uriantly on heavily salted fish, brine, sea salt, and saturated salt-fish agar. No growth appears on media containing less than 16 per cent. sea salt by weight. The shape, size, and motility of both forms is dependent upon the salt concentration of the medium, varying from the largest form found in saturated media (14 micra) to the spherical forms (2 micra) found in media of 18 per cent. concentration with all the intermediate forms between. The motility varies from the actively motile long forms, through a tumbling motion in the intermediates, to the non-motile spheres. The amount, character and coloration of the colonial growth does not seem to be affected by the changes in the concentration. Due to their extreme halophilic requirements, the staining of these organisms is very difficult. The optimum temperature for growth is 50° to 55° C. Both forms are strictly aërobic and produce neither gas nor acid in carbohydrates. Both forms will tolerate indefinite exposure to the brightest sunlight. In all probability the brilliant pigmentation is a protection against the bright sunlight in the salina of the tropics where the sea salt is produced. Likewise their tolerance to heat and salt indicates such an origin. Influenced by low temperatures and accumulation of metabolic products these organisms suffer a temporary loss of pigment which is regained on reincubation at high temperatures. In the spirochete this loss of pigmentation is accompanied by the formation of coccoid bodies. The peculiar characteristics of these organisms augmented by bacteriological examinations of the sea salt and observations at the point of production have demonstrated that reddening of salted fish is due to the *Spirocheta halophilica* and the *Bacterium halophilica* which are present in the solar evaporated sea salt with which the fish are cured. Sea salts from all over the world contain similar organisms.

149 (1896)

An appliance to be used with a gasometer for recording the volume of each expiration.

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The appliance, as demonstrated, is used with a gasometer in

which the bell is suspended by a wire passing over a grooved wheel and continuous with a length of steel measuring-tape, which in turn suspends the counterweight.

The appliance consists of a large and a small grooved wheel mounted on a single axle; from the small wheel a silk thread suspends a double magnet fitted with a hinged iron armature, which, on magnetization, firmly grasps the measuring tape of the gasometer. From the large wheel is suspended a counterweight which outbalances the magnet, permitting the weight to sink to the bottom of its guiding channel.

The tube leading to the gasometer carries an expiratory flutter valve; from the subject's side of this valve, a short take-off leads to a large tambour which operates a riding-arm, making and breaking a current during expiration and inspiration respectively.

At the beginning of expiration, this contract is made a fraction of a second before the gasometer bell begins to move; a relay closes the current which operates the magnet, causing it to firmly grasp the steel tape and ride with it during its full excursion. At the beginning of inspiration, the tambour breaks the circuit, the magnet releases the tape, and the counterweight drops to its original position. The counterweight carries a pen which records its movements on a revolving drum.

150 (1897)

Observations on the reaction of the blood of infants with acute intestinal intoxication with the phosphotungstate reagent.

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In a previous paper[1] on chemical examinations of the blood in cases of infants and children with acute toxic gastro-intestinal symptoms (cholera infantum), it was noted that in some an intense blue color was obtained using only the phosphotungstic reagent after the uric acid had been precipitated with silver lactate. This blue color was often six to eight times more intense

[1] Schwarz, H., and Kohn, J. L, *Am. J. Dis. Chil.*, 1921, xxi, 471.