

MUNICIPAL DEPARTMENT

COVERED RESERVOIRS.

Concrete groined arch covers for reservoirs built to hold filtered water are connected in such a marked manner with the filtration of water in modern public water supply practice that they are considered wholly as a modern construction, says the Engineering Record. This view is not to be criticized as a matter of substantial accuracy and yet there are some reservoirs with masonry covers that are at least as old as Spanish-American masonry in Port Rico, if not Central and South America. Obviously such masonry designs were matters of convenience or for the purpose of securing a necessary water supply in fortresses or other similar locations, the matter of the preservation of water in good sanitary condition with light and air excluded not having been recognized at the time.

The introduction of filtration for the improvement of municipal water supplies has rendered absolutely necessary, in many locations at least, its preservation under conditions more or less similar to that of deep under-ground storage. It is not intended by this observation to imply that filtered water may not sometimes be properly stored in open reservoirs, for that has been done and is being done without materially prejudicial consequences under favoring conditions. As a broad and general principle, however, it may be stated that where the filtration of water supplies is contemplated, covered reservoirs must also be considered as an essential part of a properly designed system. The pressing need of proper storage of filtered water is forcibly illustrated by the report recently made by the Commission on Additional Water Supply for the City of New York, in which the distributing or equalizing reservoir for receiving filtered water at the northern limit of the city is recommended to be covered in the usual manner with concrete masonry arches, although the full capacity of the reservoir is over 2,000,000 gallons. Again, concurrently with the strong recommendation of immediate filtration of the present or Croton supply is the recognition of the advisability of covering not only the new Jerome Park reservoir, still uncompleted, but also those now in use in Central Park. These expressions of opinion by experienced engineers, based upon the best practice of the present time, show unmistakably that, as a general proposition, any public body devising plans for a supply of pure water should incorporate in them the masonry covered reservoir for the storage of filtered water to preserve the beneficial effects of filtration.

This particular field of water-works construction does not involve the formidable expense which a few years ago was associated with it, nor are there so many unknown elements as were supposed. Pro-

bably not less than twenty reservoirs covered with groined arches have been built in the United States within the last six or eight years, or are now being built, and the experience gained from these structures shows that under proper design and supervision of construction the groined arch covering above the springing line of the arches need not cost over about 50 cents per square foot of area, unless unusually heavy loads are to be carried. A

considerable number of instances of less cost are on record. With further improvement in methods and materials it is practically certain that the present cost will be sensibly reduced.

(To be continued.)

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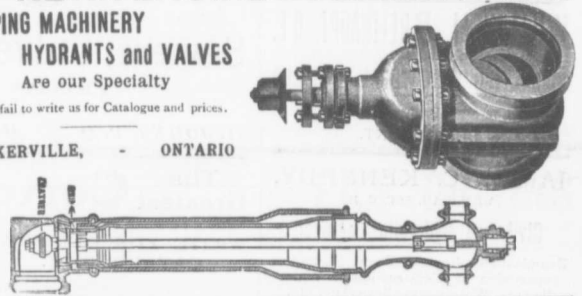
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