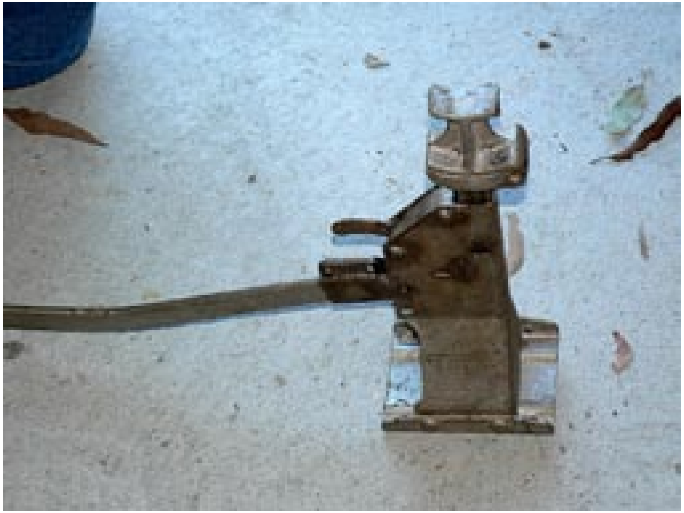


This is a jack for a 1928 Chrysler

This jack is from a T-Model Ford one-ton truck. It goes with that spanner we talked about earlier and the tailshaft/crowbar. I had that truck when I was working for the PMG in the 1930s.

These are vulcanising patches. You used to use them to patch car inner tubes. When you got a puncture you'd scour the spot around the puncture, clamp a special rubber patch over it with these special clamps, then light it, and it would smoulder and fizz away and vulcanise the patch on to the inner tube.

Those tapes there can still be played you know. There's a recording there of Granny Banks that she did not long before she died. And those Discussion Groups we used to hold at Nelson Bay…

All this stuff will come in handy some day. Here's some syringes... you never know...

Here's one of the things I was looking for. It's a slide rule. Old technology these days.

A set of box spanners that Dad bought in 1924 to go with the T-Model Ford that he bought then to run the butcher's cart. They're all SAE Standard.

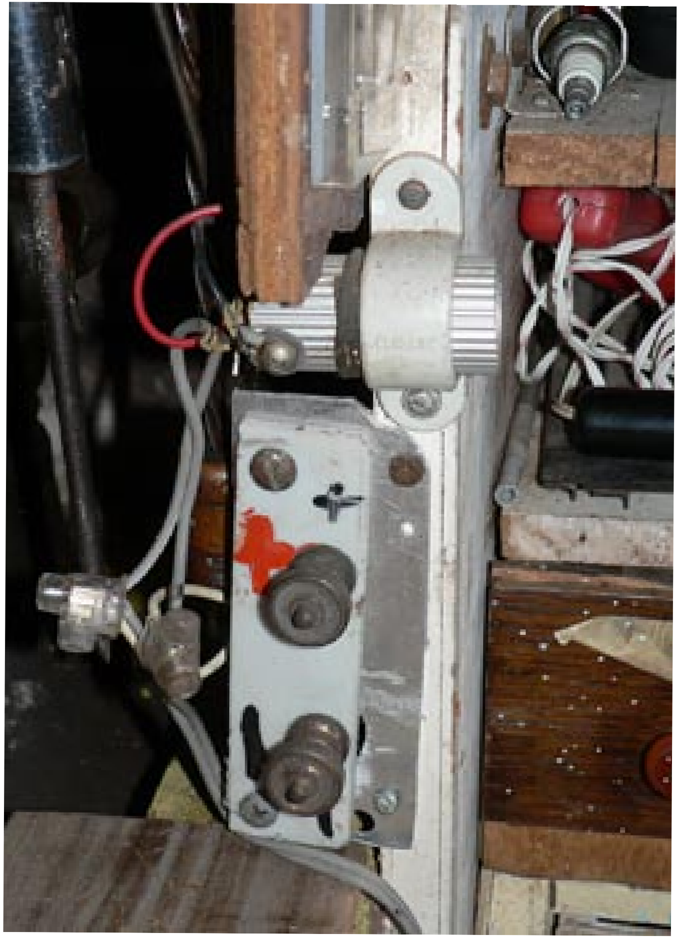
This is a spray gun. The system uses the blower end of a vacuum cleaner. One bit went over your shoulder, the spray gun plugs into the hose, and away you go.

I haven't used it much at all, actually, but my cousin Basil Chesworth up at Alstonville sprayed his car with it.

Here is a parachute off the ejector seat of a Sabre aircraft. When you ejected, the seat shot out with the pilot sitting in it. Then he released the seat, and so the seat didn't fall on top of anybody, the parachute let it down gently.

Early model radios often needed an outdoor aerial to get reception. This is an insulator for the outdoor aerial.

This car clock came out of a mid-1920s Studebaker. It's just an ordinary clock. The white rod going down the bottom was down below the dashboard as the thing fitted into the dash board. There is provision under my finger there for lights to light up the clock so it could be seen if you were driving at night. The lights weren't in the clock, they were outside and shone through the plastic window to light up the dial of the clock. The clock is still going. You wind it up with the stick thing underneath it. If you wanted to change the hands, you pulled the stick thing down to move the hands backwards and forwards to re-set the time. I think the clock would run for a week on one winding.



