





A NEW METHOD OF EXAMINATION AND TREATMENT OF DISEASES OF THE RECTUM AND SIGMOID FLEXURE.

By HOWARD A. KELLY, M.D.,

OF BALTIMORE,

PROFESSOR OF GYNÆCOLOGY AND OBSTETRICS IN THE JOHNS HOPKINS UNIVERSITY.

FOR the past eleven years I have been in the habit of examining the rectum by means of a speculum and reflected light with the patient in the knee-breast posture. I found, however, the various specula at my disposal so unsatisfactory that I have not published my method at an earlier date, preferring to wait until I might be able to devise better instruments.

I have now accomplished this, and for two years past in my clinic at the Johns Hopkins Hospital I have been demonstrating the superiority of this means of investigating the condition of the lower intestinal tract to hundreds of visitors from all parts of the United States, and from abroad.

A preliminary notice has already appeared in the *Johns Hopkins Hospital Bulletin*, for December, 1894.

I shall now describe my procedure in detail, which has the following advantages: (1) An ocular examination of the ampulla, the upper rectum, and the sigmoid flexure; (2) the bowel is distended to such a degree that its walls appear smooth, and there are absolutely no concealed areas; (3) a large area is visible at one time, so that a complete investigation may be made in a few seconds; (4) local treatment is as easy as inspection, even in areas so remote as the sigmoid flexure.

The steps are briefly these,—

(1) Through evacuation of the lower bowel.



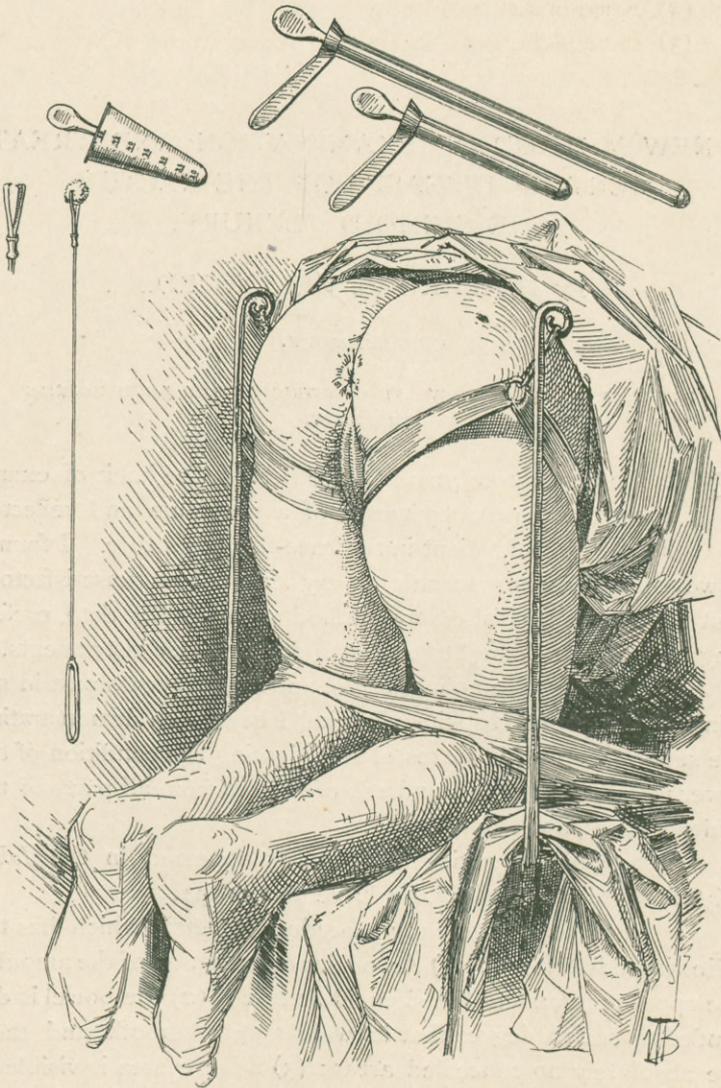


FIG. 1.—Posture of patient for proctoscopy and sigmoidoscopy. Under anæsthesia the pelvis is suspended and the knees held up as shown. The proctoscope and sigmoidoscope are shown above, reduced in the cut on exactly the same scale as the patient's body. The sigmoidoscope is therefore about as long as the thigh. The rectal dilator and applicator are shown to the left, reduced in the same way.

