

Miscellaneous.

THE PEAK OF ORIZABA.

A correspondent of the New Orleans *Picayune* gives a graphic description of an ineffectual attempt in January last, by a company numbering twenty or more, to scale the snowy peak of Orizaba, according to Humboldt the highest peak in Mexico, and the handsomest in the world. The party had resolved on treading where a white man's foot never ventured before, and anticipated remaining upon the mountain two nights at least. The correspondent describes the incidents of the first day's ascent, and continues:

At sunrise we reached the stone chapel and tower, 13,000 feet above the level of the sea. One after the other our company filed into the gateway for the night. Of its origin, there is no history—of its age, generations long since dumb knew naught. But a shepherd would not cross its threshold at night time, nor seek shelter from a storm, if a coronet were offered him. The frost that night was sharp and heavy; the bare hard earth was white, and the morning light revealed the neighboring stream iced over as it slept almost on the narrow level above the abysses. The air drifted down from the snow region, and man and horse shivered in the blast. Thermometers were low, and so were the spirits of the party. Complaints were many, and enthusiasm had flagged alarmingly. A vote then would have disclosed two-thirds of the party in favor of retreating. From this point there was no horse-path. Here ended all signs of human or animal travel, and upward, for 5,000 feet, in interminable layers of rock and cinders, and above these, and on the pyramidal ridges from the ruined tower gleamed in the sun, until one's head became dizzy at the sight, close packed snow and thousands of ice-pinnacles.

Over these we were to clamber before reaching the summit. Some of the party breathed heavily even at this height, and were averse to proceeding further. Horses were picketed within the walled yard of the ruined chapel; artists packed their apparatus, engineers their instruments, and with a plentiful supply of the brandy in each man's pocket, the guides were directed to commence the ascent. Then followed promiscuously, Americans, Englishmen, Mexicans—one after the other, singing, whistling and jesting as we trudged along. Not long did these noisy demonstrations last, however, for the breath came hard, and the hand, and feet, and senses were required for the hazardous journey. As we advanced new difficulties arose; ledges were precipitous and barely passable; rocks of round sandstone came rolling and sliding downward by us; drifts of snow from the topmost ridges glided swiftly from their places as the sun rose in the heavens; and huge, flat ice blocks at times came whirling by us like cannon balls.

When on a rise of 14,000 feet the party separated, some taking the high snow ridges; others the gorges or gullies. There is a mean difference in height between the two—often 800 feet. The gullies run up to the summit, with occasional breaks, parallel with the ridges; and the surface composed of *debris*—a collection of centuries—a spongy, black earth, through which we sank to the knees, and where no snow or ice lay, but through which, at noon-day, ran the drippings that trickled from the high snow cliffs. The fountains, winding through the gorges, increased as they descended, and uniting sometimes below swept in a thundering torrent down the mountain side. These streams had worn beds a hundred feet deeper yet than the general level of the gullies. The formation of rocks and earth differed in no wise from that further down. Here and there lay huge piles of gray limestone and sandstone, and specks of quartz, promiscuously intermingled, angled, some flat and edged, others with regular layers of time and sandstone; rents, fearfully deep, in the mountain side, disclosed curiously disposed strata of the upper, lower and intermediate sections of geologic formation. Great gaping mouths in the rocky sides sent out sulphuric fumes; and in one mammoth opening lay heaps of sulphur, and further back pillars of purplish stone (the result of drippings) 30 feet high. There are no evidences of recent eruptions, (perhaps none for 200 years,) but the fact that the summit is

bare and black, and that occasional whirls of smoke are emitted from the crater, indicates the smouldering condition only of the volcano at present.

The ascent was continued in an almost direct line toward the top. Up to within 2,000 feet of the summit level, the whole feet were in motion, but scattered at great distances from each other, some almost out of sight on the conical cliffs; some toiling abreast up the dark gulleys. At this time some began to fail and fall by the way; blood began to pass from nose and ears, and faces were swollen so that old friends knew each other only by the dress. A few continued the journey 1,000 feet higher, lay down, slept on the snow or black dust, gasped for breath and awoke. Some dropped every few minutes—it was impossible to keep awake all the time—but started up again as soon, catching the breath. The painful, oppressive atmosphere weighed heavily upon the loaded artists, and they with one accord, and without parley, turned and retraced their steps towards the spot where fell early the unambitious and weak-lunged. Those on the ridges sent whirling under their feet rocks and patches of black earth and ice clefts, that seemed to hang in air above the affrighted explorers in the gullies beneath. Land and snow sections were continually started under the feet of those above; and snowdrifts often fell, burying us at times in the *debris*.

