

HISTORY OF THE PIANO

Before the Piano

The piano can be classified as both a string instrument and a percussion instrument. This is due to the way that sounds are produced from a piano: when you play a key, a hammer strikes the string, causing a vibration from the string. In other string instruments, like a violin or cello, plucking the string or pulling a bow across the string causes it to vibrate. In other percussion instruments, striking the instrument itself with a mallet or stick causes the entire instrument to vibrate.

While the piano may be unique, other instruments have contributed to some of the piano's qualities. The hammered dulcimer originated in the Middle East and spread to Europe during the 11th century. This was the first instrument to produce sound through a small hammer hitting the strings. Unlike a piano, the dulcimer was a simple resonating box with strings stretched on top of it.

The dulcimer later developed into the clavichord, which first appeared in the 14th century. The clavichord was primarily used as a practice instrument, as it was a relatively quiet instrument. It used the same components of the dulcimer, but also incorporated a keyboard that triggered blades called "tangents." These tangents would then strike the strings, producing sounds.

During the Renaissance, the harpsichord, the direct ancestor of the piano, was invented. The harpsichord also used a keyboard, but pressing a key did not strike the string with a blade. Instead, pressing a key caused mechanisms in the instrument to lift and pluck individual strings. Though the harpsichord was louder than the clavichord, each string was plucked with uniform volume. That meant no matter how hard a musician played a key, the harpsichord would not play louder or softer. The sound was also simply dampened as soon as the key was released, not stopped.

Invention of the Piano

In the 1700s, harpsichord maker Bartolomeo Cristofori began tinkering with a new design for an instrument in Padua, Italy. This instrument would be able to change its volume depending on how much pressure was put on the key, allowing for a harpsichord with greater variation to its possible sounds. These nuances in the sound would allow musicians to experience musical expression like never before.

Cristofori originally called his invention "gravicembalo col piano e forte" or "harpsichord that plays soft and loud." This was later shortened to what we know the instrument as today: "piano." Cristofori made an extremely complex and expensive design, which made the piano initially very difficult to replicate for other instrument makers. Cristofori included an "escapement" mechanism that let the hammer fall away from the string as soon as it was struck. This stopped the string from being dampened and allowed the string to be struck harder

than on a clavichord. Cristofori also included a “check” that allowed the hammer to repeatedly hit the string in quick succession. Other inclusions to the designs were an isolated soundboard, thicker strings than a harpsichord, and a damping mechanism to silence strings when not in use.

If you ever have the chance to look at a Cristofori piano, it may seem very different to our modern design of the piano. It only has 54 keys rather than 88, and though it had thicker strings, it still has a somewhat muted tone. But unlike the clavichord, Cristofori’s piano was well suited to accompanying a voice or single instrument. This helped the piano gain popularity throughout Europe by the early 1800s.

The Piano Develops

As the piano became the primary keyboard instrument across Europe, composing for and playing the instrument developed and evolved. Virtuoso pianists emerged, as well as the development of the Classical and Romantic musical styles. These innovations in musical style spurred the development of new additions to the design of the piano, many of which made it the instrument that we know today.

In 1825, the single cast-iron frame was patented for use on the piano. This frame sits atop the soundboard and allows for even thicker and more tense strings. With these thicker strings, the volume of the instrument increased and allowed the piano to be played in orchestral and multi-instrumental settings. Three strings wound around the middle and treble registers to enhance richness, while copper added mass to the bass strings. These additions added depth and tone to the string without noticeably making the strings stiffer.

Other inventions helped bring the piano into the modern era. In 1844, the sostenuto pedal allowed tones to be sustained even after the key was released. The standardization of the 88-key format throughout the 1880s and 1890s allowed for even greater variation of tones and nuance. Most advances to the piano were made by 1900, but that doesn’t mean that experimentation and refinement has ended. In fact, even today, piano manufacturers are finding new ways to improve the centuries-old design first pioneered by Cristofori.

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