PIANO TECHNICIANS GUILD

Pittsburgh Chapter

Pittsburgh Chapter Newsletter

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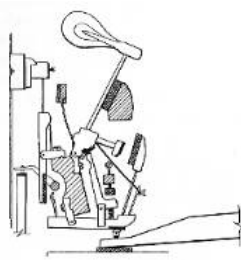
Post-summer Olympics and end of school-year summer greetings to you all. We begin another year of monthly meetings, kicking off on **September 2**, **6:30pm** at Gerrero's. Joseph DeFazio and Randy Mangus will lead the Associate's session on regulating the vertical piano action (using a model). They will describe some of the moving parts, the rails & their interrelationships. (console action diagram on the left).



For the technical seminar at **7:15pm**, Ron Gordon will demonstrate unison tuning, plus Randy Mangus will show how a Reyburn Cybertuner can measure the difference in decimal # of cents between unison strings (-1 or +1 cents allowed among them to pass Tuning Exam).

The new President of the chapter this year is Amy Marshall, who has served in this role before and has also held the position of VP in the early 2000's. Ron Gordon is continuing as VP for 2nd year and will again coordinate the technical seminar program. Randy Mangus is serving his 3rd year as the chapter treasurer and Ken Hand is in his 5th year producing the newsletter and performing secretarial duties. Joe DeFazio will once again provide refreshments and food for the monthly PTG gatherings. On August 5, the four chapter officers and former chapter president, Jonathan Langham, convened at Evergreen Chinese Buffet in Washington, PA to discuss possible technical presentations and sites to meet. We chatted about various objectives, which will be conveyed at the business portion of the meeting.

For 2008-9, the PTG chapter theme to be discussed in more detail will be "The Year of the Upgrade". For the past two years, the chapter focused on the 'Katrina Project'. Since that commendable venture is finished, Amy is initiating a drive for PTG Associates to upgrade to RPT, and a few RPT's to upgrade to CTE (Certified Tuning Examiners) or possibly to TEC (Certified Technical Examiners). To encourage PTG Associates to aspire to take RPT exams, the Associates' sessions this upcoming year will focus on learning and reviewing some technical details involved with piano regulation, repairing, and tuning.

Apparently, the fee for taking the Tuning Exam and the Repair Exam is going up from $90 to $180 as early as January 1, 2009. For those who passed the Written Exam, there is a significant incentive to take or retake one or both of the examinations mentioned. Jonathan Langham acquired a study guide for the Written Exam, and plans on making it accessible for those interested in borrowing it.

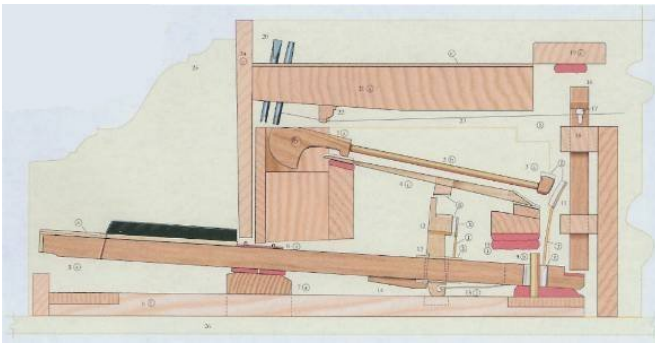
Correction: At last June's PTG meeting, the Hershey Bar Kid awardee was chosen by the 2006-7 recipient, Randy Mangus. For 2007-8, the Hershey Bar Kid award, which goes to a worthy technician who contributes their talent and time to the chapter, went to Joe DeFazio.

Bartolomeo Cristofori's pianoforte action design **source:** *http://en.wikipedia.org/wiki/Bartolomeo_Cristofori*

Piano actions are complex mechanical devices which impose very specific design requirements, virtually all of which were met by Cristofori's action.

First, a piano action must be arranged so that a key press does not actually lift the hammer all the way to the string. If it did, the hammer would remain in contact with the string and damp its vibrations. In Cristofori's pianos, the hammer travels freely for about 1-2 mms., between the final impetus given by the key & contact with the string.

Second, a piano action must greatly amplify the motion of the player's finger: in Cristofori's action, an *intermediate lever* was used to translate every key motion into a hammer motion eight times greater in magnitude. Cristofori's multiple-lever design succeeded in providing the needed leverage in a small amount of space.



Third, after the hammer strikes the string, the action must avoid an unwanted second blow, which could easily result from the hammer bouncing up and down within the space confining it. In Cristofori's action, this was accomplished by two means. By lifting the intermediate lever with a *jack* (which has a leather damper attached) that disengages in its highest position; the hammer falls (after its initial blow) to a position considerably lower than the highest position to which the key had lifted it. By itself, this mechanism greatly reduces the chance of an unwanted second blow. In addition, the action design also included a *check* (a.k.a. "back check") that catches the hammer and holds it in a partially raised position until the player releases the key; the check also helped to prevent unwanted second blows.

Cristofori's action *(1722 model depiction above right from December 2002 PTG Journal article)* was sufficiently complex and hard to build that it was a barrier to later builders, who tried to simplify it. However, Cristofori's viewpoint ultimately won out; the standard modern piano action is a still more complex and evolved version of the piano inventor's original.