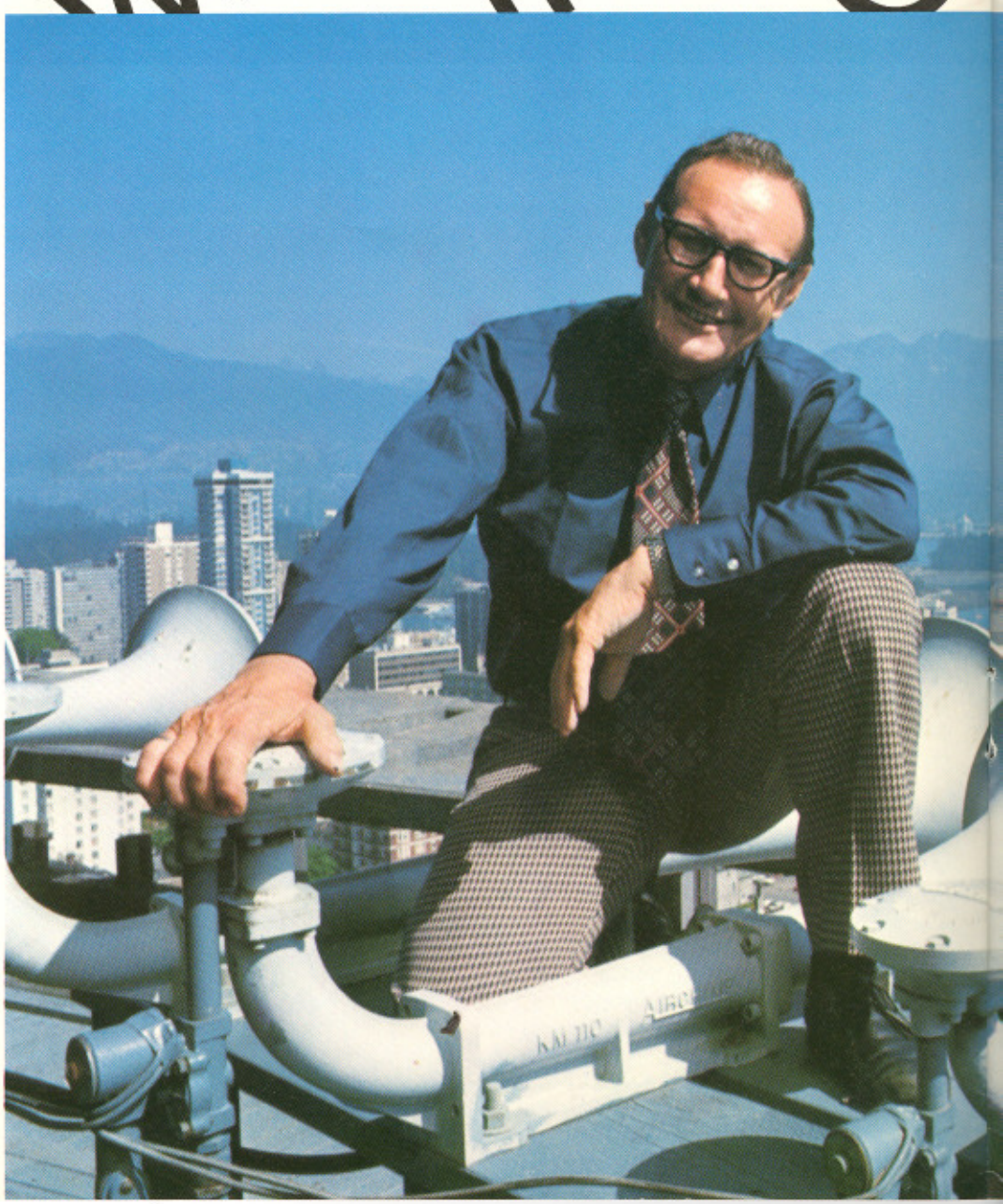
Ask not for whom the Air Ch



iimes...

What do a British locomotive, a U.S. Navy vessel, a Nova Scotia lighthouse, and the top of the B.C. Hydro Building in Vancouver have in common? Aluminum air horns, made in Vancouver by Airchime Manufacturing Company, and designed by Bob Swanson, founder of the company.

It all began in 1948 when diesel locomotives were introduced to British Columbia.

Soon after the switchover on the Esquimalt and Nanaimo Railways, there was a collision between a diesel and a truck. The truck driver said he had heard the horn but thought it was another truck. Federal authorities were hearing similar complaints from throughout Canada — that train whistles sounded like boat whistles, bridges were being lifted and cattle were charging trains.

Mr. Swanson, at the time the chief inspector of railways in B.C., felt the answer was to create an air whistle that sounded like a C-sharp diminished chord. But because steam whistles work on the flute principle, while air horns work on the trombone principle, the experts said it couldn't be done.

Mr. Swanson decided it could be done and set out to prove it. He travelled throughout B.C. recording the sound of train whistles. Analysis showed the sounds were made up of five basic notes which were really one note and four harmonics. So he had air horns manufactured to make each of these notes, tested them individually, then combined them and "by golly I had something that really sounded like a train whistle."

Installation and testing was done on various locomotives in the Vancouver area, but the first sale was made in the U.S. when the Southern Railway and the Baltimore & Ohio each ordered 250. This sale enabled him to overcome resistance in Canada and approval was quickly obtained.

"The first horn I made was steel, and you needed a wheelbarrow to move it . . . it weighed 120 (54.5 kg) pounds. So when I went to the U.S. I made it out of the lightest and best material — Alcan aluminum, alloy 135," says Mr. Swanson.

Thousands of whistles later, that's what's still being used. Airchime has been making them since 1953. Prior to that they were made under license by another company. Now Airchime licenses manufacturers in the U.S. and the U.K. to assemble them from parts made in Canada.

According to Mr. Swanson, aluminum has a number of distinct advantages for use in the permanent-moldcast bells and heads of Airchime's products.

"It's less expensive than other metals. It's easier cast and handled. It's lighter. It can be heat treated and it machines better than most metals. You can drill and tap it."

And it lasts. "You can take an aluminum whistle that's seen more than 20 years' service on a navy boat out of Victoria. Put it in a bath and remove the paint. Put the parts back on the shelf and resell them. I've done that."

Every train in Canada carries an Airchime. Every railway in North America and British Railways are equipped with them, as are many U.S., British and Canadian naval vessels.

The latest — and largest — Swanson air horn is 67⅜" (171 cm) in length, with a 34" (86 cm) diameter bell. It's driven by a self-contained 10 hp motor for use on huge supertankers.

All new Airchime developments are first tested at the "Whistle Farm", located in a remote area of Vancouver Island, by listening to them at distances up to 10 miles. To check on electrolytic action and deterioration, the whistles and horns suffer the weathering of rain, snow and frost.

Some of them have undergone such testing since 1956, and Mr. Swanson, a professional engineer, reports the aluminum is as bright and untarnished as when first cast. During the same period, iron and steel bolts in the wooden supporting structures have rusted badly.