

rent of smoke, the Indian simply takes his blanket and by spreading it over the small pile of weeds or grass from which the smoke takes its source, and properly controlling the edges and corners of the blanket, he confines the smoke and is in this way able to retain it for several moments. By rapidly displacing the blanket, the operator is enabled to cause a dense volume of smoke to rise, the length or shortness of which, as well as the number and frequency of the columns, he can regulate perfectly, simply by a proper use of the blanket. (*Custer's Life on the Plains, loc. cit., p. 187.*)

They gathered an armful of dried grass and weeds, which were placed and carried upon the highest point of the peak, where, everything being in readiness, the match was applied close to the ground; but the blaze was no sooner well lighted and about to envelop the entire amount of grass collected than it was smothered with the unlighted portion. A slender column of gray smoke then began to ascend in a perpendicular column. This was not enough, as it might be taken for the smoke rising from a simple camp-fire. The smoldering grass was then covered with a blanket, the corners of which were held so closely to the ground as to almost completely confine and cut off the column of smoke. Waiting a few moments, until the smoke was beginning to escape from beneath, the blanket was suddenly thrown aside, when a beautiful balloon-shaped column puffed upward like the white cloud of smoke which attends the discharge of a field-piece. Again casting the blanket on the pile of grass, the column was interrupted as before, and again in due time released, so that a succession of elongated, egg-shaped puffs of smoke kept ascending toward the sky in the most regular manner. This bead-like column of smoke, considering the height from which it began to ascend, was visible from points on the level plain fifty miles distant. (*Ib., p. 217.*)

SMOKE SIGNALS OF THE APACHES.

The following information was obtained by Dr. W. J. HOFFMAN, from the Apache chiefs named on page 15, under the title of TINNEAN, Apache I:

The materials used in making smoke of sufficient density and color consist of pine or cedar boughs, leaves and grass, which can nearly always be obtained in the regions occupied by the Apaches of Northern New Mexico. These Indians state that they employ but three kinds of signals, each of which consists of columns of smoke, numbering from one to three or more.

Alarm.

This signal is made by causing three or more columns of smoke to ascend, and signifies danger or the approach of an enemy, and also requires the concentration of those who see them. These signals are communicated from one camp to another, and the most distant bands are guided by their location. The greater the haste desired the greater