MOUNTAIN ROADS AS A SOURCE OF REVENUE.

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INTRODUCTION.

It is the purpose of the present paper to consider the road question from a point of view which the writer believes to be not only vastly important, especially to the mountain region which he represents, but entirely new in the discussion.

The numerous and capable advocates of good roads throughout the country, and the many associations devoted to road improvement, have given to the economic and industrial side of the question the fullest consideration, while the interest in good roads of those seeking health and recreation has not been forgotten. The intelligent work of the Office of Public Road Inquiries of the Department of Agriculture has been particularly directed to disseminating information upon the costliness of bad roads, the economic benefits to all classes of the community of good roads, and the best methods and materials for road building. The writer's object here, however, is to approach the question from a standpoint which in the highest degree unites the utilitarian and the æsthetic ideas. While applicable to very many sections of the country, this consideration of the question seems especially pertinent to the mountain region of the United States, extending practically from the Canadian border on the north to the Mexican border on the south, and from the Upper Missouri River to the fertile plains and valleys of the Pacific coast. It may be said without exaggeration that in no other part of the world is there to be found so vast a region containing throughout its entire extent scenic features of such unsurpassed beauty, with every variation of climate, affording hygienic conditions adapted in the highest degree to both recreation and health for every conceivable class of persons, healthy or invalid. The railroad facilities by which this region is reached and traversed afford the acme of traveling convenience and luxury. No political boundaries with the unpleasant concomitants of custom-house officers and passport inspection here confront the traveler in search of health or pleasure or business; each one exercises that absolute freedom of movement so inseparable from true enjoyment—free from the interference of government control, police surveillance, or the arbitrary and utterly

unwarranted exactions of petty officials which so frequently vex the traveler in Europe.

Considering the annual influx of travel invading all those regions of Europe famed for their scenic and climatic attractions, an amount of travel greatly augmented by contributions from the United States, it seems marvelous indeed that more of it has not been diverted into our mountain regions. Unfortunately, a very little consideration of the matter readily reveals the explanation of this state of things. Excepting in a few more or less widely separated localities, the roads are very primitive and the places of entertainment execrable, compared with the European standard, where these facilities make the valuable attractions of foreign countries most agreeably accessible.

It seems too obvious for argument that the pecuniary results to the communities occupying this highly favored region from securing a liberal share of patronage from tourists and travelers, seekers of health, recreation, or information, would be fully equal in the course of a few years to those now enjoyed in those regions of Europe similarly favored in the way of scenery and climate if these communities should follow the example of their European brethren, who long ago discovered that the very best investment they could make for future and permanent profit was in the establishment of good roads which would penetrate every section of their country and make all its attractions accessible to visitors.

With a view to forcibly presenting this side of the subject to readers of the Yearbook, the writer, with the authority and approval of the Secretary of Agriculture and the Director of the Office of Public Road Inquiries, procured, through the courtesy of the State Department, from many United States consular officers in Europe replies to interrogatories designed to set forth the extent to which road building had been carried and the profits derived therefrom by the communities building them in those portions of Europe now so liberally patronized by the travelers and tourists of the entire world.

Edward C. Cramer, consul at Florence, Italy; Edward H. Ozmun, consul at Stuttgart, Germany; Horace W. Metcalf, consul at Newcastle-upon-Tyne; John Stalker, consular agent at Galashiels, Scotland; and William W. Touvelle, consul at Belfast, Ireland, all send interesting, instructive, and highly valuable reports confirmatory of those quoted in this paper, but which, for lack of space, can not be more than generally acknowledged. Mr. Touvelle estimates the cost of constructing an 18-foot wide macadam road in Ireland at about $5,000 per mile and of its maintenance at about $100 per annum.

SCENIC ATTRACTIONS OF THE OLD WORLD.

SWITZERLAND.

Henry H. Morgan, United States consul at Aarau, Switzerland, says:

By some authorities it has been estimated that the 3,000,000 tourists who yearly visit the country will leave, on an average, 20 francs ($4) each, making a total of 60,000,000 francs ($12,000,000), and by other authorities the amount is estimated at from 80 francs to 100 francs ($16 to $20) each, which would seem to be a far more correct estimate, for in a number of the more frequented resorts, like Lucerne, Interlaken, Geneva, etc., the highest estimate is far below what, in my opinion, is spent by the average tourist.

In Switzerland it is the barren rocks and the ice-clad peaks of the mountains to which the nation, to a very large extent, owes its wealth and prosperity; and, on the other hand, no other country has done so much to develop the so-called tourist industry by making accessible the mountains, valleys, gorges, and crevasses, regardless of difficulties and expense, and by establishing numerous fine hotels, offering all the commodities and comforts of modern life, no matter how near to the region of eternal ice or how far removed from the great arteries of travel the hotel may be situated, thus inducing the tourist who comes for the purpose of seeing the beauties of the Alps to prolong his stay.

Now that the funicular railway has made many of the high peaks of the Alps accessible, they are crowded every day by hundreds of tourists, and the monetary value derived from the natural and scenic conditions made available by the different mountain railways can be imagined from the fact that during the season just passed over 4,700,000 passengers traveled over these lines.

Besides these easily accessible resorts, frequented by all the excursionists and tourists, there are a great number of magnificent high valleys and Alpine health resorts situated far from the general travel, but connected with it by good roads, and only owing to such roads have they been made accessible and profitable.

* * * Parts of the country, still without railway connection, are accessible by a system of fine Alpine roads, and in the more remote parts by paths branching off from these roads. In addition, there are innumerable roads and footpaths intersecting each other between every village and town over every part of the Republic.

Mr. Morgan quotes from the Hotel Budget some figures regarding a large hotel in the Bernese Alps, 19 miles from the railroad, which has accommodations for 550 visitors, the total number during the season (from June 15 to September 15) being about 13,000, with a total rough income for the season of about $100,000. He further says:

When it is considered that this establishment, during the season, gives food, lodging, and wages to 250 employees, the monetary value of several hundred similar establishments in Switzerland, many of them open all the year, will be found to be an enormous one.