- (2) Knee-breast posture.
- (3) Introduction of a cylindrical speculum provided with an obturator.
- (4) Withdrawal of the obturator, followed by distention of the bowel with air.
- (5) Inspection of the dilated bowel by light reflected from a head-mirror, through specula of various lengths and diameters.

The lower bowel is usually empty soon after an evacuation; it may also be cleansed by a purgative given the night before, or an enema a half hour before the examination.

Anæsthesia is unnecessary in using most of the specula which are of small calibre, and none of the various manipulations are painful.

The patient kneels on an ordinary table, a common kitchen table is quite convenient, with the elbows spread out at the sides so as to bring the chest as close to the table as possible, while the thighs are perpendicular to it, supporting the pelvis as high as possible. (Fig. 1.)

I use a large number of specula of different diameters and lengths, but the following constitute a practical set sufficient for all ordinary purposes: A short proctoscope, 14 centimetres ( $5\frac{1}{2}$  inches) long and 22 millimetres ( $\frac{7}{8}$  inch) in diameter; a long proctoscope, 20 centimetres (8 inches) long and 22 millimetres ( $\frac{7}{8}$  inch) in diameter; and a sigmoidoscope, 35 centimetres (14 inches) long and 22 millimetres ( $\frac{7}{8}$  inch) in diameter.

Every speculum is provided with a blunt obturator with a stout handle.

The short proctoscope (Fig. 3.) is first taken up and well coated with vaseline, and grasped in the full fist, pushing the obturator in with the palm of the hand during its introduction.

The buttocks are drawn apart and the blunt end of the obturator is laid on the anus, which is also coated with vaseline. The direction of introduction should be at first downward and forward, and when the sphincter is well passed up under the sacral promontory. The moment the speculum clears the sphincter area and the obturator is withdrawn, air rushes in audibly, and distends the bowel.

The bowel is illuminated in the following manner: A strong light—daylight will answer, but an electric light is most convenient—is held close to the sacrum, and the examiner, wearing a head-mirror, directs the rays through the tube into the bowel.

By turning the tube a little in various directions the whole of the ampulla appears in sight as a large pouch with smooth



FIG. 2.—Sigmoidoscopy. The instrument seen above to the right is introduced down to the very end, as seen in the cut, which is taken from a photograph. The electric light held over the sacrum is reflected by the head-mirror to the bottom of the tube, giving a perfect picture of the bowel at the other end.

walls, hugging the pelvic floor and sacral hollow above, and below in apposition with the vagina. The slightest peculiarities in shape or color of its mucosa, or the slightest elevation of surface, or a secretion sticking to it, is at once visible.

Above the ampulla there is a vista between two or three pro-

jecting valves on both sides leading through the upper portions of the distended bowel.

