

# MAINE STATE LEGISLATURE

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# Public Documents of Maine:

BEING THE

## ANNUAL REPORTS

OF VARIOUS

### PUBLIC OFFICERS AND INSTITUTIONS

FOR THE YEARS

1870-71.



AUGUSTA:

SPRAGUE, OWEN & NASH, PRINTERS TO THE STATE.

1871.

# REPORT

OF THE

## RAILROAD COMMISSIONERS

OF THE

STATE OF MAINE,

FOR THE YEAR

1870.

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AUGUSTA:

SPRAGUE, OWEN & NASH, PRINTERS TO THE STATE.

1871.



# REPORT.

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To THE GOVERNOR:

The Railroad Commissioners respectfully submit their Annual Report.

## *Androscoggin Railroad.*

This road runs from Brunswick to Leeds Junction—26 miles, with a branch track to Lewiston—4½ miles. It has taken a lease, however, of the Leeds and Farmington road—38 miles—for fifty years from December 1, 1865, and the whole line is now spoken of as the Androscoggin Road.

The equipment of the road has 7 locomotives, 8 passenger cars, 3 baggage cars, 2 saloon cars, 62 box cars, 54 platform cars, 8 cattle cars, 12 hand cars, 12 shove cars, and 4 snow plows, which are in good condition.

The Company have, since our last report, extended their road across Sandy river to Farmington village—¾ of a mile—and have built there a fine passenger depot, 150x33 feet, and a commodious freight house, 130x33. This is a great improvement to the road, and gives completion to it. The Company have put in track 125 tons of new rails, and 28,000 new sleepers, and kept their road in general good order. It is well ditched and ballasted. The road was very badly washed in 1869, but the culverts and bridges then damaged by freshet have been repaired and rebuilt in so substantial a manner, that they are now safer and stronger than they were before, and less liable to injury from the same cause. The bridges, however, are wooden structures, and should all have stone abutments, as we have heretofore advised; but the Superintendent again informs us that they are going to commence stone work upon them another season, with a view of narrowing the water spaces, and spanning them with more permanent superstructures.

The convenience of travellers requires a new station-house at Leeds Junction, and the Androscoggin and Maine Central can hardly afford to allow the discomforts sometimes felt by passengers there, to be much longer continued.

The road, originally too cheaply made, is coming up year by year in its character, and increasing in its business and credit, under the judicious management of its direction. Oliver Moses, Esq., of Bath, continues the very competent President of the road, and Arthur Brown, Esq., its very practical and intelligent Superintendent.

Complaint has been made to us of the discontinuance of the station upon the west side of the river at Farmington; but the Legislature has not given us a right of interference in such cases, that we are aware of.

*Portland, Saco and Portsmouth Railroad.*

This road has 52 miles of track, extending from Portland to Portsmouth, N. H. Not much work has been done upon it the past season, besides the general repairs to keep it well up as a first class road, and the substitution of new for old material constantly necessary to prevent depreciation; but it has been improved, and new side tracks at several stations put in. The road is leased to the Eastern and Boston and Maine roads, but keeps up its separate organization, and furnishes the motive power for the passenger trains of these roads over it. Its equipment of 19 engines, 175 freight cars, 3 freight saloon cars, 1 passenger baggage car, 1 smoking car, 2 eight wheeled cars, for exclusive use of Eastern Express Company, is in good condition.

It is the oldest and one of the most successful roads in Maine, and has always commanded the confidence of the public. It was built upon stock subscription, and for cash, and has always paid dividends upon its cost, and has never had a bonded debt. It is at present the only outlet by rail south and west from the State; but the travel and freight always pressing from Maine toward Boston, and now to be augmented by the railroad arrangements in progress in the State, may soon require further facilities for reaching their destination.

Francis Chase, Esq., of Portland, continues its experienced and most acceptable Superintendent. The Hon. Ichabod Goodwin of Portsmouth, is President.

*Boston and Maine Railroad.*

Only  $2\frac{1}{2}$  miles of this road is within the limits of our State—extending from the bridge at Salmon Falls to South Berwick Junction. Its track and rolling stock have been kept up the past season to the standard of its usually high character. Wm. Merritt, Esq., so long its able Superintendent, continues his vigilant oversight of it in the same capacity.

*Great Falls and Conway Railroad.*

Only 3 miles of this road is within our State. It commences at Brock's Crossing, upon the Portland, Saco and Portsmouth road in South Berwick, and crosses the Boston and Maine road at Salmon Falls into New Hampshire. It is under the management of the Eastern Railroad Company. It is in a safe and very good condition, and its equipment is in very good order, and adequate to its limited business. When the road shall be opened to Conway, N. H., the volume of its business will be augmented, and it will contribute very considerably to the travel and traffic of the Eastern road. A. A. Perkins, Esq., is its intelligent Superintendent.

*Portland and Ogdensburg Railroad.*

Ground was broken upon this road September 7, 1869. It is now opened to West Baldwin—33 miles—and graded to Fryeburg—50 miles. From Fryeburg to Conway—10 miles—it is under contract, so that, the Directors expect to open the road to Fryeburg and Conway early enough another season to command the pleasure travel to the mountains. The road has been constructed with a view to durability and safety, and its work is thorough, substantial and permanent. The road bed and superstructure are both admirable. The ties are large, of hackmatack and cedar, with quite a percentage of white oak—a wood so durable and so good to hold spikes. The rails are of a new pattern ordered by the Directors, four inches in height instead of three and a half, the ordinary height of the rail in general use in this State. It may be an improvement. The drainage of the road is excellent. The formation over which it passes for most of the route is sand or gravel, and it will be easily kept in repair.

