

ANESTHESIOLOGY REFLECTIONS FROM THE WOOD LIBRARY-MUSEUM

From Fairground to Background: Zacheus Rogers, Who Taught Edmund Andrews to Oxygenate Nitrous Oxide



On May 30, 1865, after the end of the American Civil War, the “Main Building of the Great North Western Sanitary Fair” (right) opened in Chicago. At that fairground, a dentist named Zacheus Rogers demonstrated “vitalized air” for dental anesthesia. By late 1868, for dental anesthesia, Dr. Rogers had reported having “used a mixture containing one-third free oxygen [in nitrous oxide] for several years, and that in his opinion it is far pleasanter than unmixed nitrous oxide.” Since surgical stimulation could be greater and/or more sustained than dental stimulation, Chicago surgeon Edmund Andrews, M.D. (1824 to 1904, left), suggested that “the best proportion of oxygen [in nitrous oxide] will be found to be one-fifth by volume, which is the same as in the atmospheric air.” Although most historians credit surgeon Andrews with oxygenating nitrous oxide for anesthesia, he was actually taught this concept by Dr. Zacheus Rogers, whom history somehow relegated from fairground (or foreground) to historical background. Surgeon Andrews’ original contributions to anesthesia included: 1) increasing Rogers’ nitrous oxide to oxygen ratio from a dental 2:1 to a surgical 4:1 and 2) publishing oxygenated nitrous oxide in the medical literature as “The Oxygen Mixture, A New Anesthetic Combination.” (Copyright © the American Society of Anesthesiologists’ Wood Library-Museum of Anesthesiology.)

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