Automata mechanical toys pdf

Automata, mechanisms and mechanical toys Click to go to the main page automata This page automata introduces you to the world of Automata and is full of information to help you create your own working models of wood, cards and metal. Sometimes referred to as mechanical toys or kinetic art, these are amazing little machines that use most of the mechanical processes that can be found in almost any modern machine employing cameras, gears, ratchets and cranks. This slot machine site is now mainly still open as an educational use for schools and individuals who may be interested in Automat or want to design and create their own wonderful mini wonders. We have two books that provide additional information whose sales help keep this site going. I haven't had any new Automata for a while, but I have an old/new project using found materials from the beach in Dorset that I hope to show off soon. The design and manufacture of vending machines is an exciting hobby that covers a range of skills and processes, from art, engineering and science to craftsmanship involving card, wood and metal. Whether you are working on a school project or want to start making vending machines for a hobby this site will help you. Now you can also buy online How to design and a slot machine that can be downloaded or downloaded on CD-ROM. This will help teachers and students learning Design and Technology Key Stage 3 and GCSE D&T, as well as those interested in working with wood and making their own Automaton. Now we are happy that we can offer our latest publication: How to design and create a simple automaton. This book uses cards, paper and wood. It is ideal for anyone interested in making their own vending machines, but do not have much to do experience. You will find many ideas for using home made materials that can be transformed into fantastic Automata and mechanical toys. It also includes plans to make 6 interesting models using cams and handles, all made of thin cards. (The book was originally aimed at helping teachers covering Key Stage 2 QCA unit 3c moving monsters, 5c moving toys & 6c Fairground rides, but the curriculum has changed a bit since then) It will be a great start for anyone interested in making vending machines and mechanical toys as a hobby. Now we have fantastic interactive CD-ROMs that show you how mechanisms, vending machines and mechanical toys work. It can be used with Adobe reader How to design and make Automata mechanisms and mechanical toys CD-ROM or PDF download Used to cover design and key phase 3 and 4 technologies, but the curriculum has changed a bit since then), but again it's a great place to start if you want to get into making more complex slot machines. This represents great value because it combines both books and comes with an hour of video examples of the automaton in the text, exploring how they work with great detail and explanation mechanisms. Click here to go to the main Page Return to main page, followed by a brief description history of vending machines. It can be divided into 3 harsh time frames, ancient history, 15th-19th Century and modern times. The ancient history of the First Automata was created by God. According to talmundic tradition, Adam was created in 5 hours. In the first, his dust was collected from all parts of the world; In the second, it was teaching into a shapeless mass (Golem); In the third, his limbs were shaped; In the fourth, the soul was filled into it; In the fifth, he stood up and stood on his feet. And God formed man from the dust of the earth and breathed into the nostrides of his breath of life; and man became a living soul. Genesis. Chapter II. Mythology has many stories about the automaton, some wild and fantasies, others may be based on fact. We can't say for sure what the fact or fiction is, so what follows is a description of some of the more exciting reference to mythological automatons that are based on accounts from ancient Greeks. Prometheus was reputed to have made the first man and woman on earth, with clay animated by fire and stolen from the sky. According to Apollodorus. Hephaestus The God of all mechanical art, also known as the Vulcan, the God of Life was reputed to have made two female statues of pure gold that helped him and accompanied him wherever he went. Lively young ladies, full of mind and wisdom. LLiad (Book 18). Hephaestus was also accredited, saying that Talus, a giant made of brass, guarded Crete from intruders. Talus abandoned his victims by warming their bodies and hugging them to death. His only vulnerability was his right ankle, where there was a tendon of flesh and a vein of blood. The Argonauts could only land in Crete after Talus was destroyed by medea's intervention. The Pygmation King of Cyprus fell in love with the beautiful statue, which he made and married to her after the aphrodisiac revived her. The ancient Greeks were clearly obsessed with the alteration of the creation of mechanical living beings. We know that they had very advanced engineering skills and certainly managed to create partially animated sculptures that would be used in ceremonies. They were probably worked levers and man powered, although there are descriptions of the use of steam and water as a source of energy. The Greeks certainly had the technology and ingenuity to use the steam drive they invented. Descriptions of beautiful mechanical people and objects came not only from mythology, but also from other cultures around the world. There seems to have been a shared ambition to emulate living things from all over the ancient world. This is a description of some of the more interesting ones. 15th century BC Amenhotep's son Hapu made a statue of Memnon, king of Ethiopia, near Thebes in Egypt, which uttered a melodic sound when it struck the sun's rays in the morning and during sunset. It was suggested that divine power was partly responsible because the mechanisms were far from easy to maintain noise. Athanasias drawings of the mechanisms of Memons and those of the bird, which was also activated by the rising sun. 520 BC Daedalus was a prolific and very cleaver inventor of ancient times accredited with axe, level and many other mechanical devices. He was reputed to have statues that were drawn by quicksilver and had the ability to walk. A more respectable description is of stone sculptures that seemed to breath or move their marble legs. Since Daedalu's proven ability certainly was able to invent and make some form of mechanical sculpture. Which would undoubtedly be fantastic for the ordinary people of the day. 500 BC King-shu from China made a flying magpie built of wood and bamboo. He also had a wooden horse working springs. 400 BC Archytas of Tarentum with a wooden pigeon suspended from the end of the pin, which was turned by a stream of water or steam. The pigeon simulated a flight. Archytas is the alleged inventor of screws and pulleys. Again, given his ability, it seems likely that he'll invent a mechanical pigeon. 