

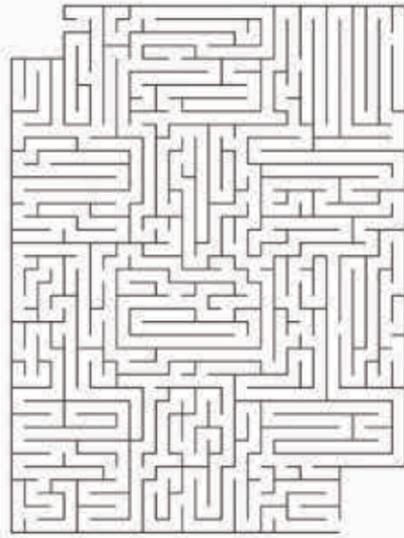
Fun & Games



VISION

A Packaging Industry Newsletter for the 21st Century

Summer Maze



What's a Wuzzle?

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Summer Word Search

Reveal Summer Message with Unused Letters!

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D S E O F S E P T E M B E R

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| AUGUST | GOLF | JULY | SUNBURN |
| BARBECUE | HATS | RELAX | SUNSCREEN |
| BASEBALL | HOLIDAY | SANDALS | SUNTAN |
| BEACH | HOT | SHORTS | SWIMMING |
| BIKING | HUMID | SOCCER | VACATION |

The Evolution of the Shipping Container



Early Wooden Shipping Crates

Up until the beginning of the 20th Century, most industrial and consumer products were shipped from one place to another in wooden boxes and crates. This was the primary method of moving goods from the point of origin directly to the customer or to a marketplace where the goods could be resold. Wooden structures were often custom made to hold whatever size product was being shipped and sometimes packed with straw or other soft materials to protect fragile products like glass from breakage. They were strong, providing optimum protection but were very heavy and expensive to transport, especially over long distances. These high transportation costs limited the consumer to purchasing products that were grown or manufactured nearby. It was clear that the development of an inexpensive, lightweight but strong shipping box could decrease transportation costs. What wasn't known at the time was that this development would drastically change marketplaces throughout the world by bringing an ever-expanding assortment of goods to consumers and businesses alike. Nobody would have guessed that the shipping box that would come to play such an important role in global commerce would be manufactured from paper. Paper was first invented more than 2000 years

ago in China as a medium to display words or symbols. Prior to the invention of paper, the Egyptians used papyrus to write on and later Europeans used parchment made from animal skins but both proved to be impractical over time. Early papermakers would pulverize the inner bark of mulberry trees with primitive tools like clubs and stones, while adding water to create a slurry substance. The mixture was then poured onto a thin mold and when dried, the mass of intertwined cellulose fibers would become the suitable surface to write on that we call paper. The art of papermaking would continue to spread throughout the world for the next several centuries. Technical improvements were made to the manufacturing process along the way but making paper in this manner remained incredibly slow.



15th Century Printing Press

This all changed in the mid-15th Century with the invention of the printing press in Europe. Print technology spread and by the end of the century 2500 cities throughout Europe had



For good nutrition to go along with that great outdoor flavor, look no further than your own garden or green grocer. Grilling is an ideal way to cook fruits and vegetables because there is minimal loss of nutrients. You don't need a green thumb to grill perfect produce - here are a few helpful hints.

Start fresh

Choose fruits and vegetables that are ripe and ready to eat. Under-ripe or overly mature produce won't work on the grill.

Wash just before using

For the freshest possible produce, it is best to refrigerate fruits and vegetables unwashed. But be sure to wash and pat dry before grilling.

Smaller is better

Cut fruits and vegetables into small bite-sized pieces. This will help to reduce cooking time and ensure the proper level of doneness.

Take their temperature

For the best results, bring fruits and vegetables to room temperature before grilling.

Add a splash of oil

Brush fruits and vegetables (except corn) lightly with oil, melted butter or your favorite marinade or oil-based dressing for added flavor and to help prevent sticking.

