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Chapter 1 : Charles Goodyear | Innovation Destination: Hartford

*Charles Goodyear, Connecticut Yankee And Rubber Pioneer: A Biography [P. W. Barker] on www.nxgvision.com
FREE shipping on qualifying offers. This scarce antiquarian book is a facsimile reprint of the original.*

His father was a descendant of Stephen Goodyear of London, Middlesex, England, one of the founders of the colony of New Haven in Marriage and early career[edit] This section does not cite any sources. Please help improve this section by adding citations to reliable sources. Unsourced material may be challenged and removed. June Learn how and when to remove this template message Engraving by W. Two years later the family moved to Philadelphia, and there Charles Goodyear opened a hardware store. This is where he did most of his work. His specialties were the valuable agricultural implements that his firm had been manufacturing, and after the first distrust of domestically made goods had worn away“for all agricultural implements were imported from England at that time”he found himself heading a successful business. This continued to increase until it seemed that he was to be a wealthy man. Between and he broke down in health, being troubled with dyspepsia. At the same time, the failure of a number of business endeavors seriously embarrassed his firm. They struggled on, however, for some time, but were finally obliged to fail. Between the years and, Goodyear heard about gum elastic natural rubber and examined every article that appeared in the newspapers relative to this new material. The Roxbury Rubber Company, of Boston, had been for some time experimenting with the gum, and believed it had found means for manufacturing goods from it. It had a large plant and was sending its goods all over the country. Soon after this, Goodyear visited New York, and his attention went to life preservers, and it struck him that the tube used for inflation was not very effective nor well-made. Therefore, upon returning to Philadelphia, he made tubes and brought them back to New York and showed them to the manager of the Roxbury Rubber Company. The manager was pleased with the ingenuity that Goodyear had shown in manufacturing the tubes. He confessed to Goodyear that the business was on the verge of ruin, and that his products had to be tested for a year before it could be determined if they were perfect or not. Goodyear at once made up his mind to experiment on this gum and see if he could overcome the problems with these rubber products. However, when he returned to Philadelphia, a creditor had him arrested and imprisoned. While there, he tried his first experiments with India rubber. The gum was inexpensive then, and by heating it and working it in his hands, he managed to incorporate in it a certain amount of magnesia which produced a beautiful white compound and appeared to take away the stickiness He thought he had discovered the secret, and through the kindness of friends was able to improve his invention in New Haven. The first thing that he made was shoes, and he used his own house for grinding, calendering and vulcanizing, with the help of his wife and children. His compound at this time consisted of India rubber, lampblack, and magnesia, the whole dissolved in turpentine and spread upon the flannel cloth which served as the lining for the shoes. It was not long, however, before he discovered that the gum, even treated this way, became sticky. His creditors, completely discouraged, decided that he would not be allowed to go further in his research. Goodyear, however, had no mind to stop here in his experiments. Selling his furniture and placing his family in a quiet boarding place, he went to New York and in an attic, helped by a friendly druggist, continued his experiments. His next step was to compound the rubber with magnesia and then boil it in quicklime and water. This appeared to solve the problem. At once it was noticed abroad that he had treated India rubber to lose its stickiness, and he received international acclamation. He seemed on the high road to success, until one day he noticed that a drop of weak acid, falling on the cloth, neutralized the alkali and immediately caused the rubber to become soft again. This proved to him that his process was not a successful one. He therefore continued experimenting, and after preparing his mixtures in his attic in New York, would walk three miles to a mill in Greenwich Village to try various experiments. In the line of these, he discovered that rubber dipped in nitric acid formed a surface cure, and he made many products with this acid cure which were held in high regard, and he even received a letter of commendation from Andrew Jackson. Exposure to

