NORMAN A. QUA

1914

STUDIED AT THE UNIVERSITY OF TORONTO, THEN DEMONSTRATOR IN THE SCIENCE FACULTY

1915

LECTURER IN NATURAL SCIENCES AT BISHOP'S (M. A.)

ENLISTED IN THE 5TH ROYAL MOUNTED RIFLES FOR OVERSEAS SERVICES

1916

ON THE BISHOP'S UNIVERSITY HONOR ROLL

1917

INSTRUCTOR OF THE DEFENSIVE GAS SCHOOL IN FRANCE

1918

ACHIEVED RANK OF MAJOR

5th Battalion Canadian Mounted Rifles

- Originally formed as a cavalry unit
- Used as part of the Canadian Infantry

- Led by Lieutenant-Colonel Denis Draper
- Organized in the 8th Canadian Infantry Brigade

- The 5th Battalion fought in the Battle of the Somme, July – November 1916.

First Toxics Gas Tanks

Reunion of the 5th CMR outside the New Sherbrooke Hotel

First Gas Attack in History

- First attack with chemical weapons
- Gas blowing over the French and Canadian line

- Germany transported liquid chlorine gas to the front in large metal canisters

- In April 22, 1915 during the Second Battle of Ypres
- 6,000 soldiers were killed, wounded, or taken prisoner of war

First World War Soldiers Using Gas Masks

EVOLUTION OF THE CANADIAN GAS MASK

The Battle of Ypres and the invention of the gas mask mark the beginning of chemical, biological, radiological and nuclear (CBRN) defence. After the First World War, chemical warfare continued to expand in scope and intensity. As a result, the need to provide effective protection for Canadian soldiers stimulated the improvement and sophistication of the gas mask in Canada.

Canada FORCES.GC.CA

1915 — **Hypo Helmet**
Dr. Macpherson invented the device weeks after he witnessed the gas attack at Ypres. It contained glycerin and sodium thio-sulphate that protected against chlorine. The Hypo helmet became the most important protective device of the First World War: two and a half million masks had been made in June 1915 for all allied troops.

Hypo Helmet © IWM (EQU 3913)

1915 — **P-Helmet**
Even equipped with a mouthpiece and soaked with sodium phenate to protect against chlorine, this mask was one of the most hated by soldiers. It gave limited protection, especially soaked in water or after one or two uses, and its conception made soldiers claustrophobic.

Helmet, Anti-Gas: © IWM (EQU 3812)

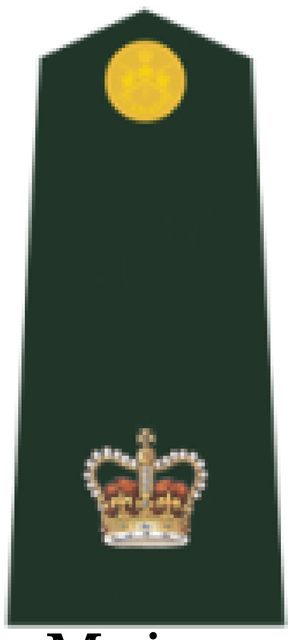
1916-17 — **Small Box Respirator**
The device had larger eye-pieces and a 'small box' filter of active charcoal. As it was worn on the chest, it saved precious time during attacks. It offered five hours of complete protection against chlorine, phosgene, hydrocyanic acid, chloropicrin, and arsine.

Respirator, Small Box Type & Haversack: © IWM (EQU 3915)

1942 — **Mark IV**
The Mark IV was the first mask entirely made in Canada with Goodrich rubber. On the eve of the Second World War, Canada produced enough masks to supply other allied nations with antigas components. The production of the mask was a boost for Canadian industries.

CWM 19750554-028 Canadian War Museum

1980 — **C4**
The C4 was entirely designed in Canada. It offers excellent chemical and biological protection. On top of that it is durable, shatterproof, and lightweight.



Major Insignia

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ENG 241: War & Literature
Prof. Claire Grogan

References:

- https://www.warmuseum.ca
- Tim Cook, *No Place to Run: The Canadian Corps and Gas Warfare in the First World War* (1999)