

INVENTIONS

COBOURG & AREA - THE INVENTIVE MIND

Necessity has always been the mother of invention as they say, and it was no different locally. With industrialization taking over, during the mid 1800s this part of Northumberland County was home to at least six inventors, their inventions and a dozen patents. E. C. Guillet, author of *Cobourg, 1798 - 1848*, wrote,

We are not well informed of how useful these mechanical inventions of Messrs Ruttan et al proved to be, but they showed that Cobourg's early citizens were not deficient in mechanical ability.

HENRY RUTTAN

HOT & COLD AIR GENERATOR ADAPTATION FOR HEATING & COOLING OF RAILWAY CARS

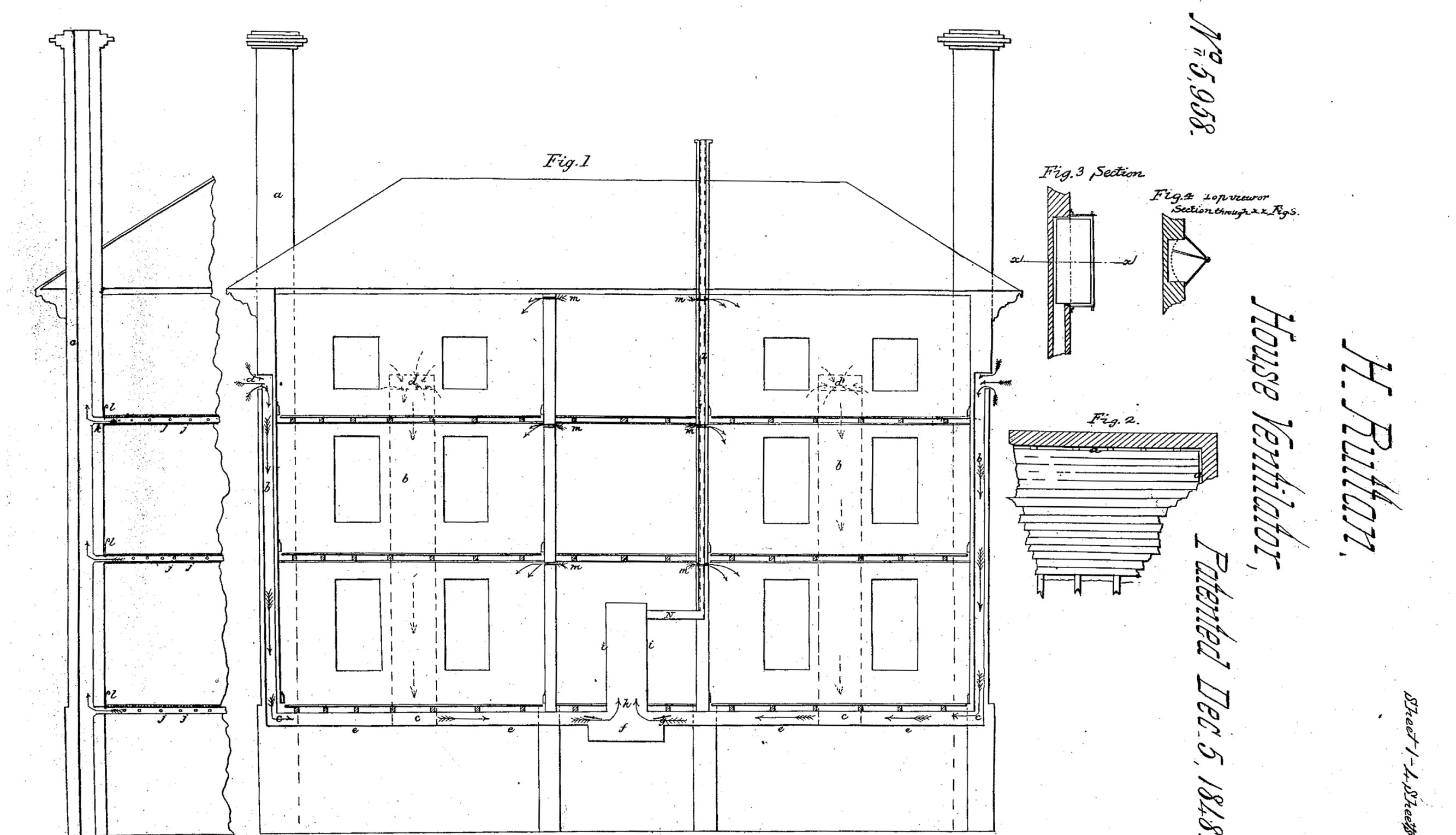
The best known of our inventors was Henry Ruttan who was born of United Empire Loyalist stock in Adolphustown, Ontario, now Greater Napanee. He left school at age 14 and worked in a store in nearby Kingston. Ruttan served in the militia during the War of 1812-14, and moved to Cobourg in 1815, setting up in business here. He was ambitious, as inventors often are, and was elected to the Legislative Assembly for Upper Canada as the representative for Northumberland County.



