Chapter XV

Elevators and Lighting

THE addition of and experiments with such modern appliances as elevators and electric lights, so as to add to the convenience of occupants of the Capitol, form an interesting part of the history of this structure. A "noiseless" screw elevator was the first form adopted. It was so noisy that the contractor changed it in 1874 to an ordinary cable elevator. In 1876 this was taken out and a hydraulic elevator substituted, and in 1877 a hydraulic elevator was placed in the Senate wing.[1] Judging from the reports the first elevators were simply for freight purposes, as the first passenger elevator (hydraulic) was put in the south wing in 1882, at the end of the east corridor, as provided for in the act of May 3, 1881.[2] During the same year a warehouse lift was placed in the Senate wing for the purpose of conveying documents to the folding room in the basement. In 1883 a sidewalk lift was put in to carry documents to the cellar, and a freight lift was put at the north end of the west corridor, both in the Senate wing.[3] In 1887 a contract was made with the Crane Elevator Company for two additional elevators. In the year 1895 a hydraulic passenger elevator was constructed in the vestibule leading to the Supreme Court room, the eastern elevator in the House wing was changed from a gravity machine to one operated by a pressure tank, and the western elevator in the same wing was extended to the cellar. In 1898 the elevator to the Supreme Court room was destroyed by an explosion and fire and the system was changed to an electric elevator.[4]

During construction gas pipes were laid throughout the wings for the House and Senate chambers, corridors, and many of the committee rooms. A 10-inch main was laid, with two 8-inch branches for each wing, and two large meters were placed under each connecting corridor. Captain Meigs, in his report of November, 1857, says that the gas company were not able to supply the gas without a new gasometer and advocates the Government making its own gas.[5]

[1] "Annual Report of the Architect of the United States Capitol" [For the Fiscal Year Ended 30 June, 1874 and 1876], 753 and 755. A passenger elevator was installed for the senators in 1873. For a discussion of the historical development of elevator service in the Capitol, see *Report of the Architect of the Capitol: Letter from the Architect of the Capitol Transmitting the Annual Report of the Office of the Architect of the Capitol for the Fiscal Year Ended June 30, 1934,* S. doc. 42 (74–1), Serial 9909.

[2] "An Act Making Appropriations for Sundry Civil Expenses of the Government for the Fiscal Year Ending June 30, 1882, and for Other Purposes," 47th Cong., 1st sess., in *United States Statutes at Large,* vol. 21, 449.

[3] The lift was actually installed on the west end of the north corridor, not the north end of the west corridor. "Annual Report of the Architect of the United States Capitol" [For the Fiscal Year Ended 30 June, 1883 and 1887], 3–4.

[4] "Annual Report of the Architect of the United States Capitol" [For the Fiscal Year Ended 30 June, 1895], 3. The explosion and fire occurred on November 6, 1898. See the reports of Glenn Brown and Charles Munroe, in *Annual Report of the Architect of the United States Capitol to the Secretary of the Interior, for the Fiscal Year Ended June 30, 1899* (Washington: Government Printing Office, 1899), 24–40. For contemporary news accounts, see "Wreck and Ruin: The National Capitol Building Damaged by an Explosion," *The Evening Star,* November 7, 1898, 3; "The Capitol Fire: Assistant Architect Woods Investigating Extent of Disaster," *The Evening Star,* November 8, 1898, 3; "Explosion at the Capitol: Vast Damage Caused in the Center of the Nation's Great Structure," *Washington Post,* November 6, 1898, 1; and "Counting Up the Cost: Extent of the Damage Caused by the Capitol Fire," *Washington Post,* November 8, 1898, 2.

[5] Captain of Engineers in Charge of the U.S. Capitol Extension, "Report on Capitol Extension, Reconstruction of Dome, and Post Office Extension," in *Message of the President of the United States to the Two Houses of Congress at the Commencement of the First Session of the Thirty-fifth Congress* (Washington: Government Printing Office, 1858), 40–47.

