THE CAÑON FROM GRAND VIEW

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The Yellowstone National Park

The Yellowstone region—that semi-mythical wonderland of yesterday—has become a fascinating reality to the traveler of to-day.

Late in the sixties the attention of the world was directed to an unexplored region in the northwestern corner of Wyoming.

Strange rumors had been set afloat concerning the existence there among the Rockies, near the head-waters of a river called the Yellowstone, of an almost inaccessible plateau, where mysterious phenomena of a most startling character were grouped as in an enchanted amphitheater.
Accordingly a number of exploring-parties were sent out to confirm or to disprove the extravagant statements that had long been rife. When the leaders of these expeditions, on their return to civilization, submitted their reports, these were at first received incredulously; the world would not believe that wonders such as they described existed elsewhere than in the imagination of the daring travelers. But as the witnesses increased in number doubt gave place to belief, and the world awoke to the importance of their revelations. It was soon proved that a new Wonderland had been discovered; and Congress, acting with commendable promptitude, decreed that this territory where Nature had assembled so many of her marvelous creations, this land she had so long shrouded in mystery, should be set apart as a perpetual playground for the Nation.

Ask any traveler who has visited the Yellowstone National Park to describe it and he will reply, ""It is indescribable."

My task is therefore not an easy one, since it is to describe the indescribable.

Returning in August, 1896, from Greece to the United States, I was dreading the long midsummer railway-ride over fully two thirds of our broad continent. ""But,"" said a friend, ""why
do you go by rail? Why don’t you travel west by water?” The thought was new to me, and I at once resolved to take advantage of that splendid water-way which leads from the Empire State to the Gates of the Great Northwest. Accordingly the porter is given instructions to “put us off at Buffalo,” where we begin our long voyage around America’s vast inland seas. Well worthy the name of seas are the waters traversed by the great snow-white leviathan, the “Northland.” From
New York State to Minnesota the traveler may speed in a luxurious steamer, almost at railway pace.

Of the most delightful voyage through Erie, Huron, and Superior I shall say little; exhilarating as are the fresh lake winds, and lovely as is the expanse of water over which we speed, the winds and waters do not lend themselves to illustration; but among the few events that call for pictorial record is the arrival at the gay summer port of Mackinac, reached on the second morning. The summer colony turns out in force to welcome us. Newspapers which are brought on board tell us that throughout the length and breadth of the land people are dying from the effects of the intense August heat. With selfish pleasure we recall two days of
fresh, cool breezes, and thank our stars that we have wisely chosen to travel west by the water route.

On the pier we find a happy crowd of people whose only object in life is to keep cool and to enjoy themselves. Many of our fellow-passengers leave the ship at Mackinac, but their places are taken by others who embark for an excursion to the famous "Soo," the gateway to Lake Superior.

We reach the "Soo," or, properly, the city of Sault Sainte Marie, in the late afternoon. The "Northland" glides into a splendidly constructed lock; the lower gates are closed; suddenly the water
at the upper end begins to act as if a geyser were striving to break forth, and slowly, steadily, lightly, as if instead of solid steel she were made but of snowy paper, the "Northland" rises eighteen feet, then pauses a moment before steaming northward upon the bosom of Superior to whose level she has been lifted so quietly and without appreciable delay.
We now enjoy a night and a day on the clear, deep waters of our greatest lake, and finally, three days after our departure from Buffalo, we reach Duluth. Thence by rail we hasten to the "Twin Cities," arriving just in time to join the friends with whom we are to travel to the Yellowstone.

Westward we are then whirled over the line of the Northern Pacific Railway, across Dakota and Montana, through the Bad Lands, along the lower course of the Yellowstone River to the little town of Cinnabar, on the border of the park, beyond which Uncle Sam will not permit the iron horse to pass. There are, however, other horses, and excellent ones, too, awaiting us; a four-in-hand coach has been provided for our party, and in it we are soon installed with bags and cameras, umbrellas, linen-dusters, and a wealth of expectation. We give the signal for our departure; a crack of the whip, a forward spring of the four horses, and we receive the first impression of a visit to the Yellowstone. It is this: In the foreground the backs of four tugging horses, on either side a mass of scrubby pines, before us a dusty road, and overhead a deep bright sky.
Pictures like this fill the eye for many hours every day, but even this monotony itself is delightful. We drink in health at every breath. As we ride along through this bracing atmosphere, we are in love with life.
Before we weary of the ride, we have entered Gardiner Cañon, where road and river wind between high cliffs. This may be called the outer gateway to the park, and is, in fact, the place where the arriving traveler receives his first hint of the picturesqueness of the great beyond. On rolls our coach, until at last, sweeping out upon a spacious plateau,
we are whirled rapidly up to the landing-stage of the Mammoth Hot Springs Hotel. This hotel is one of a series of four big caravansaries recently established in the park. Not only at the springs, but at the Upper Geyser Basin, at the lake, and at the cañon the visitor will find excellent hotel accommodations, and he need fear no hardships in this much-traveled wilderness.

From the wide veranda we may see the terraces of the Mammoth Hot Springs, which are the first phenomena presented to the tourists' eyes. Let us at once respond to the attraction of yonder magnet, and hasten up the snow-white flank of the formation.
Formation of what, you ask? And the answer is, "Formation of formation"; for the name "formation" is applied not only to the wonderful terraced hill built up by action of the springs, but also to the material or deposit of which it is composed. "Formation" is a word that in time comes trippingly upon the tourist's tongue. "But what is formation?" we ask the voluble guide, who every day leads scores of visitors across it, and from many points of vantage indicates and describes the thousand and one phenomena that here surprise, delight, and mystify. Formation is simply the calcareous material deposited by the overflowing springs whose waters hold in solution carbonate of lime.
Two hundred acres of formation have been thus created. From the valley floor rise terraces on terraces, some of them concealed among the pines far up the mountain-side. Three hours scarcely suffice for a mere visit to the wonders, grouped at many levels; as many days would not afford an opportunity for a detailed examination of them; as many weeks spent in contemplation of them would not enable the spectator to describe them. They are indescribable.

