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BY THE HOUSE OF DELEGATES,  
January 14, 1846.

Read and ordered to be printed.

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COMMUNICATION

FROM THE

PRESIDENT AND DIRECTORS

OF THE

CHESAPEAKE AND OHIO CANAL COMPANY,

TO THE

GOVERNOR OF MARYLAND.

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MADE DECEMBER 2ND, 1845.

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OFFICE OF THE CHESAPEAKE AND OHIO CANAL COMPANY,  
*Frederick, Dec. 2nd, 1845.*

*To His Excellency,*

*Thomas G. Pratt, Governor of Maryland:*

SIR:—In conformity with the 8th section of the act of 1844, chapter 281, we have the honor herewith to present to you a printed copy of the 17th Annual Report of the President and Directors of the Chesapeake and Ohio Canal Company, made to the stockholders on the 2nd day of June last. Although, under the provision referred to, it would seem that our duty, in this behalf, would be fulfilled by merely placing in your hands the report above mentioned, yet in the present interesting condition of the company, and in view of the highly important measures, which have been adopted since the publication of that report, we have deemed it proper to make this additional communication, and to present to you a full and particular account of our proceedings down to the present period.

The wise and enlightened policy pursued by the last Legislature of Maryland in passing the act, entitled “an act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes” has once more infused life and vigor into the corporate existence of this company, and rendered it no longer a suppliant at the doors of the legislature. Instead of being

petitioners for the bounty and favours of the State, as has been the case for the last seven years, the board have now the more pleasing duty of detailing to you, and through you to the General Assembly of the State, the steps they have taken to carry into effect the provisions made for the completion of the great work committed to their charge.

The first requirement of the law above alluded to was its acceptance by the stockholders of this company. With a view to enable the stockholders to understand without labor the tenour and effect of the law, we prepared and presented to them in general meeting assembled on the 29th of April last a report, giving an analysis of its provisions, and the grounds upon which we regarded it as available and commended it to their acceptance, and at the same time we laid before them an authenticated copy of the law. The meeting was unusually large in consequence of the deep, and pervading interest which was taken in the subject, upon which they were called to deliberate. The United States was represented—the State of Maryland—the State of Virginia—the Corporation of Washington—the Corporation of Georgetown—the Corporation of Alexandria—the Corporation of Shepperdstown, and numerous individual stockholders attended in person. After due deliberation this large and highly respectable body *unanimously* accepted the law.

At the same meeting of the stockholders, and on the same day, we laid before them copies of the act of Virginia, passed 20th of January, 1844, amending the charter of this company in several important matters, and extending the time prescribed by the original charter for the completion of the Canal to Cumberland, which had expired, to the first day of July eighteen hundred and fifty-five, and of the acts of Maryland, and of the Congress of the United States, assenting to and confirming the same, which, in like manner, received the unanimous acceptance of the meeting. For more particular information in relation to these subjects we respectfully refer you to a copy of the report of the 29th of April herewith presented, without its appendix, as a part of this communication,—see Appendix A. For the proceedings of the stockholders accepting the laws,—see Appendix B.

The attention of this company was directed to the necessity of obtaining the amendment to the charter, above referred to, very soon after the Board received its present organization, and application, for the purpose was thereupon, immediately made to the Legislature of Virginia, then about to commence its session. The amendment—as asked for—was promptly granted by Virginia—the assent of the Maryland Legislature, of December session, 1844, was immediately, and unanimously given, and it subsequently, during the last session of Congress, received the confirmation of that honorable body. By its acceptance on the part of the stockholders of this company in general meeting assembled, as we have just mentioned, it has duly become a part of the charter of the company.

Without this amendment to the charter, even the Maryland Legislature would have been incapable of clothing the company with adequate powers to complete the canal on a pledge of its revenues. For independent of other considerations, it could scarcely have been expected that capitalists would have invested money for the completion of a work on the security of its revenues, after the time, within which such completion was required by the terms of the charter, had expired. All difficulties have however now been removed and the law passed by the last legislature of Maryland came in good time, and promptly, after the period when the company were invested with full and express power to carry its provisions into effect. The act of Congress finally confirming the act of Virginia amendatory of the charter was passed and approved by the President of the United States, on the 7th of February, 1845, and on the 10th of March, 1845, the Legislature of Maryland passed the act waiving the liens of the State, so as to enable the company to pledge its revenues for the completion of the Canal to Cumberland. Immediately after the acceptance of this last mentioned act by the stockholders in general meeting, as we have before stated, by an instrument of writing in due form bearing date the 30th of April, 1845, the fact of such acceptance was communicated to the Treasurer of the Western Shore of Maryland, in conformity with the ninth section of the act, from which period "the said act and every part and provision thereof took effect and became in full force."

For a copy of the instrument of acceptance—see Appendix C. and for a copy of the letter of the Treasurer acknowledging the receipt thereof—see Appendix D.

The first condition required to be performed before the company could avail itself of the operative provisions of the law was the procurement of guaranties for an aggregate transportation on the entire length between Cumberland and the District of Columbia on said canal, of not less than one hundred and ninety-five thousand tons of tonnage per year, on an average of years for five years, dating from the end of six months after the said canal shall have been completed to Cumberland, and the navigation opened to that point.

At the time the act was passed we regarded this provision as exceedingly exacting, and many indeed deemed it fatal to the availability of the law from a belief that however small the risk that would be incurred thereby, the obligations would not be given. This impression having gotten abroad produced an unfavourable effect on the minds of many who, at first, had hailed the passage of the act with enthusiasm, and caused a listlessness in some quarters from which assistance was expected, to join in the execution of the guaranty. The incorporated companies of Allegany county, whose aid was most confidently relied on, from a desire to keep their means untrammelled with a view to more efficient and energetic operations in their business, stood aloof for a long time, though three of them including by far the most im-



portant coal company in the Cumberland region finally came into the measure. In reply to our repeated appeals, the answer of some of them was, "it is true the completion of the canal to Cumberland is all important to the value of our mines in that region, but it is also no less essential to the relief of the people of Maryland. A short delay is of not much consequence to us, and if the guaranty be not given now the next Legislature will repeal the clause requiring it, and the canal can then be completed without imposing the responsibility." This species of diplomatising had its effect upon others, and for a brief period after the acceptance of the law a feeling of despondency crept over the public mind. The procrastination of the companies in question, which were so immediately, and so largely interested in the completion of the canal was well calculated to dampen the ardour of individual citizens, who, generally speaking, were only concerned in the enterprize as a measure of State relief, and public benefit. But it never for a moment chilled our resolution, or caused an abatement in our exertions. With a fixed determination to carry the law into full effect, and make it available as it was passed, with all its conditions and restrictions, we earnestly applied our efforts to the accomplishment of the object, and by the aid and efficient co-operation of our friends in the western counties of Maryland and the District of Columbia, we have been entirely successful. Instruments of guaranty were prepared in such a form as to divide the responsibility—enlist the largest number of guarantors, and thus ensure the amplest amount of security. They were framed so that, in the event of the aggregate transportation on the canal for the five years mentioned in the law, falling short of the yearly average of one hundred and ninety-five thousand tons, the signers to the several instruments of guaranty were to be bound, by virtue thereof, for such *deficit*, in the proportion, which the specific amount they might assure to the company bore to the said one hundred and ninety-five thousand tons, and not further, or otherwise. This form at the suggestion of your Excellency was submitted to the examination of a distinguished lawyer of Maryland and was pronounced by him to be correct, and in conformity with the provisions of the law.

Twenty-eight instruments of guaranty of this description, have been executed and delivered to the company. The localities of the different guarantors, together with the number of instruments and signers, and the amounts respectively guaranteed in each locality, and the value of the assessable property of the parties executing the instruments, in aggregates, are as follows:

Place of Residence and location of the guarantors.	Number of Instruments.	Number of Signers.	Amount of guaranty.	*Value of assessable property.
Washington city, -	2	72	25,000	\$1,342,200
Georgetown, - -	2	95	25,000	Est. 1,000,000
Alexandria, - -	2	132	30,000	Est. 1,500,000
Allegheny county, -	10	137	71,000	891,379
Washington county, -	5	122	22,000	1,075,917
Frederick county, -	3	39	7,000	785,379
Virginia, - - -	1	6	5,000	165,369
Stockholders of the Frostburg Coal Company,	1	10	10,000	119,346
Maryland Mining Company, - - -	1	Corpo.	20,000	not ascertained
Cumberland Coal & Iron Company, - - -	1	do	10,000	do
			Tons 225,000	\$6,879,590

\*NOTE.—The value of the assessable property of the signers to the Georgetown and Alexandria guaranties is set down by estimate. That of the signers to the other instruments is certified to by a proper officer.

It will thus be seen, that, over and above the securities of the Maryland Mining Company and the Cumberland Coal and Iron company, the value of whose property could not be well arrived at, the transportation of the whole amount of tonnage required by the provisions of the law, has been secured by guarantors, whose assessable property exceeds six millions and a half of dollars. Including the guaranties of the two companies alluded to, it will be observed that the *apparent* transportation guaranteed amounts to two hundred and twenty-five thousand tons per annum, on an average of years for the five years mentioned in the act. The *real* amount of guaranty is however the precise quantity specified in the law, in as much as by the form of guaranty, each instrument executed, binds the parties thereto jointly and severally, only for the *deficit* of tonnage, if there be any less than the amount stipulated for by the provisions of the act, and the specification of amounts in the instruments, is only intended to regulate the extent of the obligation of the signers to them respectively, they being bound for the *deficit* in the proportion, which the amount specified bears to the whole one hundred, and ninety-five thousand tons *per annum*, "and not further or otherwise." By this form of guaranty the excess over the amount required by the act,

multiplies, and increases the security, but does not add to the *quantity* mentioned in the law.

Pursuant to the provisions of the act, these instruments of guaranty were duly submitted to the Governor and State Agents and received their approval, as will be seen by reference to a copy of their certificate herewith exhibited in the Appendix marked D.

By the accomplishment of this arduous and embarrassing task, the President and Directors of the company were placed in a situation to avail themselves of the benefits of the law, and they at once took efficient measures to carry it into operation. Immediately after the adjournment of the Legislature, and whilst they were exerting themselves to comply with the preliminary conditions of the act, they were at the same time gathering all the information in their power in regard to the prospect of a negotiation of a *loan* for the completion of the canal, and after the guaranties were obtained and approved, they further extended their efforts, both by correspondence and personal interviews with capitalists and others, to accomplish that desirable object. Limited and restricted, however, as they were by the terms of the law, and forbidden to make any disposition of the bonds authorised to be issued except at their *par value*, in the general depreciation of American securities, and particularly those of Maryland, they found that under existing circumstances the negotiation of a loan by the company was entirely impracticable. Their only alternative therefore in order to get the unfinished work of the canal under way to completion, was to make a contract payable in the bonds, as authorised by the provisions of the law.

The stockholders of the company with a view to the commencement of the work with as little delay as possible, at their meeting on the 23rd of July last, passed a resolution that "no previous action of the stockholders shall be so construed as to prevent the President and Directors of the Chesapeake and Ohio Canal Company, from making arrangements for the completion of the canal either by public letting or *private contract*, as may seem to them best calculated to promote the interest and facilitate the completion of the canal."

By a resolution adopted on the 6th of June, 1843, the stockholders had recommended "public advertisements in the newspapers before contracts be entered into," and the object and purpose of the resolution of the 23rd of July, above quoted, was to dispense with this requirement and leave it to the discretion of the Board to make a contract for the completion of the canal either with or without a public advertisement for proposals.

There were at that time parties prepared to finish the work for the bonds of the company, their attention having been drawn to the subject by the report of the 29th of April last, which was published at length in the National Intelligencer of the third of May, and this fact was known to the stockholders.

These parties, being the same who subsequently obtained the contract, formally submitted proposals to the Board at their next



meeting, which took place on the 12th of August, but after due consideration the Board declined accepting them, on the ground that the consideration demanded was too high. The whole amount of bonds authorised by the law was then asked for. On the 16th of August, the Board being still in session, the said parties again presented proposals in a modified form, and other proposals were also then submitted by two gentlemen of Frederick, on behalf of parties not named therein, and they at the same time asked for a delay of eight or ten days to enable them to perfect their plans. This request was promptly granted by the Board, and the whole subject was laid upon the table. On the same day, for the purpose of giving full time to the parties then before them to make their arrangements, and of inviting further competition, the Board passed an order directing an advertisement to be published, notifying the public that the guaranties required by the law had been obtained, and that the Board were now prepared to receive and act upon proposals, either for a negotiation of the loan, or proposals to complete the canal for the bonds of the company, the two modes provided by the law for the accomplishment of the object intended by its passage. For a copy of the advertisement, see *Appendix F*. This notice was immediately published by official direction, in the *Frederick Examiner*—the *National Intelligencer*—the *Union*, and the *New York Courier and Enquirer*, and from those papers it was copied either entire or substantially in many of the newspapers of the country, as a matter of general interest. The publication of the notice, however, brought to the company no proposals whatever for a negotiation of the loan, nor indeed were any such expected, as by our private enquiries we had ascertained the impossibility of effecting a negotiation at par, to which we were restricted, as we have before stated, and the insertion of the clause in that behalf in the advertisement, was only out of abundant caution; neither did it bring proposals for completing the work for the bonds of the company, except from one other party, in addition to the two already before the board.

On the 23rd of September, thirty-three days after the first insertion of the advertisement in the newspapers, the board took up the subject for final action. Three several proposals were before them; the proposals heretofore mentioned as having been offered by two gentlemen of Frederick, on behalf of persons not named therein being in a modified form now signed by the parties bidding for the contract, and all were submitted in such form as the parties respectively saw fit. Upon these the Board proceeded to act, and after full and mature deliberation, and several interviews had with the parties proposing or their attornies, they *unanimously* accepted the proposals of Messrs. Walter Gwynn, Wm. B. Thompson, James Hunter and Walter Cunningham, subject to the approval of the State agents. The proposals thus accepted were immediately laid before the State agents, then in attendance at the office of the company in Frederick, together with the other proposals which had been before the Board, and, after a full consideration of the whole



subject, the said agents *unanimously* concurred with the Board in their action in the premises.

A form of contract was then prepared with great care and particularity, embracing the terms accepted with all proper details, and after being examined and assented to by Messrs. Gwynn, Thompson, Hunter and Cunningham, and copied on paper stamped according to the Act of Assembly, it was, on the 25th of September duly executed by the parties thereto, and endorsed with the *approval* of the State agents, in full compliance with the provisions of the law. The instrument is of considerable length, and contains numerous clauses and details, many of which, however necessary as parts of the contract, are of but little or no general interest. Instead, therefore, of transmitting to you a mere copy, which will nevertheless be cheerfully furnished hereafter if desired, we will here present you with a synopsis of the leading provisions of the contract, with such explanatory comments thereon as will readily enable you to comprehend its import and bearing.

