

May 28, 1863 (Doc. 176)

edness to you for the periodicals you have furnished since our last settlement.

I remain
Very Respectfully
Your obed^t serv^t
Joseph Henry
Secretary Smith. Instⁿ

Henry Stevens, Esq.
London.

Stevens Papers, Department of Special Collections, University Research Library, University of California at Los Angeles.

In William Hinwood's hand, with Henry's signature.

1. Walter White (1811-1893) was an attendant or clerk at the Royal Society of London's library, beginning in 1844, and assistant secretary and librarian from 1861 to 1884. He resigned as the Smithsonian's exchange agent in London following his promotion to assistant secretary on May 2, 1861. *DNB*; Minutes, p. 87, Council of the Royal Society, Printed Series, Library, Royal Society of London.

2. William Wesley (1814-1891) was a London bookseller. He became the Smithsonian's exchange agent in London by the end of 1861 and acted in that capacity for many years. Frederick Boase, *Modern English Biography*, 6 vols. (New York, 1965), 3:1275; Rhees, *Journals*, p. 188.

3. Henry had apparently been the first to suggest that Stevens give up the agency. See Doc. 84.

4. Not found.

5. In a letter of September 24, 1861, Stevens had expressed himself "perfectly satisfied" with the transfer of the Smithsonian's exchange agency to Walter White. He went on, however, to say it would be difficult to keep packages from coming to him and also reported that White didn't want the agency and had transferred it to Wesley, "a bookseller, in a small way." As he thought Henry would be surprised that the agency had been given to an "English Bookseller," he had decided to send a notice to societies and libraries that he would continue to forward packages to the United States as usual. He concluded his discussion of the matter by writing that if he continued to act as the Smithsonian's London agent, he would expect the same salary that had been offered to White. Stevens Papers, Manuscript Division, William L. Clements Library, University of Michigan.

176. MINUTES OF THE PERMANENT COMMISSION OF THE NAVY DEPARTMENT¹

Meeting XXXV.

The thirty-fifth meeting was held at the Smithsonian Institution on Thursday, May 28th, 1863.

The following reports, of the usual form, and dated May 27th, were approved and signed.

No. 83 Mr. W^m H. Pettiner's description and drawing of his Machine for cutting Piles."²

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When piles are to be removed, it is desirable to draw them, if possible. In cases when this is impossible, resort must be had to cutting them, for which purpose this appears to be an ingenious and serviceable instrument, whose practical utility ↑ however↓, must be tested by actual trial.

It is, however, doubtful whether this would be more effectual than a circular saw properly adjusted.

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- No. 84. Mr. G. Dettloff's description and drawing of his "submarine galvano-electric battery within the interior of a torpedo"³

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This invention is presented in a manner which commends it to the attention and favorable consideration of the Commission. But it regrets to say that, in its opinion, this is too complicated in arrangement, and too defective in detail, to be available in practice.

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- No. 85. Mr. D. B. Eddy's plan of a "Machine to expole^A torpedoes"⁴

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This is one of the many projects, presented to the Commission, for exploding torpedoes at the end of a rod or spar, concerning which it has frequently been its unpleasant duty to express an unfavorable opinion.

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- No. 86 Mr. T. Taylor's plans, as follows:—

I. A "smoke shell"

II. A "punching Ram"⁵

* * *

I. The use of suffocating missiles of this kind has existed for centuries under various names, but has in later times been entirely abandoned, giving place to the present solid and hollow missiles. Moreover, this particular mixture of chemical ingredients would be more dangerous to friends than foes.

II. There is nothing in this plan which alters the repeatedly expressed opinion of the Commission with regard to movable Rams of this nature.

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No. 87. Mr. D. Hathaway's plan of a shell for suffocating and illuminating purposes.⁶

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With regard to the first of these the Commission will simply repeat their remark in a recent report, that experience has shown that such means of annoying the enemy are far less effective than the usual missiles; as to its illuminating qualities, the Commission considers it inferior to plans already in use.

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No. 88 Mr. J. Bissell's "plan of a steamer for river or ocean purposes."⁷

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The only novelty in this plan is that of using four propellers, two near the bow and two near the stern. Experience has shown that, owing to the complication of machinery, more than two propellers cannot be advantageously used.

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No. 89. Mr. H. Meredith's drawing of his plan of harbor defence.⁸

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The only novelty in this plan is that of placing guns on the buoys at the extremities of the line, or in other words placing guns on immovable floating batteries; which does not seem to the Commission so efficient a mode of defense as to place the same guns on ordinary vessels, which would have the advantage of motion, when desired.

