HISTORIC STRUCTURES REPORT

PART II, PORTION, RAINWATER CONDUCTORS

INDEPENDENCE HALL

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Pearl Millman

Independence National Historical Park

Philadelphia, Pennsylvania

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July 1964
Memorandum

To: Chief, EODC

From: Regional Director, Northeast Region

Subject: Historic Structures Report, Part II (Portion), Historical Data Section, Rainwater Conductors, Independence Hall

Enclosed is a copy of the Historical Data Section of the subject report for your use in preparing the Architectural Data Section as requested by Chief Architect Smith's memorandum of February 13, 1964.

(Sgd.) Ronald F. Lee

Enclosure

cc:
Superintendent, Independence
Mr. Whitcraft

GM Franey
General
Daily
Area
Memorandum

To: Regional Director, Northeast Region

From: Acting Superintendent, Independence

Subject: Historic Structures Report, Part II, Portion, Rainwater Conductors, Independence Hall

Enclosed for your review are three copies of the Historic Structures Report, Part II, Portion, Rainwater Conductors, Independence Hall.

Dennis C. Kurjack
Memorandum

To: Resource Studies Adviser, Northeast Region

From: Superintendent, Independence

Subject: Historic Structures Report, Part II, Portion, Rainwater Conductors, Independence Hall

In reply to your memoranda of February 27 and May 7, we expect to have this report ready for your consideration by June 1st.

M. O. Anderson
Memorandum

To: Superintendent, Independence

From: Resource Studies Adviser

Subject: Historic Structures Report, Part II, Portion, Rainwater Conductors, Independence Hall

A reply to our memorandum of February 27, 1964, above subject, will be appreciated.

Murray H. Nelligan

Murray H. Nelligan

cc:
Mr. Whitcraft
GM Franey
General Daily Area
Memorandum

To: Superintendent, Independence

From: Regional Director

Subject: Preparation of Historic Structures Report, Part II, Portion - Rainwater Conductors, Independence Hall

We note the exchange of correspondence between your office and the EODC, on the above subject, and are agreeable to a separate Historic Structures Report on this feature of the Hall.

To facilitate consideration of this report, please use the title as given in the subject heading above and advise as to when the report may be expected.

J. Casliole Crouch

cc:
Chief, EODC
MHNelligion/gmf
General
Daily
Area
Memorandum

To: Superintendent, Independence
From: Chief Architect, EODC

Subject: Rainwater Conductors and Leader Boxes on Buildings in Independence Square

We are aware of the condition of rainwater conductors and leader boxes on buildings in Independence Square and we have made provision for this on Independence Hall, and have planned for it on the other buildings.

Except for the most pressing exterior obligations (new roofs) we feel it would be better (because of design staff time limitations) to defer certain aspects of the exterior until the interior restoration problems have been solved.

We would appreciate having the Park's Interpretive Division prepare a Historic Data Section of the Historic Structures Report for this phase of the work, so as to have the benefit of the available documentary information on each building involved. We will prepare the appropriate Architectural Data Section and the necessary drawings.

Robert E. Smith

By: Lawrence B. Coryell, Acting

cc: Regional Director, Northeast Region
Memorandum

To: Regional Director, Northeast Region

From: Acting Superintendent, Independence

Subject: Rainwater Conductors and Leader Boxes on Buildings in Independence Square

Inspection of the existing copper rainwater conductors and leader boxes on the subject buildings reveals that the sheet copper has corroded to such an extent that the metal can be easily punctured and torn by hand. The corrosion probably was caused by chemicals in the atmosphere and those chemicals leaching from wood shingles on the roofs.

We recommend that the rainwater conductors and leader boxes be replaced under the present restoration program with new conductors and leader boxes that would restore the historic design.

The Park's Interpretation Division has data available on the historic appearance and design of the conductors and leader boxes, and could prepare a Historic Structures Report for this phase of the restoration.

