## BOUNDARY LINE

OF

## West Virginia and Maryland.

## To the Honorable Senate of West Virginia:

Having last month had the honor of an interview with His Excellency, Governor A. I. Boreman, in which I had the pleasure of being allowed to have a conversation with him about the settlement of the West Virginia and Maryland Boundary Line, respecting the line between Preston county, West Virginia, and Alleghany county, Maryland, and to exhibit maps and documents appertaining to it, and feeling encouraged by seeing a passage in reference to this matter introduced in the Governor's message, to your honorable body, I now take the liberty of addressing the Honorable Houses of the Legislature in behalf of an undertaking, in which I take interest, not only as the former Engineer in charge of the Maryland and Virginia Boundary Survey, but also as a partner in real estate and store business, under the firm of Shon \& Co., Maple Run, Preston county, West Virginia, and in Grant Court House, Grant county. I had the pleasure of communicating the following facts, to-wit:

By virtue of several acts of the Legislature of Maryland of 1852 and 1856, and of the act of the Legislature of Virginia of March, 1858, (which acts are appended under the letters $A$ and $B$,) the location of the parts of the Boundary Line between Maryland and Virginia in dispute, (including the line on the eastern shore,) was determined upon, the running and marking of the same authorized, commissioners appointed, and appropriation granted to defray the expenses of the survey by equal payments from each State.

The commissioners, viz: Thomas J. Lee, Esq., of Maryland, and the late Angus Wm. McDonald, Esq., of Virginia, secured the services of then Lieutenant, now General, N. Michler, U. S. Top’l Engineers, for the superintendence of the survey, who, aided by myself, made the survey of the part on the Eastern Shore in the fall of 1858. The summer of 1859 was then occupied in the commencement of the survey of the so-called meridian line, the western line of Maryland, about thirty-seven miles in length. This line was, by the Legislatures of both States by the acts appended in copy, determined to run from the so-called Fairfax

Stone, a mark stone put up at the very source of the North Branch of the Potomac, in a true north line to the Pennsylvania line, and authorization had been given by the two General Assemblies of both States to run and mark this line and to survey an area of reference, of a few miles in width, on both sides of the line. During that summer the line was traced over the tops of the mountains to the intersection of the Pennsylvania line, and run on through the woods for a distance of about eleven miles from the southern starting point, the remainder of the line, for reasons mentioned below, was only cleared sufficiently wide for the purposes of the surveyor.

Line Marks.- Eight permanent monuments were erected by direction of the commissioners of Maryland and Virginia, and at the joint expense of the two States, to designate points on the meridian of Fairfax Stone. Their position was determined astronomically by Lieut. N. Michler, U. S. Top'l Engineers, assisted by L. Daser.

In addition to these monuments, stakes squaring about four inches and standing about five feet out of the ground, were planted at the following points along the line: As far as Stahl's Hill, by direction of the Maryland and West Virginia commissioners jointly, and thence to Mason and Dixon's line, by the Maryland commissioners alone. A list of these line marks is found in appendix "C."

## ASTRONOMICAL DETERMINATION.

The Longitude of the meridian line was, by numerous observations of transits of the moon, and of moon cylminating stars, at the principal astronomical stations, on Backbone Mountain, Lauer Hill and Snaggy Mountain, and by comparison of chronometers transported from the Washington Observatory to Oakland, Alleghany county, Maryland, by railroad, to ascertain the difference in time, found to be-
$2^{\circ} 26^{\prime} 21^{\prime \prime} 75$, west of Washington Observatory.
Or $79^{\circ} 29^{\prime} 09^{\prime \prime} 35$, west of Greenwich.
The Latitude of the following points was determined by many series of observations of north and south stars, on the named astronomical stations:

Fairfax Stone, $39^{\circ} 11^{\prime} 32^{\prime \prime} 5$.
Lauer Hill, $39^{\circ} 21^{\prime \prime} 54^{\prime} 0$.
Snaggy Mouintain, $39^{\circ} 29^{\prime} 05^{\prime \prime} 5$.
The measurement of the line makes the distance from Fairfax Stone to the intersection of Mason and Dixon's line, 191,875 feet, or $36 \frac{34}{100}$ miles, equal to $31^{\prime} 35^{\prime \prime} 3$, of are. ; hence, the latitude of the intersection of Mason and Dixon's line is, $39^{\circ} 43^{\prime} 07^{\prime \prime} 8$.

