distinct expectation that you would accept the place—unless it could be made more attractive than it is at present<sup>2</sup>—

With such a man as you at the head of it I do not doubt that a new feeling of interest in the University could be awakened among our citizens & a new Era in its history be opened— I have confidence, too, that if there were a hope that you could be induced to accept the place the salary might be made equal to your necessity—& that something handsome might be accomplished towards open courses of Instruction & a goodly array of new Professorial talent—

Yours sincerely Alonzo Potter

Henry Papers, Smithsonian Archives.

1. To replace John Ludlow. The minutes of the meetings of the trustees of the University of Pennsylvania do not give the names of those nominated for the post.

2. The University of Pennsylvania was having problems selecting a provost. An effort to select one in December 1852 failed. It was not until

January 1854 that Henry Vethake, the vice-provost, was named Ludlow's successor. Trustees' Minutes, November 2, December 7, 1852; November 1, 1853; January 3, 1854, University Archives and Records Center, University of Pennsylvania.

## 270. TO EDWARD SABINE

Smithsonian Institution May 12 1853

Lt Col. Edward Sabine R.A. Dear Sir

Annexed I send you a draft on London for £110,12; the amount required to pay the two bills for the magnetic instruments which you so kindly procured for this Institution. We also send you two blank receipts which you will please to have signed and returned to us.

The instruments came in good time and good condition. Dr Kane has not yet started. He has been detained by illness but will leave New York on the 15" inst. The second Dip circle and the instruments for intensity, have been paid for by the Government and placed in charge of my friend Governor Stevens, just appointed to take charge of that part of Oregon called Washington Territory.

At the last session of Congress the sum of \$150.000.— was appropriated for the exploration of three routes across the Continent to the Pacific, for the purpose of a national railway.<sup>2</sup> Governor Stevens has

been directed to survey the northern route on his way to Oregon. He is a graduate of West Point, is much interested in the promotion of science, and will make magnetic & meteorological observations daily during his journeys across the country. On his arrival in Oregon he will establish "term time" observations, the result of which may be compared with those of the self registering observatory about to be established at this Institution.<sup>3</sup>

Besides the line to be explored by Governor Stevens the two more southerly routes are to be surveyed by officers of the Army.<sup>4</sup> The two parties however have not yet been organized and could suitable magnetic instruments be procured in due time we would venture to order them from London. Is it possible for you to procure in the six weeks from this date at least another dip circle and an instrument for intensity and declination? If so you will please to give the order for them.<sup>5</sup>

We would prefer a single instrument and I think one has been devised combining the requisites for intensity and declination. We were obliged to attach to the unifilar magnetometer a a small transit telescope for determining the meridian in order to ascertain the declination. <sup>6</sup> In

In one of my communications to you<sup>7</sup> I suggested that you should add to any bill you might render to the Institution for instruments the amount of expenses incurred by yourself in postage transportation &c— I beg to renew this suggestion.<sup>8</sup>

I remain very respectfully and truly Your obedient servant Joseph Henry Secretary S.I

BJ3/49, Letters to Sabine from Renwick and Henry, 1845-1853, Sabine Papers, Records of Kew Observatory, Public Record Office, Kew.

In Edward Foreman's hand, with Henry's signature. Reply: May 31, 1853, Retained Copy, BJ3/30, Copies of Correspondence to and from Magnetic Dept. re Domestic and Foreign Observatories, 1841–59, Sabine Papers, Records of Kew Observatory, Public Record Office, Kew.

1. Henry is responding to Sabine's letters of March 4, 11, and 16, 1853, in same location as Sabine's reply.

Sabine had obtained magnetic instruments for the Smithsonian and for Elisha Kent Kane's expedition.

2. In March 1853, Congress ordered Secretary of War Jefferson Davis

to make such explorations and surveys as this department might deem advisable, in order to ascertain the most practicable and economical route for a railroad from the Mississippi river to the Pacific ocean.

Davis selected those routes with the greatest political support rather than the most feasible. Jefferson Davis, "Report of the Secretary of War on the Several Railroad Explorations," U.S. House, 33d Congress, 2d Session, Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad . . . , House Executive Documents, No. 91 (1855), 1:3 (quotation); William H. Goetzmann, Exploration and

Empire: The Explorer and the Scientist in the Winning of the American West (1966; New York, 1972),

3. Stevens's instructions for carrying out magnetic observations were written by J. E. Hilgard of the Coast Survey. Astronomical and magnetic observations were assigned to G. W. Stevens, who drowned, and Capt. Remenyi, who was fired for unsatisfactory performance. Although there are mentions of magnetic observations in Stevens's narrative, there were no published results. I. I. Stevens, "Report of Explorations for a Route for the Pacific Railroad ... from St. Paul to Puget Sound," Reports of Explorations and Surveys, 1:8-9 (second pagination); I. I. Stevens, "Narrative and Final Report of Explorations for a Route for a Pacific Railroad ... from St. Paul to Puget Sound," U.S. House, 36th Congress, 1st Session, Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad . . . , House Executive Documents, No. 56 (1860), 12:37-38, 47, 58, 190.

4. The survey of the central route, along the

38th parallel, was commanded by Captain John Williams Gunnison, while that of the southern route, along the 35th parallel, was under the command of Lieutenant Amiel Weeks Whipple. Later in the year, Davis added a fourth survey for the far southern route along the 32nd parallel. Goetzmann, pp. 283-284.

5. In his reply, Sabine expressed the hope "to place in M<sup>r</sup> [Henry] Stevens' hands on or before the 17th June" five magnetic instruments. Unfortunately, although Sabine did his part, there was a delay in the receipt of the apparatus by the

Smithsonian. See Docs. 277 and 298.

6. Sabine apparently was unaware of the apparatus Henry was referring to. In his reply, Sabine wrote that he would send Henry a "Transit Telescope to be employed with one of the Unifolars for the Declination."

7. Henry's letter of October 13, 1848, Henry

Papers, 7:416-417.

8. Sabine responded that "the expenses referred to in your last paragraph for postage, transportation &c are defrayed by our Gov-

## 271. TO ASA GRAY

Smithsonian Institution, May  $26^{th}$  1853—

Dear Sir.

Your note<sup>1</sup> and the accompanying correspondence with M<sup>1</sup> Girard have been duly received, and in behalf of the Smithsonian Institution I beg leave to thank you for the candid opinion you have given as to the character of the work submitted to you for examination,<sup>2</sup> and to express my regret that you should be subjected to any unpleasant correspondence on account of the favor you have conferred upon us.3

I do not approve of the letter of M<sup>r</sup> Girard, and regret that he should have addressed you on the subject. It is a violation of our rules to allow any discussion to spring up between the author of a communication and the members of the commission to whom it is referred for examination— In all cases the correspondence must be carried on through the Secretary, in order that he may obtain the data on which to found the decision as to the acceptance or rejection of the communication.

The Smithsonian Institution had concluded to make an experiment with reference to the publication of Bibliographies on different subjects, and it was important that it should begin with those which were the most needed, and that it should adopt the best plan— M<sup>r</sup> Girards Bibli-