First. The contractors covenant and bind themselves to provide all the necessary materials of an approved quality, and to complete the Chesapeake and Ohio Canal in a substantial and workmanlike manner from the point to which it is now finished a little below Dam No. 6, to the termination of its works at the town of Cumberland, according to the plan and specifications embraced in the estimate reported by the Chief Engineer to this company on the 1st of December, 1842, as modified and explained by certain memoranda attached thereto. And to do and perform all such other, and further work, not inconsistent with said plans and specifications, as may be proper to perfect and complete the same; it being the true intent and meaning of the contract, that the said parties shall well and faithfully in a workmanlike manner, execute, construct, and complete, as well all the work of every description now remaining undone, included and designated in said plans and specifications, as whatever other and further work may, in the opinion of the Chief Engineer of the company, be proper or necessary for the thorough completion, protection, and security of the canal and its works between the limits aforesaid, including every thing that may be comprehended under the head of contingencies. They bind themselves to commence the work within thirty days from the date of the contract (which has been done,) and to prosecute it steadily and without intermission, with care and diligence, and with such adequate force, as shall in the opinion of the Chief Engineer ensure its final completion by the 1st of November, 1847, by which time it is to be delivered up fully completed; and by way of superadded obligation, they have likewise executed and delivered to the company their bonds with security, approved by the President and Directors, and the State agents, conditioned for an expenditure of at least one hundred and fifty thousand dollars in the manner aforesaid.

Secondly. They covenant and bind themselves to pay to a trustee for the use of the company, one hundred thousand dollars—

Twenty thousand on the 1st of January next, and the residue in equal monthly instalments of four thousand dollars per month thereafter; the same to be applied under the orders of the Board to defray the necessary expenses appertaining to the completion of the canal, as authorised by the first section of the law.

Thirdly. They covenant and bind themselves to pay the interest on all the bonds that may be issued in fulfilment of the contract, up to, and including the interest that will fall due on the 1st January, 1848, or on the day for the payment of the semi-annual interest next after the completion of the canal to Cumberland.

They also bind themselves to cash for the company at their *par value*, the amount of bonds further authorised to be issued under the act of 1844, chapter 281, after satisfying the provisions of the contract, in case the company should find it necessary to issue and dispose of the same, at any time between the date of the contract and the expiration of one year after the canal shall be completed to Cumberland.

And in consideration of the premises, and of the performance of the other covenants and agreements contained in the contract, this company agrees to pay and deliver to the said contractors, sixteen hundred and twenty-five thousand dollars in the bonds of the company, to be issued under and pursuant to the act of 1844, chapter 281—the same to be made payable in thirty-five years from their respective dates, and to bear interest at the rate of *six per centum per annum*, payable semi-annually. The payment and delivery thereof to be in the manner following, that is to say:

First. Upon the payment of each instalment of the one hundred thousand dollars, and of each instalment of interest, the company is to deliver to the contractors an equal amount of the said bonds at their *par value*.

Secondly. A monthly estimate is to be made of the work as it progresses and of the materials provided, and four-fifths of the estimate is to be thereupon paid to the contractors in the said bonds—the other fifth, or *twenty per cent.*, is to be retained by the company as security for the fulfilment of the contract. But it is expressly provided, that *no part of any one of said monthly estimates shall be paid to the said contractors*, until after they shall have finally concluded an arrangement satisfactory to the President and Directors of this company, and the Maryland State agents, for the sale or hypothecation of the bonds they may or might become entitled to under the contract, or have given to this company a bond or bonds with ample personal security to be approved by the Board of President and Directors and the State agents, conditioned for the due and faithful performance of the contract, and every part thereof on their part to be performed.

Thirdly. The right is reserved to the company to make any change it may see fit in the plans of the unfinished work, and the same are to be executed by the contractors according to such change. The difference in cost in consequence of such change,

if the work be of a character other than is embraced by the terms of the contract, is to be determined by the Chief Engineer, and to be added to, or deducted from, the consideration mentioned in the contract. The right is also reserved to the company to omit the construction of any particular work embraced in said plans, and the estimated cost of such particular work as may be omitted, is to be deducted and withheld from said consideration.

Fourthly. The company is to place and defend the contractors in the uninterrupted possession of the line of the canal between Dam No. 6 and Cumberland, during the prosecution of the work, and should the work be interrupted by reason of its failure at any time to do so without any default on the part of the contractors, and the completion of the canal be *thereby* delayed beyond the time limited in the contract, such further time is to be allowed to the contractors, as in the opinion of the Chief Engineer, the completion thereof was delayed by reason of such interruption.

Fifthly. Should any questions arise in regard to the manner of executing or fulfilling the contract, or the true meaning thereof, the Chief Engineer of this company for the time being, is to decide, and if the contractors shall not conform to his decision within such reasonable time as he shall designate, or in the event of a failure on their part to fulfil and comply with any one of the material covenants to which we have referred, it is made lawful for this company by order of the Board of President and Directors, based upon the certificate of the fact by the Chief Engineer or the Treasurer, as the case may be, to annul the contract; and in case it be so annulled, the contractors are to forfeit all the retained percentage of Bonds, and the materials provided, and work performed and not then already paid for, which thereupon become the right and absolute property of the company.

We will now proceed to make a few remarks in elucidation of the several provisions of the articles of agreement, merely premising, that by the prohibition of the law the company was forbidden to make "any contracts by which the completion of the whole work to Cumberland" should not be fully provided for, and that no offers were made by which, for the Bonds of the company, it could have been contracted for in parts. But independently of this, and of other considerations looking to the necessary maintenance of the credit of the Bonds that may be issued for the work, the superior advantages of one general contract such as has been made, are under existing circumstances manifest and decided.

It will be observed that under this contract there can be no after claims for extra work, which, in times gone by, have been the source of so much expense and embarrassment to the company. The contract provides for every thing necessary for "the thorough completion, protection and security of the canal and its works," between the point to which it is now finished, and its destined termination at Cumberland. The clause in regard to a reservation of power to the company to make changes in the plan of construction, or to omit any particular work that may hereafter be found



unnecessary, was inserted for the greater protection of the interests of the company. No change in the present plan is now contemplated, nor is it presumed that any will be advisable; but there are some "particular works" that it is thought may be dispensed with, and in case this be found expedient upon further consideration and be determined on, a provision is here made *for deducting the estimated cost thereof from the aggregate amount stipulated to be given to the contractors.*

We have likewise provided by the contract, for the means to enable the company to defray the necessary expenses that will grow out of the prosecution of the canal to completion, and the carrying into effect the provisions of the law, as is authorised by the first section thereof. If this provision had not been made, the company would have been subjected to serious difficulty and embarrassments, and most probably, would have been unable to meet the increased demands that must necessarily be made upon it, in fulfilling the objects of the law. In the absence of other resources it would have been compelled to look only to a negotiation of the bonds for the means alluded to, and, if unable to dispose of them *at par*, as was most likely, it would have been without remedy or relief. For these considerations, the Board required the stipulations in the contract above alluded to. Their import is, that the contractors are to cash 100,000 dollars worth of the bonds *at par*, certainly, and the residue that the company may be authorised to issue, if it be found necessary or expedient to use them. The object in fixing the definite sum, and embracing it in the aggregate consideration of the contract, was to enable the contractors to make their arrangements accordingly, and it is also believed, that the amount specified will be sufficient for the purposes to which it is to be applied. The general character of those purposes is indicated by the language of the law, viz: "the necessary expenses appertaining" to the completion of the canal to Cumberland.

These expenses will embrace, the payment of certain claims for land heretofore condemned for the use of the canal between Dam No. 6, and Cumberland which have never yet been liquidated or discharged—the cost of the plate and other charges which will accrue in the preparation and execution of the bonds including the State stamps, the pay and expenses of the engineer corps employed by the company in superintending the construction of the work and making the measurements thereof, &c.

As we have above stated we believe the fund thus provided will be adequate for all these purposes. If however it should prove insufficient, a further disposal of the remaining bonds, or of such part thereof as may be found necessary, is provided for.

We have also provided by the contract for the payment of the interest on all the bonds that are to be issued up to and including the half year's interest, that is to become due and payable next after the canal is completed to Cumberland.

The same reasons that influenced the Board in providing the



fund for incidental expenses, caused them to make provision for the payment of the interest on the bonds to the period indicated. By the first section of the law the company is empowered, out of the proceeds of the bonds, "to pay the interest on the bonds that are to be issued in aid of the nett revenues of the company until they become sufficient to pay the same, *after* the debts now due for repairs on the canal and for officers' salaries are satisfied and paid." These debts, of which we have already spoken in the communication addressed to you on the 15th of January last, (pages 19 and 20,) according to the statement of the Treasurer and accountant, at the end of the last quarter amounted to the sum of \$46,433 42 cents. It will be perceived that the aggregate amount of this class of debts has been somewhat diminished since the communication mentioned, but it is scarcely within the range of reasonable probability that they can be discharged from the surplus revenues of the company, which alone are applicable to the payment thereof, within the two succeeding years. It became our duty therefore to make adequate provision for the payment of the interest on the bonds, until after the canal shall be completed, out of the proceeds of a portion thereof at their *par value*, at the same time that we came under an obligation to issue them—and we have done so. After the work shall have been finished, and the navigation opened to Cumberland, the revenues of the company will, it is believed, need no further auxiliary aid from the provisions of the law.

We now come to "*the consideration*," which, as has been shewn, is payable in the bonds of the company, to be issued pursuant to the provisions of the act of December session, 1844, chapter 281. The entire consideration stipulated to be paid to the contractors is \$1,625,000 in the said bonds, subject to a reduction or addition as the case may be for changes of plan, or to a reduction, for the omission of any particular work embraced by the terms of the contract. As we have already stated the company has no thought of making any changes in the present approved plans that under the provisions of the contract can *add* to the cost of the work, but it is very probable that some "particular work" may be omitted and dispensed with which will *reduce* the sum above specified. This however is a subject for the future, and action may, or may not, be taken upon it. We will therefore throw it out of view in the present communication, and consider, that for the performance of the contract on its part, the company is to pay and deliver to the contractors, in the manner provided for, bonds to the amount of \$1,625,000.

To arrive at the actual amount that the contractors will receive for the completion of the canal, we must deduct from the said sum the one hundred thousand dollars of money which is to be advanced by them to the company, and also the amount of interest they will be obliged to pay under the provisions of the contract, which at a reasonable estimate may be assumed at ninety thousand dollars more.

The calculation will then stand thus:—

Entire consideration in bonds, - - -	\$1,625,000
Deduct cash to be advanced to the company, \$100,000	
Interest to be paid on the bonds, 90,000	
	190,000

Leaving the amount in bonds given to the contractors for the completion of the canal to Cumberland, . . . . . \$1,435,000

The general estimate of the entire cost of constructing the fifty miles of canal between Dam No. 6, and Cumberland, which was made out in December, 1833, amounted to \$4,440,657. After considerable progress had been made in the execution of the work, a revised estimate of the cost of the whole, embracing the work *done and to be done* between the points mentioned, was made out in December, 1839, and it amounted to the *same sum*. In a communication addressed to Governor Grason, under date of 10th February, 1840. Governor Thomas, then President of this company, at a time, when the sum of \$2,030,128 had been expended on the work, embraced in the estimates above mentioned, used the following language in reference to them: "The estimates have been carefully and skilfully prepared, and authorise me to state that the fifty miles of canal to be constructed between Dam No. 6, and Cumberland will have cost, when completed, \$4,440,350," (\$4,440,657.) \* \* \* "The estimates of the probable cost of the canal are made out most carefully. To insure accuracy the Chief Engineer has been requested to revise them again and again. *The Board believe they may be fully confided in. Experience thus far justifies the opinion.*"

Now the whole amount of the work done between Dam No. 6 and Cumberland up to the date of the present contract, according to a statement from the Chief Engineer, has cost the company \$2,892,000, which being deducted from the general estimates above mentioned, leaves \$1,548,657, as the amount necessary to finish the Canal to Cumberland, *according to said estimates*, and the plans on which they were based.

In July 1841. The Chief Engineer made another revised estimate of the work done and to be done between Dam No. 6 and Cumberland. In this estimate the entire cost of completing the whole fifty miles between Dam No. 6 and Cumberland, amounted to \$4,537,000, which exceeds the two preceding estimates by the sum of \$96,343. This increase in the estimated cost was made by reason of the abandonment of the work, and had been previously predicted as the necessary consequence of the suspension of operations, as will appear by reference to the annual report made to the stockholders by the Board of President and Directors, on the 2nd of June, 1840. In the same estimate (July 1841) the remaining cost of completing the canal on the original plan was estimated at \$1,691,136, and, for satisfactory reasons given, the

Chief Engineer recommended certain modifications of the plans embraced by the said original estimates.

On the 1st December 1841, a further detailed estimate of the work done and to be done on the fifty miles between Dam No. 6 and Cumberland, was made by the Chief Engineer, in which the saving of cost, in consequence of the modifications of the plan above alluded to, were taken into account. In the report presenting this estimate, he says, "assuming that the composite plan will be adopted for all the remaining locks, except the four first named (Nos. 68, 69, 70, 71,) and that the other changes spoken of as respects the culverts, and lock-houses will also be made (viz: brick for the arches of the culverts, and log buildings for the lock-houses) I deduct \$100,000, from \$1,691,136, and there remains \$1,591,136, for the sum required to complete the canal on the 1st December, 1841."

On the first of December, 1842, after operations on the line of the canal had entirely ceased, the Chief Engineer made a final report of the sum necessary to finish the canal. In that report he says, "to arrive at the amount now required to complete the canal to Cumberland, it is necessary to deduct from the estimate submitted to the Board in December 1841, the work done from that time to the close of the session of the last Legislature, when operations were entirely suspended, and also such other work previously done, as may have been included in the cost of completion from not having been fully estimated to the contractors, at the time that estimate was prepared. Making these deductions the sum of \$1,545,000 remains as the amount now required for completion. This amount it should be recollected contemplates certain modifications of plan, which have been advised (see my report of the 1st December 1841.) and is exclusive of interest, back debts, and cost of superintendence."

It will be perceived by reference to the terms of the contract, that the parties contracting bind themselves to finish the canal "according to the plans and specifications embraced by the estimate of the Chief Engineer reported to this company on the first of December, 1842, as modified and explained by certain memoranda thereto attached, &c."

The sheer cost of completing the canal to Cumberland, according to the plans and specifications embraced by the estimates of the first of December, 1842, which has frequently been referred to in our communications to the Legislature was, as is above shewn, \$1,545,000. The memoranda mentioned as being now attached to said plans and specifications relate to a few subordinate details, and provide for the substitution of stone instead of wooden coping for the composite locks, which is calculated to increase the actual cost of completing the work, about six thousand dollars.

