

# Cats' Whiskers and Quartz Crystals

"WE threw the switches over to the receiving position and waited . . . the strain was terrific . . . then Frank heard a call begin, right on the hoped-for spot. Frank turned quite white. I can see him now—he couldn't speak, he had to listen. He just gazed at me and gave a little nod. I leaned over and put my ear against the phones. . . ."

THAT was how two-way amateur Morse communication was first established between New Zealand and England 25 years ago on Tuesday, October 18. Brenda Bell, of Shag Valley Station, Otago, tells the story of how she and her brother established that communication, in a series of three recorded talks shortly to be broadcast from 4YA. The talks, which capture much of the excitement and enthusiasm of the early days of amateur radio, will also be heard from 2YA, starting on October 31.

Her father was an amateur scientist, Brenda Bell says. In 1876 he had seen a thing called a telephone in America, and he had come home and built one. He also had an ancient X-ray machine which "had a fine coil and gave off a good spark," and they made their first

experiment at radio transmission by persuading a ship's captain going past Shag Point to ask his operator to listen in to them. That experiment failed, but later they built a crystal set and had their first successful listening round about 1912. They used to use cats' whiskers and crystal detectors, and spent hours ranging the hills searching for different types of minerals—quartz, galena, mica—that might work, and "cutting the whiskers off every cat in the place."

Although her father's set didn't function, her brother Frank eventually built one that did, while he was still at school at Waitaki. She remembers how one day in the holidays (the set was out in a laboratory in the garden) he came rushing into the house shouting, "It works! It works!" After that they spent many a cold night, muffled up in woollies, listening in on his crystal set. There was a station on Macquarie Island that they could pick up, and an Antarctic expedition, and always the grunts and squeals of ships with Marconi or Telefunken sets, she says.

## Ditches and Towers

After the First World War, their friend R. J. Orbell, who had learnt a

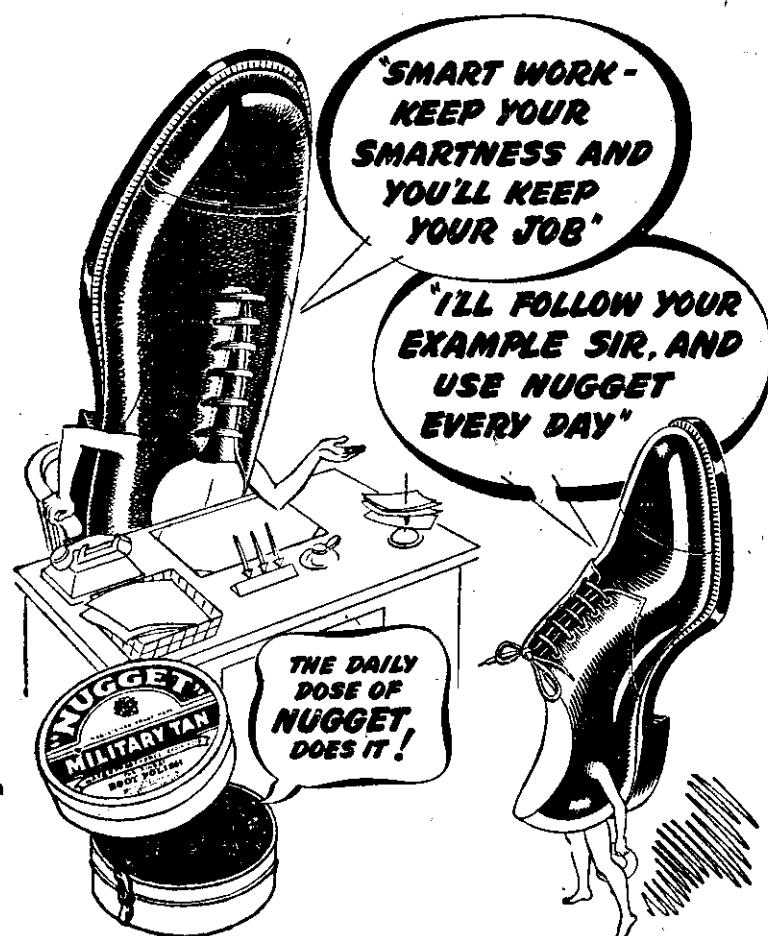
lot about radio while with the forces, joined the Bell family, and a group of experimenters grew up in the district who were in constant touch on their home-made sets. They all messed about with wires, she says, spent every penny they could raise on valves and condensers and gadgets, dug ditches and raised towers. But it was all trial and error—often mostly error—because no one really knew anything about the new medium they were handling. One day, however, they heard Big Ben strike in London—it was the BBC. Then in 1922 a friend picked up an American broadcaster. Two years later they heard a man in Gisborne who was in contact with another operator in Buenos Aires, and in September of the same year Frank Bell got in touch with an American amateur in San Francisco. The American, Brenda



BRENDA BELL  
"The strain was terrific"

Bell remembers, was a baker, and he sent them a cake, which was eaten with due ceremony.

Finally, in October, 1924, Frank Bell said in great excitement one day that



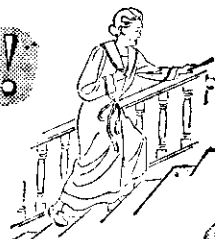
# NUGGET

## SHOE POLISHES

BLACK . DARK BROWN . MILITARY TAN . BLUE, ETC.

## Good Night!

Poor Granny goes wearily (but Bourn-vita relaxed) to bed . . .



## Good Morning!



Mrs. Mary K. Smith (where's poor Granny now?) busy, bright-eyed, alert, wakes up!

Vital, bright-eyed, bounding with energy way beyond her years . . . what's the secret of women who refuse to let birthdays leave their mark? It's a simple secret . . . the secret of a nightly soothing cup of Bourn-vita—the delicious, easily digested food drink that drives away the wrinkles and worries of the day in deep, sound, refreshing sleep. Make nightly Bourn-vita your habit — it's not only soothing but also a delicious drink with a light chocolate flavour — packed with the goodness of full cream milk, eggs, and barley malt. No wonder it's good night and good morning!



## Cadbury's BOURN-VITA

It's CADBURY'S so it must be good!