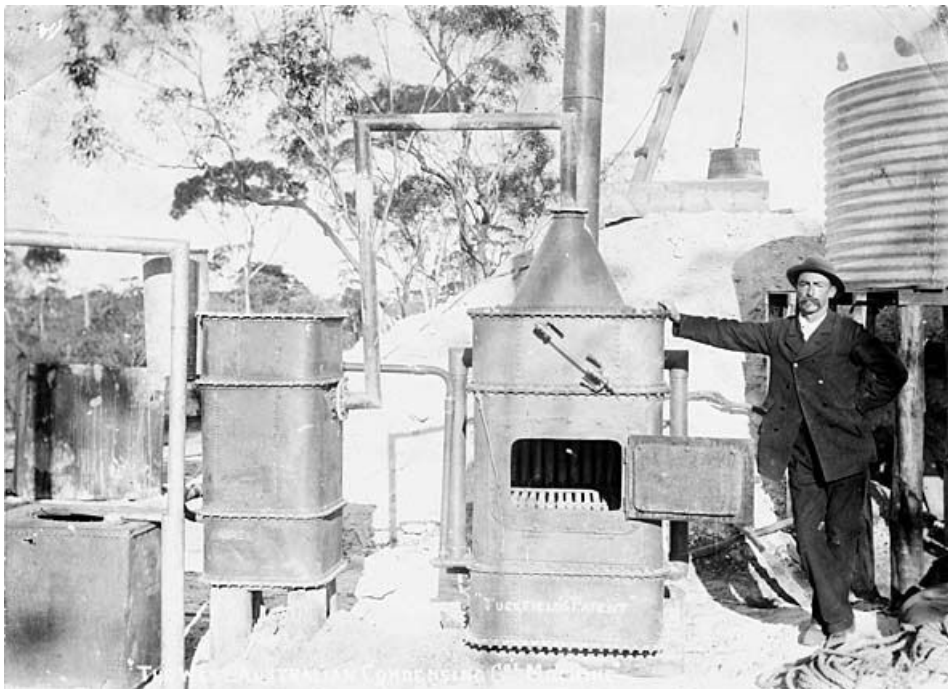


Western Australia Condenser Company, c1895



Description

This is a black-and-white photograph, measuring 15 cm x 20 cm, of a water condenser, which was manufactured by the Western Australian Condenser Company. The manufacturer's name is inscribed at the bottom of the photo. The condenser was installed and working near Coolgardie around 1895. The words 'Tuckfield Patent' are visible on the base of the furnace, which suggests that its design had been registered. The background shows the native bush of tall gum trees and undergrowth from which the fuel for the furnace was taken.

Educational value

- This asset depicts a means of making fresh, potable (drinking) water from water too brackish or saline to drink - such water came from underground bores, salt lakes or claypans in the arid gold fields; the water was boiled and the resulting steam was collected and condensed back into a liquid form; the outcome was water sufficiently free of salts for consumption by people and animals or for industrial purposes; prospector John Aspinall described the water as being potable, but not palatable, 'resembling boiled water with a dash of galvanised iron and several other unrecognisable substances including smoke'.
- It shows the technology by which water was condensed - as water boiled, it changed from a liquid state to a gas through heat; the steam rose through the pipe at the top of the boiler and, as it travelled through the pipe, further from the fire, it cooled and changed back into a liquid; the result was water pure enough to drink, which fell into the tank to the left of the furnace and was stored there for use.
- It shows a relatively small-capacity condenser and a well-manufactured system, suitable for perhaps just one small mine or settlement - this smaller condenser was unlike many of the other improvised condensers that were built on the gold fields, such as the railways' 'mammoth' condenser; portable condensers were



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made in Coolgardie by this time and this might be one of the local models; the man appears to be showing it off in the photograph, which was possibly to show to potential customers.

- It indicates the complexity of the technique used to supply fresh water for the needs of the prospectors and others on the gold fields - a small door in the furnace in the centre allowed a small quantity of wood to be fed in at any time; a gauge measured the temperature on the front of the tank; the exhaust chimney for the smoke is at the back; the cone channelled the steam into the tank alongside, where it condensed again into a liquid form; in 1903 a pipeline was completed that delivered water to the fields from a dam near Perth, making this technology redundant.
- It shows an early technology that contributed to environmental damage - condensers used large amounts of energy to treat the water, and most of the furnaces relied on wood for their fuel source; with the surrounding timber cut down to feed the condenser's fires, Coolgardie residents experienced severe dust storms; the timber was not a renewable energy source and the region still suffers today from a denuded landscape.
- It shows one source of the brackish or saline water that was treated for human consumption by condensing - in the background is a bore with a tubular bucket suspended from a whip-tackle; water was drawn from the well shaft and stored in the tank on the wooden stand to the right of the photograph, prior to being condensed; other brackish or salty water was found in wells and salt lakes or, as one mining engineer put it at the time, when it seeped into mine shafts, it made some 'water mines' rather than 'gold mines'; sometimes water from a bore was fit for animals to drink but not for humans, unless treated.
- It is an example of the work of Roy Millar, who took numerous photographs depicting life in the gold fields in the 1890s - Millar held an exhibition in Coolgardie in 1894.
- It suggests the desperate situation caused by water shortages on the gold fields in the 1890s - with no permanent sources of fresh water the Government and individuals had to resort to innovative ways of obtaining water for human consumption; rocks were harvested for water and salt water was boiled; rainwater run-off was channelled into railway dams built at the base of granite outcrops; portable condensers allowed prospectors to stay out in the field as long as salt water was available.

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Creator Roy (William Roy) Millar, photographer, c1895

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