

of the form of that room which I think is of very great size; some 250 by 150 feet. It is I think almost a perfect oval. I don't know of course anything about the material of which the walls are formed but I presume they are of some material fairly absorbent. But, whatever may be the truth as to the best form of chamber, we may seldom have the opportunity of devoting our efforts entirely to its attainment. We have all, however, within our reach the means by which we can overcome imperfections, and for the knowledge of what these are and how to apply them we are very much indebted to Professor Anderson. I have much pleasure in moving a vote of thanks to Mr. Anderson for his valuable paper. (Applause.)

The President: Are there not forms of rooms in which it would be utterly impossible to reduce the echo sufficiently to make it a good speaking room?

Mr. Anderson: Of course there are some forms of rooms that are quite unsuitable for public speaking. There is no question but that a room that focuses the sound at some particular point is going to prove detrimental to the hearing. That room could not be made perfect but it could be very much improved. If we take the room and succeed in absorbing the sound we shall certainly reduce it. There are rooms that from their form would not be capable of being brought into a perfect condition, but we can always improve a room which has decidedly bad reverberation. Improvement is all that we can hope for in a room that has been already constructed and where principles have been obviously violated. But the question of form is a very important one; perhaps quite as important as the question of material. It is a question that I have entirely avoided in this paper. I had not time to consider both of them. All I can say now is that a room that is bad cannot be made entirely good, but it can be improved.

Mr. Pearson: The room used as an example is for orchestral music; the time there is 2.32 seconds. For speaking what should be the time?

Mr. Anderson: As low as possible. There is no object in having any decided reverberation for a speaker. That means that a room suitable for an orchestra is not suitable for a speaker. I might say in this connection that data have been determined for piano music, by making a number of tests in the new Conservatory of Music. The figure arrived at was 1.08 seconds. That was arrived at by tests conducted there with a similar apparatus to this. The judges were the President of the Conservatory and several members of the faculty. Nothing was said about the apparatus; they simply decided when it was right and when it was not. Curtains were draped around the room until a certain stage was reached. One of the faculty played a number of airs on the piano and they decided whether there was too much, or not sufficient, reverberation. The rooms were tested one after the other and a figure of 1.08 was arrived at. That is only about half for orchestral music. For speaking the reverberation should be very slight. A hall that has a reverberation of more than one-half a second is unsuitable for the best effects in speaking.

Mr. Pearson: What would you consider the best form of room for speaking and for orchestral purposes?

Mr. Anderson: I do not think there is any form better than the rectangular for either purpose.

Mr. Burke: Mr. President,—In connection with the form of room I remember my late Principal,

Mr. Langley, stating that it is practically impossible to make an octagonal room suitable for speaking. He had built a little chapel on Albert Street of octagonal form and it was never good for speaking in. I also remember a church in Montreal, built on the octagon plan, which was never satisfactory. They put in wires, curtains, and galleries and never could make it thoroughly satisfactory. I have always understood that the form of the Greek theatre is considered the best for speaking; that is a semi-circular building with a straight wall at the back, such as the hall that Professor Anderson spoke about. In my own experience I have found that a semi-circle or a little more than half the circle, with a flat wall at the back, is practically perfect for speaking purposes.

Mr. Anderson: Let me point out that such a building would be practically rectangular. As a rule it is only the seating that is semi-circular. I would not say that a rectangular building is perfect or that the other is perfect, but I think that the semi circular building with a wall at the back would be equally good.

Mr. Burke: The Jarvis street Baptist church is a little more than a semi-circle and you can almost hear a whisper when the speaker is on the platform. On the other hand it is not as good for choral music as it ought to be. Everything seems to come right at you; there is no reverberation.

Mr. Pearson: Taking the second column, plaster on lath, are those figures constant?

Mr. Anderson: Approximately. There would be small variations depending on the thickness of the plaster and its kind and so on. But those quantities are fairly constant. Hard oak would differ slightly from pine but not very greatly. Those differences are comparatively small and in any case it would simply lie with the architect to obtain such data as he could of various forms of material used and keep them for reference.

MISSION FURNITURE.

Art in house furnishings never fares so hard in this country as when it tries to assume the virtue of honesty and avoid the appearance of deceit. Everybody whose memory runs back a third of a century will recall the dreadful shamming which overwhelmed the "Eastlake" movement, and a glimpse at the catalogues of "mission" things now to be found at every turn—the catalogue—brings to mind the old horrors when sham wedge-pins and tenon ends were glued on almost any place for decorative purposes. Eastlake things went the way of all the world, not so much because they were ugly, or because they came to be made by people without anything genuine in their natures—such people as wave the flag and make a loud noise on state occasions and call their efforts patriotism—but because change of fashion ruled them out. Now one might well respect the founders of the missions, who with crude tools and at plenty of cost of hard labor, made lumbering furniture that brought some degree of comfort to a simple, honest, hard life. If their chairs had legs two or three times too large, it is still easy to expect the maker for doing a thing that he probably regretted at the time. The piece of musquit that he must use, could only be reduced to a proper size with his crude tools by an amount of labor which he could not spare from his other duties, so he cut it to his lengths and used it as it was, any notion of a vain display of profusion and indifference to cost of materials being farthest from his thoughts. He then framed and joined the work as well as the limitations of his tools, his skill and time permitted, and while he rested, thanked God for what he had done and what he had taught his followers to do. One might take honest pleasure in having a bit of furnishing that came from such sturdy hands, but when it comes to most of the latter-day stuff that is advertised as Spanish Mission furniture, stuff that is ground out by modern machinery and put together without intelligence, stuff in which structural skill is conspicuously absent, and silly profusion of material and sham constructive details most prominent, we submit that the degree of simplicity that with indifferent success it retains, ought not to save it. Yet, despite the fact that most of this stuff is lacking in all the qualities of quaintness and sturdiness that distinguished the originals, it will probably have its vogue until fashion decrees its undoing.—*Western Architect.*