*Under the contract we have executed, therefore, the canal is to be thoroughly completed to Cumberland according to the present approved plans and in the most perfect manner, for at least one hundred and ten thousand dollars less than the cash estimate of*



*the first of December, 1842, and at least one hundred and sixteen thousand dollars less than that estimate with the added cost of the present modification of plans ; and the parties are to receive payment therefor in the bonds of the company.*

Again, referring back to the original estimates of 1838 and 1839, whose accuracy has heretofore been so strongly attested by our predecessors in office, and making the necessary deductions therefrom of the amount already expended, and every allowance for the saving of cost (\$100,000 less the \$6,000 now again added) in consequence of the changes of plan in regard to some of the locks, the arching of the culverts, and the materials for the construction of the lock-houses as already described, and the present contract price for the execution and entire completion of all the remaining work to be done on the canal between Dam No. 6 and Cumberland is still \$19,657 less than the amount *in money* called for by those estimates, even throwing out of view the necessary increase in the actual cost consequent upon the suspension of operations in 1841, which has been estimated, as before shewn, at \$96,343, and also the cost of trimming and perfecting the finished portions of the work which has certainly suffered some, though comparatively small dilapidation, by reason of the long abandonment and *non user*.

When these facts are taken into consideration, we think it will be readily admitted that the terms of the present contract are at least such as cannot be excepted to by those who have an interest in the completion of the canal.

We would, however, in this connexion also take occasion to express the opinion, based upon a cursory revision of the estimates of 1842 by the Chief Engineer, in August last, in which the prices were made to conform more nearly to existing rates, that the amount now given is a fair and adequate consideration for the work, and that, with it, the contractors will be able to fulfil their engagements, and by proper energy and economy, also realize for themselves a just remuneration for their labors and responsibility.

The fact that a contract has been executed for the completion of the work to Cumberland and the punctual payment of the interest on the bonds until after the navigation shall be opened to that point for an aggregate amount *within* the sum authorised by the Legislature, which was thought by many unacquainted with the subject, to be insufficient to accomplish these objects, will doubtless give additional value to the bonds in the estimation of capitalists, and possibly the contractors may now be able to dispose of them at their par value. Should they, however, find it necessary to make some discount in effecting their negotiation, the per centage on the whole will have to be deducted from the specific amount they are to receive, as above indicated, *for the construction of, the work*, and their compensation therefor will be to that extent reduced. Their measures for effecting a financial arrangement, which were commenced before the contract was entered into with them, are being urged forward with becoming industry, and from facts within our



own knowledge, we have reason to believe that they are progressing under the most favorable auspices, and with the promise of early success. No bonds, however, have yet been issued by the company, nor will any be delivered to the contractors for the construction of the work until after they shall have placed themselves in a condition to be entitled to receive them according to the terms of the contract.

They have, however, in the meantime, commenced operations pursuant to their agreement, and have already gathered a number of laborers upon the line. As the season is now so nearly drawing to a close the force will probably not be materially augmented this year, but, upon the opening of the next spring, they contemplate making it full and effective, and thenceforward pressing on the work to completion with all due diligence, so as to finish it by the time limited in the contract.

The assurance the company has that this will be done, is to be found—in the joint obligation of the parties contained in the contract itself, some of whom are gentlemen of known standing and responsibility and of scientific skill and judgment in engineering, and they risk their all in the enterprize—In the bonds executed by them with ample personal security approved by the President and Directors of the company, and the agents of the State of Maryland, conditioned for an expenditure forthwith, and with all due diligence, of at least one hundred and fifty thousand dollars in the construction of the work, irrespective of any payments to be made to them therefor, and the whole of which is to be forfeited, if they do not proceed—In the fact that they have already commenced the work with commendable energy, and are pressing forward in compliance with the condition of the above mentioned bonds—In the reservation of one-fifth, or *twenty per cent.* from each monthly estimate after the contractors shall have placed themselves in a condition to be entitled to receive payments for the work, which is forfeited to the company upon a failure on their part to fulfil all their agreements—In their measures now in progress for a successful negotiation of the bonds—And in the forfeiture to the company of all materials provided and work performed in case the contract be at any time declared abandoned for non performance, as is therein provided for. Additional motives to energy and promptitude in the execution of the work and for its early completion, and a saving the company harmless from the accumulation of interest in the event of delay should it be found inexpedient to enforce the stronger provisions in that behalf made, are provided for in the stipulation that the contractors are to pay the interest on all the bonds that may be issued up to and including the half year's interest that will become due and payable, next after the completion of the canal and the opening of the navigation to Cumberland; and the interests of the company, are further specially guarded by the provision, that *no part of any monthly estimate is to be paid to the contractors until after they shall have finally concluded an arrangement, satisfactory to the*

*President and Directors of the company, and the State agents,* for the sale or hypothecation of the bonds they may become entitled to under the contract, or have executed and delivered to the company their bond or bonds with ample personal security to be approved by the President and Directors, and the State agents, conditioned for the due and faithful performance of the articles of agreement, and every part thereof on their part to be performed.

Such are the securities provided for the completion of the work, for the general performance of the covenants of the contract, and for the protection of the company in these regards. A further and specific security for the prompt payment by the contractors of the interest on the bonds after they are issued, as it becomes due and payable, up to the period designated for its payment by them, is provided for by the reservation of power to the company, in case of their failure to do so, to retain all bonds, that are at the time, or that may thereafter become payable to the contractors, and at the risk of the contractors, at pleasure, sell for the best market price, or hypothecate, on such terms as the board of President and Directors may see fit, such amount of said bonds, as may be necessary to raise the sum required to pay such interest, and apply the same to that purpose.

Within the eight months that have elapsed since its passage, we have thus complied with all the preliminary conditions and carried into full effect the leading provisions of the law of the last session of the Legislature of Maryland, entitled, "An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland and for other purposes." The right to make a contract, such as has been executed, payable in the bonds of the company, is plainly and expressly conceded in the law; and that it was our incumbent duty, under existing circumstances, to exercise the right is equally obvious. It was the only mode, by which this company could avail itself of the benefits of the law, or carry into effect the intentions of the Legislature. The policy, the interests, and, some have even thought, the faith and honor of the State of Maryland, demanded the completion of the canal to Cumberland with the least practicable delay. We were therefore not insensible of the urgency of the duty that was devolved upon us by the passage of the law in question, and, whilst we made fair and just terms the indispensable prerequisite, we considered promptitude of action a matter of scarcely less importance. We forebore to make a contract until acceptable proposals were obtained, but as soon as they were obtained, and we had no reason to suppose that any more favorable would be offered, we closed with them. The terms of the present contract are advantageous to this company—better we will venture to say, than were anticipated by the ablest friends of the canal in the Legislature of Maryland, at the time of the passage of the law providing for its completion.

The only other duty imposed upon this company by the law of the last session, of which we have just spoken, is contained in the seventh section thereof, which requires the company "to execute to the State and deliver to the Treasurer of the Western Shore of Maryland a mortgage on the canal, its lands, tolls, and revenues, subject to the liens and pledges by the foregoing provisions of the act made, created or authorised, as an additional security for the payment of of the loan made by the State to this company, under the act of December session, 1834, chapter 241, and the interest due and in arrear, and which may hereafter accrue thereon;" which mortgage is required to be submitted to the Attorney General of the State, and to be approved by him as sufficient in law. The draft of a mortgage to the State, in full compliance with the above provision, has been prepared and submitted to the examination of the Attorney General. As soon as it is returned to the Board, it will be executed and delivered to the Treasurer of the Western Shore of Maryland.

In closing this subject we will present a brief statement of the amount of liens or preferred claims upon the annual nett revenues of the company that will result from the waiver of the liens of the State by the act of 1844, chapter 281, and the carrying into effect the provisions of the contract. Throwing out of view the small debt due and in arrear for repairs and officers' salaries, which will soon be paid off, the summary will be as follows:

1st. The interest on \$1,625,000 of bonds, payable semi-annually,	\$97,500
2nd. The interest on the debts of the Potomac Company, adjusted under the 12th section of the charter of this company, not to exceed -	5,000
3rd. The annual amount to be set apart as a sinking fund to pay the principal of the bonds when they become due,	25,000
Total,	\$127,500

A through transportation of at least 195,000 tons per annum on an average of years for five years, dating from the end of six months after the canal shall be completed to Cumberland, which is equivalent to at least the same amount of revenue in dollars, has been securely guarantied to the company, as has been already shewn, which alone will exceed the amount necessary to discharge the above mentioned preferred claims by the sum of \$67,500. Assuming that the way trade will always be sufficient to meet the current expenses, of which there can be no doubt, this sum and any further accumulation that may accrue will be applicable to the payment of the arrears due the State.

We must not be understood, however, as supposing it at all probable that there will ever be occasion to resort to the guaranties. The rapidly increasing demand for coal and iron throughout the country, and the growing and energetic spirit of enterprise which is concentrating itself in Allegany county for the purpose of develop-



ing its mineral resources, apart from the western trade, which will, we think, be large after the canal is finished, make it a matter of almost moral certainty, that the revenues of the company will at an early period after the navigation shall be opened to Cumberland, much exceed the annual amount stipulated for in the law. As in our former communications, however, we have considered at length the probable productiveness of the canal after it shall be completed, we will not again dwell upon the subject in this place.

On various occasions during the year eighteen hundred and forty-four, a portion of the public press in the city of Baltimore, either by direct charge or obvious innuendo, sought to create the impression, that the tolls on the Chesapeake and Ohio Canal, and particularly those on the transportation of flour, had, in a spirit of competition, been reduced below the proper standard, for the purpose of withdrawing the trade in that article from the Baltimore and Ohio Rail Road, and this charge was in private conversation repeatedly made by persons connected with the rail road company, during the early part of the last session of the Legislature, at the city of Annapolis. Feeling that it did the officers of this company great injustice, and that it was calculated to produce a prejudice against the company unless corrected, in the communication we made to your Excellency on the 15th of January last, which was laid before the Legislature, and printed under an order of the House of Delegates, we discussed the subject with some particularity and showed the utter groundlessness of the charge. This communication was reprinted as a part of the appendix to our last annual report herewith presented to you, and the facts then exhibited in relation to the matter may be seen by reference thereto, (page 20.) We had hoped, that the decisive refutation there given to the charge would have silenced those, who had given currency to it, and that it would not again be necessary for us to advert to the subject. The newspapers, so far as our knowledge extends, have, since the publication of that communication, foreborne to allude to the matter, but the charge is now repeated in an *official* form, and with a distinctness, which leaves no room for doubt as to its meaning. On page 15 of the nineteenth annual report of the President and Directors to the stockholders of the Baltimore and Ohio Rail Road Company, made on the second Monday of October last, and signed by the President *pro tem*, of that company we find the following paragraph:—

“It is obvious that the *very low rates charged by the Chesapeake and Ohio Canal Company* for the transportation of *this article* (flour) to the cities of the District, do not afford a *remunerating revenue*, by which that company might be enabled to meet its obligations to the State of Maryland; and that, while this is the case, its policy, at the same time, had the unjust effect of abstracting trade from the city of Baltimore, to which the State was looking, in a very great degree, for the means, by taxation, of paying the interest upon the debt contracted for the construc-



tion of the canal. If the rate charged by the canal were an *adequate one*, and had been made with a view to its obligations to the State, the city of Baltimore would have less right to complain, whatever might be the injury she suffered in other respects; but when she was heavily taxed for the construction of a work, which, at the same time deprived her of the means of paying that tax, the evil was one which it was supposed would readily call for the interference of the State, the only authority, which could exercise a sufficient control over the subject," &c.

As the residue of the paragraph relates to the totally inadmissible and *impossible* arrangement proposed by that company last winter, and properly disposed of by the last Legislature, we deem it unnecessary either to quote or notice it.

We have italicised those parts of the quotation to which we invite attention. It will be seen that the Chesapeake and Ohio Canal Company is here accused of charging "*very low rates*" for the transportation of *flour*. That the rates are so low as not to afford "*a remunerating revenue.*" That "*if the rate charged by the canal were an adequate one* the city of Baltimore—or in other words the Baltimore and Ohio Rail Road Company, would have less right to complain, whatever might be the injury it suffered in other respects." And the interference of the Legislature of Maryland is impliedly invoked to compel this company to increase its charges, for the obvious purpose of thereby having the trade driven from the Canal to the Rail Road, but professedly in order to make the canal yield "*a remunerating revenue.*"

As it is scarcely presumable that the officers of the Baltimore and Ohio Rail Road Company are not aware of the fact, that this company *are not carriers* on the canal, and that the only charge over which the company has any control is *the toll* required for the privilege of transportation, we are bound to infer that the rates of charge, which are here alluded to, relate exclusively to the present *toll* for the transportation of flour on the canal.

Now it is well known, that according to the general experience of internal improvement companies, both in this country and Europe, a low, but judiciously regulated rate of tolls, is, under ordinary circumstances, rather calculated to increase than diminish revenue by augmenting the amount of transportation, and that in consequence of such experience, a material reduction in the rates have been made in nearly every section of this country, on the most prosperous canals. The conclusion therefore sought to be inculcated by the rail road company, is unauthorised, even if their statement in regard to the rates was correct; but it is not correct. Although we would apparently have been fully justified in following the example of other companies, and reducing our tariff of tolls to such rates as are charged on kindred improvements elsewhere, we have yet to say, that no such reduction has been made; and furthermore that the toll on flour, is under the present tariff of this company, actually higher than it was ten

years ago, and that it is much higher than is charged on the State canals of New York and Pennsylvania.

Having before us authenticated copies of the tariff of tolls on the canals in the States above mentioned, we will here present their rates, on the transportation of flour, in contrast with the rate charged by this company, which is complained of as being "very low" and "inadequate."

*"Rate of toll established by the Canal Board on the New York State Canals, for the year 1845, and as modified and reduced to take effect at a future date."*

	Per 1000 lbs. per mile.		Per ton of 2000 lbs. per mile.	
	1845.	1846.	1845.	1846
On Flour, -	Mills 4½.	Mills 4=	Mills 9.	Mills 8.

*"Rates of toll to be charged on the Pennsylvania Canals on and after the first day of March, 1845."*

On Flour per 1000 lbs. per mile, 4 Mills=8 Mills per mile per ton of 2000 lbs.

And yet we learn that the aggregate receipts of toll on the New York Canals, during the current year up to the close of the second week in November amounted to the very large sum of \$2,510,131, which is \$63,757, more than was received in all the year 1844, and that the receipts up to the 29th of November when the navigation was closed by ice, amount to \$2,646,118 for the whole year, which exceeds the aggregate receipts of last year by the sum of \$200,088.

The revenues from the Pennsylvania canals have also been considerably augmented since the adoption of their low charges.

It is thus shown that on the New York State Canals the toll on flour is at present 9 mills per ton per mile, and that after this year it will be only 8 mills per ton per mile.

That on the Pennsylvania State Canals it is at present but 8 mills, per ton per mile, and that with these rates the canals of New York are eminently productive, and those of Pennsylvania promising to become so.