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No. 90. The suggestion of Capt. E. B. Hunt, U.S. Engineers, for the more rapid turning of steam vessels.⁹

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The Commission entirely agrees with Capt. Hunt as to the importance of rapid turning in Ram warfare. He is right in supposing that several cases have occurred during the War, where vessels have been sunk or seriously injured by Rams, for want of this facility, but, in the opinion of the Commission, the use of two parallel propellers, working fore and aft, would prove more effective than Capt. Hunt's plan of a propeller working athwartships; for the ship could be turned more readily by causing the former to revolve in opposite directions.

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No. 91. Mr. C. P. Simpson's plan of a vessel for removing obstructions in harbors.¹⁰

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This plan would, in the opinion of the Commission, be ineffectual for the proposed object. It is the production of a man deficient in practical knowledge, however prolific in suggestions.

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A series of experiments with Lieut. Felt's Signal Rockets were now witnessed by the Commission, the the exhibition taking place in accordance with the following letter from Lieut. Felt.

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Signal Camp Instruction
Georgetown D.C.
May 28/63

Admiral Davis
Presd^t Board of Navigation
Sir,

I have arranged the following programme for our experiments this evening, & given my orders accordingly, which I hope will meet with your approval. I will send an officer to meet you at the Smithsonian Institute & he will be furnished with our countersign signals to advise the Camp at Georgetown when you are all assembled & ready to have the rockets fired, on receiving which signal the Officers at Georgetown will fire the Rocket P & I will answer with the Rocket A from Fort Washⁿ. Then the officer at Georgetown will fire three rockets, one after the other, & I will then fire three from Fort Washⁿ. The officer at Georgetown will then fire three other rockets which I will answer from the Fort. The Officer at Georgetown will then fire either a P or A rocket & I will reply with a P or A & close the Exhibition. Bearing of Georgetown Camp from Smithsonian Inst. N.W. Time mentioned by you yesterday 8½ P.M. Hoping this will meet with your approval I remain Very resp^lly

Your Obd^t Serv^t
Geo. H. Felt
Lt. & A.S.O.¹¹

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Lieutenant Denake was present during the exhibition, and also Mr. B. F. Greene, Associate.¹²

After which the meeting was adjourned.

Minutes, pp. 66-69, Records of the Permanent Commission, Records of Boards and Commissions, Naval Records Collection of the Office of Naval Records and Library, RG 45, National Archives.

1. The devices reported on in this entry were all presented to the Permanent Commission at its May 26 meeting. In most cases, the inventors had written initially to Secretary of the Navy Gideon Welles. Their letters are in Letters Referred to the Commission, vol. 2, Records of the Permanent Commission, Records of Boards and Commissions, Naval Records Collection of the Office of Naval Records and Library, RG 45, National Archives. The reports that resulted from the committee's examination were signed by Charles Henry Davis, Alexander Dallas Bache, and Henry. With one exception, they are in Reports from the Permanent Commission, Other Records, Office of the Secretary of the Navy, Naval Records Collection of the Office of Naval Records and Library, RG 45, National Archives; the report on Hunt's device (No. 90) is in Letters Sent, vol. 1, p. 155, Records of the Permanent Commission. The substance of each report appears in the minutes reproduced here; the asterisks represent material not included by the copyist.

This entry is typical of the Permanent Commission minutes in terms of the number of devices considered, the rapid disposition of the proposals, the rejection of most of the devices, and the use of gentle sarcasm in the reports (No. 86).

2. William H. Pettiner, of Green Point, Long Island, had written Welles on March 23 after being advised to do so by the publishers of the *Scientific American*. He offered a machine for cutting piles under water.

3. According to Gustav Dettloff's letter of March 17 to Lieutenant Commander D. L. Braine, Dettloff was a surgeon's steward on the United States steamer *Monticello*, which was at Beaufort, North Carolina, when he wrote. He asked Braine to forward a diagram and description of the device, which he claimed to have invented, to the Navy Department. If it were adopted as "a weapon against rebellion," his reward would be "having done some good for my adopted country."

4. Daniel B. Eddy of Somerset, Massachusetts, wrote Welles on March 12 and again on April 1. Anticipating a Union attempt to capture Charleston Harbor, Eddy proposed attaching iron rods to the sterns of ironclads so that torpedoes could be exploded before reaching the bodies of the ships. He claimed simplicity and low cost and was anxious to have his plan tested. As character references he gave the names of his representative in Congress and a banker in Hartford, Connecticut.

5. Thomas Taylor, of Roxbury, Massachusetts, wrote Welles on April 1. His smoke shells were to be used against ironclads and fortifications. The fifteen-inch shells were filled with "Oakum or its Equivalent (the Bisulphuret of Carbon & phosphorus) The igniting principle. Asphalt to produce dense smoke, & the Chlorate of potash to supply Oxygen." Taylor enclosed two printed endorsements. According to one, a letter from Joseph N. Brewer of Roxbury to Senator Henry Wilson of March 27, 1862, Taylor had exhibited his shell to Lincoln and Senator O. H. Browning. Brewer described Taylor as a founder of the local mechanics' institute and "a gentleman of high scientific attainments." For the March 1862 exhibition, see Robert V. Bruce, *Lincoln and the Tools of War* (1956; Urbana and Chicago, Illinois, 1989), p. 220.

