Music in Code

The Paper Roll: Reiterating Piano

RICHARD (OOV):
Well this instrument looks like a grand piano,(IV) but I can't see a keyboard anywhere, (OOV) so how does it make music?

PAUL (OOV):
Well (IV) it was played exclusively from this folding cardboard. It was called book music for fairly obvious reason and it was based on the Jaquard loom system for weaving.

RICHARD:
And (OOV) how are the holes in the book music turned into sounds?

PAUL (OOV):
Well the mechanism in this instrument is of a reiterating system and in fact I'm just going to turn the handle and show you that the hammers are all now bouncing up and down en masse. So that when the music's in place the fingers in the key frame would actually be triggered to stop those hammers from moving and you can see that small group have stopped bouncing up and down. Now under normal circumstances of course the majority of these hammers would be held in check and only the ones reading the perforations in the music (IV) were left free to move and vibrate against the strings.

RICHARD (IV):
I believe (OOV) you can put expression into the music that you're playing.

PAUL (OOV):
Yes there is expression available. You can probably see here that the mechanism is bouncing up and down as I turn the handle and in that particular mode is fairly quiet. If I change the position of this lever it changes the mechanical advantage and so the hammers strike it through a greater distance.

RICHARD:
And you get a very much louder sound.

RICHARD:
This method of encoding musical notes is a basic binary system. The perforation provides the note on state and the lack of perforation provides the note off state.

CAPTION:
Reiterating Piano
(Piano Melodica)
Giovanni Racca
Italy c.1900