Ramon J. Delgado
Acting Superintendent

Copy to: Chief, EODC
Memorandum

To: Regional Director, Northeast Region
From: Acting Superintendent, Independence
Subject: Rainwater Conductors and Leader Boxes on Buildings in Independence Square

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Ramon J. Delgado
Acting Superintendent

Copy to: Chief, EODC
SIGNATURE SHEET

RECOMMENDED

Superintendent  Date  7/17/64

Regional Director  Date

Chief, Eastern Office, Division of Design & Construction  Date

APPROVED

Director  Date
CHAPTER II
HISTORICAL DATA

Prepared by Historian Pearl Millman
Documentary evidence about the rainwater conductors of Independence Hall establishes that the original downspouts and conductor heads were of lead composition. The earliest description of these structural features is some twenty-five years following the construction of the building. On August 26, 1777, by order of the Pennsylvania Supreme Executive Council all leaden spouts in the city were to be removed. As a result, the downspouts and conductor heads were removed from the old State House. In the account of leaden spouts taken from the citizens of Philadelphia, the entry referring to the State House establishes that lead downspouts with lead rectangular heads were an original feature of the building. This entry notes that the material removed from the State House included “29 to Copper 1636. [pounds of lead] 4 Square 0 [heads].”

In 1784 an extensive program of repairs and alterations was to be undertaken in the State House. At this time a committee was appointed by the Pennsylvania General Assembly to examine the condition of this public building. The committee’s report of September 22, 1784 included the recommendation to install copper spouts. The work progressed rapidly for by December 20 the "copper trunks to convey the water from the roof" were in place. The use of lead as part of the drainage system was probably continued for in September 1785 Robert Haydock (who in 1793 fabricated the Congress Hall spouts and spout heads) provided 141 1/2 pounds of sheet lead. At the same time "...free Stone for under Spouts at State house..." was supplied by John Sidleman.
Although no specific reference is made in the vouchers to the fabrication of spout heads, they undoubtedly were also of copper composition. Charles Gow who supplied copper for the installation of the rainwater conductors received payments of £71.6.0\(^7\) and £62.0.0.\(^8\) The total amount exceeded the cost of the downspouts. The voucher for "20\(^{lb}\) Sheet Copper...£2..0..0" included in the first payment is probably the cost of the spout heads. From 1785 until 1795 no repairs were made to the State House rainwater conductors. In the latter year Joseph Skerrett was paid "£0:11:3"...to mending one of Conductors [sic] 4 new hooks & fixing up Another of the Conductors to the state house..."\(^9\)

Written records do not reveal whether the eighteenth century conductors on Independence Hall were circular or rectangular. For such information we must rely on contemporary prints and available data on rainwater conductors for this period. The earliest view of the State House prepared by Scull and Heap (1750-1752) shows circular downspouts. (See Illustration No. 1.) They are also to be noted in the 1769 Bennett engraving of the Scull and Heap map and the John Reed view of the State House in 1774. (See Illustration Nos. 2 and 3.) Although in these early views the square heads are not clearly defined or detailed, the circular pipes with regularly spaced collars and open ends appear consistently.

Except for the 1804 William Birch view of the State House (see Illustration No. 4) no pictorial representations of this structure depicting the new 1785 rainwater conductors appear until 1815. The
John Lewis Krimmel print, "Election Day, 1815 [at Independence Hall]," (see Illustration No. 5) is the most detailed and accurate view of the building before the development of photography. A notable feature is the absence of collars on the circular downspouts. The Birch print also omits the collars. It is thought that in 1785 they were not replaced during the installation of the copper spouts. In addition, available information on rainwater conductors indicates that in the late eighteenth and in the early nineteenth centuries collars for the spouts were not a common feature.

The conductor heads of the downspouts are detailed for the first time in an enlargement of the cornice-roof section of Independence Hall as shown in the Krimmel print. (See Illustration No. 6.) These are the copper ones which replaced the original square leaden heads in 1785.

