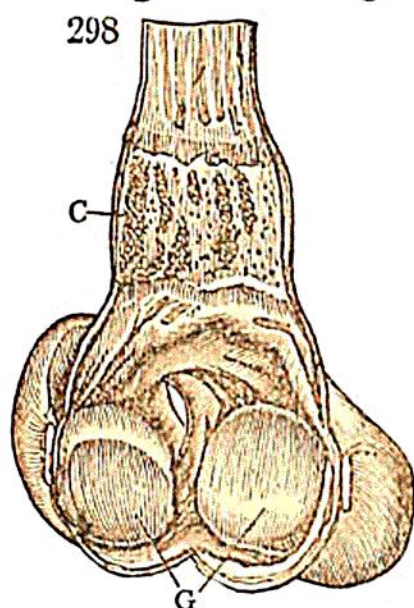


naria. The *Aplysia* has a considerable number of these gastric teeth. An apparatus of a still more complicated kind is provided in most of the insects belonging to the order of Orthoptera; but I shall not enter at present into a description of them, as it will be more convenient to include them in the general account of the alimentary canal of insects, which will be the subject of future consideration.

The internal machinery for grinding is exemplified on the largest scale in granivorous birds; where it forms part



of the stomach itself, and is termed a *Gizzard*. It is shown in Fig. 298, representing the interior of the stomach of a *Swan*. Both the structure and the mode of operation of this organ bear a striking analogy to a mill for grinding corn, for it consists of two powerful muscles (a,) of a hemispherical shape, with their flat sides applied to each other, and their edges united by a strong tendon, which leaves a va-

cant space of an oval or quadrangular form between their two surfaces. These surfaces are covered by a thick and dense horny substance, which, when the gizzard is in action, performs an office similar to that of mill-stones. In most birds, there is likewise a sac, or receptacle, termed the *Crow*, (represented laid open at c) in which the food is collected for the purpose of its being dropped, in small quantities at a time, into the gizzard, in proportion as the latter gradually becomes emptied.* Thus, the analogy between this natural process and the artificial operation of a corn-mill is preserved even in the minuter details; for while the two flat surfaces of the gizzard act as mill-stones, the crow supplies the place, of the hopper, the office of which is

* The gastric glands, which are spread over the greater part of the internal surface of the crow, and which prepare a secretion for macerating the grain, are also seen in this part of the figure.