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harsh chemicals , such as nitric acid and lead oxide , adversely affected his health, and once nearly suffocated him by gas generated in his laboratory. Goodyear survived, but the resulting fever came close to taking his life. Together with an old business partner, he built up a factory and began to make clothing, life preservers, rubber shoes, and a great variety of rubber goods. They also had a large factory with special machinery, built at Staten Island , where he moved his family and again had a home of his own. Just about this time, when everything looked bright, the panic of came and swept away the entire fortune of his associate and left Goodyear penniless. His next move was to go to Boston, where he became acquainted with J. Haskins, of the Roxbury Rubber Company. Goodyear found him to be a good friend, who lent him money and stood by him when no one would have anything to do with the visionary inventor. A man named Mr. Chaffee was also exceedingly kind and ever ready to lend a listening ear to his plans, and to also assist him in a pecuniary way. About this time it occurred to Mr. Chaffee that much of the trouble that they had experienced in working India rubber might come from the solvent that was used. He therefore invented a huge machine for doing the mixing by mechanical means. The goods that were made in this way were beautiful to look at, and it appeared, as it had before, that all difficulties were overcome Goodyear discovered a new method for making rubber shoes and received a patent which he sold to the Providence Company in Rhode Island. However, a method had not yet been found to process rubber so that it would withstand hot and cold temperatures and acids, and so the rubber goods were constantly growing sticky, decomposing and being returned to the manufacturers. Perfection and Patent of Vulcanization in Springfield, Mass. United States patent Several years earlier, Goodyear had, however, started a small factory at Springfield, Massachusetts , to which he moved his primary operations in De Forest, who was a wealthy woolen manufacturer, became involved as well. The work of making the invention practical was continued. In , in Springfield, the process was sufficiently perfected that Goodyear felt it safe to take out a patent. Hancock claimed to have invented vulcanization independently, and received a British patent, initiated in , but finalized in Goodyear attended the trial. If Hancock lost, Goodyear stood to have his own British patent application granted, allowing him to claim royalties from both Hancock and Moulton. The advantages of a career in life should not be estimated exclusively by the standard of dollars and cents, as is too often done. Man has just cause for regret when he sows and no one reaps. After arriving in New York, he was informed that she had already died. The medal honors principal inventors, innovators, and developers whose contributions resulted in a significant change to the nature of the rubber industry.

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Chapter 2 : Charles Goodyear | American inventor | www.nxgvision.com

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The well-known company Goodyear Tire and Rubber Company were named in his honor after his death. Charles was born on the 29th December in New Haven, Connecticut. His groundbreaking work on rubber would begin with his experimentation in vulcanization. Despite the significance of his discovery, Goodyear would struggle to patent vulcanized rubber until 1844. He would die penniless on the 19th July in New York City. The Goodyear Tire and Rubber Company were founded in his name in 1890. Engraving of Charles Goodyear. He was the son of Amasa and Cynthia Bateman Goodyear and the eldest of six children. His father was actually a descendant of Stephen Goodyear. Stephen, from London, England, was supposed to be one of the founders of the New Haven Colony in 1637. Charles would leave home in 1812 to travel to Philadelphia to learn the hardware business. Here he would work very hard until he was 21 when he returned Connecticut. The father and son team would then begin manufacturing ivory and metal buttons as well as other agricultural implements. In August of 1815, Charles would marry Clarissa Beecher. A few years later the young family once again moved to Philadelphia. Here Charles opened his first hardware store. It was here that the majority of his early career was to be spent. Goodyear At this point in his life, Charles specialized in the manufacture of agricultural implements. At this point in time, there had been a distrust of domestically made farming implements. Most consumers preferred to import goods from the British Empire. Advertisement His success grew and grew until his health would fail him in 1842. Charles was struck down with dyspepsia. This was not to be the end of his woes, however. His company struggled on but were eventually required to enter bankruptcy. Soon after in around 1844, Charles Goodyear would hear about gum elastic. Rubber the wonder material A U. Soon after, Goodyear would visit New York and find himself introduced to life preservers. It struck him, immediately, that the tube used for inflation was not very effective or well made. Advertisement When he returned home to Philadelphia he began making tubes with his own design valves. Charles Goodyear showed the store manager his brand new valve but the store manager shook his head. Although impressed with the design, he informed Charles that the company was not in the market for valves at that moment in time. In fact, they would be lucky to stay in business at all in the not so distant future. The Goodyear company was named after Charles Goodyear. They had racks upon racks of rubber goods that had begun to melt in hot weather. Thousands of dollars of other goods were being returned in large quantities as well. Most were beginning to rot, thereby making them completely useless. At first, consumers were enamored with the new wonder material from Brazil. The gum could be seemingly be shaped and molded into almost anything and it was waterproof. Factories had begun to spring up everywhere to cash in on the new craze. But the products being churned out turned out to be less than the highest quality. The public became angry with the gums tendency to freeze bone-hard in winter and turn into glue in the summer. Investors would lose millions of dollars. Everyone seemed to agree that rubber was done for in America. Charles was disappointed and pocketed his small valve. He also took a look at the rubber products in question. He had toyed with small pieces as a child, but now the strange material took on a new affinity in his mind. Advertisement Charles Goodyear, however, made his mind up to experiment with this gum to see if he could cure these problems. Unfortunately, not to a welcome reception. Go to jail, do not pass go A former creditor had him arrested and imprisoned. This was not to be his last visit to jail as it turned out. Whilst there Goodyear asked his wife to bring him batches of raw rubber and her rolling pin to experiment. And so, it was there in his jail cell that Goodyear would begin his groundbreaking work on rubber. At that point, the gum was relatively inexpensive and he would spend his time heating and working it with his hands. Advertisement He further postulated wither he should add a talc-like substance like magnesia powder. Charles managed to incorporate a certain amount of this powder to produce a beautiful white