For the next forty-five years, a number of alterations were made to the rainwater conductors of Independence Hall. Written evidence does not reveal when such work was carried out. An 1861 photograph of the building (see Illustration No. 7) provides the graphic documentation of these changes. The downspouts are shown in this photograph with regularly spaced collars. They are further ornamented by the first appearance of wooden boots or casings fitted to the once open end spouts. The conductor heads were also altered during the first half of the nineteenth century. Leaden flanges with the date "1733" were added to the heads at this time.
Until the restoration work on Independence Hall for the Centennial celebration in 1876 no further alterations were made to the rainwater conductors. (See Illustration No. 8.) Under the supervision of Colonel Frank M. Etting and his Committee on the Restoration of Independence Hall many alterations and repairs were instituted. Among these was the installation of tin rainwater conductors and spout heads. An 1878 photograph of the building shows this work completed except for the missing collars on the east and west end pipes. (See Illustration No. 9.) An 1890 view of Independence Hall (see Illustration No. 10) shows the collars in place.

During the 1897-1898 restoration of Independence Hall directed by T. Mellon Rogers to restore the building to its appearance in 1776 work was done on the rainwater conductors. They were repaired or replaced as their condition warranted. Again in 1917, monies were provided by the City Council of Philadelphia for new metal spouting. The copper rectangular conductors as we see them today are an innovation of this period. (See Illustration No. 11.) Little is known of alterations to the conductors for the years following 1917 other than routine maintenance.

The rainwater conductors found today on Independence Hall are substantially those of the early twentieth century. It is evident from the available information that there are no remains of the original conductors and conductor heads. The early lead downspouts as shown in contemporary prints were rounded with collars and open ends.
Historical documentation establishes that eighteenth century spouting was almost exclusively circular and it remained the most common type in Philadelphia well into the nineteenth century. There is limited information on the original conductor heads other than their being square and leaden. The flanges of the conductor heads dated "1733" cannot be authenticated. There is no available written evidence regarding the installation of the flanges in the eighteenth century. Not until 1861 do graphic materials indicate this. In addition, the date itself is in question in relation to building construction and spout installation.

It is necessary to raise another point in the treatment of rainwater conductors of Independence Hall. Eighteenth century architectural tradition raised the possibility that the downspouts on the south wall of the building differed from the conductors on the north facade. Historical investigation has revealed that both form and composition of eighteenth century downspouts sometimes differed from the architecturally important facade to the sides and back of structures. This was especially true of public buildings.

Before a final decision is made on the restoration of the rainwater conductors of Independence Hall, an architectural investigation of all the wall surfaces, cornices and other structural features against which the downspouts rested or pierced should be undertaken. The results of this study coupled with available documentary evidence should provide an accurate restoration of the original rainwater conductors.


6. Ibid.

7. Ibid.

8. Ibid.


14. The wood conductor heads now in place on the building can not be documented from available information.

16. Construction of Independence Hall was begun in 1732; such refinements as downspouts and heads were not installed until several years following this date.
ILLUSTRATIONS
Earliest known view of State House, made before erection of steeple (1750-1752); from Scull and Heap map. Among characteristic features are circular downspouts with open ends and regularly spaced collars. Square spout heads are visible but detailing not clear. Courtesy Library of Congress.
Adaption of Scull and Heap map dated 1769; engraver R. Bennett. Circular pipes clearly indicated by the spout ends.
The John Read view of the State House from 1774 map. Note details of round leaden spouts and spout heads before their removal in 1777.
Birch view of Independence Hall from the west, made in 1804. Note the one spout shown does not have collars and appears circular from open end.
"Election Day, 1815" by John Lewis Krimmel, a detailed and accurate view of Independence Hall. The circular spouts and spout heads shown here are those which replaced the originals in 1785.
Detail from Krimmel's "Election Day--1815."
Note the details of the spout head.
First photograph of Independence Hall following alterations to rainwater conductors. Note round downspouts with collars, the wooden boot, and flanges on the conductor head dated "1733."
View of Independence Hall after the Etting restoration (about 1878).
Note absence of collars from east and west end downspouts.
Independence Hall in 1890. Note replacement of collars on east and west end downspouts.
Independence Hall, 1925. The rectangular copper downspouts as they appear today. Courtesy of City of Philadelphia.