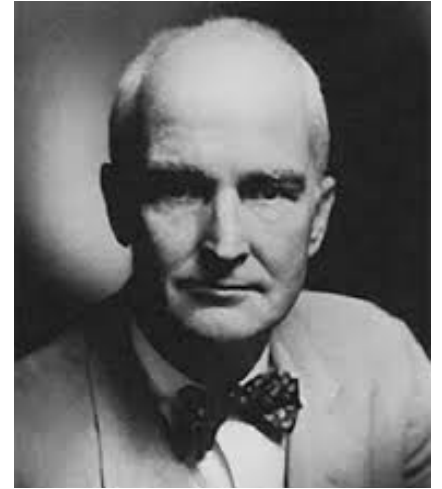


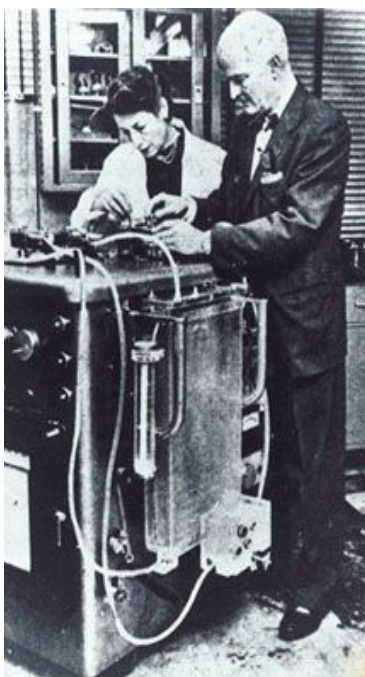
# JOHN H. GIBBON JR., MD

Dr. John Heysham Gibbon, Jr. graduated from Jefferson Medical College in 1927, and in a brief series of events, he was named Fellow at Massachusetts General Hospital. In 1930, he found himself assisting Dr. Edward Churchill in an emergency pulmonary embolectomy. At that time the procedure was one of desperation, as no patient in the U.S. had survived the removal of blood clots in open-heart surgery. As Dr. Gibbon recorded the patient's waning vital signs prior to the procedure he thought, "If only we could remove the blood from her body by bypassing her lungs, and oxygenate it, then return it to her heart, we could almost certainly save her life." Despite a successful removal of large clots from the patient's pulmonary artery, she never regained consciousness. This "critical event" initiated Dr. Gibbon's determination to produce a heart-lung machine.



Dr. Gibbon was Chief of Surgical Services at the 364th Station Hospital in the Pacific Theater. After the war, upon returning to Philadelphia, his alma mater offered him the position of Professor of Surgery and Director of Surgical Research, which he accepted. Through Jefferson Medical College's connections, IBM and its premier engineering department entered the picture and worked with Dr. Gibbon and his oxygenator to develop a larger device known as IBM "Model I." His wife, Maly Gibbon, and the Jefferson Medical College surgical residents were also deeply involved in the evolution of this huge apparatus (too heavy for the building's elevators), which proved repeatedly successful in experiments on dogs. But limitations on the machine for human patients existed and the decision was made to cannibalize parts of Model I for Model II, which was ready for its first test in February 1952. Although the heart-lung device was fully functional, the first patient, a 15-month old baby, died during the operation. A post-mortem revealed a much larger defect than was suspected.

On May 6, 1953 at Jefferson Medical College Hospital, Dr. Gibbon and his staff, with the help of his latest-designed heart-lung machine, "Model II," closed a very serious atrial septal defect between the upper chambers of the heart of eighteen-year-old Cecelia Bavolek. This was the first successful intracardiac surgery of its kind performed on a human patient. "Jack" Gibbon did not follow this epoch-making event by holding an international press conference



or by swiftly publishing his achievements in a major medical journal. According to a recent biographical review by C. Rollins Hanlon, "Therein lies a hint of the complex, unassuming personality behind the magnificent technical and surgical achievement of this patrician Philadelphia surgeon." After the triumphant Bavolek case in May of 1953, Dr. Gibbon employed the Model II on two more patients in July 1953. Both children subsequently died, prompting Gibbon to declare a year's moratorium regarding use of the heart-lung machine, pending investigations into solving clotting problems and blood loss.

During the years leading up to his successful surgery, Dr. Gibbon had been sharing his blueprints and experiences with Dr. John Kirklin at The Mayo Clinic. Eventually, the Mayo Clinic built the "Model III" based on the proposed changes from Dr. Gibbon's lab, which led to several successful operations there. While Dr. Gibbon turned to his non-cardiac interests, others continued to perfect cardiac surgery. It is clear that Dr. Gibbon's contributions to the field of cardiac surgery were necessary in order for the field to develop, which is why he is often referred to the "father of cardiac surgery".