The station houses and depot buildings are not all yet erected; but in our recent examination of the road, we noticed a fine

depot building, with offices, and a hall over them, at "Steep Falls" station at Standish, and were gratified to learn that it was built and tendered to the Company as a present, by Tobias Lord, Esq., a wealthy citizen of the place; and further on, at Baldwin, is another station-house, presented to the Company by Richard Chase and neighbors. We mention these evidences of friendship for the road, as standing in agreeable contrast to the exactions and unreasonable claims for damages too often made against railroad corporations, by persons who forget that their property has been enhanced in value, as a whole, by a road, though a small fraction of it may have been taken away by an easement over it.

The rolling stock of the Company consists of 4 locomotives, 4 passenger cars, 1 smoking car, 2 conductor's cars, 20 box cars, 40 flat cars, and they are all new excepting one engine, and in good condition. The business is already very considerable over the road, and increasing.

The route is such that it seems to us it must command in future a very great business, and awaken resources that have slept so long—too long—not unknown, but unused. It strikes the Presumpscot at Cumberland Mills, and following up its banks, opens its little valley, and makes accessible its fine water powers. Crossing this river it touches the foot of Sebago lake, as beautiful a sheet of water as there is in the State, and the terminus of more than thirty miles of inland navigation. It then strikes the Saco, and passing near the mouth of the Ossipee and its valley, it continues up the Saco to Fryeburg and its source, in the Notch of the White Hills—thus passing in its route the splendid water powers at Steep Falls, Hiram Bridge, and elsewhere upon this river. The proposed route further, after leaving this State, passes the White Mountains at Crawford's, and thence on to St. Johnsbury, Vt.; thence by a road under contract—90 miles—to Swanton, and thence, by roads already in operation, to Ogdensburg. It will then be the shortest and most direct route from the West to the Atlantic, and Portland will be the nearest ocean depot for the exhaustless products of the West, whether designed for home distribution, or shipment to the Provinces or Europe.

These are no doubt among the considerations that induced the public spirited merchants of the commercial capital of our State to favor the enterprise—an enterprise that certainly promises increased business to their beautiful city, as well as growth to the



State. It will tend also to prevent a diversion of the trade of western Maine, and a part of New Hampshire, that has been used to come here, into new channels, and to keep it where it appropriately belongs and has been wont to go.

The judicious location of the road, and the substantial manner of its construction, are eminently due to John F. Anderson, Esq., its distinguished engineer; and the ability with which the affairs of the corporation have been managed, and the energy with which its road has been pushed forward toward completion, assures the President, Samuel J. Anderson, Esq., a very high position among railroad men.

*Portland and Oxford Central Railroad.*

This road has been extended, since our last report, to Canton, making it  $27\frac{1}{2}$  miles from its starting point on the Grand Trunk at Mechanic Falls. The 5 miles from Hartford to Canton Village, opened this season, is not yet fully completed, but cars pass over it with safety, driving slow. The bridges are wooden structures, and should all, as a matter of economy in the end to the Company, and of safety to the public, have stone abutments to shorten the span, and hold more securely the superstructure in position. The Pottle bridge has not been rebuilt as we had expected it would have been ere this; but we are now assured by the President that the stone has been gotten out and paid for and is ready to be put in place another spring for the abutments of a new truss bridge of a permanent character, and Mr. Smith further informs us that he intends to replace the Sumner and Allen bridges also, another year, with new ones with stone abutments.

The track of the road from Mechanic Falls to Hartford is in good condition. The rolling stock is not quite such as the travel and business require; but the Company intend to improve and add to it as fast as their means will permit.

F. B. Smith, Esq., is President, and is giving to the road his personal and unremitting attention. He has had some difficulties to contend with, but he has made the most of the means at his command to improve the road and increase its capacity. Mr. Smith appears anxious to make his road useful to the community, and manifests a commendable solicitude that its facilities for freight, and safety for travel, shall be such as to command the confidence and the patronage of the public.

*Bangor and Piscataquis Railroad.*

This road, starting from its junction with the European and North American Railway at Oldtown, 13 miles above Bangor, extends to Dover—40 miles. The track of the road has been greatly improved the past season, and is now in very fair condition. The bridges are strong. The rolling stock is in good order, and consists of 4 engines, 2 passenger cars, 1 baggage car, 15 box cars, 3 hay cars, 38 platform cars, and 1 snow plow.

The business of the road has quite come up to the expectations of its managers, as we understand, and is regularly and gradually increasing. The construction of this road has stimulated into operation a number of little enterprises upon its route, that will give employment to labor, and make a demand for raw materials before almost worthless.

At Lagrange, old mills are being rebuilt, and it is proposed to put up two steam mills the coming season. At Orneville, Hallowell Rice & Co. have in successful operation an excelsior mill, capable of manufacturing four tons per day, and have nearly ready for operation, a new saw mill for long lumber, shingles, spool stock, &c. New mills have been built at Milo, Medford, Sebec and other points adjacent to the line of the road. New slate quarries have been opened at Brownville, Barnard, Howard and Monson. Other kindred enterprises will follow, as the facilities of transportation by the road come to be more known; and all in return will give business to the road, and though it may have been under a cloud for an hour, we trust a clear day of success is dawning upon it.

We notice by the papers that the Company propose to ask of the Legislature a renewal of the charter to Moosehead Lake, and for the right of further extension to the western boundary of the State. Hon. Isaiah Stetson of Bangor, a merchant of wealth, is its efficient President, and L. H. Eaton, Esq., its attentive Superintendent.

*Portland and Rochester Railroad.*

This road is now opened to Springvale, 36 miles by rail from Portland. The road from Saco river to Alfred continues in excellent condition, and the four miles built this season, under its skillful engineer, Charles O. Davis, Esq., save its many curves, that the configuration of the earth's surface rendered unavoidable, we suppose, is a first class road, thoroughly and well made. The

bridge over the Mousam river is very fine, its masonry is first class, with a beautiful finish, and its superstructure is an elegant Pratt truss. The old part of the road, from Portland to Saco river, including the bridge over the Saco, is safe for the passage of trains at reasonable speed, but as the business increases, the track will require new iron and the bridge perhaps a new pier and a change in the structure of its arches. The road is everywhere well ditched, and it is greatly to the credit of the Engineer and Superintendent that the important prerequisite of good drainage is so well attended to. A road, if once well made, will not long remain in good condition unless well drained. The sleepers are good and track well ballasted.

