

History of the vacuum cleaner



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The vacuum cleaner

It was not all that long ago, when housewives had to clean their houses, their carpets and rugs with clothes and brushes that usually gathered more dirt than they cleaned. Additionally, by the mid 1800s during the industrial revolution, factories were producing tens of thousands of manufactured items along with tons of pollution. “Dirt and suit were everywhere” [(The great idea finder (2007))]. These two problems, combined with the people’s new-found obsession with hygiene and cleanliness brought into the market many products, designed to make life and work easier with the most famous of them all, the vacuum cleaner.

The vacuum cleaner is a household appliance used for cleaning carpets, floors and rugs by the process of suction. The first vacuum cleaners had to be operated manually, with the American Daniel Hess being the first one to invent and patent a vacuum cleaner. He was a resident of West Union, Iowa and called his invention a carpet sweeper and not a vacuum cleaner. The machine had a rotating brush and a mechanism to generate suction. The amazing with this machine was that it included two “water chambers” that captured dust and dirt. Hess stated, that the air was cleaned while passing through the device but as we have no record that this machine was ever build we cannot be sure of its abilities [(The great idea finder (2007))].

Another early model, the “Whirlwind” which was also patented, was created in Chicago in 1868 and it created suction using a belt-driven fan. The “Whirlwind” and many other vacuums so many tried to invent were awkward, bulky and expensive and therefore not really successful in the market.

It was not until 1901 for the innovation to come. A British engineer named Hubert Cecil Booth created a petrol-driven vacuum cleaner. It was a movable horse-like unit which was parked outside the building to be cleaned, with long hoses fed through the windows. Although it was large and had to be operated manually by two persons, it was the first vacuum cleaner that sucked the dust away rather than blowing it away, like all other vacuums did until then. This new feature made Booth's model so successful, that using it was considered novelty and fashionable. Wealthy society ladies threw "vacuum cleaner parties," where guests were lifting their feet while drinking their tea, for Booth and his uniformed attendants to vacuum the carpet [(Morclean Ltd (2008)]. Even the Queen Victoria's carpet and the Naval barracks were cleaned by Booth's vacuum cleaner.

The next technological leap was also the turning point in the history of the innovation of the vacuum cleaner. In 1907, the asthmatic James Murray Spangler, a janitor in Canton, Ohio observed that the source of his cough came from the old fashioned vacuum cleaner he used while working. He tinkered it with an old motor fan and attached it to a soap box on a broom handle. He even used a pillow case for collecting dust.[Mary Bellis (1997)]. In this way he solved his asthma problem and even further invented the first portable electric vacuum cleaner. He started a company and sold his company and patent to his cousin's husband, the famous William H. Hoover. Until then, the vacuum cleaner was just a new invention used by the rich and for social purposes. William H. Hoover applied his innovative ideas and improved this new portable vacuum cleaner, turning it to a purely commercial item available to every household.

Just like every new invention that first appears in the market, Hoover's vacuum cleaner also faced a number of difficulties and obstacles.

Competition was formidable, with several other cleaning substitutes and services already available in the market. Door to door cleaning services were even offered. It was difficult for people's taste to be rationed away from these already tested goods and services and try something new and unfamiliar like the vacuum cleaner. It was difficult for them to accept and trust a small machine that sucked the dust away which was so simple that anyone was in the position to use.

At that point Hoover had already proved himself as an innovator but now he had to think and act like an entrepreneur and generate solutions, and so he did. He first identified his target group and created a selling plan. He offered a 10 days free home trial and also sent sellers going around from house to house showing off his product. In this way he managed to overcome competition and sluggish sales. It didn't take long until there was a Hoover® vacuum cleaner in nearly every home. [Mary Bellis (1997)].

William H. Hoover is a real innovator and entrepreneur. He earns these titles because he proved his skills by offering to the market something new and innovative by employing existing means of production differently, more appropriately, more adventurously. He had carried out new combinations on the way a vacuum cleaner was produced and then promoted it into the market, as Joseph Schumpeter (1934) states. [Edward Lumsdaine and Martin Binks (2007)]

The vacuum cleaner was not invented on a single day. According to Schumpeter's (1934) distinction between gradual and discrete change, undoubtedly there was a gradual change in the vacuum cleaner's innovation process. Similar cleaning equipment were already present in the market from before 1880 and they were called the vacuum sweepers. During the period between 1880-1906 a continuation of existing established technology and processes led to the invention of the first vacuum cleaner. This process of innovation caused major improvements in its applications and its characteristics with Daniel Hess, Cecil Booth and James Sprangler each contributing on their own unique way adding their own personal touch on the invention and the innovation of the vacuum cleaner. Creativity, originated in the inventor's Daniel Hess's mind that later led to development of the new product, the vacuum cleaner by Cecil Booth, James Sprangler and William H. Hoover. After years of innovation and development, the vacuum cleaner took its first commercial form in 1907. Every new model that was produced, was connected with earlier versions with the aim to satisfy people's tastes and increasing need for cleanliness.

The vacuum cleaner had a great impact on people's welfare and the society as a whole. Its birth, was due to a number of advances in technology brought away by the Industrial Revolution and also due to the fear of people for germs. It provided the solution to household filth, factory pollution and even the plague that swept away through the navy at the turn of the 20th century. It made cleaning easier for housewives that did not have to follow the spring cleaning ritual anymore, where the furniture were moved aside and the carpets and rugs were moved outside to be cleaned. It even brought an ease

to the emerging scary advertising and medical establishment propaganda about the dangers of filth.[Charles Richard Lester (2006)].

For me and for many others the invention of the vacuum cleaner contributed dramatically on the improvement of sanitation and health standards of the people. Without a doubt the entire innovation process of the vacuum cleaner can teach us many valuable lessons. It's inventor, Daniel Hess, fills the profile of a creative person which states that a person to be creative must be able to look beyond the obvious and generate good quality solutions in problem solving. [Edward Lumsdaine and Martin Binks (2007)]. So for us to be creative we must learn to think and operate under this definition. To continue with, Cecil Booth and James Sprangler through their innovative steps and work on the vacuum cleaner, teach us that for every problem there is a solution. Just like Booth created the first modern vacuum cleaner to satisfy demand for sanitation, just like Sprangler solved his asthma problem by simply adding a pillow case on his vacuum cleaner so and us, we can solve all problems in our life as long as we learn and create knowledge as we go along. Finally, William H. Hoover teaches us never to give up and continue with our work besides any problems we encounter in our way. Through his innovative and entrepreneurial activities, he indirectly teaches us that success comes via correct planning and continuous efforts.

Today there is almost no household without its vacuum cleaner. Hoover's company still operates and is one of the top vacuum cleaner manufacturer and distributor companies in the world. Additionally many more firms operate in the market producing vacuum cleaners, taking into advantage the growing popularity of electric appliances and the sustainable demand for

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sanitation and cleanliness. The technology now is obviously more advanced and vacuum cleaners are produced in every possible size and shape. The vacuum cleaner is without a doubt one the best representatives of cleanliness ever and an essential appliance for every house.

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