280 bc Ctesibius experimented with natural air pressures and pneumatic principles that he used to automate doing what has been described as fabrications and fun things of many kinds that have been found to be pleasant for the eye and ear. Ctesibius's most notable automaton was the blackbird, which sang using water works and characters that drank and moved. Ctesibius is probably the founder of whet now we think like a modern day automaton, objects that will please or entertain us and certainly the first forms of kinetic art. Unfortunately we do not know the full extent of the slot machine did. But its purpose as pieces of work to entertain it is so interesting and unusual at this time in history. 220BC Philon of Byzantium took the principles of pneumatic used by Egyptians to power many of his mechanical invents. He was also interested in steam and is reputed to have introduced the use of fire and steam as a means of producing movement. There is a fascinating amount of material about these early automatons and there's inventors. It is well worth looking for and exploring in more detail their work and inventions. Soon the Greeks came up with some fantastic fictional ideas that would not develop for another 2 thousand years. If history were different and not so turbulent in those early years, it seems likely that we would have seen steam-powered traffic, such as ships and even cars, emerge. 15th - 18th Century Allthough there was a steady trickle of automatons being produced from ancient times until the 15th century it is not up to about 1400 hundred that we see some really remarkable and substantiated automatons being produced. This next section takes a brief look at some of the most climsy ones. 1436-76 Johannes Muller was considered a manufactured and artificial eagle. It flew to greet Emperor Maximillian at his entrance to Nuremberg in 1470, while some distance from the city, then returned to at the top of the city gate and greeted the emperor upon his arrival, by stretching his wings and bowing. 1452-1519 Leonardo da Vinci became a lion in honor of King Louis XII. It advanced to him, stopped, opened his chest with a claw and pointed to the fleur-de-lis coat of arms of France. It's possible leonardo could have made another vending machine, but the records are very sketchy. 1500-85 Gianello della tour cremona To alleviate the boredom of Emperor Charles V, Della Tour with several automatons. The most serious one was a lute player who walked either in a straight line or circle while plucking strings and turning his head from side to side. He also made mechanical figures of flying birds and articulated soldiers who blew trumpets, beat drums and fought on table tops. 1576-1626 Salomon de Caus studied automata form of ancient times and worked a lot with water as a means of power and help produce the movement of birds and sounds. A remarkable piece of work was a vending machine that had a singing bird when a mechanical owl was placed on a rock song stopped. 1629-95 Christiaan Huygens made many vending machines for the Royal Court and the King of France. In 1680 he was ordered to machine shows the entire army to fight. He also produced figures of artisans mimicking the characteristic movements of their trade. 1731 Maillard Produced quite sophisticated vending machines with extensive use of gears and gears to produce vending machine horses that worked by turning the handle. 1709-1782 Jacques de Vaucanson produced some of the most famous historical automatons and is considered by many to be one of the greatest manufacturers of vending machines of all time. His most famous work called Duck was an artificial duck made from gilded copper that drank, ate, quaked, sprayed into the water and digested food like a live duck. Vancanson also made flute and tabor players. The flute player was 5ft 10in tall (1.8m) and stood on a pedete. A stream of air led through the complex mechanism causing the player's lips and fingers to move naturally on the flute. Opening and closing openings on the device. He had a repertoire of twelve tunes. People couldn't believe that the sounds of flutes were made by a vending machine, instead they thought that bellies or some other invent made sound. Viewers were asked to see the mechanism and internal details. They could also feel the breath from the lips of the flute player and see the fingers determining the notes. 1721-1790 Pierre Jaquet-Doz was a great mathematition who specialized in applied mechanics and horology. With the help of his son and adopted son, he made three automatons, which are still considered miracles of science and engineering today. The writer, drafts and musician still exist and are at the Museum of Art and History in Switzerland. The writer can be programmed to write up to 40 letters dipping pen to ink and writing each letter clearly, even dots i and T. Drafts can draw four pictures and even blows graphite off the page. The musician plays the organ, depressing the keys of his instrument with his fingers while moving the upper body in life, such as the way, and bows at the end of the performance. 1792 Tipu tiger was made by the son of a sultan. The tip enemy was the savage of his favorite creature, the tiger. The vending machine is made of wood and contains a miniature organ. Movement is limited to the movement of the soldiers shoulder, while the tiger grow grows. 1800-1850 Joseph Faber took 25 years to make his famous automaton Euphonia. The machines produced sounds similar to the human voice. It started with reciting the letters of the alphabet and then saying, How are you ladies and gentlemen. She asked and answered questions, whispered, sang and laughed. The mechanisms could be controlled. It even spoke in a German accent as it spoke in English, but was made by a German speaking Austrian. Anyone who checked the mechanism was convinced that the vending machine made noises and not ventriloquist. 1893 George Moore with a steam man who worked from a gas boiler. He reached a walking speed of 9 miles per hour. In the 19th century, the 19th century was the first It was a fruitful and golden era for vending machines. It was also at a time when mass production techniques meant that vending machines could be made cheaply and easily, and it is around this time that we see vending machines becoming more children's ay rather than expensive adult salon amusement. Since then, they have taken over mechanical toys, and although they were supposed to survive well into the 20th century, they have not been able to survive until the 20th century. Modern children's expectations and safety legislation have led to the demise of the tin ay clock. Modern times Now we see Automata emerging as a modern art form. It is sold as specialized pieces ranging from a few pounds to several hundred. Artists and craftsmen of modern times are now leading manufacturers of vending machines. Modern school curricula gave thousands of students the opportunity to create their own piece of kinetic art under the banner of Design and Technology. Today there is a lot of interest in vending machines. The first examples will bring some of the highest prices in auctions. Many antique collectors consider them to be the most valuable accusations you can make. The art of animating human form still fascinates us. Many modern toys now use electric motors and plastic devices to achieve this goal, but the mechanical principles behind them go back thousands of years. If you look in professional art magazines, you will see exhibitions showing the skills of modern vending machine makers. Return to the main page