AUTHENTICATED U.S. GOVERNMENT INFORMATION GPO

In 1864 arrangements were made for introducing Garden's magnetic gas-lighting apparatus, which was installed in 1865, and March 2, 1867, the Rotunda was lighted by gas ignited by electric current.[6]

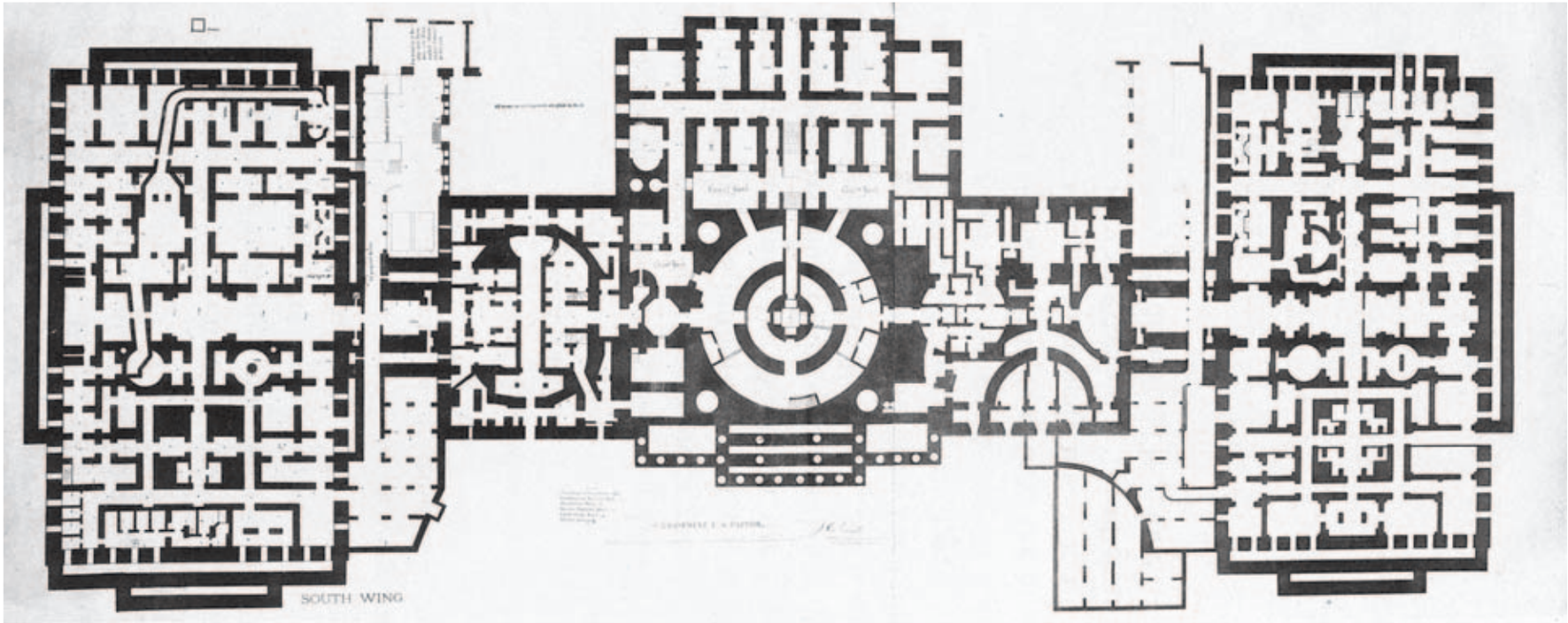
In the year 1878 a Commission was appointed to investigate the question of lighting the building by electricity. In 1880 I. H. Rogers, who had charge of the electric gas lighting in the Capitol, made experiments on the different patented electric lights and reported that he did not consider them steady enough for lighting a legislative hall. The report of 1881 shows the electric lights still unsatisfactory. A. B. Talcott was appointed electrician of the House in 1882. In the year 1884 the United States Electric Lighting Company, at their own cost, were allowed to install arc lamps at the top of the steps of the north, south, and west approaches; and the Brush-Swann Company were allowed to place in the Dome experimental lamps which they thought would illuminate the grounds and avenues around the Capitol. The Edison Company were allowed, in 1885, to place incandescent lamps in the cloak rooms and lobbies and on the stairways. The arc lamps were found objectionable because they attracted such a large number of insects around the building. In 1886 the incandescent lamps placed in the cloak rooms and lobbies were found to be very much superior to gas, which had been previously used for lighting these apartments. In the year 1888 the Sawyer-Man Electric Company, through Royce & Marean, were given permission to install, at their own expense, 200 lamps in the House wing and 650 lamps in the Senate wing, by act of August 4, 1886.[7] Many of these lights were in use during the year 1888 and proved so satisfactory that the Committee on Public Buildings and Grounds was authorized to investigate the subject of lighting the building by electricity. The use of electric lighting proved so satisfactory that arrangements were made in 1895 to purchase the electric plants in the Capitol, as authorized by the acts of March 3, 1893, and March 2, 1895.[8] A contract was made with the Westinghouse Company in which they agreed to take out all engines and dynamos of the original plant and replace them with modern low-tension machines, consisting of four direct-connected engines and dynamos, with a capacity of 1,250 16-candlepower lamps each. Electric lights replaced gas in the space over the ceilings of the House and the Senate in 1897. The heat caused by the gas lighting in the Senate Chamber was so great that in cold weather the difference in temperature between the inside and outside caused the glass in the skylights to crack. The use of electric lights was found to remedy this defect. During this year a contract to light the grounds by electricity was carried out, and electric fans were installed in the kitchen and toilet rooms to carry off disagreeable odors.[9]

