an overhead reservoir, from which the pipe extends around the building in which the carving is executed. Dropping from this pipe at different points are lengths of common garden hose, through which the compressed air passes to the pneumatic ham-mers. These hammers are of the most delicate mechanism, being only about one foot in length, and are controlled by the workmen only about one foot in length, and are controlled by the workmen in the same manner as ordinary hand work. The air operating in the same manner as ordinary hand work. The air operating on the hammer forces to and fro a pinion in the centre at the rate

on the hammer forces to and fro a pinion in the centre at the tate of 250 strokes per minute. Five of these hammers are in operation at the works of the above company, the cost being about \$100 each. The com-pressed air pump cost upwards of \$300. All the apparatus is of American manufacture, having been purchased in Illinois. It is claimed that by the use of one of these hammers a workman can accomplish three times as much as by the old hand method, while the work is also of a much finer quality. In the United States these hammers are being extensively used, but they have only recently been adopted in Great Britain.

A company has been formed at Chatham, Ont., with a capital of \$300,000, to manufacture a patent elevator.

The Crown Pressed Brick Company are building another patent dry kiln at Ormstown, Que., for burning dry pressed brick.

Messrs. Seaman, Kent & Co., Toronto, have recently had printed an attractive illustrated catalogue relating to their sliding and vengtion blinds

During the year 1895 there were received at the port of Mon-treal by vessel 146,971 barrels of cement, showing an increase of 4,599 barrels as compared with the previous year.

Arrangements are being made for the transfer of the pottery works at St. Johns, Que., to a French company, known as the Comptoir Ceramique Francais. This company controls all the pottery works in France.

The Diamond Brick and Tile Company, of Kansas City, U. S., have been experimenting with Manitoba clays for the purpose of ascertaining their adaptability for the manufacture of vitrified brick for street paving purposes. The tests thus far have not been satisfactory.

SOUND IN IT'S RELATION TO BUILDINGS.

THERE is, perhaps, no subject connected with building on which so little exact knowledge is obtainable as that which forms the title of this article. ence of architects and builders in past ages seems not to have evolved fixed laws by which the designer of a building may certainly know what its acoustic properties will be. Only to a limited extent is the operation of sound understood—beyond that all is guesswork, and the individual designer must choose his own theory and experiment for himself. It is not surprising that under such conditions, failure is more often achieved than success.



Two years ago, at the annual convention of the Ontario Association of Architects, Mr. D. G. Baxter, of Stratford, presented a paper on this subject, in which some original theories were advanced and evoked favorable comment. Our readers will doubtless be interested to learn that Mr Baxter proposes to put these theories to a practical test in connection with a Methodist church to be erected at Wellburn, near London, Ont. The auditorium of this church will be funnel shaped with the object of securing the best acoustical effect. The interior will be like the accompanying sketches, while the outside will not be noticeable from the added wings. We invite an expression of opinion from our readers

concerning this new departure in church design. Indeed, a statement from a number of our readers of their experience in this direction, would prove an interesting and helpful feature.

The Royal Institute of British Architects are showing recognition of the importance of this subject by instituting a series of enquiries with a view to collect and record fuller information than is at present obtainable. The enquiries are as follows :

1. PLAN.-Give a general plan, with elevations and sections of the interior of the building.

2. MATERIALS.-Describe the materials of which the building is constructed, carefully noting the finish of the interior surfaces and the disposition of carpets, hangings, or other similar fabrics.

3. CONSTRUCTION. - The construction of the building should be described as fully as possible.

4. SEATING. — Illustrate the method of seating by plan

and section. 5. SPEAKERS, ETC.-Show position of speakers or musicians in relation to the audience.

6. EFFECT OF AUDIENCE. — The effect of an audience should be carefully noted. State if the room is better if partially or entirely filled.

7. VENTILATION. — Describe in some detail the system of ventilation. If possible, note the mean and extreme temperatures and the effect of the variation produced by it and by changes in direction of the ventilation. the position in which the thermometers are placed.

8. KEYNOTE.—If the keynote of the building is known, state it, and say whether or not, if the voice is pitched in this key, any improvement in sound is noticeable.

9. QUALITY OF SOUND. - (a) State what is the general reputation of the building for (1) Music; (2) Speaking. (b) State what the quality of the sound is—full and resonant, &c., and note any peculiarity of effect, such as echoes and the like. (c) If defective, state the nature of the defective executive as possible. nature of the defect as carefully as possible.

10. REMEDIES.-If remedies have been tried to obviate defects, state them, and the result obtained. The precise nature of the remedy should be fully detailed.

11. ADDITIONAL PARTICULARS.—Add any particulars not above scheduled which may be considered necessary or desirable, and state age of building.

12. REFERENCES. — Give references (if any) to published descriptions of the building, especially those dealing with its acoustic properties.

13. AUTHORITY. — Give the names of the experimenters and date of experiments.

BY THE WAY.

A CORRESPONDENT sends the Inland Architect his impressions of Canada and Canadians. Much of what he writes can be classed as "rubbish," inaccuracy of statement being a conspicuous feature. As an example of the latter the following will suffice : "The Canadians are rather slow in adopting novelties. are few and far between, and are looked at askance by many yet who would as soon attempt to walk upon the waters, as did Peter of old, as to trust their precious lives in one of those "bird cages." I admit that with most of these elevators it would be a saving of time for a busy man to walk, even leisurely, up or down stairs."

× × ×

ARCHITECTS and builders were among the first to avail themselves of the advantages in the way of convenient and rapid local transit afforded by the bicycle. By means of the wheel, the expense of keeping a horse can, in many instances, be saved, while those who formerly went about on foot are effecting a large saving in time and strength. I wonder how many architects and architectural students have made a sketching tour on the birst d An opportunity is now afforded in this direction which every architectural student, in particular, should be quick to recognize and take advantage of. The officers of the Toronto and Montreal Sketch Clubs should endeavor to organize a series of short sketching tours during the coming summer.