

Hürthle's venous manometers which were used in the experiments consist of small metallic tambours, 10 mm. in diameter, covered over with thin rubber tissue slightly stretched. On the centre of this membrane rests a light metal disc of 8 mm. diameter, which supports, and transmits its movements to a lever moving very easily and writing at one end on the kymograph with a suitably shaped quill. The lever magnifies the up and down movements of the disk as 120:5.

On account of the very slight variations in pressure underlying the venous pulse, friction has to be minimized as much as possible. This is accomplished by adjusting the lever against the kymograph by a screw arrangement, so that it exerts the slightest possible pressure upon it. The manometers, the glass canulas, and the rubber tubing connecting them were filled with saturated solution of magnesium sulphate, which prevented the clotting of the blood in the vein over the opening of the canula.

It was possible, by measuring the distance that the lever of the manometer was raised, and comparing this with the effects of known pressures of water at the close of the experiments, to estimate approximately the pressure present in the veins at any point represented on the tracings.

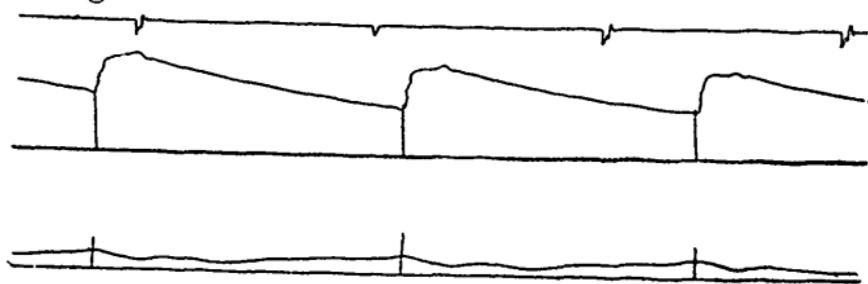


FIG. 2.—Pressure tracing from artery (above) and brachial vein (below).
Time in seconds. From a dog.

The rate of propagation was measured in two regions:

1. Through the external jugular vein.
 2. Through the inferior vena cava to the femoral vein.
- In the first case, pulse tracings were taken simultane-