All the hotels have fine shops connected with them, which do a thriving business, and the receipts of the branches established at such resorts by the post and telegraph department form a very considerable revenue to the country.

The Swiss Government has organized a very good service of diligences which is kept up all the year round on the great first-class Alpine roads, as long as the large, enormous masses of snow and the danger of avalanches does not render this travel impossible.

Bridle paths and trails are numerous. There are Alpine societies which make it their object to make accessible all the points of view and all such mountains offering fine scenery. All the municipal authorities of towns and villages, anxious to attract

tourists, do a great deal toward building paths for pedestrians, and the National Government makes a certain appropriation each year for the maintenance of mountain roads in several cantons. All the inhabitants interested in the tourist industry form societies and contribute to the necessary fund. The Alpine societies of the different countries—Switzerland, Germany, France, and Austria—build paths and shelter houses for the protection of Alpine sportsmen. A great number of such shelters are established in the highest regions.

How capital is made out of scenic beauty in Switzerland is shown by the example of the great gorge of the Aare, near Meiringen. This most picturesque and grand gorge, pierced by the floods of the river Aare through an enormous mass of solid rock, was not accessible until lately, when it was made so by means of an iron gallery leading through its entire length. This gallery was constructed by a stock company, which has rented the gorge from the municipality of Meiringen, and now does great business by levying 1 franc from all tourists who come to see this celebrated gorge.

A. L. Frankenthal, United States consul at Berne, writes of the inducements offered tourists in Switzerland and the benefits derived from them by the whole country. He gives the following statistics: General information bureaus, 50; registered hotels in 1900, exclusive of those charging less than $1 per day, about 1,900; insurance on hotels in 1899, $107,000,000; available hotel beds, 104,876; hotel employees, 27,700, receiving in wages yearly, $4,000,000; visitors to registered hotels, 2,559,000; amount received by industries supported by tourists, about $40,000,000. Mr. Frankenthal further says: "No estimate could be made of the total amount of money spent by tourists; even if an exceedingly small sum per person is taken, the result in figures would show a surprising amount."

Horace Lee Washington, United States consul at Geneva, Switzerland, gives a large amount of interesting and valuable statistics, among which, perhaps, the most suggestive are: "In 1899, 158,000 visitors boarded in the hotels; in 1900, 175,000; and in 1901, approximately, 305,000." He also gives quite exhaustive details regarding the character and methods of construction and maintenance of the roads in the Canton of Geneva, which are of the very highest standard of mountain-road construction practiced in the world.

NORWAY.

Victor E. Nelson, United States consul at Bergen, Norway, says:

The present income derived from tourists during the season, in the period May 15 to September 15, has been estimated at about 10,000,000 kroner ($2,680,000), which sum at a rate of 5 per cent per annum represents the interest on a capital of 200,000,000 kroner ($53,600,000). That capital should therefore be the monetary value of the natural hygienic and scenic conditions at present. But I believe that the income yearly could be increased to about 40,000,000 to 50,000,000 kroner ($10,720,000 to $13,400,000) if the natural scenic and hygienic conditions were all made available by good roads, hotels, and mountain resorts and proper means of transportation. These 40,000,000 to 50,000,000 kroner would represent the interest on a capital of 1,000,000,000 kroner, which would constitute the monetary value of the natural hygienic and scenic conditions of Norway. The total number of tourists this year is presumed to be 30,000, of which about 2,000 were Americans.

Henry Bordewich, United States consul-general at Christiania, writes of the costly roads which extend far up into the Arctic Circle, and which are a source of interest and importance to travelers second to no other feature of weird and picturesque Norway.

AUSTRIA.

Frank W. Mahin, United States consul at Reichenberg, Austria, says:

This consular district covers about 8,000 square miles, approximately the area of the State of Massachusetts. It is nearly all mountainous. The summer resorts are numerous in the northwestern part of the district, comprising about one-quarter thereof. The only avenues of passage are wagon roads and footpaths, and often only the latter. There the very existence of the resorts and wayside hotels, which are many, depends upon good wagon and pedestrian thoroughfares.

The two most frequented modern resorts of this district are without railroads. In one case the nearest station is 3 miles and the other 10 miles. These resorts are made accessible by macadamized roads and well-kept footpaths, which radiate in every direction. The season is practically limited to the summer months, though there are occasional visitors in the spring and autumn. The resort, which is but 3 miles from a railway station, receives each season 30,000 to 40,000 transient visitors, although it has an all-the-year-round population of scarcely 300; the income each season is approximately 1,000,000 crowns ($200,000). This is a health resort, the water being a specific for nervous disorders, but transient guests go thither for the cool weather and charming scenery. All through this region is a very tangle of footpaths, crisscrossing in every direction, but all marked by different colors on trees and stones corresponding to colors on the maps which guide the pedestrian. Wagon roads being an exception here, hotels are found at frequent intervals on the paths; hundreds, and in July thousands, of pedestrians throng these ways.

The primary causes of the mountain resorts and hotels are natural scenic and hygienic conditions, but an absolute necessity to their existence are good roads and paths. These roads are all built with the greatest care, macadamized with basalt; their edges are protected with stones 3 or 4 feet high and 3 to 6 feet apart, the distance being less alongside a river or high precipice. Iron railings connecting the posts are sometimes used. Men are employed to keep the roads in good condition, each man being assigned about 1½ miles of road. A fresh layer of broken stone is put down every fall or spring, the mud being first cleaned off.

FRANCE.

Another phase of the road question, more or less touched upon by the other consuls, but not quoted for lack of space, appears in the following from Robert P. Skinner, United States consul-general at Marseilles, France:

The importance of maintaining first-class highways is as definitely accepted in this country as the multiplication table. A road map of France is not unlike a cobweb, or rather a series of cobwebs, each one consisting of concentric circles connected by radiating lines.

