

Please read and send in as full a  
discussion as possible at earliest date.

## The Canadian Society of Civil Engineers.

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### MILITARY ENGINEERING.

Its History and Connection With Civil Engineering.

(By Capt. T. E. Naish, R.E., M. Can. Soc. C.E.)

To be read before the General Section. Autumn, 1905.

### HISTORICAL, MILITARY, CIVIL, AND "ORNAMENTAL" ENGINEERING.

Man was a fighter before he became an agriculturist or a manufacturer, and so military engineering preceded civil engineering, and has still retained (and always will retain) some of its primitiveness.

Indeed, between military engineering and civil engineering there is historically an intermediate stage which we may call "ornamental engineering."—to this stage belong the Pyramids, the Colossus at Rhodes, Cleopatra's Needle, and the enormous monoliths in the Phoenician temple wall at Baalbec in Syria. Wherever we notice this stage of "ornamental engineering," we may infer a lengthy period of previous civilization, which will be confirmed by the researches of archaeology.

We know that Egyptian civilization had existed for a long time when the Great Pyramid was built by Cheops, though that event took place nearly 4000 years B.C., because the art of that same period had long passed the barbaric state, and shows signs of elaboration; and the religion that brought the enormous granite sarcophagi of the underground temple of Serapis hundreds of miles down the Nile, was not that of a primitive people. It would seem that the ancient world had no call for utilitarian engineering, for