We first make our way over an expanse of snow-white formation. These colorless terraces may be said to be covered with the powdered bones of dead and vanished springs; where the waters have ceased to flow, all beauty and all color disappear. The first touch of color greets us at the terrace called the "Narrow Gauge." Along its crest a number of miniature geysers have raised their little cones. Most of them are content merely to boil and simmer, but their laziness is put to shame by one energetic little spout,
a tiny eruptive spring known as the Baby Geyser. It throws a mighty liquid column, as fat as a pencil, to the astounding height of seven inches. The waters of these springs flowing unceasingly, down the slope, simultaneously build up and tint the ridge. These waters are, however, only apprentices in terrace-building and beginners in the art of terrace-tinting. They are but neophytes, meekly practicing simple exercises through which, in time, they will gain the skill required to construct and color palaces like that of the Orange Geyser, who is a master builder. On a foundation solid in form and strong in color rests a superstructure of exquisite daintiness, its overhanging balconies adorned with richly tinted stalactites, each one of which is shedding liquid pearls.

But, though we are in midsummer, the trees all round about, as if they realized the hopelessness of an attempt to rival this unearthly beauty, put forth no leaves to cover their gaunt nakedness. Beautiful as is this specimen of the waters'
workmanship, it is comparatively insignificant; this is but a single isolated terrace—it is as nothing when we stand below the veritable mountain where the same phenomena are reproduced in countless numbers. But here the fact is vividly impressed upon us that these springs, like mortal men, are subject to the awful law of death—the streams of life are ever changing in their course. To-day they are flowing here from terrace to terrace, bowl to bowl, clothing them all with brilliancy and warmth, creating things of beauty to delight a generation. They will in time forsake this slope, and then it, like the one down which the warm flood coursed in earlier days, will gradually grow white with age, dry with neglect, and finally, enfeebled by the alternating shocks of heat and cold, wind and rain, its graceful, snow-white, death-like forms will crumble to powder to be trampled underfoot by the travelers of future years. But meantime other beautiful structures will have been created. As we turn our
dazzled eyes upon these marvelous productions of an unseen worker, we realize that perennial beauty is destined to reign here, as in the human race, although an impartial providence has decreed that individual loveliness shall be ephemeral.

These things attract and charm us just as flowers do—because of their freshness and their perishability. Were this Pulpit of the Gods hewn in solid rock, were its colors applied in some indestructible lacquer, were we assured that in a thousand years it would not change or fade—why, half its charm would vanish. Just as dewdrops on flowers add to their freshness and their charm, so are these forms made lovelier by the waters which clothe with life every pillar of the colonnade, every curve of the whole structure. A thin veil of water, hot and clear, courses in quick pulsations over the beaded rims and down these tinted pillars until the terrace seems to live. The glorious effect produced by these masterpieces of mineral painting when they reflect the sunshine through a waving, rippling screen of crystal water is impossible of pictured reproduction.

And yet this phenomenon of terrace-building may be easily explained. Nature has furnished here a series of
object-lessons, which, viewed in the light of simple scientific facts, make all the mystery clear. At our feet is a miniature formation where all the details of the grander terraces are minutely reproduced. We see a tiny source of mineral water, a system of little bowls at various levels; here already the construction of the terrace has begun. The waters, as we know, contain calcareous matter; as the water cools and evaporates, this substance is deposited; cooling and evaporation naturally take place more rapidly at the outer rims of the bowls because by the time the water reaches them its temperature has decreased; therefore the deposits at the edge are more quickly made, and thus the rims are gradually
built up until the waters are forced to seek another place of overflow, and recommence their work elsewhere. It has been estimated that to increase the rim an inch in height the water labors for a space of sixty days. The tinting is caused by mineral substances brought with the waters from the inner earth. But why seek to explain this seeming miracle? It is enough that after years of toil the silent forces will produce a thing of such enchanting beauty that man’s desire to investigate is lost in ecstasy of admiration.

It is enough for us that these yellows, browns, and purples are harmoniously blended; that the still warm pools are bluer than the fairest sky or deepest sea; that every line and curve is to the eye as soft as a caress—it is enough that we have felt the thrill born of the contemplation of the beautiful. What care we for calcareous deposits, evaporations, sulphur stains, and iron oxides? Away with them.

Even Minerva, Goddess of Wisdom, whose name one terrace bears, here bids us admire rather than seek to understand. Nor is Minerva the only mythical deity honored here; the name of Jupiter, the Father of the Gods, now dignifies
the grandest of the higher terraces. Born in a pool which measures a full hundred feet across, the waters of Jove’s spring have formed a terrace five acres in extent. Surely the Greeks, had they possessed so wonderful a piece of earth, would not have exiled all their deities to the peaks of barren mountains. This region would have been the Thunderer’s abode and that of his innumerable kindred. Now I could lead you on for hours from pool to spring, from terrace to terrace. I could compare the terraces with their broken rainbows, to shattered spectra, but all my words would not suggest the half of what one glance reveals. I cannot but say, “Go thou and see.” But do not look for beauty in the full glare of noon. The visitor who trudges over the terraces blinded by the crude light of midday sees noth-whites and dingy yel-softer light of evening, or the glow of sunrise best reveals the beauties of the terraces.

We pause to look at a huge cone, which is called “Lib- erty Cap’; it is the
creation of an ancient spring,—a spring that may be said to have committed suicide by building up its crater to such a height that the waters, unable at last to reach the top and overflow, forsook this stately pile and went to labor at an architectural structure less ambitious.

Next morning, and, in fact, every morning during the season, an animated scene is witnessed at the landing-stage of the hotel. Five or six coaches dash up from the huge stables, and eager passengers take their places for the long drive of over one hundred and sixty miles around the park.

We cannot but admire the many excellences of the transportation outfit; splendid Concord coaches, well-cared-for, solid and comfortable; horses, well-groomed and strong; drivers, as skilful as the western driver needs must be. Only one thing is there to criticize,—the utter absence of "local
color” in the raiment of those drivers. Why has not the company seized this splendid opportunity to preserve a costume that once was typical of western life? A corps of drivers, not exactly uniformed, but dressed to fit their parts, in buckskins, broad-brimmed hats, red shirts, and pistol-belts would be an innovation welcomed by every traveler, for travelers demand the picturesque.