Within recent years a splendid road has been finished between Toblach and the Austrian frontier, where I believe it is carried on by the Italian Government to Venice. The military problem is responsible for this highway, but its more immediate effect has been to attract to the region thousands of tourists, who, until recently, did not go to Cortina at all, and could not go now except for this one road. Diligences and automobile omnibuses take the places of railways elsewhere, and Cortina, with a population of 800, has a summer population of from 5,000 to 8,000. The

coming of these thousands of strangers has brought prosperity to the agricultural classes, who now have a market for all sorts of perishable produce for which their fertile valley is adapted, and for which they would be unable to secure transportation to the markets of the larger cities. At midday from June to October one can see a line of private post carriages, diligences, and automobiles at Cortina a mile long, while the horses are being tended in neighboring stables. A school of marquetry has been established and gives employment to a large portion of the permanent population, and the output is all absorbed by the summer visitors. This is the most serious business carried on at Cortina, but there are, as may be supposed, hundreds of small shops where every conceivable trifle is offered for sale.

Between the city of Marseille and Toulon, connected by the finest railway in France, a number of "massagerie" firms do a large highway express business, and meet railway competition, both as respects expedition and prices. Now that the automobile has been perfected, in a measure, immense automobile trucks are being used for this traffic, and, because of the splendid roads, are able to travel at from 15 to 30 miles an hour. People find it now both easy and fascinating to make weekly excursions into the country, and, owning vehicles which enable them to extend their explorations to remote regions inaccessible by railway, they are gaining a vast fund of practical information which may be expected to favorably affect the development of the country in coming years.

The almost universal practice in this country is to employ two-wheeled carts for heavy traffic. French law does not permit more than five horses to be harnessed together, single file, in these carts, and the usual number is four. A team of four horses is always expected to transport 5 tons of merchandise, day in and day out. There are carters who work up to 8 tons and a good many who average 6 tons.

Very little improvement has been made in this country upon the Scotch system, of which the popular understanding, followed by the contractors here, is that the crushed stones must be equal in size, and none larger than a man could put into his mouth. Where this rule has been departed from, and especially where large stones have been mixed with small, the results have always been unsatisfactory.

The Axenstrasse road in Switzerland and the road from Salerno to Amalfi in southern Italy, types of roads in European mountain regions especially interesting to tourists, are shown in Pl. LXXII.

SCENIC ATTRACTIONS OF THE UNITED STATES.

No fact is better understood or more confidently relied upon in the scenic regions of Europe than the patronage derived every year from Americans. It is a subject which has excited much attention and discussion on this side of the Atlantic. The assertion is often made that it is a disgraceful thing that millions upon millions of American dollars should be squandered in Norway and the Alps by people ignorant of the overshadowing attractions of their native land. While all true Americans would rejoice to see the tide of travel turned toward this country, it behooves us not to belittle the allurements of European regions. We should concern ourselves diligently with the questions:

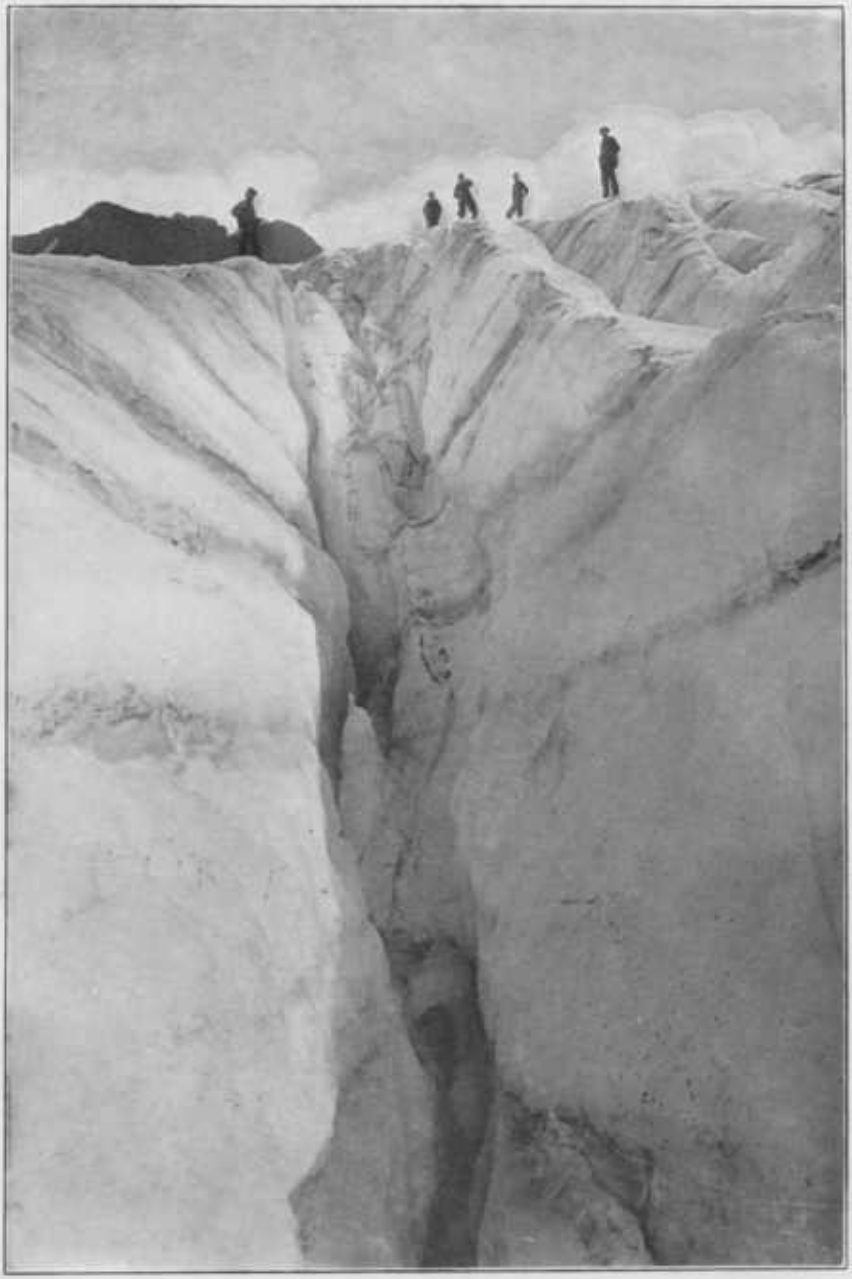
What are the scenic attractions of the United States?

