2

Papers, May 1880

Department of the Interior.

Washington May 6th 1880.

Prof. William B. Rogers.
President of the National Academy of Sciences.
Boston, Mass.

Sir:

By joint resolution of Congress, approved, August 3, 1876, the Secretary of the Interior, the Secretary of the Smithsonian Institution and the Librarian of Congress, were constituted a commission empowered to take measures to restore the writing of the Declaration of Independence and the signatures appended thereto. In compliance with the direction of the Commission I have the honor to

(submit

[5/6/ 1880]

submit for your consideration the following resolution passed at a meeting held at the Department of the Interior on the 5th instant.

"That the Secretary of the Interior, "Chairman of the Commission, present the "question of restoration of the faded writing of "the original manuscript of the Declaration "of Independence, to the President of the "National Academy of Sciences, Professor William "B. Rogers, of Boston, with the request to "appoint a committee of experts, from the "members of the Academy, to take the "subject into consideration, and to report "whether such restoration be expedient or

(practicable

[5/6/1880]

"practicable, and if so in what way the
"object can best be accomplished."

C. Schurz

Secretary of the Interior
and Chairman of the Commission.

From Sec. of the Interior
requesting me to appoint
Com. of Nat. Academy.
To advise as to procuring
Obs. Mass. Dec. 3rd.

I have appointed
Prof Wolcott Gibbs
" J. E. Holbrook
" Chancellor of S.C. College
" Ro. E. Rogers
" J. Lawrence Smith.
all of whom have accepted.

" J. Lawrence Smith

NATIONAL BOARD OF HEALTH
WASHINGTON.

May 11. 1880

W. B. Rogers Esqr
President N. Acady of Sciences &c &c

My dear Sir,

I have the honor to acknowledge the receipt of your commn of the 3d inst by the hands of Prof. D. L. Cabell, President N. B. of Health, relating to the continuance of a Comn of the Academy upon the affairs of this Board. I have to return thanks for the consideration and am Professor Rogers

Very respectfully & truly

T. J. Turner

Sec. N. B. of H

2005.

Mass. Institute of Technology,

Boston, May 12 1880

To Hon^b. Carl Schurtz
Secretary of the Interior.
Washington. D.C.

Dear Sir.

I have the honor to acknowledge the rec^t of your communication relating to "the question of the restoration of the faded writings of the Original Manuscript of the Declaration of Independence" and requesting "me" to appoint a Com^n of experts from the Members of the Mass^s Academy to take the subject into consid^n and to report. I beg to say that having only last Tuesday returned to Boston I ~~have~~ ~~been~~ have not been able to attend to your request, but that I shall lose no time in ~~selecting a Committee for the~~ doing so.

WBR

Minneapolis, Minn.,
May 15, 1880.

President Rogers:
Dear Sir:

If you can put us in the way of securing good men for any of the positions named in the enclosure, you will place us under an obligation.

Very truly & respectfully
Yours &c.
Wm. B. Folwell

Wm Kettner Robbins
Assistant in the department of Chemistry — Quantitative Analysis

Rec'd. W. Brooks

1. Water at Heads.

2. Deposit Check in Bank.

356.25 + 35.

3. Call on the Board.

4 Hazard to Order Gravel Med. Size Anthony near Barlys Beach Rolls gravel.

GENERAL ORDERS No. 38.

HEADQUARTERS OF THE ARMY,
ADJUTANT GENERAL'S OFFICE,
Washington, May 17, 1880.

The following Acts of Congress are published for the information and government of all concerned:

AN ACT making appropriations for the support of the Army for the fiscal year ending June thirtieth, eighteen hundred and eighty-one, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and the same are hereby, appropriated, out of any money in the Treasury not otherwise appropriated, for the support of the Army for the year ending June thirtieth, eighteen hundred and eighty-one, as follows:

For expenses of the commanding general's office, two thousand five hundred dollars.

For expenses of recruiting and transportation of recruits from rendezvous to depot, seventy-five thousand dollars. And no money appropriated by this act shall be paid for recruiting the Army beyond the number of twenty-five thousand enlisted men, including Indian scouts and hospital-stewards; and thereafter there shall be no more than twenty-five thousand enlisted men in the Army at any one time, unless otherwise authorized by law. Nothing, however, in this act shall be construed to prevent enlistments for the Signal Service, which shall hereafter be maintained, as now organized and as provided by law, with a force of enlisted men not exceeding four hundred and fifty.

For contingent expenses of the Adjutant-General's Department at the headquarters of military divisions and departments, three thousand dollars.

For expenses of the Signal Service of the Army, purchase, equipment, and repair of electric field-telegraphs and signal equipments and stores, ten thousand five hundred dollars.

PAY DEPARTMENT.

FOR PAY OF THE ARMY: One general, one lieutenant-general, three major-generals, fifteen brigadier-generals, seventy colonels, eighty-five lieutenant-colonels, two hundred and forty-three majors, three hundred and twelve captains, mounted, three hundred and six captains, not mounted, thirty-four chaplains, twenty-one storekeepers, forty adjutants, forty regimental quartermasters, two hundred and two first lieutenants,

mounted, three hundred and sixty first lieutenants, not mounted, one hundred and forty-six second lieutenants, mounted, three hundred and five second lieutenants, not mounted; including the additional pay to thirty-five aides-de-camp, to the adjutant and quartermaster of the Engineer Battalion, to one hundred and eighty acting assistant commissaries of subsistence, in addition to pay in line, to officers of foot regiments while on duty which requires them to be mounted, to the officer in charge of public buildings and grounds in Washington, and to the examiner of State claims in the office of the Secretary of War; four hundred retired officers; enlisted men of all grades not exceeding twenty-five thousand men; four hundred and fifty enlisted men of the Signal Corps; the allowances for travel, retained pay, and clothing not drawn, payable to enlisted men on discharge; and one retired ordnance sergeant, eleven million five hundred and forty-eight thousand six hundred and one dollars and fifty-five cents.