Magnetic Variation.-Magnetic observations were made at several points along the line, which gave the result contained in the list appended under the letter " $D$."

Elevation.-As the survey of reference was executed with a very good Theodolite, together with Astronomical Instruments, kindly furnished by the U. S. Topographical Bureau, every line or road surveyed was leveled at the same time, thereby giving profiles of all the routes surveyed. The elevation of a very great number of points thus obtained, have been marked on the maps"; the list appended under the letter "E," shows the accurate altitudes of several points along the line, obtained by coincidence between the above mentioned process and barometrical measurements, and will not be without interest.

Whilst Lieut. Michler, aided by L. Daser, thus determined the accurate direction of the line on the ground, the second part of the agreement between the two States was complied with by myself, holding the position of Principal Assistant, and I surveyed during that season an area of about eighty square miles, about equally divided between the two States, along both sides of the line, up to the North West Virginia turnpike, and from that point on the Maryland side exclusively, to the Baltimore and Ohio railroad, as the Legislature of Virginia had failed to make further appropriation for that purpose. In the course of that summer the commissioner of Virginia obtained permission to go to England, in order to look for some further information as to the description of the different boundary lines between Virginia and her neighboring States.

So he went to England in the following winter, 1859-60, and the Legislature of Virginia, in its session of 1860 , resolved not to consent to any more expenditures on this line before having received the report of Mr . McDonald, who, however, did not return until after the close of the session.

The State of Maryland, thus temporarily abandoned by Virginia in this matter, however, was determined to close up her portion of the work, and the Legislature of that State, in 1860, appropriated the further sum of $\$ 10,000$, for the completion of the tracing of the line, and the survey of reference on the Maryland side only, and Lieut. Michler having been ordered away by the United States Government to take charge of the Light Houses on the Pacific Coast, I was, in the spring of 1860, put in charge of the survey, which I completed during that season, assisted by Mr . Daser.

The Maps of the Survey, consisting of eight detail sheets on large Antiquarian paper, on a scale of $\frac{1}{12,000}$ and one General Map on a scale of of $\frac{1}{60,000}$ have just been completed in obedience to the act of the Legislature of Maryland, , passed in 1868, appropriating the sum of $\$ 2,500$ for their completion, and entrusting me with the work, which I have now finished, and have the pleasure, by kind permission of the Govennor of Maryland, to exhibit to your Honorable body.

I have never seen Mr. McDonald's Report apout his researches in England, presented to the Legislature of Virginia at a time when nobody cared for boundary lines, but the original "charter from the Crown of England to the Barons of Baltimore, defining the confines of the lands constituting the old Colony of Maryland," is so plain, that after a careful investigation of the subject, neither of the Legislatures of the two States hesitated to pronounce, in distinct and explicit act, the true meridian line, starting from the old Fairfax Stone, situated at the source of the North Branch of the Potomac river, the boundary between the two States, which, and none else to run and to mark, authorization was given and 'appropriation granted for. This charter, referring to this line, says:
" * * * And all the tract of that land between the routes under-* "written, that is to say, passing from the said bay called Delaware Bay, "in a right line by the degree aforesaid unto the true meridian of the "first fountain of the river of Pattowmack, thence verging towards the "south, with the further bank of said river and following the same on the "west and south."

