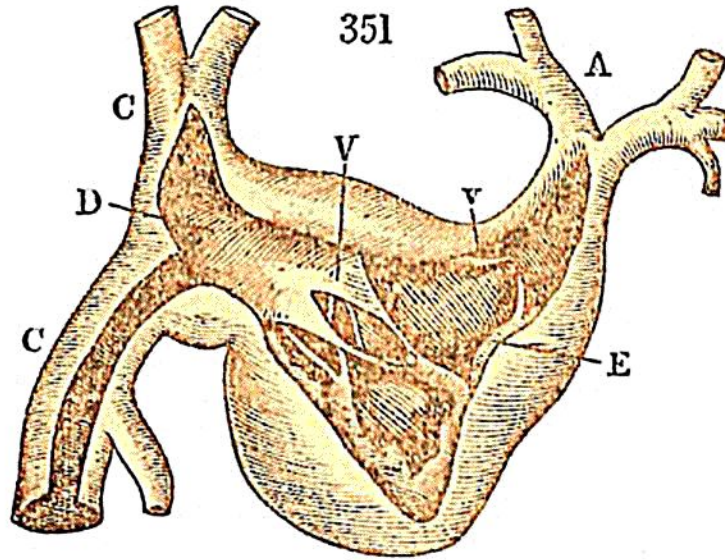


additional securities against the retrograde motion of its fluid contents. Valves are accordingly interposed between the auricle and ventricle; and great refinement of mechanism is displayed in their construction. Fig. 351 represents their



appearances (at *v*) when the cavities, both of the auricle (*D*), and the ventricle (*E*) are laid open: *c, c*, as before, being the upper and lower venæ cavæ, and *A*, the main trunk of the aorta. These valves are composed of two loose membranes, the fixed edges of which are attached circularly to the aperture of communication between the cavities, and their loose edges project into the ventricle; so that they perform the office of flood-gates, allowing a free passage to the blood when it is impelled into the ventricle, and being pushed back the moment the ventricle contracts; in which latter case they concur in accurately closing the aperture, and preventing the return of a single drop into the auricle. These valves being attached to a wide circular aperture, it is necessary that they should be restrained from inverting themselves into the auricle, at each contraction of the ventricle. For this purpose there are provided slender ligaments (which are seen in Fig. 351,) fixed by one end to the edge of the valve, and by the other to some part of the inner surface of the ventricle, so that the valve is always kept within the cavity of the latter. In the auricle, the same purpose is answered by the oblique direction in which the veins enter it.