need revision other than that caused by progress in knowledge. The investigations of Professor H. Douvillé on the morphology of the tests of the larger foraminifera are almost certainly the best that have yet been made—his work is classic—but this will not prevent the necessity of having to revise his nomenclatorial treatment of the organisms he has studied so profoundly.

Strict adherence to the rules of the International Code of Zoological Nomenclature in paleontologic publications is a fundamental necessity, for unless this is done there will be perpetual instability in paleontologic nomenclature.

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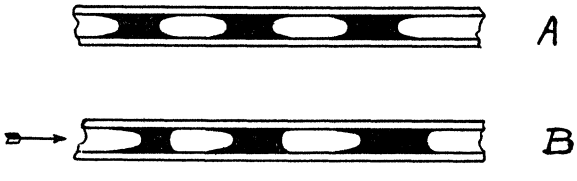
A NEGLECTED CAPILLARITY EFFECT

THE principle of the phenomenon of the "chaplet of drops," due to Jamin, is simple. The annexed figure shows glass tubes containing series of water drops separated by air bubbles. With both ends open to the atmosphere as at A the drops and the bubbles are symmetrical, but at B, the air in the left-hand end of the tube being under pressure, the symmetry is disturbed and in consequence of the different curvatures of the left and right ends of each drop there is a resultant force from right to left. With a sufficient number of drops in a tube of fine bore Jamin found that the force was great enough to resist a pressure of several atmospheres.

Thinking that possibly the Jamin effect might be responsible for some of the numerous cases of engine failure which have caused airplane disasters the author has made experiments with chaplets of water drops in gasoline.

Many methods were tried for introducing the chaplet of drops into a glass tube, the simplest proving to be a suction method. The capillary tube, one end of which is drawn out to a fine jet and crooked at right angles, is laid flat upon a table. A bracket fixed to the left-hand end of the table supports a beaker which is thus held just below the level of the table. The crooked end of the capillary tube reaches



nearly to the bottom of the beaker, which is filled, the lower half with water and the upper half with gasoline. A rubber pipe is fitted tightly over the open end of the capillary tube so as to form a straight extension to that tube. In order to draw up liquid from the beaker into the capillary tube a wooden roller is laid across the rubber pipe and rolled along from left to right. Water is drawn up when the jet is at the bottom of the beaker, gasoline when the jet is raised.

It is important to draw out the end of the tube into a fine jet, since otherwise a water-spout is apt to form between the water below and the gasoline above.

The following is a brief summary of results obtained:

(1) The head of water supported by a water-gasoline chaplet in a glass tube of given bore is about constant for a given number of drops no matter what are the lengths of the drops.

(2) Between the limits of ten and thirty drops the head supported by a chaplet is roughly proportional to the number of drops.

(3) The head supported by a given number of drops is inversely proportional to the diameter of bore of the tube.

(4) The head supported per ten drops of ordinary gasoline (Texaco brand) in a glass tube of 1.5 millimeter bore is about five centimeters of water. Thus a chaplet consisting of thirty drops of gasoline alternating with twenty-nine drops of water supports a head of about fifteen centimeters of water.

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THE AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY

THE thirteenth annual meeting was held at Cleveland, from December 28 to 30, 1925, in conjunction with the Federation of American Societies for Experimental Biology. Dr. George H. Whipple, of Rochester, New York, presided.

Among the interesting papers was a communication by Dr. George H. Whipple, on "The Hemoglobin of Striated Muscle," in which he showed that there was a considerable variation in the hemoglobin content of muscle which, however, can not be robbed by anemia's demands. It is obvious that muscle hemoglobin is of importance whether one studies the end products of hemoglobin disintegration or the parent substances suitable for construction into mature hemoglobin; also that muscle hemoglobin must be considered in any study of body pigment metabolism.

Drs. H. Cushing and S. J. Maddock produced an experimental obstruction of secretion from the Pars Nervosa of the Pituitary by means of small metal clips. Marked changes in the posterior lobe, with the production of diabetes insipidus, indicated that the pituitary was intimately involved in this condition.

