divide, then join, and again subdivide in such a complex manner that the individual funiculi become interlaced most intricately; so that each branch leaving a plexus may contain filaments from all the primary nervous trunks which form the plexus. In the formation also of smaller plexuses at the periphery of the body there is a free interchange of the funiculi and primitive fibers. In each case, however, the individual fibers remain separate and distinct.

It is probable that through this interchange of fibers, every branch passing off from a plexus has a more extensive connection with the spinal cord than if it had proceeded to its distribution without forming connections with other nerves. Consequently the parts supplied by these nerves have more extended relations with the nervous centers; by this means, also, groups of muscles may be associated for combined action.

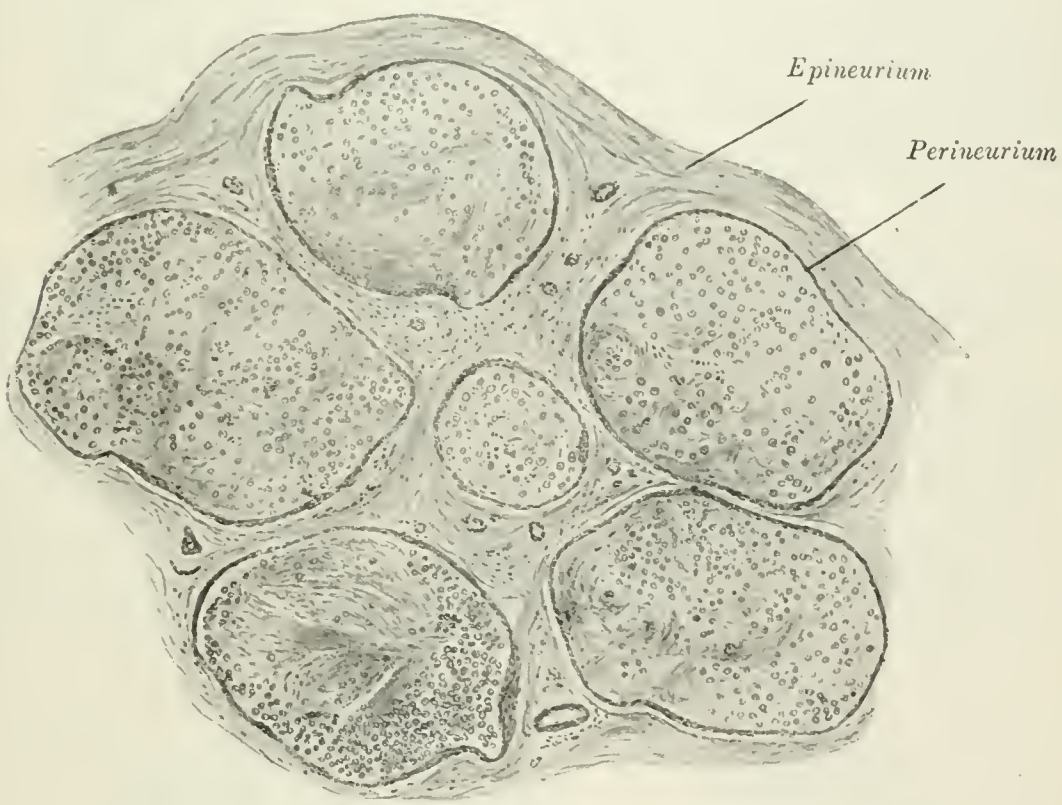

FIG. 636.—Transverse section of human tibial nerve.

The **sympathetic nerves** are constructed in the same manner as the cerebrospinal nerves, but consist mainly of non-medullated fibers, collected in funiculi and enclosed in sheaths of connective tissue. There is, however, in these nerves a certain admixture of medullated fibers. The number of the latter varies in different nerves, and may be estimated by the color of the nerve. Those branches of the sympathetic, which present a well-marked gray color, are composed chiefly of non-medullated nerve fibers, intermixed with a few medullated fibers; while those of a white color contain many of the latter fibers, and few of the former.

The cerebrospinal and sympathetic nerve fibers convey various impressions. The **sensory nerves**, called also **centripetal** or **afferent nerves**, transmit to the nervous centers impressions made upon the peripheral extremities of the nerves, and in this way the mind, through the medium of the brain, becomes conscious of external objects. The **centrifugal** or **efferent nerves** transmit impressions from the nervous centers to the parts to which the nerves are distributed, these impressions either exciting muscular contraction or influencing the processes of nutrition, growth, and secretion.

Origins and Terminations of Nerves.—By the expression "the terminations of nerve fibers" is signified their connections with the nerve centers and with the parts