For mileage of officers of the Army for travel on duty under orders, two hundred thousand dollars.

For miscellaneous expenses, to wit: Hire of one hundred and twenty-five contract surgeons and two hundred hospital-matrons; extra-duty pay to enlisted men for service in hospitals; pay of fifty-four paymasters' clerks and fourteen veterinary surgeons; hire of paymasters' messengers, not to exceed fifteen thousand dollars; cost of telegrams on official business received and sent by officers of the Army; compensation of citizen clerks and witnesses attending upon military courts and commissions; travel expenses of paymasters' clerks; commutation of quarters for officers on duty without troops at places where there are no public quarters; and for the payment of any such officers as may be in service, either upon the active or retired list, during the year ending June thirtieth, eighteen hundred and eighty-one, in excess of the numbers for each class provided for in this act, five hundred and fifty-one thousand one hundred and ninety-eight dollars and forty-five cents.

Subsistence Department.—For subsistence of twenty-five thousand enlisted men, one hundred and twenty additional half-rations for sergeants and corporals of ordnance, enlisted men of the Signal Service, women to companies (laundresses), one thousand eight hundred and seventy-five civilian employees, one hundred and twenty-five contract-surgeons, two hundred hospital-matrons, one hundred and ten military convicts, and five hundred prisoners of war (Indians), in all ten million seven hundred and fifty-five thousand eight hundred and twenty rations, at twenty cents each; for difference between cost of rations and commutation thereof for detailed men, and for enlisted men and recruits at recruiting stations, and for cost of

hot coffee and cooked rations for troops traveling on cars; for subsistence stores for Indians visiting military posts, and Indians employed without pay as scouts, and guides, two million two hundred and fifty thousand dollars; of which amount three hundred thousand dollars shall be available from and after the passage of this act for the purchase of stores necessary to be transported to distant posts in advance of the thirtieth of June, eighteen hundred and eighty: *Provided*, That to the cost of all stores and other articles sold to officers and men, except tobacco, as provided for in section one thousand one hundred and forty-nine of the Revised Statutes, ten per centum shall be added to cover wastage, transportation, and other incidental charges, save that subsistence supplies may be sold to companies, detachments, and hospitals at cost prices, not including cost of transportation, upon the certificate of an officer commanding a company or detachment, or in charge of a hospital, that the supplies are necessary for the exclusive use of such company, detachment, or hospital.

Quartermaster's Department.—For the regular supplies of the Quartermaster's Department, consisting of stoves for heating and cooking; of fuel for officers, enlisted men, guards, hospitals, storehouses, and offices; of forage in kind for horses, mules, and oxen of the Quartermaster's Department at the several posts and stations, and with the armies in the field; for the horses of the several regiments of cavalry, the batteries of artillery, mounted men of the Signal Service, and such companies of infantry and scouts as may be mounted, and for the authorized number of officers' horses, including bedding for the animals; of straw for soldiers' bedding; and of stationery, including blank books for the Quartermaster's Department, certificates for discharged soldiers, blank forms for the Pay and Quartermaster's Departments, and for printing of division and department orders and reports. three million six hundred thousand dollars.

For incidental expenses, to wit: For postage and telegrams or dispatches; extra pay to soldiers employed under the direction of the Quartermaster's Department in the erection of barracks, quarters, storehouses, and hospitals, in the construction of roads, and other constant labor, for periods of not less than ten days, including those employed as clerks at division and department headquarters, and Signal-Service sergeants; expenses of expresses to and from the frontier posts and armies in the field; of escorts to paymasters and other disbursing officers, and to trains where military escorts cannot be furnished; expenses of the interment of officers killed in action, or who die when on duty in the field, or at posts on the frontiers, or when traveling on orders, and of non-commissioned officers and soldiers; authorized office furniture; hire of laborers in the Quartermaster's Department, including the hire of interpreters, spies, and guides

for the Army; compensation of clerks to officers of the Quartermaster's Department; compensation of forage and wagon masters authorized by the act of July fifth, eighteen hundred and thirty-eight; for the apprehension, securing, and delivering of deserters, and the expenses incident to their pursuit; and for the following expenditures, required for the several regiments of cavalry, the batteries of light artillery, and such companies of infantry and scouts as may be mounted, and for the trains, to wit: hire of veterinary surgeons, medicine for horses and mules, picket-ropes, and for shoeing the horses and mules; also, generally, the proper and authorized expenses for the movement and operations of the Army not expressly assigned to any other department, one million dollars.

For purchase of horses for the cavalry and artillery, and for the Indian scouts, and for such infantry as may be mounted, two hundred thousand dollars.

For transportation of the Army, including baggage of the troops, when moving either by land or water; of clothing and camp and garrison equipage from the depots of Philadelphia and Jeffersonville to the several posts and Army depots, and from those depots to the troops in the field; of horse equipments and of subsistence stores from the places of purchase and from the places of delivery, under contract, to such places as the circumstances of the service may require them to be sent; of ordnance, ordnance stores, and small-arms from the founderies and armories to the arsenals, fortifications, frontier posts, and Army depots; freights, wharfage, tolls, and ferriages; the purchase and hire of horses, mules, oxen, and harness, and the purchase and repair of wagons, carts, and drays, and of ships and other sea-going vessels and boats required for the transportation of supplies, and for garrison purposes; for drayage and cartage at the several posts; hire of teamsters; transportation of funds for the pay and other disbursing departments; the expenses of sailing public transports on the various rivers, the Gulf of Mexico, and the Atlantic and Pacific; for procuring water at such posts as, from their situation, require it to be brought from a distance; and for clearing roads and for removing obstructions from roads, harbors, and rivers, to the extent which may be required for the actual operations of the troops in the field, four million dollars.