Continued on page 3



This Quarters Issue Contains:

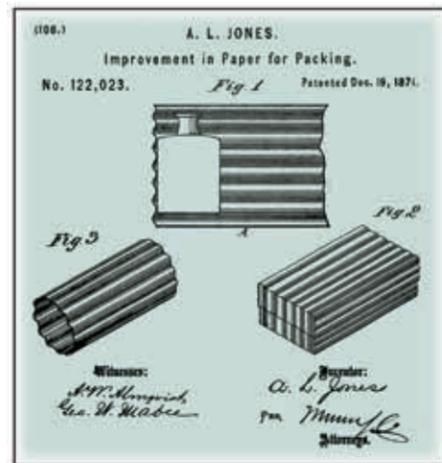


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Packaging Industry News

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printing presses. Inexpensive books were being produced like never before resulting in a massive increase in demand for cheap paper. Also around this time, book publishers began to replace heavy wooden book covers with a thicker paper, known today as paperboard. Over the next few centuries, the paper making process advanced and eventually machines with moving wire belts could produce huge quantities of paper very efficiently.



The first patent for corrugated paper in America was issued in 1871. The crimped or pleated material was flexible, lightweight, inexpensive and acted as an excellent shock absorber for shipping fragile items. This corrugated paper was used to wrap and cushion glass items like bottles and lantern chimneys to protect against breakage. A few years later, double-faced corrugated was invented. With liner sheets glued to both sides of the corrugated medium, the corrugated board as it would come to be known, became stable and suitable for constructing a box. The entrepreneurs of the time recognized the opportunity before them. They patented new equipment and speedy manufacturing processes, built manufacturing plants and transformed the packaging industry forever. As we entered the 20th century, the use of corrugated boxes for shipping all sorts of products increased dramatically.

Acceptance of the corrugated shipping box did have some hurdles to overcome. Many manufacturers were wary of the level of protection a corrugated box would provide versus a wooden box. Likewise, transporters were worried that they would be held accountable for breakage or damage to products and refused to accept shipments in corrugated boxes. There was also another problem. The large railroad con-

glomerates of the day had extensive holdings in both timberlands and sawmills. Maintaining the use of wooden boxes impacted their profits and because wooden boxes were heavier, they could charge more to transport them. In order to protect their assets, the railroads resisted the use of corrugated boxes by refusing to carry them or assessing monetary penalties on their use. These surcharges sometimes amounted to 400% for shipments traveling east from California. Infuriated by this practice, a West Coast box maker supported by other box manufacturers brought suit against the railroads for this discrimination and in 1914, the Interstate Commerce Commission handed down a landmark decision. The ICC found that there were no differences in the movement of commodities in fiber and wood boxes and prohibited all tariff discrimination. Almost immediately, the corrugated box moved from being the substitute container, to the shipping container of choice.



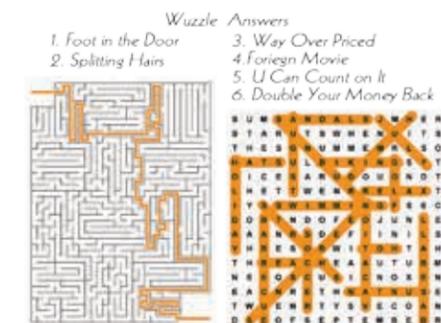
Lighter boxes meant lower shipping costs. Manufactured goods could be shipped safely and inexpensively from far away locations providing consumers with a greater selection of products at affordable prices. Distribution networks expanded and the level of commerce in the United States grew exponentially. Manufacturing technologies have advanced and materials have improved but today the corrugated box has remained the preferred vehicle for shipping a product. Almost every manufactured and agricultural product shipped in the US from one locale to another, travels in a corrugated carton.

The earliest form of printing on a shipping box was accomplished by embossing dies that stamped identifying marks on the wooden planks. The first graphics on corrugated board were printed by letterpress using thick oil-based paste inks. This slow drying ink became an impediment. Machines were getting faster but any workflow improvements were negated by the long wait for the inks to dry before proceeding with die cutting and finishing. The introduction of flexographic printing presses solved this problem. The flexographic process used low viscosity water

based inks that were quickly absorbed by the board, drying in a matter of seconds. Flexographic presses could produce boxes at much greater speeds and with less damage to the flutes than the letterpress machines. Bottlenecks were eliminated; the integrity of the carton structure improved and productivity soared.

The shipping box industry has certainly transformed itself since the early days of wooden crates. Today more than 1,240 industry plants located in more than 900 U.S. cities and towns produce over 40 billion boxes annually and are responsible for the employment of over 900,000 people. Corrugated is a renewable and eco-friendly product. 91% of every carton manufactured in the U.S. in 2011 was recovered and you can expect this trend to continue with more corrugated cartons being manufactured from kraft paper made from recycled packaging than virgin pulp from trees. The development of more efficient recovery processes and the increased use of environmentally friendly inks and coatings will lead to an even greater use of recycled content.