I made this little gadget recently - just two terminals, to connect the battery which is down underneath the bench up to waist high where I have a socket for a cigarette lighter. It gives me a positive and negative terminal and I don't have to go down to the battery underneath the bench if I want to put a couple of bulldog clips on it to make something work, such as the spark plug cleaner.

Here we have a packet of primus needles. These were used for pricking the dirt out of the Primus jet when the raw kerosene was pumped up from the bottom of the Primus. A speck of dirt always seemed to get in it and blocked it up and it wouldn’t work, so you used to use a little Primus needle to prick the dirt out of the jet. Usually the speck of dirt came back up after a while and the Primus didn’t go again, so it was an often-repeated process.

The little spanner underneath is probably unique. I’ll bet there’s not another one like it in Australia. It was used to take the Primus jet out of the noisy Primus burner. (there were two types of Primus burner – one was a “noisy” one and a later one was quieter.) In order to get at the jet of a noisy burner you had to get in at an angle of 45 degrees below the burner part itself. This little gadget has like a universal joint on it to let you turn it and unscrew the jet out of the Primus body itself.

Later on, around the 1930s or so, Primuses came out with a silent burner in which the gas from the jet was squirted up directly and then spread out to come through a series of holes around a small thing a bit like the lid of a jam jar. This sort of Primus burnt less noisily than the earlier ones. Because there was direct access down from the top when you took the jam-jar lid thing off, the nipple was much easier to remove. I made this out of a bolt and cut the groove in the bottom of it so that it just fitted over the Primus jet which made it easy to screw the nipple out.

This is a gadget to let you heat a lamp like a Coleman lamp which burnt kerosene or petrol (kerosene mostly). You raised the glass, you dipped this into some methylated spirits and set fire to it, and then clamped it around the upright tube going from the reservoir at the bottom of the lamp up to where the mantle was at the top. When it was sufficiently heated the mantle then ignited because of the vaporised kerosene coming up from below. The petrol or kerosene was kept up to the lamp by means of pumping air into the container at the bottom of the lamp.

I have quite a collection of old valves. These are mostly television valves, but there is a number of radio valves in the box as well. There'd be four or five hundred valves there, and although they're outdated, they'd still be worth around ten dollars each today. Valves for use in radio telephony were invented by a fellow called Fleming about 150 years ago, and they consisted of a hot filament wire – usually supplied with a current from a two- or six-volt battery to light the filament. Around the filament was a coil of 8 or 10 turns of wire called a grid. The next thing out from the grid was the plate of the valve which was a solid metal shield. The way the valve worked was: the filament was heated up by the current going through it; it glowed red, and in doing so emitted electrons. The current flowed from the filament to the positive plate connected to a higher voltage terminal supply – usually around 90 to 125 volts. When the voltage was applied to the plate, the electrons, being negative in charge, immediately flowed towards the plate. In order to get to the plate they had to move past the grid. Around the grid was a field which was controlled to be slightly more negative than the filament. This repelled the electrons as they came towards it, and so by changing the voltage on the filament from a lot negative when no electrons went past it to only a little bit negative when a number of electrons went past it and over to the plate, we were able to control the flow of current to the valves. We were able to control that flow by a very small amount of change in the voltage of the grid, and the electrons flying to the plate completed an electronic circuit. So in that way we had a small voltage applied to the grid making a big change in the current that was flowing from the plate back down to the cathode.

These valves I've just described were those that were used in the early radios where you had a direct battery supply to the filament and a direct DC supply to the plate. Later on it became desirable to use an AC supply to the radio set so that it could be plugged into the power supply. In order to do that, the first thing that was necessary was to surround the red-hot filament with a coated tube called a cathode. This cathode tube got hot, and the electrons that were originally emitted from the hot wire were now emitted from the cathode and exactly the same process took place. Also, instead of having a battery supply to give you the voltage we used a rectified Direct Current – that is, a current that was originally an Alternating Current which had been changed into a Direct Current by means of rectifier valves. The rectifier valve was like the valve I first described, except that it had no grid in it. It just had the cathode or filament and then the plate nearby so that the current was not controlled or adjusted in any way - all that was available to it flew over to the plate or anode, (which is the correct name for it). It only went one way though – it couldn't flow backwards because there were no electrons being emitted to flow back towards the plate.

The next development of the radio valve was the placing of a screen between the ordinary grid and the plate. This screen had roughly the same voltage as the plate, but being closer to the cathode it attracted the electrons and accelerated their rate of flow to the valve. The electrons got going so fast that when they hit the plate they often bounced back so that we had a shower of electrons being re-emitted from the plate. So then a suppressor screen was put in as well, and so then we had a valve which was (from the inside) the hot filament, then the cathode, then the grid, then the screen, then the suppressor grid, then finally we had the plate. That was the ordinary efficient valve of the 1930s, 40, and 50s.

Here we have an Octel valve – that is, a valve with eight pins on the socket at the bottom and a central rod with a keyway on it which would only allow the valve to be inserted in a certain direction. This valve is surrounded by a metal shield which was not only for when the valve was working well, but it was also emitting radio frequency waves which could be picked up by other valves nearby. This meant that it had to be shielded by a metal shield that went around the valve.

This is a little valve that came out during the war and was used for about twenty years or so. I just included this one because it shows an area of white at the top, which means that air has got into the valve and it is no longer a vacuum – and a vacuum is essential for the working of all valves

This one is a valve made of metal. It could have been made of glass and does the same job, but it is made of metal so you don't need the metal shield on it.