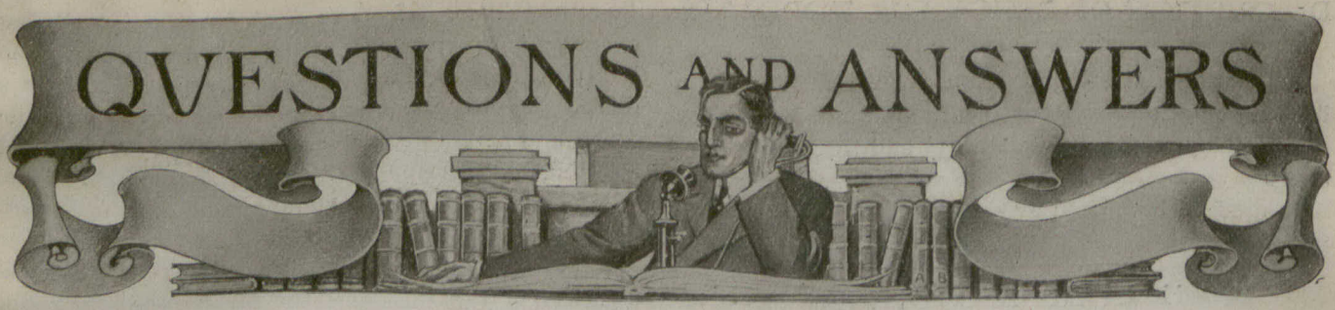
QVESTIONS AND ANSWERS



"Concrete Worker" asks:—Can you give me any information regarding "Reinforced Concrete Posts," their composition, and the qualities they possess?

Answer:—There is an increasing demand for some form of fence post that is not subject to decay. The life of wooden posts is very limited, and the scarcity of suitable timber in many localities has made it imperative to find a substitute. A fence post to prove satisfactory must fulfil three conditions: (1) It must be obtainable at reasonable cost; (2) It must possess sufficient strength to meet the demands of general farm use; (3) It must not be subject to decay, and must be ablet o withstand successfully the effects of water, frost and fire. Although iron posts of various deigns are frequently used for ornamental purposes, their adoption for general farm use is prohibited by their excessive cost. Then, too, iron posts exposed to the weather are subject to corrosion, to prevent which necessitates repairing from time to time, and this item will entail considerable expense in cases where a large number of posts are to be used. At the present time the material which seems most nearly to meet the requirements is reinforced concrete. The idea of constructing fence posts with concrete, reinforced with iron or steel is by no means a new one, but on the contrary, such posts have been experimented with for years, and a great number of patents have been issued covering many of the possible forms of reinforcement. It is frequently stated that a reinforced concrete post can be made and put in the ground for the same price as a wooden post. Of course this will depend in any locality upon the relative value of wood, and the various materials which go to make up the concrete post, but in the great majority of cases wood will prove the cheaper material in regard to first cost. On the other hand, a concrete post will last indefinitely, its strength increasing with age, whereas, the wooden post must be replaced at short intervals, probably making it more expensive in the long run.

A Toronto subscriber asks: "What class of lime and what proportion should be used to lay pressed brick in white mortar?"

Answer—One part of white lime to two or three parts of good, live sand, with a sufficiency of clean water, thoroughly incorporated together. The mortar will require to be more pliable than what is used for ordinary kiln-burned brick, as the joints for pressed brick are generally thinner.

"Architect" asks: "What would be the cost per cubic foot of a brick and unprotected steel building to be used for store purposes?"

Answer—Buildings of this type range around 18 cents per cubic foot, but the cost varies according to the area, perimeter, party walls and street fronts.

In answer to a correspondent, who asks for information regarding the strength of brick piers, some tests were recently made to determine crushing strength per square foot of three brick piers, each 12 inches square and 8 feet long, the first laid up in mortar composed of one part Portland cement and allowed to set seven days; the second, of bricks laid in pure Portland cement allow- to set seven days; and the third, of bricks in Portland cement allowed to set fourteen days. The first pier withstood about 250 tons, the second over 325, and the third practically over 400 tons per square foot. Of course the piers were exceptional ones, laid up with extraordinary care, and all the conditions of test and resistance were ideal; but in the face of such experiments it would seem as if ordinary brickwork laid up in an ordinary manner in good Portland cement mortar ought easily to be trusted with at least 25 tons per square foot, or about the same stress per foot as is considered wise upon sandstone.

Replying to the recent enquiry of a subscriber: The southwest wind prevails in England, in the north of France and in Germany; in the south of France the direction inclines toward the north, and in Spain and Italy the north wind predominates.

In answer to an Ottawa correspondent: The crushing strength of granite is variously stated to be 12,000 to 20,000 lbs per square inch, the tests being made on two inch cubes. Solid granite not altered by weathering or other influences, weighs 165 to 170 lbs per cubic foot, according to the amount of iron bearing mineral present.

In answer to a subscriber who asks for a good floor stain, here is one: First get the floor perfectly clean. If there are cracks between boards fill them, then mix linseed oil and burnt umber together, a tablespoonful to a pint of linseed oil. Stir it thoroughly. If you wish it darker, put in more umber; if lighter, use more oil. Put it on the floor with a clean paint brush. Rub it evenly. After a few days, when dry, put on second coat. Try a little of the stain on a piece of wood first to get the color you wish. When it gets soiled or dirty mop it off with a little warm borax water, which will clean and not hurt the stain. You can retouch it now and then if it needs it. This finish resembles a hardwood floor.

An Owen Sound subscriber asks the origin of the various colors employed in decoration.

Answer.—The cochineal bug furnishes many of the most brilliant colors, including the bright carmine, crimson, purple lake, and scarlet. The cuttlefish gives the sepia, and Indian yellow comes from the camel. Ivory chips produce ivory black and bone black, and the exquisite Persian blue was discovered accidentally by fusing horses' hoofs and other refuse animal matter with impure potassium carbonate. Crimson lake comes