By mutual agreement the "further" or southern bank of the Potomac was as the boundary replaced by the middle of this river about the year 1780. (See History of Maryland, by J. V. L. McMahon.) Truly the intention of Virginia was to resume negotiations immediately after having acted upon Mr. McDonald's report, but its fulfillment was rendered impossible by the passed events.
Since the establishment of the State of West Virginia this boundary question, which grows in importance with the development of the mineral and other resources of those regions, and the non-settlement of which has already caused much confusion in the collection of taxes, the transfer of lands, in the bringing of suits and serving of process in the neighborhood of the lines, having become the affair of West Virginia, I would respectfully propose the following action by your Honorable Body:
I. To acknowledge the line, as designated in the Charter of Maryland and determined upon by the Legislature of Maryland and Virginia, by an Act.
II. To order a true copy of the Maps prepared for Maryland.
III. To order the surveying and mapping of the area of reference on the West Virginia side of the line which is complete only for about fourteen miles from the initial point, (Fairfax stone), to be continued and completed for the remaining twenty-four miles up the Pennsylvania line.

Ad. 1. There seems to be no serious obstacle in the way of the acknowledgment of this line by West Virginia. It is true, that Mr. McDonald's withdrawal from the Joint Commission prevented the preparation of a joint report, required in the two Acts of the Legislatures of the
two States, upon ratification of which the line should be established and acknowledged as the boundary line, but the high reputation of then Lieut. now Gen'l Michler, as an Astronomer, and the endorsement of his work by the learned commissioner of Maryland, Thos. J. Lee, Esq., who himself held the high rank of a Capt. of N. S. Top'l. Eng'rs up to his resignation, were so conclusive as to the accuracy of the line traced and run, that the Legislature of Maryland in its Act passed in March, 1860, which is appended under the letter F, acknowledged this line to be the boundary line, and made the further appropriations of $\$ 10,000$ and of $\$ 2,500$ for the completion of the work on the Maryland side of the line.

Ad. II. The original maps having most courteously been delivered to me by the Governor of Maryland for the purpose in question. I do not anticipate any difficulty in obtaining permission to retain them until the copies are finished.

Ad. III. Before explaining the necessity of this survey, may I be permitted to say a few words about the cutting of the line through the woods.

The line was cut through the forest at the joint expense of the two States, one rod wide.
From Fairfax Stone to Stable Hill, distance.
10 miles.
From Glass' Road to Mason \& Dixon's Line, distance............. ${ }^{\frac{1}{2}}$ "
Also, a total distance of about $\frac{1}{2}$ mile was cleared on the tops of
the following hills in the line about 2 rods wide, at joint ex-
pense; Ashby's Hill, Lauer Hill, Freelock Plateau, on the 2
Hills N. \& S. of Baltimore and Ohio Railroad, Snaggy
Mountain, Fike's Hill, Evan's Hill, Sickles' Hill, being..... $\frac{1}{2}$ "

$$
\text { Total cutting done, ................................. } 11 \text { miles. }
$$

The cutting completed in the stated width of one rod comprises an area of 23 acres, and to cut the remainder of the line being a total distance of $23 \frac{1}{3}$ miles, in the same width, would comprise an area of 53 acres, which would involve a considerable outlay to the State, but as the intersection of the line as correctly run in $1859 \& 1860$, with all the roads, rivers, creeks, mountain ranges, \&c., was accurately ascertained by the survey of reference and laid down on the maps prepared at the expense of the State of Maryland, it seems to me that the clearing away of a gap of one rod wide along the entire length of the line might be dispensed with, and the State of West Virginia in reference to the line itself, might confine herself to the restablishment of the marks put at these intersections, most of which will have disappeared with the exception of the stone monuments, but which can by the aid of these maps be easily replaced partly by taking the offisets on roads, \&c., given on the maps, and partly by running several short portions of the line itself. Although ten years have elapsed since the time of the first running of the
line, I do not'expect to find very great changes in the settlements near the line, but if such a work is decided upon by the Honorable Legislature of West Virginia, I would recommend to have rough marking stones planted at the places, where the wooden posts were put formerly. Stones being near by along the whole line, with few exceptions, this would not cost the State much, and by adopting the mode of re-determining the line proposed above, the State would save the entire cost of cutting.

