

Fig. 15. A medusa just dropped from the hydra. Feb. 14, 1855. Natural size.

Fig. 15<sup>a</sup>. The same as fig. 15, magnified about 40 diameters. *a* remains of the chymerous channel of the peduncular attachment; *b* outer wall of the proboscis; *c* radiating tubes; *c'* circular tube; *d* fold of the innermost wall; *d'* transverse fold of the inner wall; *e* aperture of the proboscis.

Fig. 16. A young free medusa, in a dying state, compressed and folded longitudinally. Seen from the abactinal end. *a* innermost wall receding from the disk (*b*); *c* radiating tubes; *d* digestive cavity. 100 diameters.

Fig. 17. View from the abactinal end of a medusa a little older than fig. 15<sup>a</sup>. *a* the veil; *b* circular tube; *c* proboscis; *d* digestive cavity; *e* innermost wall; *e'* point of attachment of *e* to the disk. 100 diameters.

Fig. 18. About the same age as fig. 17, but very much contracted. *a* longitudinal folds; *b c* corrugated lines on the outer surface of the disk. 125 diameters.

Figs. 19, 20, 21, 22, 23, and 24 are all lettered alike. *v* the vitelline sac; *y* yolk; *p* Purkinjean vesicle; *w* Wagnerian vesicle; *v'* Valentian vesicle.

Figs. 19, 20, 22, 23, and 24. Various stages of development of the eggs of a full-grown free medusa. May 17, 1855. 500 diameters.

Fig. 21. An egg from fig. 15, Pl. XVII. 500 diameters.

Fig. 21<sup>a</sup>. A layer of eggs from fig. 15, Pl. XVII. *a* outer and *b* inner wall of the proboscis. 400 diameters.

Figs. 25 and 25<sup>a</sup>. Spermatic particle of a full-grown free medusa. Fig. 25, 500 diameters; fig. 25<sup>a</sup> exaggerated, the better to show the form.

## PLATE XIX.

## CORYNE MIRABILIS Ag.

[All the figures are drawn from nature by H. J. Clark.]

Fig. 1. A portion of the body and a tentacle of a hydra, showing the furrows *g g'* in the outer wall *b b'*. *f* globular mass of lasso-cells. 500 diameters.

Fig. 2. Portion of the body and a sectional view of a partially extended tentacle. *a* outer wall of the body in profile; *a'* the same as *a*, in a full view; *a'' a''' a''''* cells of the inner wall of the tentacle; *b* outer wall of the body; *b'* outer wall of the tentacle; *c* horn-like sheath; *d* outline of the digestive cavity; *e* space between the outer and inner walls of the tentacle;

*f* layer of lasso-cells at the tip of the tentacle; *g* processes around the mesoblast of the cells of the tentacle. 400 diameters.

Fig. 3. Surface view of a tentacle. *a b* cells of the inner wall; *c* outer wall; *d e g* profile of cell walls of *a b*; *f* globular mass of tentacles. 300 diameters.

Fig. 4. Sectional view of the body just below the tentacles. *a* inner wall; *b* outer wall; *c* horn-like sheath; *d* digestive cavity. 500 diameters.

Fig. 5. Lasso-cell of a hydra. *a* wall of the cell; *b b'* axial column, which corresponds to the base of the lasso-thread; *c* the anchors; *d* coil of the lasso; *f* aperture. 1100 diameters.

Fig. 5<sup>a</sup>. The same as fig. 5 uncoiled. *a* the empty cell; *b* thicker part of the base of the lasso-thread; *b'* where the thread begins to taper; *c c'* the anchors or barbs. *c'* is seen through *b*; *d* the thread; *d'* end of the basal portion; *e* cavity of *a*; *f* aperture of the cell.

Fig. 6. Lasso-cell from the proboscis of a full-grown free medusa. *a* profile of the spiral coil *d*; *f* aperture of the cell. 1100 diameters.

Fig. 6<sup>a</sup>. The same as fig. 6, but the basal portion of the thread everted. *a* the inverted thread passing through the basal part back to the coiled part *d*.

Fig. 7. Edge of the disk and a tentacle of fig. 13, Pl. XVII, principally to show the cellular structure of the outer wall (*a'*) of the tentacle, and disk (*a*); *b* wall of the radiating tube; *b'* inner wall of the tentacle, continuous with *b*; *c* circular canal; *d* cavity at the base of the tentacle; *d'* channel of the tentacle; *e* innermost wall of the disk. 400 diameters.

Fig. 7<sup>a</sup>. The outer wall of the disk of fig. 7 in profile, and more highly magnified. *a* outer ends; *b* inner ends. 500 diameters.

Fig. 7<sup>b</sup>. Superficial or end view of fig. 7<sup>a</sup>.

Fig. 8. Eye-speck of fig. 15<sup>a</sup>, Pl. XVIII. *u* outer wall, and *v* inner wall, of the exterior base of the tentacle; *w* a lasso-cell. 1100 diameters.

Fig. 8<sup>a</sup>. A few oily globules from the dark mass of fig. 8.

Fig. 9. The edge of the disk and the base of a tentacle of the medusa of fig. 12, Pl. XVII. *a* outer wall of the tentacle; *b* circular tube; *d* entrance of *b* into the radiating tube (*c*); *e* innermost wall of the disk. 200 diameters.

Fig. 10. Profile section of a part of the disk and radiating tube of a medusa about ready to drop from the hydra. *a* wall of the tube; *b* innermost wall, and *b'* middle wall, of the disk; *c* outermost wall. 500 diameters.