A NOTE ON PROSTATIC DRAINAGE.

By T. J. D. Lane.

The method of prostatic drainage about to be described has been devised and used during the last few months at the Meath Hospital.

The technique has been employed in only two cases, but the hope of tempting others to co-operate in giving it a trial prompts this early publication.

Suction drainage of the bladder may be either continuous or intermittent. Such continuous drainage calls for the employment of an electro-motor or water pump suction. Intermittent drainage may be effected by simple means, such as a hand-operated syringe or by means of the electro-motor or water pump manually turned on at intervals.

Devine is perhaps the most recent advocate of suction methods and apparently employs continuous suction. McAlpine employs water and electric suction turned on at intervals. McCrea has used a Higginson's syringe to effect intermittent suction.

Continuous water suction is open to some serious objections. One of the most serious is the inevitable variation in water pressure with corresponding variations in the degree of suction and the consequent impossibility of of maintaining even, gentle aspiration of the bladder contents. Further, unless long lengths of piping are employed the constant noise must annoy and distress the patient.

Continuous electrical suction is not subject to the variations to which water suction is prone. If the motor be well encased or stored in a cupboard its noise can be deadened almost to vanishing point. There are, however, few, if any, machines on the market capable of running continuously day after day for any length of time without risk of serious or even permanent damage to themselves. Moreover, continuous suction drainage must be associated with continuous noise in the patient's bladder. McAlpine has stressed the necessity for ensuring that negative pressure is not set up within the bladder and the need for adequate air entry to prevent it. The air cannot enter without making noise. The noise is quite loud, bubbling and hissing in character, and must disturb and upset all but the most phlegmatic of patients.

It would seem undesirable on physiological grounds to keep the bladder entirely and continuously empty.

A grave objection to all the foregoing intermittent methods is the constant nursing attention necessary. In many hospitals the difficulty of securing the day and night services of a nurse to turn on a tap or switch for a few seconds every quarter of an hour for some days is insurmountable. It is because of this that the following plan was devised.
In collaboration with Mr. Morris of the Irish Electro-Medical Company, a machine has been devised which will switch on and off at predetermined intervals and for a fixed duration of time the current to an electric suction pump.

The mechanism of this machine (vide Fig. 1) consists in the main of a clock movement mounted horizontally face upwards in a wooden box. The dial and hour hand wheel were taken off and an insulated arm was fixed to the spindle which originally held the minute hand. This arm, made of ebonite, had a spring contact fixed to its free end. An ebonite disc was mounted over the clock movement and held in place by supports projecting upwards from its side. Contacts in pairs were inserted in this disc in 12 equidistant positions corresponding to 5-minute intervals. The spring contact of the insulated arm was so arranged as to short circuit the contacts on the disc as the former was rotated by the clock movement. The duration of such short circuit is 10 seconds, and during this time the current is allowed to actuate the suction motor. A switch was provided so that the pump could be set to work for 10 seconds every 5 minutes or for 10 seconds every 10 minutes. A push button switch was also provided.

In a new model a 14-day clock is being fitted.

The machine as originally arranged had only four contacts and switched on the suction pump for 10 seconds every quarter