Two papers by Drs. Lucke and McCutcheon, on "The Kinetics of Osmotic Swelling in Arbacia Eggs," and the effect of P^H, showed that as long as the cell is uninjured the Donnan equilibrium such as occurs in erythrocytes is not established in these cells. They concluded that the rate of swelling is affected by processes of unknown nature in the semipermeable membrane of the cell, which modify the effect of diffusion.

Drs. S. A. Schlueter and I. F. Weidlein presented a method for the experimental production of lung abscess, by allowing the infective element to reach the lung tissues via the blood stream in the form of a septic embolus.

Studying reversed passive anaphylaxis, Dr. Eugene L. Opie and J. Furth made the important observation that the meeting of antigen and antibody is sufficient to produce anaphylactic shock, irrespective of the order of their introduction into the body, although an interval of approximately four hours must intervene between the injection of the antigen and antiserum. The authors believe that the precipitate formed by the precipitin and precipitinogen may be at the base of the reaction and that it is unnecessary to assume the explosive formation of a toxic substance.

In a study of fowl paralysis, Dr. A. M. Pappenheimer and his associates found characteristic lesions in the peripheral nerves, dorsal ganglia and nerve roots, with degenerative changes in the nerve trunks in the later stages. No parasites were demonstrated and the experiments to determine transmissibility have not as yet led to positive conclusions.

Syphilitic myocarditis was reported by Drs. Wade H. Brown and Louise Pearce, in six routine post-mortem examinations of experimental animals, although treponemata were not demonstrated. These were said to be the first cases of syphilitic myocarditis or visceral syphilis reported in the rabbit.

Studying the amount of specific toxin found in the blood of 144 cases of scarlet fever, Drs. F. G. Blake and J. D. Trask found as high as 350 skin test doses in severe cases, and from twenty-five to one fourth skin test doses in the moderate cases. In the average case the specific toxemia fell at the end of the first week; and in septic cases in the second or third week.

Dr. Carl V. Weller succeeded in producing symmetrical lead gangrene in guinea pigs by the administration of large doses of white lead only when given in carefully spaced intervals. The character of the lesions was that of a symmetric ischaemic dry gangrene.

By means of a modified celloidin injection and corrosion technique, Drs. McIndoe and V. S. Counsellor secured beautiful specimens of the intra-hepatic vascular and biliary trees. This method brought out that in marked portal cirrhosis the disturbance was mainly in the smaller branches of the portal and hepatic veins. In biliary obstruction enormous dilatation of the ducts resulted, resembling the condition seen in hydronephrosis and bronchiectasis.

Injecting egg albumen intravenously into adrenalized rabbits, Drs. W. J. M. Scott and H. S. Thatcher found that pulmonary emboli occurred in a high percentage but practically never in the controls. They did not attempt an explanation of the mechanism involved.

An interesting paper on the splanchno-peripheral autonomic balance by Drs. Petersen and E. F. Muller would have to be consulted in the original, as it does not lend itself to presentation in abstract.

New evidence of the potential immortality of mammalian tissues was presented by Dr. Leo Loeb. He found that cartilage tissue alone withstands the various body reactions to transplantation. He has therefore been able to carry transplanted cartilage of rats for five or six years, *i.e.*, several times the average length of life for a rat.

The influence of adrenalectomy on the susceptibility to tetanus toxine in white rats was investigated by Drs. J. M. Rogoff and E. C. Ecker. No difference, however, could be demonstrated. Local tetanus appeared in both adrenalectomized and unoperated rats after about the same period and the same amount of tolerance to given doses was found.

Drs. Jessie M. Gottesman and Henry L. Jaffe, studying the histogenesis of autoplastic thymus transplantation in the rat, found that the transplants undergo destructive changes which begin within a few hours and reach their height in about two days. Regenerative changes then begin, which are characterized by proliferation of the reticular cells, and during the third day the small thymic cells appear. Regeneration is usually complete by the fourteenth day, when the new-formed lobules are differentiated into cortical and medullary zones.

Drs. M. C. Borman and T. H. McMillan studied for the first time the gradual destruction of the sino-auricular node in dogs' hearts by means of radium emanation. Not only did this method seem well suited for such investigations, but it offered a means of studying a gradual progressive destruction which was not before available. A temporary production of nodal rhythm was the chief functional change noted in partial destruction. The specialized sinus node tissue seems particularly susceptible to the degenerative effects of radium.

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Secretary.