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compound that appeared to, indeed, be less sticky than normal. Charles thought he was on to a winner. He even managed to secure some investment from childhood friends in New Haven. Goodyear and his family began to make up hundreds of pairs of magnesia-dried rubber overshoes in their kitchen. Before they could take them to market, however, the footwear began to sag into a shapeless paste in the summer. A combination of his neighbors complaining and investors discouragement, Goodyear decided to move his experiments elsewhere. Once there a friend gave him the fourth-floor tenement bedroom in the attic to become his laboratory. In time his brother-in-law would visit and lecture him on his hungry children. He also reminded Goodyear that rubber was dead. Charles Goodyear begins his experiments In his makeshift lab, Goodyear decided to compound the rubber with quicklime and boil it in a mixture of quicklime and water. This technique had startling results and appeared to solve the problem. His success was quickly noticed and he received international acclaim. A New York trade show even awarded him a medal for his solution to making India Rubber lose its stickiness. Charles Goodyear was understandably pleased until that was, he noticed a new problem. He observed that a weak drop of acid was enough to neutralize the alkali and cause the rubber to become soft again. Disheartened Goodyear continued his experiments. On one occasion he applied some nitric acid to one sample of rubber. This had a strange effect on the rubber making it smooth and as dry as a cloth. This surface cure was considerably better than anyone had ever made before. Throughout this time, Charles was experimenting heavily with nitric acid and lead oxide. Exposure to these kinds of chemicals was starting to adversely affect his health. He almost suffocated from the vapors produced in his laboratory. Thankfully he survived but the episode resulted in a fever that also almost claimed his life. Goodyear was advanced several thousand dollars to begin production. Boom and bust The company started to make clothes, life preservers, rubber shoes and other rubber goods. Sadly, the financial panic in wiped out his backer and the embryonic business and left Charles and his backer penniless. Here he became acquainted with J. Haskins of the Roxbury Rubber Company. They would become very close friends over time. Haskins would lend Goodyear some money and offer help and support for the inventor. He also became acquainted with one Mr. He was also very kind to Goodyear and ready to listen to his plans and offer assistance. He invented a machine to help mix the rubber through mechanical rather than chemical means. Rubbertapper on a plantation. Goodyear also, around this time, developed a new technique for making rubber shoes. He even received a patent which he sold to the Providence Company on Rhode Island. But, as before, a method to process rubber so it could withstand hot and cold temperatures and acids was still yet to be discovered. So any rubber goods produced were constantly growing sticky, decomposing and being returned to the manufacturers. Vulcanisation Vulcanisation is a chemical process whereby the physical properties of natural or synthetic rubber are improved. Vulcanised rubber has much higher tensile strength than untreated rubber and has great resistance to swelling, abrasion and is elastic over a great range of temperatures. The most basic method of accomplishing vulcanization is to use a mixture of sulfur and heat on rubber. The process was discovered in by Charles Goodyear after many years of trial and error. His experiments also noted important functions of certain additional substances in the process. One such material, called an accelerator, can cause vulcanization to proceed much more rapidly at lower temperatures. Sulfur is not dissolved or dispersed in the rubber, rather it appears to become chemically combined.

