a well adapted diaphragm, Kümmell is able to say with his large experience that the X-ray will show a stone, if present, in every case, regardless of its chemical composition, and in stout or thin patients. The value of the X-ray is not only in demonstrating the presence of a stone but its situation as well. To accomplish this, more than one plate should be made. It is found that calculi generally remain in one position and therefore constancy is an important element in the diagnosis. The shadow of a renal calculus is generally a little away from the spinal column and about the level of the second lumbar vertebra or just below the 12th rib. Variations in position might suggest a horse-shoe kidney or a dilated pelvis with the stone in the lower part. In one of my cases the stone was shewn to be in the ureter, and I was able to go directly down upon it, without opening or disturbing the kidney. This rendered the operation more simple and safe. In another instance two oxalate calculi were distinctly shown in the kidney itself. We have found it advantageous to read the plate in a dark room, placing it in a frame in front of a good light. Kümmell sometimes uses an opera glass to get better definition.

I have not had any satisfactory results from the use of the segregator. I admit that my experience with it has been very limited. On several occasions I attempted to use Luy's pattern, but failed. On two different occasions, gentlemen professing to know how to use it and expressing faith in its efficiency visited my clinic and were afforded an opportunity of demonstrating its value. In both cases complete failure was frankly admitted by the operator.

In the following cases the ureters were catheterized by Dr. R. P. Campbell, late Medical Superintendent of the Montreal General Hospital, and I wish here to acknowledge my indebtedness to him, and to express my appreciation of his skill in this work, and his care and accuracy in carrying out the various examinations and tests of the urines removed. The catheterization of the ureters has been done as a rule, under local anæsthesia. If ether is given the flow of urine is temporarily so nearly arrested that, to get enough for examination, the patient must be returned to bed with the ureteral catheters in situ. It is obvious, therefore, if serious difficulty in finding the openings is encountered that no help can be obtained from the use of methylblue, as recommended by Castaigne or of indigo-carmine as recommended by Voelkers and Joseph. As a rule the operation is unpleasant and disagreeable, but not unbearable if the bladder and urethra are normal. The cystoscope and catheter are, of course, carefully sterilized and the bladder thoroughly washed out.