sponse to the same concentration. A typical result is shown in Fig. 2.)

The indication of sensitization to parasympathetic stimulation may or may not have been accidental in view of the fewer contradicting negatives.

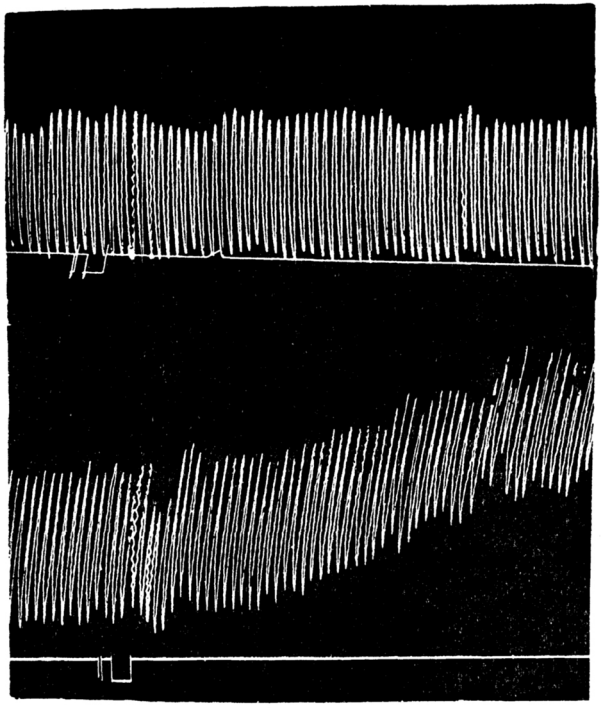

FIG. 2.

Upper curve is tracing from duodenal segment from athyroid, lower from thyroxinized rabbit, suspended in same bath. At signal physostigmine (1:12 million) was brought in contact with both segments.

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## A New Dialysis Test for Tissue Thirst.

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Small samples of blood serum from normal and nephritic individuals have been dialyzed against water, normal salt solution, and

various strengths of weak hydrochloric acid. This was done on the assumption that in edematous individuals the colloids were already saturated with water and would swell less on dialysis than in the normal. To our surprise the reverse proved true. In a long series of experiments this phenomenon has been constant and so striking that we believe the method may be of real clinical value.

The technique is as follows: Tubes about 15 cm. long were prepared with a small bell-shaped opening. The opening was closed with a thin collodion membrane and one or 2 cc. of serum introduced into the tube with a fine bacteriological pipette. The tubes are calibrated so that when filled to a certain point and immersed in fluid the amount of swelling can be read in percentage of the original volume of the serum. The results of these studies are as follows:

1. The maximum swelling takes place with N/100 HCl.
2. Normal sera generally do not swell at all, but never more than 9%.
3. Sera from a long series of cases of uremia and oedema, both nephritic and cardiac, swell enormously. (Very often over 50%, the maximum tube reading.)

Careful studies of the chemical composition of these sera showed that the swelling was dependent neither on the acidosis (as measured by carbon dioxide combining power, Van Slyke), the urea content, the sodium chloride content, or the protein content of the sera. In fact the edematous and nephritic sera invariably contain less protein than the normal sera although they swell very much more.

Experiments were performed by adding salt, urea, etc., to the sera and that did not increase the swelling. From these studies it is evident that in nephritis and edema there is some change either in the chemical composition or the colloid dispersion of the proteins themselves which render them capable of absorbing far larger amounts of water than normal sera.