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Chapter 3 : Formats and Editions of Charles Goodyear; Connecticut Yankee and rubber pioneer; [www.nxg

www.nxgvision.com: Charles Goodyear, Connecticut Yankee and Rubber Pioneer: A Biography () by P. W. Barker and a great selection of similar New, Used and Collectible Books available now at great prices.

Charles Goodyear Save Charles Goodyear December 29, 1793– July 1, 1860, was an American self-taught chemist [1][2] and manufacturing engineer who developed vulcanized rubber , for which he received patent number 1 from the United States Patent Office on June 15, 1844. However, the Mesoamericans used a more primitive stabilized rubber for balls and other objects as early as BC. His father was a descendant of Stephen Goodyear of London, Middlesex , England, one of the founders of the colony of New Haven in Marriage and early career Engraving by W. Two years later the family moved to Philadelphia , and there Charles Goodyear opened a hardware store. This is where he did most of his work. His specialties were the valuable agricultural implements that his firm had been manufacturing, and after the first distrust of domestically made goods had worn awayâ€”for all agricultural implements were imported from England at that timeâ€”he found himself heading a successful business. This continued to increase until it seemed that he was to be a wealthy man. Between 1820 and he broke down in health, being troubled with dyspepsia. At the same time, the failure of a number of business endeavors seriously embarrassed his firm. They struggled on, however, for some time, but were finally obliged to fail. Between the years 1820 and 1830, Goodyear heard about gum elastic natural rubber and examined every article that appeared in the newspapers relative to this new material. The Roxbury Rubber Company, of Boston , had been for some time experimenting with the gum, and believed it had found means for manufacturing goods from it. It had a large plant and was sending its goods all over the country. Soon after this, Goodyear visited New York, and his attention went to life preservers , and it struck him that the tube used for inflation was not very effective nor well-made. Therefore, upon returning to Philadelphia, he made tubes and brought them back to New York and showed them to the manager of the Roxbury Rubber Company. The manager was pleased with the ingenuity that Goodyear had shown in manufacturing the tubes. He confessed to Goodyear that the business was on the verge of ruin, and that his products had to be tested for a year before it could be determined if they were perfect or not. Goodyear at once made up his mind to experiment on this gum and see if he could overcome the problems with these rubber products. However, when he returned to Philadelphia , a creditor had him arrested and imprisoned. While there, he tried his first experiments with India rubber. The gum was inexpensive then, and by heating it and working it in his hands, he managed to incorporate in it a certain amount of magnesia which produced a beautiful white compound and appeared to take away the stickiness He thought he had discovered the secret, and through the kindness of friends was able to improve his invention in New Haven. The first thing that he made was shoes, and he used his own house for grinding, calendering and vulcanizing, with the help of his wife and children. His compound at this time consisted of India rubber, lampblack , and magnesia, the whole dissolved in turpentine and spread upon the flannel cloth which served as the lining for the shoes. It was not long, however, before he discovered that the gum, even treated this way, became sticky. His creditors, completely discouraged, decided that he would not be allowed to go further in his research. Goodyear, however, had no mind to stop here in his experiments. Selling his furniture and placing his family in a quiet boarding place, he went to New York and in an attic, helped by a friendly druggist, continued his experiments. His next step was to compound the rubber with magnesia and then boil it in quicklime and water. This appeared to solve the problem. At once it was noticed abroad that he had treated India rubber to lose its stickiness, and he received international acclamation. He seemed on the high road to success, until one day he noticed that a drop of weak acid , falling on the cloth, neutralized the alkali and immediately caused the rubber to become soft again. This proved to him that his process was not a successful one. He therefore continued experimenting, and after preparing his mixtures in his attic in New York, would walk three miles to a mill in Greenwich Village to try various experiments. In the line of these, he discovered that rubber dipped in nitric acid formed a surface cure, and he made many

