Description of New Orthopedic Appliances

John Lyford III
DESCRIPTION OF NEW ORTHOPEDIC APPLIANCES

JOHN LYFORD, III, M.D.*

"MATCHED" GENERAL UTILITY RETRACTORS FOR USE IN ORTHOPEDIC AND EXTREMITY SURGERY

It has been observed that for most orthopedic and extremity surgical procedures there were usually prepared in the sterile-instrument "set-up" eight to fourteen retractors of different designs and sizes. This armamentarium included the small skin "rakes" and "vein holders," progressing through the larger "appendix," "Hibbs," "army-navy," and "gall-bladder" retractors to the special patellar and tendon holders. This large number of instruments created confusion for the surgeon, assistants, and nurses.

To simplify this problem the following group of four "matched" general utility retractors was designed. During the four years that these retractors have been

![Image of retractors]

Fig. 1—"Matched" general utility retractors. Note the position and shape of the "holding" ends on each.

*Formerly Associate, Division of Orthopedic Surgery. At present, Chief, Department of Orthopedic Surgery, Veterans Administration Hospital, Louisville, Ky.

198
used they have met with acclaim by all who have employed them, and the number of retractors required to be prepared for orthopedic and extremity operative procedures has been reduced by approximately fifty per cent.

These retractors are illustrated in the accompanying photograph. All are made of stainless steel three-sixteenths of an inch thick, with those numbered 1, 3, and 4 in the photograph being five-eighths of an inch wide, and that numbered 2 being five-sixteenths of an inch wide. It is to be noted that the holding ends on all are curved-in slightly and bevelled to prevent slipping, but the edges are smooth to avoid tearing the soft tissues. Each retractor has holding ends of different lengths, doubling the function of each instrument. The length (or depth) of these ends are as follows: retractor number 1, two inches and three inches; number 2, three-eighths of an inch and three-fourths of an inch; number 3, one inch and two inches; number 4, one inch and three inches. The lengths of the retractors are thus: number 1, nine and one-fourth inches; number 2, nine inches; number 3, five and one-half inches; number 4, six and one-half inches. These dimensions were chosen as most satisfactory after trials of various combinations.

On the retractors with short ends—numbers 2, 3, and 4 in the photograph—the ends are turned in opposite directions to make for easier handling when in use. The retractor illustrated as number 2 has proved especially useful in procedures involving tendons and blood vessels in the hand, and that shown as number 1, in arthrotomies of the knee joint where the longer end serves very well for “supporting” the patella, and in spine-fusion operations.

AN ADJUSTABLE DUAL-PURPOSE “OVERHEAD” READING TABLE FOR USE ON THE FOSTER-LYFORD REVERSIBLE ORTHOPEDIC BED

For the patient required to remain at complete horizontal bed rest, there are in use many accessories for aids in reading, such as “prism” eyeglasses for angle vision, and special overhead projection apparatus.

It had been observed that on occasion, for various reasons, such aids were not always available to the patient. Particularly there seemed to be an inconvenience in obtaining such accessories for those patients who were to be under treatment for relatively short periods, were to be at bed rest at home, or were to have intermittent rest periods in the supine position, such as individuals with spondylitis rhizomelic.

In this report there is described a “frame” with dual functions: it can be used as an “overhead” reading table, and it can serve as a “cradle” to prevent bed coverings from resting on the patient.

This “frame” has been designed for use primarily with the Foster-Lyford reversible orthopedic bed, but can be used readily on standard beds. The “frame” is constructed of light-weight metal tubing, is adjustable as to height and length, and can be disassembled into its component parts for easy storage in a drawer. The “table” on which the reading matter is supported is clear plastic. Plastic is
used rather than glass to obviate injuries to the patient's face or eyes from breakage. With this apparatus the patient in the supine position can read easily books, magazines, or newspapers.

It is to be noted that for greatest comfort and facility by the patient in reading with the "overhead frame," the "table" supporting the reading matter should
be tilted cephalad about 15 degrees, and a source of illumination should be provided directed from below upwards.

In Figure 1 are illustrated the “overhead reading table,” and an instance of its clinical use on the Foster-Lyford reversible orthopedic bed. Pages of the reading material are turned by the patient if his upper extremities are functioning, or by an attendant if the patient cannot use his arms and hands.