

The Mechanical Musical Instruments

The Cylinder Box

This type of music box uses a cylinder set with pins to represent the music score. Music plays as the pins are struck by steel teeth. First produced in Switzerland in the 1830s, cylinder boxes reached the height of popularity in the 1880s. In spite of the many improvements made over the years, however, the limited number of tunes that could be played on a single box as well as its relatively high price (since each was hand-made) led to the decline of the cylinder box in favor of the next generation of music boxes, the disc box.

The Disc Box

The 1886 development of this music box in Germany was monumental because many tunes could now be played on a single machine by simply changing the discs and, since it was machine-made, it could be mass produced. Leading manufacturers concentrated mainly Germany, but the product was exported to the United States and England. By the 1920's, however, manufacturers of this type of box had all but disappeared due to the proliferation of the phonograph.

The Street Organ

Developed long prior to that of the music box, the mechanism for automatic organs had been used in musical timepieces since as early as the beginning of the 18th century. By the 19th century, the widely disseminated music of the hand-cranked street organ was well known among the populace. A variety of types were available including the "barrel-type" with a wooden barrel for the music score and the "book-type" which used perforated paper for the score. These machines were most popular from the latter half of the 19th through the beginning of the 20th century. Imported to Japan towards the end of the Edo Period, "orgel", the Dutch word for "organ," became "orugoru," the Japanese term for "music box" still used today.

Automata

Clock mechanisms and mechanical dolls, or automata, have long been closely related. In the 18th century, elaborate automata were created by the likes of Jacques de Vaucanson and Jacquet-Droz. From the latter half of the 19th to the beginning of the 20th century, many automata studios sprung up in France. Famous workshops such as Vichy, Rouillet et Decamps and Lambert produced a multitude of automata in cooperation with high-class doll makers like Jemeau and Simon & Halbig.

The Player Piano

Player pianos were first made in the 1890s. A perforated paper roll holds the music score while vacuum pressure is used to move the piano hammers. The reproducing piano, developed in Germany in 1904, accomplished the reproduction of pianists' actual performances. These landmark instruments continued to be manufactured until around 1930. Welte Mignon, Duo-Art, and Ampico remain among the more well-known types. Preserved on the rolls are the timeless performances of famous pianists such as Vladimir Horowitz and Camille Saint-Saëns.

The Phonograph

The phonograph, invented by Thomas Edison in 1877, was a landmark piece of equipment allowing people to record and play back musical performances and the human voice for the very first time. Thanks to the record disc developed by Berliner in 1877, the popularity of the phonograph spread rapidly, and by the 1900s phonograph sales seriously threatened the music box market. With the advent of electronic recording in 1925 improving the efficiency of the phonograph, the usefulness of the majority of mechanical musical instruments came to an end.