Figure 493, *d*, is the cross-section of a rachitic femur with curvature and pilaster-formation in the upper third, which shows clearly the anterior pilaster, as we mentioned it above. It has been attempted to trace the cause of the pilaster in all cases back to rachitis; this is wholly unfounded. The pilaster is formed always when the demands upon the bone continually approach its ultimate strength, so that the elastic flexures produce sufficient excitation for the apposition of bone substance; it is quite indifferent whether this limit is reached through excessive demand or through insufficient strength. We may therefore trace this characteristic of the Anau femora, and indeed also their strong curvature, to very considerable exertion on the part of the lower extremities, which, as we shall see later, has also produced considerable changes in the tibia.

The upper end of the diaphysis shows scarcely anything worthy of remark. The index of the diaphysis cross-section amounts here to 85.3 and 82.3 respectively; it is therefore at the limit between platymerism and eurymerism. On the other hand, the lower end shows a shaping differing essentially from the form of that of the modern European. The anterior surface is here considerably more depressed. It is also strongly inclined towards the medial side; on the other hand, the planum popliteum is also inclined toward the medial side, so that a very considerable narrowing of the bone is caused on this side, which shows itself in a triangular cross-section (fig. 493, *c*). In contrast to this, the corresponding cross-section of a European femur has a much more rounded form (fig. 493, *f*). The preponderance of the lateral sagittal diameter is clearly recognizable when we express it in percentage of the sagittal diameter of the median plane. We find here an index of 133 right and 137 left.

A further peculiarity in the form of the Anau femur is the rather abrupt attachment of the lower epiphysis upon the diaphysis, in contrast to the gradual "trumpet-like" flare present in the more common European form (plate 94, fig. 4). This sudden enlargement of the end of the slender diaphysis is very pronouncedly present in the man of Neandertal and in Spy I. Martin (1905, p. 617) has described this form also in the Senoi femur. Plate 94, fig. 4, shows the lower end of the femora of Neandertal, Anau I, and of a modern European.

An examination of the upper epiphysis shows a striking torsion of the collum. If we imagine a plane laid through the head, the trochanter major, and the saddle-point of the lower joint-surface, we shall see that the greatest diameter of the collum forms with this plane an angle which, according to Lehmann-Nitsche (1894, p. 25 and p. 43), amounts to 19.5° in the Bajuvars; 17° in the Suebians and Alemanni; in the Anau I femora, both right and left, this angle reaches 33°. In the Neandertal femur we find this torsion angle of the collum = 26°. A high value for this angle would seem from this to be a mark of primitive form.

The linea obliqua is strongly developed and stands remarkably steep, reaching the medial edge about 4 cm. below the trochanter minor. It forms with the axis of the diaphysis an angle which we can mark with a needle and measure direct with the protracter. It is 19° right, 17° left. In the Neandertal femur, which has the linea obliqua very faintly indicated, this angle is about 22°; in the Senoi