*On the Chesapeake and Ohio Canal the toll on flour is now and has been since the 20th June 1843, two cents per ton per mile (ten barrels to the ton,) for the first twenty miles, and one and a half cent per ton per mile for any further distance it may be carried, and the same disparity exists in regard to the toll on other articles generally. But, as we have above shown, the toll on flour on the Chesapeake and Ohio Canal is not only higher than upon the New York and Pennsylvania Canals, but the present rate is somewhat higher than was charged on this canal in the year 1835. The general tariff of tolls, established in that year, fixed the toll on flour at two cents per ton per mile, (ten*

and a half barrels to the ton,) for the first *fifteen miles* and *one and a half cent* per ton per mile for the residue of the distance. On the first of May, 1841, the parties navigating the canal paid the tolls principally in the scrip of the company, and the toll was then raised to the highest point authorised by the charter, which is two cents per ton per mile for any distance, so that, in the language of our communication of the 15th January, 1845, before alluded to, "as far as practicable the increased charge might make up for the diminished value of the larger portion of the funds in which it was paid." A charge of two cents per ton per mile—receivable in scrip—which was then bought by the boatmen at about fifty cents in the dollar, though nominally higher, was also really less than the present rate. The receipt of scrip for toll was gradually restricted from time to time until June, 1843, when it was entirely prohibited. In that month the present tariff was adopted and under it payment *in current funds* has been required, in all cases.

Such is the rate of toll on the transportation of flour, and such the general regulation now established on the Chesapeake and Ohio Canal under the existing tariff.

From the facts above stated in regard to the lowness of the tolls on the New York and Pennsylvania canals, and the beneficial effects resulting therefrom, it might, perhaps, be supposed that this company has erred in not profiting by their experience, and that the same low rates of charge on the Chesapeake and Ohio Canal would lead to somewhat similar results. But we believe, that, the time for this has not yet arrived. A reduction of prices to those charged on the canals alluded to, would probably withdraw from the rail road nearly the whole of the tonnage it now receives from the Point of Rocks westwardly to the termination of the finished portion of the canal, but although this would considerably augment the amount of our trade, the increase it is believed would not compensate for such a reduction. The district of country to which the Chesapeake and Ohio Canal is now accessible, is entirely too contracted for the adoption, at present, of the policy which governs the management of the northern canals; but after this work is completed to Cumberland, where it will be placed in connection with the great thoroughfare to the west, and may enter the field of competition for the immense trade of the valleys of the Ohio and of the States bordering on its waters, which now passes down the lakes to Buffalo, or enters at Pittsburg upon the Pennsylvania improvements, a different state of things will exist, and it will *then* be a question for those who may control the affairs of this company to decide, whether they will maintain the *present* high rates of toll on the transportation of agricultural productions, or by a judicious adjustment of charges on tonnage of every description, apply the great capacity of the canal, with all the improvements of modern motive power, in full and fair competition with its northern rivals. Whenever the time shall come for the



determination of this question, it will, doubtless, be settled with a due regard to the interests of the State of Maryland.

We have now shewn that the allegations of the rail road company are without foundation, and we regret the necessity which has compelled us to do so. The agitation of the question can certainly be productive of no beneficial results to that company. So far from having the effect desired by them, it will only prove that the tolls charged on the Chesapeake and Ohio Canal, when compared with the rates on the most productive canals in other States, are, if liable to exception at all, too high; and although the cost of transportation on the canal even with these high rates for toll, is less than the cost on the Baltimore and Ohio Rail Road, the comparison instituted may cause an effort on the part of those who trade upon the canal to bring about a reduction. We are not prepared to say that *some reduction* might not at present be made, to the manifest advantage of the traders on the canal, and without diminishing the income of the company; but as it has not clearly appeared, that the interests of the company in the existing condition of things, would be promoted thereby, we have heretofore abstained from taking any action on the subject, principally through a desire to avoid every proceeding not obviously called for by the demands of duty, which might be calculated to increase the already highly excited hostility of the rail road company and its especial friends. By no expedient have we ever sought to injure or impair the usefulness of that company. On all proper occasions we have vindicated our own course with courtesy, and we hope with becoming firmness, but against their repeated aggressions we have hitherto adopted no countervailing or retaliatory measures. We have seen them departing from their engagements for the transportation of coal from Cumberland to Dam No. 6, for an account of which we respectfully refer you to our seventeenth annual report herewith transmitted to you. We have seen them charging *four cents* per ton per mile for the transportation of coal to Dam No. 6, where it might be transferred to the canal, and two cents per ton per mile generally, and  $1\frac{1}{2}$  cents per ton per mile, under special contract, on other parts of their road, and to the city of Baltimore. We have witnessed the operation of their sliding scale, by which the toll upon flour has been reduced, from points along that portion of their road which is adjacent to the Chesapeake and Ohio Canal, to "such a rate as would (merely) compensate for the expense of transportation." We have seen them charging, and still persevering in the charge of *twenty cents per ton* for the transportation of tonnage from the canal opposite Harpersferry across their viaduct to that place, or to the intersection between the Baltimore and Ohio Rail Road and the Winchester and Potomac Rail Road, the whole of which distance does not exceed *a quarter of a mile*, although for the transportation of the proper tonnage of the Rail Road no extra charge is made above the regular toll, which, for the same distance, does not exceed *three cents* per ton. We have seen all this, and yet have pursued the even tenor of our way without attempt at retaliation.



Looking with a single eye to the broad interests of this company, and adopting no measures, which in our opinion those interests have not clearly demanded, we have not allowed our course to be influenced in any degree by their hostility; nor would we, on the present occasion so long have dwelt on the subject now under consideration, had not a vindication been forced from us.

We have now shewn that the statement of the Rail Road company is unsustained by the facts—that the toll on flour on the Chesapeake and Ohio Canal, instead of being “*very low*,” is very nearly *double the rate charged on the highly successful canals of New York, and on those of Pennsylvania*, and we may well add, that even if there had been any grounds for the charge that has been made, it comes with a very bad grace from a company, which on the 2nd of March, 1844, (see Document FF. of the last session,) stated to the Legislature that “*lower rates of tolls and charges than those established by the (then) printed tariff upon the respective articles therein comprehended, according to the usual manner in which they are offered for transportation, would not yield to the Rail Road company a reasonable profit, or to the State the income it now receives from its investment in the Rail Road company*”—and which, nevertheless, on the 10th of October of the same year, reduced those rates of toll and charges on flour about *one-fourth* from points contiguous to the line of the canal. At the time this reduction on the Rail Road took place, applications were made for a corresponding reduction of the toll on the canal, but the Board did not accede to the request, and the traders on the canal universally acquiesced in their decision. They soon found, as we had predicted to them, that although the rates on the Rail Road had been reduced “*below the point of profit*,” the transportation on the canal, by reason of competition among the boatmen, would still be the cheaper mode of conveyance to market, and in consequence thereof, the trade on the canal continued, and still continues to increase, though necessarily, in the unfinished condition of the work, but slowly. The amount of tolls accrued during the past three quarters of the present year as compared with the same period in 1844, is as follows:

	1844.	1845.
Tolls accrued from the first of January		
to the 30th of September, - - -	\$35,566 05	\$38,304 72

Showing an increase of \$2,738 67, in favor of the past three quarters of the present year, notwithstanding the total stoppage of the coal trade on the rail road, between Cumberland and Dam No. 6, brought about by the annulment of “*the arrangement*” by the rail road company, and the imposition by them of a prohibitory tariff on their road between those points, to which we have before alluded. The increase of the receipts of the present year over the last will probably be somewhat enlarged by the close of the year. Whatever surplus may remain however over and above the amount required to defray the current expenses will be appli-

cable to the payment of the debts due, and in anear for repairs, and officers salaries, as already heretofore stated.

The total revenue of the company, accrued in the three quarters of the current year, ending on the 30th of September, according to the statement of the treasurer and accountant, amounts to the sum of \$40,196 72, and was derived from the following sources, viz:—

Tolls, - - - -	\$38,304 72
Water Rents, - - - -	1,316 25
Rent of Houses, - - - -	225 00
“ Land, - - - -	77 00
“ Mole, - - - -	273 75
	—————\$40,196 72

And the total expenditures for the same period have been as follows:—

For Construction, - - - -	\$7,798 26
Repairs Ordinary, - - - -	13,957 42
Salaries and pay of President, Directors, Clerk, Treasurer and Counsel, - - - -	4,734 95
Engineer Department, - - - -	2,693 29
Pay of Superintendents, Collectors and Lock-keepers, - - - -	8,642 49
Office rent, printing, stationery and pos- tages, - - - -	748 42
Law Expenses, - - - -	100 00
	—————\$38,674 83

Balance in favor of the Company, 30th Septem-  
ber, 1845, - - - - \$1,521 89

The amount paid for construction, as above shown, was expended in the completion of certain improvements, which we have caused to be made on the line of the canal, as adverted to in our former reports. The benefits already resulting from those improvements may be well understood, by the mere fact that the item for “*Repairs extraordinary*,” which has hitherto loomed so largely in our statement of expenditures, is, at present, entirely omitted from the table; not a single breach of any consequence has yet occurred on the canal during the current year, and the navigation has never been in finer order. Two thousand and thirty-two dollars and thirteen cents, of the amount included in the above statement, are properly chargeable as appertaining to the completion of the canal, said sum being for additional expenses incurred in carrying into effect the act of the last session of the Legislature, and in preparing for the commencement of the work. The Board have partially organized the corps of engineers, by the appointment of three assistant engineers, three rodmen, one superintendent of masonry, and one superintendent of sections; and, in the spring, it will have to be further enlarged, and placed on a permanent basis.

For several years past and particularly within the last month very serious complaints have been made by traders on the canal, on

the ground that the Rail Road company withheld from them suitable accommodations and facilities for the transfer of their trade from the canal to the Rail Road opposite Harpersferry, and also in regard to the heavy charge made by that company for crossing their viaduct from the Maryland to the Virginia shore of the Potomac, even when facilities were afforded for transportation at that point. The remedy for these grievances is placed by law in the hands of your Excellency.

By the fourteenth section of the act of 1835, chapter 395, the authority to direct and require the establishment of Depots on the Baltimore and Ohio Rail Road is vested in the Governor and Council of Maryland, but the Council having been abolished by the amendment of the Constitution, under the act of 1836, chapter 197, section 13th, the authority, it is presumed, is now vested in the Governor alone. If, pursuant to this power, your Excellency would cause the Baltimore and Ohio Rail Road company to establish a Depot at the canal basin near and below Harpersferry between locks No. 32 and 33 of the canal, facilities would be afforded to the traders on the canal, at that point, which would obviate much of the expense and inconvenience, they are now subjected to. By the requirements of their charter the Rail Road company would then be compelled to *provide facilities*, and take in articles at that point; and, it is presumed, they could not then charge, therefrom, a higher rate per ton per mile, than is authorised by their charter on other parts of their road. We have felt it our duty to submit this matter to your consideration, and, respectfully, ask your attention thereto. If a depot were established at the point indicated, the trade on the canal would certainly be increased thereby.

In October last the President, three of the Directors, and the Chief Engineer of the company, accompanied by one of the Maryland agents, and two gentlemen from the North who represented certain capitalists with whom the contractors are now in treaty for a negotiation of the bonds of the company to which they may become entitled under the contract, made an excursion along the line of the canal for the purpose of an examination and inspection of both the finished and unfinished portion of the work and of the Cumberland coal region from which the large portion of its trade is expected to be derived, after it is completed; and we are much gratified in being able to say, that the result of the examination was of the most satisfactory character. One of the Northern gentlemen, above referred to, who—in the language of one familiar with his qualifications—“brought to bear upon the subject practical knowledge and discriminating observation, the fruits of experience acquired by him during several years past, in the superintendence of the most important public works of Massachusetts, of one of which (the Boston and Worcester Rail Road) he has been—if not the father—the presiding genius”—has, since his return home, given publicity to his observations in a series of numbers published in the Boston Daily Advertiser; and coming from so



highly intelligent and disinterested a party, in lieu of any details from ourselves, we herewith present in the Appendix (marked G.) copies of two of the numbers, which relate to the subject of most interest to the authorities of the State. They will doubtless be read with pleasure by all, who feel an interest in the success of the canal. In consequence of the prohibitory tariff imposed by the Baltimore and Ohio Rail Road company, between Cumberland and Dam No. 6, the growing trade in coal, iron, &c., from the Cumberland region, as described by the writer of these essays, will be enjoyed by the Rail Road company until after the canal shall be finished to that point, but *only until then*.

We have now rendered to you a full and detailed account of our proceedings since the date of the communication transmitted to you in January last, and also commented on such other matters as seemed to call for a notice at our hands. At no period since this company was organized has it passed through so eventful a crisis as the last eight months, and never before have the duties of those entrusted with its management been more arduous and responsible. Upon the carrying into effect the provisions of the act of eighteen hundred and forty-four depended the completion of the canal to Cumberland, and upon the accomplishment of that great object rested all the hopes of the friends of the work, and the prospect of relief to the people of Maryland from the burthen of taxation that now presses upon them. Public attention was therefore strongly directed to all our movements, and, at one time, the popular feeling in the western portion of the State became restless and urgent, and almost desponding, in consequence of what they supposed was ill-timed delay, or inability to make the act available. Unaffected by the outward pressure however, we proceeded calmly, and steadily onward, exhibiting to the public in a special communication addressed to the Stockholders, and published in one of the most extensively circulated newspapers in the country the strength of the security provided by the law, and fulfilling its conditions in a manner that would give the greatest efficacy to its provisions; and finally, when fair and just terms were offered, and we had no reasonable ground to expect that better could be had, we made a contract for the thorough completion of the canal to Cumberland. In the framing of that contract we have guarded the interests of the company by every expedient our judgment could suggest; and we believe that little more is now necessary, than attention to its details, and prudence and judgment in carrying out its provisions, to secure the object, for which it was executed. We may therefore indulge the reasonable hope, that the day of serious difficulty with this company has passed by, and that it may now, without further obstacle, press forward to the early realization of the important results, which are anticipated from the completion of the Chesapeake and Ohio Canal to its present destination, and fulfil the hopes of its friends.

By order of the Board,

JAMES M. COALE, President  
Of the Chesapeake and Ohio Canal Company.

## APPENDIX A.

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OFFICE OF THE CHESAPEAKE AND OHIO CANAL CO.,  
Frederick, April 29, 1845.

To the Stockholders of the Chesapeake and Ohio Canal Company, in General Meeting assembled:

GENTLEMEN: Pursuant to the charter of the Chesapeake and Ohio Canal Company, we have called you together on the present occasion to submit to your consideration two several enactments which have received all the sanctions required from legislative authority, and only await your assent and acceptance to become fixed laws.

The first is an act amendatory of the charter of this Company entitled "*An act further to amend the act incorporating the Chesapeake and Ohio Canal Company,*" which was passed by the Legislature of Virginia on the 20th day of January, 1844, confirmed by the Legislature of Maryland on the 8th day of February, of the same year, and assented to by the Congress of the United States, and approved by the President on the 7th day of February, 1845.

