How the Belle of Louisville Steam Calliope Works

(1) The calliopist flips a switch and electrical current is sent to the keyboard's micro-switches (A) and the "hot" wire on the manifold (B) that transmits electrical current to the calliope's 32 whistles

(2) On the keyboard, a key is pressed, thereby lifting an arm and depressing the pin (an electrical switch) (C) and allowing electricity to flow to the corresponding whistle's valve magnet (D).

(3) The magnet (D) becomes positively charged and the electrical current lifts the valve's pin (E) that normally blocks steam from entering the whistle. When the pin (E) is raised and the valve is open, steam flows from the manifold (F) into the base of the whistle.

(4) Steam is dispersed through open holes in an internal coupling (G) and is funneled through the base of the whistle (H) and around the languid (I)

(5) Steam is directed around the languid and hits the "bell" (chamber) of the whistle (J) causing the metal chamber to vibrate and create sound

(6) When the key is released, the steam trapped inside the bell is exhausted into the atmosphere from the opening between the base of the whistle and the bell.