

The most important invention in the world started as a simple quest for ten thousand dollars.

In the eighteenth century, pool, (then called billiard), was extremely popular. However, the ivory balls that were required for the game were very expensive to make. In 1863, a maker of these balls offered a ten thousand dollar prize to anybody that could create a practical substitute for ivory.

John Wesley Hyatt, a printer in Albany, New York, decided to try and win the prize. For several years Mr. Hyatt tried to make the balls by molding glue and sawdust together. When this failed, he tried coating the 'balls' with a liquid that dried on hard and smooth, which was made by chemists by adding alcohol and ether to an acid-treated cotton called nitrocellulose. John experimented with this liquid, even adding ivory dust in an attempt to make it work, but everything he tried failed.

One day it struck him, why not mix the nitrocellulose with something that would make it into a *solid* instead of a liquid, and use that to make the balls? Camphor, a substance from a tree, mixed with alcohol and the acid-treated cotton did the trick; they changed the liquid into a soft solid. John named the substance celluloid.

Hyatt then put the solid into a mold, and pressed hard, while heating it. When he opened the mold, out came a shiny, pool ball. It was the year 1870 and John Wesley Hyatt had


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invented the first plastic. Did he win the ten thousand dollar prize? It seems the offer had expired.

Even though celluloid had one major fault; it caught fire easily, Mr. Hyatt had opened up a whole new industry. In 1907 a chemist, Leo H. Baekeland, invented Bakelite, a plastic that wasn't as flammable as celluloid. For the next twenty-five years chemists and inventors from all over the world devised different plastics. In the mid 1930s Wallace H. Carothers and research team at E.I. de Pont de Nemours & Co. invented nylon which was the first plastic that could be spun into fibers for clothes. Now every time you got dressed you would be using plastic.

Over the last few decades plastic has been perfected so that it can replace almost every material. If plastic continues to grow in industry as much as it has in past years, tomorrow's world will use so much plastic, it would be impossible to live without.

Even in today's world almost everything you touch is made from or has plastic in it. Your shirt, the coating on book covers, television sets, modern phones, piano keys, water bottles and jugs, and, of course, pool balls are just a few examples. Without plastic there wouldn't be any CDs or DVDs to give us enjoyment. Modern day computers, something that we rely on heavily, wouldn't exist. Doctors wouldn't have prosthetics to replace missing limbs on people. Home appliances, such as toaster ovens and microwaves wouldn't exist or, if they did, they would have to be made from materials that would be



harder to shape, and maybe more expensive. Plastic has made things possible that we wouldn't have been able to dream about without it.

Look around the room that you are in, and count the objects that are made from or have plastic in them; they're probably seventy to eighty items. Plastic is a material substantially everyone takes for granted. But think for a minute, if a maker of billiard balls hadn't offered a prize, and a printer in New York hadn't decided to win it, would we be able to function or have an enhanced sense of amusement without these objects? Would we be able to go about the daily lives we have become so accustomed to, using computers, microwaves, and other objects without second thought?

Bibliography

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