

the manner in which the principles and conditions investigated in that paper, have been practically carried out in the arrangements of the Lecture Room at Washington. The subject is so novel, and of so much importance, that we emphatically call the attention of architects and builders to this successful application of scientific research to purposes of public utility. We have only to add, that, from the accounts we have received, we believe that this first attempt to construct on scientific principles a room which shall fulfil the requirements of hearing has been entirely satisfactory. The following explanatory description by Professor Henry will be readily understood by reference to the article above mentioned. We need only further add that it will be observed, the practicable problem which had to be solved, was not the construction of the most perfect lecture room, in all respects, which the ascertained laws of acoustics, as applicable to public buildings, rendered possible; but the adaptation, by means of general principles previously ascertained, of some portion of a structure already completed, chiefly with a view to architectural effect, to the purposes of a theatre for public lectures.

The following is a brief description of the lecture room, which has been constructed in accordance with the facts and principles stated in Professor Henry's memoir on this subject, so far at least as they could be applied.

There was another object kept in view in the construction of this room besides the accurate hearing, namely, the distinct seeing. It was desirable that every person should have an opportunity of seeing the experiments which might be performed, as well as of hearing distinctly the explanation of them.

By a fortunate coincidence of principle, it happens that the arrangements for insuring unobstructed sight do not interfere with those necessary for distinct hearing.

The law of Congress authorizing the establishment of the Smithsonian Institution directed that a lecture-room should be provided; and accordingly in the first plan one-half of the first story of the main building was devoted to this purpose. It was found, however, impossible to construct a room on acoustic principles in this part of the building, which was necessarily occupied by two rows of columns. The only suitable place which could be found was, therefore, on the second floor. The main building is two hundred feet long and fifty feet wide; but by placing the lecture-room in the middle of the story a greater width was obtained by means of the projecting towers.

The general form and arrangement of the room will be understood