The survey of reference was resolved upon by the Joint Commission, in order to connect the line running on its greater length through unsettled country, with well known and permanently established settlements, places and land marks, such as there are.

On the then Virginia side-Horseshoe run road.
Mt. Carmel or German Settlement (West Union Village.)
Cranberry" Summit-Baltimore \& Ohio R. R. Station.
Crab Orchard Settlement.
Feik's Hill.
Spurgin's Settlement.
Mud Pike.
And on the Maryland side-Red House.
Crossing of N. W. Va. Turnpike over Backbone Mountain.
Oakland-Baltimore \& Ohio R. R. Station,
Course of the Big Yougiogheney river, touching the places:
Swallow Fails.
Sanging Ground Settlement.
Friendsville.
Blooming Rose Settlement.
These places embrace an area of about 260 square miles, of which 160 square miles have been surveyed, 30 square miles being on the Virginia side, and 130 square miles on the Maryland side of the line, leaving about 100 square miles to be surveyed yet, at the expense of the State of West Virginia.
This survey of reference was deemed not only useful, but indispensible, experience showing how easily boundary lines are blotted out on the ground by the shifting of settlements, changing of roads, streams, \&c., and by a good many other causes originating in improvements of different kinds, if the lines are not secured by surveying and mapping in duplicate an area on both sides sufficient to show the line and adjacent country and its topographical features beyond doubt, and to give a complete record of it to be filed in. the archives of each of the two States for the use of the authorities. In this view the two Commissioners coincided, and in directing this survey of reference to be executed, adopted the
course pursued in all the Boundary Surveys made on this continent lately, of which I beg leave to name the following:

The United States and Mexican Boundary Survey.
The North Western Boundary Survey.
The Maryland and Virginia Boundary Survey on the Eastern shore.
The Texas and Indian Territory Boundary Survey.
The Kansas and Indian Territory Boundary Survey.
All of which have been executed on the same principle, not ony with the view of fixing the line on the ground for the present, but with the wise intention of securing it for all future time by a complete record of it on paper, showing the full topographical features of the adjacent country on both sides of the line, and giving each State a copy of this record, to be referred to at any future time.
Aside of all these considerations it appears proper to the honor of our State, to have this surveying and mapping, which was commenced and completed on the eastern side of the line by Maryland, at a cost of little less than $\$ 20,000$, completed on the western side also in the same style by West Virginia, and offer Maryland an opportunity of obtaining a copy of the mapped record on the western side of the line, in reciprocity to the courtesy with which Maryland holds out the opportunity to West Virginia to get a copy of the mapped record on the eastern side of the line. This entire work will not cost our State more than about half the expense incurred by Maryland, viz., $\$ 9,800$, as appears in my estimate, appended under the letter " G ," and based upon the prices paid by Maryland in the prosecution of the work on her side.

West Virginia not having anything at all on record about this important work, I have little doubt that the wisdom of the present Legislature will take decisive action in the matter, and having from the commencement been connected with, and for the greater part of the time been in charge of the Boundary Survey, I beg leave to say, that although I am engaged now in the United States Engineer's Office, I would with pleasure take the professional part of the matter in my hands again if it would please the Honorable Legislature to entrust me with the work.
Hoping a favorable decision, I am,

> Most Respectfully, Your Obd'n't Serv't., John de LACAMP, Late Surveyor in Charge of Maryland and Virginia Boundary Survey, U. S. Engineer's Office, Corner G and $22 d$ Streets. Washington, February 1st, 1869.
P. S.-In reference to my character and ability, I beg leave to refer your Honorable Body to the letter of Hon. C. D. Hubbard, Member of Congress, and General N. Michler, which I had the honor of presenting to His Excellency, Governor Boreman.