The road will be opened to Rochester early in July of the incoming year, when its friends anticipate a large increase of its local business and an early through connection by rail via Nashua and Concord with the South and the West.

The equipment of the road is in good order; 1 new engine has been added to it, 10 box cars and 20 platform cars.

Thomas Quimby, Esq., is Superintendent—a sound and practical man—and the Hon. John Lynch is its very able President.

#### *Belfast and Moosehead Lake Railroad.*

The Belfast and Moosehead Lake Railroad extends from Belfast to the Maine Central road at Burnham—33 miles. It is in the main well made. Its masonry, bridges, embankments, appropriate station houses and depot buildings and general organic structure will rank it among the first class roads of the State. Its rails are English iron of a good quality and well spiked. But the ties are many of them unsuited to the general character of the road—some are of inferior wood, some rotten, and many less than the standard face of six inches. Nor is the ditching completed. But the inferior or defective sleepers can easily be replaced by larger and better ones by the section men from time to time as the road is operated; and the ditches can be deepened and cleared in the same way as the trains commence running. But it is not often a road is in better condition when first opened than this was on November 1st, when its Directors considered it ready for its rolling stock.

It has been pushed forward to its present near completion with wonderful perseverance by its most energetic President. And

the cheerfulness with which the citizens of Belfast and the communities upon the route have coöperated with the Directors, and in a most favoring season for field work, to effect an early completion of the road, evinces their enterprise and their faith in the project; and we hope the road will carry to Belfast the business and growth its projectors anticipated, and to the towns upon its line the conveniences and benefits they predict, and to the lessees, if the contract for a lease heretofore entered into shall be carried out, a remunerative travel and traffic.

But we may be pardoned for referring—and appropriately here, we think—to the suggestion in an earlier report we had the honor of submitting to the Legislature, in favor of a State policy in the location of railroads, and of the propriety of investing the duty and power somewhere to see to it that they be located where public convenience and necessity require, or prospective development may justify, and not with a view of promoting the interests of rival roads or rival communities, too often to the injury of too hasty subscribers, or to the prejudice of investments before made in other roads, or enterprises that are just as much entitled to the protection and favor of the State.

The road was built under a contract for a lease, when completed, to the Maine Central Company for fifty years; and one of the articles of that contract was, that in case any difference should arise between the parties “in relation to building the road,” by the Belfast and Moosehead Lake Railroad Company, or “in relation to running the trains,” by the Maine Central, such difference should “be submitted to the Railroad Commissioners of the State for the time being, whose decision shall be final.” Such a difference has arisen and been submitted to us, and we have decided it, not to the satisfaction of either party, it may be, but rightly, we think. Our decision has not been acted upon by the Board of Directors or stockholders, that we are advised of; but under a friendly arrangement the gauge of the road has been narrowed, and rolling stock put upon it by the Maine Central Company; and upon the return of Judge Rice, the President of the Maine Central road, we trust an arrangement between the two Companies will be made, alike honorable to both Boards of Directors, and satisfactory to the stockholders and the public—an arrangement so liberal that it shall not discourage incipient tributary roads, and so in accordance with the spirit of the contract that stockholders shall have no reason for complaint.

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*Atlantic and St. Lawrence Railroad.*

This road extends to Island Pond—149 miles. The portion of it within this State is 82 miles. It was, on the 5th of August, 1855, leased to the Grand Trunk road of Canada for 999 years, and is more generally spoken of as the "Grand Trunk," as if it were technically a part, as it is practically, of the Canadian road.

The improvement in this road that we noticed last year, we are gratified to observe, has been continued the present season in the way of renewals and repairs. 1,800 tons of rails, equal to  $17\frac{1}{2}$  miles of track, or 22 per cent. of the whole distance in the State of Maine, and 45,000 new ties have been put in track, and 16,637 rods of new board fence, with cedar posts, rebuilt. The iron put down this year has been laid in oak joint-blocks, which the engineers of the Grand Trunk recommend where soft wood ties are used. The road almost everywhere needs more gravel. The clay cuttings, however, between Portland and Falmouth, and some other places similarly requiring it, have been ballasted. The washouts of last year, excepting those at Falmouth and Cumberland, which have been temporarily bridged to make the passage over them safe for the time being, have been repaired in a substantial manner. In the one about two and a half miles north of South Paris, a forty feet How-truss bridge, with heavy ashlar masonry abutments, has been built, to take the place of the small culvert that was there before. At Woorthley brook, north of Empire road, a How-truss bridge has been put up. At Falmouth, we are informed by Mr. Hannaford, the eminent engineer of the road, it is proposed to build a new cut stone arched culvert another season, the material for which has been partially got out; and the culvert on the Cumberland grade is to be rebuilt also, larger and more substantially.

The bridges upon this road have always been of the highest character, and they remain strong, substantial and safe. In the iron girder bridges the engineer, at our suggestion, has renewed the centre supports where they required it.

At Portland, the Company have made during the year quite an expenditure in the renewal of the Boston wharf and shed, and in the erection of new car-shops, and structures for the new water supply from the city of Portland.

The rolling stock assigned to the Portland and Island Pond division of the Grand Trunk, consists of 20 passenger cars, 10 baggage cars, 2 smoking cars, 49 engines and 7 snow plows. Freight

cars upon the Grand Trunk are not assigned to special sections ; but this section has participated in the increased facilities afforded by the 600 freight cars added to the general rolling stock of the road, and the equipment in the main is in good order.

