Rhees, *Journals*, pp. 526, 746; Henry to Bache, January 26, 1863, Bache Papers, Smithsonian Archives.

- 2. John James Abert, head of the Topographical Bureau of the Corps of Engineers from 1829 and then of the successor Corps of Topographical Engineers from its creation in 1838 until his retirement in September 1861, had died the day before. *Henry Papers*, 3:69n; *ANB*.
- 3. Henry and Bache had nominated John H. Alexander (Henry Papers, 6:565n) to be one of the commissioners for the annual assay in 1863 at the United States Mint in Philadelphia. The assay was conducted to determine whether coins produced at the Mint met legal standards of weight and purity. Although Alexander was named to the commission, he did not attend. Henry Papers, 5:6; Vol. 2, Minutes of the Annual Assay Commission, Records of the United States Mint at Philadelphia, Records of the Bureau of the Mint, RG 104, National Archives; Bache and Henry to Salmon P. Chase, January 10, 1863, Letters Received from the Smithsonian Institution, General Records of the Department of the Treasury, RG 56, National Archives.
- 4. Of the commissioners who attended the assay, Henry was one of six who were specially designated by the president. His appointment was communicated in a letter from Salmon P. Chase of January 26 (Letters Sent, Records of the Office of the Secretary of the Treasury Relating to the Mint Service, 1792–1886, Records of the Bureau of the Mint, RG 104, National Archives). Henry had been a member of the assay commission in 1841, 1853, and 1862. Vols. 1 and 2, Minutes of the Annual Assay Commission, Records of the United States Mint at Philadelphia, Records of the Bureau of the Mint, RG 104, National Archives; Henry Papers, 5:6.
- 5. The letter of Edwin M. Stanton (1814–1869, ANB) of January 26 is printed in Rhees, Journals, p. 194. At about the same time, Stanton directed Henry to house books and papers taken from John Johns, Episcopal bishop of Virginia, at the Virginia Theological Seminary in Alexandria. Both the library, which had been taken from Beaufort, South Carolina, by Union forces, and Johns's library and papers were destroyed in the January 1865 fire in the Smithsonian Building. Smithsonian Report for 1864, p. 119.

167. TO GUSTAVUS VASA FOX¹

Washington Feby 7th 1863

Dear Sir

Accompanying this letter I send you a programme of a permanent commission to which all subjects of a scientific character on which the Government requires information may be referred.

I leave the city to day to attend the annual assay at the U.S. Mint in Philadelphia and intend to return on Tuesday² when I would be pleased to have an opportunity of speaking with you on the above mentioned programme.

I am very truly your obt. servt. Joseph Henry

Hon G. V. Fox assist Sec^y of the Navy

Propositions relative to a permanent Scientific Commission.

1. There shall be constituted a Permanent Commission consisting, for the present, of Admiral Davis, ³ Professor Henry, and Professor Bache,

February 7, 1863 (Doc. 167)

to which shall be referred questions of science and art, upon which the Department may require information.

2. This commission shall have authority to call in associates to aid in their

investigations and inquiries.

3. The members and associates of the commission shall receive no compensation for their services.⁴

Miscellaneous Letters Received, General Records, Office of the Secretary of the Navy, Naval Records Collection of the Office of Naval Records and Library, RG 45, National Archives.

The propositions appear to be in William Hinwood's hand. Reply: Undated draft, possibly by Fox, in same location; Retained copy, Gideon Welles to Henry, February 11, 1863, Miscellaneous Letters Sent, General Records, Office of the Secretary of the Navy, Naval Records Collection of the Office of Naval Records and Library, RG 45, National Archives; a copy of Welles to Davis of February 11, 1863, appears on page 1 of the minute book of the commission, which is also in RG 45 in Records of the Permanent Commission, Records of Boards and Commissions.

1. Fox (1821–1883) was assistant secretary of the navy under Gideon Welles and was, in effect, chief of naval operations for the Union.

2. February 10.

3. Charles Henry Davis had been called back to Washington in November to become head of the navy's new Bureau of Navigation, which encompassed the Naval Observatory, the Nautical Almanac Office, and what later became the Hydrographic Office. He was promoted to rear admiral the day Henry wrote this letter. *Henry Papers*, 6:263n; ANB.

4. The reply of February 11 was signed by Gideon Welles, secretary of the navy. It informed Henry of the establishment of the commission along the lines proposed and invited

him to serve with Bache and Davis.

Welles had appointed a three-member Naval Examining Board in late 1861 to perform a similar function as the Permanent Commission, but the board lasted only until July 10, 1862, and accomplished little. According to historian Robert V. Bruce, Welles established another board in September. Although documentation concerning the origins of the Permanent Commission is skimpy, it appears that Henry, Bache, and Davis met two or three times in late January and early February prior to this letter. One or two of the meetings were held with Fox. Henry later wrote (Doc. 192) that the government had consulted him about inventions

offered to assist the war effort and that he had proposed the commission to help share the work and responsibility of evaluating the material. Although Henry is the sole signer of this letter, it undoubtedly reflects the joint deliberations of all four men.

The Permanent Commission started meeting on February 20. Over its brief life during the last two years of the war, it held over one hundred meetings, issued over two hundred and fifty reports, and considered an estimated three hundred inventions. Without facilities or a budget of its own, the commission met at the Smithsonian, the Coast Survey, and the Bureau of Navigation. It found most of the devices it examined unworthy of further consideration and in this essentially negative role saved the government time, effort, and money.

The best treatment of the commission is Nathan Reingold, "Science in the Civil War: The Permanent Commission of the Navy Department," *Isis*, 1958, 49:307–318. For documentation of the meetings prior to this letter, see Henry to Bache, January 26, 1863, and February 5, 1863, Bache Papers, Smithsonian Archives; Bache to Benjamin Peirce, February 2, 1863, Peirce Papers, Houghton Library, Harvard University; Charles Henry Davis, *Life of Charles Henry Davis, Rear Admiral*, 1807–1877 (Boston, 1899), pp. 289–290; Robert V. Bruce, *Lincoln and the Tools of War* (1956; Urbana and Chicago, Illinois, 1989), p. 224.