How easy or how difficult is it to reach the various parts of the scenic regions?

What can be done to make the scenic regions most available, and what sort of expenditure in this line is most promising of results?

FIG. 1.—THE AXENSTRASSE ROAD, SWITZERLAND.

FIG. 2.—ROAD FROM SALERNO TO AMALFI, ITALY.



A GLACIER NEAR LAKE MCDONALD, MONTANA.

EASTERN SCENIC REGIONS.

East of the Missouri River these questions have been quite satisfactorily and creditably answered. The very best which Europe has to offer already has its counterpart, in so far as that is physically possible, on our Atlantic seaboard and among the lakes, hills, and mountains of the East. In dozens of places on the coast, the White Mountains, Catskills, Adirondacks, Appalachians, and Alleghenies, tourists can find just as much of pleasure and comfort as they could in similar localities abroad. That they appreciate it is attested by the hundreds of thousands of patrons who each year avail themselves of these privileges. And this patronage is by no means confined to Americans. The love of travel and change is inherent in Europeans also, and they come each year in increasing numbers to gratify it in this country. Even as far west as the Hot Springs of Arkansas, in the beautiful Ozark Mountains, there has grown up a resort with every comfort and luxury to be found at Ems or Carlsbad.

WESTERN SCENIC REGIONS.

This paper has to do principally with the vast section west of the Missouri River, which contains practically 1,000,000 square miles of mountains. For comparison it may be noted that the entire State of New York covers a little over 49,000 square miles. As may be expected, the physical characteristics of so large a region vary greatly. Its mountain system seems to culminate in Colorado, where the large majority of its highest and most rugged peaks are found.

Here there is no parallel to Mont Blanc, the highest peak in Europe, which attains an elevation of 15,780 feet. Its American counterpart, Sierra Blanca, 14,390 feet, in Colorado, guards the southern flank, and Mount Rainier, 14,526 feet, in Washington, guards the northern flank of this great mountain phalanx; while in advance, as if leading in majestic march to the western ocean, stands Mount Whitney, 14,898 feet. It is an interesting feature of nature's plan that this is the loftiest trio of peaks in the United States. Between these north and south extremes there are perhaps a hundred as high or higher than the famous Jungfrau, in Switzerland, 13,670 feet.

Timber grows to a height of 12,000 feet in places in Colorado, while on Mount Shasta, in California (14,380 feet), it ceases at about 8,000 feet, and on Mount Rainier at 7,000 feet. In the Harz Mountains, in Germany, little timber grows above 3,500 feet, and in the Tyrolese and Bavarian Alps the limit is about 6,000 feet.

All realistic, vivid writers on scenic Europe say much about the play of light upon the snow and ice and the things which it conjures up in the imagination; and Alpine literature is filled with incidents of disaster and death.

Of glaciers, those awful, moving, frozen rivers of the Alps, none is found here to compare in frightful detail and tragic story. The tourists

can not be shown a yawning crevasse and told that "at this spot in 1820 three guides were swept in by an avalanche and carried down to unknown depths; that forty-one years later, fulfilling the prediction which said, 'About 1860 that slow procession of the ice will bring its dead once more to light,' those three bodies, looking so natural that they almost seemed asleep, were delivered for burial to their great grandchildren in the valley below."[1]

It is not reasonable to believe that these blood-curdling tales and tragedies of Alpine peaks constitute the real fascination of the Matterhorn and other lofty summits. In this country are snow and ice in plenty, and glaciers also, but they do not lure travelers to destruction. The same sun lights them here as there into radiance and beauty, and fancy can as easily conceive their myriad fantastic shapes to be the fountains and palaces of some celestial city. Every gulch above timber line has its snow banks, which grow deeper and deeper as one ascends. Any day or night a storm may drop a mantle of white upon the summits, but in the glare and heat of the summer sun it usually melts and vanishes. There are few peaks which can not be reached by the pedestrian with safety and comparative ease. There is no other experience known to man which produces the exhilaration and mental exaltation that comes with views from lofty summits. Distant empires seem to lie within the vision. Lifted miles above sea level in an atmosphere so thin and clear that the stars shine through and send their greeting, a conception of the awful sublimity and infinite magnitude of God's universe will penetrate then and there to the soul as perhaps it never did before. It is such sensations and emotions that repay the fatigue, the suffering from cold and loss of sleep, the hazards of dizzy cliffs and ice and snow, and the excessive cost in all ways which play so important a part in most Alpine ascents.

The avalanche which sweeps down the mountain side, mowing everything in its path and engulfing all at the bottom under hundreds or thousands of tons of snow, ice, rocks, and timbers, is always one of the sad features of a precipitous region where much snow falls. In the United States that is a danger of little moment during the summer and early autumn. The avalanche's harvest of destruction is gathered during the winter when the storms are raging or in the spring when the melting snows let go their hold. These tragedies of the mountains could hardly be invoked here during the tourist season by any recklessness, however wanton.