The second is a simple legislative enactment, entitled "*An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes,*" passed by the Legislature of Maryland on the 10th day of March, 1845.

The reasons and motives that actuated the Board in making application for the amendment to the *charter* of the Company, above referred to, will be seen by reference to their memorial to the Legislature of Virginia, a copy of which will be found in the Appendix, No. 1; and the importance of the amendment to the interests and well being of the Company will be readily appreciated by an examination of the law itself.

Its leading provisions are an enlargement and extension of the time allowed for the completion of the canal to Cumberland, which without this amendment, would long since have expired, and left the Company at the mercy of the sovereignties that created it, and an *express* authority conferred on the President and Directors, or a majority of them assembled, to borrow money from time to time to carry into effect the objects authorised by the charter of the Company, to issue bonds or other evidences of such loans, and to pledge the property and revenues of the Company for the payment of the same and the interest to accrue thereon, in such form and to such extent as they may deem expedient,

with a proviso saving the prior rights or liens of the State of Maryland under the mortgages heretofore executed by this Company to said State, except in so far as the same may be waived, deferred, or postponed, by the Legislature thereof.

The object of this proviso was to secure the assent of the Legislature of Maryland to the general provisions of the law. If the act had not contained the clause referred to, it could never have received the confirmation of the Maryland Legislature, inasmuch as such confirmation, without it or an equivalent provision, might have been construed into a general waiver of the State's claims to an indefinite amount, and for all purposes authorized by the charter of the Company. Under the law as it now stands, however, whatever rights the State of Maryland may have by virtue of her mortgages remain good, except in so far as they may be waived by her legislative authority.

By obtaining this important amendment to the charter, this Company was once more placed upon solid grounds, and new life was infused into its corporate existence. The time allowed for the completion of the canal to Cumberland, which, under a strict construction of the original charter, expired in September, 1840, is by it extended to the 1st day of July, 1855. All rights, privileges, or advantages, dependent upon the completion of the work to that point within the time originally prescribed, if it shall be finished within the enlarged time now allowed, are reaffirmed and legally secured, and power to the President and Directors to borrow money for the general purposes of the Company, and to pledge its property and revenues for the payment of the same and the interest to accrue thereon, is plainly and expressly given.

We regard this law as of the highest importance, and respectfully recommend that it be accepted and assented to by the Stockholders, so as to make it a part of the charter of the Company.

Important and necessary, however, as under existing circumstances, are the powers and authority granted by the charter amendment of which we have just spoken, this Company would still have been compelled to remain stationary, and incapable of any progressive movement towards the completion of the great work we have in charge, without the further action of the Legislature of Maryland, providing for a waiver of her liens. This, after a long, earnest, and persevering effort, we have the gratification to inform you we have likewise obtained, by the passage of the second act referred to in the commencement of this communication. Although there are some parts of this law which may be regarded as vexatious and exacting, we yet feel assured that, by the generous aid and co operation of the friends of the canal, and by the exercise of the same prudence and perseverance which has enabled us to overcome the obstacles hitherto thrown in our path, all present difficulties may be surmounted, and the provisions and objects of the law be fully complied with and fulfilled. We therefore, in like manner, respectfully commend it to the acceptance of the stockholders.



It will be seen, by reference to the ninth section, that the act is not to take effect until after it is accepted by this Company, and such acceptance is duly communicated to the Treasurer of the Western Shore of Maryland. Up to this time, consequently, the Board could take no definitive measures for complying with its provisions; but, in anticipation of the favorable action of the Stockholders, we have, ever since the adjournment of the Legislature, been actively engaged in making arrangements to have its requirements fulfilled, and are flattered with the belief that at a very early day after the law receives your sanction its preliminary conditions will be satisfied.

When the clause requiring a guaranty for the through transportation of not less than one hundred and ninety-five thousand tons of tonnage per year for five years, dating from the end of six months next after the completion of the canal to Cumberland, was inserted in the bill, apprehensions were entertained that the requirement might prove fatal to its availability, inasmuch as individuals and private corporations are seldom known to assume upon themselves responsibilities that are to enure to the common benefit; but the enthusiasm with which the measure has been received by the stockholders of the incorporated companies of Allegany county, by the people of the Potomac counties of Maryland and Virginia, and by the citizens of the District cities, has dissipated all doubt and apprehension on this subject.

It is now sufficiently ascertained that the guaranties will be given, and securely given; *and this cause of apprehended weakness will then be converted into a source of strength.* The guaranty will not only operate as a sort of collateral security for the bonds that may be issued for the completion of the work, but, being executed for small amounts by numerous responsible parties, making, in the aggregate, the quantity stipulated for in the law, they will bind by the strong motive of self-protection nearly every important trader at each extremity and along the line of the canal to the canal interest, and induce all to take a lively and active part in augmenting its trade. In this way the Chesapeake and Ohio Canal, which is already so highly appreciated by all who are within the range of its operations, will acquire additional claims to the popular favor and support.

After the guaranties are executed and approved by the Governor of this State, and the agents representing the State in this Company, or a majority of them, the Board will then be empowered to avail themselves of the operative provisions of the law, and to issue the bonds of the Company for the completion of or raising the means to complete the canal to Cumberland.

According to the provisions of the law, the Board of President and Directors are invested with the discretion either to borrow money on the bonds of the Company at their par value, and make contracts to have the work done, payable in cash, or, with the approval of the State agents, to enter into a contract or contracts to have it executed and paid for directly in the bonds secur-

ed in the manner therein provided for. Which plan it may be most expedient to adopt is a matter for consideration; and, unless the Stockholders formally indicate a preference, the Board will be governed by circumstances, and, after consultation with the authorities above mentioned, pursue such course as in their judgments may be most conducive to the general interests of the Company, keeping in view the completion of the canal at the earliest practicable period as an object of primary importance. It would certainly be more desirable for the Company to raise the money themselves, and pay for the work in cash, if a loan can be readily obtained, as by that means the field of competition among contractors would be greatly enlarged; and the only consideration that at present could have any weight with the Company in favor of letting out the work to be paid for in bonds, is the saving of the time that otherwise must necessarily be consumed to perfect a negotiation. But whether this consideration should be allowed to prevail, must depend materially on the character of the bids, and the responsibility of the parties who may offer to contract for bonds, in case any such proposals should be offered. No such contract certainly will be entered into, unless the parties can demonstrate to the satisfaction of the Board that they have ample means or resources, or have made such arrangements as to leave no doubt of their ability to finish the work within the time that may be prescribed, which will not exceed two years from the commencement of operations.

Whether, however, the work be completed by contractors who can command the means and will receive the bonds in payment or whether the Board are first to raise the money on the bonds from capitalists, and pay for the work in cash, it is very manifest that *the security given will be so abundant as to render the investment one of the best of which we have any knowledge.* By force of the law and its acceptance by this Company, the bonds will be *preferred and absolute statutory liens* on the entire nett revenues of the Company, fortified by guaranties of an annual tonnage for the first five years greatly more than is necessary to yield a sum sufficient to pay the interest and the annual appropriation to the sinking fund provided by the act. The margin allowed over and above the amount necessary for the completion of the canal and the payment of the necessary expenses appertaining thereto, will be applied to the payment of the interest on the actual outlay until the work is finished; and after that period the revenues of the Company will be an unfailing and constantly increasing source for that purpose, and the providing an adequate sinking fund to discharge the principal of the bonds when they become due, according to the requirements of the law.

It may be proper, in this connexion, to give a brief description of the Chesapeake and Ohio Canal, its dimensions, present cost, capacity, and the sources of its expected trade, in order that the strength of the security upon which the bonds are to be based may be justly appreciated.

## THE CANAL.

The Chesapeake and Ohio Canal, with the terminus at present contemplated, extends from Georgetown, in the District of Columbia to the town of Cumberland, in Allegany county, Maryland, a distance of  $184\frac{1}{2}$  miles. About five miles of the canal is within the District; the entire residue of the line is within the State of Maryland. Of the entire line,  $134\frac{1}{2}$  miles, extending from Georgetown to Dam No. 6, are finished and navigable, and the trade thereon is steadily increasing. Thirty-one and seven-tenths miles of the work on the remaining fifty miles have already been executed, at a cost of \$2,892,000, and there only remain eighteen and three-tenths miles of the work to be done to complete the canal and open a through navigation from the tide water of the Potomac to Cumberland. The amount required to finish these eighteen and three-tenths miles, according to a detailed estimate made by the Chief Engineer in 1842, was \$1,545,000. That estimate was made in reference to the cost of the work which had been done at a time when provisions were high and labor scarce. Now, however, provisions are low, and labor is abundant, and these advantages must necessarily enure to the benefit of the company.

## DIMENSIONS AND COST.

The *depth* of the Chesapeake and Ohio Canal is six feet throughout, but its transverse section varies. From Georgetown to Harpersferry, a distance of sixty miles, it is sixty feet wide at the top, and forty-two feet at the bottom. From Harpersferry to Dam No. 5, (forty-seven miles,) the top width is fifty feet, and bottom width thirty-two feet. From Dam No. 5 to Cumberland, (seventy-seven and a half miles,) the top width is fifty-four feet, bottom width thirty feet. The basin of the canal at Cumberland is six hundred and nine feet above the level of tide water at Georgetown. This ascent is overcome by one tide and seventy-five lift locks, averaging about eight feet lift. The locks, so far as the work has been finished, are constructed in the most durable manner, of solid masonry, and each has a chamber of one hundred feet long and fifteen feet wide in the clear. They are constructed with a view to a double lockage, whenever the exigencies of the company may require it; but, as we shall presently show, the capacity of the canal, with single locks, as at present, is fully equal to the accommodation of a trade sufficient to gratify the most extravagant desires of its supporters. The sheer cost of the canal up to this time is as follows:—

For the acquisition of lands, - - -	\$402,913 94
For the engineer department, - - -	358,951 04
For construction, - - -	9,013,837 56
Total, - - - -	<u>\$9,775,702 54</u>

## CAPACITY.

When the canal shall be finished and filled to its capacity, boats carrying 100 tons of tonnage may navigate its entire length with



ease. In consequence of the mildness of the latitude in which it is located, it has heretofore seldom been closed by ice for more than six weeks in the year, which generally happens in January and February; and, in this respect, it consequently possesses great advantages over the Northern canals, whose navigation is usually suspended for four or five months annually. It is scarcely necessary to go into an estimate of the annual amount of tonnage that *might* be transported on a work of this description; but, as the calculation is before us, we will here transcribe its results.

Several years ago, the Chief Engineer of this company made two estimates, founded upon data furnished by the experience of fourteen years on the Erie canal in New York. The one was based on the greatest month's work, and the other on the number of boats which, in the opinion of several of the officers of that canal, could conveniently be passed each day. Assuming the capacity of boats on the Chesapeake and Ohio Canal at only eighty tons, according to the first calculation the amount of tonnage capable of being transported on it during a navigable year was shown to be, in both directions, with single locks, as at present, 3,264,000 tons, and with double locks, 5,440,000 tons; and on the second basis, the amount presented was, with single locks, 6,000,000 of tons, and with double locks, 10,000,000 of tons per annum. With a large allowance, therefore, for the usual discrepancy between theoretical calculations and practical results, it is very manifest that many years must elapse before the full capacity of the Chesapeake and Ohio Canal, with single locks, can be tested by actual experience.

#### SOURCES OF TRADE AND REVENUE.

The canal, running nearly parallel with the river through its entire length, necessarily passes through the centre of the fertile grain-growing valley of the Potomac, whose agricultural and manufacturing productions will, in a great measure, be borne upon it to market. Along its line may be created "a water power surpassed in extent only by that which England and the United States enjoy in common, near the western extreme of the Erie canal, in the Falls of Niagara." When it is finished to Cumberland, it will be put in direct communication with the trade of the West, and will afford the most eligible and cheapest route to the seaboard, from the vast and populous regions beyond the Alleghany mountains. With a portage, by wagons, of only seventy-three miles on the great national macadamized road, between Cumberland and Brownsville, on the Monongahela, to which steamboats of the largest class now come, the facilities of water communication for freight of every description will be afforded to the States bordering on the Ohio river, and those of the far West who may navigate its waters, in conveying their productions to the cities of the Atlantic, or receiving from thence their supplies. From the county of Alleghany, also, a considerable amount of tonnage will be supplied, in iron, fire bricks, cement, lumber, &c.; but by far the most impor-

tant source of trade relied on, and to grasp which has been the primary and controlling motive in prosecuting the work to its present destination, is the boundless and inappreciable coal fields of that county. Within a range of from six to twelve miles from the basin of the canal at Cumberland the deposits of bituminous coal of a superior quality are numerous, and, morally speaking, inexhaustible. Those that have been already opened consist of horizontal strata, slightly elevated, and declining towards the valleys, so as to be situated in the best possible manner for self-draining. According to Professor Silliman, the quantity of coal in that region that is thus situated "is so abundant that it will not be exhausted for centuries. It will be the province of a distant posterity to drain to lower beds by tunnelling, or by the unlimited and untiring energy of the steam engine." But the boundless extent of the Alleghany coal fields, as well as the superior quality of the *Cumberland coal*, are matters so well established now as to render a parade of authorities on the subject in this place superfluous. Such as may desire to pursue the inquiry will find a mass of testimony collected together in the Appendix to our special report of the 16th of November, 1843, and new illustrations of its value will be seen by reference to the voluminous and very learned report of Professor Johnson "on American coals applicable to steam navigation and to other purposes," made to the Navy Department, in June, 1844, and recently published under an order of the United States Senate. In this last mentioned document, which contains the results of a long series of scientific experiments, it will be found that, "*in the order of evaporative power under equal weights,*" "*of evaporative power under equal bulks,*" which is deemed of the highest importance for the purposes of steam navigation, and of the "*evaporative power of combustible matter,*" the Cumberland coal takes rank as number one in a list of thirty-seven different varieties of coal, obtained from various regions in the United States and Great Britain and her dependencies, including the Newcastle, Sidney, Pictou, Liverpool, and Scotch coals.

"As a fuel for domestic purposes, (according to the report alluded to,) it possesses, on the one hand, a flame abundantly sufficient to give cheerfulness to the aspect of a parlor fire, and, on the other, a *durability* approximating that of some of the lighter anthracites; and, as a furnace coal for the manufacture of iron, it will be found among the best of the bituminous class, since, either with or without previous coking, it may be very advantageously employed in the blast furnace."

"Three different sizes of chain were in progress of manufacture at the different periods at which these experiments were made. They can, however, be all reduced to the same size, by a comparison with a common standard sample of coal, which was used on two sizes of chain. Thus Atkinson & Templeman's (Cumberland coal) made eighteen links of a chain one and three-eighths inches in diameter, and eight links of another chain one and fifteen-sixteenths inches in diameter, by the use in each case

of sixty pounds of coal. Midlothian (new shaft) coal of equal quantity was found adequate to the making of fourteen links of one and three-eighths inch chain; and three Virginia coals, (viz: Crouch & Snead's, Creek Company's, and Chesterfield Mining Company's,) having a mean evaporating power almost identical with the Midlothian 'new shaft,' put in nine links of one and three-eighths inch chain."

