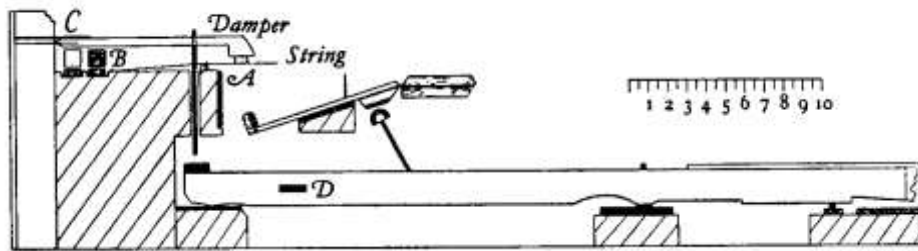


Setting up a Single Action



The single action appears to be simple, but getting the whole thing even and playing nicely is not quite as easy as it looks. I would not claim to be an expert, but these notes are based on my own experience, and will, I hope, be of some help.

The first thing to say is that every piano is different, and we need to feel and hear what is right for the one we are doing. But some guidelines are useful.

Bending the brass wires which carry the 'Old Mens' Heads' is a lot of fun, and irresistible. That's why so many pianos have had them fiddled about with. What I will now say does depend quite a bit on the geometry of the piano in question, but the basic point is that the stems are usually angled, so bending them towards you raises the height. But also, the striking faces of the hammer butts are angled, so bending the wires towards you means they need to reach higher anyway... The net effect is often not much, except of course to change the *gearing*, so that the same movement throws the hammer further. Mmm...

Let's start with the proposition that the OMHs should all be in a straight line. They seldom are, 'as found', but surely they should be. As a starting point, they should make contact with the striking-faces of the hammer butts somewhere around the middle.

Then check that the key-dip is about 7mm. A tad more in the bass, less in the treble, is good. But say ~ 7mm at middle C. If it is much less than this, the thing will be unplayable, and if much more, then there will be a lot of lost motion and sloppiness for sure. If it is not, it may be necessary to adjust the cloths, but as a starting point again:

- two thicknesses under the fronts (sometimes buff leather pads for the sharps)
- two thicknesses for the back-touch (tails) – glued or tacked at one edge only
- one thickness (possibly thinner, firmer cloth) on the balance rail.

If any of this is done with the action on the bench, out of the piano, note that warping is possible, and the touch depth may be different when the keyframe is screwed down onto the piano base. Best perhaps to do the back-touch with it out, and then screw the action firmly back into the piano. Changes in the number of layers from bass to treble are unheard-of, but it is permissible to introduce (or correct) a warp by putting card or veneer packing under the frame in one or more places. Traces of original packing are often seen.

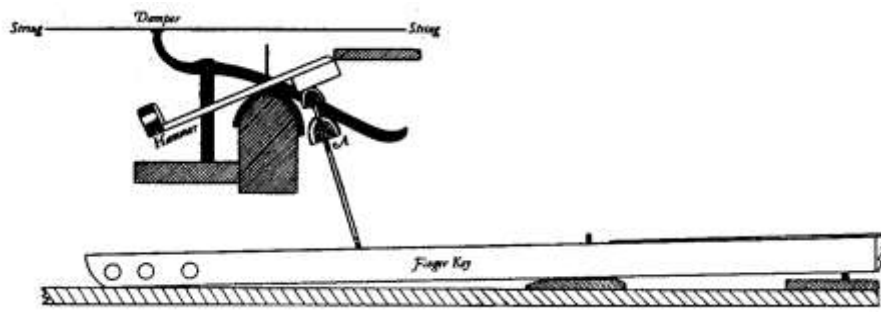
Now push the key slowly so that the hammer rises - does it stop about 2/3 – 3/4 of the way up? If so, that's probably OK for a start anyway. Nearer is usually OK in the treble, further away might be better in the bass. If not, adjust the *height* of the OMH by screwing it in or out. Not by means of the thread in the head, which will surely wreck it, but into the key. Grip the wire firmly with pliers. Usually, an even multiple of half-turns is best, as the stem is not usually 'vertical' sideways – they are often bent. But the thread is quite fine, so a small

adjustment is possible. Do the middle octave first if you can. Does it work? It's a compromise of lost motion, acceleration, and distance of the hammer from the string at fall-back. If the approach is too close, there will be blocking and bouncing. Minimal lost motion and close approach give good control over dynamics. But in some pianos this just isn't possible without making the touch too shallow. These pianos need to be played with a sort of 'pecking' motion, where speed is more important than strength.

Only then, if some notes seem weaker than others, may we consider bending the OMHs, but first check that nothing is interfering with the free movement of the hammer. Too much glue on the hinge? Interference between the hammer-shaft and the cover-rail? Friction or bad alignment of the guide-pins? If all this is OK, bending the wire *slightly* towards us will increase the velocity ratio, and throw the hammer faster. Of course, it may also push the hammer too near to the string, which may require the OMH to be screwed down one more turn...

The other thing to say is do all this with the dampers *off*. (unless it's a Broadwood, of course, in which case see below) Then adjust the dampers to be even. They only need to start to lift at half-dip or so. If they are Southwell's patent 'Irish' dampers, this is no problem, but the original wooden lever type are much more troublesome. Why they didn't simply use weighted levers, I have no idea. The main thing is that the 'whalebone' springs shouldn't be too strong. If they are, they will ruin the touch completely. Especially in the bass, you may feel that the damping effect is a bit half-hearted, but this was the way English pianos were designed and built – quite unlike 'Viennese' pianos with their precise staccato damping.

Broadwoods with Peacock Brass Dampers



It's still a puzzle to me (although there is progress) why the old Broadwoods - which are basically single action - seem to set up so much easier, and play more reliably. One factor may be the tiny pad of red cloth between the core of the Old Man's Head and the covering leather. This affects the resilience, and possibly reduces the tendency to bounce.

The basic rules are mostly as above, but it is probably best to work with the dampers in place all the time. Apart from anything else, on the first straight type (used until 1791) they must not collide with the hammers which pass between them. Also, their gravity action is unvarying. This is a good time to check that they work freely, though, and that the oil is not congealed.

David Hackett
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