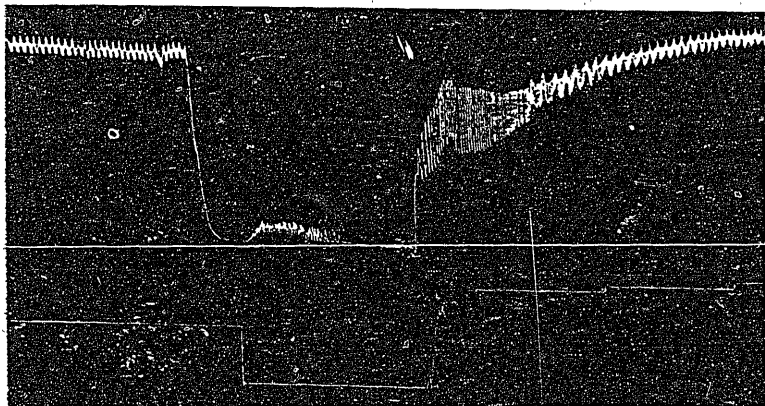


nerves, which specially is concerned in the upholding of the general blood pressure of the body. The blood pressure markedly falls if the portal flood gates are thrown open by section of the splanchnics and on the other hand rises if these be stimulated. These nerves may be paralyzed by other means than section—nitrite of amyl, chloroform, and curarè, all acting in this way. Now, given such a paralysis, note the effect of gravity. Here is a chart showing the blood pressure in the carotid. The cord was divided in the upper



TRACING III.

dorsal region with the animal in the feet down position, and at once the pressure fell to zero and the heart became weak, and the respirations gasping. The abdomen was maintained in a retracted state. Evidently the blood was accumulating in the abdominal veins, and the animal, by retracting the abdominal muscles and gasping, was unconsciously doing its best to empty the paralyzed and engorged abdominal vessels and so get some blood into the heart. When the animal was reversed, and the feet put upwards, the blood pressure rose at once, gravity then coming to its assistance instead of being an impediment. The same effect was produced by bandaging, or pressing the abdomen, thus driving the blood out of the abdominal vessels.

As regards the effect of abdominal pressure, it is interesting to note that Stephen Hale, in his classical experiments on blood pressure, recorded that "when the blood has subsided in the tubes which were fixed to the arteries of these dogs, it would, as in the horses, rise, on a sudden, considerably on deep sighing, as also on pressing the dogs' bellies hard with the hand. The blood would