

Innes and Mills condenser, Coolgardie, late 1890s



Description

This is a sepia photograph, measuring 16 cm x 21 cm, showing a small privately built and operated condenser owned by Innes and Mills at Coolgardie, Western Australia in the late 1890s. The furnace and boiler are in the centre of the picture. Firewood is stacked loosely in the foreground. A man in the centre is holding a steel rod used for stoking the furnace fire. Water is being poured from an open bucket directly into one customer's water bag. The stance of the men suggests that the photograph may have been posed. The inscription reads 'INNES and MILLS CONDENSER COOLGARDIE'.

Educational value

- This asset depicts one method of obtaining water on the gold fields - there were no permanent sources of fresh water and prospectors rushing to seek their fortunes in the 1890s had to rely on gnammas (holes in the granite rocks) that collected water, natural soaks where water accumulated in the soil and condensers that distilled saline water from lakes or underground; miners, townspeople and travellers along the eastern route from Perth relied mainly on condensers to supply them with potable water; a pipeline carrying fresh water from a dam outside Perth to the parched gold fields opened in 1903, solving the water problem.
- It suggests the difficulties of obtaining water on the eastern gold fields - with no rivers or fresh water lakes in this arid environment. people had to buy water from water sellers; virtually all water in the eastern gold fields was saline, so it had to be converted into fresh water by a distillation process, which made it expensive; the price fluctuated from half a shilling to 5 shillings a gallon (less than 5 L); even if a prospector had plenty of money, this did not necessarily solve his need for water; one prospector explained that out in the field it was more a case of how much water you could carry rather than how much money you had, because sources were so scarce and water sellers were concentrated in the larger centres.



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- It illustrates the workings of a condenser - the plant condensed steam produced from salt water boiled in a tank, resulting in water fit for human consumption; usually a 100-gallon (380-L) square tank, previously used to transport biscuits on board ship, was erected on stones so a fire could be lit underneath it; the resulting steam was channelled through pipes and collected in a second tank as it condensed on cooling; because the tanks in which the water was boiled were made from thin iron, they burnt through easily; every 10 hours the condenser was stopped and five or six buckets of loose salt cleaned out; two sheets of corrugated iron placed together with their hollows corresponding formed the steam pipes.
- It shows customers purchasing expensive and rather unpalatable distilled water - a prospector wrote in his diary in 1895 that condensed water 'has a very insipid taste, resembling boiled water with a dash of galvanised iron and several other unrecognisable substances including smoke'; repeating the condensing process improved the quality and taste of the water; those who could afford to, purchased rainwater tanks, as tanks saved money in the long run and provided better quality water; the numbers of plumbers in Western Australia rocketed because of water-supply-related work on the eastern gold fields, particularly building rainwater tanks.
- It shows one of several types of condenser on the gold fields - condensers varied in capacity and construction; according to the 'Coolgardie Miner', condensers ranged 'from the humble-single-boiler, a tallow-tank on edge, which did work bravely, to the complicated portable, double-effect distilling plants that went wrong on every occasion'; some condensers were imported at great expense from Britain but others were made locally; some condensers were privately built, owned and operated, but the Government built condensers too; a 'mammoth' Government condenser was built to supply the railways with water for steam engines; mines condensed underground water that seeped into shafts, supplying labourers as part of their wages.
- It depicts a method of making a living, often taken on by unsuccessful prospectors - this privately built and operated small-scale condenser in Coolgardie was owned by entrepreneurs Mr Innes and Mr Mills, who probably purchased water from the Government bore and sold it at a profit after treatment; many condenser operators made more money from selling water than they would have specking for gold, except during rainy weather when people could get water for free, collecting it in rain tanks, buckets or any containers available; a prospector recorded in his diary that it rained for 14 hours at the end of April 1895, 'Whereat there has been general rejoicing all over Coolgardie' but 'Condenser men looked glum'.

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Creator Greenham and Evans, photographer, c1890s

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