occasion.

If the banks of the river in the vicinity of Meadow Brook were of sufficient height to keep the logs within the channel, in such a case the erection of a boom at or below that place, would only occasion a delay in driving the lumber; but such is not the true state of the case. It appears evident from the drift-marks upon the trees, that the water not only rises above the bank, but remains nearly stationary for some considerable length of time during high water in the spring; and this condition of the bank is not confined to a few rods in the immediate vicinity of Meadow Brook, but extends hundreds of rods up and down the river; so that the consequence of maintaining a boom below Meadow Brook would be, not merely a delay,

but to thorw the logs over a large tract of low ground, and place them in a worse situation for the operators than when on the stump ; and for this we have not been able to discover an adequate remedy.

All which is respectfully submitted.

JAPHETH GILMAN,
BENJ. S. DEANE,
GEO. R. HERRICK.

AN ACT

TO

INCORPORATE

THE

SEBOOMOOK SLUICEWAY COMPANY.

STATE OF MAINE.

IN THE YEAR OF OUR LORD ONE THOUSAND EIGHT HUNDRED AND FORTY-ONE.

AN ACT to incorporate Seboomook Sluiceway Company.

SECT. 1. *Be it enacted by the Senate and House of Representatives in Legislature assembled,* That William Boyd, William Moulton, Nathan Cummings, William E. Edwards, and George Turner, with their associates, successors and assigns, be and they hereby are incorporated and created a body politic, by the name of Seboomook Sluiceway Company, with all the powers, rights, privileges, immunities and liabilities incident by law to similar corporations.

SECT. 2. *Be it further enacted,* That said Corporation shall have power and authority to locate, construct, and maintain, in the township called Seboomook, a Sluiceway for the passage of logs and other lumber from the waters of the west branch of Penobscot River into the north-west Bay of Moose Head Lake, to pass through Meadow

Brook and Pond, in a southerly and south-easterly direction to North-West Inlet Stream, thence to said Moose Head Lake—provided the bed of said Sluiceway in some part thereof shall pass through a ledge; which ledge, at the sides of said Sluiceway where the excavation therefor is made through it, shall in some part thereof, be at least as high as the high-water-level of Penobscot River, opposite the mouth of Meadow Brook. The bed of said Sluiceway to be laid with timber, when necessary, not exceeding six feet in general width at its usual water level, and not lower at the place where it commences to pass through ledge, than the low-water-level of said Meadow Pond, and to be constructed with a suitable bulk-head and gate where it passes through ledge; which gate shall not be more than six feet wide, and not be raised except when necessary for the passage of logs and other lumber through said Sluiceway. And there shall also be constructed a bulk-head and gate across Meadow Brook at its mouth—provided said Sluiceway shall not obstruct or prevent the running of timber down said west branch of Penobscot River. And said Corporation may take, hold and use any land along the course of said Sluiceway not exceeding the width of two rods, except where a greater width be necessary for excavation or embankment, paying the owners thereof a full and

just compensation for all damages arising therefrom.

SECT. 3. *Be it further enacted,* That said Corporation shall have power and authority to construct and maintain a boom from Hawk Island to the south bank of said west branch of Penobscot River, and a swing-boom at the west end of said Island, for the purpose of turning in and securing the logs and timber passing to said Sluiceway. Provided that in case any logs or timber intended to pass down said Penobscot River, float into said booms, it shall be the duty of said Corporation to turn the same out of said booms without delay, and if they unreasonably neglect so to do, they shall pay the owners thereof all the damages arising therefrom.

SECT. 4. *Be it further enacted,* That if any person or persons shall suffer damage by the exercise of the powers herein granted, and the parties are unable to agree upon the same, he or they may, by petition, setting forth the manner he or they are injured and the damages claimed, apply for remedy to the District Court within and for the County of Somerset, which Court shall cause said damages to be ascertained by three discreet, disinterested free holders of said County; and either party aggrieved by the judgment of said Court may appeal therefrom to the Supreme Judicial Court. Provided that petitions for damages shall

be filed in the Clerk's office of said Court within one year next after such damages may have accrued, otherwise such claim shall be barred.

SECT. 5. *Be it further enacted,* That if any person or persons shall wilfully or mischievously take up, remove, injure or destroy any part of said Sluiceway, Booms, or other works appertaining thereto, or obstruct the waters thereof, he or they, or any person or persons aiding or abetting therein, shall forfeit and pay to said Corporation treble the amount of damages, to be recovered in any Court of competent jurisdiction, and shall also be liable to indictment for such offence.

SECT. 6. *Be it further enacted,* That a toll be and hereby is granted for the use and benefit of said Corporation, according to the following rates, viz: fifty cents for each and every thousand feet, board measure, for all logs and other lumber which may pass through said Sluiceway—and said Corporation shall have a lien upon all logs and lumber passing through said Sluiceway, for the payment of tolls due and payable thereon according to the rate aforesaid.

SECT. 7. *Be it further enacted,* That said Corporation may take, hold, lease, and convey any estate, real and personal, necessary to carry into effect the purposes of this act, not exceeding the amount of forty thousand dollars. And this Act

shall continue in force for the term of twenty years from the time when said Sluiceway may be completed, which shall be within four years from the passage of this Act.

STATE OF MAINE.

IN SENATE, March 13, 1841.

Laid on the table, and ordered, That 500 copies be printed for the use of the Legislature.

[Extract from the Journal.]

ATTEST, DANIEL SANBORN, *Secretary.*