[6] Gardnier's (not Garden) apparatus was installed, tested, and lit in 1865–66. "Report of the Commissioner of Public Buildings," in *Report of the Secretary of the Interior,* H. ex. doc. 1 (39–2), Serial 1284; "Report of the Architect of the Capitol Extension," in *Report of the Secretary of the Interior,* H. ex. doc. 1 (39–1), Serial 1248.

[7] An Act Making Appropriations for Sundry Civil Expenses of the Government for the Fiscal Year Ending June 30, 1887, and for Other Purposes," 49th Cong., 1st sess., in *United States Statutes at Large,* vol. 24, 239.

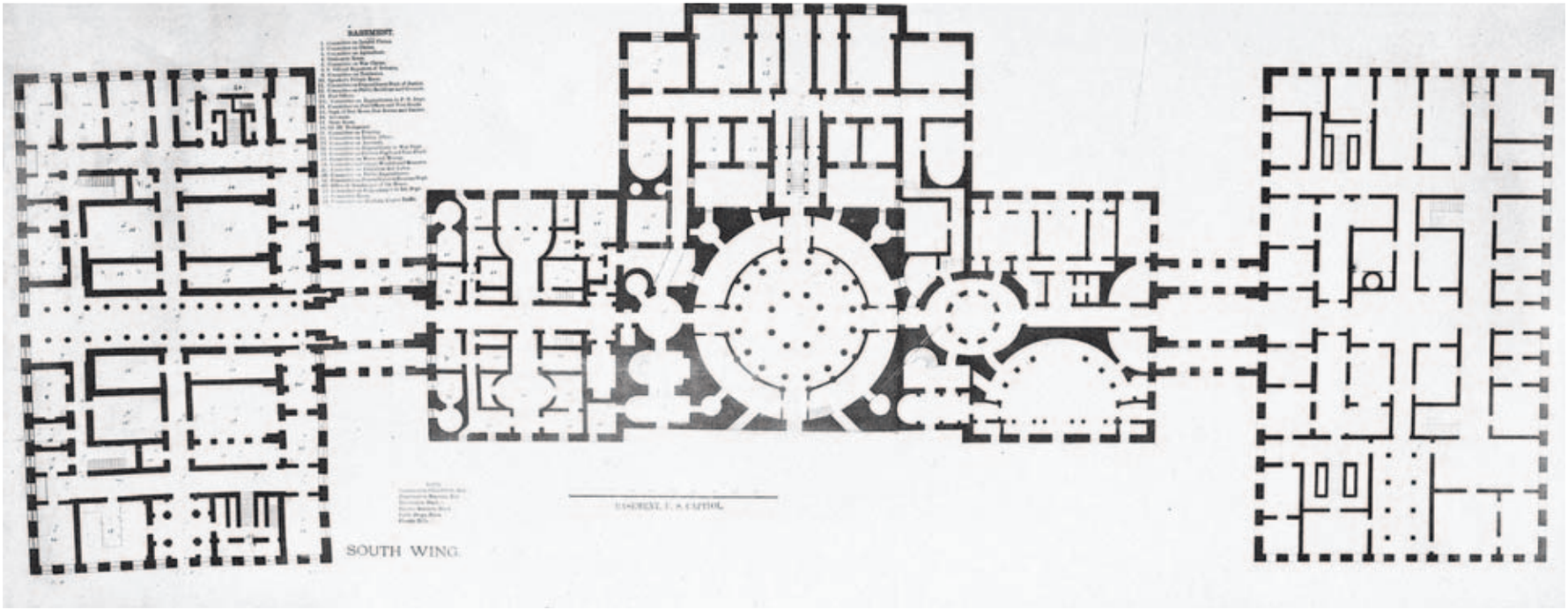
[8] An Act Making Appropriations for Sundry Civil Expenses of the Government for the Fiscal Year Ending June 30, 1894, and for Other Purposes," 52nd Cong., 2nd sess., in *United States Statutes at Large,* vol. 27, 591; "An Act Making Appropriations for Sundry Civil Expenses of the Government for the Fiscal Year Ending June 30, 1896, and for Other Purposes," 53rd Cong., 3rd sess., in *United States Statutes at Large,* vol. 28, 935.

