The history of the piano

History

Piano, stringed keyboard musical instrument, derived from the harpsichord and the clavichord. Also called the pianoforte, it differs from its predecessors principally in the introduction of a hammer-and-lever action that allows the player to modify the intensity of sound by the stronger or weaker touch of the fingers. For this reason the earliest known model (1709) was called a gravicembalo col pian e forte (Italian for “ harpsichord with soft and loud”).

It was built by Bartolomeo Cristofori, a harpsichord maker of Florence, Italy, who is generally credited with inventing the piano. Two of his pianos still exist. The case of one, dated 1720, is in the Metropolitan Museum of Art, New York City; the other, dated 1726, is in a museum in Leipzig, Germany. Early Evolution of the Piano Beginning about 1725, when the noted German organ maker Gottfried Silbermann of Freiberg adopted Cristofori's action, the next major developments took place in Germany.

Perhaps the most important contribution was made by Johann Andreas Stein of Augsburg, who is credited with inventing an improved escapement that became the foundation of the “ Viennese” piano praised by Wolfgang Amadeus Mozart and favored by most German composers of the late 18th and early 19th centuries. Twelve masters from central Germany migrated to London about 1760 and established the English school that, under John Broadwood and others, turned to the production of pianos of a stronger build, resembling those of our own day.

The French manufacturer Sebastien Erard founded the French school in the 1790s, and in 1823 created the double action that is still in general use. By this time artisans in all Western nations were working to perfect the

pianoforte. Numerous improvements were and are still being made in design and construction. Germany and the United States have long been distinguished for fine pianos, notably those of the German firm founded by Karl Bechstein and the American firms of Baldwin, Mason & Hamlin, Steinway, and Chickering.

The pianos of the Austrian Bosendorfer firm are also highly respected. The compass of the early piano was, like that of the harpsichord, only four, or at most, five octaves, but it has gradually increased to a compass of more than seven octaves as structural changes allowed for increases in tension amounting to several tons. Modern Structure The modern pianoforte has six major parts (in the following discussion, the numbers in parentheses refer to the accompanying diagram (Diagram #1 below) of the structure of a pianoforte): (1) The frame is usually made of iron.

At the rear end is attached the string plate, into which the strings are fastened. In the front is the wrest plank, into which the tuning pins are set. Around these is wound the other end of the strings, and by turning these pins the tension of the strings is regulated. (2) The soundboard, a thin piece of fine-grained spruce placed under the strings, reinforces the tone by means of sympathetic vibration. (3) The strings, made of steel wire, increase in length and thickness from the treble to the bass. The higher pitches are each given two or three strings tuned alike.

The lower ones are single strings made heavier by being overspun—that is, wound around with a coil of thin copper wire. (4) The action is the entire mechanism required for propelling the hammers against the strings (see

Operation of the Action below). The most visible part of the action is the keyboard, a row of keys manipulated by the fingers. The keys corresponding to the natural tones are made of ivory or plastic; those corresponding to the chromatically altered tones, of ebony or plastic. (5) The pedals are levers pressed down by the feet.

The damper, or loud pedal, raises all the dampers so that all the strings struck continue to vibrate even after the keys are released. The soft pedal either throws all the hammers nearer to the strings so that the striking distance is diminished by one-half, or shifts the hammers a little to one side so that only a single string instead of the two or three is struck. Some pianos have a third, or sustaining, pedal that does not raise all the dampers, but keeps raised only those already raised by the keys at the moment this pedal is applied. The use of these pedals can produce subtle changes in tone quality.

Many upright pianos have been built in which the application of a pedal interposes a strip of felt between the hammers and strings so that only a very faint sound is produced. (6) According to the shape of the case, pianos are classified as grand, square, and upright. The square form (actually rectangular) is no longer built. For use in private homes it has been entirely superseded by the upright, which takes up far less room. Grand pianos are built in various sizes, from the full concert grand, 2. 69 m (8 ft 10 in) long, to the parlor or baby grand, less than 1. 8 m (6 ft) long.

Upright pianos include the late 19th-century cottage piano, of which the upright grand is merely a larger form. The modern spinet and console pianos

are small uprights related to the cottage piano. In the upright pianos the strings run vertically, or diagonally, from the top to the bottom of the instrument. Uprights and small grands are sometimes overstrung; that is, the bass strings are stretched diagonally across the shorter treble strings, thereby gaining extra length and improved tone quality. The combined tension of the strings on a concert grand piano is about 30 tons, on an upright about 14.