By introducing the long proctoscope (Fig. 4) carefully these

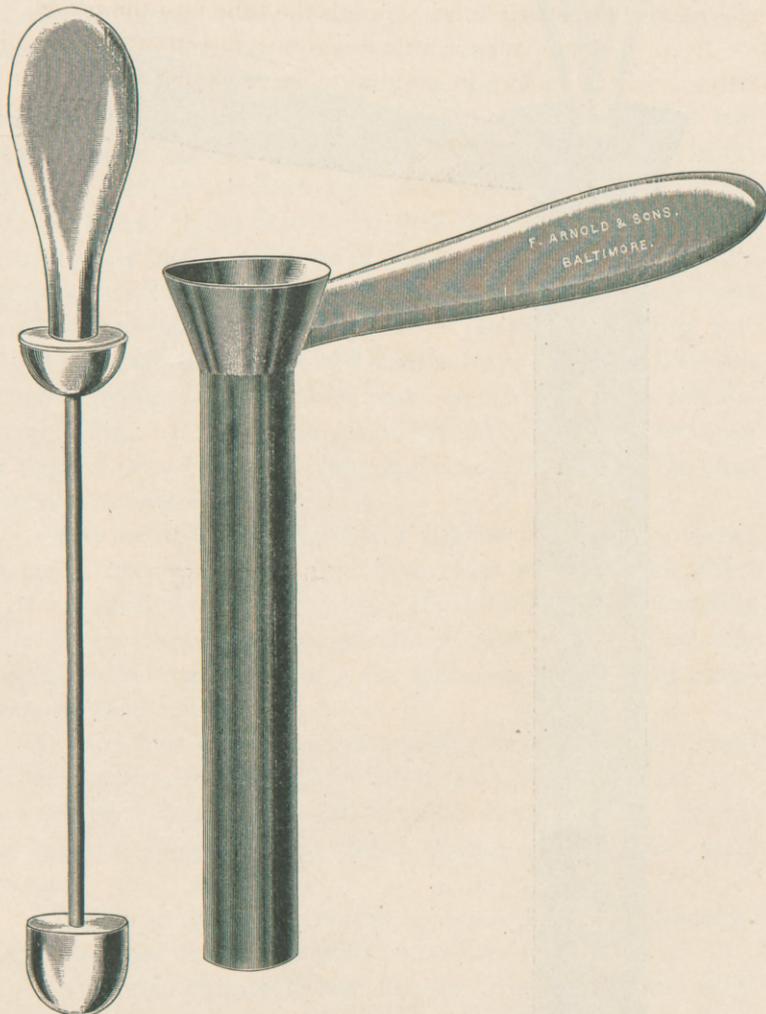


FIG. 3.—Short proctoscope (cylinder, 14 cm. x 22 mm.) for examining the ampulla and lower rectum. Blunt obturator is seen at the side. Four-sevenths actual size.

folds are pushed aside without resistance, and the bowel above comes into full view. There is considerable variation in the direc-

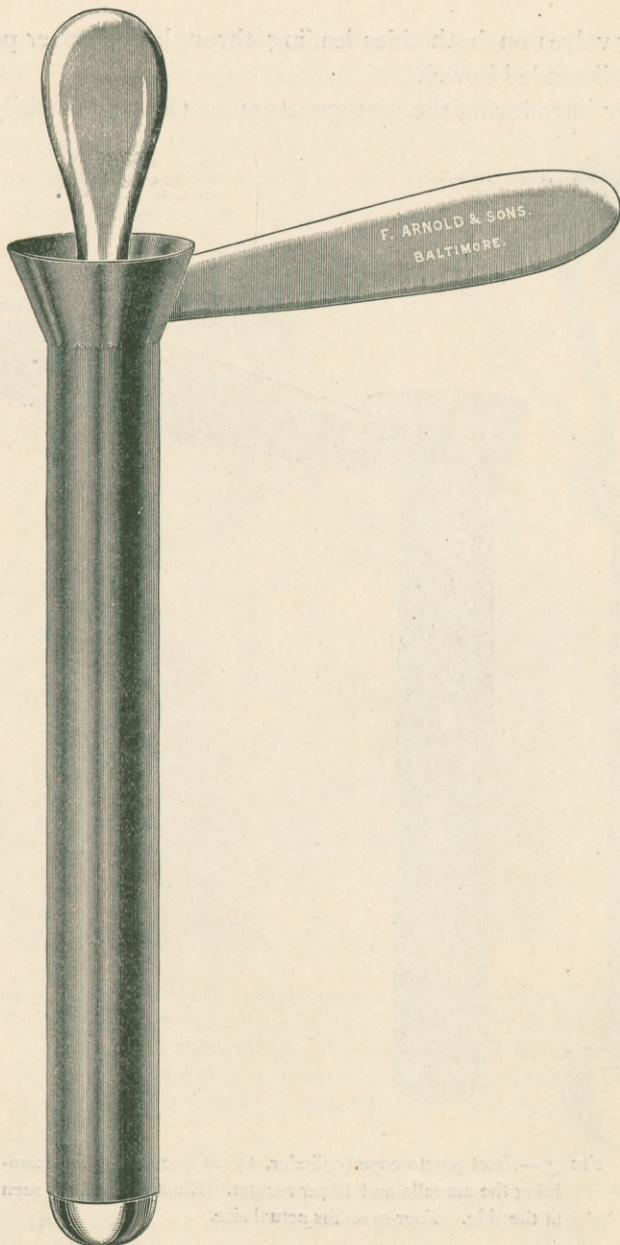


FIG. 4.—Long proctoscope (cylinder, 20 cm. x 22 mm.) for examining the upper rectum. Obturator is in place in the speculum. One-half actual size.