'The following table will exhibit "the relative heating powers of the Cumberland and foreign coals, as tested in making chain cable, compared with their evaporative powers:"'

Designation of coals.	Pounds of steam, at 212°, produced by 1 lb. coal.	Size of links, diamet. in inches	No. of links made by 60 pounds of coal.	Deducted No. of links, of 1½ inch diam., by 60 lbs.
Cumberland—Atkinson & Templeman Maryland and New York Mining Co. - - -	10.699	1 <sup>3</sup> / <sub>8</sub>	18	18
Foreign—Scotch - - - -	6.946	1 <sup>3</sup> / <sub>8</sub>	10	10
Pictou - - - -	8.412	1 <sup>3</sup> / <sub>8</sub>	11	11
Liverpool - - - -	7.842	1 <sup>3</sup> / <sub>8</sub>	13	13
Newcastle - - - -	8.656	1 <sup>3</sup> / <sub>8</sub>	15	15

Possessing these advantages, and others that might be enumerated, it is scarcely possible, without incurring a charge of extravagance, to estimate the amount of Cumberland coal that would be annually consumed, if a full and regular supply were furnished to, and at all times kept on hand in the markets of the country. We have before us, however, abundant evidence to show that the most energetic efforts will be made to keep pace with the demand, to whatever magnitude it may increase, as soon as the proper facilities of conveyance are afforded. During the past year, new life and enterprise appear to have manifested themselves in the Cumberland region. Within the range of which we have before spoken, numerous mines have already been opened by incorporated companies of large capital, private partnership, and individuals, all of whom are now preparing for vigorous operations. One railroad, which is to connect the mines with the basin of the canal at Cumberland, has already been completed; another is under contract, and two more in contemplation, which will be finished next year. These roads, the longest of which will not exceed ten miles, will bring the products of the various mines to the basin of the canal at Cumberland, and from thence they will be transported on its smooth surface to market. According to the present tariff, the toll on the transportation of coal from Cumberland to Georgetown is one dollar per ton. It will be perceived that in the foregoing enumeration we have mainly confined our-



selves to a consideration of the descending trade of the canal. The ascending will of course consist of those ordinary supplies which pass from the seaboard to the interior.

Before concluding this branch of the subject, it may be well to remark, that our income, in the present unfinished condition of the work, is more than sufficient to defray the annual expenses of the Company. During the last year, the entire aggregate expenses amounted to the sum of \$47,287 66, and the income to \$55,894 16—leaving a surplus revenue of \$8,606 50. It will thus appear that the whole revenue that may accrue to the Company from the important trade depending upon the completion of the canal to Cumberland, of which we have just spoken, together with a surplus income from the intermediate trade, which must continue to augment, will be covered by the liens, and be applicable, as far as is necessary, to the payment of both the interest and principal of the bonds that may be issued.

We have thus presented a brief outline of the canal, and indicated some of the most prominent sources of its expected trade and revenue. Having done this, we think we have given good reasons for the assertion made in an early part of this communication, that the bonds that are to be issued under the recent law, being preferred and absolute liens upon the entire nett revenues of the Company, will be one of the best and safest investments of the day.

In addition to the laws of which we have hereinbefore spoken, and which are now submitted for your acceptance, we also obtained from the last Legislature of Maryland a very important act for the prevention of injuries to the canal and its works, to guard against frauds upon our revenues, and to facilitate generally the enforcement of the police regulations of the Company. This law, not now requiring the assent of the Stockholders, is not presented to you in form; but we deemed it worthy of being mentioned at this time as a matter of interest. In connexion with the two other laws, it perfects our system of measures. It clothes the Company with ample powers to protect and defend, whilst the others enable it to press onward to its present destination, and complete the magnificent improvement which has so long been retarded for want of such aid.

Our present position, therefore, is a subject of congratulation. With an ample provision for the completion of the Chesapeake and Ohio Canal to Cumberland; with responsible parties willing and ready to execute and deliver the guaranty required by the third section of the act, to give efficacy to that provision, and with a confident reliance upon the cordial co-operation of those whose sanction and approval are necessary to perfect such guaranty, and some of the other proceedings under the law, we have every reason to felicitate ourselves on the prospect of a speedy termination of the long probation which this Company has been compelled to endure. And among the numerous causes of gratification which will arise from a contemplation of the future, in case our

just expectations in this behalf be realized, not the least will be the conviction that, at an early period after the navigation shall have been opened to Cumberland, the State of Maryland will derive substantial returns from her large investments in this work. The shadow that has recently been thrown across her honored name is from the pillar of debt that has been built up by her contributions to this Company, and the burden of that debt must continue to bear heavily upon her patriotic people, until relief is brought to them from the revenues of the canal.

It will be observed that in the present communication we have confined ourselves exclusively to the special objects for which this meeting was called, and to the consideration of matters appertaining thereto. At the regular annual meeting of the stockholders in June next, we will make our usual report in regard to the general concerns of the Company during the past year.

By order of the Board:

JAMES M. COALE,  
*President of the Ches. and Ohio Canal Company.*

(The Appendix to this report (of the 29th of April) consists of memorials, and copies of the laws, which may be seen by reference to the statute books, and therefore is here omitted.)

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[B.]

## GENERAL MEETING OF THE STOCKHOLDERS OF THE CHESAPEAKE AND OHIO CANAL COMPANY.

A General Meeting of the Stockholders of the Chesapeake and Ohio Canal Company, duly convened agreeably to the charter of said Company, was held on the 29th of April, 1845, at the office of said Company in the city of Frederick, to take into consideration the expediency of accepting an act of the Legislature of Maryland, passed at its recent session, entitled "An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes;" and also an act entitled, "An act further to amend the act incorporating the Chesapeake and Ohio Canal Company," passed by the Legislature of Virginia on the 20th day of January, 1844, confirmed by the Legislature of Maryland by an act passed the 8th February, 1844, and assented to by the Congress of the United States during the session just closed.

On motion, Governor SAMUEL SPRIGG, of Maryland, was called to the Chair, and THOMAS TURNER was appointed Secretary.

The list of the Stockholders having been called over, on motion, the Chairman appointed Messrs. Ingle, Van Lear, and Washington, a committee to examine the various proxies, and report thereon.

The said committee, having performed the duty assigned them, reported the following Stockholders to be duly and regularly represented in this meeting, viz :

*The United States*—By Colonel J. J. Abert.

*The State of Maryland*—By Governor Samuel Sprigg, Allen B. Davis, John Van Lear, and William T. Goldsborough, Esqrs. State Agents.

*The State of Virginia*—By James L. Ranson, Esq.

*The Corporation of Washington*—By W. W. Seaton and Lewis Johnson, Esquires.

*The Corporation of Georgetown*—By William S. Nicholls, Samuel McKenney, and Evan Lyons, Esquires.

*The Corporation of Alexandria*—By Phineas Janney, Robert H. Miller, and William H. Fowle, Esquires.

*The Corporation of Shepherdstown*—By Jas L. Ranson, Esq.

In addition to the above, there were several individual Stockholders represented by proxy, and numerous Stockholders personally present; in all, constituting the representation of a large majority of the stock of said Company.

JAMES M. COALE, Esq., the President of the Company, on behalf of the President and Directors, presented and read a report to the meeting in regard to the objects for which it was convened.

After which, he presented and laid before the meeting authenticated copies of the following acts, viz :

An act entitled "An act to amend the act incorporating the Chesapeake and Ohio Canal Company," passed by the Legislature of Virginia on the 20th January, 1844.

An act entitled, "An act to confirm an act of the General Assembly of the State of Virginia," &c., passed by the Legislature of Maryland on the 8th February, 1844.

An act entitled, "An act confirming and assenting to an act of the Legislature of Virginia," &c., passed by the Congress of the United States, and approved by the President on the 7th day of February, 1845.

Also, an act of the Legislature of Maryland, entitled, "An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes."

Whereupon, J. VAN LEAR, Esq., one of the Maryland State Agents, submitted the following resolution :

*Resolved by the Stockholders of the Chesapeake and Ohio Canal Company in General Meeting assembled,* That the act entitled "An act further to amend the act incorporating the Chesapeake and Ohio Canal Company," which was passed by the Legislature of Virginia on the 20th day of January, 1844, confirmed by the Legislature of Maryland on the 8th day of February of the same year, and assented to by the Congress of the United States, approved by the President on the 7th day of February, 1845, be, and the same is hereby, accepted and assented to, and declared to be in full force as a part of the charter of this Company.



The question being taken, the above resolution was *unanimously* adopted.

JAMES L. RANSON, Esq., proxy of the State of Virginia, then offered the following resolutions.

*Resolved by the Stockholders of the Chesapeake and Ohio Canal Company in General Meeting duly assembled,* That the provisions of the act entitled "An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes," passed by the Legislature of Maryland at its December session, 1844, chapter 281, be, and the same are hereby, approved, assented, and agreed to; and that such approval, assent, and agreement, under the corporate seal and the signature of the President of this Company, be communicated to the Treasurer of the Western Shore of said State, in conformity with the 9th section of the said act.

*Resolved,* That a further mortgage to the State of Maryland be executed by this Company, and delivered to the Treasurer of the Western Shore of said State, on the canal, its lands, tolls, and revenues, subject, nevertheless, to the liens and pledges made, created, or authorized by the said act of 1844, chapter 281, as an additional security for the payment of the loan made by the said State to this Company, under the act of December session, 1834, chapter 241, and the interest due and in arrear, and which may hereafter accrue thereon, in compliance with the 7th section of the first-mentioned act of 1844, chapter 281.

The said resolutions were read; and, the question having been taken, they were *unanimously* adopted.

The meeting then, on motion, was adjourned *sine die*.

SAMUEL SPRIGG, *Chairman*.

THOMAS TURNER, *Secretary*.

### [C.]

*Instrument of writing transmitted to the Treasurer of the Western Shore of Maryland, signifying the acceptance on the part of the Chesapeake and Ohio Canal Company of the act of Maryland, December session, 1844, entitled "An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes."*

Whereas the General Assembly of Maryland did, at its late December session, 1844, pass an act entitled "An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes," in which act, among other things, it is provided, "that whenever the Chesapeake and Ohio Canal Company, in general meeting of the Stockholders assembled, shall approve, assent, and agree to the provisions of this act, and shall have communicated to the Treasurer of the Western Shore of Maryland

such approval, assent, and agreement, under the corporate seal and the signature of the President of said Company, this act, and every part and provision thereof, shall take effect, and be in full force, but not otherwise."

And whereas, the Stockholders of the Chesapeake and Ohio Canal Company did, in general meeting, on the 29th day of April, 1845, pass the following resolution:

"*Resolved*, by the Stockholders of the Chesapeake and Ohio Canal Company, in general meeting duly assembled, 'That the provisions of the act entitled 'An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes,' passed by the Legislature of Maryland at its December session, one thousand eight hundred and forty-four, chapter 231, be, and the same are hereby, approved, assented, and agreed to; and that such approval, assent, and agreement, under the corporate seal and the signature of the President of this Company, be communicated to the Treasurer of the Western Shore of said State, in conformity with the ninth section of said act:'"

Now, therefore, I, James M. Coale, President of the Chesapeake and Ohio Canal Company, do, by these presents, make known to the Treasurer of the Western Shore of Maryland, that the Stockholders of the Chesapeake and Ohio Canal Company have, in general meeting, assented to and accepted the said act of the General Assembly of Maryland, passed at December session, 1844, entitled "An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes," with all its conditions and provisions.

In testimony whereof, I have hereunto caused the corporate seal of the said Chesapeake and Ohio Canal Company to be affixed, and signed these presents, this thirtieth day of April, Anno Domini one thousand eight hundred and forty-five.

J. M. COALE, President

Chesapeake and Ohio Canal Company.

Test. THOMAS TURNER,

Clerk Chesapeake and Ohio Canal Company.

OFFICE CHESAPEAKE AND OHIO CANAL CO.,

Frederick, May 5, 1845.

I hereby certify the foregoing to be a true copy of the original instrument of writing which was transmitted to the Treasurer of the Western Shore of Maryland on the 3d instant.

Test:

THOMAS TURNER,

Clerk Chesapeake and Ohio Canal Company.

[D.]

[COPY.]

TREASURY, ANNAPOLIS, 6th May, 1845.

DEAR SIR,—I have the honor hereby to acknowledge the receipt of your favor of the 2nd inst., transmitting a certified copy of a resolution of the Stockholders of the Chesapeake and Ohio Canal in general meeting duly assembled, approving, agreeing, and assenting to the provisions of the act of the General Assembly of Maryland, entitled "An act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes," passed at December session, eighteen hundred and forty-four.

And also an Instrument of writing in due form communicating such agreement, assent and approval under the corporate seal and the signature of the President of said Company, in conformity with the ninth section of said act.

Very respectfully, your obedient servant,

(Signed.) D. CLAUDE,  
Treasurer, Md.

To J. M. COALE, Esq.,  
President Ches. & Ohio Canal Co.

I hereby certify the foregoing to be a true copy of the original letter on file in this office.

Test: THOMAS TURNER,  
Clerk Chesapeake and Ohio Canal Co.

OFFICE CHESAPEAKE AND OHIO CANAL CO.,  
Frederick, November 13th, 1845.

[E.]

[COPY.]

*Certificate of the approval of the Instruments of Guaranty, by the Governor and State Agents of Maryland.*

Whereas by an act of the General Assembly of Maryland, passed at December session, 1844, chapter 281, entitled "an act to provide for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes," it is, among other things provided, that "no bonds shall be issued for the completion of the Chesapeake and Ohio canal to Cumberland, as therein before provided for, until after one or more of the incorporated companies of Allegany county, or other corporations or individuals, shall by an instrument or instru-



ments of writing in due form, with ample security, to be approved by the agents representing this State in the Chesapeake and Ohio Canal Company, or a majority of them and the Governor, guarantee to the said company an aggregate transportation on the entire length between Cumberland and the District of Columbia on said canal, of not less than one hundred and ninety-five thousand tons of tonnage per year on an average of years for five years, dating from the end of six months after the said canal shall have been completed to Cumberland, and the navigation opened to that point."

And whereas instruments of guaranty, in due form with ample security, have been executed and delivered to the said Chesapeake and Ohio Canal Company by certain incorporated companies of Allegany county, and by individuals, for the full amount required by the said law, and the same have been submitted to and approved by us.

