"Patently successful" is a series of articles presenting a selection of patented Australian engineering inventions that conquered the world but whose Australian origins are not widely known.

Breakthrough for lawn mowing

By Edward Genocchio

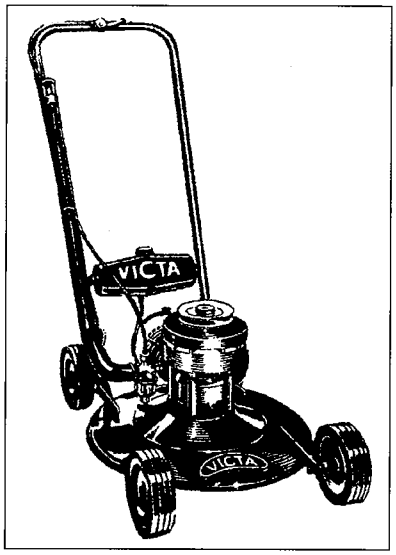
Victa is one of the best known and loved Australian brands of lawn mowers. But not many people know the patented technology that revolutionised the way lawn mowers were constructed.

The first Victa lawn mowers were created by Mervyn Victor Richardson in his garage in Sydney's suburb of Concord in the early 1950s. Richardson had little schooling and trained himself on the job in various engineering businesses.

The original production Victa lawn mowers included the now famous "peach can" look, a new arrangement of blades and cover guard and a lightweight chassis. It was the first mower in Australia to combine a petrol engine with a rotary blade.

Richardson noticed that existing lawn mowers were heavy, clumsy machines that were fuel and energy inefficient, could not cut long grass or reach a fence line and were difficult to operate by an average person. He set about engineering a very simple, reliable lawn mower that anybody could use, that quickly and efficiently cut any type of grass right up to a fence line.

The first advertisement for a Victa mower stated "Victa 18 inch rotary mower. 1hp petrol engine. Cuts to fence and any height grass, weeds etc. Safe for 10 year olds". It's reported that the first Victa showroom was so popular on a Saturday that highway traffic was regularly diverted to allow for customer parking.



The Victa 1955-56 Rotomo 18" Model 1. The drawing is from Patent No 8770/55 filed 2 May 1955.

Richardson moved the engine to sit on top of the cover guard with a vertically extending engine shaft rotating blades in a horizontal plane. He also introduced a pivoting system.

In earlier lawn mowers, if you over-ran rocks the blades would be struck disrupting their rotation, stalling the motor and sending a shock to the engine shaft and up the handle.

Richardson introduced a pair of pivots so that if the blades came into contact with surfaces harder than grass, they would pivot out of the way ensuring a smoother, more reliable and consistent cut while also preventing damage to the engine shaft and blades. This pivoting motion also reduced the shock travelling to the engine shaft and up the handle. Today this design is still being used by many lawn mower manufacturers.

The success of his mower encouraged Richardson to set up the Victa company and go on to design and patent many more innovative lawn mowers, millions of which have now been sold worldwide.

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