For hire of quarters for troops, of storehouses for the safe-keeping of military stores, of offices, and of grounds for camp and summer cantonments, and for temporary frontier stations; for the construction of temporary huts and stables; and for repairing public buildings at established posts, eight hundred and eighty thousand dollars.

For construction and repair of hospitals, as reported by the Surgeon-General of the Army, seventy-five thousand dollars.

For purchase and manufacture of clothing and camp and garrison equipage, and for preserving and repacking the stock of clothing and camp and garrison equipage and materials on hand at the Philadelphia, Jeffersonville, and other depots of the Quartermaster's Department, one million dollars.

For all contingent expenses of the Army not provided for by other estimates, and embracing all branches of the military service, to be expended under the immediate orders of the Secretary of the War, forty thousand dollars.

MEDICAL DEPARTMENT.—For purchase of medical and hospital supplies, medical care and treatment of officers and soldiers on detached duty, expenses of purveying-depots, advertising, and other miscellaneous expenses of the Medical Department, two hundred thousand dollars.

For the Army Medical Museum, and for medical and other works for the library of the Surgeon-General's Office, ten thousand dollars.

ENGINEER DEPARTMENT.—For engineer depot at Willets Point, New York, namely: For purchase of engineering materials to continue the present course of instruction of the engineer battalion in field engineering, one thousand dollars.

For incidental expenses of the depot, remodeling ponton-trains, repairing instruments, purchasing fuel, forage, stationery, chemicals, extra-duty pay to soldiers engaged in special skilled labor, such as wheelwright work, printing, photographing and lithographing engineer documents, and ordinary repairs, four thousand dollars.

ORDNANCE DEPARTMENT.—For the ordnance service, required to defray the current expenses at the arsenals; of receiving stores and issuing arms and other ordnance supplies; of police and office duties; of fuel and lights; of stationery and office furniture; of tools and instruments for use; of public animals, forage, and vehicles; incidental expenses of the ordnance service, including compensation of workmen in the armory and museum building connected with the Ordnance Office and those attending practical trials and tests of ordnance, small-arms, and other ordnance supplies, one hundred and ten thousand dollars.

For manufacture of metallic ammunition for small-arms, eighty thousand dollars.

For overhauling, cleaning, and preserving new ordnance stores on hand at the arsenals, twenty thousand dollars.

For mounting and dismounting guns and removing the armament from forts being modified or repaired, including heavy carriages returned to arsenals for alteration and repairs, and other necessary expenses of the same character, and for repairing ordnance and ordnance stores in the hands of troops and for issue at the arsenals and depots, and for extra-duty pay for enlisted men detailed for ordnance service, thirty thousand dollars.

For purchase and manufacture of ordnance stores, to fill requisitions of troops, one hundred and fifteen thousand dollars.

For infantry, cavalry, and artillery equipments, consisting of clothing-bags, haversacks, canteens, and great-coat straps, and repairing horse equipments for cavalry troops, sixty-five thousand dollars.

For powder depot: For grading grounds, erecting magazines, and other necessary buildings, and all expenses incident thereto, fifty thousand dollars: *Provided*, That the Secretary of War may, in his discretion, expend a sum not exceeding eighteen thousand five hundred dollars of this amount in the purchase of additional land adjoining the present site

For manufacture of arms at national armories, three hundred thousand dollars.

That upon the application of any college, university, or institution of learning incorporated under the laws of any State within the United States, having capacity at the same time to educate not less than one hundred and fifty male students, the President may detail an officer of the Army on the retired list to act as president, superintendent, or professor thereof; and such officer may receive from the institution to which he may be detailed the difference between his retired and full pay, and shall not receive any additional pay or allowance from the United States.

UNITED STATES TESTING-MACHINE.—For caring for, preserving, using, and operating the United States testing-machine at the Watertown arsenal, five thousand dollars.

SEC. 2. That no money appropriated in this act is appropriated or shall be paid for the subsistence, equipment, transportation, or compensation of any portion of the Army of the United States to be used as a police force to keep the peace at the polls at any election held within any State: *Provided*, That nothing in this provision shall be construed to prevent the use of troops to protect against domestic violence in each of the States on application of the legislature thereof or of the executive when the legislature cannot be convened [.]

Approved May 4, 1880.

II—AN ACT making appropriations for fortifications and other works of defense, and for the armament thereof, for the fiscal year ending June thirtieth, eighteen hundred and eighty-one, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the sum of one hundred thousand dollars be, and the same is hereby, appropriated, out of any money in the Treasury not otherwise appropriated, for the protection, preservation, and repair of fortifications and other works of defense, for the fiscal year ending June thirtieth, eighteen hundred and eighty-one, the same to be expended under the direction of the Secretary of War; also, the following for the armament of fortifications, namely:

For the armament of sea-coast fortifications, including heavy guns and howitzers for flank defense, carriages, projectiles, fuses, powder, and implements, their trial and proof, and all necessary expenses incident thereto, and for machine guns, including the conversion of smooth-bore cannon into rifles, and the manufacture of four improved breech-loading twelve inch rifled guns four hundred thousand dollars.

For torpedoes for harbor defenses, and the preservation of the same, and for torpedo experiments in their application to harbor and land defense, and for instruction of engineer battalion in their preparation and application, fifty thousand dollars: *Provided*, That the money herein appropriated for torpedoes shall only be used in the establishment and maintenance of torpedoes to be operated from shore stations for the destruction of an enemy's vessel approaching the shore or entering the channels and fairways of harbors.

Approved May 4, 1880.

III—AN ACT to authorize the sale of Fort Logan, Montana Territory, and to establish a new post on the frontier.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of War be and he is hereby authorized and empowered to establish a new military post at or near the Mussel Shell River in the Territory of Montana, as he may deem best for the protection of the frontier from Indian incursions: *Provided*, The total cost of the same shall not exceed the sum of fifty thousand dollars.