## APPENDIX A.

## Chapter 275.-An Act for running and marling the Western Boundary Line of this State.

Passed May 22, 1852.
Whereas, It is of great importance that.
Be it enacted by the General Assembly of Maryland:
Sec. 1. That the Governor be, and he is hereby requested to open a correspondence with the Governor of Virginia in relation to tracing, establishing and marking the said line ; and in case the Legislature of Virginia shall pass an act providing for the appointment of a commissioner to act in conjuction with a commissioner, on the part of Maryland, in the premises, then, and in such case, the Governor be, and he is hereby authorized and required to appoint a commissioner, who, together with the commissioner who shall be appointed on the part of Virginia, shall cause said line to be accurateiy surveyed, traced and marked with suitable monuments, beginning therefor at the said Fairfax stone, and running thence due north to the line of the State of Pennsylvania.

Sec. 2. And be it enacted, That it shall be the joint duty of the commissioners after running, locating, establishing and marking the said line, to make a report, setting forth all the facts touching the locating and marking of the same; and it shall be the duty of the commissioner of each respective State, to forward copies of this joint report to each of their respective Legislatures, and upon ratification of such report by the State of Virginia and the State of Maryland, through their respective Legislatures, the said boundary line shall be fixed and established so to remain forever, unless changed by mutual consent of the said States.

## APPENDIX B.

## An Act to ascertain and fix the Boundary Line of the States of Virginia and Maryland.

Wherèas, The General Assembly of Maryland has passed two acts for running and marking the boundary line between that State and the State of Virginia, beginning therefor at Smith's Point, at the mouth of the Potomac river, and running thence to the Atlantic Ocean, to form the eastern line; and beginning at the Fairfax stone, on the Potomac river, sometimes called the North Branch of the Potomac river, at or
near its source, and running thence due north to the line of the State of Pennsylvania, for forming the western boundary line; and whereas, the Legislature of the State of Maryland has requested the appointment of a commissioner on the part of this State, to act in concert with the commissioner of Maryland, to run, ascertain and mark the said lines ; therefore,

1. Be it enacted by the General Assembly of Virginia, That the Governor be, and he is hereby authorized and required to arpoint, as soon as may be, a commissioner, who, together with the commissioner who may be appointed on the part of Maryland, shall cause the said lines to be accurately surveyed, traced and marked with suitable monuments, from Smith's Point, at the mouth of the Potomac river, to the Atlantic Ocean, and from Fairfax stone, situated as aforesaid, to the Pennsylvania line, as aforesaid.
2. It shall be the duty of the commissioner on the part of the State of Virginia, after the running, locating, establishing and marking the said lines, to make a joint report with the"commissioner on the part of Maryland, setting forth all the facts touching the same, and to forward a copy of said joint report to the Legislature of Virginia. And upon ratification of such report by the Legislature of the States of Maryland and Virginia, the said lines thus run and ascertained, shall be fixed and established ; to remain forever, unless changed by the mutual consent of the said States of Maryland and Virginia.
3. Be it further enacted, That an adequate compensation be allowed by law, upon an order of the executive, to said commissioner, to be paid out of any funds in the treasury not otherwise appropriated.
4. This act shall be in force from its passage.

## APPENDIXC.

List of Line Marks put on the Western Boundary of Maryland.

| line marks. | distance apart in $_{\text {fect. }}$ | bemarks. |
| :---: | :---: | :---: |
| I. |  |  |
| Monument at Fairfax Stone. |  | Cut stone, resting on foundation stone, set immediately south of the old stone marked FX, planted in 1746 to show the bounds of the Fairfax grant. This old stone was not disturbed. |
| Stake at N. Branch of Potomac... | 4,090 |  |
| " on Arnold's Hill............... | 2,580 |  |
| " at Laurel Run................ | 2,350 |  |
| II. |  |  |
| Monument on Backbone. | 6,090 | Cut stone, same as No. I. |
| Stake at Br'ch of Youghiogheny R, | 5,110 |  |
| . 6 on Freeland's Hill............ | 1,820 |  |
| " at Big Youghiogheny River, | 3,080 |  |
| " \% on Roth's Hill ................ | 2,500 |  |
| " at Horse Shoe Road. | 2,060 |  |
| " on Hentze's Hill.. | 4,060 |  |
| " at Mill Road................... | 4,025 3,580 |  |
| - III. |  |  |
| Monument 35 beyond N. W. Va. Turnpike, nearChildholm's Hill, | 4,120 | Cut stone, obelisk, 5 feet h |
| Stake at Stahl's Road. | 3,710 |  |
| ". on Stahl's Hill................. | 3,090 |  |
| " at Martin's Road | 2,315 |  |
| " at Wild's Road. | 2,410 |  |
| " on Ashley's Hill............... | 1,850 |  |
| " at trib'y of Big Yough'y R.. | 1,660 |  |
| IV. |  |  |
| Monument on Lauer Hill........... | 2,500 | Mound of earth and stones |
| Stake at Footpath across Line..... | 2,765 |  |
| " on Little Stream... | 1,680 |  |
| " at Laurel Run... | 2,150 |  |
| " at Little Stream.. | 4,890 |  |
| " at Freelock's Road............ | 1.715 |  |
| " at Little Laurel Run. | 1,190 |  |
| " at Freelock's Road. | 790 |  |
| " at White's Road................ | 1,715 |  |

