

Without this it had better cease to exist.

21. The whole tendency of modern war (notably and primarily illustrated in the civil war on this continent) is the development of field engineering in its *general* and broad sense.

Torpedoes, submarine mining, telegraphs, signalling, &c., have also developed themselves in an extraordinary degree as special branches of engineering, and have become essential to the safety of an army or State.

22. To carry out both these objects (viz., special and general engineer instruction) in Canada, it is imperative to commence by placing the Engineer militia on a reasonably efficient basis.

23. To do this in the most economical way, consistent with utility, and keeping in view that no one arm should be developed to the entire neglect of others, I beg to submit the following:

A.—The establishment of a small permanent enrolled nucleus of a school for engineering, say one or two officers, and from 25 to 50 men.

These men must all be highly trained, and some be specialists, and all must be available for instruction of the militia force generally.

The natural advantages of Kingston, and the existence of the R.M. College, point clearly that the nucleus should be at Kingston, and that it should be intimately connected with the College, as not only is an engineer detachment necessary for the College, but the latter is able to afford facilities for the training of engineers.

B.—The instruction of the engineer corps during annual training, and occasionally at other times, by competent instructors. These instructors to be obtained from Her Majesty's regular service, till the force alluded to under head A becomes capable of affording it.

C.—The compulsory annual training *in camp* of such engineer corps for a period of not less than

For Effectives, 14 days. { Sundays and days of marching inclusive, and

For Recruits, 21 days. } pay be allowed for the *full* period.

D.—The accumulation of a small depot of engineer stores at the headquarters of engineer instruction, viz: —Kingston.

E.—All the engineer stores, carriages, &c., issued to, or obtained by engineer corps, to be drawn in the first instance from this store, or if direct purchase is sanctioned, then only on recommendation of a qualified and responsible officer of that branch of the Service.

F.—Annual inspection by qualified officers of the engineer branch of the Service.

G.—Within a reasonable number of years every officer of the Militia Engineers should be *required* to obtain qualifying certificates in the following subjects:—

(a) Performance of regular duty, and knowledge of interior economy of corps.

(b) Artillery drills and practical gunnery.

(c) Infantry drills.

(d) Military surveying.

(e) Military administration.

(f) Tactics.

(g) Field engineering in its principal branches.

The instruction and certificates for *a*, *b* and *c* could at present be best obtained from the Royal School of Gunnery, *d*, *e*, *f* and *g* from the Royal Military College and Engineer School in connection with it.

The standard need not be high at first.

H.—The organization of Engineer corps at the "places" and of the description specified as follows:—

Toronto . . . . .	{	One Field Company,
	{	One Garrison Company.
	{	One Submarine Mining Section.
Kingston . . . . .	{	One Garrison Company,
	{	One Submarine Mining Section.