But as our skilful whip remarked, “Clothes don’t make the driver.” Of this we are convinced long before the coach enters the picturesque defile that forms the inner doorway to the National Park. It is the famous portal known as “Golden Gate,” and the title Golden Gate is fitting in a double sense; the rocks are golden, while upon this last mile of road traversed much gold has been expended — its construction having cost the government no less than $14,000. But the road, alas, is badly engineered, its grades are steep enough to test the endurance of the strongest horses, its surface is buried in a small Sahara of shifting sand and dust impalpable as air. Fortunately a series of showers...
preceded us and laid the dust along our way. As our coach toils slowly upward, as the murmur of the river grows fainter, as the cliff-like cañon-walls draw nearer and nearer to one another, we forget the steep grades of the heavy road in admiration of scenes through which it leads us. We are but four miles from the springs, and yet we are a thousand feet nearer the skies, two thousand feet above the railway terminus, and seven thousand feet above the sea.

And presently the golden portals slowly open, revealing to us a broad valley circled by mountains and dominated by a cloudland, all of silver. Far off we see the Gallatins, a range whose average altitude above the sea is over 10,000 feet, but the great height of the park plateau reduces mountains to mere hills, disappointing the traveler who looks for towering peaks or Alpine scenery. The great affinity of the lightning for one of the numerous mountains that
surround this plateau led the discoverers to entitle it Electric Peak. It is a sort of giant storage-battery; explorers attempting to attain the summit have been baffled by electric forces, which caused their fingers to prickle and tingle and their hair to stand on end. They had, indeed, a shocking experience.

But leaving behind this huge Leyden jar, we approach, an hour later, a unique feature, a mountain made of glass. That black glistening mass is vitreous matter, obsidian or volcanic glass, formed by the rapid cooling of a great wave of lava. Harder than stone, obsidian has long been a favorite material for the weapons of primitive races, and yonder cliff has furnished the aborigines with countless arrowheads.

It has also furnished opportunities for some of the most magnificent lies ever invented by a prevaricating pioneer. One of
the early explorers became so exasperated by the ridicule with which his stories were received that he decided to give his hearers good and sufficient cause for incredulity. While hunting in this valley, so runs his yarn, he came upon a splendid elk, and being a

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OBSIDIAN CLIFF
good shot he fired at long range. The elk did not even start; a second shot at closer range met with the same result. Therefore he ran toward the animal at full speed, until his career was suddenly arrested by crashing into a vertical wall of glass, so perfectly transparent that he had not noticed it. The elk was grazing peacefully upon the farther side. But not discouraged, our hunter made his way around the mountain only to find that the huge mass of glass had acted like a telescope, and had made him think that he was within a few rods of the game that in reality was twenty miles away.

As we drive on, we skirt a number of pretty lakes and finally, at noon, just as the thought of luncheon obtrudes itself, there flash into view the snow-white tents of "Larry's" famous lunch establishment. What traveler does not remember Larry Matthews and his canvas palace? Who can forget his cheery welcome when, lifting the ladies from the coach, he cries: "Glad to see you! Walk right upstairs,—or would ye rather take the elevator?" And who
can forget the honest Irish face of landlord Larry Matthews? His ready wit is remarkable. Every day he is expected
to be funny from 11 to 2 o’clock, during which hours he must not only delight the inbound tourists, but carefully avoid repeating himself in the presence of those outward bound who lunch here for the second time. He’s hard to catch, however, for his bright sallies come just as freely as do his smiles. As an example of Larry’s quickness, there was in our party an Italian gentleman we laughingly called the Count. “Ah, Count,” uttered Larry, “glad to meet you; but
you know a dollar’s all that’s a count in this café.”

We never know what we are eating at Larry’s busy table d’hôte. He never gives us time to think about the food. He is able to make the people laugh so much and eat so little that the company should meet all his demands for an increase of salary. A lady asks for a glass of milk. “Drive in the cow!” shouts Larry. “A drink of water, if you please,” murmurs a pretty
miss; and Larry with deep solicitude inquires, "Wad ye like it hot or cold?"
And then if one looks wistfully upon the butter or the sauce, he quickly reassures you with the declaration that "there's no extra charge for flies and dust, —always on the bill-of-fare,—a standing order."
This joke, like the dish referred to, is "a standing order"; but although we lunched four times at Larry's, we seldom caught him putting old cylinders in his
phonograph of fun. The eruptions of laughter that occur every day with greatest regularity at Larry’s, certainly cause as much genuine amusement as any of the spoutings of the neighboring geysers. It was at Larry’s that we met the original, Simon-pure “Calamity-Jane,” who twenty years ago was famous as a woman-scout, and served our generals faithfully in many of the Indian wars. As we ride away from Larry’s and the laughter dies away, we begin to hear a
roaring as of rushing steam, and presently we are halted by the sentinel of the geyser regions, who holds aloft a pillar of hissing vapor to warn us that we are approaching danger-

ous ground. We could not, if we would, ignore the Black Growler, whose gruff songs of greeting and farewell will haunt the tourist's memory for years. Day and night, unceasingly, the growler utters his deep, sullen roar. But why called *Black Growler* no one seems to know. Perhaps some blind man may have named it; for just as to the blind a blare of trumpets suggests a brilliant red, so to us, if we shut our eyes, the roar of this great safety-valve sounds *black*. 
As the other features of the Norris Basin are reproduced on a much grander scale elsewhere, we do not linger, but drive on amid the beauties of the Gibbon Canion, where forest and stream combine to charm the eye. And do you realize the importance of the trees and waters of the Yellowstone? The park is a forest-covered region, completely isolated in the midst of a vast tract of treeless deserts. In it there are no fewer than thirty-six lakes, and twenty-five waterfalls, while its streams and brooks are numberless. It is a well known fact that even at the season of low water this generous region sends forth a refreshing flood into the surrounding parched states. No one can estimate the loss that would ensue should this supply be cut off or diminished. Yet the possibility exists. Destroy, or permit the destruction of, these glorious forests that cover almost nine tenths of the park, and the land will become a barren waste. These miles and miles and miles of piny growth insure the life of all the lakes and streams by preventing a too rapid melting of the snow and by luring the rain from the vaporey clouds. The government has most wisely adopted sufficient means for the preservation of the park's green mantle.
but eternal vigilance is the price of the security; our Federal troops who play the part of fireman within the National Park are often called upon to fight fierce battles with the forest flames.