SEC. 2. The Secretary of War is hereby authorized and directed, after due notice, to sell at public auction or otherwise dispose of in parcels or otherwise, as he may deem most advantageous to the government, the site, reservation and buildings of Fort Logan, Montana Territory, and re-

invest the proceeds of such sale in the erection of the post authorized by the first section of this act: *Provided,* That such portion of said buildings, or of the materials thereof, as can be profitably removed to said new post, may be reserved from sale and so removed.

Approved May 8, 1880.

BY COMMAND OF GENERAL SHERMAN:

E. D. TOWNSEND,
Adjutant General.

OFFICIAL:

Assistant Adjutant General.

Established colleges or universities, with officers of the Army serving thereat, under section 1225, Revised Statutes.

Name.	Rank and regiment.	College or university.
George T. Olmsted, jr	capt. U. S. A	*Agr'l and Mechanical College of Texas, Bryan, Texas.*
Thomas J. Spencer	capt. 10 cav	*Southern Illinois Normal University, Carbondale, Ill.*
Rezin G. Howell	1 lt. 2 art	*Kentucky University, Lexington, Ky.*
Charles Morris	1 lt. 5 art	*Massachusetts Agricultural College, Amherst, Mass.*
Frank W. Hess	1 lt. 3 art	*Allegheny College, Meadville, Pa.*
Junius W. MacMurray	1 lt. 1 art	*Union College, Schenectady, N. Y.*
James B. Burbank	1 lt. 3 art	*Cornell University, Ithaca, N Y.*
Henry Romeyn	1 lt. 5 inf	*Hampton Normal and Agr'l Institute, Hampton, Va.*
George A. Thurston	1 lt. 3 art	*Iowa State University, Iowa City, Iowa.*
Luigi Lomia	1 lt. 5 art	*Ohio State University, Columbus, Ohio.*
Henry B. Osgood	1 lt. 3 art	*Western University of Pennsylvania, Pittsburg, Pa.*
Isaac T. Webster	1 lt. 1 art	*University of Nebraska, Lincoln, Neb.*
M. C. Wilkinson	1 lt. 3 inf	*Tualatin Academy and Pac. Univ'y, Forest Grove, Oreg.*
Ephraim T. C. Richmond	1 lt. 2 art	*Dickinson College, Carlisle, Pa.*
Henry C. Danes	1 lt. 3 art	*Bishop Seabury Mission, Faribault, Minn.*
Medorem Crawford, jr	1 lt. 2 art	*Bowdoin College, Brunswick, Me.*
John L. Clem	1 lt. 24 inf	*Galesville University, Galesville, Wis.*
William A. Dinwiddie	1 lt. 2 cav	*Illinois Industrial University, Champaign, Ill.*
Charles R. Barnett	1 lt. 5 art	*Pennsylvania Military Academy, Chester, Pa.*
Albert S. Cummins	1 lt. 4 art	*University of Vermont, Burlington, Vt.*
Joseph Garrard	1 lt. 4 art	*North Georgia Agricultural College, Dahlonega, Ga.*
Mitchell F. Jamar	1 lt. 13 inf	*Louisiana State University, Baton Rouge, La.*
John E. Myers	2 lt. 3 art	*Cornell College, Mount Vernon, Iowa.*
Clarence Deems	2 lt. 4 art	*Maryland Agr'l College, Prince George's Co., Md.*
George R. Cecil	2 lt. 13 inf	*Michigan Military Academy, Orchard Lake, Mich.*
John P. Jefferson	2 lt. 5 art	*Brooks Military Academy, Cleveland, Ohio.*
Edwin B. Bolton	2 lt. 23 inf	*Mississippi Military Institute, Pass Christian, Miss.*
Erasmus M. Weaver, jr	2 lt. 2 art	*Western Reserve College, Hudson, Ohio.*
William R. Hamilton	2 lt. 5 art	*Indiana Asbury University, Green Castle, Ind.*
Francis P. Blair	2 lt. 3 art	*University of Missouri, Columbia, Mo.*

SEC. 1225. "The President may, upon the application of any established college or university within the United States, having capacity to educate, at the same time, not less than one hundred and fifty male students, detail an officer of the Army to act as president, superintendent, or professor thereof; but the number of officers so detailed shall not exceed * * * [thirty] at any time, and they shall be apportioned throughout the United States, as nearly as may be practicable, according to population. Officers so detailed shall be governed by general rules prescribed, from time to time, by the President. The Secretary of War is authorized to issue, at his discretion and under proper regulations to be prescribed by him, out of any small-arms or pieces of field-artillery belonging to the government, and which can be spared for that purpose, such number of the same as may appear to be required for military instruction and practice by the students of any college or university under the provisions of this section; and the Secretary shall require a bond in each case, in double the value of the property, for the care and safe-keeping thereof, and for the return of the same when required."

SEC. 1260. "Any retired officer may, on his own application, be detailed to serve as professor in any college." [But while so serving, such officer shall be allowed no additional compensation.]

I. The following regulations, in regard to detail of officers of the Army at established colleges and universities within the United States, are prescribed by the President, under the above laws:

1. Details "shall be apportioned throughout the United States as nearly as may be practicable according to population"; such States as do not contain sufficient population to entitle them to one officer will be grouped with one or more contiguous States or Territories, so that the combined population of the group will allow the detail of one or more officers, to the extent of thirty officers in all.

2. As a rule, captains of companies, regimental staff officers, or officers who have served less than three years with their regiments or corps, or who have recently completed a tour of detached duty, will not be eligible. No details will be made that will leave a battery, troop, or company without two officers for duty with it. The period of detail will not be longer than three years.

3. Retired officers, if acceptable to any institution, may, on their own request, be detailed on

Pass - 3
Wy - 2
Ohio 2

this duty among the thirty authorized. Besides this number, any retired officer may arrange to serve at a college or university without detail from or reference to the War Department; but unless *detailed* under section 1225, Revised Statutes, such service will not entitle the institution to the arms, &c., provided by that section.