[9] "Annual Report of the Architect of the United States Capitol" [For the Fiscal Year Ended 30 June, 1897], 7–8.



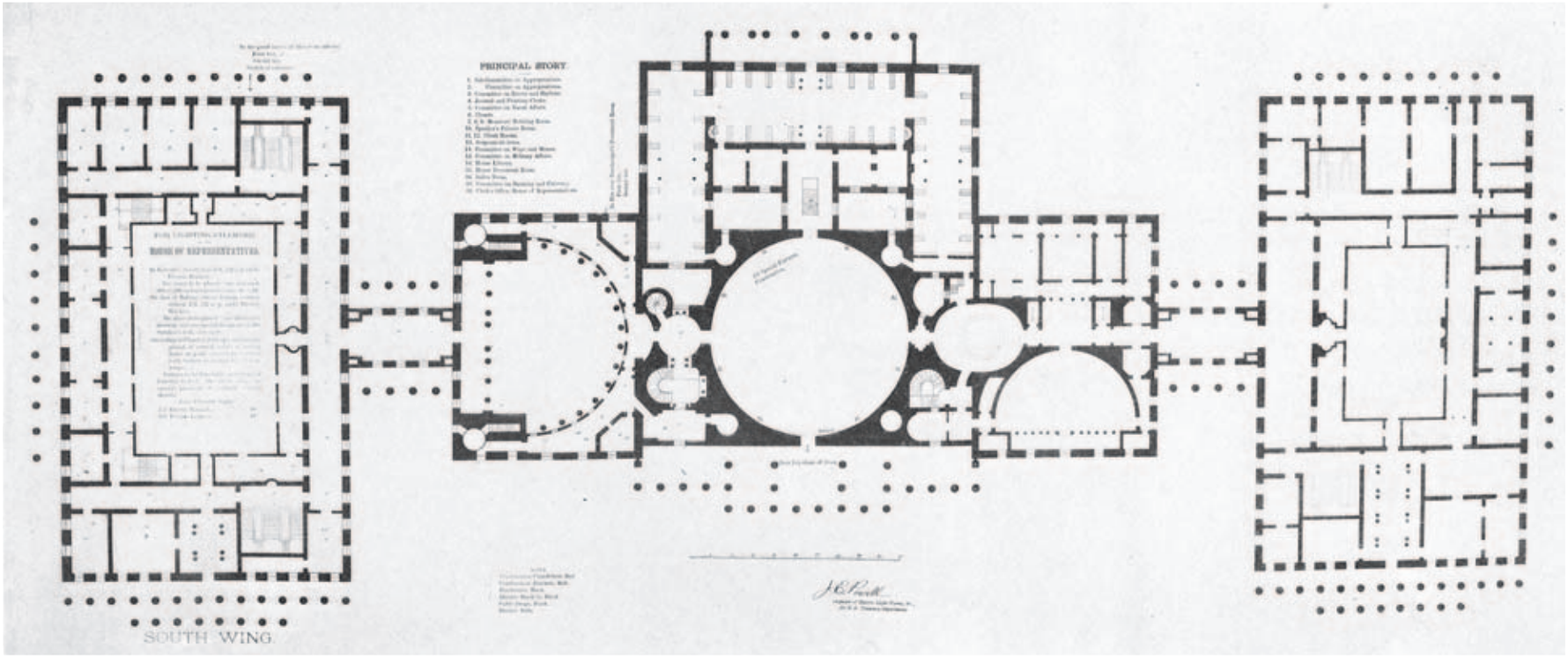
THE BUILDING AS COMPLETED, CELLAR PLAN.