The trains upon this road are heavier than upon any other road in the State—heavy as lumber, provisions, ship-timber and merchandise can make them, and frequent as accumulating stocks, of owners impatient to realize, can crowd them forward. The freight is great, the travel large, and the wear of the road in proportion, and the strain upon the equipment constant. The number of tons of merchandise carried over the Atlantic and St. Lawrence section of the road for the eleven months ending November 30, last, was 473,705, and the number of passengers conveyed 205,273, the gross revenue from the former description of traffic being \$681,-373.46, and from the latter \$228,961.65 ; and to show its increase in business, the gross receipts for 1862 were \$735,403, and in 1869 they came up to the larger sum of \$1,055,855. This great business imposes upon the superintendence of the road a responsibility that cannot be too vigilant, and necessitates great outlays and continual renewals

The Grand Trunk has added business and commercial importance to Portland, its ocean terminus, and is the cheapest and most direct route from Maine to the West, for travel or freight. Maine will, therefore, watch with interest the improvements upon it, and will hope its enlightened direction will make it as superior in condition as it is in route, to command the ever increasing business between her citizens and the West.

C. J. Brydges, Esq., of Montreal, a gentleman of large railroad experience and eminent ability, continues the Managing Director in this country ; and we are happy to learn that the improved financial condition of the Company he represents will enable him to make further liberal outlays upon the track and equipment.

#### *European and North American Railway.*

This road is completed, as a first class road, to Mattawamkeag, 58 miles ; about 56 miles remain, all under contract and much of it graded, to extend it to the boundary line. The track and bridges have been well kept up and are in excellent order. The rolling stock consists of 6 engines, 9 passenger cars, 4 baggage cars, 20 box cars, 75 platform cars, 1 snow plow, and is in good condition.

This road passes by a great many saw mills, tanneries and other

establishments, and it has wisely but liberally adopted the policy of extending side tracks to them, to facilitate the transportation of lumber, bark, hides, &c. A side track of  $2\frac{3}{4}$  miles from Orono to the mills at Upper Stillwater has been laid, giving advantages of shipment by rail to the large establishments there never before enjoyed, enhancing their value and remunerative we suppose to the road. The company have made large purchases of real estate at Bangor the past season, and have built a new engine house, five stalls, turning table, car house 34 by 220 feet, freight station and offices, and have extended their track to deep water at High Head below the Maine Central Depot.

The movements of the company indicate means and success, and their railway is occasioning development and investments along and adjacent to its line.

The 56 miles from Mattawamkeag to New Brunswick line will be completed, a portion of it early, and all of it during the coming summer. It will there connect with the European and North American Railway of the Provinces—western extension—that was opened a year ago to the city of Saint John, 88 miles. From St. John there is a continuous road already in operation to Shediac upon the shore of the Gulf of St. Lawrence, and to Halifax, 262 miles, excepting the link between Amherst and Truro of about 60 miles. And this link as a part of the Inter-Colonial road is to be completed by the terms of the contract on Nov. 1, 1871. A chain of railway will then extend from San Francisco in the west to Halifax in the east, binding the States and the maritime Provinces together in the relations of commercial amity if not of political union.

This road completed will make a line of railway of 306 miles across our State, and though we cannot quite boast in the words of the old refrain, that it runs from "Kittery to Quoddy," we can if we please actually pass over it in a few months from Kittery to Vanceborough, till we meet the flag of the Dominion, and may well feel some State exultation that this last link in the trans-continental railway from San Francisco to Halifax is nearing its grand completion. Our State with persistent favor has encouraged the construction of this road. She looked to the settlement of lands within her domain and the having a revenue from their improvement; to the using of her unrivalled water power and attracting foreign capital; to the encouragement of production; to the creating employment for her citizens at home and inviting emigration

from abroad, and gave it a subsidy with the generosity of State munificence; and she does not yet fear disappointment in her expectations of growth and progress in consequence. She has given it a princely domain, and expects a royalty in return of public benefits and general improvement.

The road is under very able management. G. K. Jewett, Esq., of Bangor, a gentleman of wealth and financial ability, is President; Hon. Noah Woods is Treasurer, and President of the construction company, and J. M. Lunt, Esq., of large railroad experience, is Superintendent.

*Maine Central Railroad, and Portland and Kennebec, and Somerset and Kennebec Railroad—two Roads.*

The Maine Central Railroad Company, since our last report, have leased the Portland and Kennebec road, thereby consolidating under one management the two roads, and have elected a new Board of Directors. Judge Rice, late President of the Portland and Kennebec road, is President of the associated Companies. Messrs. Noyes and Lincoln remain, as before, Superintendents of their respective districts.

The Maine Central is now being extended from Danville Junction to Cumberland—18 miles, to connect there with the main line. After the completion of this extension, to be laid with the 4 ft., 8½ in. gauge, the gauge from Danville Junction to Waterville is to be narrowed to conform. This trunk line of consolidated roads will then have a uniform gauge from Bangor to Portland, both by the way of Augusta and Lewiston, and will connect at Portland with the same gauge westward. Passengers may then take seats at Bangor without change of cars, by either route, until arrival at Portland; and cars with freight, leaving Bangor or intermediate stations, will pass through to their destination at Boston or elsewhere, without occasion to break bulk on the way. There will be no transshipment at Portland necessary. The embargo of the gauges will be lifted. There will be opened an unobstructed and quick communication between the place of shipment and of destination. The merchant will have an advantage in transportation not heretofore enjoyed—a new facility in reaching market that will induce larger shipments and increased production. For the cheaper, easier and quicker the means of conveyance to market, the more will that means be used, and the greater will be the production. When, therefore, we consider how large a



proportion of the productions of this State, both of manufactured articles and of the forest and the farm, seek Boston, or the manufacturing districts of Massachusetts, for a market, we realize how great are the hindrances, both to shipment and production, occasioned by the delay and expense and liability to injury in the necessity of transshipment on the way.