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products with this acid cure which were held in high regard, and he even received a letter of commendation from Andrew Jackson. Exposure to harsh chemicals , such as nitric acid and lead oxide , adversely affected his health, and once nearly suffocated him by gas generated in his laboratory. Goodyear survived, but the resulting fever came close to taking his life. Together with an old business partner, he built up a factory and began to make clothing, life preservers, rubber shoes, and a great variety of rubber goods. They also had a large factory with special machinery, built at Staten Island , where he moved his family and again had a home of his own. Just about this time, when everything looked bright, the panic of came and swept away the entire fortune of his associate and left Goodyear penniless. His next move was to go to Boston, where he became acquainted with J. Haskins, of the Roxbury Rubber Company. Goodyear found him to be a good friend, who lent him money and stood by him when no one would have anything to do with the visionary inventor. A man named Mr. Chaffee was also exceedingly kind and ever ready to lend a listening ear to his plans, and to also assist him in a pecuniary way. About this time it occurred to Mr. Chaffee that much of the trouble that they had experienced in working India rubber might come from the solvent that was used. He therefore invented a huge machine for doing the mixing by mechanical means. The goods that were made in this way were beautiful to look at, and it appeared, as it had before, that all difficulties were overcome Goodyear discovered a new method for making rubber shoes and received a patent which he sold to the Providence Company in Rhode Island. However, a method had not yet been found to process rubber so that it would withstand hot and cold temperatures and acids, and so the rubber goods were constantly growing sticky, decomposing and being returned to the manufacturers. Perfection and Patent of Vulcanization in Springfield, Mass. Wikisource has original text related to this article: United States patent Several years earlier, Goodyear had, however, started a small factory at Springfield, Massachusetts , to which he moved his primary operations in De Forest, who was a wealthy woolen manufacturer, became involved as well. The work of making the invention practical was continued. In , in Springfield, the process was sufficiently perfected that Goodyear felt it safe to take out a patent. Hancock claimed to have invented vulcanization independently, and received a British patent, initiated in , but finalized in Goodyear attended the trial. If Hancock lost, Goodyear stood to have his own British patent application granted, allowing him to claim royalties from both Hancock and Moulton. The advantages of a career in life should not be estimated exclusively by the standard of dollars and cents, as is too often done. Man has just cause for regret when he sows and no one reaps. After arriving in New York, he was informed that she had already died. The medal honors principal inventors, innovators, and developers whose contributions resulted in a significant change to the nature of the rubber industry.

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Chapter 4 : Charles Goodyear | Goodyear Corporate

Description: Traces the s endeavors of Charles Goodyear to reinvent rubber into a usable substance, at the risk of his own life and the lives of his family, and how money hunters and competitor Thomas Hancock ultimately robbed him of fame and fortune. Reprint. 30, first printing.