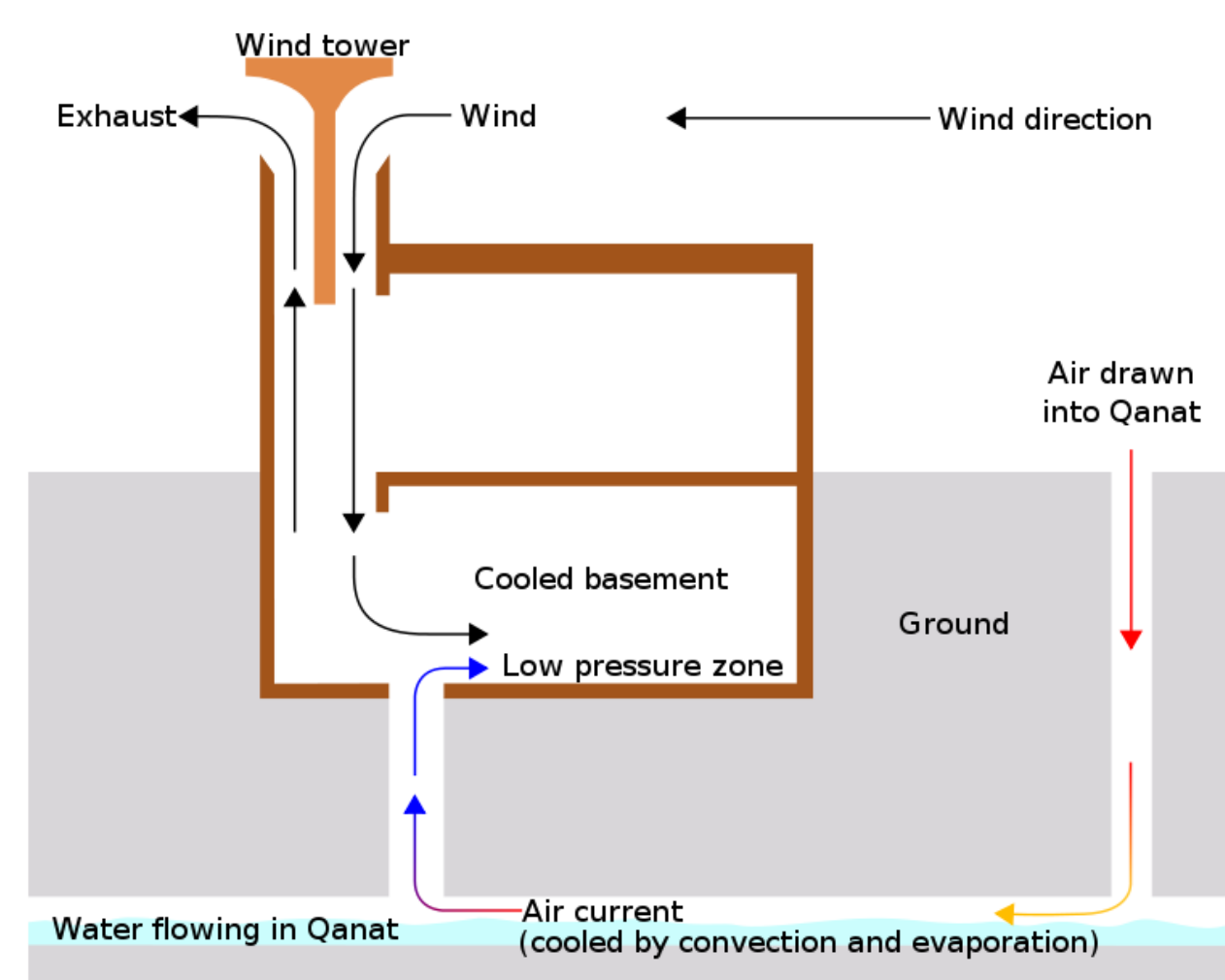
His first inventions and patents were for **more efficient heating and cooling systems for buildings**. *The Legislative Assembly of Ontario Volume for 1854*, records his inventions thus:

"Called a centre combustion and detached fire chamber for the admission of cold air" (January 27, 1847), " and "For admitting air under the floor"(January 31, 1851).

Ruttan was ahead of his time when he demonstrated that you could create superior air flow in homes while at the same time using fuels more efficiently. The premise was that you drew fresh air into the home or larger building through a duct. The air then passed through a convection-type heater into any number of rooms before it flowed back out through a foul air exit duct to the outside. **This process is not unlike popular air exchange systems today.**



Henry Ruttan's second invention was an adaptation of the first and was **successfully used in railway coaches throughout North America**. *The Dictionary Of Canadian Biographies* describes this patent as "Outside air is forced through ducts into the cars by means of the train's motion, passed through a wash tank which cleaned, humidified and cooled it. In the winter the system was modified to heat the air entering the cars."



The air flow concept was not new, being used in early Egypt where reeds were hung in windows and moistened with trickling water. Evaporation of the water cooled the air blowing through the window. Ancient Rome utilized aqueducts to circulate air through homes, while the **Persians created cisterns and wind towers to cool buildings in the hot season.**

Nevertheless, **Ruttan was a pioneer in this field** and would develop 7 patents on the subject between 1848 and 1858.