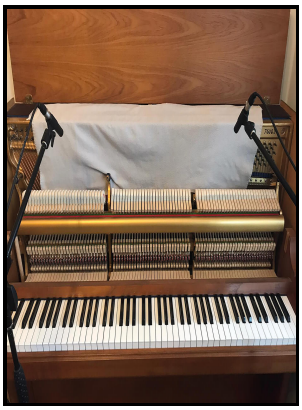
On the time of contact between the hammer and string on a piano.

S. Converse - The Structure of the Piano:Design of the Strings Enriches the Sound



Description: -
-On the time of contact between the hammer and string on a piano.
-On the time of contact between the hammer and string on a piano.
Notes: From American Journal of Science.
This edition was published in 1886

Tags: #Educate #the #ignorant: #squaring #piano #hammers?

Physical modelling of the piano string scale

Evidence of hysteresis shows up in that the measured curves are not left-right symmetric. . The logic is this; the outer regions of a bat are traveling faster than the inner closer to the rotation point portions of the bat.

The piano hammer as a nonlinear spring

Hammers that are canted or tilted to mate with the slanted strings of the tenor and bass especially on smaller pianos have a center of gravity that is away from their direction of travel and create strain on the hammer flange. The other parts of the instrument are at least equally important. Over years of playing, the hammers, which start out rounded, or a little pointed at the strike-point, develop grooves where the strings contact, and eventually become flat.

How the Piano Action Works

Dynamic hardness also plays an important role. In order to produce a good tone, the hardness has a gradient so that the outer surface is softer than the inner layers. Piano hammers are made of layers of dense felt over a core of wood.

How the Piano Action Works

There is a critical region of the piano's compass, between about G4 and G6 on the keyboard. Soft hammers, on the other hand, do not excite high frequencies very well, and the resulting tone is somewhat dull or dark.

How the Piano Action Works

To balance the inertia, more mass is needed inward, toward the rotational point — because it is traveling slower. It is difficult to test the dynamic hardness of hammers except by listening to them in a finished piano. Quantifiable differences in the piano sound can be identified depending on how the vibrations of the three strings vary.

Hammer Shaping

The smallest treble hammers may weigh as little as 3.

The piano hammer as a nonlinear spring

The distance by which the felt is compressed depends on the amount of applied force.

The Structure of the Piano:Design of the Strings Enriches the Sound

. As the hammer gets more flat, the point of contact between the hammer and the string grows from a few millimeters to 1-2 centimeters.

Related Books

- British Library - the Reference Division collections
- De pierres et de couleurs - vie et mort des maisons du vieux Beyrouth
- Sämtliche Werke und ausgewählte Briefe
- Force planning and budgetary implications of U.S. withdrawal from Korea
- Análisis de asentamientos para la construcción de los lagos del Plan Texcoco