and a height of 90 feet. The materials prescribed for this structure are granite with concrete backing. The width of this bridge is 100 feet, but a suggestion has been made that the structure be erected at Niagara-on-the-Lake, and should this be adopted the width will be reduced by 50 per cent. A beautiful boulevard is now being constructed from Niagara Falls southward, and it is very probably that this will be used as a connecting ling in connection with this driveway somewhere in the neighborhood of Fort Erie and Buffalo. In the design of this bridge Mr. Thompson received the assistance of Messrs. Griffin and Wynkoof, architects.

Mr. Thomson, in addition to being the consulting engineer of the committee, is a member of the Committee of International Organization and the Commerce on Memorials. He is a Canadian and a graduate of the class of '86 of the School of Practical Science, now the Faculty of Applied Science and Engineering, University of Toronto.

ASPHALT IN THE PAST YEAR.

Aside from its financial features, the annual report of the General Asphalt Company (owning the Barber, Trinidad and Bermudez Companies) issued May 14th, contains information of interest, especially to the paving and road-building industry. The total volume of business increased from $16,004,173.08 to $16,542,281.14. For the first time in the company's history the item "asphalt," which includes crude and refined asphalt and asphaltic products in all forms, exceeds the paving account. Sales of asphalt increased from 247,491 tons in 1910 to 265,677 tons in 1911. Thus while the consumption of asphalt increased in the amount just stated, and produced a revenue increase of $2,297,030, the paving done by the company shows a slight decrease, owing to the fact that a greater proportion of asphalt construction is done by customers of the company using Trinidad and Bermudez asphalts rather than by the company itself.
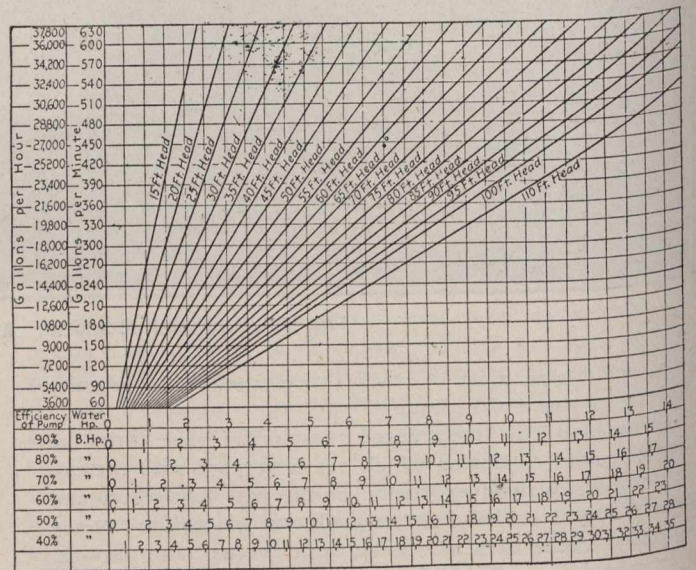
PUMPING DIAGRAMS.

The power required to pump a given quantity of water to a given height, when the efficiency of the pump is known, or how much water can be raised to a given height by the power available can be determined from the accompanying diagrams which were prepared by W. E. Wort for the American Machinist. These diagrams give the brake horse-power, number of U.S. gallons per minute and per hour, the pump efficiencies, and various heads in feet from 15 to 300 feet.
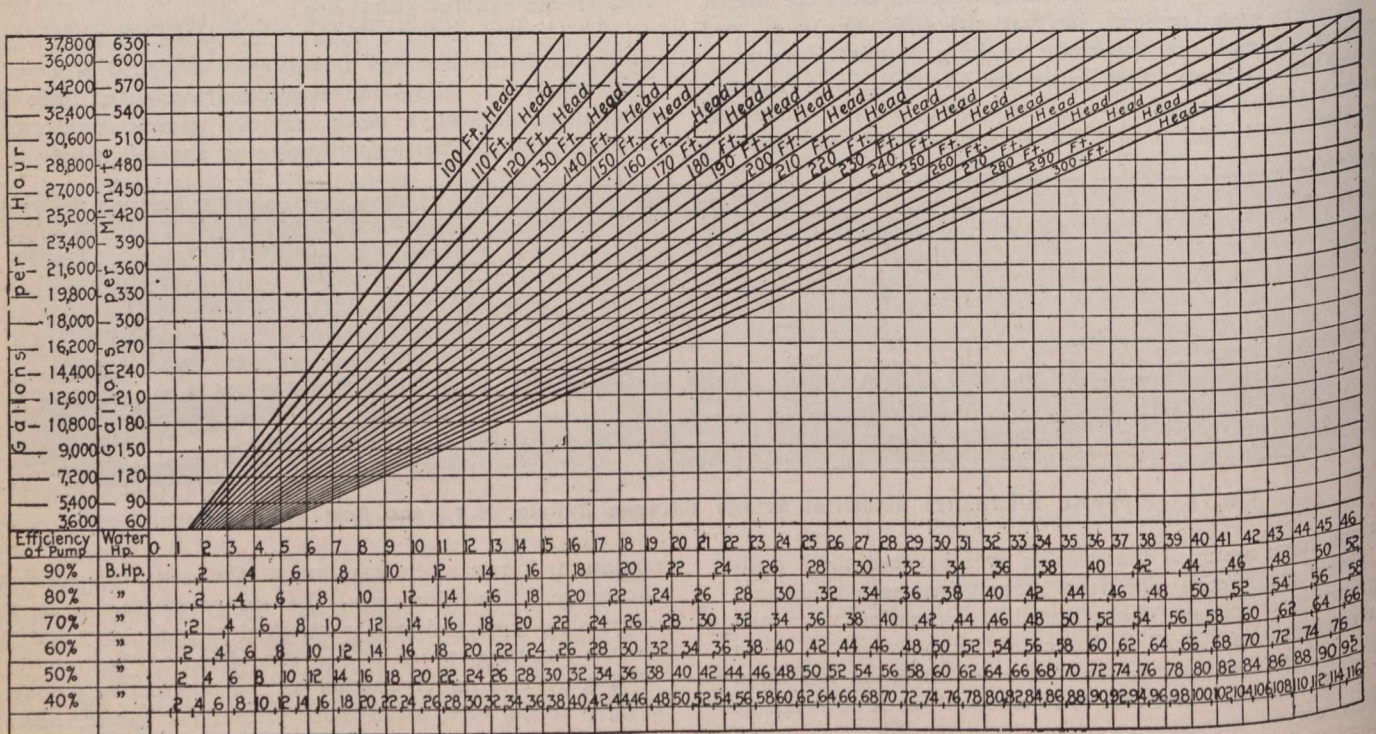
For example, if it is required to pump 350 gal. per min. against a total head of 85 ft. and the efficiency of the pump is 60 per cent., the brake horse-power is found by following the 350-gal. horizontal line to its intersection with the 85-ft. head diagonal, then following down the vertical line to its intersection with the 60 per cent. efficiency horziontal line at the lower part of the table. It will be seen that 15 b.-h.p. is the power required for the duty specified.

Pumping Diagram, 15- to 110-ft. Head (U.S. Gallons).

Pumping Diagram, 100- to 300-ft. Head (U.S. Gallons).