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*The Editor does not hold himself responsible for opinions expressed by his correspondents.*

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#### NEW BOOKS.

*Conversion Tables*, by Robert H. Thurston, A. M., C. E. (New York, John Wiley and Sons.)

The main portion of this very convenient volume is also printed as an appendix to Part I. of the *Materials of Engineering*, by the same author, and contains all Measures and Weights expressed according to the British, United States, and and Metric systems, as well as the most complete and most useful Tables of "conversion factors" yet published.

In the present work these Tables are prefaced by an excellent Essay on the requisites of a perfect system, and by a discussion as to the merits of that known as the metric for which Mr. Thurston claims many great advantages.

*The Plasterer's Manual*, by K. Cameron, (New York, W. T. Comstock,) The "Plasterer's Manual," is a neat little book which is designed to be used as a pocket guide. It contains a number of useful tables and receipts, terse descriptions of the various materials used in plastering, instructions for making mortars and the results of practice as to the best methods of performing the various descriptions of work. While there is much in the book of value to the experienced, it does not overlook the wants of the novice to whom the author gives the following advice: "Do not depend upon a book alone in learning a trade; example and practice, as well as precept, are also required to master it thoroughly. It is therefore essential to place yourself under the instruction of an experienced workman, being careful to form an apprenticeship only with one whose work and reputation are excellent. An apprenticeship formed with any other would prove a damage rather than a help." Mr. Cameron's Manual would be a valuable guide to a young man in the selection of a master, because it points out very clearly what good work is. The remarks on the character of work and the value of workmen have the ring of good common sense.

#### "COVERED SERVICE-RESERVOIRS."

By MR. WILLIAM MORRIS, MECH. INST., C.E.

(A paper read at the Institution of Civil Engineers.)

The Author alluded to the fact that covered reservoirs were used by the Romans, and other ancient people, for keeping water cool and pure for potable purposes, and showed that their use was by no means a recent refinement, although they had only lately been introduced in modern waterworks. It did not appear, from official returns, that covered reservoirs were used in London in 1850, when filtration had only been partially introduced. But it soon became evident that covered reservoirs were necessary for the storage of filtered water, and accordingly it was enacted by the Metropolis Water Act, 1852, which required all water (except water pumped from wells) to be filtered, that all reservoirs for filtered water within 5 miles of St. Paul's Cathedral should be covered. This enactment was more particularly intended to preserve the water from contact with the smoke of London; but the objection to uncovered reservoirs was by no means confined to the neighbourhood of large towns, as owing to the rapid growth of vegetable and animal life in service reservoirs, the improvement from the filtration of the water was rapidly lost, especially during the summer. As examples, the Author referred to the uncovered reservoirs constructed at the cost of the Admiralty in Greenwich Park and on Woolwich Common for the protection, in case of fire, of the Greenwich Hospital, Royal Dockyard, and other Government establishments, which were partially used by the Kent Waterworks for the supply of their district. The Author then proceeded to describe the covered reservoirs at Plumstead and at Shooter's Hill, purchased by the Kent Company. These were covered by brick arches, springing from cast-iron girders. Then followed descriptions of different works, including the Chislehurst Reservoir, which was built of brick, covered with arches supported by cast-iron girders, and rendered internally with cement. The circular reservoir, purchased from the Dartford Local Board of Health, was covered with brick arches supported on nine wrought-iron joists radiating from the centre, where they were supported by a cast-iron column. The circular reservoir in Greenwich Park consisted in brick arches, resting on concentric rings of rolled wrought-iron, girders supported by piers. The filter-beds at Deptford were converted into covered reservoirs, consequent on the Kent Company abandoning the supply from the river Ravensbourne in favour of spring-water from the chalk, in which case the old filtering material was utilised in the construction of the concrete vaulting. The covering of a small reservoir at Plumstead with Bannett's flooring was described, and the construction of a covered reservoir on Woolwich Common in lieu of the old one referred to, when relinquished by Government. This was an oblong reservoir 200 feet long by 100 feet wide; the walls were of concrete, faced with brick; the covering arches were of brick springing from rolled joists supported on brick piers. The above works were designed