The corrugated box has made a valuable contribution to commerce around the world. It expanded marketplaces by making so many more goods from faraway places available and affordable to consumers. More recently, the ability of businesses and individuals to ship and receive items inexpensively and safely has helped foster the incredible growth of economic activity on the internet. Today corrugated boxes even help manufacturers communicate marketing messages at supermarkets, big-box stores and warehouse clubs by presenting products in packaging or POP displays with innovative structure designs and colorful graphics. The corrugated box is truly a success story. Its low cost and ability to transport its contents safely made the corrugated carton an invaluable innovation. It has become the preferred shipping package for most products, revolutionizing distribution systems in the process and helping markets everywhere grow and prosper.



Word Search Message With Unused Letters:
Summer starts when its the Summer Solstice around the twenty second of June and finishes with the Autumn Equinox near the twenty second of September

Packaging Industry Trends

Digital Impact - Corrugated and Beyond!

The operation at Digital Impact's new expanded digital printing and die cutting facility is functioning at maximum efficiency. With a year of training and experience on the new equipment, DI's pressmen and finishing specialists have become proficient at turning out all types of exceptionally printed pieces.

Using state-of-the-art technology, DI is producing short and intermediate quantities of up to 1000 units of corrugated pallet skirts and POP floor displays for snack foods and candy companies. Some display bases, shelves and trays are unprinted or flood coated in a single color with the header communicating the marketing message. Many display manufacturers contract with DI to direct print high-resolution headers or specific fill pieces for a multi-part display as a cost saving option vs. litho print.



Durst Rho 900 Flatbed Digital Printer

The acquisition of the Rho 900 UV press with instant ink drying capability has significantly increased the variety of substrates, beyond paperboard, available for printing. Digital Impact has produced distinctive signs, displays, standees, prototypes, etc., using the following materials:

Fome-Cor A quality graphic arts board; die cuts easily and edges stay closed

Coroplast Corrugated plastic sheets; light and weather resistant

Foam PVC Durable PVC sheet; perfect for indoor or outdoor applications

High Density Polystyrene Closed cell foam board; indoor / outdoor applications

Acrylic/PET/Polycarbonate Polymer-Plastic

Bio-Board/Falcon Board Eco-friendly with white printable surface

DiBond Aluminum faced with polyethylene core

Gatorfoam White wood fiber veneer face over polystyrene core

Wood
Flexibles White / clear vinyl, SBS, Styrene, Backlit, Poster, Wallpaper, Magnetic, etc.

This list is ever expanding. Digital Impact continually tests its print capability on new substrates and customers are encouraged to submit new printable materials for examination and assessment. DI also conducts tests on the suitability of new laminates as they are introduced to the market. These are the UV curable liquids applied after the printing process and used to protect and/or enhance the finished product.



XP44 Digital Die Cutting Table

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For the sweet tooth

Add brown sugar to melted butter, brush over fruits and season with cinnamon or ginger while grilling. To prevent sugar from burning, brush on close to end of grilling time.

It's hot on the grill

Allow the grill rack to get hot before adding your fruits and vegetables. This will help seal in the natural juices without drying it out.

Use medium coals

To avoid burning, grill fruits and vegetables above a lightly dispersed bed of medium coals. Medium describes coals that glow through a layer of gray ash. To test for medium heat, you should be able to hold your hand over the grill for only four to five seconds.

Think fruits and veggies first

Because they taste best served closest to room temperature, grill fruits and veggies before grilling meat. This will allow time for the fruits and vegetables to cool so you can serve the alongside hot meats.

Flawless corn on the cob

For perfect corn on the cob, immerse the ears of corn (still in husk) in cold water for one to two hours prior to grilling. Then grill - it's not necessary to remove silks - over direct heat until husks are charred (about 15-20 minutes), turning occasionally. The moisture in the corn turns to steam when heated and cooks the corn without burning. Remember to wear heavy rubber gloves when peeling off the hot husks and silks.

Foiled again!

For a steamed effect, wrap vegetables in foil before grilling. Add a touch of butter, juices and herbs or your favorite dressing or marinade and you've got a great side dish. Husked and de-silked corn on the cob can be prepared this way.

Have a Great Summer!