4. No detail will be made for any institution except upon an application from its proper representatives, nor will any officer be so detailed unless acceptable to the authorities of the institution, who should make their selection from the officers available for this duty.

5. Applications for officers should be addressed to the Secretary of War, and should duly certify the number of male students the college or university has the capacity to educate, and should also be accompanied by the last printed catalogue.

6. Officers of the Army desiring a detail at colleges or universities may make application to the Adjutant General, through the usual military channels, for such details: their applications and the recommendations forwarded therewith will, if the officers are available, be furnished to such institutions as may desire to make a selection.

II. The following are the regulations prescribed by the Secretary of War for the issue of arms, &c., required for military instruction and practice at colleges and universities, under section 1225, Revised Statutes:—

1. The number of pieces of field artillery, with necessary implements, and of small-arms and accoutrements, which may be issued for the purposes of military instruction to each selected college and university having an officer of the Army stationed thereat, is limited to the following, viz:

2 3-inch rifled guns, wrought-iron, model 1861, at $450	$900 00
2 carriages and limbers, 3-inch gun, at $325	650 00
2 gunner's haversacks, at $3.35	6 70
2 handspikes, trail, at $1	2 00
4 lanyards, at 10 cents	40
2 priming-wires, at 10 cents	20
4 sponges and rammers, 3-inch, at $1	4 00
4 sponge-covers, 3-inch, at 30 cents	1 20
2 tube-pouches, at $1.50	3 00
4 thumbstalls, at 20 cents	80
2 tompions, 3-inch, at 30 cents	$0 60
2 vent-covers, at 40 cents	80
1 pendulum hausse, 3-inch	2 50
1 pendulum hausse seat	60
1 pendulum hausse pouch	75
2 paulins, 12 by 15 feet, at $11.75	23 50
150 Springfield "cadet" rifles, cal. .45, with appendages, &c., at $18	2,700 00
150 bayonet scabbards, steel, cadet, at 91 cents	136 50
150 waist belts and plates, at 50 cents	75 00
150 cartridge-boxes, cal. .45, at $1.25	187 50

2. Issue of the above stores will be made by the Chief of Ordnance to any selected institution upon its filing a bond in the penal sum of double the value of the property, conditioned that it will take good care of and safely keep and account for the same, and will, when required by the Secretary of War, duly return the same, within thirty days, in good order, to the Chief of Ordnance United States Army, or such officer or person as the Secretary of War may designate to receive it.

3. To conform to the requirements of the law, the terms "college" and "university" herein used are held to relate to "State institutions, incorporated or public," and not to "mere schools, private or municipal."

4. The following is the blank form of bond to be executed previous to the issue of ordnance and ordnance stores, viz:

* * * * * * * * * *

5. For practice-firing, the following allowances of ammunition will be made annually to each of the various institutions, viz:

1,000 carbine metallic ball-cartridges, cal. .45.
1,000 metallic blank cartridges, cal. .45.
100 round blank cartridges for 3-inch gun.
300 friction primers.

This ammunition will be issued upon requisitions to be forwarded to the Chief of Ordnance by the presidents or superintendents of the institutions; and as annual allowances date in all cases from July 1 of each year, requisitions should be forwarded before or as soon after that date as practicable for the prospective year's supply. Undrawn allowances of one year cannot be drawn in the succeeding year.

6. Regular property returns will be rendered quarterly to the Chief of Ordnance by each president or superintendent of an institution supplied with arms, &c., accounting for all ordnance and ordnance stores issued to the institution under his charge. These returns will be made on the blank forms to be supplied by the Chief of Ordnance.

7. Whenever any institution shall fail to return the public property in its charge within thirty days after demand made by the Secretary of War, the delinquency will be promptly referred to the Attorney General, that the bond of the institution may forthwith be put in suit.

8. All expense of repairs of stores are to be borne by the institution using the same, the Ordnance Department supplying spare parts for repairs at cost price.

[G. O. No. 100, Adjutant General's Office, November 21, 1879.]

Cambridge, May 17/80

Dear Prof: Rogers:

After receiving your kind communication of May 14, I read again Prof: Tyndall's letter to the late Prof. Henry. I have no doubt that the trust, if wisely administered, can do much for the encouragement of original scientific research in this country. You will certainly agree with me in thinking that harmony and mutual confidence in the Board of Trustees ~~are~~ of the first importance. If you think that my appointment would be agreeable to

the other members of the Board, and that my coöperation would be of any account, I shall be very glad to render any service in my power for the advancement of an object, so much to be desired.

With many thanks for your favorable opinion

I am sincerely yours:

Joseph Leeming

OFFICE OF THE U.S.
COAST AND GEODETIC SURVEY
WASHINGTON, D.C.

May 17th 1880.

My dear Sir;

I shall be very glad to serve on the committee for restoring the Independence Manuscript, and have so telegraphed you, informing you at the same time of the fact that your report for the Academy has been ordered to be printed by the House, and is before the Senate for action. These statements hardly require further explanation.

I will only add the further assurance that I am looking after the matter at every step, in connection with the Act to Authorize the Academy to hold Trust Funds.

I regret very much that I will not be able to be with you next week. The weariness of the Deficiency and the general Appropriation bills keeps me back.

Yours faithfully,
J. E. Hilgard

Prof. Wm B. Rogers;
President Nat'l Acad. of Science,
117 Marlborough St.,
Boston, Mass.

Woodbury

131 Devonshire St.
Boston, May 18. 1880.

Prof. Wm. B. Rogers LL.D.

Dear Sir,

In response to your request, I herewith send to you this statement of the principal professional work upon which I have been engaged since 1873.