En route once more, a cloud of happy cyclists flits by our coach. Here my cycling friends will ask, "Would you advise a wheel-tour through the park?" Yes, and no. No, for the rider who expects to roll through the Rockies as easily as over city boulevards and parkways. Yes, for the man who thinks fatigue essential to enjoyment, who does not object to roads four inches deep in sand, who can ride up heavy grades, and whose temper is as well trained as his legs. To those who would ride around the park astride a saddle, I commend the plan adopted by these two young ladies, for if the girl in bloomers is not seen scorching through the wilderness a-wheel, she is not absent altogether—she has merely a change of mount. These sensible equestriennes.
triennes are but types of scores who, like them, tour the park in divided skirts. They are, as a rule, members of some itinerant camping-party, their mothers, fathers, aunts and uncles, brothers and sisters, preceding or following them in great white prairie-schooners, of which

large fleets are tacking to and fro across the park in all directions. These people do not patronize the great hotels. They carry tents, supplies, cooking-stoves, and cameras. They come from every state. We talked with people from California, Texas, Michigan, and Maine. In one week during our visit two hundred and seventy-five campers registered at the military post at the entrance of the park; every person entering the park must register and leave his firearms in charge of the guards, unless he prefers to have the lock of every weapon sealed, the seal not to be broken until he passes out again. If the soldiers who here
serve as park policemen find a camper with an unsealed gun, they are at liberty to suppose that the sight of some huge elk or graceful deer has been too much for him. The broken seal may cost him a fine of one thousand dollars, or a long sojourn in the stone house at Fort Yellowstone.

The following queries recently appeared in a daily paper: "How large is the park?" "Is it surrounded by a fence?" "What is the fence made of?" My answers are:

"The park is sixty-five miles long by fifty-five miles wide." "It is surrounded by a fence." "The fence is made of flesh and blood, endurance and courage, and covered with the uniform of the United States cavalry."

As we ride on, we meet other travelers more economical, who, dispensing with tents, wagons, and stoves,
reduce their baggage to such a point that one or two pack horses suffice for transport. We saw one lonely camper with his "baggage cars" coupled by neck and tail in a simple but ingenious way. The complete outfit of another enthusiastic traveler reveals no suggestion of luxury. It consists of a canvas sleeping-bag, and a few boxes of supplies. He tells us that it has long been his ambition to see the great west, and that the hard times of 1896 convinced him that it would be cheaper to travel and enjoy himself than to remain in business; accordingly, with two horses and this slender outfit, he set out from Cheyenne with the intention of visiting every point of interest between the Missouri and the Pacific Coast. He travels leisurely, and although he confesses to
occasional spells of loneliness, he says that he thoroughly enjoys his absolute freedom and would change places with no man. His journey costs him on an average just fifty cents a day.

But while we have been discussing passing travelers, our coach has brought us to the Upper Geyser Basin, where the geysers like gigantic censers are wafting their vapory incense skyward. A geyser basin is an area where the crust of this great volcanic region is thinnest. In venturing out upon its surface, which in places gives back hollow echoes to our tread, we feel that we are very near indeed to the infernal fires. Everything about us tends to excite both timidity and awe. "Unearthly" is the best word to describe the scene, and as we pick our way amid steaming pools, as columns of steam and boiling water suddenly rear themselves beside, in front of, or behind us, as gusts of heated air fan our faces and the sound of hissing vapors fills the ear, we may be
pardoned if a sense of the supernatural overpowers us, if we falter for a moment until familiarity with these
phenomena shall give us confidence. The theory of geyser action advanced by Bunsen and accepted by the scientific world is not difficult to comprehend. A geyser crater is usually a deep, well-like fissure filled with water; it is of unknown depth; near the bottom there are volcanic fires or heated rocks that act upon the lower sections of the watery column enclosed in this deep narrow well. We know that water under heavy pressure must be raised to a higher temperature before it will boil than water that is merely being heated in an open caldron. Therefore the lower sections of the water column, before reaching their boiling-point, are heated to such a degree that were the pressure not so great, ebullition would certainly result. Imagine, then, this state
AN HOURLY SPECTACLE

Photograph by F. Jay Haynes, St. Paul
of things: water which is hot enough to boil under normal conditions, but prevented from boiling and from producing steam by the immense pressure to which it is subjected. Then imagine that a little of the water nearest to the subter-

Photograph by F. Jay Haynes, St. Paul

WATER AND STEAM

ranean fires becomes hot enough to boil in spite of the pressure. A little steam is thus produced. This rises, disturbs, and slightly lifts the superincumbent column of cooler water. The pressure, which alone prevents ebullition, is thus relieved.
What then occurs? The vast mass of superheated water deep in the well suddenly finds itself not, as before, below its boiling-point, but far above it, and without waiting to boil it instantaneously flashes into steam, and the cooler water resting above it is shot forth as from a cannon's mouth to awe mankind, to tell him of the terrible unalterability of Nature's laws.

Thus we may understand the great irregularity of the eruptions. So many factors are to be considered—the depth, diameter, and direction of the geyser tube, the proximity of the heated rocks, and the workings of the water system which refills the tube, whether by infiltration of rain or river water, or by the flow of subterranean springs. The marvel is, not that the moment of these glorious displays cannot be accurately named, but that it can be even approximately surmised. One geyser, only, makes any pretense to punctuality. It has been named on this account "Old Faithful." Regularly every hour it performs its task of entertaining tourists. It merits the gratitude of those who have not time to wait upon the whims of its eccentric neighbors.

While waiting with an expectant group of visitors, one overhears many amusing remarks. Some tourists, led astray by one of Larry's jokes, ask at what time they are going to "grease the geyser." And this expression, "greasing the geyser," refers to a former custom of putting soap into the crater to make the geyser spout before its time. This practice of soaping is now prohibited, for it eventually destroys the action of the geyser. The fact
that soaping would advance the hour of eruption was discovered quite by accident. A Chinese laundryman who had found the hot pools a great convenience in his business, one day mixed his suds in the wrong hole. His pigtailed head escaped by miracle as a charge of shirts, collars, and cuffs was fired skyward with tremendous force.

