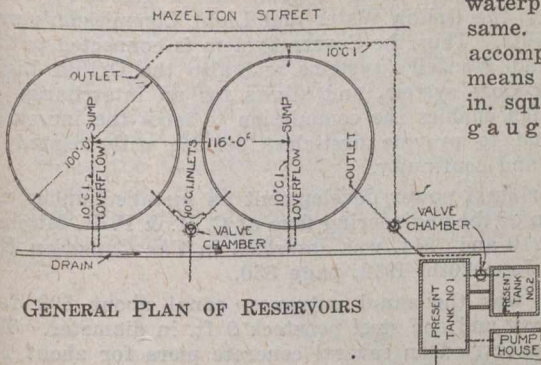
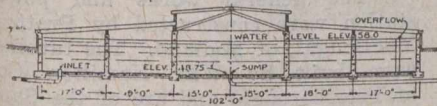


In the accompanying drawings is shown the method that was used to bring the various inlet and outlet pipes through the floor and to waterproof around same. This was accomplished by means of a 36-in. square No. 20-gauge copper



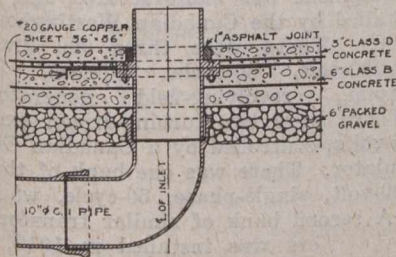
sheet, bolted between machine-flanged joints on the pipe. A 1-in. asphalt joint was made around each pipe. These joints were found to be very satisfactory and have been absolutely water-tight.

Considerable study was given to this design to secure an appearance that would be as pleasing as possible. This was necessary because these tanks are in the centre of the residential section of the town. After the pre-



so added, the tanks will look even more attractive than they do at present, the white concrete making a rather pleasing contrast with the green grass.

The concrete used on this work was as follows: For the walls, 1:1½:3; the lower 6-in. course of the floor, 1:2:4; footings and columns, 1:2:4.



SECTION THROUGH FLOOR SHOWING INLET PIPE

Reinforcing steel of a low grade was permitted on account of the low unit stress which was adopted.

The contract for this reservoir was let on the basis of cost plus \$2,800 for contractor's profit, and the total cost, including this profit, was \$41,415.20. This cost was made up of the following items:—

Labor	\$13,097.20
Reinforcing steel	5,846.08
Steel frames	750.44
C.I. pipe, specials, valves, etc.	3,814.49
Lumber, nails, etc.	6,033.34
Cement, sand, gravel and stone.	3,368.93
Burlap and pitch	589.59
Brick	143.24
Raising roofs of old tanks	750.00
Roof and supplies	1,377.82
Surety bond	204.60
Freight	2,185.66
Workmen's compensation	196.46
Miscellaneous	256.95
Contractor's profit	2,800.00

Total \$41,415.20

The tenders were received in August, 1918. The contract was awarded August 23rd to the R. Wescott Co., of Windsor, Ont. Construction was started immediately, and basins were completed, ready for holding water, by the end of the year. The tenders ran all the way from \$41,920 (the Wescott Co.'s **guaranteed outside figure**) to \$77,000, which reflects the very unsettled conditions that prevailed in August, 1918. The engineer in charge was J. J. Newman, of Windsor, who is town engineer of Leamington. The plans and specifications were prepared by James, Loudon & Hertzberg, Ltd., consulting engineers, Toronto.

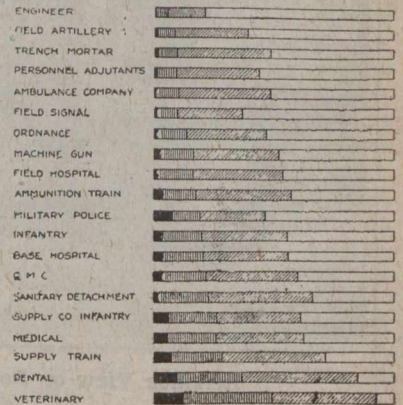
The reservoirs have been filled for nearly five months and have shown no leakage excepting at two or three small pin holes, which have been easily plugged, and now the reservoirs are absolutely water-tight.

ENGINEER OFFICERS FIRST IN MENTAL TESTS*

TYPICAL of the results obtained under the direction of the Division of Psychology, Medical Department of the United States War Department, is the chart reproduced herewith, which indicates that of all the classes of officers examined the engineer officers show the highest grade. The tests upon which the officers' ratings depend were prepared by a committee of the American Psychological Association and of the National Research Council, for the purpose of determining relative intelligence.

While admitting that a man's value to the service should not be judged by his intelligence alone, it has nevertheless been thoroughly demonstrated that the intelligence ratings are useful in indicating a man's probable value to the army service.

Letters ratings have been used as follows: A, very superior intelligence—this grade is ordinarily earned by only 4 or 5% of a draft quota, and is composed of men of marked intellectuality; B, superior intelligence—this class includes less exceptional intelligence than that in class A, and is obtained by 8 to 10 soldiers out of 100; C +, high average intelligence—this group includes 15 to 18% of all soldiers and contains a large amount of non-commissioned-officer material; C, average intelligence—includes about 25% of all soldiers; C - . low average intelligence—includes about 20% who, though below the average in intelligence, are usually good privates and satisfactory in work of routine nature; D, inferior intelligence—includes about 15%; and D - and E, very inferior intelligence. The comparison in the diagram is for officers only.



RELATIVE GRADES OF U. S. ARMY OFFICERS—ENGINEERS RANK FIRST

*From "Engineering News-Record," New York.

The Peterborough Council have not yet signed the contract with the Russell-Townsend Co., Toronto, for the construction of the Hunter St. bridge, although the Board of Works recommended the acceptance of that company's proposal to do the work on a cost-plus basis. The company estimated the cost at about \$249,000 and wanted about \$30,000 as a profit fee, this fee to include certain machinery rental. D. Conroy, of Peterborough, wrote a letter to the council, after the tenders had been announced, offering to do the work for a guaranteed sum of about \$243,000, and the council are considering the acceptance of his offer.