Cascades and waterfalls, fed by melting snows, are abundant in all mountain regions, and are a never-failing attraction. These can not be seen to advantage from moving trains, but always lend a charm to a trip on foot or by horse. Some are of extraordinary proportions. The Lower Falls of the Yellowstone descend 310 feet in one vertical

[1] This story appears in so many Alpine narratives that it is probably well founded.

LAKE TAHOE, CALIFORNIA.

Yearbook U. S. Dept. of Agriculture, 1901.

FIG. 1.—INTERIOR OF A POPULAR RUSTIC MOUNTAIN INN.

FIG. 2.—THE GREAT SALT LAKE, SHOWING PRINCIPAL ISLAND IN THE DISTANCE.

plunge; the Bridal Veil Falls in the Yosemite are more than twice as high and over 50 feet in width, while the Yosemite Falls, the highest waterfall in the known world with anywhere near the same volume, leaps 2,600 feet in three plunges, clearing over 1,500 feet at the first jump, 625 at the second, and the remainder in the last. The great Falls of Niagara (that apt Indian name meaning "thunder of waters"), although more than three-quarters of a mile wide, are less than 170 feet high in their farthest descent.

It is said that there is not a mineral spring in Switzerland which was not famous at least as far back as the Middle Ages, but in this vast western mountain region, like the waterfalls of Norway, they are so many and so varied that not one-fourth of them have ever been named.

A mountain lake is always a scenic gem. They are the mirrors in which man sees reflected the countless moods and fancies of the Deity. Like the cataracts, they are born of the melting snows. Their name is legion. To attempt to specify even the principal ones would be like trying to list the cities of the world. To mention a half dozen of those best known to the tourist, one would perhaps select Lake McDonald (Pl. LXXIII), in Montana, near which are to be found the most typical glaciers in the United States; Lake Chelan, in Washington, with its 60 miles of changing landscape on either shore; Lake Yellowstone, where the waters that come down from the mountains mix with those ever rising from plutonic depths; Lake Cœur d'Alene, in Idaho, a lake of entrancing beauty, but with a name suggestive of troubled scenes and wicked deeds; Lake Tahoe (Pl. LXXIV), in California, of which Mark Twain said, upon seeing it for the first time nearly forty years ago, "I thought it must surely be the fairest picture the whole earth affords;" and Lake San Cristobal, in Colorado, a lake in an oval cup, which, when the sunset gilds its mountain walls, looks like a huge sapphire in a setting of purple and gold.

But the Great Salt Lake! that imprisoned fragment of a prehistoric ocean! It is one of the wonders of the world. It still covers 2,500 square miles of its old bed, although its contour has been shrinking for ages. (Pl. LXXV, fig. 2). The lines of former ripple marks may be seen like steps carved upon the distant mountains. Unlike the Dead Sea, in Palestine, 1,300 feet below sea level, its surface is level with the tops of the Allegheny Mountains. Its waters are more than four times as salt as those of the ocean; no living thing can exist within them. Owing to their extraordinary buoyancy, a man can stand up and walk in them. Fed by four fresh-water rivers, the lake has no outlet, but wastes in vapor to the clouds. Its principal tributary is the River Jordan, which comes down from the Wasatch Mountains, widens out into beautiful Utah Lake, and again contracts to pour its waters into this strange salt sea, just as its namesake in Palestine comes down out of the mountains of Lebanon, widens out into the Sea of Galilee, and again contracts to feed the Dead Sea. It has islands

of very considerable height and size, with trees and meadows and running streams, and perfect, gently sloping beaches of white sand.

Only the briefest reference can be made to other attractions in this wonderful mountain field. The crumbling ruins of the homes of the ancient cliff dwellers cover thousands of square miles, and are a subject of absorbing interest to the tourist and the student. There are the stupendous canyons, which the Almighty, to whom a thousand years is as a day, has been hewing out with infinite patience; the geysers, which send their vast volumes of water, mud, and steam high into the air, impelled by some force in the subterranean depths about which man may speculate, but whose mystery he will never fully solve; the giant trees, whose beginning was coeval with that of Christianity; the great wind cave in South Dakota, which rivals the Mammoth Cave of Kentucky; the thousands of forms in which the flora and fauna of this region are not duplicated elsewhere; the enormous deposits of ore that have been the foundation upon which has rested so much of this country's wealth. There are countless ways to study and enjoy and receive profit in this most prolific region.

PRESENT MEANS OF REACHING SCENIC REGIONS OF THE UNITED STATES.

How easy or how difficult is it to reach the various parts of the scenic regions is the next question to be considered. Few realize the progress which has been made west of the Missouri River. (Pl. LXXVI, fig. 1.)

In July, 1865, the first rail was laid west from the city of Omaha. At that time the nearest railroad on the east was far away, and the only means of communication was by boat on the river. The first year but 40 miles of track were laid. There was not a settlement on the proposed line from the Missouri River to the Sierra Nevada Mountains. The work was all done under guard of the United States Army, and graders and trackmen were often called upon to fall into line and protect themselves, or go to the rescue of some neighboring railroad camp attacked by savages.

Less than four years later, on the 10th of May, 1869, the last spike was driven at Promontory Point, in Utah, and the first transcontinental railroad linked with bands of steel our Eastern to our Western coast.

In March, 1871, ground was broken for the first scenic transmountain railroad of the West, running from Denver over the divide between the Platte and the Arkansas. Ten months later it was opened for traffic to Colorado Springs, a distance of 76 miles. The following year it was opened to Pueblo, 120 miles from Denver, with a stub of about 45 miles to the coal fields of the Arkansas. The little iron rails, weighing but 30 pounds to the yard, were brought from Europe. Previous to the opening of passenger service the triweekly stage, which ran between Denver and Colorado Springs, carried an average of five passengers a trip. But little was then known regarding the principles and practice of narrow-gauge railroading in the

FIG. 1.—LOCOMOTIVES ILLUSTRATING ONE GENERATION'S PROGRESS.

