MOVING FOUR DOUBLE BRICK FLATS.

We have in the past, says Carpentry and Building, made mention in these columns of a number of interesting pieces of work in connection with the moving of buildings, both large and small, but the latest to attract attention is the moving at one time of four five-story double brick flats, 100 × 75 feet in size. The work was commenced the early part of September, and the houses moved about 6 feet per day, the work requiring nearly 300,000 feet of 12 × 15 inch yellow pine. The buildings are to be moved 75 feet in one direction and 35 feet in another.

The operations are being carried on at Willis avenue and 134th street, New York City, the contractor being Frederick Damm. In doing the work the outside and party foundation walls were torn away at intervals to allow the erecting of cribs, the east and west walls resting on sills which are lapped and stepped to conform to the four levels of the houses. The sills rest on the timbers, which form the 24 cribs and which run completely under the building, east and west. A series of 14 run north and south under the building and interlace with the others to form a complete frame. Owing to the building being about 5 feet lower at the south side than at the north, the supporting frame is stepped off in four great steps, each about 15 inches high, at the north the frame being seven timbers high, while at the south it is only four. After this frame was built, 325 ordinary 4-inch jack screws were placed under it at regular intervals. The buildings were then jacked up and the remaining walls removed. The tracks, 14 in number, were wedged up to the timbers and the jacks removed. The tracks are lubricated with a very greasy soap, which has body enough to keep the sliding timbers from actual contact with each other. The houses are moved by 20 of the jacks, which are set in timbers and buckled to the tracks by chains. They are distributed regularly throughout the frame and are operated simultaneously by signal. The buildings when properly situated will be lowered by jacks a distance of 3 feet, and the new foundation walls will be built up and wedged.

GREEK MASONRY.

What must be observed in the edifices of Greece is the high finish of all the parts. In them the object, which is not intended to be seen, is wrought with as much care as the exterior composition. The junctures of the blocks which form the columns of the Parthenon are so perfect as to require the greatest attention to discover them, and they leave a mark no thicker than the finest thread. In order to attain this extraordinary perfection, the marble was first reduced to its proper shape by a chisel. Afterwards the two pieces were rubbed one upon the other, and sand and water thrown upon the center of friction. The courses, by means of this practice, were placed with incredible precision, and this precision in the shafts of the columns was determined by a square pivot of olive wood. The roses, the plinths, the moldings, the astragals, all the details of the edifice, exhibit the same perfection. The lines of the capitals and the flutings of the columns of the Parthenon are so sharp, that you would be tempted to suppose that the entire column had passed through a lathe. No turners' work in ivory can be more delicate than the Ionic capitals of the Erectheum and the Caryatides of the Pandroseum are perfect models.

EXAMINATION IN SANITARY SCIENCE.

The following papers were given to the candidates in the recent examination in Practical Sanitary Science at the Sanitary Institute :

1. What is the difference between density and specific gravity? How would you determine the density of a piece of coke?

2. State what is meant by the term "latent heat," "radiant heat" and "convection"? How does "convection" differ from "conduction"?

3. Give the composition of a typically good drinking water. State the character and composition you would expect water to have when drawn from the following sources :—(a) chalk, (b) loose sand or gravel, (c) upland surface gathering grounds, (d) rain.

4. Describe the method you would propose to purify a river water intended for public supply, and explain its action.

5. State briefly the precautions to be taken to obtain a stable, dry and healthy building upon the following sub-soils :—(a) stiff clay, (b) sand containing springs.

6. At what depth of flow does a drain discharge the greatest volume? Explain why the velocity of a drain running full is no greater than when it is running half full.

7. What are the advantages and disadvantages of "combined" and "separate" town sewerage systems? and what are the principal considerations that govern a decision as to which system shall be adopted?

8. What is meant by the "flashing point" of petroleum oils? How is this regulated by Act of Parliament? What are the defects in construction of some of the lamps commonly sold that render them dangerous in use?

PLUMBERS' EXAMINATIONS.

The first examinations under the new plumbing by-law adopted by the City Council of Vancouver, were held recently. The Board of Examiners consisted of the City Engineer, the Plumbing Inspector and Mr. S. A. Wyse. The following persons wrote on the theory of plumbing :—H. McQuarrie, W. Blackmore, J. Scott, A. Patton, J. Moran, S. Mortimore, W. Braden, J. Hunt, O. Laursen and C. A. Green.

USEFUL HINTS.

The following formula supplies an ink which will write easily on glass : White lac, 10 parts ; Venice turps, 5 parts ; turpentine, 15 parts ; and powdered indigo, 5 parts. The first three ingredients are mixed and melted, and the indigo is added. The writing is unaffected by water.

Oil must be used in the first coat of paint for brickwork, for it is the oil which forms the material which binds the pigments together. Certainly brickwork must be perfectly dry when the paint is applied, for otherwise it would soon scale off. If the proper precaution is observed in the work of painting this kind of work there will be little cause for complaint, and the protection added to this kind of work by paint is almost as great as is the protection added to woodwork.

The Art of Bronzing.—Dissolve copper filings in aqua fortis. When the copper has impregnated the acid, pour off the solution, and put into it some pieces of iron or iron filings. The effect of this will be to sink the powder to the bottom of the acid. Pour off the liquor, and wash the water in successive quantities of water. When the powder is dry, it is to be rubbed on the article with a soft cloth ; but observe that previously to the application of the bronze powder, a dark blackish sort of green is first to be laid on the article. If you wish the powder to adhere stronger, mix it with gum water, lay it on like paint with a camel's hair brush, or previously trace the parts to be bronzed with gold size, and when nearly dry, rub and powder over it.