In the summer of that year, I was employed upon the test of the Lynn Water Works pumping engine by a board of consulting Engineers consisting of Messrs. Wm. E. Worthen of New York, Chas. Kermany of Louisville, the late John P. Kirkwood of Brooklyn, Jos. B. Davis of Boston, and John C. Hoadley of Lawrence.

Later in the season I was engaged upon a similar test of the pumping engine at Lowell, under a similar commission consisting of Messrs. Jas. B. Francis of Lowell, John C. Hoadley and Wm. E. Worthen. In addition to the work during this trial, I was employed to compute the results from the observations taken during the tests. Subsequently I was employed in similar work at the second test of the Lynn pumping engine and at the test of the Lawrence pumping engines.

My duties upon these tests consisted in preparation of

the apparatus employed making measurements of fuel, water, temperatures and the other data connected with the operation of the machine, including the use of the indicator and of the hook-gauge in the weir measurements of water and in the tabulation of results.

Most of my other work has been more private in its nature, but has consisted of similar tasks for private individuals and corporations and also surveying land, laying out and building roads &c.

I have not had any connection with railroad or bridge work but have made a speciality as far as possible of questions pertaining to hydraulics and the use of steam and water for motive purposes.

In April 1877, I was employed by the Lawrence Spool Co. of Rockport Mass. to design special machinery, and subsequently became superintendent of that corporation. Later I resigned that position and entered the services of the Mill Mutual Insurance Cos. as an inspector of the hydraulic service of mills, their construction and such other engineering duties as may be assigned to me. I have no connection with underwriting except indirectly as stated above.

Of my course at the Institute I can merely say that nature has not vouchsafed to me the power of

facile acquisition of knowledge; and tasks easily mastered by others, were learned by myself only after persistent and continuous application.

Having prepared for College, my plans were changed at a late day, and I resolved to enter the Institute. After the first year, I met with no conditions (if memory serves aright) excepting in descriptive astronomy at the semi-annual of the third year, and it was made up before the annual examination of that year. I am a member of the American Society of Mechanical Engineers, and of the New England Cotton Manufacturers Association.

Respectfully Submitted,

C. J. H. Woodbury.

[5/18/1880]

A recent accident prevents the use of my right hand and I am obliged to communicate wholly by dictation.

Prof W. B. Rogers
Pres N. A. S.

OFFICE OF THE U.S.
COAST AND GEODETIC SURVEY
WASHINGTON, D.C.

May 18/80
4 PM

My dear President,

Yours of yesterday is rec'd. The Vice Pres't was more punctilious than heretofore (it may be presumed), because of an opposition majority. We met his point however by borrowing the MSS. from the House Printing Com. and it was presented in the Senate yesterday, referred to Com. on Library and ordered to be printed. A resolution to print 500 extra copies for the Academy will be presented at earliest time that it is in order. I am looking after these matters & wrote & telegraphed you yesterday.

Yours J. E. Hilgard

WM. B. WHITING,
Vice-President and Secretary.

EDWARD ATKINSON,
President and Treasurer.

BOSTON MANUFACTURERS MUTUAL FIRE INS. CO.

131 Devonshire Street.

Boston, May 19 1880

Prof. Wm B Rogers L. L. D.

Dear Sir

Herewith I send you a copy of my remarks on Mill vibration at the Autumn meeting of the N. E. ~~Manuf~~ Cotton Manuf. Association

I do not anticipate that it will interest you by reason of any industrial connection, but as a matter of physics I believe it to be the first practical application of those laws of vibrating plates first enunciated by Chladni.

Very Respectfully.
C. G. D. Woodbury.

School of Mines, Columbia College,
Corner 50th Street & 4th Avenue,

New York, May 19, 1880

My dear Sir -

In reply to your favor I would say that I shall be most happy to serve on the Committee of the Academy to which is assigned the duty of considering the question of restoring the writing of the Declaration of Independence & the Signatures appended thereto.

The subject was referred to

me during the Centennial & I gave some study to it at that time, but did not decide upon any method which I thought it safe to apply to this valuable document.

I shall be very glad to take up the subject again in such good company as you mention

Very Truly Yrs
C. F. Chandler
per Geo. F. Miller

To Dr. W. B. Rogers.

Columbia College,
New York.

President's Room, May 21, 1880.

My Dear Prof.,

I am in receipt of your letter of the 17th, notifying me of your appointment of Prof. Lovering as third Trustee of the Tyndall fund. While Prof. Lovering is entirely acceptable to me, I cannot but regret that you did not appoint Prof. Norton — my only reason in favor of his appointment, however being the very one which induced you not to make it, viz., that he is in the immediate vicinity of the other two trustees. In the

discussion of questions, which are now likely very soon to arise, as to the application to be made of the income of the fund, the personal intercommunication between the trustees will be indispensable, and frequent consultations may be necessary. This will impose upon Prof. Lovering, or upon us who are here, the necessity to making the journey from time to time between New York and Boston which will be somewhat inconvenient.

The selection, however, is as entirely acceptable to me, and I presume to Prof. Yeamans, as any one could be at a distance from New York.

Dear, Very Sincerely Yours
F. A. P. Barnard

Prof. W. B. Rogers.

Important (~~Probably~~ 1880) 1

Comm: on School May 23. 2 PM

1. Theses, and order of Graduating exercises -

2. Case of M Woodbury.

Spent 4 years as a regular Stud^t at Inst - Dep^t of Civ. Engineering, graduating Class of 1873 - passed all his exam^ns including the Intermediate Examn of 4th year, but owing to some failure in the Closing Exn in Civ: Engineering was not admitted to his degree -

Has since been constantly occupied in important engineering works of which he gives some statement in his letter - Has also spent the past winter here engaged in experiments with an apparatus of his own invention on Lubricating Oils &c - & now submits an acc^t of these & other works in lieu of a Thesis - While asking the Corp^n of the Inst^t to grant him the Degree of S B, with Civ. Eng^g as of the Class of 1873 -

whether it was lawful —

That the ~~[illegible]~~ prohibitory
resolution of Other Cases like that
of Mr. Woodbury, among the former
students of the Law, who had completed
their studies, by requesting
to confer with the Faculty on
a consultation thereof — for the
purpose of learning what other
cases may have occurred in
the

3 — Mention Genl. F. A. Walker
as one of whom I have thought as
a desirable successor — as Pres. of
the Inst. Have inquired about his
character & qualifications, as Mathematician
At Yale where he has been Prof. for many
years, & Prof. Mahan speaks in the highest
terms of his fitness as a lecturer & administrat
officer — & has spoken personal qualities;
Prof. B — read extracts of his letter just
rec.d — Clarence King's opinion — &c —

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
Washington, May 25, 1880.

