

of biliary ducts. 2. The presence of micrococci in the peripheric part of the lobules and interlobular spaces of the portions of the liver taken from the red part. The fact that the autopsy was made within half an hour of the death of the patient, coupled with the fact that the micrococci, besides being larger than septic micrococci, were found to fill up completely bloodvessels and to distend the capillaries between the liver-cells, clearly show that they must have been present during life. It will also be noted that they were found only in those portions of the lobule where the liver-cells were either as yet quite intact or only at the commencement of the disease process. Whilst older observations (such as those of Eppinger, Waldeyer, Klebs) mention the presence of micro-organisms in the liver and also in other organs in acute yellow atrophy, the most recent observations (such as those of Coats, Klein, &c.), made with improved methods, gave negative results. In two cases of acute yellow atrophy which I had examined before, quite according to Koch's method,² no micro-organisms were seen. This difference is, perhaps, to be explained by the fact that in my former cases, and perhaps in those of other observers, the disease had already been considerably advanced, and affected the whole of the liver lobules, whilst in this case the process was seen at its commencement in some places, and only there the micrococci were found. How far these micrococci are pathogenic it is impossible for me to say. Unfortunately, I omitted to cultivate them, and as I had only portions of the liver given to me for examination, I am not in a position to state whether any of these micro-organisms occurred also in other tissues or organs besides the liver.

THE URETHROGRAPH.

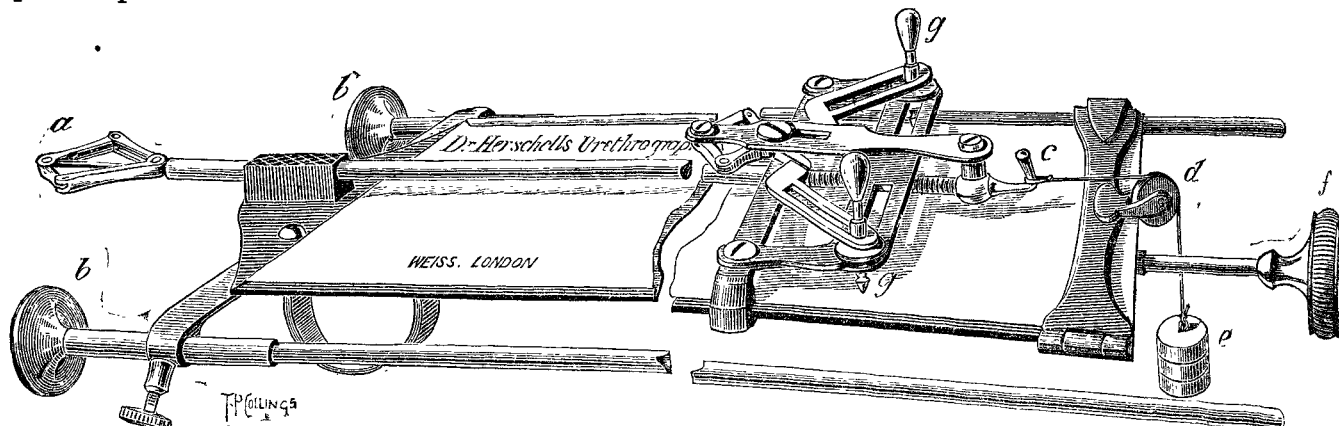
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THE instrument, a description of which I published in THE LANCET of June 2nd, 1883, was imperfect in many ways. The principal fault was the fact that the recording pins traversed a portion of the circumference of a circle instead of moving vertically to the axis of the urethra. My second instrument, which is the subject of the present article, is a great improvement upon the previous one, and does not possess its chief defects. Nevertheless, even this one must only be regarded as a step in the experimental evolution of a new machine, perfection only being reached, as for instance in the case of the midwifery forceps or sphygmograph, by a series of tentative efforts, each in its turn to be cast aside and superseded by an improved form.

The following is a technical description of my urethrograph in its present and improved form. The apparatus mea-

and below, is a cross-bar, with the lower member of which a longitudinal screw (*f*) engages. This screw operates to work the cross-bar, together with the gear it carries, from end to end of the frame or platform, on which a strip of smoked paper for the reception of the diagram rests. Upon the upper member of the cross-bar is fixed a vertical stud, on which are pivoted two cross-levers, scissor-like. Corresponding ends of these levers are connected by links to one end of a bar mounted to reciprocate longitudinally on the stud carried by the upper member of the cross-bar, whilst the other end of the longitudinal bar is attached to a wire passing through a tubular rod carrying a head (*a*), the construction of which will be presently explained. The longer arms of the scissor-like levers are slotted, and the cross-bar is also provided on either side with guide-slots running at right angles to the platform. Through each of these guide-slots and a slotted arm of the diagonal or scissor-like levers a scriber (*g*) passes, the lower extremity of which bears lightly upon the smoked paper, whilst the upper end may be loaded with a weight sufficient for ensuring the distinct marking of the paper. The head (*a*) constitutes what may be termed the exploring implement, and consists in a series of four levers articulated together and mounted on the end of the tubular probe. As before mentioned, a wire passes from the outer extremity of the articulated head, constituting the exploring implement, to the recording apparatus, and between the opposite end of this wire and the cross-bar a light spiral spring is introduced, the function of which is to cause a tendency in the exploring instrument to remain at its extreme width—that is to say, as greatly extended laterally as the size of the passage within which it is enclosed permits. The effect of the spring may be increased by the addition of a weight (*e*), suspended by means of a cord passing over the guide roller (*d*) and attached to the hook (*c*).

The action of the apparatus is as follows:—The transversely collapsible head (*a*) is pushed forward and protruded as far as possible from the framework by means of the longitudinal screw and thumb nut (*f*). This head, being collapsed by approximating with the finger and thumb of the right hand the arms carrying the scribers (*g g*), is introduced into the urethra as far as the bulb, and allowed to expand. The instrument being held steady, and supported in the manner previously mentioned, the rod carrying the head is slowly withdrawn along the urethra by turning the thumb nut (*f*), traversing in its course the whole canal anterior to the bulb. Upon reaching a strictured portion of the passage the quadrilateral head becomes contracted in respect to its width and extended longitudinally, the amount of this elongation being communicated by means of the central wire to the longitudinal top bar represented in the figure. This bar, in a similar manner, causes the quadrilateral system constituted by the links and the shorter arms of the scissor-like levers to be correspondingly elongated, and the longer or slotted arms of the last-named levers (operating the scribers) to be



sures and records diagrammatically any variations in the size of the passage, and at the same time indicates the position of such variations. The contrivance consists in an oblong framework, mounted, by means of a loop underneath, upon the forefinger of the operator, whose thumb rests on the plate marked in the accompanying sketch with diagonal cross-lines. There are also two adjustable side-struts or buffers (*b b*), adapted to press against the body of the patient and steady the instrument whilst in use. Mounted so as to slide upon the two sides of the frame, and extending across the same both above

moved inwards, this action taking effect against the resistance of the spiral spring and adjustable weight (*e*). The width of the path traced by the two scribers varies with the circumference of the urethral passage traversed by the exploring instrument, the relative position as well as the degree of such variations being indicated upon the diagram produced.

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AT Glasgow a lad has been fined forty shillings for distributing "secret disease" pamphlets, which the stipendiary magistrates said were obscene.

² Journal of Anatomy and Physiology, 1881.