Now, therefore, to all whom it may concern, be it known, that instruments of writing with ample security have been executed and delivered to the Chesapeake and Ohio Canal Company by certain incorporated companies of Allegany county, and by individuals, guaranteeing to the said Chesapeake and Ohio Canal Company an aggregate transportation on the entire length between Cumberland and the District of Columbia, on said canal, to the full amount of one hundred and ninety-five thousand tons of tonnage per year on an average of years for five years, dating from the end of six months after the said canal shall have been completed to Cumberland and the navigation opened to that point; and that we, the Governor of Maryland, and the agents representing said State in the said Chesapeake and Ohio Canal Company, have examined and approved said instruments of guaranty as being amply secured and in full compliance with the provisions of the act entitled "an act for the completion of the Chesapeake and Ohio Canal to Cumberland, and for other purposes," as herein before mentioned.

Given under our hands this 29th day of July, in the year of our Lord, one thousand eight hundred and forty-five.

THOS. G. PRATT, Governor of Maryland.

SAMUEL SPRIGG,	} Agents representing the State of Maryland in the Chesapeake and Ohio Canal Company.
TENCH TILGHMAN,	
JOHN VAN LEAR, Jr.	
A. B. DAVIS,	

*Office Chesapeake and Ohio Canal Company,*

Frederick, December 2, 1845.

I hereby certify the foregoing to be a true copy of the original paper on file in this office.

Test :

THOMAS TURNER,  
Clerk Chesapeake and Ohio Canal Co.

[F.]

## NOTICE.

OFFICE OF THE CHESAPEAKE & OHIO CANAL Co. }  
 Frederick, August 18th, 1845. }

Instruments of guaranty, with ample security, assuring to the Chesapeake and Ohio Canal Company an aggregate transportation on the entire canal, of not less than one hundred and ninety-five thousand tons of tonnage per year, on an average of years for five years, dating from the end of six months, after the canal shall be completed to Cumberland, and the navigation opened to that point, having been executed and delivered to the company, and approved by the Governor of Maryland and State Agents, the Board of President and Directors of said company, are now authorized to borrow money on the Bonds of the company, which are made, preferred and absolute liens on the entire nett revenues of said company, to pay for the completion of said canal to Cumberland, or to enter into a contract, or contracts, for the completion of said work, and to pay for the same directly in said Bonds.

The Board of President and Directors of said company, are therefore now prepared to receive and act upon proposals, either for the negotiation of said loan, or for the completion of the Chesapeake and Ohio Canal to Cumberland, for the Bonds of the company, as preferred liens on the nett revenues of the company, as aforesaid. As stated in their report of the 29th of April, however, no contract will be entered into for the completion of the work for Bonds, unless the parties proposing can demonstrate to the satisfaction of the Board, that they have ample means and resources, or have made such arrangements as to leave no doubt of their ability to finish the work, within the time prescribed, which must not exceed two years from the date of the commencement.

More particular information may be had by application, at the office of the company in Frederick.

By order of the Board,

THOMAS TURNER,  
 Clerk Ches. & Ohio Canal Co.

[G.]

*From the Boston Daily Advertiser.*

## THE CUMBERLAND COAL REGION.

Boston, Nov. 17, 1845.

My letter of the 2d instant, written from Philadelphia, in which I undertook to give you an account of an excursion then just completed, through the valley of the Potomac river, along the banks of the Chesapeake and Ohio Canal, and through the rich mineral re-

gion near the sources of that river, came to an abrupt conclusion, before the narrative was more than half completed. I will now attempt to furnish the residue, and to prevent its being drawn out to an inconvenient length, I shall relate what I saw in the most summary manner.

The object of the visit of our party being to ascertain the character of the works of the canal, and more especially their durability, and the state of preservation which they are now in, after a number of years' continuance, with a very moderate amount of annual expenditure for repairs, they considered this object fully accomplished during the journey which I have described of nearly a hundred miles, and which was made in our canal boat in the space of a day and a half. In the course of this journey, we passed through more than 40 lift locks. We carefully observed the state of these, and of all the works of masonry. All which as I have already remarked, appeared to be of the most substantial and durable character, as well as of highly finished workmanship. The banks and towpaths also throughout, appear to be of remarkable firmness and durability, the canal of equal depth, and of such depth as to be entirely free from grass, and every description of vegetation. The appearance of the masonry on the upper portion of the line, is decidedly better than that on the lower parts, and it is also probably stronger, in consequence of the superior quality of the stone used in the work. There was perhaps also some improvement in the finish of the work from the greater experience of the contractors by whom it was constructed, as well as of the engineers.

Our party having come to the conclusion of abandoning the further prosecution of our voyage, at about noon on Tuesday, we passed over to the Virginia side of the Potomac, and proceeded to the nearest station of the Baltimore and Ohio Rail Road, where we were soon taken up by the train which left Baltimore in the morning. The train was well filled, by apparently 150 passengers, and it proceeded at a good pace to Cumberland, where it arrived shortly after sunset. It is singular that the rail road which departs from Baltimore, in the heart of the State of Maryland, soon after it reaches the banks of the Potomac, passes over to the Virginia shore, and continues on that side of the river for near a hundred miles; while the canal, which commences at Alexandria; on the Virginia side of the river, before leaving the District of Columbia, crosses over to the Maryland side, and continues along that bank, throughout its whole course to Cumberland. The projectors of the canal had their choice of route, and their preference of the Maryland shore drove the rail road to the opposite bank. The rail road although forced upon the less favorable shore, not being so rigidly confined as the canal to a level route, was not compelled to follow the sinuosities of the river, but soon after passing Harpersferry, was able to take a more direct course, for about 20 miles, through the fine counties of Jefferson and Berkley, and thus to make a saving of 10 or 15 miles in distance.



The distance in other parts on its upper portion might probably have been further shortened by occasionally crossing the river, had the ground not been previously secured for the use of the canal. At two points the extreme curvatures of the river are avoided by tunnelling the points of projecting mountains. These are through masses of slate rock, the crumbling texture of which is such, that it was found necessary to protect the perforation by strong side walls, covered with an arch of brick masonry. Four or five miles below Cumberland, the rail road again crosses the Potomac into the State of Maryland, and passing over the canal also, proceeds on the north side of it to its present termination, near the proposed canal basin in the centre of the town.

I have remarked that the canal is yet unfinished, that is, the water is not let into it, for a distance of 50 miles, extending from Dam No. 6 to Cumberland. It was arranged that the visiting party should pass over this part of the route on horseback, for the purpose of examining minutely the advance which was made in the work, before its suspension in 1841, and the present state of the finished as well as unfinished portions of it. As the horses which had been ordered for the accommodation of the party, would not have arrived at No. 6, and as the accommodations for lodging so many, or even any number of persons would probably not be found of the first order, it was concluded to proceed by rail road to Cumberland, and to return to Dam No. 6, by the same conveyance on the following morning, for the resumption of the survey at that point.

We accordingly arrived at night, as I have before stated, at Cumberland. This town is remarkable for being one of the principal gateways to the Western country. Situated on the Eastern margin of the Alleghany Mountains, it has long been known as the starting point for the celebrated national road, which was constructed at the charge of the Treasury of the United States, extending in the first instance to Wheeling, on the Ohio river, and subsequently in a westerly direction through the State of Ohio. The importance of the town has been greatly increased by the recent opening of the rail road to it, and the expected extension of the canal to the same point, as well as by the commencement of works at the iron and coal mines in the vicinity. The impulse thus given to it may be judged of, from the fact that the population of the town is now 7000, it having been doubled within the last 18 months. It is already the second town in point of population in the State, and it is manifestly destined to a rapid increase. A great number of substantial brick buildings have been erected within the last two years, and within that period not less than five miles of pavement have been laid in the streets of the town. There is a handsome Court House, many handsome private houses, and large stores, and several commodious public houses.

At 8 o'clock, on the following morning, we resumed our seats in the rail road cars and retraced the course of our journey of the preceding evening, to Dam No. 6, where we were set down in a

little more than two hours. We were thence to find our way back to Cumberland, in the course of the two succeeding days, by following the course of the unfinished canal. This dam, like the others on the river below, is built across the Potomac for the purpose of retaining a sufficient portion of its waters, for the feeding of the canal, and also for forming a navigable basin by which boats and rafts from either shore of the river, may be admitted into the canal, or passed from the canal into the river. This dam is built with great strength, to enable it to resist the very high freshets to which this river is subject. The bed of the dam is wide, giving it a gradual slope not only on the upper side, but also below the summit, so that the water may shoot over it, to a distance from its base. The masonry at the extremities of the dam, on the two banks of the river, including the locks on the northern shore, for passing boats into the basin and receiving the proper supply of water at all levels of the river, and also for passing with boats into the canal above, is of a very substantial character, and it is in every respect in excellent order. From this dam, as well as from that at Shepherdstown, and at other places where the canal receives its supply of water, the river is rendered navigable to a considerable distance above. These basins afford the means of entering the canal by boats from the Virginia shore. At a short distance above this dam, a landing is provided, for receiving into the canal boats, coal and other loading, which may be brought to this point on the Baltimore and Ohio Rail Road. A turn out track is here made, for the accommodation of this trade, and during the last year, four or five thousand tons of coal, from Cumberland, were here delivered into canal boats for the District of Columbia.

By the time the party had completed their examination of the works at this dam, and of the canal below for some distance, the horses arrived, and after each had provided himself, from the joint store, with his supply of provisions for the day, we mounted for our journey along the canal. Fortunately for us, our horses proved to be, in general, very good ones, and we made our journey with a good degree of speed and comfort.

Should I attempt to describe the incidents of this journey, with the interesting portions of the work and the varied and striking features of the country, in detail, I should be compelled again to leave my narrative but half finished. I can only describe it in the most general terms, and without leisure for a careful condensation. The canal proceeds as before, for the most part along the base of a precipitous mountain ledge, terminating at the river, with a margin constantly varying in width. The skill of the engineer was constantly taxed, to determine whether the bed selected for the canal was such as would contain the water, and resist filtration and the consequent washing away of the bank, from the constant action from within, and also whether it was of sufficient strength and elevation, to resist the force of the river upon the bank without, particularly in periods of inundation, which some-

times raise the river to a height of near 30 feet above the level of low water. In all cases where it was deemed necessary, for security against these two forms of resistance, the earth has been removed, and an artificial bed and bank have been substituted, composed of a material which will resist filtration, and presenting an exterior protection, consisting chiefly of rocks, taken when necessary, from the interminable ledges along the northern bank of the canal, sufficient to resist the force of the waters of the river at the time of its highest freshets. Since the advance of the works to their present state, a freshet has occurred, viz: in the Summer of 1842, of greater height than any flood that has been known within a period of more than 30 years. This afforded a favorable test of the sufficiency of the precautions which had been taken, in the planning of the work. In all places where the works were completed, they were found to be fully adequate to resist the inroads of the flood, with a margin to spare, against even an increase of the volume of water.

The whole of this division of the canal, of 50 miles in length, from Cumberland to Dam No. 6, is to be fed from the basin at its head. The whole length must of course be opened for use, at one time. For the purpose of facilitating a simultaneous completion of all parts of it, the heavier portions of the work were undertaken first. The easier sections are for the greater part untouched. These consist merely of excavation through the bottom lands, which occur to a considerable extent along some portions of the valley of the Potomac, as it widens, on approaching its head branches. The whole country in fact, for a distance of 20 or 30 miles, measured by the widenings of the river, below Cumberland, presents a much less wild appearance, in consequence of its opening into a wide basin, especially after passing the south branch of the Potomac. Along this valley, on both sides of the river, as you approach the base of the Alleghanies, there are extensive meadows, and tillage lands, which afford excellent crops of wheat. The general aspect of the country along this distance, is not unlike that of the valley of Connecticut river, in some parts of Hampshire and Franklin counties. It has consequently a far more attractive appearance, as a country inviting cultivation, and habitation, than the regions below. Considerable portions of the canal are in consequence not crowded so closely upon the ledge of rocks which forms the base of the adjoining mountains.

On recurring to a summary description of the present state of this section of the work, which is founded on the statements of the engineer, I find that 31 7-10 miles of the fifty, are already completed. By far the greater portion of the distance thus completed, as we observed on riding along the tow-paths, notwithstanding the lapse of five years since its completion, and the absence of all repairs during that period, is now in a condition for the immediate admission of the water. This trial of the ability of the banks and path, to resist the effects of time, rains, and frost, without the aid of repairs, affords a very satisfactory test of their durability. Much



of the path, as I have remarked of the parts below, has the consistency of a MacAdamized road, and the banks appear to be of a consistency to resist effectually the wash and filtration of the water. The expense of the work thus executed, on these fifty miles, was \$2,892,000. This includes the expenditure on portions of the remaining 18 3-10 miles, which are begun and not finished. These embrace the most difficult and costly parts of this division of the canal, and they are now so far advanced as to admit, for the most part, of being finished in about the same period of time which will be required for the execution of the lighter sections yet untouched.

The most difficult and expensive portion of the work which remains to be completed, is one on which the greatest amount of cost and labor has been already expended. This consists of a tunnel and deep cut, through a rocky projection of the mountain, by means of which a circuit of about five miles, along the bend of the river, with much expensive work along its precipitous bank, is avoided. The length of the tunnel, all of it through a slate rock, is 3,118 feet, and including the deep and expensive cuttings at the two termini, particularly the eastern, where for a long distance it is of great depth, the length of heavy rock cutting is about a mile. The depth of the tunnel, through the highest summit of the rock which it passes under, is 360 feet. A great part of the excavation of the tunnel, in consequence of the time occupied in opening the approaches at the termini, consisting of long and deep cuttings, was made by working through two pairs of perpendicular shafts, one of which is of a depth of 126, and the other 166 feet. The waste rock of the excavation was hoisted alternately through the two openings, in each pair of shafts, and the two served to sustain a current of air, by which the tunnel was more easily and effectually ventilated.

It would require the whole compass of my letter, to enable me to give you a satisfactory description of this gigantic work. I can only add, that the work is only so far completed, that the entire mountain is perforated, so that the air passes through it; and our whole party, each with a lighted candle in hand, walked through it. The rock is full of fissures, from some of which there are occasional slight tricklings of water. Masses of rock occasionally fall from the roof and sides of the opening, and in places the passage is much obstructed by them. Much of the loosened material is suffered to remain, because it will be needed in the completion of the work which remains to be done within the tunnel. Our path was therefore very uneven, and sometimes difficult. We picked up some curious specimens of stone, which attracted our attention in the dim light as we passed. Among them were a few fossil specimens of vegetable formation, which were taken where the superincumbent rock was 160 feet in height. The cost of the excavation thus far was about \$80,000, and the estimated cost of completing it is about an equal further sum. What remains to be done is to form a coating for the whole tunnel, to consist of a brick wall

on each side, united by an arch above, to be 18 inches in thickness, and laid in hydraulic cement. The width of the tunnel between the walls is to be 24 feet, and its height to the crown of the arch 24 feet. A tow-path 6 feet in width is to be formed, of substantial masonry, and surmounted by an iron railing, and the water way is to be 18 feet in width, and the depth of water 7 feet. It will require six or seven millions of bricks, and it is estimated that the work may be completed in two years. Clay for the making of brick abounds in the immediate vicinity of the tunnel, and fuel for little more than the cost of cutting. An excellent material for the making of hydraulic cement is found on the borders of the canal, and also near Cumberland, and there is a mill for grinding it on the bank of the canal. All the materials for the work will therefore be obtained at a low cost.