It was therefore a necessity with the Maine Central to change its gauge, if it would improve its western connection and retain its business as a carrier of products and merchandise, and it was wise in it to harmonize its interests with the Portland and Kennebec, already of the right gauge, for it thereby reaches Portland through it by 18 miles of new road instead of 30, and saves half a million of dollars or more in the not being obliged to purchase depot grounds and buildings at Portland. For the Portland and Kennebec road already had entrance and a depot there.

Since the decision of the court in August, in relation to the Portland and Kennebec road, enabling the conditional arrangement between the companies to be finally consummated, an additional train has been put on between Augusta and Bangor, arriving at Bangor at nine o'clock A. M., and leaving at three o'clock P. M., affording great convenience to the citizens of Augusta and Bangor, and of Dexter and the towns on the line of the road.

The freight train now leaves Bangor daily at half-past four o'clock A. M., and is in Portland at four o'clock P. M., and in Boston at five o'clock A. M. next day. It leaves Boston at five o'clock P. M., is in Portland at three o'clock A. M., and in Bangor at half past four o'clock P. M. It used to leave Bangor at one o'clock P. M., arrive at Waterville same night, leave the next morning for Portland, arriving the same day, when the cargo was transhipped to the Portland, Saco and Portsmouth cars, not always at hand, or enough of them, and with whatever of injury in handling, expense and delay there might be, started for Boston. The present arrangement of freight trains, that the associated companies are enabled to adopt, is a change in the movement of freight that shippers and the people will more and more appreciate. The wise and liberal policy of a uniform rate of fares for winter and summer carriage has been adopted; and as soon as it can be arranged, a night passenger train is to be put on between Bangor and Boston, to leave, we understand, probably at eight o'clock P. M., to arrive at six o'clock A. M.

The Maine Central, with its leased and tributary roads, passes through the heart and capital of the State, and its largest cities and towns; and from its central position it will be natural that localities at a distance from it will seek railway connection with it, and while such lateral roads will become feeders to it, they will at the same time be branches of it, and may need sap from the main trunk as they first shoot out, to give them life and support. So, too, agricultural and manufacturing establishments, within reasonable distance from its lines, may ask favors in the carriage of their materials and products, and though able in the end to repay any services rendered, they may require in their infancy to be lifted into standing, and have indulgences granted them until in successful operation. Such aid as it can render these and kindred enterprises it will find its interest, we have no doubt, in giving, and the State may well expect, we think, from it that fair and enlightened policy that best consults its own good in most promoting the good of others. It will find its interest, too, we trust and are assured, in reasonable and uniform rates of fare and of freight, that there shall be no color of exaction, and in dealing fairly by old investments, as well as in inciting to new ones, for the sake of the return; so that the increased facilities that enlarged capacity will place at its disposal shall inure to the profit of the road, and to the benefit of the citizen as well.

The Maine Central proper has improved its track during the season. It has laid 650 tons of new rails and relaid about 500 tons of old, built a new truss bridge over Sourdapscook stream, rebuilt the pile bridge at Belgrade, put in 40,000 new sleepers, and graveled about 16 miles of track.

The Portland and Kennebec proper, with the Somerset and Kennebec leased by it, has also improved its track. It has laid 1,100 tons of new iron, 50,000 new sleepers, rebuilt 12 stone culverts, a truss bridge at Falmouth, renewed and strengthened its other bridges, ballasted and raised much of its track, so that, in the opinion of the Superintendent, the road was never before in so good condition. The fences may have been neglected a little, and some other minor matters, by reason of the great amount of bridge building rendered necessary by losses by fire and flood. A marked and noticeable improvement is the new iron bridge at Augusta. The company are entitled to credit for this noble structure that fire cannot burn nor freshet reach, and Mr. Patten of the Direction, as we understand, to commendation for his judg-

ment in making the contract for it and for his business capacity in overseeing its construction and erection. As the bridge is over one of our largest rivers and upon the eastern approach to the capital of our State, it may not be uninteresting to state in detail its character and strength.

It was built by Messrs. Kellogg, Clark & Co. of Philadelphia, and consists of five long and two short spans, the whole length of which is about 960 feet. The five long spans are, 156, 172, 173, 174, 174 feet in length respectively, and the short or street spans, 67 and 44 feet long. The approach to the bridge is a curve of three hundred thirty-six feet radius. The plan of construction is what is known as the "Pratt" Truss, but with the tension or truss rods crossing two panels. The height of the truss is 27 feet, and the bridge is 14 feet wide in the clear. The top chords of the truss, as well as the posts and upper lateral distance struts, are made of "Phoenix Iron Columns," whilst the lower chords are made of round bars, with the ends expanded (by hydraulic pressure,) so as to admit of drilling the pin connections. The floor beams are of wrought iron, 15 inches deep, and two to each panel post, and suspended to it by wrought iron links, through which the chord connection-pins pass. Each span is free to move upon an expansion roller on the top of the pier. The extreme movement due to expansion and contraction is about two inches.

The masonry piers of the old bridge being too low to clear the ice in times of high water, it was thought best to remove the coping course and build them ten feet higher; and as it was decided to make the structure a "through" bridge, it also became necessary to carry up the piers still higher. Not wishing to put more weight upon the foundations than they had already borne, after careful consideration the company decided to adopt iron columns placed upon the tops of the masonry. These are also the "Phoenix Columns," in sets of four, with heavy cast iron base and top plates, very strongly braced between themselves and to the masonry. As the bridge is on a grade of four feet in its length, the columns on the west are 17 and on the eastern pier 21 feet high. The abutments on each bank were built new, and all the masonry laid in cement. The approach on the west side was changed, and the river spans are now nearly on a line.

