

**DIMENSIONS OF DOORS.**

According to the Italians, the principal door of a building has no determinate dimensions, but varies according to the grandeur of the building and its possessor or its use. Palladio agrees with Vitruvius that the height from the floor to the ceiling should be divided into three parts and a half, that two parts should be given to the height of the aperture and to its breadth one, after deducting from it the twelfth part of the height. Muet proposes the least breadth of the principal door to be  $7\frac{1}{2}$  ft., the largest 12 ft., the height to be one and a half of the breadth, or rather the double of it. With regard to rooms, Palladio has laid down these rules for the doors. The least breadth of the aperture should be 2 ft., the greatest 3 ft., and the height agreeable to the least 5 ft.; to the greatest  $6\frac{1}{2}$  ft. Muet is of opinion that the least breadth should be  $2\frac{1}{2}$  ft., and the height suitable to it,  $5\frac{1}{2}$ . The breadth, from 3 ft. to 4 ft., requires the height to be twice as much. In a royal palace the breadth of 5 ft. or 6 ft. may be allowed to the opening, and the height may be double of it or sometimes less than double by a fifth or fourth part of the breadth.

The city council of Winnipeg, Man., has decided to offer the English bond holders of the Winnipeg Water Works Company's bonds the sum of £40,000 for the purchase of the entire plant.

The Standard Drain Pipe Co., of St. Johns, P.Q., have commenced the manufacture of paving brick for the construction of sidewalks. Being salt glazed and vitrified they are said to be as hard and equally durable as asphalt, while at the same time being less expensive.

A bridge, the construction of which possesses several features of interest, has just been completed at Bizerte, Tunis, under the direction of French engineers. For a long time ferry boats were utilized at the entrance of the canal between the Mediterranean and Bizerte Lake, and the authorities hesitated to permit the construction of a swinging bridge, the manipulation of which, it was thought, would involve loss of time. The problem was solved by M. Arnodin, who invented the structure, which was turned over to the public on June 19. The two steel towers have been erected on opposite sides of the canal, each sixty-five meters (213.22 ft.) in height, and by means of an arrangement of cables and pulleys the car or bridge proper is quickly elevated to the top of these towers on the approach of a vessel, the latter easily passing under. A 6 h.p. engine elevates the car in forty seconds, and the loss of time is reduced apparently to a minimum. The bridge is of special importance, as the Government is establishing a naval station at the port of Bizerte.

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Oil paints for architectural purposes usually have two objects—protection and decoration; they consist of a vehicle for mixing and binding, and a pigment for giving body and colour. Durability in both the vehicle and the pigment is essential, as they are so interdependent that the failure of one about equally affects the other.

**TREATMENT OF FRESH PLASTER.**—Says a correspondent of the *Mahler Zeitung*: Freshly plastered cement surfaces on walls I have treated as follows, which method has been found to be excellent during my practice of about 15 years: The freshly plastered surface first remains without any coating for about 14 days, then it is coated with a mixture of 50 parts water and 10 parts ammonia carbonate dissolved in hot water; leave this coat alone for a day, paint it again and wait until the cement is taken on a uniform gray color, which takes place as a rule in 12 to 14 days. Then prime the surface thus obtained with pure varnish and finish the coating, after drying, with ordinary varnish paint or turpentine paint. This method has always given good results.

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