tion of the axis of the distended rectum ; sometimes the view from the ampulla between the valves extends as far as the sacral promontory. The promontory is easily recognized as a smooth, rounded eminence on the dorsal surface of the bowel, feeling like bone when touched with the end of the speculum.

Upon introducing the sigmoidoscope (Fig. 5), the longest speculum, the investigation is continued up into the dilated sigmoid flexure in the false pelvis by turning the handle to the right. At some point in the flexure the atmospheric distention ceases, and the lumen of the bowel can then only be followed farther by cautiously pushing the end of the instrument on through the lax collapsed folds. I have been able to carry my sigmoidoscope in over thirty centimetres (twelve inches) in this way. (Fig. 2.)

Sometimes the view is not satisfactory, owing to little obstructing masses of fæces ; these may be readily removed with the scoop. Fig. 6.) A little mucus on the surface of the bowel may be cleared away by using a long applicator, devised by Dr. Otto Ramsay, my associate.

Other causes interfering with a satisfactory view, are these : the patient may not let the chest down close enough to the table ; or, if a woman, a corset may keep the bowels from gravitating towards the diaphragm ; or, gravitation may take place slowly and the bowel open up slowly, the speculum following it centimetre by centimetre.

I have plainly seen and sounded a stricture of the bowel fourteen centimetres (five and a half inches) above the anus, in a case in which I had previously handled it through an abdominal incision, when removing uterus, ovaries, and tubes for pelvic abscess.

I have recently seen a polypus not more than five millimetres in diameter, ten centimetres (four inches) above the anus.

I have also repeatedly had occasion to examine cases diagnosed and treated for years as colitis, when I found the rectum the seat of a chronic inflammatory trouble, limited either above or below the promontory by a perfectly sound mucosa.

I use three other rectal instruments which I desire to describe : a conical sphincter dilator, shown in the text three-fourths

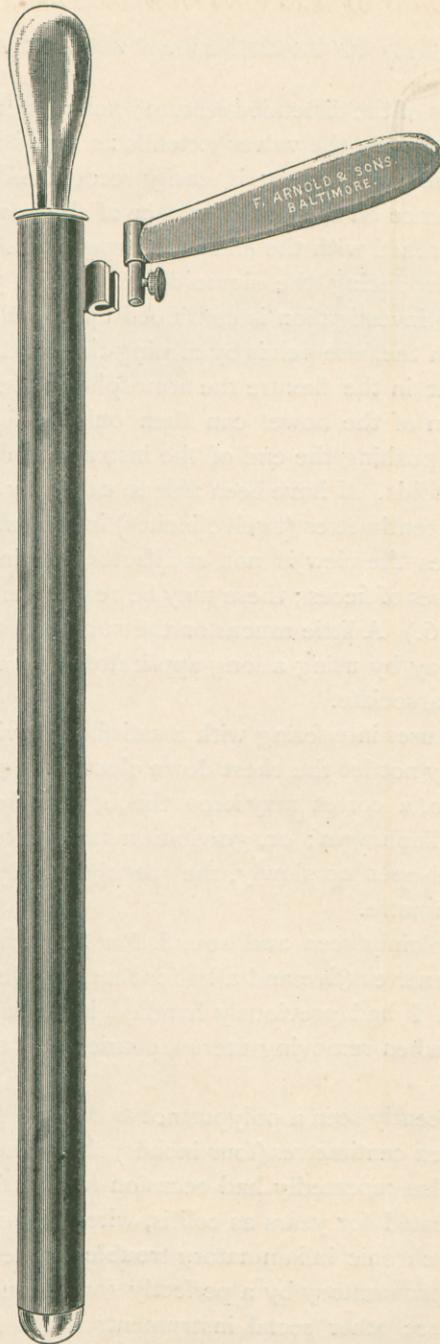


FIG. 5.—Sigmoidoscope (cylinder, 35 cm. x 22 mm.) for examining the sigmoid flexure. The detachable handle is seen above to the right. The obturator is in place in the speculum. Two-fifths actual size.

