of Dr. Luys, and the practical fact that Cathelin's urine separator can be used with the patient lying down has a distinct advantage over that of Dr. Luys. Since Dr. Bickersteth's interesting paper appeared¹ Luys's instrument is becoming well known in this country.

Cathelin's urine separator is shaped like an English lithotrite, and has a small catheter on each side of its stem and beak. Before the instrument is introduced into the bladder, the partitioning diaphragm is withdrawn into the stem, until the mark "o" on the carrying rod indicates that it is completely shielded; the other figures, graduated from 10 to 300, indicate that a globe that would hold one of the specified quantities in grams would be bisected through its middle by the diaphragm projected to that index. For example, when one leaves 40 grams of water in the bladder, the rod is pushed into the stem until the figure 40 is about to disappear, then the diaphragm fills and bisects the bladder into lateral halves.

In my practice I have had some very striking illustrations of the efficacy of the instrument in keeping unmixed the two urines in the bladder. In our consulting rooms I consider the use of the urine separator is less objectionable to females than that of the cystoscope. Ten to twenty minutes is long enough to collect sufficient urine for diagnosis. In one of Dr. Herbert Vachell's cases I left the instrument in a male patient's bladder for one hour and twenty-five minutes, with very little discomfort. This patient had pains—back-ache on the left side—and the left kidney secreted but one-fifth the quantity of the right kidney. I performed decortication of the left kidney with satisfactory results.

In this paper I do not propose to give reports of cases, but would venture to refer to one that is a most striking example of perfect partitioning of the bladder. In another patient of Dr. Herbert Vachell's at the Cardiff Infirmary, who had haematuria with a large palpable tumour of the right kidney, Cathelin's instrument drew highly-coloured bloody urine from the right side, and clear urine containing albumen from the left. The coloured right urine was alkaline in reaction, whilst the left clear urine was acid. I was inclined to think the albumen on the left side might be due to a trace of the right urine escaping by the diaphragm. Five weeks ago I removed the kidney with the tumour (carcinoma); since then the urine has remained clear, but still contains albumen, as it did before removal of the diseased kidney.

For demonstration purposes urines can be fixed in test tubes by means of gelatine and formalin, and I have been much struck with the difference in colour of normal urine from the two kidneys; in some cases one kidney seems to possess greater affinity for extracting colouring material than the other.

I have once been saved from removing a tumour of the only functional kidney. An old lady had a large right renal tumour; I took her into the infirmary for operation. As I had just received Cathelin's instrument I used it, but to my surprise I could only get urine from the diseased side. I thought that this might possibly be due to the diaphragm not being placed in the middle of the bladder, and that it pressed on the left ureteral orifice. I made a second examination with the same result. A third examination under an anaesthetic gave exactly the same result, and I also found by cystoscopic examination that the left ureteral orifice was a thin U-shaped slit with no peristaltic movements. I injected water coloured with potassium permanganate through the left catheter, and it returned the same colour without affecting the urine from the right side. The mere fact of anaesthetizing this old lady gave rise to serious uraemic symptoms for a fortnight. In cases of renal calculus with albuminuria I have found non-albuminous urine on the sound side. From the above observations it seems clear we have at present reliable urine separators, and it is scarcely possible to bring forward a better illustration than the one briefly referred to, where the urine was alkaline on one side and acid upon the other, to show that we possess an instrument of very great value for diagnostic purposes.

REFERENCE.
Lancet, March, 1904.

THE LIGHT TREATMENT IN FLORENCE.—A committee, of which Professor Pellizzari is the chairman, has been formed to promote the establishment of a light institute for the treatment of lupus and other forms of cutaneous tuberculosis at Florence. The King of Italy has intimated his approval of the scheme, towards the execution of which he has contributed £120.

THE LEISHMAN-DONOVAN BODY IN ULCERATED SURFACES;

A POSSIBLE ROUTE OF ITS ESCAPE FROM THE HUMAN BODY.

BY

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IN the *BRITISH MEDICAL JOURNAL* of May 28th we described the presence of Leishman-Donovan bodies in the lymphatic glands of the mesentery. In later work it has been found that the distribution of the parasites in the glands is not uniform, some containing none, some a few, others enormous numbers.

A careful examination of the intestine of the case before mentioned revealed a small ulcer about 12 in. above the ileo-caecal valve, three small punched-out ulcers at the splenic flexure, and two areas of atrophied mucous membrane, one 15 in. or thereabouts above the caecum, the other in the upper part of the ileum.

The mesentery presented numerous small nodules, somewhat resembling minute tubercles; similar nodules were present on the peritoneal surface of the small intestine, and also at the base of the small intestinal ulcer.

Microscopically the intestine exhibited areas of small-celled infiltration between the mucous glands, and in the sub-mucous coat, the atrophied areas showing similar though more advanced changes, most of the mucous membrane having disappeared.

In the infiltrated areas of the small intestinal ulcer, and in one of the ulcers from the large intestine, Leishman-Donovan bodies, few in number, it is true, but unmistakable, were found; they were enclosed in cells. In the other areas no parasites were detected, but as the bodies were so few in the ulcers it is possible that they may yet be found here also.

In sections of liver, spleen, and lymphatic glands the position of those bodies is undoubtedly, in the majority of instances, intracellular. In many cases the protoplasm of the cell is swollen, the nucleus staining faintly or having disappeared.

We have never seen the parasites in the red blood corpuscles in sections or otherwise. Wright and James have found the Leishman-Donovan, or a similar organism, in ulcers of the integuments (Oriental sore), Christophers in intestinal ulcers. The foregoing note again records their occurrence in ulcers of the intestinal mucosa, and this is interesting in view of the fact that dysenteric ulceration is a very usual termination for kala-azar.

Failing the discovery of any other means of exit from the body, may it not be that the normal route of escape for the parasite is by an ulcerated surface? With this idea in view we lately produced by croton oil and liquor epispasticus slight ulcerating dermatitis in a patient with Leishman-Donovan bodies in his viscera, but failed to find the parasites in the discharges. This experiment cannot, however, be considered conclusive, as we were afraid, in the interests of the patient, to produce anything like deep ulceration.

The above observations confirm, then, the work of Christophers recently published in India, and are of interest in showing that these parasites may escape by the intestinal canal.

PRELIMINARY NOTE ON THE CULTIVATION OF ANAEROBES.

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Most of the instruments devised for the cultivation of anaerobes are faulty in design, in so far as they do not allow of the organism being examined from time to time, and while it is growing, without disturbing the whole anaerobic arrangements; another drawback to their use is the uncertainty of obtaining typical surface cultures. As in the excellent instrument planned by my assistant, Mr. A. R. Laing, M.B., Ch.B. (*Lancet*, February 20th, 1904, p. 515) their construction is generally based on the principle of substituting an atmosphere of hydrogen for air.

The method I am about to describe aims at the exclusion of any atmosphere whatever, and has proved remarkably efficient in the large experience I have now had of its employment. By means of it, cultures of anaerobes, such as the