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# HOW DOES A PIANO WORK?

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The first piano was made in 1709 by Bartolomeo Cristofori in Italy. The way the piano is made and works has been improved many times in order to create the modern piano. However, most of those improvements were made in the 1700's and 1800's. By 1900, the basic piano design we use today had already been created.

Today many people like to keep the pianos which were made a long time ago. They have them rebuilt, putting many new parts in them instead of selling them and buying a new one. When it is finished it can look just like new and sound wonderful. But, whether a piano is new or rebuilt, they are all basically made of the same materials.

The wood from the Spruce tree is used to make the soundboard, the heart of the piano which vibrates and amplifies the musical tone.

The bass strings are made from steel and are wound with copper. This produces the low notes on the piano.

Steel is used to make the treble strings. There are about 196 treble strings in a piano, which produce the middle and high notes. Tuning a piano is really just stretching the strings so that they vibrate at the right frequencies to make different notes.

The black keys on the keyboard are made from the wood which comes from the ebony tree. Sometimes they are made from plastic.

The wool from a sheep is pressed into felt and wrapped around a piece of wood to make the hammer. The hammer hits the string and helps to produce a beautiful tone.

Keys are made with hardwood and most are covered by white keytops. Today, keytops are made with plastic, but, they used to be made from the ivory of an elephant's tusk.

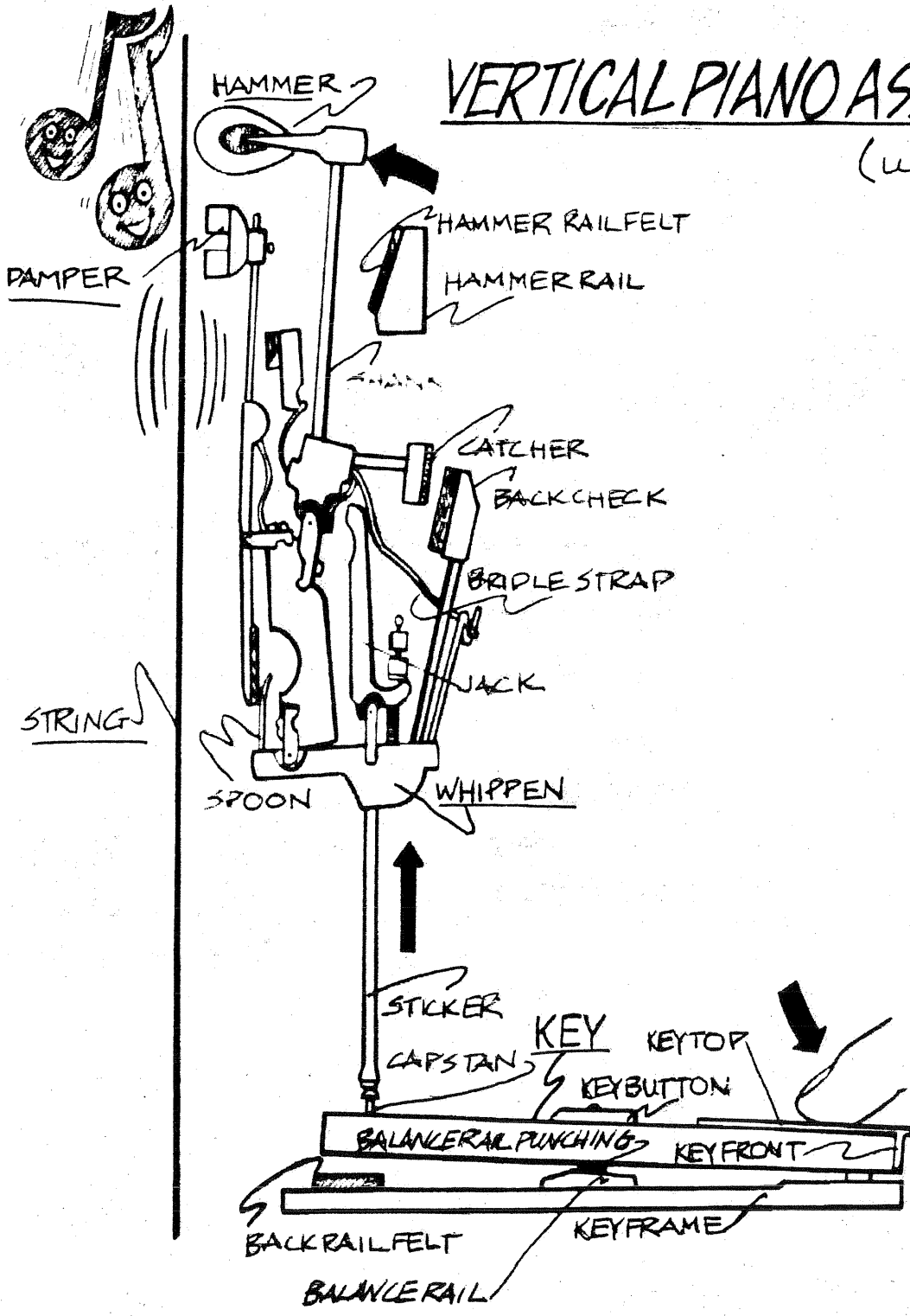
The leather from a cow's or a deer's hide is used to make the 88 backchecks in the action. These little parts catch the hammers when they come back from striking the key and stops them, holding them ready for the next time.

The plate of the piano is made from cast iron, which is strong enough to hold the piano's shape and keep the strings tight, even with the 20 tons or more of pressure on it. The plate is the heaviest part of the piano, weighing between 300 to 600 pounds.

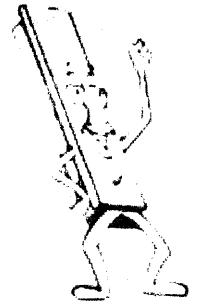
Many of the other little parts connected to the keys, hidden inside of the piano, are made from wood , felt and steel. These moving parts make up what is called the action assembly. The average vertical piano has over 7,000 moving parts.

# VERTICAL PIANO ASSEMBLY

(UPRIGHT)

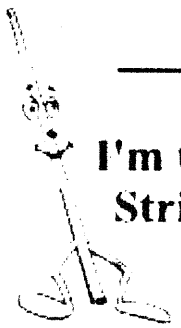


**I'm the Key.**  
I tell the rest of the piano what to do...



**I'm the Whippen.**  
I take the message from the key to the hammer...

**I'm the Hammer.**  
I strike the string.



**I'm the String.**

**I vibrate to make a musical tone.**

**I'm the Damper.**



**I close down on the string to stop the sound.**