Plan of the current basement level produced under the direction of J. E. Powell, electrical engineer, Treasury Department, 1888. *Location unknown.*



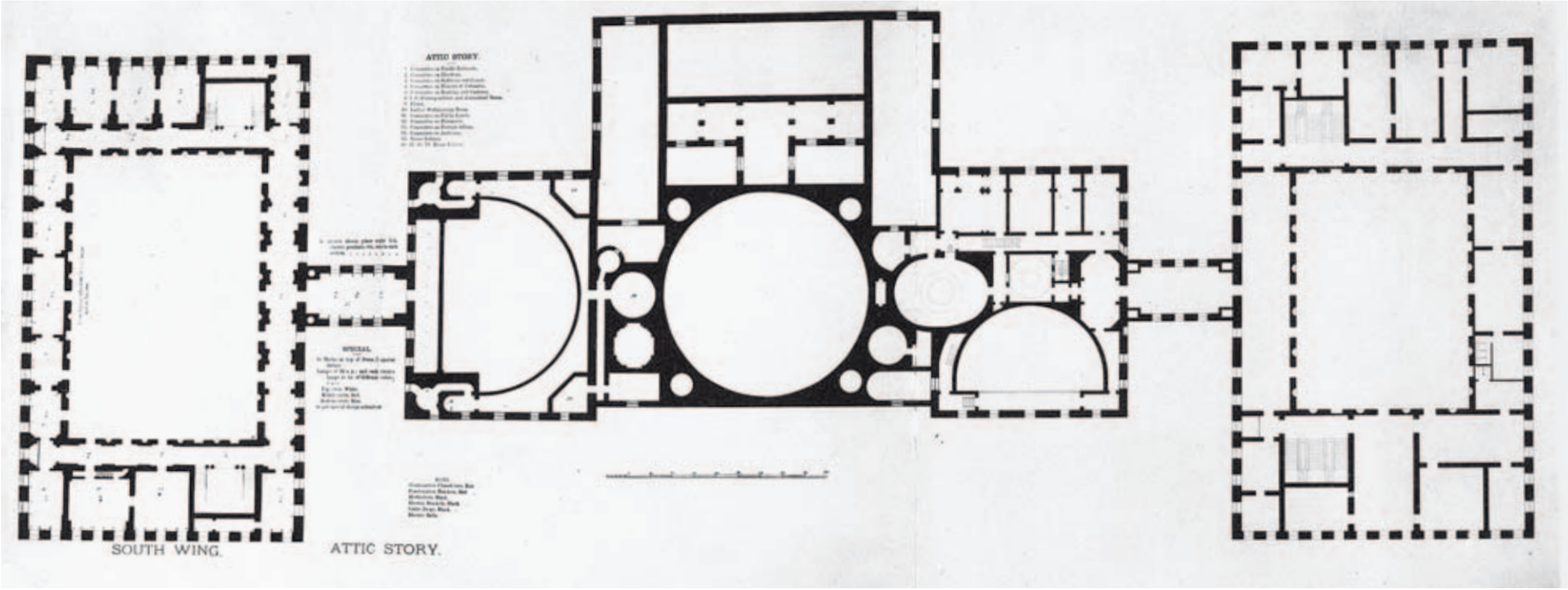
THE BUILDING AS COMPLETED, BASEMENT PLAN.

Plan of the current first floor produced under the direction of J. E. Powell, electrical engineer, Treasury Department, 1888. *Location unknown.*



THE BUILDING AS COMPLETED, PRINCIPAL STORY PLAN.