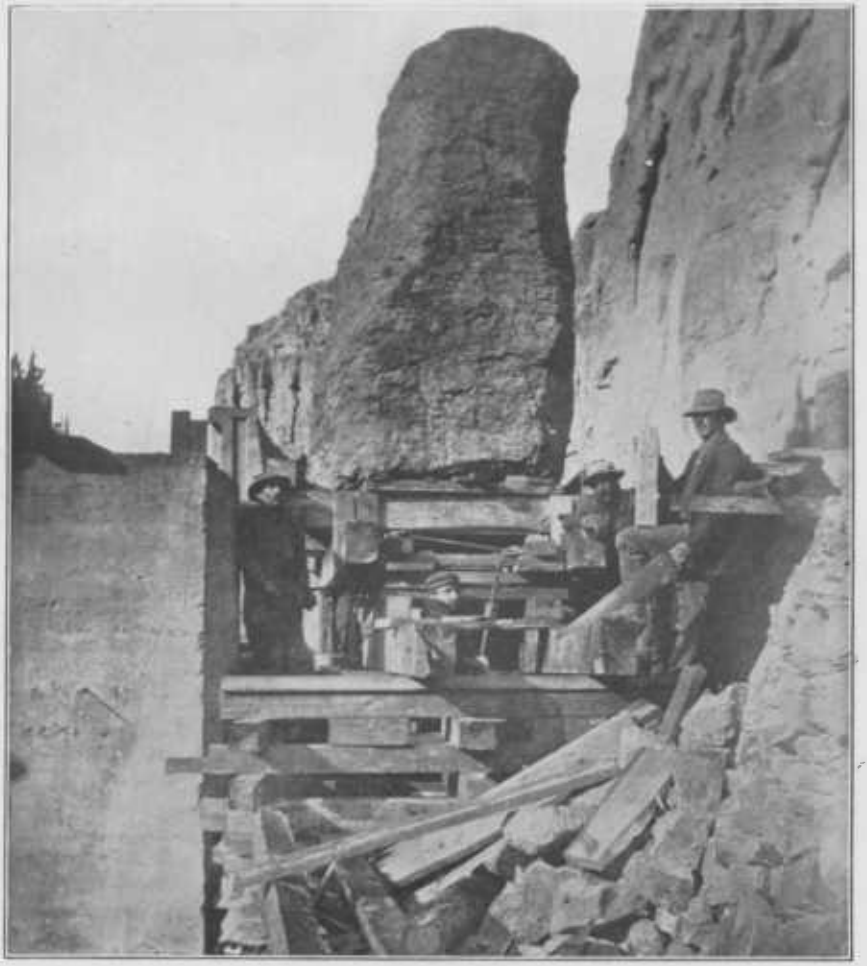


FIG. 2.—RESCUING THE MONOLITH, YELLOWSTONE NATIONAL PARK.

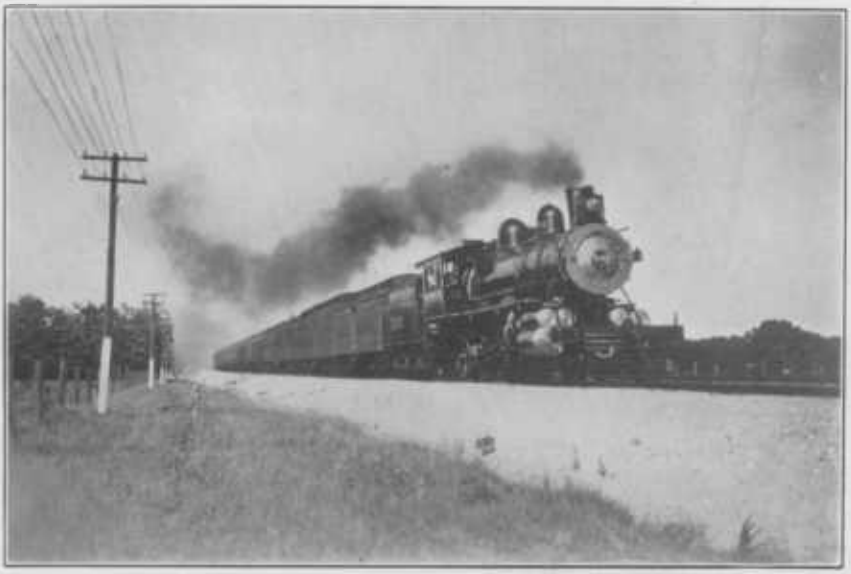


FIG. 1.—A TRANSCONTINENTAL LIMITED TRAIN TAKING ITS OWN PHOTOGRAPH AT 60 MILES AN HOUR.

FIG. 2.—THE NEW VIADUCT AT GOLDEN GATE, YELLOWSTONE NATIONAL PARK.

mountains. The single train each way daily, with a speed averaging less than 15 miles an hour, was composed of one small engine, a composite baggage and smoking car, and one short passenger coach, with a row of very narrow double seats on one side and equally narrow single ones on the other.[1]

Now, six lines run through to the coast; extra branches and divisions occupy every important pass, gulch, and canyon, and six additional lines bring passengers and freight from the East to Denver.

The railroad conquest of this region is accomplished, and when the industrial history of the United States shall be written the names of Oakes Ames, Leland Stanford, William J. Palmer, Henry Villard, and James J. Hill will be among the ones which head the list of men deserving the country's highest gratitude and honor.

Thirty years ago one train a day, with a single sleeper, carried every passenger who traveled by rail to the Pacific. Now more trains, fully outfitted and equipped with every known comfort and luxury of railway travel, leave Chicago daily for the Pacific than leave any Eastern city in every direction.[2] In fact, the provision for the comfort of the ordinary passenger (who does not patronize the standard hotel car) from the Missouri River to the Pacific is very far in advance of what it is on any Eastern railroad. (Pl. LXXVII, fig. 1.) Every day in the year round-trip tickets are on regular sale between Chicago and the Pacific coast at a less rate per mile than they can be purchased between New York and Boston, while at special times excursion tickets reduce these rates by a very large percentage.