We had hardly completed our survey of this interesting work, and the magnificent scenery in the windings of the river around it, when the shades of evening began to fall upon us. There was little appearance of any settlement, or human habitation near us, but being invited by Mr. Dungan, the resident Engineer who accompanied us, to lodge with him for the night, his invitation was most cheerfully accepted. After fording the Potomac, where it passes rapidly over a wide bed, covered with loose rocks, among which our horses had some difficulty in finding firm foothold, and riding some distance through a winding path, on the Virginia shore, we found his hospitable mansion, in a most retired, but romantic spot, surrounded by fine fields, and at a distance by endless mountains and forests. Here we were kindly received by his family, hospitably entertained, and notwithstanding our numbers most comfortably lodged. At an early hour in the morning, we resumed our journey, nearly twenty-five miles of it being still before us.

There was much in this day's journey, deserving of description, but I must pass it over without notice. We took our dinner at a place called Oldtown, the only place resembling a village which we passed during the day. What I am most desirous of attempting to describe, but that it would lead me into too long a digression foreign to the purpose of my letter, is some of the peculiarities in the geological formation of the points of the mountains, which are cut through at hundreds of places, where they project into the valley approaching the very margin of the river. What struck me as most remarkable was, that the sections of these mountain ridges or promontories, present almost uniformly an upper stratum of rock, forming an arch corresponding nearly with the external face of the mountain, and supported beneath by other strata, corresponding more or less nearly with the form of the upper stratum. These are cut by fissures, nearly at right angles with the sides, into apparently separate rocks, of all varieties of dimensions, the whole forming a sort of cyclopean masonry, having much the appearance of works of art, more massive than are any where to be met with. These

arches are sometimes nearly in regular curves, and sometimes quite irregular. They often have the appearance of having been forced, while in a semi fluid state, from a regular arch in which they had been previously formed, by a superincumbent weight, or some other force. The upper stratum varies in thickness apparently from four to ten feet or more. The inferior strata are generally much thinner than the upper, and more irregular. Some of these arches are extremely curious, particularly one which is intersected by the rail road, near where it crosses the Potomac, and others of a similar character in that vicinity, which are intersected by the canal.

We finished our day's journey at so late an hour, as to be obliged to defer our visit to the canal basin to the next morning. This will be formed in the central part of the town, and indeed the town is apparently built in great measure in reference to it. There will, in fact, I suppose, be two basins—one an enlargement of the upper level of the canal itself, upon the borders of which, or of branch canals leading into it, merchandise may be loaded and unloaded upon boats there lying, and the basin or reservoir to be formed above, by a dam to be erected across the Potomac, a short distance below the discharge into it of Wills's creek, one of its most important branches. The foundations of this dam are already laid, extending across the river, embedded upon the rocky bottom of it. The wings of this dam are also built, in one of which is the sluice way for the supply of water to the canal, and also a lock for the transfer of boats from the canal to the basin above, and from the basin to the canal. This structure, like the other masonry, is of great strength, and of excellent materials and workmanship. I do not now recollect the proposed height of the dam, but it will be such as to afford a sufficient depth, in the reservoir, thus formed, for the floating of loaded boats, over a very large space, and a sufficient fall to create a power for manufacturing purposes, from the surplus water of the river. It will, in fact create a slack water navigation, extending along the main branch of the Potomac, if I mistake not, for some miles, upon which rail roads from the mines may, if it should be judged expedient, discharge their loaded cars.

I find it necessary, notwithstanding my efforts to curtail the narrative, to defer the account of our visit to the Mount Savage Iron Works, and the Coal Mines, to another letter.

I find it necessary, notwithstanding my efforts to curtail the narrative, to defer the account of our visit to the Mount Savage Iron Works, and the Coal Mines, to another letter.

Boston, Nov. 18, 1845.

Having taxed your patience with a much longer narrative of the excursion of our party, on the canal, the sole object of which narrative was to afford some distinct notion of the state of the canal, the prospect of its completion, the durability of the work, and its capabilities for doing the business for which it was designed. I proceed now to give a short account of a hasty visit, which we made to the Mount Savage Iron Works, and to several of the coal mines in the vicinity of Cumberland.



At 9 o'clock, we took our seats in the cars of the Mount Savage Rail Road, but in consequence of some accidental delay, we were not under way until 10. This rail road, passing through the valley of Wills's Creek to the mouth of Jennings's River, and thence by that of the last named stream, to the Mount Savage Company's Iron Works, has been built at the expense of that company, for the purpose of giving them the means of communication with the Baltimore and Ohio Rail Road, and with the Canal when it shall be completed to Cumberland. The principal use of it at present consists of the transport of iron and coal, and the conveyance of passengers and merchandise between Mount Savage—which is already a considerable town,—and Cumberland. It consists at present of a single track, with a wooden superstructure and plate rail, but the road way is sufficient to admit of the laying of any additional track which may become necessary. It has an ascending grade, in some parts of more than 100 feet in a mile, but as there will be little demand for the transport of heavy loads upward, this is of little consequence. The mountains which enclose the valley through which the route passes, and those which form the whole region of the iron and coal mines, are less lofty and precipitous, and the ravines and vallies less narrow and confined than I had supposed. The mountains, it is true, are of considerable height, and some of their faces are steep, presenting the strong features of mountain scenery, but in general they are not so abrupt as to make them unfit for cultivation. There is a pass near the mouth of Jennings's River, called the Narrows, which is enclosed on both sides by steep mountains, and farther upward the valley is bounded by a bold face of the mountain, consisting of limestone rock several hundred feet in height, bearing the marks of frequent slides of rock from top to bottom, which is called the *Devil's Race Course*. We were informed that it was the practice of persons who want of limestone rock, to resort to this enormous quarry, and to discharge it by its own gravity from the top to the bottom of the precipice. Here we were informed limestone is obtained for the use of the furnaces and other works at Mount Savage, and that Mount Savage, which lies in a basin enclosed by hills not too steep to afford pleasant sites for buildings, presents the appearance of a large and thriving manufacturing establishment. It is the property of a company who are I believe chiefly Englishmen, and it is under the superintendance of Col. Young, a gentleman who has the reputation of being in every way qualified by his intelligence, skills and energy to be entrusted with so responsible a charge. The establishment is rapidly growing from month to month, and the population of the village, entirely dependent upon it is at present not less than 4,500, and this number is likely to be doubled in a very short period. The buildings appropriated to the various branches of manufacture are very large and commodious. That in which the operations of forging and rolling iron are carried on is of immense size, and said to cover an acre of ground. There are other buildings for the various other operations of the iron manufacture.

We saw two large furnaces in blast, by the power of a steam engine of great power, and we saw in the progress of erection, in an adjoining building, another engine, to be of four times the power, which is by far the largest I ever saw, and if I mistake not, the largest in the country. The furnaces are supplied with ore taken directly from the mines in the immediate vicinity. The pits, for *coking* the coal taken from adjoining mines, are situated upon the same height of ground in the immediate vicinity of the spot where the coke is required for use. The buildings and machinery for the smelting, hammering, rolling and casting of iron, for reducing into the various states and forms into which it is desired to reduce it, are arranged along the slope of the valley, on a system adapted to conducting the various operations with the greatest convenience. The manufacture for which preparations appeared to be made on the largest scale, are the manufacture of bar, rail road, and all kinds of rolled iron. The iron for the Maryland Mining Company's Rail Road, had been just rolled there. We saw also some fine H rails which they had begun to roll for the Fall River rail road, but unfortunately for us the rolling was suspended on that day, in consequence of a *strike* among the workmen of that particular branch, for higher wages. I do not suppose that the interruption can have lasted for any length of time. We saw the machinery for the handling, rolling, and sawing off of these rails, and saw also the process of rolling iron in other forms. We were indebted to the obliging courtesy of Col. Young, in showing to us, and explaining to us every thing which curiosity prompted us to enquire into. Many of these things I have not even hinted at, and if I were to attempt to explain or enumerate them, it would make this letter even longer than the two which have preceded it.

We left the interesting spot, deeply impressed with the rare combination which it possesses of every thing necessary for carrying on advantageously the manufacture of iron of every kind and of the best quality. Every material I believe, obtainable from the earth, required for any of the processes of this manufacture, is afforded here in abundance. Even fire bricks were shown to us, made of a material found upon the very spot, which Col. Young assured us were equal to the best he could import from England. All that remains to be done, for ensuring a great and rapid increase of this manufacture at this place, is to bring to the doors of the consumers of the article, by completing the access to it which were long ago projected, and which are now on the eve of completion. Let the Baltimore and Ohio Rail Road, which has already opened the access to this region from one side of the Alleghanies, open a like access to it from the West; and let the Chesapeake and Ohio Canal, on which \$12,000,000 have already been expended, be completed, so as to afford a still cheaper mode of transport for the heavy and cheap products of this region—products which are necessary to the comfortable subsistence of every individual in the country—and the demand for these products must be immense.

Finding it impracticable to extend our researches to all the establishments of this region, which we were desirous of visiting within the day, without a journey in all of some 30 miles, to say nothing of the distance we should be called on to walk both upon, and under the ground, it was decided that our further visit should be chiefly confined to the Mines and Works of the Maryland Mining Company. The direct approach to those Mines from Cumberland is by another route, through the valley of Brad-dock's Run, and nearly in the course of the National road. But we were able to reach them more easily from Mount Savage, by a retired route which carried us past the Clifton and several other Coal Mines. These mines are not yet worked to any great extent, but for the purpose of opening them to the market, the track of a rail road is already nearly graded, uniting with the Mount Savage road at their works, and extending through a valley of gradual ascent to the vicinity of Frostburg. We proceeded on horseback along a winding road in the vicinity of this track, and several coal estates were pointed out to us as we passed. I may here remark, without attempting to give a description of the coal region, that the Mount Savage location was selected rather with reference to the iron manufacture than to that of mining coal, and that being situated near the easterly verge of the coal region, the veins of the coal are thinner, and less eligible for working than at some miles distant towards the southwest, and that for the greatest ease of mining, and abundance of coal beneath a given surface, it is necessary to proceed some 15 or 20 miles, to near the mouth of the Savage river. The thickness of the principal vein, however, increases as you advance towards the National road, where, and in the vicinity of the Maryland, and Boston and New York Company's premises, it is of a thickness of 10 to 14 feet.

On reaching the Cumberland road, you find yourself in the midst of an open and cultivated country, which has supported a considerable agricultural population for many years. Frostburg is a large village prominently situated in an elevated country, and containing a number of good houses. Among them is a large and commodious public house, in a very commanding situation, from which you have an extensive view in every direction. Its elevated situation secures to it at all times a cool and healthy atmosphere, and it is in consequence the resort of visitors from the Southern cities, who, in considerable numbers, make it their Summer residence. The house is large and commodious, and it is well kept. It is on the great line of travel to the West, over the National road, and of course in the line of constant communication with both the East and the West. Our party found there an excellent dinner.

Here we exchanged our horses for seats in carriages, which conveyed us a short distance, down the National road, to the Mine of the Maryland Mining Company. This company possesses a large tract of territory extending South-westwardly from the National road. The large vein of coal of which I have spoken



passes through it, or rather beneath it, lying nearly in a horizontal bed, the two sides curving upwards, while longitudinally it runs in a horizontal direction. There are already two entrances, by horizontal shafts, one of which is near the centre, or lowest point. This will probably be the main entrance to the mine of this company, as it is directly opposite to the termination of their rail road. Cars brought by locomotives from Cumberland, standing on a level 10 or 12 feet below that of the great coal vein, will here receive coal discharged by dumping from the smaller cars which bring it from the mine. The entrance to the mine is wide enough for a double rail road track, on which the cars are drawn by horses or mules. This entrance, which is at a point where the vein had been apparently broken by some convulsion of nature, and its place partially supplied with earth, is protected for some rods by a stone arch. It soon enters the regular vein of coal, and from that point it extends horizontally, as stated above, rather increasing in thickness, for miles. The slate rock above the vein of coal is of sufficient strength to sustain itself, and the superincumbent earth, provided the opening is not made too wide, and sufficient pillars of coal to support it, are suffered to remain at proper intervals. These two entrances or shafts may be made to branch off in any direction at pleasure. The thickness or height of the vein at this place is about eleven feet. This vein is slightly subdivided into three unequal portions, by two thin strata of slate, or shale, which readily crumbles, and is removed, and thrown upon the bottom of the pit, before the coal is taken away.

The other entrance to the same vein is at a distance of some rods on the left, and in consequence of the slope of the vein in this direction, it is at a higher level. This shaft has been opened, and worked to some extent, for many years. It runs in a direction nearly parallel with the other, a distance of some 1500 feet. We entered it that distance, each visitor being provided with a lighted candle. We occasionally met the loaded cars passing out, drawn by mules. We passed also several openings, where other shafts branch off on each side. There was occasionally, at intervals, very little water to be seen, which if there were enough to form a current, might apparently be made to flow out by the side of the railway track. The coal taken from this shaft is at present deposited upon the bank above the rail road termination, to be in readiness for removal to Cumberland and Baltimore, so soon as the rail road shall be completed.

The opening of this mine is at a distance, I believe, of about 10 miles from Cumberland. The only transport of coal to market hitherto, from this place, has been by wagons over the national road to Cumberland. It is thence transported by rail road to Baltimore, at a freight of a cent and a third per mile, with 10 cents in addition for transportation by horse power from the upper depot through the city. The Maryland company is now engaged in the construction of a rail road branching from the Mount Savage rail road at a distance of two miles from Cumberland; thence fol-

lowing the valley of Braddock's Run, near the route of the national road, and terminating at the mouth of the mine as above stated. This rail road is well constructed, of rails made at the Mount Savage works, and of a grade much more easy than that of the national road, the maximum in ascending being a little over 100 feet in a mile. From the mine to Cumberland the grade is all the way descending.

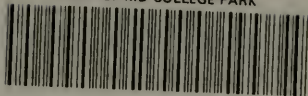
This rail road will be completed in January next, and from that time there will doubtless be a regular supply of this excellent coal in the Baltimore market. A branch of the same rail road is also in progress, and will be completed at about the same time, which is built for the New York and Boston Mining Company, whose mines are situated at the Northward of those of the Maryland Company. Their mine will be entered in a similar manner to that which I have already described. Although the Company is called a New York and Boston Company, I do not learn that any of its associates are citizens of Boston, nor do I learn that Boston capital is invested in any of the enterprises for developing the resources of this mineral region. I here bring my narrative to a close, not for want of material for further recital, but to spare your patience.







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