

(1) Cover smear with gentian-violet stain, heat to steaming point, wash. (Gentian violet 3 grams, aqua 100 c.c., add 9 c.c. of this stain to 1 c.c. of the following; gentian violet 2 grams, analin gentian oil 9 c.c., absolute alcohol 63 c.c. The above are "stock" solutions; the mixture should be freshly prepared as it will not keep.)

(2) Cover with a solution of 1 part iodine, 2 parts of potassium iodide, and 300 parts water for 1 minute, or until smear is dark brown, wash in 95 per cent. alcohol until blue color ceases to run.



FIG. 48.—Diphtheria bacillus (bacillus diphtheriae) of Loeffler. Pleo-morphic, non-motile, non-sporogenous, non-flagellate, non-liquefying, non-chromogenic, aerobic, readily cultivated and stained by all methods. F. F. Westbrook has described (a) a virulent type with clubbed extremities and polar granules, (b) granular type, (c) barred type, (d) solid type. (Greene.)

(3) Stain with Bismarck brown or safranin for thirty seconds, wash, dry and mount.

Diplococci lying within pus cells, which take ordinary stains but are decolorized by Gram's method and then take the brown counter-stain are to be considered as gonococci.

The following important organisms do not stain by Gram's method ("Gram-negative"): Neisser's gonococcus, Friedlander's pneumobacillus, bacillus typhosus, bacillus coli communis, influenza, diplococcus

intracellularis meningitidis and numerous others.

### III. KLEBS-LOEFFLER BACILLUS of Diphtheria.—

Take a swab from the suspected pseudomembrane by means of a sterile whisp of absorbent cotton wound on the end of a probe, smear over the surface of a culture tube containing a "slant" preparation of Loeffler's blood-serum mixture, and place in thermostat for twelve