As the moment of the eruption approaches, an impatient visitor, who has been watching the steam ascending from the crater, demands, "Well, when does she bust?" but on observing the tightness of the clothes of the corpulent questioner, it seems to be a close question as to which will "bust" the sooner—the geyser or the gentleman. At last, however, some one cries, "Look out!—there she goes!" There is a backward rush of dazed spectators, and upward in a mass of glittering glory the contents of the tube is lifted, forming a dazzling pillar of rising and falling water, surrounded by its flowing draperies of steam. This is repeated every hour with but the slightest variations.

Here is a water-clock older than that of the Greeks, and it marks time as perfectly today as when the divine clockmaker first put together its more than mysterious mechanism. That monument of water is one hundred and fifty feet in height. It stands there apparently undiminished for seven minutes, and
in these seven minutes no less than one and a half million gallons of boiling water are shot forth. In one day Old Faithful furnishes more water than would be used for the needs of a city of three hundred thousand people. Nor is this all, for this is but one of the hundred geysers which, day and night, summer and winter, are rising thus like ghostly sentinels to see that all is well in Nature’s Wonderland, and then returning again to oft-broken slumbers.

It seems as if the other geysers, conscience stricken by the punctuality and frequency of Old Faithful’s exhibitions, individually were
to make up for their long periods of laziness by giving superior displays when their turns arrive.

Excelsior, the grandest of them all, spends seven or more years in preparation, and then begins a series of imposing outbursts. A mighty cliff of living water rises from a boiling lake, and as often as the waters fall, they are hurled again into the air. Though its form is ever changing, the cliff of water stands there in seeming permanency, until at last the unseen forces weaken and the glorious vision vanishes. The level of the river that flows near the crater of Excelsior is raised several inches after every outburst of this great geyser, which in one eruption ejects more water than could be thrown up by the combined forces of all the other geysers in the basin. Unfortunately all is quiet here on the day of our visit. The last preceding display occurred in 1892. Beautiful as are the manifestations of the forces of nature when
acting upon the clear, deep pools, they become ridiculous or fantastic when mud is substituted in the craters for the crystal waters. Here in the mammoth "Paint Pots" nature plays a joke upon us. In one caldron is a mass of mortar-like mud, which during unknown ages has been in a state of ebullition. Up through the slimy matter rise tiny puffs of steam, each one ejecting, with a nauseating flop, a tiny spout of what looks like vanilla or strawberry ice-cream, half melted. The shapes which are momentarily assumed by these expectorations of the clayey slush are grotesque to such a point that lookers-on are frequently convulsed with laughter. The word "grotesque" describes the Paint Pots;
wonderful, marvelous, and grand are the adjectives we use in speaking of the geysers; but when we would tell of the Morning Glory Spring, a still, warm pool of deepest blue, the word "beautiful" is the only one that rises to our lips. Those who have never looked into its depths will smile incredulously, and being shown a colored photograph of the spring,
say that photographer and artist have told a most transparent lie. But eyes that have been treated to this bath of beauty
will tell you that no photographic lens can there be substituted for the human eye, that not by any painter’s pigment may the exquisite tones of blue be reproduced. The lining of the crater is of snow-white deposit, the water itself is colorless, and yet the illusion of blueness is intense and persists even on gray cloudy days. It seems as if it had been vouchsafed to us to peer into the deep, placid soul of nature. Reluctantly turning from the contemplation of these cerulean depths, we find ourselves again upon the indelible sandy road cut through the piny forest. No correct impression of the Yellowstone and its wonders can be imparted unless scenes are linked together by sections of that long, long road on which the traveler must spend seven hours every day.
I mean the traveler who insists on rushing through the park on schedule time, in five and a half days, not because he is compelled to, but because he has been told that it is possible.

We cannot praise the undue expedition with which the average traveler rushes through our Wonderland. Few, if any, take time for more than a mere glance at the lakelet that lies in a little hollow on the crest of the continental divide. And yet that lily-dotted pond merits our thoughtful consideration and will richly repay the visitor.

We are in the Rocky Mountains near the apex of our continent. That placid sheet of water is therefore wooed by two mighty suitors,—the Atlantic and the Pacific,—and, undecided but impartial, she bestows her favors on them both.
alike; and when she weeps for love of both, one tear may trickle down the cheek kissed by her western lover, the Pacific, while another salutes the outstretched arms of the Atlantic, in the Gulf of Mexico. From this point onward, the dash down-grade is thrillingly exciting; our four horses swing us at a spanking pace around curves and past a score of splendid points of view. Far away to the south, outside the limits of the park, we see the three great Teton Peaks rising as if in protest at their exclusion from our Wonderland—as if by an unwearying appeal they would compel the government to reconsider that unsatisfactory southern boundary line, to move it a few miles farther south, and thus add to
the park a feature that it lacks, a range of alpine grandeur. Nearer, and well within the limits of the park, we see the beautiful Shoshone Lake, while all around us rise the wooded slopes of the apparently insignificant range that forms the backbone of our land—the Continental Divide.

Still following the down-trending road, we reach some hours later the shores of that great silent reservoir of icy waters, Lake Yellowstone. With a shore-line more than one hundred miles in length, with an altitude of almost a mile and a half above the sea, there are but few lakes in the world that surpass Lake Yellowstone in area and elevation. One or two lakes in the Andes of Peru, one or two in the scarce explored regions of Tibet are its only rivals.

