pile or cone ("*cone de déjection*"; "*Murbrüche*" [164]), with the apex pointing up the water-course. Huge accumulations of bowlders and shingle may thus be seen at the foot of such torrents—the water flowing through them, often in several channels which reunite in the plain beyond. From the deposits of small streams, every gradation of size may be traced up to huge fans many miles in diameter and several hundred feet thick, such as occur in the upper basin of the Indus[165] and on the flanks of the Rocky Mountains,[166] as well as other ranges in North America (Fig. 126).[167] The level of the val-

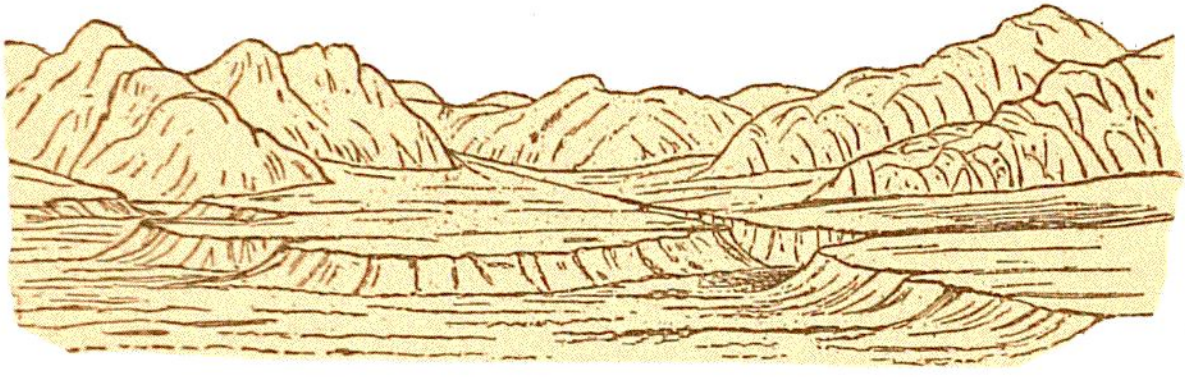

Fig. 126.—Fans of Alluvium. Madison River, Montana.

leys in the Tyrol has been sensibly raised within historic times by the detritus swept into them from the surrounding mountains. Old churches and other buildings are half-buried in the accumulated sediment.[168]

(*b*) In River-beds.—The deposition of alluvium on river-beds is characteristically shown by the accumulation of sand

[164] G. A. Koch, Jahrb. Geol. Reichsanst. xxv., 1875, p. 97, describes the debacles of the Tyrol. Consult also the work of Surell and Cézanne cited on p. 630.

[165] On the alluvial deposits of this region, see Drew, Q. J. Geol. Soc. xxix. p. 441; also his "Jummoo and Kashmere Territories," 1875.

[166] See Dutton's "High Plateaus of Utah." Hayden's "Reports of the U. S. Geological and Geographical Surveys of the Territories."

[167] In the great inland basin of North America, which includes the arid tracts of Great Salt Lake and other saline waters, the depth of accumulated detritus must amount in many places to several thousand feet. See on this subject I. C. Russell, Geol. Mag. 1889, and Gilbert's Essay on Lake-Shores in the 5th Annual Report of the U. S. Geol. Surv.

[168] G. A. Koch, Jahrb. Geol. Reichsanst. xxv., 1875, p. 123.