

of this material are equivalent to only 1 square yard of $\frac{1}{2}$ in. felt. The drappings of art serge which it is proposed to hang between the columns are of value as sound-absorbers, but only to the extent mentioned above.

3. I would suggest that the Speaker's chair be moved forward about 2 feet.

4. If trouble is experienced from noise coming from the passages outside the chamber, these passages should be well carpeted.

Information about special materials is expected to come to hand within a few days. With this it will be possible, perhaps, for me to make further suggestions if the Committee so desires.

If the above recommendations are carried out, the reverberation-time will be reduced to 0.9 second for all pitches, which will, I think, give as good hearing-qualities as can be obtained without making very extensive and costly alterations in the design of the chamber.

The Committee should not forget that the chamber, if altered as I suggest, though suitable for speaking, will be unsuitable for music. The deadening effect upon sound may be considered unpleasant by some, but this is to a certain extent a question of psychology. One expects a large room to have a considerable reverberation-time. The deadness of the chamber will be not nearly so great as that of the old Legislative Council chamber. The latter is, however, a small room; one expects to find it dead for sound, and is not therefore disagreeably surprised.

If the Committee so desires, correction may be obtained temporarily by placing strips of felt on the walls and ceiling, and under the carpets of the gallery; and on the floor of the Press Gallery; also under the carpets and in unused spaces of the main floor. Considerable quantities can be placed effectively behind the large curtain at the end of the chamber.

I am, &c.,

HARRY CLARK.

Wellington, 28th May, 1919.

SUPPLEMENTARY REPORT TO THE FURNISHING ADVISORY COMMITTEE ON THE ACOUSTIC PROPERTIES OF THE CHAMBER OF THE HOUSE OF REPRESENTATIVES OF NEW ZEALAND.

Experiments on the Acoustic Effects of Stretched Wires.

All of the felt and other sound-absorbing materials which had been placed temporarily in the chamber were removed. Measurements of the reverberation-time to the number of 450, together with speaking tests, were made in various parts of the floor and gallery. Wires were then strung under the direction of Mr. Campbell, and the measurements and other tests were repeated. The position of the organ and the various places of observation were the same during both experiments.

The wires, which were copper, No. 20 gauge, were attached to battens which were secured at the top of the woodwork in front of the galleries. They were strung both lengthwise and crosswise, at 6 in. intervals, over the entire area of the chamber enclosed by the woodwork, and were tightly stretched.

The mean reverberation-time *with wires* exceeded that *without wires* by one-half of 1 per cent. This difference is not greater than the expected error of measurement. The wires had no perceptible effect upon *interference* of sound. Speaking tests, which are always of questionable value, showed no differences.

There is therefore good reason to believe that the wiring of the chamber has had no effect of any kind on the acoustic properties.

Expected Information about Materials.

It was stated in the report of 28th May that information about suitable materials for use on the walls of the chamber was expected shortly. This information has not yet come to hand.

Yours, &c.,

Wellington, 7th June, 1919.

HARRY CLARK.

SPECIAL REPORT.

I HAVE the honour to report that at a meeting of the Furnishing Advisory Committee held on Tuesday, the 2nd March, the following resolution was unanimously agreed to: "That the members of the Furnishing Advisory Committee express their high appreciation of the care and energy with which Mr. Malcolm has discharged the duties of Chairman of the Committee, and that this resolution be recorded on the Journals of the House.

2nd September, 1919.

A MEMBER OF THE COMMITTEE.

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