Around Lake Yellowstone rise mountains from ten to fifteen thousand feet in height, and yet these mountains, because we are already almost eight thousand feet above sea-level, do not seem to us more lofty than a range of hills. The mere knowledge that a mountain is of immense altitude does not impress one half so much as the apparent height
of lesser peaks. Thus Mount Washington, in New Hampshire, with its mere six thousand feet of visible elevation, seems grander to us than these giants which have almost thrice its height. Yet bring hither our favorite New England peak, bury it beneath the lake, its base at the sea-level, and then where would the dizzily perched Summit House find itself? It would be occupied by trout and other finny guests, while the instruments of the Mount Washington observatory would be rusting more than a thousand feet below these waters. Nay, the summit would not rise high enough even to pierce the muddy bottom of Lake Yellowstone.
Were this courageous little steamer on which we cross the lake to prolong its excursion on this same plane of altitude eastward from the Rockies, it would sail across our continent almost eight thousand feet above our cities, accompanied by fleets of clouds; it would cross the broad Atlantic, meeting no obstacle until its prow grated upon the icy slopes of the Alps or Pyrenees. We may not take this flying trip, however, but shall steam on toward a little island where there are confined a few tame buffalo; the only buffalo we may hope to see, for in the summer the wild herd inhabiting the
park seldom presents itself to tourists' eyes. But the days of the wild bison are numbered, although it is protected by the strong arm of the law; there remains today only a meager band, yearly decimated, and doomed to ultimate extinction. The traveler who will brave the rude winter of these altitudes may be rewarded by a sight of four or five wild buffalo in full retreat across the snow-covered open stretches. But a visit to the park in winter is no simple matter; snow then lies from ten to twenty feet upon the level and is piled mountain-high in the ravines. Yet a winter tour is possible, though at the cost of sufferings and perils which few men will care to pay. The cold at that period is frightful. In the words of an intrepid photographer
who has made several midwinter tours in the Yellowstone, "When it was only ten degrees below, we called it a warm day. We had been accustomed, during our two-hundred-mile snow-shoe journey, to a temperature of fifty-two degrees below zero." And there are men who every winter hibernate in the big empty hotels of the park, for reasons that insurance companies best understand. The manager of the hotel at the Grand Cañon, with his wife, spends nine long, lonely months in the snow-bound caravansary, there being miles of snowy nothingness between him and the world. But he is not a prisoner; he often glides out of a third-story window on his Norwegian skees, and then as lightly as a sea-gull he skims down and away across white snowfields, which sustain him some twenty feet above the level of old earth. He has looked upon scenes whose fascinations he avers are ample recompense for what to us would seem

Photograph by F. Jay Haynes, St. Paul  

FIREHOLE CASCADES
almost a living death. Think of it: two people spending here a winter of two hundred and fifty days, each day so like another that the march of time is imperceptible.

But ere these thoughts shall chill us to the bone, let us return to summer sunshine by the lake. The view of the lake reminds us that I have not mentioned what is to some the chief charm of these waters,—the fact that they are literally swarming with fish, so eager to be caught that skill is not required. Naturally, Yellowstone fish-stories are like other things in this region,—the most remarkable of their kind, for the reason that unlike other fish-stories, they are absolutely true. No exaggeration is needed to add color to them. Let me prove it to you. In the picture you may see my friend, after casting his line into the icy waters of the lake, dipping the finny prey into the depths of a spring of boiling water. What a convenience for the hungry traveler!—his Friday breakfast kept cool and fresh in a vast natural refrigerator until it pleases him to fish it out, flop it into a natural kettle
and, without budging, cook it on the spot. You are incredulous, because, alas! truth and the finny tribe have no affinity. And I will confess that, although containing many ingredients of truth, my tale is not a wholly honest one, for although this culinary feat is performed by tourists every day, in our case the fish could not be made to bite, the steamer was whistling her last warning, and—dare I confess it?—impelled by photographic necessities, I hastened to the kitchen in the luncheon-tent near by, purchased a miserable trout, and hung its stiff, cold corpse upon our dangling, disappointed hook.

After this confession, as a proof of my regard for truth, can you refuse to believe my other stories? Here is one to test your confidence: There is in the park a river in which geyser waters overflow. As
the hot water rests upon the surface, the cold, trout-swarming river is, as it were, covered with a stratum of boiling water, and fish caught in its depths may be cooked on the way out!

Leaving the lake, let us follow the swift-flowing but placid river to the culmination of our journey, the Grand Cañon of the Yellowstone. Strange,—is it not?—that the approach should promise so little: a level valley, a ribbon of green water, and in the distance the shadowy forms of Mounts Washburne and Dunraven.

But before we turn to the consideration of the cañon, let me recall briefly an excursion over Mount Washburne to Yancey's ranch—a horseback trip that may be made as an alternative to the return to Mammoth Hot Springs by the coach-road. The ascent of Mount Washburne is not difficult, and it calls for neither great endurance nor daring horsemanship. The trail, although in places indistinct, is easy and secure as mountain-trails go.
The view from the summit is not especially striking to one accustomed to mountain scenery of regions more broken and picturesque, but the exhilaration of the ride and the resulting appetites are ample compensations for the effort. A visit to "Uncle John Yancey's" ranch is an experience that will be remembered but which will not be repeated.

A comic writer might find food for profitable study in the peculiarities of Uncle John, but the ordinary traveler will find neither palatable food nor decent accommodations while at the old man's "Hotel." The tenderfoot should not remark the unwashed condition of the two historic glasses into which the proprietor pours the welcoming libation of "Kentucky tea," for it is Yancey's boast that his whisky glasses have never been polluted by the contact of
so alien a liquid as water. That water is not held in good
repute at Yancey's is evidenced by the location and condition
of the "bathing establishment" maintained for the incon-
venience of guests who are so perverted as to require more
than the pail that serves the needs of the habitués of the
primitive caravansary. On the whole it is wiser to leave
the park with the impressions of its glories undimmed by
memories of Yancey's Ranch.

The approach to the cañon from the lake is commonplace
indeed, yet between us and those unimpressive mountains
toward which we drive, lies one of the grandest sights on
which man has ever looked—one of the great things of the
world. The mountains are largely forest-clad; for miles on
both sides of the cañon there stretch away great areas of
timber that soften every outline of the landscape, give it a
regularity, a velvety smoothness, that ill prepare the traveler
for the chaotic awfulness of that on which he is about to look. It is as if nature had striven by every means to enhance the sublime surprise that she reserves behind this curtain of deep green. Yet, lest we should be stricken blind and dumb by the full, instantaneous revelation of the glory of the lower cañon, let us look first upon the milder beauty of the upper gorge. Into it leaps the river, in a plunge of a hundred feet or more, then on it rushes between gray-wooded walls, its waters greener than the pines, or, being churned to foam, whiter than snow. Follow me down to the river-bank; no danger need be
feared; beauty, not danger, lurks below. Here for a moment the waters seem to curb their eagerness, as if the drops which have journeyed long in company would bid farewell to

one another, before, in the confusion of their final leap, they are forever separated or dispersed in spray. Dare we now in imagination follow them? Nay, we are almost tempted to follow bodily, so great is the fascination of the flood, as with
THE UPPER CAÑON OF THE YELLOWSTONE
a calm deliberate swiftness, like that of a mighty eagle swooping upon its prey, it glides as lightly as the wind over the brink, and plunges toward the center of the world. Instantly, as if by powerful enchantment, it is transformed from a greenish serpent into a bridal veil of purest white. We are assisting at the nuptials of awfulness and beauty. But to appreciate the full solemnity of it all, one must hear the ceaseless roar, like the anthem of the eternal choir, and feel the cool spray-like aspersions, as of the holy water.