[Circular.]

In addition to the instructions contained in General Orders No. 100, series of 1879, from Headquarters of the Army, concerning details of officers of the Army at colleges, universities, &c., the following instructions from the Secretary of War, concerning the detail of retired officers at such institutions, under the act approved May 4, 1880, are published for the information of all concerned:

The act provides—

That upon the application of any college, university, or institution of learning incorporated under the laws of any State within the United States, having capacity at the same time to educate not less than one hundred and fifty male students, the President may detail an officer of the Army on the retired list to act as president, superintendent, or professor thereof; and such officer may receive from the institution to which he may be detailed the difference between his retired and full pay, and shall not receive any additional pay or allowance from the United States.

All officers detailed under section 1225, Revised Statutes, whether from the active or retired list, belong to the thirty officers distributed according to the annexed apportionment, and the institutions to which they are detailed are entitled to the arms provided by that section, under regulations published in General Orders No. 100, series of 1879, from Headquarters of the Army.

The details authorized by the act of May 4, 1880, will be in addition to the thirty allowed by the section referred to, and may be made to institutions of learning of the requisite grade in any State, without reference to population or to the number of officers already serving therein; but there is no provision of law for supplying arms to the institutions receiving details under this act.

Whenever the detail of an officer, under section 1225, Revised Statutes, shall expire at an institution of learning within a State or group of States having a greater number of officers on such duty than the State or group is entitled to under the apportionment, the vacancy so created will not be filled by a detail under the section named, but by a detail, under the act approved May 4, 1880, of such officer on the retired list as the authorities of the institution may select and who may be willing to accept the detail.

Any communication addressed to a retired officer, in care of this office, will be forwarded to his address. The names of all such officers are published in the Army Register.

Under section 1225, Revised Statutes, which requires the thirty officers authorized thereby for detail at colleges, &c., to be distributed throughout the United States, as nearly as practicable, according to population, the following table of apportionment has been adopted, being based on a division of the total population of the

United States by the census of 1870 (38,558,371) by 30 (the number of officers authorized), which gives 1,285,279 as the population a State or group of States should have, as nearly as practicable, to be entitled to an officer:

Table showing apportionment of details, under section 1225, *Revised Statutes.*

States and groups.	Aggregate population of States and groups.	No. of officers to which entitled.	States and groups.	Aggregate population of States and groups.	No. of officers to which entitled.
Maine	626,915		Alabama	996,992	
New Hampshire	318,300		Mississippi	827,922	
Vermont	330,551		Louisiana	726,915	
	1,275,766	1		2,551,829	2
Massachusetts	1,457,351				
Connecticut	537,454		Texas	818,579	
Rhode Island	217,353		Arkansas	484,471	
	2,212,158	2		1,303,050	1
New York	4,382,759	3			
Pennsylvania	3,521,951	3	Tennessee	1,258,520	1
			Kentucky	1,321,011	1
New Jersey	906,096		Ohio	2,665,260	2
Delaware	125,015		Indiana	1,680,637	1
			Michigan	1,184,059	1
	1,031,111	1	Illinois	2,539,891	2
			Wisconsin	1,054,670	1
Maryland	780,894		Missouri	1,721,295	1
West Virginia	442,014		Iowa	1,194,020	1
	1,222,908	1	Minnesota	439,706	
			Nebraska	122,993	
Virginia	1,225,163	1	Kansas	364,399	
			Colorado	39,864	
North Carolina	1,071,361				
South Carolina	705,606			966,962	1
	1,776,967	1			
			California	560,247	
Georgia	1,184,109		Oregon	90,923	
Florida	187,748		Nevada	42,491	
	1,371,857	1		693,661	1

By order of the Secretary of War:

E. D. TOWNSEND,
Adjutant General.

Official:

Assistant Adjutant General.

WAR DEPARTMENT,

ADJUTANT GENERAL'S OFFICE,

Washington, May 25, 1880.

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	1,222,908	1	Minnesota	439,706	
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Virginia	1,225,163	1	Kansas	364,399	
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By order of the Secretary of War:

E. D. TOWNSEND,
Adjutant General.

Official:

Assistant Adjutant General.

U. S. Coast and Geodetic Survey Office,

Washington, May 26th, 1880.

My dear Sir;

A resolution to print five hundred copies of your report passed the Senate this morning.

The proof has been read by Prof. Coffin, and has also, contrary to my anticipation, received a careful revision at my own hands. I have therefore concluded that you would be glad to be spared the trouble of proof-reading, especially as sending the proofs so far, would have involved some delay. The "revise" will be received in a few days, and should you desire to see it before the 500 extra copies are printed, it can still be sent to you.

I am detained at home by the condition of the appropriation bills in the House. We have had quite a victory over our opponents.

Yours very truly

J. E. Hilgard

Prof. W. B. Rogers

Rec'd C. W. Ernst, X

DAILY ADVERTISER
EDITORIAL ROOMS,
27 COURT ST.

BOSTON, May 27th, 1880.

