British museum restores early 1900's domestic phonograph wax recordings

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Credit: Museum of London

(Phys.org)—Workers at the Museum of London have successfully restored 24 of 26 wax cylinders used by a man in the early 1900's to record family get-togethers and private holidays. The recordings are believed to be the oldest ever found to have captured audio of Christmas and other holiday celebrations.

The recordings were made by Cromwell Wall, a civil engineer living in a London suburb and captured events during the period 1902 to 1917. The find is of significance because wax cylinders used to record sound were extremely delicate – very few have survived to modern times. And of those that have, even fewer are identifiable as to the source of the voices or sounds that appear on them.

The handwritten description on this wax cylinder's box reads "Minstrel Boy" Key C. / Sung by Leslie Wilberforce Wall (age 7 1/2 years) in competition at Industrial Exhibition Grove Rd New Southgate Oct 22/1904 Gaining 1st prize. (Speed 1.E)".

The cylinders were donated to the museum in 2008, but fearful that attempting to play them would cause damage, curators left them alone.

More recently, new techniques were used to clean the wax recordings allowing the cylinders to be played and recorded in digital format. Sound engineers then cleaned them up and the result is remarkable collection of recorded history.

The recordings were made using Walls' Columbia Home Grand Graphophone and the results were known as phonographs – sounds recorded onto wax cylinders. At the time the recordings were made, wax cylinders (an idea developed at Alexander Graham Bell's lab) had supplanted the tinfoil sheets used by Thomas Edison when he invented the device. Most such recordings made during the early 1900's were of professional musicians or singers or of office workers using the machine as a dictation device. Few playable cylinders survived due to their fragile nature. Dust and oils in the air could fill the grooves and heat and humidity could of course cause melting. It's not known what steps Wall and his descendants took to preserve the cylinders, but the presumption is that they were kept in a very cool dry place in a sealed container.

To make the cylinders, the large horn would be aimed in the direction of the sound to be recorded and the cylinder rotated. As it did so a needle would scratch grooves into the hard wax. To play the sound that had been recorded, the cylinder was rotated while a needle gently followed the contours of the grooves, converting the vibrations that resulted, into sound which was then broadcast via the horn.

Wall and his family can be heard talking, laughing, singing and playing instruments on the recordings, offering modern listeners a small peak into normal family life in early twentieth century London.

More information: www.museumoflondon.org.uk/Coll … p.aspx?g=group-20026

www.museumoflondon.org.uk/Corp … istmas+recording.htm