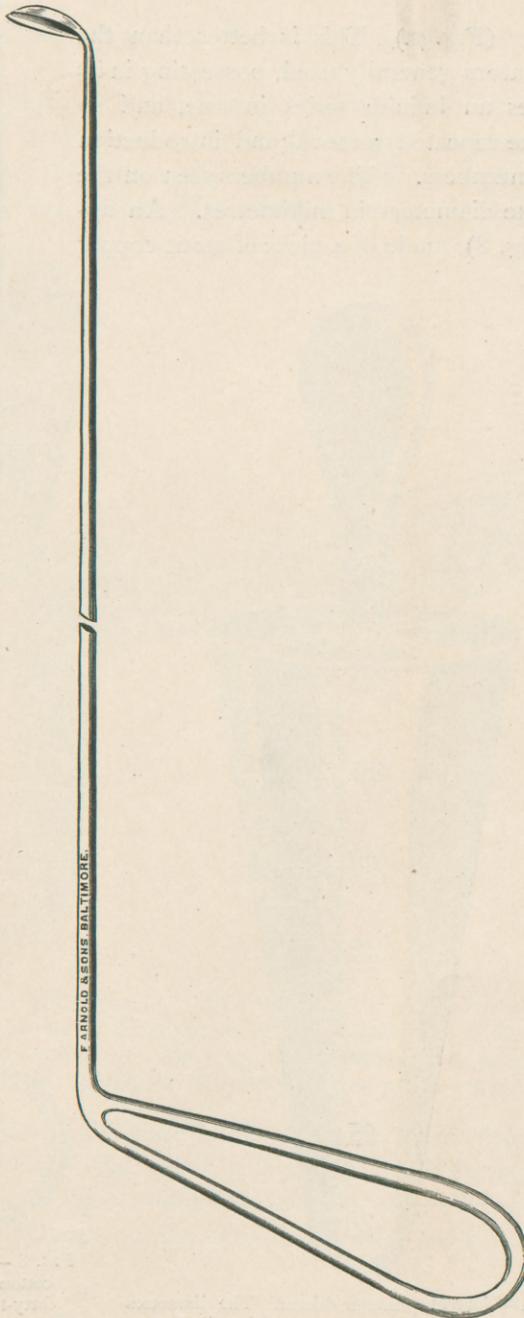


FIG. 6.—Scoop for removing small faecal obstructions forty-two centimetres long. One-third actual size.

actual size. (Fig. 7.) This is better than the series of dilators generally used, possessing in its conical sides an infinite series in one, and so avoiding the repeated removal and introduction of different numbers. The numbers seen on the scale are the diameters in millimetres. An applicator (Fig. 8), made of a piece of stout copper

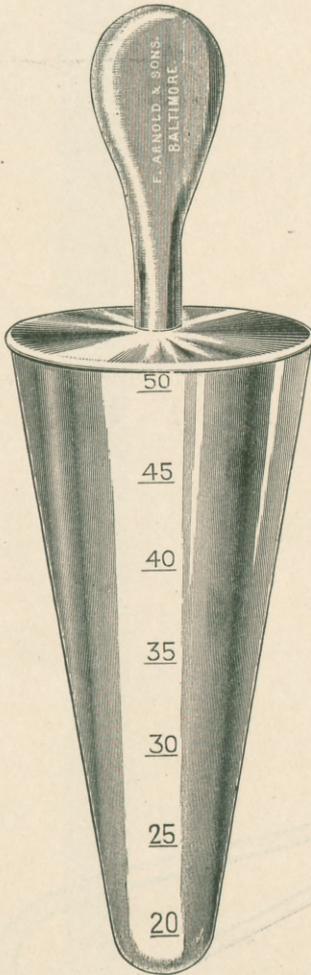


FIG. 7.—Conical sphincter dilator. The diameters of the various parts are indicated in millimetres. The figure is three-quarters actual size.