The wrought iron in the bridge is guaranteed to bear a strain of 60,000 pounds to the square inch before breaking. The bridge is

calculated to bear a moving load of 2,500 pounds per lineal foot; and the iron in no part is strained over 10,000 pounds per square inch, while every bar in the truss has been tested to double the strain that can come upon it. The longest span was tested by placing four of the heaviest engines upon it at once, covering the whole length, and the deflection was accurately noted, and found to be *one inch*. The bridge was then only sustaining 2,080 pounds per lineal foot, showing that it will be impossible to put upon the truss the load it is designed to bear. All of the abutting joints of the different parts of the truss are planed or turned, and after erection the bridge was painted with two coats of light paint. The cost of the entire work, bridge, piers, retaining wall, &c., is not far from \$110,000.

The two roads will find more time another year for repairs and improvements where their joint action shall show them to be necessary, and they have under consideration, as we are advised, large expenditures upon their wharves at Bangor, and upon their depot grounds at Portland and elsewhere, to enlarge their capacity for business.

The rolling stock of the roads consists of of 38 locomotives, 600 merchandise cars, 40 passenger cars, and 12 baggage cars. This statement may not be exactly correct, nor embrace quite all the details of their equipment. Mr. Lincoln thinks his section requires 4 more locomotives, 6 passenger cars, and 100 freight cars, to do the business pressing upon it with dispatch and ease.

The associated Company is under very able and practical management. It embraces the best railroad experience in the State.

#### *Dexter and Newport Railroad.*

This road, opened in the fall of 1867, extends from its junction with the Maine Central at Newport to Dexter—14 miles. It is operated by the Maine Central—and its gauge has been narrowed to conform—under a lease of thirty years. The road has been well cared for in its track and equipment, and has proved serviceable, we believe, to its projectors and the communities they represented. It has given new life to the before enterprising village of Dexter, and has enhanced real estate and made more convenient the operating the several mills there, that give thrift and prosperity to the place.

Charles Shaw, Esq., a successful merchant, is President, and Mr. Isaiah Owen is the very acceptable conductor and local agent.

In a review of the several railways which we have very carefully examined, we are gratified to discover in the evidences of progress upon them, a policy pervading all the companies of the State, we think, to bring their respective roads up year by year to a higher level of perfection and safety.

*Houlton Branch of St. Andrews Railroad.*

A railway from Debec, on the line of the St. Andrews road in New Brunswick to Houlton—8 miles, 3 miles of it in Maine—has been completed and opened the present season. This is the first railroad into Aroostook, and enables the shipment of freight—in the wrong direction. Houlton is one of the most enterprising, and for its size, one of the wealthiest towns in the State, and its good people are as loyal to the government, whose flag has been used to float from the high ground in its rear, as any in the State; but it is remembered that it is upon Aroostook the State has wisely lavished appropriations for roads, bridges and schools, and given away lands for settlement, and it might have seemed at first blush that a road westward across it to connect with the European and North American Railway, in the direction of the not very ancient ancestral hearthstones of its people, and of the commercial and political capitals of their State, would have been more in keeping with reciprocal allegiance.

The *Calais and Baring and Lewy's Island Railroad*, it is not our duty to examine. Mr. Porter of St. Stephens, a merchant of high character, is President, and Mr. Sawyer of Calais, continues its popular Superintendent.

The *Somerset Road*, that extends from its junction with the Maine Central at West Waterville to Solon and Carratunk Falls—33 miles—has not yet been completed; but much work has been done upon it, some \$335,000 having been expended in labor and materials, and a small force remains where deemed advisable. About 22 miles of it have been graded, we understand, and the abutments to the bridge over the Kennebec at Norridgewock are completed, and one pier nearly so, and other work done. A vigorous prosecution of work is to go on upon the opening of another season, it is said, until completion.

This road passes through a portion of the rich farming lands of Kennebec, that rejoice in an industrious population, that must

yield it a large local business. Manufacturing establishments will spring up upon its route in time, to enrich the neighborhood and give traffic to the road. This road, we believe, had its parentage in the household of the Maine Central before its nuptials with the Portland and Kennebec; but whether any parental estrangement has sprung up since, by reason of the new allegiance, we have not cared to inquire. It is under contract for a lease, when done, to the Maine Central. It has a Board of Directors of earnest business men, and F. W. Hill, Esq., of Exeter, a gentleman of wealth, is President.

The *Knox and Lincoln Railroad*, extending from Bath to Rockland, has not yet been opened. The Directors had hoped that it would be ready for the rolling stock during the fall; but more work and a greater outlay were found necessary than was at first expected, and hence its completion has been unavoidably delayed. By the report of E. R. Emerson, Esq., the Engineer, at present in charge of construction, made to the Directors, and kindly sent us, it appears that the earth and rock excavations, as well as the culvert masonry and bridging, have all been greatly in excess of the estimates of Mr. Reed, upon whose plans the work was at first undertaken.

But the road is now near completion and we infer will be of the highest character. The iron for the whole line has been purchased and is being put in track. Two engines have been received and twenty freight cars, two saloon and two baggage cars are on hand, and it is expected that trains may be put on during the winter to Wiscasset—10 miles—and that the early summer will witness the road opened to Rockland, and in successful operation from river to river.

The road when done will have cost more per mile than any road in Maine; but it will have been well done. And it passes through populous communities whose commercial character ensure a very great business to it. The Board of Directors embraces gentlemen of State reputation and eminent position, and the President, Oliver Moses, Esq., of Bath, is distinguished among business men for practical judgment and financial ability.

*Routes* for new roads have been projected—some have been examined—more upon paper perhaps than in the field. Indeed some have been well nigh built upon the map, but have afterwards gone

into hospital, to revive again, it may be, upon a more favoring season. There are to be many applications for new charters at the coming session, in relation to which we have confidence the Legislature will use a sound judgment and a wise discrimination.

