is the *spinous process*, (s,) which unites the two leaves, and thus completes the superior arch, of which it may be regarded as the key stone, for the protection of the spinal marrow. Then come the two *transverse processes* (T, T) which extend outwards from the sides, and with which the arches of bone, constituting the ribs (R, R) are generally connected. These are the six parts which may be considered as the elements that are most essential, and most constantly present in the composition of the vertebræ. But some other parts may also be noticed as of very frequent occurrence: such are the bony plates which cover the two flat portions of the bodies of the vertebræ, forming the surfaces immediately contiguous to the intervertebral ligament; which surfaces, in some of the lower orders of the vertebrata become articular. There is frequently, also, a development of processes, (F,) forming arches and spines at the lower surface of the vertebræ, or the one opposite to that which gives rise to the superior arches already mentioned. This structure is very generally met with in fishes, and it is observed also in the cetacea. The arches thus formed enclose a large artery, which is the continuation of the aorta, or the main artery running along the back, immediately under the spinal column.

There are still other processes, less constantly present and more variable in their shape. They form articular surfaces for the purpose of being connected with the surfaces of corresponding processes in the contiguous vertebra. Of these there are four (A, A, A, A) belonging to each vertebra, two in front, and two behind. These, however, should not be included among the primary elements of the vertebræ, because we find them, in different instances, occupying different positions, and formed sometimes by extensions of the bodies, and at other times of the leaves. In following them through the several tribes of animals, we observe them shifting their places, in various ways, and not even preserving any constancy in their number. They are wholly absent in fishes: in the crocodile, and other reptiles, they approximate so as to form three articular surfaces, namely, two close to