Fig. 17. A gland of the stomach in profile; *a*, surface of the stomach; *b* above, opening of the gland; *b* in the middle and below, its cavity; *c*, *d*, its walls; 500 diam. Just hatched.

Fig. 18. Section across the thick intestine, 500 diam.; *a*, *a'*, columns of cells of the mucous membrane; *b*, stratum of round cells; *c*, inner, and *d*, outer muscular coats; *e*, thin membrane inclosing the whole intestine; fig. 18a, the same as fig. 18, *a*, and *a'*, being seen in one focus; fig. 18b, two columns of cells separated so as to disclose the mesoblasts; fig. 18c, *a*, *b*, cells of fig. 18, segmenting; the same as fig. 17.

Fig. 19. Section across the long intestine, 500 diam.; *a*, *b*, *c*, *d*, *e*, as in fig. 18; the same as fig. 17.

Fig. 20. One of the claws, 25 diam.; *a*, horny sheath; *b*, interior cells of the claw; *b'*, cells at the base of the claw; fig. 20a, cells of the horny sheath, 500 diam., in profile; fig. 20b, the same as fig. 20a, view perpendicular to the surface; fig. 20c, cells at the end of the horny sheath, 500 diam.; fig. 20d, cells of the skin of the next joint, just beneath the sheath, 500 diam. Period of laying unknown, opened Aug. 25, 1852.

Fig. 21. The bone of the claw, 40 diam.; fig. 21a, cells at the surface of fig. 21, 500 diam.; the same as fig. 20.

Fig. 22. Cartilaginous matrix of a bone of the toe, 500 diam.; fig. 22a, separate cells of fig. 22. Period of laying unknown, opened in Sept., 1852.

Fig. 23. Cells at the surface of the foot, 500 diam.; the same as fig. 22.

Fig. 24. Piece of the bone of the toe, 500 diam.; the same as fig. 22.

Fig. 25. Interior cells of the foot, 500 diam.; the same as fig. 22.

Fig. 26. Cells of the shield, 500 diam.; the same as fig. 22.

Fig. 27. Cells of the ear, 300 diam. Laid July 18, opened July 28, 1852.

Fig. 28. Cells of the eye, 300 diam.; *a*, cells of the retina; *b*, skin of the head; *c*, passage-way to the brain; the same as fig. 27.

Fig. 29. Crystalline lens taken out of the eye with the surrounding membranes, 40 diam.; *a*, membrana pupillaris; *b*, pigment layer on the zonula Zinnii (*c*). Period of laying unknown, opened in Aug. 1852.

Fig. 30. Portion of the crystalline lens, 300 diam.; *a*, the converging ends of the fibres *b*; the same as fig. 22.

Fig. 31. The converging ends of the fibres of the crystalline lens, 300 diam.; the same as fig. 29.

Fig. 32. Part of a section through the centre, from front to back, of the crystalline lens; *a*, the ends of the fibres, 40 diam.; fig. 32a, *a*, *b*, *c*, *d*, four fibres of fig. 32, 500 diam.; fig. 32b, large globules intermixed with the fibres, 500 diam.; fig. 32c, portion of a fibre twisted so as to show a combined view of the edge and of the flat side, 500 diam.; fig. 32d, ends of fibres swollen by water, 500 diam. Period of laying unknown, opened Sept. 9, 1852.

Fig. 33. Section of the thickness of the retina at a point midway between the front and back of the eye, 500 diam.; *b*, *c*, cells of the inner or first layer; *d*, second layer; *e*, *f*, third layer; *g*, fourth layer; *h*, *i*, membrana Jacobi; *i'*, outer prolongations of *h* and *i*; fig. 33a, cells of the membrana Jacobi, with their yellow and orange mesoblasts, 1100 diam. Hatched Oct. 1855.

Fig. 34. Profile of the mucous membrane of the thick intestine, 500 diam.; fig. 34a, surface view of fig. 34, altered by water; *b*, a group; *c*, single cell; 500 diam.; the same as fig. 15. These two figures are between fig. 14 and fig. 15, and erroneously marked 20 and 20a.

PLATE XXII.

[Drawn from nature, by H. J. Clark.]

Fig. 1, from Thalassochelys Caouana; fig. 7, from Trachemys serrata; all the others from Chelydra serpentina.

Fig. 1. Obliquely transverse section of a rib, 500 diam.; *a*, innermost cartilage cells; a^1, a^2, a^3, successively nearer to the surface of the bone; *b*, innermost layer of the fibrous layer next to the cartilage cells; *b*, *c*, *d*, *e*, *f*, *g*, successively nearer to the surface of the bone; *h*, corium; g^1, granular, hardened fibrillæ of the outer layer of the bone: h^1, similar soft fibrillæ of the corium; fig. 1a, a single cartilage cell, 800 diam.; *a*, parietes of the blastematous cavity; *b*, cell wall shrunk; *c*, mesoblast; fig. 1b, the same as fig. 1a, 1100 diam. Just hatched.

Fig. 2. Transverse section of a rib; the letters are the same as in fig. 1.

Fig. 3. Strip from the inferior face of a vertebra, 500 diam., view from within; *a*, fibres running in the direction of the length of the vertebra; *b*, more interior layer: *c*, still deeper; *d*, innermost layer; fig. 3a, granular fibrillæ of fig. 3, *b*, 800 diam. Just hatched.

Fig. 4. Transverse section of the interior portion of the ventral half side of a vertebra, 500 diam.; *a*, *b*, granular lining of cells; *c*, ossification encroaching upon the cells; *d*, coarse granular ossification; *e*, mesoblast of the cells; the same as fig. 3; fig. 4a, *a*, *b*, crystals of nitrate of lime.

Fig. 5. Transverse section of the cartilage cells of the coracoid bone, 500 diam.; *a*, blastema; *b*, cells. Just ready to hatch.

Fig. 6. Longitudinal section of fig. 5; *a*, *b*, the same as in