## APPENDIX C-Continued.

| Line marks. | Distaneapart In feet | remarks. |
| :---: | :---: | :---: |
| V. |  |  |
| Monument on Balt. \& Ohio R. R.. | 2,415 | Cut stone, same as at N. W Virginia Turnpike. |
| Stake at Collin's Road.. | 3,165 |  |
| Little Stream. | 3,865 |  |
| " | 1,170 |  |
| " " " .... | 1,950 |  |
| Pile of rocks on Summit | 2,650 |  |
| Stake on Summit | 4,430 |  |
| Stake on Summit......... <br> " at Somer's Road... | $\begin{aligned} & 2,555 \\ & 1,245 \end{aligned}$ |  |
| VI. |  |  |
| Monument on Snaggy Mountain... | 3,230 | Square cut stone, 3 feet high, resting a on large rock, on the top of which is a cut stone obelisk. |
| Stake at Creek. | 1,820 |  |
| \% in Rodehaver's Clearing.... | 800 |  |
| " at White Oak Creek...... | , 3,385 |  |
| " at Trib'y White Oak Creek, | 690 |  |
| " at Hoys Run | 3,775 |  |
| " at Nottkin's Run | 1,340 |  |
| " at Browning's Run. | 3,325 |  |
| " at Tarkiln Run.. | 1,770 |  |
| " at Creek. | 2,995 |  |
| " at Cranesville Road | 3,910 |  |
| " at Walf's Road | 1,980 |  |
| " at Walf Junior's Road. | 1,955 |  |
| " at Feik's Hill Road......... | 2,260 |  |
| VII. |  |  |
| Monument on Feik's Hill. |  | Same as on Snaggy Mountain. |
| Stake at White Rock Run.. | 5,005 |  |
| " at Footpath.... | 5,880 |  |
| " at Branch of Laurel Run... | 1,590 |  |
| " at Buffalo Run.... | 2,245 |  |
| " at Uppoll's Road.. | 5,020 |  |
| " at Layton's Road. | 3,770 |  |
| " at Glover's | 2,755 |  |
| " at Dietz's | 2,340 |  |
| " at Evan's | 1,340 |  |
| " on Evan's Hill... | 1,710 |  |

## APPENDIX C-Continued.

| hune marks. | Distaneapar\| | remaris. |
| :---: | :---: | :---: |
| Stake at Mohr's Road | 2,180 |  |
| " at Sickles " | 2,225 |  |
| " at at McDonald's Road | 3,040 2,710 |  |
| " at Feik's Run. | 2,250 |  |
| " at Scrub Glade Run. | 300 |  |
| " at Spring........ | 825 |  |
| at Glass Road. VIII. | 2,120 |  |
|  |  |  |
| Monument at Mason and Dixon's Line. $\qquad$ | 2,130 | Cut stone, 6 feet long, sunk 2 |
| Total length of Line..... | 191,875 |  |

## APPENDIX D

List of Magnetic Variations Observed in July, 1860.