WHAT CAN BE DONE TO MAKE SCENIC REGIONS OF UNITED STATES MOST AVAILABLE.

The last question with which this paper deals is, What can be done to make the scenic regions most available, and what sort of expenditure in this line is most promising of results?

The answer clearly is, Get ready to entertain the people who are coming, for if we do they will surely visit us. The railroads are fully prepared to bring them to the doors of the regions, and it must be

[1] At the time so little attention was paid in this remote section of the country to commercial photography that no view of the train was ever made, so far as the most diligent investigation has disclosed. One of the little toy engines did elude the scrap heap. A view has been secured of it, using for a background one of the type of engines used through the mountains on the same road to-day.

[2] There is an interesting story connected with the effort by which the view of a standard transcontinental train was secured. The enthusiastic, resourceful young amateur who undertook it found that no apparatus hitherto used would give him satisfactory results on a train of that size running at the terrific speed of 60 miles an hour. Trial after trial resulted in failure. He finally, after a great many experiments, devised a new form of shutter that would give an exposure of one-thousandth of a second, which would allow the train to move about an inch while the shutter was open. This was operated by an electric mechanism, so arranged that the engine would close the circuit when it reached the point adapted to the position of the camera. The train then actually took its own photograph when running 60 miles an hour.

made easy and pleasant for visitors to reach those scenic attractions. They should have more good roads to drive over; good trails to ride and walk over. These should lead to every mountain peak and to or past each point of scenic interest. As the landscape gardener uses every art to bring out and embellish the beauties and attractions of his grounds, so the roads and trails should be studied to make them not only good in themselves, but also to provide them with features which shall compel attention and cause visitors to remember and talk about them.

It is generally true of an important scenic road that some particular feature impresses itself with especial vividness upon the attention and recollection of all who have occasion to travel over it. This may be an unusual landmark, a spot with a legend or a history, an unexpected view, a natural object of suggestively realistic form, or some artistic handiwork of man. This landmark becomes so well known through the ready narratives of drivers and guides, local publications, scenic bulletins, newspaper articles, etc., that every traveler looks for it, and long after he has gone remembers and talks about it; and thus the road where it occurs gets to be better known because of it.

Near the lower entrance to the Golden Gate, on that superb road system of Yellowstone National Park, stands a vertical prong of rock, a sort of rough monolith, with slightly elliptical cross section, perhaps 7 or 8 feet thick, in larger diameter at the base and tapering gently to a height of 12 or 15 feet. (Pl. LXXVI, fig. 2.) This came to be a familiar landmark, and when a year or two ago Captain Chittenden planned to reconstruct this portion of the road, preparatory to building a beautiful concrete viaduct (Pl. LXXVII, fig. 2) and revising the grade, the higher location at this point threatened a sacrifice of the old stone. But so many and earnest were the protests that he decided to preserve it. Having first erected for it a substantial base built up to the level of the upper grade, he carefully elevated the huge rock to its new position. Thus rescued and preserved, its former interest has been augmented a hundredfold. Every traveler who passes it hears the story and goes home to tell it, and with it he tells much about the roads of the park that perhaps otherwise might never have found lodgment in the memory.

But these accidents of nature never impress so permanently as does some work of great artistic merit. Along this line may be given what Stoddard says of the St. Gothard: "It is in truth the king of Alpine roads, resembling a mighty chain which man, the victor, has imposed upon the vanquished Alps—one end sunk deep in the Italian lakes, the other guarded by the lion of Lucerne." The allusion is to that masterpiece of Thorwaldsen, a gigantic lion 30 feet in length.[1]

[1] Stricken with a mortal wound the lion lies in death's last agonies stretched upon the floor of a cave. His closing eyes are taking a farewell look at the escutcheon of the Bourbons, whose sculptured lilies are covered by his fast-relaxing paw. Above him are carved the words "Helvetiorum fidei ac virtuti" ("To the fidelity and virtue of the Helvetians," as the Swiss were then called, the word virtue being used in its original sense of manly courage and valor).

FIG. 1.—THORWALDSEN'S LION, ST. GOTHARD ROAD, SWITZERLAND.

FIG. 2.—OURAY, THE GREAT UTE CHIEF.

(Pl. LXXVIII, fig. 1.) This is one of the most impressive monuments in Europe, and was cut by the artist in the solid wall of the cliff to commemorate the heroic defense of the Tuileries by the Swiss guards, August 10, 1792. The French Revolution had begun; their sovereign, Louis XVI, had fled, and they sacrificed their lives in vain; but their valiant deed, thus immortalized, will outlive the centuries. The short quotation from Stoddard shows how a suitable masterpiece of art, immortalizing a noble action, distinguishes the road near which it may be. The conviction that we should not ignore the suggestion and inspiration thus afforded impels the writer to submit an imaginary example to illustrate and emphasize the principle.

In the early seventies, immediately after the Uncompahgre Utes had ceded to the United States what is known as "The San Juan region," Otto Mears, with an optimistic confidence, which seems little short of inspiration, began to build that wonderful system of mountain roads that gave him the title by which he will always be known in Colorado history, "The Pathfinder of San Juan."

The Uncompahgres still retained the larger part of their old reservation. This must be crossed before the Mears road could enter the main range, where prospectors had just begun to make important discoveries. The only output had been thrilling tales of hardship and adventure, with a few alluring statements of rich finds and an occasional specimen of silver-bearing rock that found its way to Denver. That city by the nearest existing route was then over 400 miles away, and that nearly half the distance by the crudest of Indian trails. But he built the road from Saguache across the reservation, past the door of the rude adobe home of Chief Ouray[1] (Pl. LXXVIII, fig. 2), through the canyons and over the highest passes, and opened to the world a section of great and enduring value. For many years this road system was the sole avenue of communication with the outside world, and this was sometimes blocked for months by impassable drifts of snow.

