Voicing

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PTG

Hammer Supports

- Wooden hammer support
  - Grooves routed to support back-checks
  - Concave center section
  - will hold about a third of the hammers
  - Weighted with brass plate screwed onto underside
- Wooden hammer clamp
  - 5 T-nuts & bolts
  - Metal section clamps into an adjustable swivel vice
  - Vice is bolted to the workbench
  - From experience, this clamp is perfect for pre-voicing a new set

Hammers

- Tension & compression
  - Cut a hammer core in half to see how much the felt will open

Shaping

- Custom-made hammer support for a section of grand hammers
  - Curved and grooved to fit back-checks and knuckles
  - Supports in different lengths for various sections
- Sandpaper
  - There is a in rolls with sticky side
  - one side of paddle 60 grit, the other side 100 grit
  - Jergen Goring with PianoForte Supply imports German sandpaper
    - Costs $10/sheet, but lasts a long time
    - Comes in three grits: 30, 60 and 100 micro-something
    - Milar backing
    - Makes perfect curve over hammers for buffing & strip sanding
    - Very sharp, creates very fine felt dust
    - Two sheets glued together back-to-back is stiff
      - enables quick sanding of the sides of the hammers
      - increases clarity
  - Black emery paper cuts the hammers into white powder
- Paddles
  - Paint sticks & standard paddles
  - Rounding the corners: tool made with ½" aluminum L-bracket
    - Glue sandpaper to inside of L
    - Glue wooden triangular block of wood inside L at end for handle
  - Leather-cushioned paddle with super-fine sandpaper for fine finish
- Sanding hammer just where string grooves are

- Put finger on one side of hammer, place tool on the other side, or hold hammer on both sides and sand the middle
- Plexiglass tool 6”x5/8” wide (about 1/3 wider than the surface of the hammer) with an1/8” strip of 30micron sandpaper glued down the center
- This is designed to be able to hold the plexiglass against either side of the hammer or equally, in order to position the strip of sandpaper specifically over one single groove at a time

Leveling Strings

- Place finger on string to feel, then adjust with a screwdriver
- Bubble machines – first must level the piano
- Rubber mute with tongue depressor for handle used to mute all three strings simultaneously
- String lifter: pull up low string
  - ¾” dowel with beveled end covered with felt and a piano wire screwed onto the side, with a small hook at the end of the wire

Shank Voicing

- Burnish the shanks, top & bottom
  - Rub the tool firmly up & down the shank
- Remove a portion of the wood
  - Sometimes sand away a third of the thickness of the shank with a paddle
  - Shave the shank with a knife used as a scraper
- Results of shank voicing
  - This tames the sound so the strike isn’t so hard
  - The sound is cleaner, more transparent, richer
  - It omogenizes the sound
  - Sanding the shank has the same effect as massaging or squeezing the sides of the hammer

Iron

- After drastic shaping and needling, the hammers might look pretty rough
- Iron the hammer to even out the surface
- Finish with a fine sanding

Needling

- Chop stick tool
  - Single needle on end of chop stick
- Weighted handle with three needles
- One needle with a #1, two #2 needles, and three #3 needles
  - The needles are supported by set screws so they bend rather than break
- Needling tools
  - Tiny multi-needle tool
    - Looks like a small wire brush
    - 12 needles by 5 needles
  - Multi-needle hammer

        - 20-25 shallow needles in end of ½" dowel set inside of brass tube screwed onto a 6"wooden shaft that is glued into a round wooden handle with a finger hole in it
    - Metal ring with single 1" #1 needle held by set screw
    - 2 #2 needles 1/8" long in 2" wooden handle
    - Weighted wooden handle with 1 #1 needle ¾" long
    - Heavy wooden handle with 3 needles ½" long
    - Heavy wooden handle with 5 needles ¼" long
    - #3 is .075 and #4 is .075 but 5mm longer
    - Metal thumb handle with 4 needles, 3/8" long