The Glass Harmonica

Most of our musical instruments have long histories. The piano evolved from the harpsichord in the early 18th century. The violin dates to the 16th century and is derived from earlier fiddles of the 13th century. But not all musical inventions survived. The glass harmonica enjoyed an impressive popularity in the 18th century and then virtually disappeared — despite the fact that some 400 pieces were written specifically for the instrument.

The glass harmonica evolved from the simple observation that if you wet your finger and run it along the rim of a partially filled wine glass you’ll get a haunting musical note whose pitch depends on how much liquid is in the glass. In 1743, the Irishman Richard Packeridge thought of placing a series of glasses on a table, each with a different amount of liquid, so one could play a musical tune. Such an arrangement is extremely awkward and severely limits what one can do. Nonetheless, noted musicians like Gluck and Delaval played the instrument, which was known as an angelic organ, musical glasses or seraphim.

American statesman and inventor Benjamin Franklin attended a concert performance by Delaval in London where the angelic organ was played. Franklin was captivated by the sound and set about improving the instrument. By 1762 he was writing to Giambatista Beccaria in Turin of his new invention, the armonica or glass harmonica. Franklin had a series of 37 glass bowls of various diameters made by a glassblower. This number covers three full octaves with all the half steps. The bowls had a hole in the center of the bottom. They were mounted horizontally on a metal spindle like a row of chickens on a spit. To save space, they were nested but were not allowed to touch one another. The rod was connect-
ed to a foot pedal system so all of the glasses could be rotated simultaneously. The musician simply wet-
ted his or her fingers and touched the desired glass-
es. In this way complex chords could be played.

The instrument quickly became very popular, with
winning praise from [Thomas] Jefferson, Goethe,
Paganini, Mozart, Beethoven, Donizetti, (Richard)
Strauss, and Saint-
Saëns, among many. The
last five wrote pieces specif-
ically for the glass harmoni-
ca. Mozart’s last work of
chamber music, Adagio and
Rondo, was written for the
instrument. Franklin is said
to have remarked “Of all my inventions, the glass
harmonica has given me the greatest personal satisfac-
tion.” But by the early 19th century the glass harmoni-
ica had slipped into obscurity.

Why did it disappear? One explanation is that the
soft sound of the instrument was not compatible with
the volume of a modern orchestra. Another is that the
everie sound of the instrument aroused passionate
feelings both favorable and unfavorable. Thus, while
Jefferson called the harmonica “the greatest gift offered
to the musical world of this century” and Paganini
referred to its “celestial voice”, J.M. Roger wrote that
its sound “plunges us into dejection” and “the
strongest man could not bear it for an hour without
fainting”. Claims arose that listening to the harmonica
caused nervous problems, early termination of preg-
nancy, convulsions and madness. It is true that
virtuoso Marianne Davies, a
relative of Franklin, per-
formed on the glass har-
monica and ended up in a
mental institution. Police in
one German town banned
the instrument after a child
died during a concert per-
formance. These incidents contributed to the appar-
ent hysteria. A third explanation is that the romantic
ism of making music by rubbing glasses was dimin-
ished by the mechanization of the glass harmonica.
Perhaps in the end the novelty of the strange sounds
were off and interest dissipated.

Since the 1990s, the glass harmonica has been
making a comeback. You can listen to samples of music
played on the instrument at www.fiskalbiller.com/
soundsample.htm.

—JOHN M. JOHNIG