

Beth Israel Deaconess  
Medical Center



HARVARD MEDICAL SCHOOL  
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News from the Roberta and Stephen R. Weiner Department of Surgery  
at Beth Israel Deaconess Medical Center

# INSIDE SURGERY

## ALUMNI SPOTLIGHT

### John Bookwalter, MD, FACS, 1970

Surgeon, innovator, and creator/developer of eponymous retractor

Since the late 1980s through the present day, the operating rooms of virtually every hospital in the United States as well as hospitals in more than 120 countries worldwide have been equipped with a Bookwalter® retractor, a device that provides surgeons with continuous exposure to abdominal and pelvic organs during an operation.

Named for its creator and developer John Bookwalter, MD, a 1970 graduate of the Fifth (Harvard) Surgical Service (the predecessor of the BIDMC General Surgery Residency Program), the Bookwalter retractor was introduced in 1980 and for decades has been the market-leading table-mounted retractor in the United States.

While retractors existed before Dr. Bookwalter developed his innovative design—indeed some were introduced for general surgery in the late 19th century—they were consistently inadequate for the task or too difficult to use. Consequently most surgeons, at least those in academic medical centers with training programs, preferred to have junior surgical residents use hand-held retractors.

But as the young Dr. Bookwalter discovered early in his residency, holding retractors—often for hours—was not only tedious; it also did not offer trainees the best vantage point from which to closely observe the surgeon's actions and learn. There must be a better way, believed Dr. Bookwalter, though it would be years before he would fully develop the innovative device for which he is so well known.

#### A privilege

Dr. Bookwalter was born and raised in Columbiana, Ohio. His mother was a nurse and both his father and grandfather



Photo courtesy of Symmetry Surgical

were general practice physicians. One day, while accompanying his father on house calls, Dr. Bookwalter's father told him, "It's a privilege to take care of sick people." At that moment, the 12-year-old made up his mind to become a doctor. He decided on surgery when his father described it as being the "most fun."

Dr. Bookwalter attended Amherst College, graduating with honors, earned his medical degree from Harvard Medical School, and was delighted when he was accepted to the prestigious Fifth Surgical Service for his general surgery residency, from which he graduated in 1970.

Following a two-year stint in the U.S. Army Medical Corps at Fort Bragg, North Carolina, Dr. Bookwalter returned to Boston to complete a cardiothoracic surgery residency at New England Deaconess Hospital, now the home of the Fifth Surgical Service. After his graduation in 1973, the self-professed "country boy" moved to Vermont. There he and several other surgeons formed a small private practice affiliated

with Brattleboro Memorial Hospital, where he was on staff, serving for many years as Chief of Surgery, for nearly 40 years until his retirement in 2012.

### The key to good surgery

Dr. Bookwalter loved virtually everything about his residency training (except, he admits, holding retractors for long stretches) and found a lifelong mentor and friend in the late Cornelius E. Sedgwick, MD. Dr. Sedgwick, who was Chief of Surgery at New England Deaconess Hospital from 1964 to 1980, is credited with helping lead the surgical residency program to great prominence.

“Sedge” as he was known to many, “was a superb technical surgeon who also was a wonderful person who treated everyone with kindness and respect,” says Dr. Bookwalter. “He taught me so much and was like a father to me.” Among the many valuable lessons that Dr. Sedgwick taught his trainees is that “Good exposure is the key to good surgery,” which particularly resonated with Dr. Bookwalter.

Though the inspiration for a better retractor came early in Dr. Bookwalter’s training, it was not until later, when he was in the Army and subsequently in private practice that he was able to pursue his ideas. In 1975, he began working with the medical device manufacturer Codman & Shurtleff\* to develop his novel retractor, which incorporated several important innovations.

### ‘Trial and evaluation’

One was the use of a single post to affix his unique retractor ring (to which the retractor blades are attached) to the operating table, rather than two posts on opposite sides of the table. This single-post design provided greater lateral flexibility and, consequently, better exposure. The idea for a single post was, says Dr. Bookwalter, the result of trial and error (which he prefers to call “trial and evaluation”) but it worked.

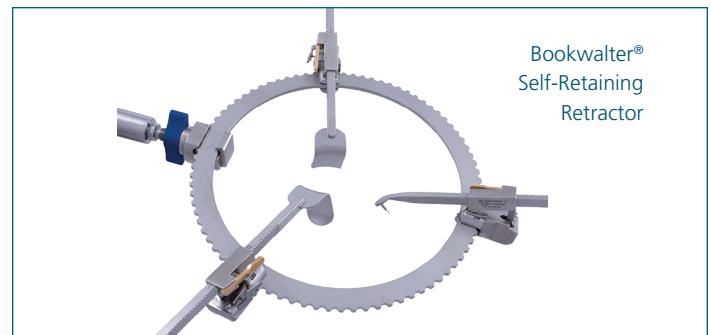
Another innovation was to design the retractor so it would fit over rather than under sterile drapes, which enabled the surgeon to add, move, or remove it during an operation. Still another was a novel ratchet system to hold the retractor blades to the notched ring, enabling the surgeon to reposition and secure the blades quickly and easily.

With the support and backing of Codman & Shurtleff, the retractor, which was patented in 1979, was manufactured and marketed. Surgeons loved it, and before long, it was in widespread use.

In addition to making it easier for surgeons to operate, the Bookwalter retractor had other positive consequences.

By freeing residents from hand-held retractor duty so they could more closely observe and assist in operations, it enhanced surgical training.

The device also enabled surgeons in hospitals without trainees to perform more complex operations than they would otherwise be able to. “Based on a very clever concept, the Bookwalter retractor provided ideal exposure in a whole range of open procedures and also ameliorated the problem of the lack of assistants in rural hospitals,” says fellow alumnus and longtime friend **Marvin L. Corman, MD**, Professor of Surgery at Renaissance School of Medicine at Stony Brook University and author of *Corman’s Colon and Rectal Surgery* (profiled in the Winter 2019 issue of *Inside Surgery*).



### Continuous innovation and improvement

The enduring success of the Bookwalter retractor is the result of continuous innovation and improvement. For decades Dr. Bookwalter has continued to work with its manufacturer to further improve the retractor system to meet the evolving needs of today’s surgeons.

Patented improvements include retractor rings that conform to varying patient anatomy and smaller incisions, blades that more closely mimic the motion of hand-held retractors, lighter-weight components, and a wide assortment of blades to support different surgical procedures, to cite just a few. Importantly, all new components are designed to be compatible with earlier components.

Although he is no longer operating, Dr. Bookwalter is certainly not retired. Still happily living in Vermont with his wife, Marilyn, he remains actively involved in making further improvements to his retractor system and developing new devices that he hopes will also improve surgical practice and patient care. Ever the innovator, Dr. Bookwalter encourages young surgeons to tackle challenging problems they confront in their work. “The opportunity for improvement,” he says, “comes from something that is difficult.”

\*In 2011, Symmetry Medical purchased the surgical instruments business of Codman & Shurtleff, creating a new company, Symmetry Surgical. The Bookwalter Retractor System® is exclusive to Symmetry Surgical.