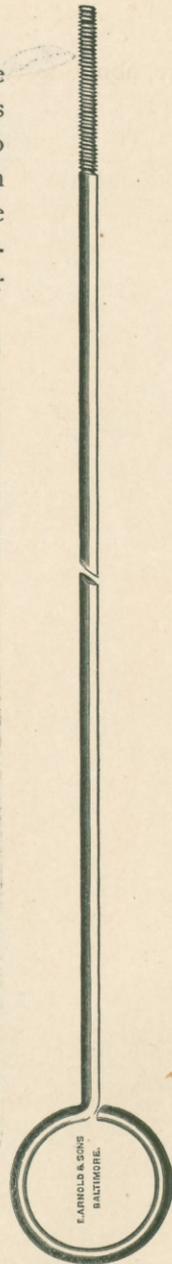


FIG. 8.—Copper-wire cotton applicator, forty-two centimetres long. One-third actual length.

wire, about forty-two centimetres long, is useful in topical treatments.

The sphincteroscope (Fig. 9), shown three-fourths actual size in the text, is short and conical. It is used by pushing it into the ampulla, and then withdrawing it until the sphincter circle closes well over it; by withdrawing it slowly by steps, each time

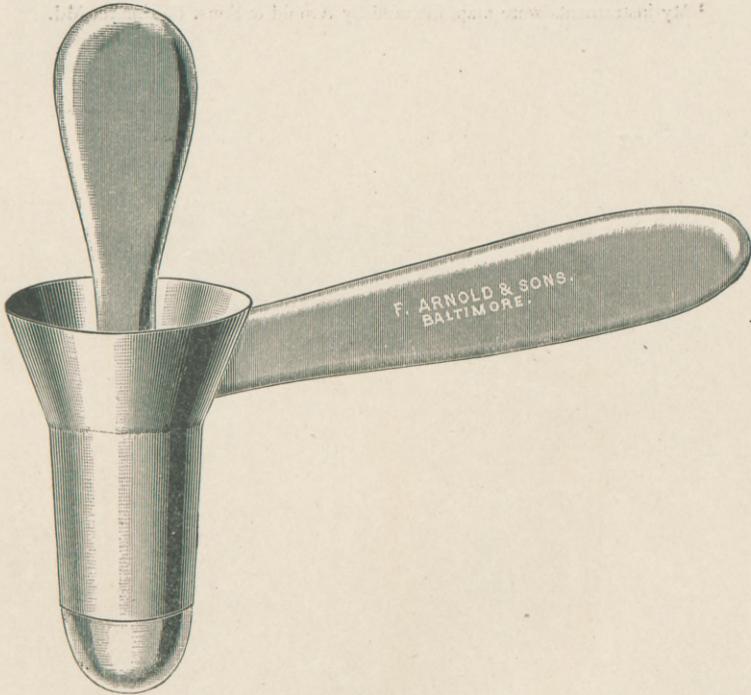


FIG. 9.—Sphincteroscope. The cylinder is four centimetres long, and its diameter at the upper part is three centimetres; at the lower end 2.5 centimetres. The flange is five centimetres in its greatest diameter. The obturator is in place. Three-quarters actual size.

pushing it back a little, the whole sphincter area is brought beautifully into view. Each time it is pushed back during the withdrawal it does not re-enter the portion of the bowel just left, but simply flattens out the area within view for a more perfect inspection.

I have had a variety of larger instruments made for examination and treatment of the bowel, but offer these sizes as a practical set.<sup>1</sup>

I also frequently use one of my bladder specula, nineteen to twenty millimetres in diameter, and secured by it a perfectly satisfactory inspection of the lower bowel.

<sup>1</sup> My instruments were manufactured by Arnold & Sons, Baltimore, Md.