Plan of the second floor produced under the direction of J. E. Powell, electrical engineer, Treasury Department, 1888. *Location unknown.*

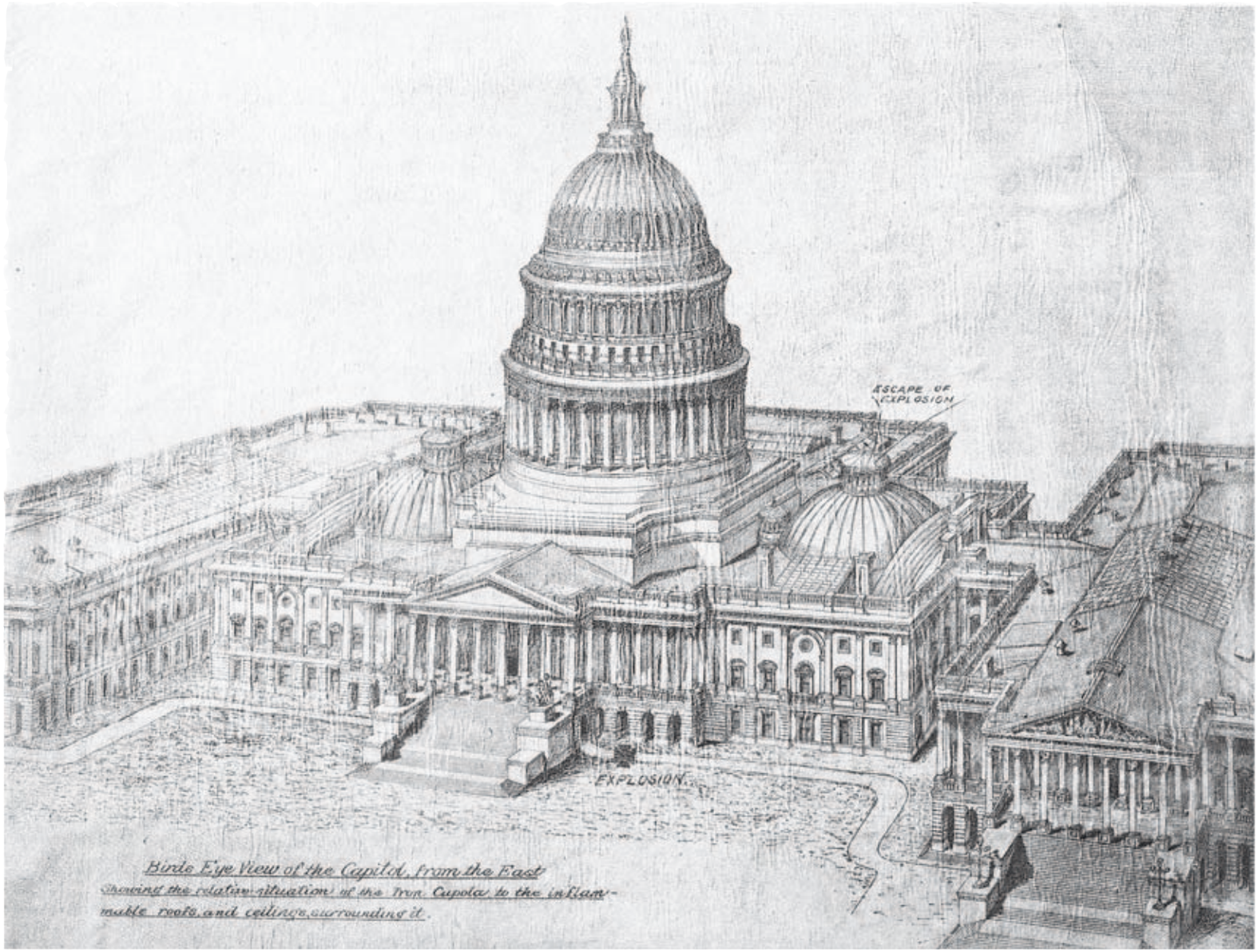


THE BUILDING AS COMPLETED, ATTIC PLAN.

Plan of the third floor produced under the direction of J. E. Powell, electrical engineer, Treasury Department, 1888. *Location unknown.*

EAST FRONT, AS COMPLETED.

NORTHEAST VIEW, AS COMPLETED.



BIRD'S EYE VIEW SHOWING ROOF OF CAPITOL.

Drawing illustrating the area of the Capitol damaged in the 1898 gas explosion. *Location unknown.*