

absorb a larger proportion, and are sure to decay in a short time. It is generally stated in books that a good brick should not absorb more than one-fifteenth of its weight of water. The absorption of average bricks is, however, generally about one-sixth of their weight, and it is only very highly vitrified bricks that absorb so little as one-thirteenth or one-fifteenth."

It is said by those who have made a study of the subject, that a brick may absorb a large percentage of water and yet not disintegrate easily. Disintegration is largely caused by water and frost. The water absorbed by the brick becomes frozen, causing the expansion and decay of the brick. Another cause of disintegration is lime, which under the action of water, burns out, and causes the brick to go to pieces.

It has been noticed that bricks which absorb less than 10 per cent. and upwards of 15 per cent. of water are better able to withstand the action of the water than those which absorb from 10 to 15 per cent. The water absorbed by the former is not enough to cause sufficient expansion to destroy the structure of the material, while the latter are so porous that the water absorbed quickly drains out again without allowing time for the destructive influence of frost to operate upon the brick. It is estimated that a brick which absorbs 20 per cent. of water will drain out the greater part of this water again in from 20 minutes to half an hour, so that unless frost sets in immediately after rain there is little danger of the brick being injured. A brick which absorbs say 12 per cent. of moisture is considered much more dangerous than one which absorbs 20 per cent.

As very little appears to be known with regard to the character and quality of Canadian manufactured bricks, we would be pleased to be furnished with any further information on the subject, and invite our readers who may be able to do so, to contribute data on this line.

ONTARIO ARCHITECTS' ACT.

WE are pleased to observe that the Ontario Architects' Act, embodying the amendments desired by the Ontario Association of Architects, has passed its second reading in the Legislature. The Association have taken pains to explain very clearly the meaning and effect of the proposed amendments, and the legislators with scarcely an exception have had the good sense to see that the measure is one which will operate in the public interest. As it is an unwritten law of legislative bodies that a measure which passes its second reading without serious opposition is entitled to a third reading, we look for the adoption of the measure at an early day.

ILLUSTRATIONS.

TORONTO, HAMILTON AND BUFFALO RAILWAY STATION,
HAMILTON, ONT.—WM. STEWART & SON, ARCHITECTS.

PROPOSED EAST END DEPOT FOR THE C.P.R. AT MONTREAL.
—GEO. B. POST, ARCHITECT, NEW YORK.

RESIDENCE FOR MR. F. T. FROST, SMITHS FALLS, ONT.—
J. A. ELLIS, ARCHITECT, TORONTO.

DESIGN FOR A TOWN HALL.—EDWARD SWALES,
ARCHITECT.

COMPLIMENTARY OF THE "ARCHITECT AND BUILDER."

WE have recently received a number of kindly worded letters from some of our subscribers, from which we take the liberty to print the following extracts:

"Many thanks for the copy of your New Year's number of the CANADIAN ARCHITECT AND BUILDER. It is a truly admirable production, and a credit to the arts and crafts of the country in every respect."—Hamilton McCarthy, R.C.A., Toronto.

"I wish to say how much pleasure it gives me to receive the ARCHITECT AND BUILDER monthly, and how much it must please every subscriber to see its rapid progress. The present number is a piece of art for which the publisher deserves the highest credit."—James Mather, Architect, Ottawa.

"I desire to congratulate you upon the greatly improved appearance of your journal, as evidenced in the recent number, both as regards the illustrations, letter press and advertisements; the latter having sketch illustrations, are made more attractive, and consequently receive more attention at the hands of the profession."—Geo. W. Gouinlock, Architect, Toronto.

STUDENTS' DEPARTMENT.

MAXIMS FOR DRAFTSMEN.

THE power of shading rightly depends mainly on lightness of hand and keenness of sight; but there are other qualities required in drawing dependent not only on lightness, but steadiness of hand; and the eye to be perfect in its power, must be made accurate as well as keen, and not only see shrewdly, but measure justly.

Nearly all expression of form, in drawing, depends on your power of graduating delicately; and the graduation is always most skillful which passes from one tint to another very little paler.

In darkness of ground there is the light of the little pebbles or dust; in darkness or foliage, the glitter of the leaves; in the darkness of flesh, transparency; in that of stone, granulation; in every case there is some mingling of light.

An entire master of the pencil or brush ought indeed, to be able to draw any form at once as Giotto his circle; but such skill as this is only to be expected of the consummate master, having pencil in hand all his life, and all day long, hence, the force of Giotto's proof of his skill.—Ruskin.

THE STAIRCASE.

STAIRCASES, says the author of the Architectural Association prize essay on "The History and Development of The Staircase," have been conveniently classed under the following six descriptions: (1), the spiral or newel staircase; (2), the straight staircase; (3) that which goes round two, three or four sides of a rectilinear figure; (4), a central ascent with two branches; (5), the circular, semi-circular, or oval open well staircase; (6), compound, composed of straight flight in conjunction with curves. The first two and the third of these we have already noticed as being the usual forms during the Mediæval and Transitional periods respectively, and we shall frequently find examples of the remaining three among the staircases of the Renaissance. The circular or oval well staircase was really the mediæval spiral staircase in an improved form. The fact of the mediæval newel being solid practically placed a limit on its diameter, but the open newel could be made of any size, and consequently the number of steps in each circuit increased, thus allowing the ascent to be made with a less number of revolutions, and greatly diminishing the inconvenience resulting from the varying width of each tread. Geometrical staircases were not introduced till the latter part of the reign of Charles II., and Sir Christopher Wren is said to have constructed the first in the south-west Tower of St. Paul's Cathedral. Winding staircases were very often used during the Renaissance, especially in its earlier stage.

TORONTO SKETCH CLUB.

A meeting of the Toronto Sketch Club was held at the office of Messrs. Strickland & Symons on Tuesday, Jan. 21st, when Mr. Wickson acted as critic. The subject for competition was the Corner of a Court Yard shewing a Tower, Gable and Entrance—view taken from inside. This was a study in composition and grouping more than detail. The designs were not so numerous as on previous occasions as the subject was rather difficult for the junior members. Mr. E. R. Rolph took first place for the draughtsmen with a design in French Gothic, and Mr. Melville P. White first place for the students.

A meeting was held on Tuesday, Feb. 4th, at Messrs. Curry & Baker's office. Plans were submitted for a farm house for a farm of 100 acres, the owner of the house to work on farm. Mr. Baker criticised the various drawings and considered them all too elaborate for a house of the requirements. The kitchen should be the most important room in the house, whereas the drawing-room in nearly all cases was given the most study. They were more suitable for a gentleman farmer that would have a smaller house attached for farm hands. Mr. C. P. Meredith took first place for the students. The next meeting will be held in Mr. Langton's office on Tuesday, Feb. 18th.