But having seen beauty fall into the arms of awfulness, we will look upon the land in which they are to dwell together while the brief honeymoon endures. Then close your eyes, turn them toward the east, open them, and suppress a
gasp of admiration if you can! Our first impression is one of overwhelming surprise. The cañon is so much vaster than we thought. Its coloring is more vivid than we ever dreamed it could be. It seems like a mine of precious stones, uncovered to amaze and dazzle the sun itself. The river has already cut down through this mine of color more than a thousand feet, yet the vein seems to be inexhaustible. The rocky mass of the plateau is decomposed to unknown depths; the chemic products resulting from that decomposition produce the color; the rains, the flow of water from subterranean springs, and the winds that sweep through the cañon have helped to blend the tints, until the walls appear as if draped with the tatters of some gorgeous rainbow.
But there are other points of vantage from which even more stupendous vistas are revealed. To reach them we must turn back and climb up in and through the woods that clothe the slope of the upper cañon. The quick transitions from light to shade, from free space to the seclusion of the forest, are delightful. In the soft gloom of the wood we may repose our eyes wearied with too much glory. Overcome by the unseizable vastness of the cañon, we turn with pleasure to the contemplation of little things which elsewhere would have no interest for us. For hours in these woods I have watched the chipmunks, busy, saucy little animals, which being unmolested here are so tame that when I sat quite motionless they would approach, sit on the other end of the same log, and try to enter into conversation.

One day, however, I encountered upon this steep, narrow path a number of strange beings, so wholly out of keeping with the scene that I could not believe my eyes. They were members of a military cycle expedition—eight soldiers from
the colored regiment of Fort Missoula, in Montana, who under the command of young Lieutenant Moss, successfully accomplished a journey of over one thousand miles a-wheel. Each man carried from sixty to seventy pounds of baggage; a complete camping equipment, tents, poles, and blankets, supplies, dishes, cooking utensils, and provisions, in addition to the heavy arms and ammunition. Thus handicapped, these men rode sometimes ninety miles a day.
over western roads that are a disgrace to our civilization. No wonder that to them the roads within the park seemed almost perfect by comparison.

But as we find ourselves upon the road that skirts the cañon brink, we must confess that the park roads, though not so very bad, are, when compared to European roads, disgracefully inferior. Nowhere is a system of splendid highways more needed, for railroads
have been permanently barred out. Let Congress indulge in a wise expenditure some may call extravagance, and make the Yellowstone a park in fact as well as in name.

Yes, as we peer into the piny labyrinths, which lie between us and the cañon precipice, we feel that here nature has done so much that man should not refuse to do his share. Nature provides a feast of beauty; she asks only that man shall make the banquet hall accessible. Let us hope that it will be done; that the future will see here in our park hundreds of miles of splendid avenues, which with graceful curves and gradual inclines will lead the people of many lands into this wilderness. Beginning at the Springs, the throngs of future visitors will view the marvels of the
park with an increasing wonder and enthusiasm, and will be brought here to this forest, on the verge of the abyss, prepared by what they have already seen to draw aside these piny screens and look with reverence and wonder upon the grandest sight of all, this overwhelming acme to their journey, the Grand Cañon of the Yellowstone.

From Lookout Point the Great Fall looks almost insignificant; yet its waters drop almost twice as far as those of huge Niagara. What seems from a distance a ribbon of white spray is in truth a stream seventy-four feet in width and three hundred and sixty feet in length.

Below us is a pure white mound of formation, not of snow as we at first imagine; but snow is not a stranger
here; upon the contrary it is almost a regular inhabitant, for in the Yellowstone they say there are only three seasons and they are called "July, and August, and Winter." And winter is the most impressive of them all. Then no array of startling color strikes the eye. Then all is cold and still. The cañon sleeps beneath a covering of dazzling whiteness, and a great solitude is over all. For nine long months the cañon slumbers thus. Then, waked by the first kiss of summer, she gently lays aside, one by one, the robes of white in which she has been sleeping, dons the most gorgeous of her thousand dresses, and welcomes the return of her long-absent lover, the sunshine of the glorious summer days.
From the brink we cannot always see the depth of the cañon. "Red Rock," and pinnacles of other hues obstruct our view, while from the cañon walls great screens, like wings on a theater-stage, have been pushed out to cut the lines of sight and add confusion and disorder to the scene. These delicately tinted screens are as beautiful in color as they are strange in form. We find here reproduced the Gothic forms of Occidental architecture, with an opulence of color that is more than Oriental. Hundreds of Gothic spires, —feudal castles, too, with fantastic crenelations, all these are here. Nor is the masonry of cold, gray rock; instead, the walls are all aflame with amber, amethyst, and jasper. Nor are these castle-ruins few in number; they seem in truth
innumerable. Let us look deeper; there far, far down are other detached spires apparently floating in the dimness of a lower world. And do you realize the magnitude of some of these great natural minarets? Yonder tower, of a dull garnet color, would dwarf a modern office-building of twelve stories. Do you realize the height of the great wall that rises in the shadow far beyond? To illustrate its height, take four great buildings, each like the Masonic Temple of Chicago, and pile them one upon another. Then place in the cañon the towering structure thus created, the ground floor resting at the river’s level. Do you believe that the roof garden would surpass the summit of that wall? If so,
you are mistaken; the people gathered there would have to look upward to see us standing on the cañon’s brink.