April 27 Innovation Destination: Hartford CT Legends 0 comments Tags: Charles Goodyear , Connecticut , entrepreneur , Goodyear , innovation , manufacturing , Naugatuck Connecticut entrepreneur Charles Goodyear. He is also credited with inventing the chemical process to create and manufacture pliable, waterproof, moldable rubber. Good year married Clarissa Beecher in August of Goodyear returned to Connecticut several years later after the business went bankrupt. He began experimenting with natural rubber in his mids, determined to pursue a new venture: The Roxbury Rubber Company was a large plant that had been experimenting with gum elastic with the hopes of manufacturing goods made from the material and was sending its goods all over the country. He became interested in life preservers, and realized the tubes used to inflate was ineffective and not poorly manufactured. The manager was impressed with the innovation Goodyear had shown in manufacturing the tubes. At the time, the Roxbury Rubber Company was supposedly on the verge of run. Goodyear thought he had discovered the secret. Through the kindness of friends, he was able to improve his invention in New Haven. However, he soon realized that the gum, even treated in his innovative way, still became sticky. Discouraged, his creditors, decided he would not be allowed to go further in his research. He continued with his experiments. When word got out that Goodyear had created a means of treating India rubber to lose its stickiness, he received international recognition. This proved to him that his process was not a successful one. There Goodyear discovered a new method for making rubber shoes. However, a method had not yet been found to process rubber to make it withstand hot and cold temperatures and acids. The rubber goods were constantly growing sticky, decomposing and being returned to the manufacturers. Goodyear continued his work of making his method more practical. In Goodyear discovered the process of vulcanization. It took him several years to recreate the chemical formula and refine the process of mixing sulfur and rubber at a high temperature. The inventor made experiments to ascertain the effect of heat on the same compound that had decomposed in the mail-bags and other articles. He was surprised to find that the specimen, being carelessly brought into contact with a hot stove, charred like leather. Goodyear continues, describing how his discovery was not readily accepted: He directly inferred that if the process of charring could be stopped at the right point, it might divest the gum of its native adhesiveness throughout, which would make it better than the native gum. Upon further trial with heat, he was further convinced of the correctness of this inference, by finding that the India rubber could not be melted in boiling sulfur at any heat, but always charred. He made another trial of heating a similar fabric before an open fire. The same effect, that of charring the gum, followed. There were further indications of success in producing the desired result, as upon the edge of the charred portion appeared a line or border that was not charred, but perfectly cured. Goodyear later describes how he systematically experimented to optimize the curing of rubber: On ascertaining to a certainty that he had found the object of his search and much more, and that the new substance was proof against cold and the solvent of the native gum, he felt himself amply repaid for the past, and quite indifferent to the trials of the future. Goodyear named his invention, vulcanization, after Vulcan, the Roman god of fire. His vulcanization process put Naugatuck, CT, on the map as a prominent location for rubber manufacturing during the 19th and 20th centuries. The Goodyear Blimp also bears his name. In spite of these successes, Goodyear battled patent infringements and debt until his death in A man has cause for regret only when he sows and no one reaps.

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Chapter 5 : Charles Goodyear - Wikipedia