## APPENDIX E.

List of Altitudes determined along Western Line of Maryland.

| Places at which the Altitude was Ascertained. | Above the Sea Level, |
| :---: | :---: | :---: | :---: | :---: | :---: |
| at mean tide. |  |

## APPENDIX F.

Chapter. 385.-An Act for the establishment of the Southeastern and Nortnwestern Boundary Lines between this State and the State of Virginia, and making further appropriations to complete the Survey and marking of the same.

$$
\text { Passed March, } 1860 .
$$

Sec. 1. (Relates of the South-eastern line, on the Eastern shore.)
Sec. 2. And be it further enacted, That the North-western Line of this State, is a Line commencing at Fairfax stone, at the head of the North Branch of the Potomac river, and running thence due North to the Southern Line of the State of Pennsylvania, as surveyed in the year 1859 by the Commissioner appointed by the States of Maryland and Virginia in conformity with the laws passed by the said States for that purpose.

Sec. 3. (Appropriates $\$ 10,000$ for completing the Survey and record of these Lines.)

Sec. 4. Directs this act to take effect from the date of its passage.

## APPENDIX G.

Estimate of John de la Camp for completing the survey commenced by the States of Maryland and Virginia, formerly called the Maryland and Virginia Boundary Survey, and for furnishing the State of West Virginia a mapped record of the survey, consisting of detail sheets on large antiquarian paper, on a scale of $\frac{1}{12000}$, and a general map on a scale of $\frac{1}{60,000}$; for re-running such portions of the line as may be necessary for the redetermination of the intersections of the line with roads, rivers, creeks, hill tops, \&c., and for marking such intersections by rough mark-stones, and for making for the State of West Virginia a copy of the boundary maps prepared for the use of the State of Maryland. The survey to be completed in the same manner as the old Maryland and Virginia boundary survey was commenced in 1859 and 1860 , and the maps furnished to be executed in the same finished style as those prepared for the use of the State of Maryland.
Theodolite survey of 96 square miles at $\$ 25$ per square mile, ..... \$2,400
Plotting of the same in $\frac{1}{12,000}$ scale, and drawing the map in pencil, at $\$ 1250$ per square mile, ..... 1,200
Inking rivers, creeks, roads, farms, clearings, houses and horizontal curves, at $\$ 625$ per square mile ..... 600
Tracing, transferring and inking rivers, creeks, roads, farms, clearings, houses and horizontal curves, from the Maryland sheets being 161 square miles, at $\$ 8$ per square mile ..... 1,088
Shading of the hill topography on the copy of the Maryland sheets, square inches, ..... 4,600
Shading of the hill topography on the maps of the new sur- vey, square inches ..... 2,700
Number of square inches at 15 cts per square inch, ..... 7,300 ..... 1,065
Filling in of the bush, field and swamp characters on the copy of the Maryland sheets, square inches, ..... 4,600
Filling in the same on the map of the new survey, sq. ins., ..... 2,700
Number of sqaure inches at 15 cts per square inch, 7,300 ..... 1,095
Lettering of all the dêtail sheets, including titles, scales, frames, \&c. ..... 4,50
General Map in $\frac{1}{60,000}$ Scale.
Reduction of 2,700 square inches $\frac{1}{12,000}$ to 108 square inches ${ }_{6} \frac{1}{60,000}$, and tracing and transferring of the general map made for Maryland, being 192 square inches, including inking of the out-line work ..... 300
300 Square inches of topography in $\frac{1}{60.000}$, at $\$ 2,50$ per sq. inch, ..... 750
Lettering on general map, including title, scale, frame, \&c. ..... 262
Paper, mounting, portfolio, stationery, rods, flag-stuff, \&c., \&c.,... ..... 100
68 Marking stones, rough, set at the intersections of the line with roads, rivers, creeks, hill-tops, \&c., at $\$ 5$ per stone, including the necessary measurements, \&c., for the ascertainment of the intersection ..... 340
Incidental expenses, ..... 120
Total, ..... $\$ 9,800$

