## CANADIAN CONTRACT RECORD

December 9, 1903



## DEPOSITING CONCRETE UNDER WATER.

Laying submerged concrete for the Nussdorf lock, at Vienna, was described in the "Zeitschrift" of the Austrian Society of Engineers recently. The excavation was made to a depth of 26.24 feet below water level and a very large mass of concrete was deposited over the surface through movable vertical chutes. The lock has a total width of 92 feet over all and 49.2 feet clear inside. The excavation was made full width, between sheet piling, and the bottom was filled in with rammed sand and gravel so as to form a kind of invert with its upper surface horizontal in the middle and sloping upwards a little on both sides. On this foundation was built a mass of concrete having a total thickness of 13.12 feet in the center, where the upper surface was 13.12 feet below water level. At the sides of the lock the concrete walls were carried up to a height of 3.28 feet above water level, with a thickness of 8.2 feet. Three longitudinal rows of piles were driven on each side of the axis of the lock and supported a sixrail track about 7 feet above water level. On this track moved three carriages which spanned the full width of the lock transversely. Each carriage had three trolleys, one in each of the main panels of the transverse bent of piles. Each trolley carried a vertical telescopic tube through which concrete was deposited on the bottom of the lock. The tops of these tubes were level with a transverse track which ran from end to end of the carriage. The ends of these tracks just cleared the outside rows of piles which, on one side of the lock, supported a distribution track parallel with the axis of the lock. The concrete was delivered by dump cars running on the distribution track, which delivered it to smaller dump cars on the carriage tracks. These cars in turn discharged their contents into either of the three chutes on each carriage. The carriages were traversed from end to end of the lock, and as each chute moved nearly one-third the length of the carriage, the whole area of the lock was commanded by the nine chutes. The concrete was deposited in three horizontal layers 3.28 feet thick, but these layers were not laid continuously, being built in comparatively narrow banks or ridges so that the different strata would or nuges so has the unerent strata would key together and form a corrugated mass that was thought to be more satisfactory than one with continuous horizontal joints. As the concrete was deposited the chutes were shortened and the three layers were encousingly along d. After the rays here successively placed. After the main body of the bottom and the side walls had been built by this method, the water was pumpbuilt by this method, the water was pump-ed out and a 2,3-foot layer of concrete was rammed over the bottom and completed with a finishing surface 0.3-feet thick. The chutes were of different lengths in the three carriages, the first ones depositing the concrete up to a level of 23 feet below the surface, the next set depositing the concrete between that level and 19.7 feet, and the last completing the sub-aqueous

work up to the final height of 16.4 feet be-low the surface.

## STREET SPRINKLING.

In a report from Consul Brainard H. Warner, of Leipzig, July 15, 1903, cover-ing the paving, cleaning, and sprinkling of the streets of that city, he states that, according to the authorities of Paris, wood pavements, for their better preservation, should be sprinkled four times a day, which is done by the Leipzig department.

A street flushing machine has recently been tried by the Department of Street Cleaning in New York on some of the as-

phalt pavements. It has a large water tank kept under an air pressure of about 40 pounds per square inch by means of a compressor run by a gasoline engine. The water is stated to be used in a very enconomical manner because it is under such a high pressure that a small jet is more effective than a large flush under ordinary hydrant pressure.

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