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He showed the store manager a new valve he had devised for rubber life preservers. The manager shook his head sadly. He showed Goodyear why: At first everybody had wanted things made of the new waterproof gum from Brazil, and factories had sprung up to meet the demand. Then abruptly the public had become fed up with the messy stuff which froze bone-hard in winter and turned glue-like in summer. Not one of the young rubber companies survived as long as five years. Rubber, everyone agreed, was through in America. Goodyear disappointedly pocketed the valve and took his first good look at rubber. It was not his first sojourn there, nor his last. He asked his wife to bring him a batch of raw rubber and her rolling pin. Here, in his cell, Goodyear made his first rubber experiments, kneading and working the gum hour after hour. Out of jail again, he tried, with promising results. He talked a boyhood friend into backing a modest venture. Charles, his wife and small daughters made up several hundred pairs of magnesia-dried rubber overshoes in their kitchen. But before he could market them summer came, and he watched his footwear sag into shapeless paste. He was adding two drying agents to his rubber now, magnesia and quicklime, then boiling the mixture and getting a better product all the time. Impressed, a New York trade show awarded him a medal. Goodyear lavished all the arts of decoration on his dingy samples, painted them, gilded them, embossed them. Running short of material one morning, he decided to re-use an old decorated sample and applied nitric acid to remove its bronze paint. The piece turned black, and Goodyear threw it away. A few days later he remembered that somehow the blackened scrap had felt different. He retrieved it from his trash can and found he was right. The nitric acid had done something to the rubber, made it almost as smooth and dry as cloth. This was better rubber than anyone had ever made before. A New York businessman advanced several thousand dollars to begin production. But the financial panic of promptly wiped out both the backer and the business. Destitute, Charles and his family camped in the abandoned rubber factory on Staten Island, living on fish he caught in the harbor. In time, Goodyear got new backing in Boston and again seesawed to momentary prosperity. His partners wangled a government contract for mailbags, to be manufactured by the nitric-acid process. When he returned, the mailbags melted. After five futile years, Goodyear was near rock bottom. Farmers around Woburn, Mass. The great discovery came in the winter of Goodyear was using sulphur in his experiments now. Snickers rose from the cracker-barrel forum, and the usually mild-mannered little inventor got excited, waved his sticky fistful of gum in the air. It flew from his fingers and landed on the sizzling-hot potbellied stove. When he bent to scrape it off, he found that instead of melting like molasses, it had charred like leather. He had made weatherproof rubber. Dyspeptic and gout-racked, his health broken, he hobbled about his experiments on crutches. He knew now that heat and sulphur miraculously changed rubber. But how much heat, for how long? With endless patience he roasted bits of rubber in hot sand, toasted them like marshmallows, steamed them over the teakettle, pressed them between hot irons. When his long-suffering wife took her bread from the oven, he thrust in chunks of evil-smelling gum. At night he lay awake, afraid that he would die and the secret with him. He pawned his watch and the household furniture. When even the dinnerware was gone, he made rubber dishes to eat from. Then the food was gone, too. Unable to pay for a funeral, Goodyear hauled the little coffin to the graveyard in a borrowed wagon. Of the 12 Goodyear children, six died in infancy. At last he found that steam under pressure, applied for four to six hours at around degrees Fahrenheit, gave him the most uniform results. He wrote his wealthy New York brother-in-law " who had once lectured him about his parental obligations " of his discovery. As soon as he could, Goodyear disposed of the manufacturing interests " which might have made him a millionaire " and went back to his experiments. He wanted to make everything of rubber: He had his portrait painted on rubber, his calling cards engraved on it, his autobiography printed on and bound in it. He wore rubber hats, vests, ties. Goodyear saw rubber as what we know it is today:

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Many food packagers, for example, now wrap their products in Pliofilm, a rubber-derived plastic; Goodyear suggested the same application in In one famous case, his advocate was no less a personage than Secretary of State Daniel Webster. In a two-day speech Webster won a permanent injunction against further patent infringements. Goodyear was slow in filing foreign patent applications. But he had sent samples of his heat-and-sulphur-treated gum to British rubber companies without revealing details. One sample was seen by famed English rubber pioneer Thomas Hancock, who had been trying for 20 years to make weatherproof rubber. With that clue, he reinvented vulcanized rubber in , four years after Goodyear. By the time Goodyear applied for an English patent he found that Hancock had filed a few weeks earlier. Offered a half-share of the Hancock patent to drop his suit, Goodyear foolishly declined and lost. Eventually, however, accumulated royalties made his family comfortable. His son, Charles Jr. Today there is a cultivated rubber tree for every two human beings on earth. The United States alone imports almost half of it, and synthesizes as much or more from petroleum. Nearly , Americans earn their livelihoods in rubber manufacturing. I am not disposed to complain that I have planted and others have gathered the fruits. A man has cause for regret only when he sows and no one reaps. Portrait of Charles Goodyear by G. Charles Goodyear discovers the vulcanization process. All fields are required To:

Chapter 6 : Goodyear | Innovation Destination: Hartford

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Chapter 9 : Charles Goodyear: The Father of Vulcanization

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