

初期のスミソニアン協会ビルディングの機械（展示）室：レメルソン 発明および革新研究センターの起源としての意義

The Apparatus Room in the Smithsonian Institution Building During its Earliest Times: The Significance in the Origin of the Lemelson Center for the Study of Invention and Innovation

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Technological Innovation, Smithsonian Institution, National Museum of American History,
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Introduction

The Lemelson Center for the Study of Invention and Innovation was founded in 1995 at the Smithsonian Institution's National Museum of American History through a \$10.4 million gift from the Lemelson Foundation. The Center is located near the science and technology exhibits at the National Museum of American History. Building on the unique resources of the Museum, which collects and preserves more than 3 million artifacts, the Center implements its mission to document, interpret, and disseminate information on invention and innovation to a wide public; to encourage inventive creativity in young people; and to foster an appreciation for the central role that invention and innovation play in the history of the United States.

The Lemelson Center provides the American people with new perspectives on innovation, which could reveal useful ways of interpreting technological innovation in Japan and presenting these interpretations to the public. The purpose of this paper is to examine one of the least understood backgrounds of the vast collections of science and technology on which the Lemelson Center could be based. The focus will be on the collections of scientific apparatuses that were in the Smithsonian Institution Building during its earliest times.

1. The Smithsonian Institution Building or the "Castle"

The Smithsonian Institution in Washington D.C. is the world's largest museum and research complex. Presently, it includes nineteen museums and galleries, the National

Zoo, and research centers. Endowed by James Smithson and created by an act of Congress in 1846, the Smithsonian is dedicated to the increase and diffusion of knowledge.

The Smithsonian Institution Building, which has come to be known as "the Castle," was erected on the Mall in 1855. At the time, the building contained a museum, an apparatus room, a picture gallery, a lecture room, a library, a publication room, and other rooms such as the chemical laboratory. The museum contained a natural history collection, while the apparatus room was equipped with collections of scientific apparatuses.

2. The Apparatus Room

There used to be an apparatus room on the second floor in the main building. The room was not only equipped with collections of scientific apparatuses and instruments but was also arranged in a manner that facilitated scientific experiments (Fig. 1).

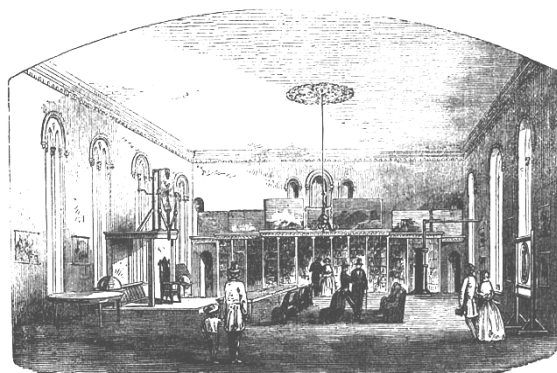


Figure 1. The Apparatus Room. Courtesy Smithsonian Institution Archives.

Most of these apparatuses had been donated by Dr. Robert Hare of Philadelphia, who had accumulated them during his twenty-nine years as professor of chemistry at the University of Pennsylvania Medical School. His large electrical machine was placed on an elevated platform in the room. The hair of a person sitting on the throne-like chair on the platform under the machine was supposed to stand on end as a result of an electric charge (Fig. 2).

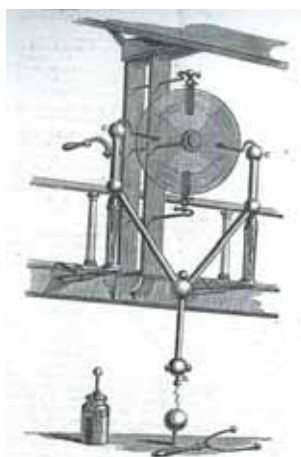


Figure 2. Dr. Hare's Electrical Machine. Courtesy Smithsonian Institution Archives.

In addition to his collections, the room contained a complete set of pneumatic instruments constructed for the Smithsonian Institution, a set of ingenious devices for illustrating wave motion, Page's electromagnetic instrument, and a large Fresnel Lens used in lighthouses. Furthermore, the room contained a hydro-electric machine imported from Germany by the Institution itself. The machine emitted a steady succession of sparks and charged a battery of sixteen large jars in 30 seconds.

These collections were important not only for their intrinsic value but also for establishing a precedent that should be frequently observed by others. From this perspective, the apparatus room could be identified as the predecessor of a museum of science and technology.

Considerations

The National Museum of American History exhibits many of the nation's premier technological artifacts. By taking advantage of such artifacts, the Lemelson Center plays an important role, especially now when science,

mathematics, and engineering are perceived as crucial to the nation's technological competitiveness and economic future.

Unfortunately, the apparatus room was completely destroyed in the fire of 1865, and the scientific collections therein did not directly lead to the present collections of the abovementioned museum. Therefore, the room has not been examined completely. However, the value of the apparatus room should not be underestimated because it held a significant meaning for the American people at that time.

According to the first Guidebook of the Smithsonian Institution of 1857, "In the apparatus-room, the most prominent object is a large electrical machine on an elevated platform. This instrument was constructed by Dr. Robert Hare, of Philadelphia." Dr. Hare made important contributions to early American chemistry; he invented a number of instruments related to the field. For his invention of the "compound" or "oxyhydrogen" blowpipe, he became the first recipient of the Rumford Prize (1839), which is one of the oldest scientific awards in the United States endowed by the American Academy of Arts and Sciences.

Dr. Hare's large electrical machine exhibited on an "elevated platform" in the apparatus room symbolized the important role of invention and technological innovation in the history of the United States. Such an attitude toward invention and innovation would become the foundation of the Lemelson Center in present time.

References

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