



THE CARDBOARD BOX

STORY
BY
CORREY BALDWIN

It can be difficult to imagine a time before the cardboard box. But for centuries there were no cereal boxes, no cartons of tea or packing for light bulbs, no packages in the mail from Amazon. Aside from rather decadent tin cans and glass bottles and jars, nothing was available in small, individually wrapped, lightweight containers.

And yet somehow the world functioned perfectly well. Goods and products were shipped and sold almost exclusively in bulk, using wooden crates and barrels and cloth sacks—to be unloaded at markets and general stores, and dolled out to shoppers. Then came the Industrial Revolution.

Suddenly it became possible to manufacture and transport a huge amount of product cheaply and efficiently. And with mass production came mass demand. But all this required a new form of packaging: product needed to be packed and shipped as smaller units. Enter cardboard.

When we talk about cardboard, we are actually talking about two different but related materials, which developed alongside each other: corrugated cardboard, largely used in shipping, and thick paperboard, largely used for packaging.

The first development for both came in 1856, when Edward Allen and Edward Healey from England patented a pleated or corrugated paperboard that they used to line tall hats, giving the hats added strength and warmth. But it took Albert Jones, an American, to see the potential of this corrugated paper as a packing material. In 1871 he reinforced the corrugated paper with a single liner sheet, patenting what he called “a corrugated packing paper.” He suggested it be used particularly in transporting glass vials and bottles. Finally, in 1874, Oliver Long added a second liner sheet to Jones’s packing paper, putting the final touches on what we think of today as corrugated cardboard.

One final step was needed, however, to usher in the cardboard box itself. This came in 1879, when Robert Gair, who owned a paper bag factory in Manhattan, came up with a method for producing pre-cut, prefabricated cardboard cartons and boxes. It all began with a factory error.

The presses in Gair’s factory made use of “die scoring,” in which thin metal bars (known as “rules”) are used to crease a sheet of paper when pressed down into it, allowing the sheet to then be easily folded. (The same technique is used for more decorative purposes, such as embossing.) “Die cutting,” on the other hand, uses sharper rules that are set lower, allowing them to cut through the paper, rather than just crease it.

In Gair’s day, die cutting and die scoring were two separate processes. Not only that, but for more complex projects, cutting would often have to be done by hand. As such, creating a cut and foldable patterned piece of cardboard—as is needed for assembling a cardboard box—was far too time-consuming and thus prohibitively expensive.

That is, until one ordinary day in 1879. Gair’s factory was preparing an order of seed bags when a metal rule on one of the presses shifted, and cut through the sheets rather than creasing them. By the time a worker noticed, 20,000 bags had been ruined.

It was a small price to pay, for a light bulb went off in Gair’s head: the rules on a press die, he realized, could be set at two different heights, allowing for both cutting *and* creasing, at the same time, on the same machine.

It was an astonishingly simple concept, but it increased the efficiency of Gair’s factory fantastically. The amount of bags that his factory used to make in an entire day, he could now produce on a single machine in just two and a half hours. But the real innovation was the cardboard box, which overnight had become not just affordable, but lucrative.

Gair moved his operations to Brooklyn, where he built a large cardboard packing factory near the shipping docks along the waterfront—an array of buildings so extensive

people referred to it as “Gairville.”

Gair’s first clients included Colgate, the department store Bloomingdale’s, and the cosmetics company Pond’s, as well as a number of cigarette companies. But the real breakthrough came in 1898, when the newly formed National Biscuit Company (later Nabisco) ordered two million cardboard cartons to package its cracker, the Uneeda biscuit.

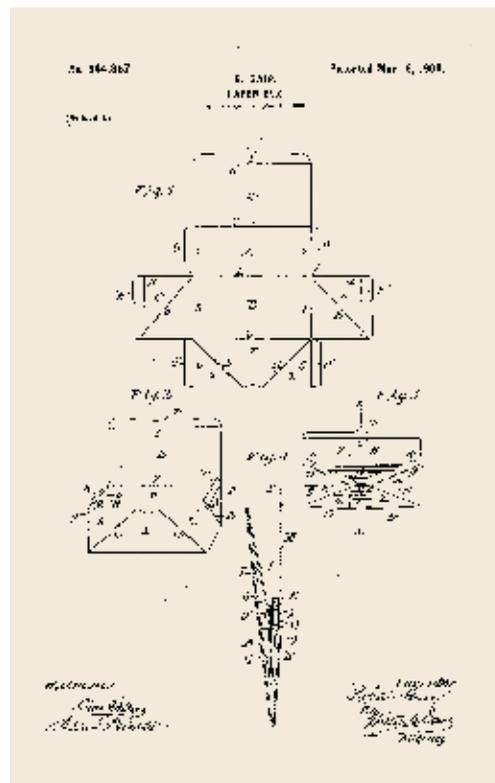
It was a moment that has been called the birth of consumer packaging, due to the widespread distribution of Uneeda biscuits that followed, as well as the massive advertising campaign by the National Biscuit Company—the

first million-dollar campaign in American history. Cardboard’s inevitable rise was cemented in 1906 when the upstart Kellogg’s company came knocking, looking to package a new, lightweight flaked cereal they were calling Kellogg’s Toasted Corn Flakes.

What began with crackers and breakfast cereal quickly spread to nearly every conceivable consumer product. Producers could now market their product in smaller units—pre-packaged and sized for individual consumers. And it was a dream material: cheap to manufacture and to transport, lightweight yet strong and durable, and easy to use.

Cardboard cartons and boxes were also easy to stack and display—display being the operative word, for the invention of the cardboard box was a watershed moment for marketing as well.

Unlike the cloth bag or the utilitarian crate, a cardboard box consisted of six flat surfaces that positively screamed out to be printed on. It was an enormous, irresistible opportunity for marketers. There, on each and every container, could be displayed logos, slogans and advertising copy, let alone any amount of images, graphics and colour. The possibilities were endless, and the world of marketing and advertising—as with packaging—would never be the same. **U**



CURIOUS TIDBIT

The cardboard box is currently the only packing material to make it into the International Toy Hall of Fame, located in Rochester, New York (inducted in 2005). The other obvious contender, bubble wrap, has yet to be so recognized, though it did make it onto the short list in 2016.