The sun was by this time in mid-heaven, and beat down fiercely, blinding us, and starting a thousand little rills from the exposed ledges that seemed in the sunbeams silver veins, as they slid noiselessly down the tall ice pillars, and ran along the rocky sides, clear as crystal, till they went foaming and leaping into the surging stream below. No sign of tree, or shrub, or grass blade, or hardy flower—all silence, and snow, and black desolation; rifted rocks, wierd, unseemly piles of frozen earth and ice, upward—mist and cloud below; the sun and sky, deep blue, overhead; beneath, the cloud-field and the abyss. Artists were out of sight under the clouds, descending; engineers and others lay down or staggered at points on the way, incapable of willing or acting, and calling upon those in front to return. Falling rocks became more frequent; boulders, undermined by the thaw of ice, came spinning after each other at fabulous rates of speed. Snow banks would start off themselves from their places, and with a sharp cutting sound, drop into the abyss and be seen no more. Shafts of ice 30 feet long, loosened by the falling boulders and snow slides, slipped from their moorings, fell upon the sandstone cliff below, ground into fragments, and bounding onward between sun and cloud, sparkling like diamonds as they fell. The winds were sharp and cold, but not high. Sometimes, in the deep hollow, it struck the sharp crag, and shrieked like the night tempest on a rocky reef. Once, and once only, it chopped round and swept the mass of cloud away eastward, and then distant landmarks, and cities, and plains were visible. Popocatepetel and all the Mexican volcanoes were distinguishable, and with a good telescope we looked out over the Chiquite Mountains into the placid waters of the gulf. In a few minutes the wind shifted, and cloud and mist trooped back again and hung with a sort of affectionate embrace, around the mountain top and sides.

Sound at this height was very distinct, although it appeared distant when actually near. Amid the silence that reigned, the snapping ice shafts and snow-slides, and falling rocks, and even the little waterfall fell painfully upon the ear. The crashing noises one experiences in caverns, when a stone strikes the floor, or a rill plays upon the rock, resemble nearly the sensation; and when a boulder broke upon the lower ledge, the sound quivered with a vibratory motion for a long time before it died away. The sense of isolation is acute, existence is a dream; the senses half benumbed, memory in a mist, and thought lost in a maze of uncertainty. Were it not indeed for the continuous struggle to retain vitality, the sensation of losing breath, and the constant loss of blood, one might easily be induced to dream on in a seeming sleep on a sunny snow ledge or cinder gorge.

We are now nearly 16,000 feet above sea level. Distinctly, as if at our elbow, the sound of the guide's feet striking the solid drift, 1,000 feet away, fell upon the ear. Evidently the Indian pilots, who did not count upon our advancing so far, became alarmed and indicated a

wish to return. But Gen. S— urged them forward, taking himself a narrow, conical ledge, pushed after toward the summit. Notwithstanding the pretentious knowledge of these natives, it is very much doubted whether any living being advanced further toward the summit than our party did.

Some time during the war with Mexico, twenty or more years ago, an army officer—a South Carolinian, I believe—made the attempt to reach the top, but he fell, paralyzed, after reaching the height of 15,000 feet above the gulf. His comrades proceeded no further, but planted on the spot, firmly in the rocks, a stout staff, and on it unfurled the stars and stripes. The flagstaff remains yet in its place, but not a thread of the flag is left—all given to the winds and storm, the hail, sleet and the gale. Two-thirds of our party were out of sight, down the slope; three alone, beside the affrighted guides, held their way. Blood oozed from ears, nostrils and mouth, and veins stood out on the forehead in great black lines. Our footing became more and more uncertain, the ascent abrupt; the stones constantly turning and crumbling away, and sometimes, huge masses of earth, boulders and scoria, loosened by the melting snow, came thundering and hissing from above, fairly flying past our heads, on to the next projecting ledge, and great snow-drifts, broken and crumbled by the colliding rocks, avalanched down upon our heads a perfect storm of snow, and icicles, and black earth, and lava dust. One of the guides, smitten by a passing drift, rolled, half dead, about the hundred feet down the slope, and was buried for awhile in the *debris* of snow and earth. Col. C., a West Pointer, was thoroughly exhausted, and made as incoherent speeches as a toper in his last struggles to maintain consciousness. His broken sentences, low and indiscreet, were indicative of scenes on the Chickahominy, mustering squadrons in cold weather. Down the mountain side, almost under the clouds, lay our English friends, completely demoralized, and seemingly discussing on a lava bank sundry bottles of cognac, unconscious of the dangers threatening their fellow-voyagers in their perilous journey on the treacherous cliff above. The miniature cascades disappeared; even the drippings disappeared from the rocks; for we had passed the line of thaw. Snow was beaten down hard and compact, and glistened like ice as the sun fell upon it. But an abundance of loose rocks lay on the surface, poised for motion at the slightest touch.