#### *Accidents.*

Sarah Ann Cunningham, a child eighteen months old, a daughter of Mr. Thomas Cunningham of Milford, was killed on the 25th of November, by the 5:15 down freight train, at the railroad crossing in Milford, near the bridge. The parents live within a few rods of the track; but the child had never before, as its mother says, strayed on to the road that she was aware of. It was a very dark evening, and the place of the disaster was upon a down grade, and upon a curve. The engine had no head-light, and the employés upon the train were not aware of the casualty until the next day. The remains were found by a little sister, sent to search for her after she was missed in the evening, on the track where the railway crosses the county road, the head severed from the body, and lying some feet from it.

There is much danger to lives upon railroad crossings in villages, and parents and citizens cannot be too careful, or conductors and engineers too vigilant, at these exposed points, to avoid disasters. Neither should ever be unmindful of the liability of their occurrence.

On the same day, November 25th, a boy eight years of age was killed upon the Portland and Rochester Railroad. The boy's name was Walter, a son of Mr. John Mace, baggage-master upon the Portland and Kennebec road. The inward bound train had discharged its passengers in the Portland depot, and was backing out to be made up for morning. As the passenger car was moving out of the depot, the lad got upon it, but was put off by the brakeman. When the baggage car came along he attempted to get upon that, between it and the tender, but fell on the track, and the tender and engine ran over both legs, cutting them off between the knee and the hip, and severing an arm. The boy died about nine o'clock the same evening. The coroner's jury acquitted the employés upon the train of any fault in the matter.

Charles Libby of Windham, sixteen years of age, was killed at the Lambert road crossing in Falmouth, September 6th. He was run over by the 5:15 train from Portland, of the Portland and

Kennebec road. The coroner's jury did not find any cause for censure of any one employed on the train.

The train that left Brunswick at 2:20 P. M., December 7th, for Bath, was thrown from the track at Cook's corner, two miles from Brunswick station, and the baggage car and one passenger car were thrown upon their sides. Engineer Hammond had an arm broken. The accident was caused by a misplaced switch.

November 15th the 4 o'clock train of the Portland and Kennebec Railroad came in collision with an ox upon the track at Rigg's brook about two miles from Augusta. The four rear cars were thrown off the track, and two of them were badly broken up. The engine dragged the remaining three cars some twenty rods, one of them on its side. It was a bad smash up, doing much damage to the train and seriously bruising six or eight passengers. But the great wonder of the casualty is that limbs were not broken and lives lost in the catastrophe. The same train ran into two cows between Richmond and Augusta, one of them just below South Gardiner. There must have been fault upon the part of the railroad company or of the owners of the cattle. If the road was properly fenced by the company, it was the duty of the owners to keep the bars up. The cattle were not rightfully within the location of the road.

A very severe disaster occurred October 27th, on the Bath Branch of the Portland and Kennebec road. The train consisted of an empty box car, three platform cars, followed by a baggage car and two passenger cars. The accident was caused by the breaking of a wheel on the rear platform car. Mr. Crawford, the baggage-master, was standing on the platform at the moment. A fragment of the wheel struck him with great force, breaking his left arm, cutting his clothes across the abdomen, crushing his foot, and making several contusions. He lived but a little while. The coroner's jury found "that the deceased, George W. Crawford, came to his death on Thursday, October 27th, at 2:30 o'clock P. M., on the Bath branch of the Portland and Kennebec Railroad, by the breaking of a wheel of a platform car belonging to the Androscoggin Railroad, and throwing the cars from the track, at Thompson's brook, in Brunswick; and the jury severely censure the employés of said Androscoggin Railroad Company for suffering the wheel to be run on the road."

January 3d, 1870, the morning train from South Paris, on the Grand Trunk, ran into a wash-out at Mink brook, so called, and



the engine, tender, milk car and baggage car went down into it, and over the embankment some fifty feet. The engineer, Mr. Nichols, got a deep and ugly wound in the knee, and several severe bruises. The fireman was wounded slightly on the arm.

November 5th, on the Grand Trunk, the tender of a gravel train ran off the track, leaving the locomotive on its side across the track. The fireman, Oliver Jordan, was fatally injured, and died soon afterwards. The engineer, John Sinclair, was injured in the hand, and Henry Hamilton in the ankle. The coroner's jury found that Mr. Jordan came to his death by an unavoidable railroad accident, and that no blame was attached to any of the employés.

March 14th, Oliver Tracy, the proprietor of woollen mills at West Buxton, and a gentleman of respectability, with Mr. John Sawyer of the same town, and Mr. H. Partridge of Saco, attempted to cross the track of the Portland, Saco and Portsmouth road, at the crossing east of the station at Biddeford, in a sleigh drawn by two horses. They saw the train approaching about fifty feet off. The horses succeeded in getting over the track, but the sleigh was hit, and Mr. Tracy was instantly killed, and Mr. Sawyer considerably injured. No blame can be attached to the employés upon the train.

Thus it appears a number of accidents during the year occasioning death or bodily injuries have taken place. But no life of a passenger has been lost other than of employés, and in the cases where injuries to passengers have been suffered, caused by the accident, no blame we think can be attached to the persons in immediate charge of the train. There have been besides several instances of trains getting off of the track, with a narrow escape of life, occasioning damage to the equipment of the road. This latter class of accidents implies ordinarily, if not always, neglect by employés or defective track or equipment, and whether the one or the other it is within the power of the management to remedy it, and it is not enough that the corporation is liable for all the damages to others consequent upon such casualty. For lives are put in jeopardy, which, if lost, no compensation can restore or damage atone for. The corporation is not liable, certainly, unless there be fault, no matter how fatal the disaster; but it should have no accidents that the best human foresight can ward off—never a collision nor other accident, except from a new break in train or

rail, or the intervention of extraneous cause, that no vigilance could have foreseen or prevented.