On that old Mears road, in the wildest part of the Uncompahgre Canyon, so high above the boiling torrent that it looked like a small green and silver ribbon shimmering in the awful depths below, men, let down by ropes, carved in the almost vertical wall of the frowning

[1] That friction which always emits heat upon an Indian frontier was not wanting there. Many impetuous individuals of each race, impatient of restraint, encroached upon the privileges of the other. The relations at times became so critical that it seemed as if actual hostilities must soon begin. But Chief Ouray never lost head or temper. He was the stanchest, truest friend whom the white man ever had among his red brothers in the West. And he was, withal, a great man; a statesman by instinct, keen of reason, with broad charity, unfailing patience, and wonderful control over himself and his tribe. No provocation was ever so exasperating, or danger of outbreak so imminent, that his wise counsel and skillful diplomacy did not find some peaceful way out. The Utes (called interchangeably Uncompahgres and Utes) long since parted with the remainder of their reservation and moved to a new home beyond the limits of the State. Ouray went with them, but his mission seemed to end when he was compelled to leave the home and the graves of his fathers, and he soon sickened and died.

precipice a shelf, and from it made the road. It raises no invidious comparison to say that it is the most remarkable piece of mountain road ever constructed in the United States. Hundreds of people every year take that long trip (they can go on the railroad now) just to ride over the Mears road. The writer has yet to learn of the first one who did not hold his breath and exclaim: "I did not know that there was anything in America like it. This is indeed sublime."

Would it not be a fitting memorial for such a place if some American Thorwaldsen, beside this road in the canyon that bears the name of the tribe over which Ouray ruled, should chisel upon that wall of everlasting rock the form and features of the illustrious chief, and inscribe above it the legend, "To the fidelity and virtue of Ouray"?

There must be suitable hotels, inns, boarding houses, bath houses, tennis courts, golf links, polo grounds, and boats for the lakes; the streams must be kept supplied with fish; courteous and efficient guides must be at hand when desired. Many places are already provided in these respects, while others are woefully lacking.

The methods and practices of other regions and countries where the tourist is made a source of revenue should be carefully studied. Hotels and inns need not all be either elaborate or expensive. It is not the large caravansary which excites the thrill of anticipation in the breast of a tired and hungry traveler; it is the pretty, artistic, tasteful, rustic place of shelter which suggests a cozy room, appetizing home cooking, and restful comfort. (Pl. LXXV, fig. 1.) Pomp and flourish, waiters in garb and demeanor better fitting a funeral than a feast, are more suggestive of a big bill than value received. A successful host or hostess is, like a poet, "born, not made."

In a plain, rustic hotel in eastern Oregon presides a dear old lady. Sun rays always seem to be in her beautiful white hair; her welcome is like the greeting of the dawn; her good-by is a benediction. An embodied spirit of benevolence and good cheer, she captures the heart of every guest who crosses her threshold. The food upon her table reminds one of childhood's days and its choicest memories. Such are the tourist's friends, and they draw him like a magnet.

CONCLUSION.

A study of the conditions which make for success in scenic regions promises great pecuniary returns. The records of the railway passenger departments show that the Western tourist business is largely increasing year by year. When the skies in other States become like furnace walls of molten brass, the cool, revivifying atmosphere of these mountains makes them seem a haven of refuge, and the more inviting they are made the more income will be derived from this feature of Nature's bounty.

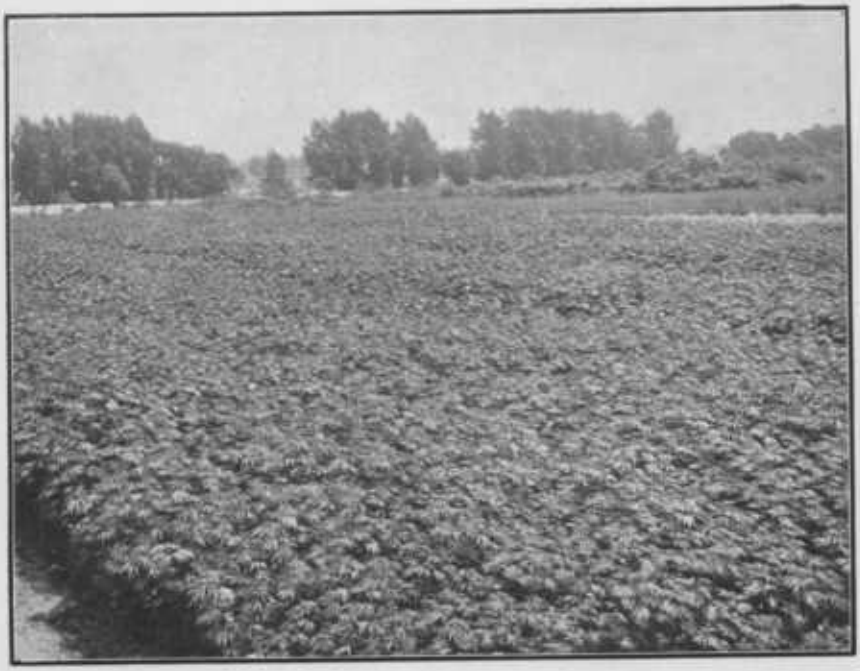


FIG. 1.—YOUNG HEMP, ABOUT 4 FEET HIGH, GROWING FOR FIBER.

FIG. 2.—HEMP PLANT OF CHINA-KENTUCKY TYPE, GROWN FOR SEED.

[Plant with leaves, pistillate; leafless plant, staminate.]

FIG. 3.—HEMP PLANT OF SMYRNA TYPE, GROWN FOR SEED (PISTILLATE).