The guide started more than one as he picked his way some distance in front. We heard by the footfall that the courageous S— was pushing on. He was within 500 feet of the top, turning into a shallow gulley to avoid the falling boulder, when a sliding, tumbling noise was heard, then a dull click, then a fall, and in a moment a heavy boulder came whizzing by on its downward course, some one called out, "S— has fallen!" The rock struck him on the shoulder, breaking it, and hurled him a hundred feet down the steep gulley. The guide reached him soon after, and we bore him slowly down the steep slope, abandoning for the time our enterprise.

Arrived at the tower, the mountain streams, swollen by the melting snow, went foaming and roaring down their rocky beds. Our horses were picketed as we left them in the morning. We passed another night within the roofless chapel; and with all the quaint stories and goblin fables associated with it, slept soundly till "rosy fingers of morn" streaked the eastern sky; and down again with our wounded comrade into the soft warm winds and pine groves, we picked our way, and yet further on, to the balmy air of the lowlands, where cool streams from the hills, and peak danced merrily through maguey fields, and in the orange shade through broad pampas to the Rio Blanco.

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THE LATEST TRIUMPH OF ELECTRICITY.

The perfect success of the Atlantic Telegraph has eclipsed the splendor of an entirely new discovery in the mysterious science of electricity, brought out by Mr. H. Wilde, of Liverpool, during the past year. It is like the finding of a new continent, the exploration of which is sure to be rewarded with vast and valuable accessions to the domain of human knowledge. So this latest achievement in electrical progress

is not only great in itself, but incalculably important for the promises of good stored within it.

To describe Mr. Wilde's discovery in the limits of this article, and without the aid of diagrams, so as to render it clear to persons unfamiliar with electrical apparatus and processes, would be impossible. It cannot be appreciated without a knowledge of the philosophy of electro-magnetic induction, of which it is, in fact, a paradoxical and unexplained illustration. In a general way, it may be said that the discoverer has found a method of producing electricity in quantities and of an intensity hitherto unknown, by the action of feeble electrical currents upon powerful magnets. Our readers probably remember the magnificent electric light exhibited from the dome of Boston State House on the 4th of July, several years since. The light was so powerful that common newspaper print could be read by it all over the Common. But to produce it required five hundred cells of zinc, carbon and acid; a cumbersome, clumsy and expensive apparatus. Mr. Wilde dispenses with all this, and performs his wonders by the combination of six small permanent magnets weighing only a pound each, a ten-inch electro-magnet weighing three tons (which accumulates and retains the developed electricity, on the same principle as an insulated submarine cable or the Leyden jar), and an armature revolving within an iron cylinder at the rate of fifteen hundred turns a minute. The cylinder is about a foot long, and has a bore of two and a half inches; the armature which plays within it, not touching the sides, is coiled about with insulated copper wire. It is from this armature, when the different parts of the apparatus have been connected and put into operation, that the electricity is evolved and the effects are produced.

These effects are astonishing. An arch of electric light several inches long spans the space between the polar terminals of fixed carbon. This light rivals the sun in its dazzling luminousness. At a distance of a quarter of a mile it throws shadows from the flames of street lamps upon a wall. It beats the sun at taking photographs. In twenty seconds it darkens sensitized paper held at a distance of two feet from the light, as effectually as one minute of full noonday sunshine. This fact when first announced to the scientific world, was received with incredulity; but it is the truth. Two enterprising photographers in England have since put up the machines in their shops, and now do all their copying and enlarging by the new electric light at night. As this part of the photographic business is large and profitable, the discovery is of special importance to persons engaged in it. The production of artificial actinic, or photographic light, has been accomplished to a limited extent by the combustion of magnesium and some patented compounds, but there are practical objections to their use which do not exist in the case of the electric light. Of course the heating power of the flame is intense. It melts seven feet of No. 16 iron wire, and heats to a red heat twenty-one feet of the same wire in an instant. Other effects are not reported; but there is no doubt that the flame would melt platinum in large quantities, volatilize gold, and perform all the other difficult feats. These achievements appear truly marvellous when it is remembered that the electricity from the magneto-electric machine is of itself sufficient to heat to redness the smallest piece of iron wire. The magnets and the revolving armature do all the work.

Now here, assuredly, is a great discovery. What is the full scope of the possibilities opened up by it no one can tell, nor intelligently conjecture. The cost of the apparatus is small, the waste of materials trifling, and where the motive power for driving the armatures is already at hand, the expense of working would be nominal. The operation is continuous and reliable, and the only objection brought against the machine is the noise caused by the revolving armatures, which could probably be obviated. A complete machine, made under the direction of the inventor, will soon be brought to this city and exhibited. The utilization of its extraordinary powers, which first presents itself to the mind of most persons, is, probably, the lighting of Broadway. A light which would enable people to read a quarter of a mile away would leave nothing to be desired. Twelve such lights would perfectly illuminate Broadway from the Battery to Fourteenth