Let us now drive on until we reach the one point from which the playful traveler is permitted to send great rocks rolling and bounding down the steep sides of the mighty ditch. We drop a boulder over the precipice. At first the stone rolls down the smooth sandy slope, then, on reaching a narrow defile some hundreds of feet below, it begins to bound back and forth in zigzags between the bases of the jutting pinnacles. At every concussion the big rolling
stone detaches huge masses of decomposed rock from the cliffs, and these join in the mad downward rush by hundreds. Meantime we follow with fascinated eyes the boulder’s wild career as in leaps of several hundred feet it nears its watery destination. But it seems as if it never would arrive, so great is the distance it must travel. Smaller and smaller it appears to grow, until at last the boulder, looking to us like a tiny pebble, plunges soundlessly into the greenish flood of the Yellowstone and disappears. So exciting is this game of tenpins that we search for other rocks; but the brink has been well cleared by former players. We find just one stone left, the only one that has not been rolled down the slope by tourists; nor will
it be until our race becomes far sturdier than it is to-day, for that one remaining boulder is more than fifteen feet in diameter. It is remarkable not only for its size, but also for its complete isolation. It is the only piece of granite in this valley. Its nearest neighbor lies more than twenty miles away. How came it here? we ask; and science answers that it was stranded here by some prehistoric river of ice, left to bear eternal witness to the existence of glaciers in this region. It is a mighty mile-stone on the highway of geology. It marks the close of an epoch in the history of our terrestrial sphere. It records the abdication of a glacial king.

But the wondrous beauty of the forest cannot keep us long away from the Grand Cañon. We are involuntarily
drawn to the very brink. Who is there that cannot understand the fascination of the cañon? No one can look into its depths, as we do now from Inspiration Point, and not have an overwhelming desire to go down and solve the mystery of its great beauty and its grandeur. Who is there that does not envy the eagles that dwell upon the pinnacles, and are free to soar in slow, grand curves between these gorgeous walls, free to descend and drink of the rushing waters far below; free to survey the scene from points of view which man will never reach. One mystery, however, never can be solved; that of the perfect blending of these colors. All hues are there, spread out, and yet no one can say where the yellow ceases or where the red begins. No lines of demarcation can be traced between the purple and the pink; between the orange and the green; and there are three long miles of this chromatic glory. Three miles of gorgeous color and of fantastic forms. Then, beyond, a score of miles of shadow and solemnity.

Yes, as we turn and look in another direction we see the somber pine-clad walls between which the river there flows on for twenty miles, walls not less high nor less imposing
than those immediately below the falls, walls which, despite the absence of all color save a deep, rich green, possess a grand, stern beauty of their own. That misty, shadowy nave is, in the eyes of many, as beautiful as the brilliant chasm from which we have turned away. The pine-trees, of which unnumbered millions are stationed in the park, are crowded in multitudes at the canon's brink, as if in eagerness to look upon the scene. Some, like the more courageous soldiers of a hesitating army, have already dared to clamber down the walls; while others—veritable heroes these—have reached the very border of the stream itself.

Let us now turn back and wander through the forest, where we shall see the glory of sunset stealing between the
tall straight trunks to gild the cañon walls beyond. Every evening, returning from the contemplation of the cañon, it was through these beautiful forest-scenes that our path led us. Often the skies flamed with gold and yellow. At other times, the background against which the trees were silhouetted was of brilliant red, pale pink, or tender green. It seemed as if there in the west the gods were preparing the gorgeous colors with which, during the long, still night, they would retouch the frescos on the cañon walls.

Most travelers are content to view the cañon from the points to which I have already led you. Others remain unsatisfied until they have looked into the great chasm from "Artists' Point," the one perfect point of view, which is unfortunately on the other bank, and in 1896 was well-nigh inaccessible. There was no bridge; the crossing of the river below the falls was utterly out of the question; but there remained the possibility of crossing far above the upper
gorge, where the waters, although swift-flowing, present a level, navigable surface. But there has not been a boat upon the river since the last one, very fortunately empty, was swept away and dashed to pieces by the cataracts. No boat! No bridge! The river being now too deep and swift to ford, I turn in my difficulty to the gallant soldiers of Uncle Sam, who are stationed at the cañon. The sergeant in command at the little military camp enthusiastically comes to my assistance, and at sunrise next morning I find him a little way above the rapids, slowly poling upstream a raft, which he has built expressly for our excursion. At last we reach a point from which he deems it safe to put out into the current, where the waters, swift as those of a
mill-race, are gliding on in their eagerness to plunge into the yawning canyon, just one mile beyond. There was, of course, no actual danger, yet the thought was ever present that our raft, if left to its own devices, would at
THE GREAT FALLS FROM BELOW

Photograph by F. Jay Haynes, St. Paul
once follow unresistingly that treacherous flood, bound through the rapids and plunge over the first fall, then dash through the upper cañon, and finally meet annihilation in the whirlpool at the bottom of the great cataract.

In safety, however, we arrive upon the farther shore. Then we skirt the right bank through a thick growth of pine, and while we are walking through the forest, thunder-showers come and go with great frequency and fury. We are soon drenched to the skin, but pressing on we reach the edge of the forest; the earth appears to open at our feet, and the cañon yawns
before us, deep and mysterious. Vapors are surging upward from its depths, but fortunately the sun is beginning to break through the clouds above. A shaft of sunshine touches a portion of the opposing wall, and another brilliantly illuminates the pinnacles of white and gold, while others chase the vapors rapidly away. The fears that rain and fog will render our excursion fruitless are dispelled, as, reaching another point of view, we exchange salutes with friends on the other rim. We shout to them, they shout to us; but the sounds meet only half-way and then fall into the depths between. We cannot hear, nor are we ourselves heard. The river’s rumbling mocks our puny efforts to span the deep chasm with
a bridge of vocal sound. We must attempt to span it with our gaze. Few of the great sights of this world have power to thrill us more than this vista of the cañon of the Yellowstone. We are unable to tell what most impresses us: the immensity of the great gulf, the infinite glory of its colored walls, the struggling river far below, the stately army of tall pines massed on the brink and pressing forward, apparently as eager as we to drink in all the splendor of the scene.

All these things go to compose the scene, to form that indefinable majesty that inspires us—to hold our peace.

Silence is the only eloquence that can avail us here. No man has yet found language to express the majesty of this abyss of color. But, we ask, will no voice ever perfectly express in words what we all feel but dare not, cannot speak? Will no great poet of the new world, inspired by these grandeurs, ever utter the immortal song in which our vaguest thoughts shall find interpretation? Great, great indeed must
be the soul of him who would give adequate expression to
the reverential awe inspired by a scene like this.

But what is man that he should strive to utter the
unutterable? The emotions that overwhelm us here can be
expressed only in one language, and that is not a mortal
language; it is the language of those to whom all mysteries
have been revealed—the great eternal, wordless language of
the soul: a language that we may not understand until the
gates of death have closed behind us.