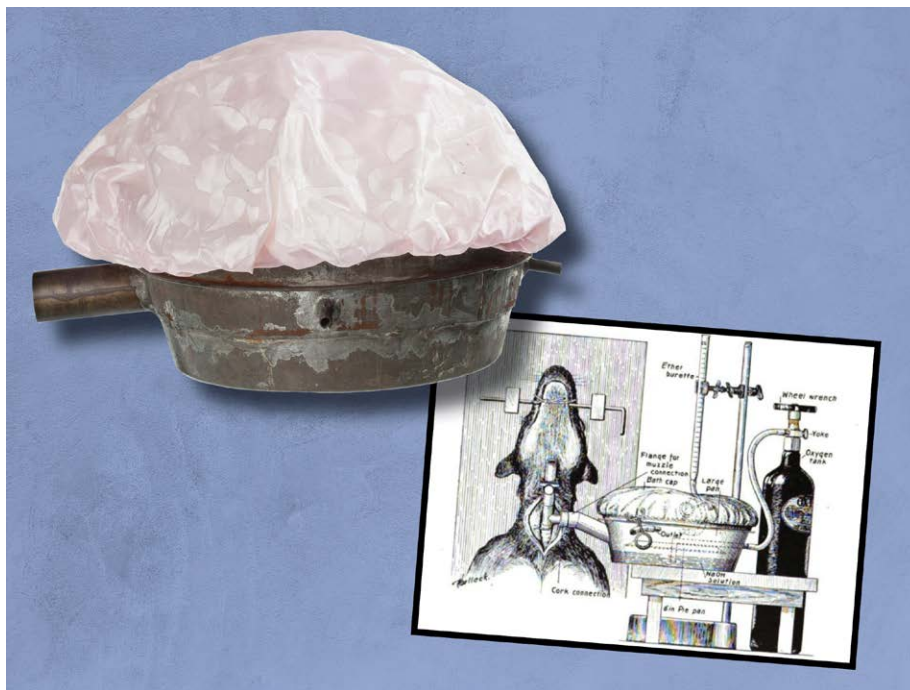


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## ANESTHESIOLOGY REFLECTIONS FROM THE WOOD LIBRARY-MUSEUM

# Before Soda Lime: Dennis Jackson's Cake-Pan Experiments



When not painting landscapes or carving violins, Dennis E. Jackson, Ph.D., M.D. (1878 to 1980), was baking up new anesthetic methods in his pharmacology laboratory at Washington University, St. Louis. Fashioned from everyday materials, Jackson's closed breathing system for experimental animals was highlighted in a 1916 article in *The Journal of Laboratory and Clinical Research*, now called *Translational Research*. Featuring a tinned-iron cake pan sealed by a rubber bathing cap (left), the confectionary apparatus was a visual treat. The cannulated trachea of an anesthetized dog was connected to a lye-layered chamber within the covered cake pan (right). As a potent carbon dioxide absorber, sodium hydroxide solution helped to prolong anesthesia, prevent hypercapnia, and contain noxious fumes. A separate inlet delivered oxygen for inhalation, and a burette dispensed precise drops of volatile anesthetic (right). Jackson's ingenious design would inspire future American carbon dioxide-absorbing devices like Ralph Waters' to-and-fro soda lime canister (1924) and Brian Sword's circle system (1936). With his easily replicable recipe for maintaining anesthesia, Jackson aspired to make physiological studies of ether, nitrous oxide, and chloroform anesthetics...a piece of cake. (Copyright © the American Society of Anesthesiologists' Wood Library-Museum of Anesthesiology, Schaumburg, Illinois.)

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