If a train is nearing a crossing, and a child is carelessly allowed to be upon the track, the driver may not be able to stop his engine in time to save it. Or if a person of age, seeing a train close approaching, heedlessly attempts to cross ahead of it, his death, though not the deserved, may be the not unnatural penalty of his insane rashness. But were a conductor to leave a station when not entitled to the right of way, whether too early or too late, ignorant whether the track be clear or not to the next station or turn-out, and feel his way along, imperilling the lives of hundreds of human beings, his ignorance becomes a crime, that an after disaster may reveal, but does not create, or its escape excuse. So, too, if there is a broken rail in the track, or an arch in a bridge has given way, and the section men, who should be as un-failing in their vigilance as the sun is in rising, have given notice of the defect, and a train is allowed afterwards to pass over it, before repairs, whoever ordered it, or he whose duty it was to stop it and did not, runs a risk, which risk is a crime, that disaster afterwards may be the best proof of, but for which escape can be no justification; for it is not his own life only that he places at the hazard that the train may "this time go over safe," but more precious lives than his own, and that have no knowledge or control of the impending danger.

And it is this original neglect, this incipient crime, that railroad management should attempt to remedy, as well as overt fault, and if preventative means can be devised, that legislation should attempt to enforce. Defects that are visible and negligence that is known will be remedied or punished, but that intangible and invisible cause of disaster, that is sometimes cloaked under the garb of "inevitable railroad accident," often eludes detection, though it none the less exists, and wants to be exorcised by legislative anathema. We must reach it if we can.

Every person placed in position in the operating a railway should be selected singly for fitness and competency, and not at all from favor to him or his friends, for the public safety has no compromises to make with incapacity. The President and Directors, as the fountain of authority in the management, the people have a right to look to for the highest intelligence and to hold responsible for judgment in appointments and for a vigilance in oversight commensurate with the magnitude of the interests in-

trusted to their care. The Superintendent, with good health and a clear head, should devote himself solely to the duties of his most responsible position, a position more responsible in the number of lives and the amount of property in charge from day to day and throughout all the days of the year than any other in time of peace in the whole range of the machinery of government and of business. Neglecting all other things besides, he should have an eye single to the movement and safety of his trains and the good condition of his road. His subordinates, if selected for their fitness, will be competent; and they should be intelligent to understand and obedient to perform their duties with the precision and exactitude of military discipline.

These prerequisites existing, thus briefly sketched, with the aid that skill and science can lend them, the country might reasonably expect, we think, less frequency in these sad disasters, and have encouragement for the hope that they may become in time the rare catastrophies of an age instead of the ordinary "accidents" of the year.

But without further suggestion, we respectfully commend this whole subject to the careful consideration of the committee of the Legislature upon railroads. Further rights of interference in case of defects may perhaps well enough be conferred upon the railroad commissioners, and severer penalties against inattention and neglect of employés be enacted, and stricter oversight and more stringent accountability be imposed upon directors.

*Miles of Railway in Maine.*

Portland, Saco and Portsmouth.....	52 miles.
Great Falls and Conway.....	3½ "
Boston and Maine.....	2½ "
Portland and Rochester.....	36 "
Portland and Kennebec.....	100 "
Bath Branch of Portland and Kennebec.....	9 "
Androscoggin.....	64¾ "
Lewiston Branch of Androscoggin.....	5 "
Calais, Baring and Lewy's Island.....	22 "
Belfast and Moosehead Lake.....	33 "
Grand Trunk.....	82 "
Maine Central.....	110 "
Newport and Dexter.....	14 "
Portland and Oxford Central.....	27½ "

Bangor and Piscataquis .....	40	miles.
European and North American.....	57½	“
Portland and Ogdensburg.....	33	“
Houlton Branch of St. Andrews.....	3	“
Total.....	694¾	“

*Miles of Railway opened in 1870.*

Portland and Ogdensburg.....	33	miles.
Belfast and Moosehead Lake.....	33	“
Portland and Rochester.....	4	“
Portland and Oxford Central.....	5	“
Houlton Branch.....	3	“
Total.....	78	“

And there are under construction 186 miles.

Railroad companies are now required by law to make legal and sufficient fences on each side of their location before the construction of their road, under a personal liability of the directors, and any subsequent neglect of the corporation to maintain and keep them in repair is liable to be visited with indictment and fine. If these provisions are sound and wise, would it not be just and right to require the adjacent owners to keep the bars up and gates shut upon the fences that have been erected for their protection? If the gates are left open or bars down so that cattle can enter at will, the fence may become a trap to keep them in; for once inside they do not know how to extricate themselves, and seek the track to lie down to rest, or if frightened run upon it to escape, and thus collisions take place with more or less disaster. It has even been suggested that fences, though costing a thousand dollars per mile or so, are of but little use, that they do not serve in the average to protect cattle, and bring no immunity from accidents. But we refer to fences particularly with a view of calling attention to the inquiry whether owners of lands contiguous to railroad tracks should not be required to keep their bars up and gates closed, and in case of neglect to do so, be held responsible for consequences. It is not the duty of the railroad company to keep the bars up or gates shut, and they cannot do it; and why should they be obliged to build a fence the bars and gates in which may be carelessly left open with impunity?

The statute for assessment of damages for real estate taken by

the location of railroads is a little loaded in its provisions, and in its practical application sometimes, it is alleged, works injustice and inequality in appraisals. The owner certainly should have full and adequate compensation for the easement over his land, that is taken against his will; but if the Legislature has acted wisely in granting a chartered right to cross his premises, the award of impartial men, summarily made upon proper notice, and promptly paid, should be satisfactory and to both parties. A better system, however, than the present, perhaps, would be for the railroad corporation, upon the location of their road, to apply to the court for the appointment of a committee to assess the entire damages at once, upon proper hearing, upon the whole location.

S. H. BLAKE,  
A. W. WILDES,  
S. T. CORSER.

BANGOR, December 31, 1870.