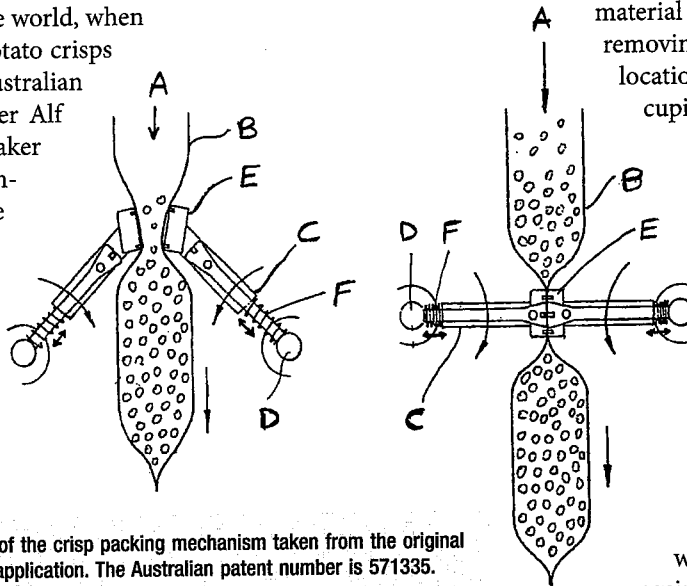


In a new series of articles, engineer and patent attorney Edward Genocchio will present a selection of patented Australian engineering inventions that conquered the world but whose origins in this country are not widely known. His first article is about a packing system for potato crisps.

Packing potato crisps at high speed

NO MATTER WHERE YOU are in the world, when you open your next packet of potato crisps you might be supporting an Australian company. Around 1984, engineer Alf Taylor of packaging machine maker TNA in Sydney patented an improved rotary packaging machine for snack foods as shown in the sketch.

In a continuous motion, crisps A are added to a tubular bag material B. Arms C are rotated about shafts D in opposite directions and with the same angular velocity. The arms C include heads E and telescopic spring arrangements F to allow arms C to move longitudinally so heads E engage and press against the bag material B. The heads E, when in contact with the bag material B, sever the tubular bag and heat the ends of the now formed separated bags to form a seal. Because the heads, when initially engaged with the bag material B, move at a faster velocity than the bag



Sketch of the crisp packing mechanism taken from the original patent application. The Australian patent number is 571335.

material B, the heads E "strip" the bag removing the crisps from the sealing location and reduce the volume occupied by the crisps.

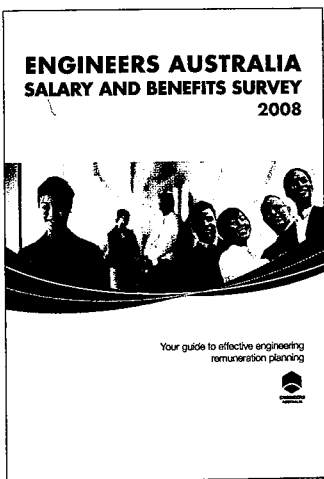
Before this invention, generally packaging machines for snack foods reciprocated vertically forming and filling bags at 50-60 bags per minute. With the unique stripping action using rotary continuous motion heads the Taylor machine could do 200 bags per minute.

The invention led not only to faster speeds, but also superior reliability and reduced waste. Since then the Taylor packaging machine has catapulted TNA

from a small unit factory in Rydalmere to be one of the world leaders in packaging machines for snack and other food products having offices and factories in North and South America, Europe, Asia and the Middle East. ■

Edward Genocchio is a principal of Spruson & Ferguson Patent & Trademark Attorneys (www.sprusons.com.au).

ENGINEERS AUSTRALIA SALARY AND BENEFITS SURVEY 2008



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