Dear Mr. President,

I have to thank you for your great kindness in connection with the Academy celebration and the proceedings at the Institute. If you think my little reports and my editorial paragraphs meagre or not sufficiently to the point, I shall promise you better work hereafter, when I hope to have the benefit of your advice. Mr. Goddard, my kind friend and principal, agrees with me that the Institute has special claims upon our columns and such abilities as we may have. I do not like to entrust these important occasions to reporters, however

careful they may be, and if you will favor Mr. Goddard or me with suggestions, you will find that we are willing and docile. Unhappily my tastes are not scientific, but I deem it of paramount importance that the Advertiser should keep en rapport with intellectual leaders. My own notion of true journalism is that of service. I cannot hope to lead others; but I can follow those who are leaders of thought, and in an humble way I may serve as a middle-man between important men and thoughtful readers. I thank you again and beg leave to add an expression of my faithful sentiments.

C. W. Ernst

President W. B. Rogers, LL.D.

Mass. Institute of Technology.

CLASS OF 1880.

GRADUATION EXERCISES,

THURSDAY, MAY 27TH, 3.30 P.M.

INTRODUCTION — PRESIDENT ROGERS.

PRESENTATION OF THESES.

READING ABSTRACTS OF THESES AND PRESENTATION OF DIPLOMAS: —

1. Geology of Norfolk County Basin.
   GEORGE H. BARTON, *North Sudbury.*
2. Sudbury River Water Works.
   CHARLES H. BROWN, *Boston.*
3. Solubility of Certain Salts in Sodium Thiosulphate.
   NATHANIEL C. SMALL, *Boston.*
4. Chelmsford Street Bridge, at Lowell, Mass.
   EDWIN E. CHASE, *Lowell.*
5. Pan Amalgamation of Sullivan Ore from Maine.
   FREDERIC W. CLARK, *Chicago, Ill.*
6. Mystic Water Works.
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7. Concentration of Zinc Blende from Maine.
   LORING R. MILLEN, *Savannah, Ga.*
8. History of Musical Pitch in Boston.
   WILLIAM T. MILLER, *Boston.*

AWARD OF CERTIFICATES.

Address — REV. GEO. E. ELLIS, D.D.
Count Rumford's Contributions to Applied Science.

Closing Remarks.

LIST OF DIPLOMAS AND CERTIFICATES AWARDED.

Degree of Bachelor of Science conferred on : —

CHARLES H. BROWN,
EDWIN E. CHASE,
GEORGE W. HAMILTON,
In the Department of Civil Engineering.

GEORGE H. BARTON,
FREDERICK W. CLARK,
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In the Department of Elective Studies.

Certificates awarded to: —

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ARTHUR W. SANBORN,
Of the School of Mechanic Arts.

Certificates awarded to: —

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INTRODUCTION — PRESIDENT ROGERS.

PRESENTATION OF THESES.

READING ABSTRACTS OF THESES AND PRESENTATION OF DIPLOMAS: —

1. Geology of Norfolk County Basin.
   GEORGE H. BARTON, *North Sudbury.*
2. Sudbury River Water Works.
   CHARLES H. BROWN, *Boston.*
3. Solubility of Certain Salts in Sodium Thiosulphate.
   NATHANIEL C. SMALL, *Boston.*
4. Chelmsford Street Bridge, at Lowell, Mass.
   EDWIN E. CHASE, *Lowell.*
5. Pan Amalgamation of Sullivan Ore from Maine.
   FREDERIC W. CLARK, *Chicago, Ill.*
6. Mystic Water Works.
   GEORGE W. HAMILTON, *Boston.*
7. Concentration of Zinc Blende from Maine.
   LORING R. MILLEN, *Savannah, Ga.*
8. History of Musical Pitch in Boston.
   WILLIAM T. MILLER, *Boston.*

AWARD OF CERTIFICATES.

Address — REV. GEO. E. ELLIS, D.D.
Count Rumford's Contributions to Applied Science.

Closing Remarks.

LIST OF DIPLOMAS AND CERTIFICATES AWARDED.

Degree of Bachelor of Science conferred on : —

CHARLES H. BROWN,
EDWIN E. CHASE,
GEORGE W. HAMILTON,
In the Department of Civil Engineering.

GEORGE H. BARTON,
FREDERICK W. CLARK,
LORING R. MILLEN.
In the Department of Mining Engineering.

NATHANIEL C. SMALL,
In the Department of Chemistry.

WILLIAM T. MILLER,
In the Department of Elective Studies.

Certificates awarded to: —

M. PENNOCK BARNARD,
ARTHUR W. SANBORN,
Of the School of Mechanic Arts.

Certificates awarded to: —

MARIA THERESE BAKER, Newtonville,
LIZZIE F. BURNES, Roxbury,
MARY T, F. COOK, East Boston,
ABRAHAM L. DOOLITTLE, South Boston,
CLARENCE H. LEWIS, Watertown,
PHILLIP LITTLE, Boston,
WILLIAM V. O'LEARY,
FREDERIC R. TOWER, Braintree,
Of the Lowell School of Industrial Design.

U. S. Coast and Geodetic Survey Office,

Washington, May 28th, 1880.

My dear Sir;

I learn this morning that the printers, although well disposed, cannot keep the type standing any longer. Although the first proofs were required to be returned very soon, I had still hoped to send you the "revise", but it now seems to be out of the question. The report has been very carefully read, however, and I trust will meet your approbation. The haste to print has resulted from the promptitude with which the order to print was made. Anticipating an early adjournment, I attended to that matter at the first opportunity.

Very truly
Yours,

J. E. Hilgard

Prof. Wm B. Rogers;
&c &c
Boston, Mass.

1401 I St.
Washington D.C.
May 29, 1880

Prof. W. B. Rogers

My dear Sir

I send you diplomas of Prof. W. H. Brewer & Maj J. W. Powell elected members of the Nat. Acad. of Sciences - Please sign them & send them to Prof. Marsh, & ask him to send them to Prof. Barnard & then return to me.

Very truly yours
J. H. C. Coffin