6. Dexter Hathaway of Arena, Wisconsin, wrote Welles on April 6. If the military used the shells, he expected "a recompense for the discovery." He described himself as "a machienist and in low circumstances."

7. John Bissell of Philadelphia wrote Welles on April 9 to propose a steamer for river or ocean use. Although he was convinced his steamer would be faster and more seaworthy than those in use, he had no means of testing his plan. He wrote that "every idea of loyal citizens should be at the [ser]vice of the government—especially now—"

8. Henry Meredith sent only a drawing of his "Buoys to obstruct harbors or rivers." Gideon Welles to Charles Henry Davis, April 13, 1863, Letters Received, Records of the Permanent Commission.

9. There is no letter in the file from Edward Bissell Hunt (*Henry Papers*, 7:610). F. A. P. Barnard's 1864 eulogy of Hunt does not mention this device but does refer to Hunt's "Sea Miner," which would allow a ship of war to destroy an enemy ship by firing a projectile under water at great distances. Hunt died later in 1863 when he fell after being overcome by fumes while testing the sea miner. F. A. P. Barnard, "Memoir of Edward B. Hunt, 1822-1863," *Biographical Memoirs of the National Academy of Sciences*, 1895, 3:35-38.

10. C. P. Simpson of St. Catharines in Canada (south of Lake Ontario and just west of the border with the United States) wrote Welles on April 20 and 21 to propose a "submerger" to remove obstructions in Charleston Harbor. He confessed he knew nothing of the "particular nature, depth in water, strength &c" of the obstructions.

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11. Felt was an acting signal officer in the army's newly-established Signal Corps under Chief Signal Officer Albert James Myer. Myer's opposition to giving Felt a permanent commission had led to a court of inquiry, which exonerated Felt, in May. Prior to the exhibition of Felt's rockets before the Permanent Commission, Myer questioned whether Felt was developing his rocket signals for personal profit or for the benefit of the United States. Paul J. Scheips, "Union Signal Communications: Innovation and Conflict," *Civil War History*, 1963, 9:406-407; A. J. Myer to C. H. Davis, May 25, 1863, Letters Received, Records of the Permanent Commission.

At the May 30 meeting, the commission reported (No. 92) that it couldn't recommend adoption of the rockets by the navy until certain problems, including not enough difference between the green and white lights, were overcome. A second attempt on August 20 failed when the rockets were fired too early. Felt received a patent for his rockets five days later.

After a successful second exhibition, the commission reported (No. 168) on January 23, 1864, that the problems had been resolved and the display was satisfactory. Minutes, pp. 70-71, 142-143, Records of the Permanent Commission; G. H. Felt, U.S. Patent 39,636, August 25, 1863.

12. Benjamin Franklin Greene (1817-1895), formerly director of Rensselaer Polytechnic Institute and a professor there, was chief clerk of the Navy Department's new Bureau of Navigation from February 1863 to March 1873. Greene was an associate of the Permanent Commission, beginning with the May 15 meeting. Henry B. Nason, ed., *Biographical Record of the Officers and Graduates of the Rensselaer Polytechnic Institute, 1824-1886* (Troy, New York, 1887), p. 129; S. Reznick, "B. F. Greene's Scientific Career in the United States Navy, 1863-1879," *Rensselaer Review of Graduate Studies*, 1968, No. 52, pp. 21-24; Minutes, p. 45, Records of the Permanent Commission.

177. TO MARY ANNA HENRY

Smithsonian Institution, May 30, [1863]^A

My dear M

Your very acceptable letter¹ has just been received. . . . Nothing new in regard to the war. The "Advertiser," of this morning, contains an article from the London Times, on the first movement of Hooker which is almost prophetic of the result which had not, at the time, reached England.² The Permanent Commission has met almost every night since you left, either at our house or at Dr. Bache's. One meeting was on the top of the high tower of the Smithsonian Building, for observing a new method of signals, founded on the projection from rockets, of stars of different colors in different orders of succession. Thus a blue star might signify number one—a red and then a white star, number 35. Opposite these numbers, in a signal book, is found the word which is intended to be conveyed. All this, however, is not to be made public though there is little novelty in the system. The result of the trial was, on the whole, quite satisfactory, although the weather was hazy, the signals from Fort Washington sixteen miles down the river could be readily understood.³ I had a visit a few minutes ago, from a young man who has just come from Richmond, where he has been a prisoner for several months. He was taken on the Mississippi, and sent to Richmond, through the interior. He was well