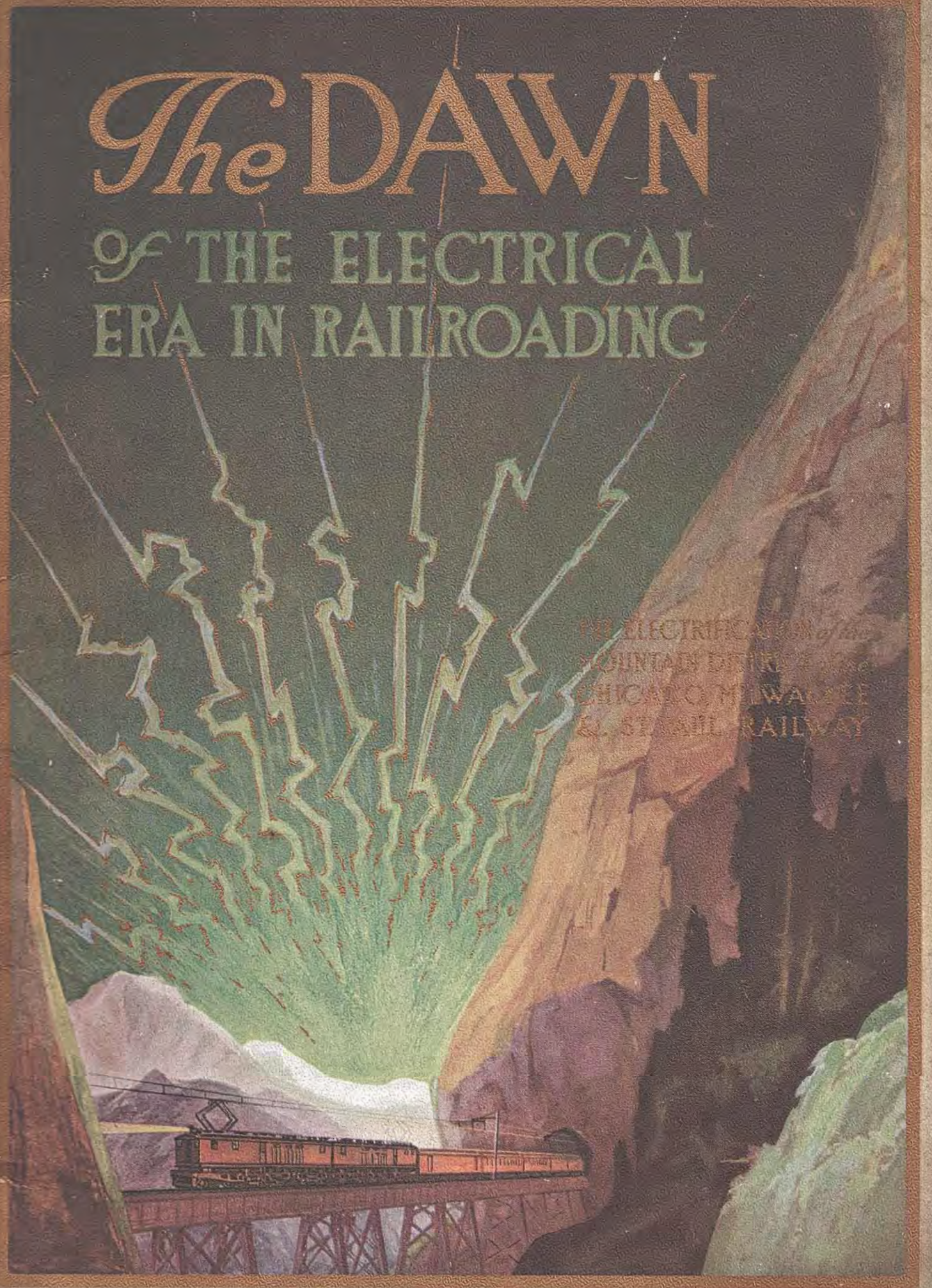
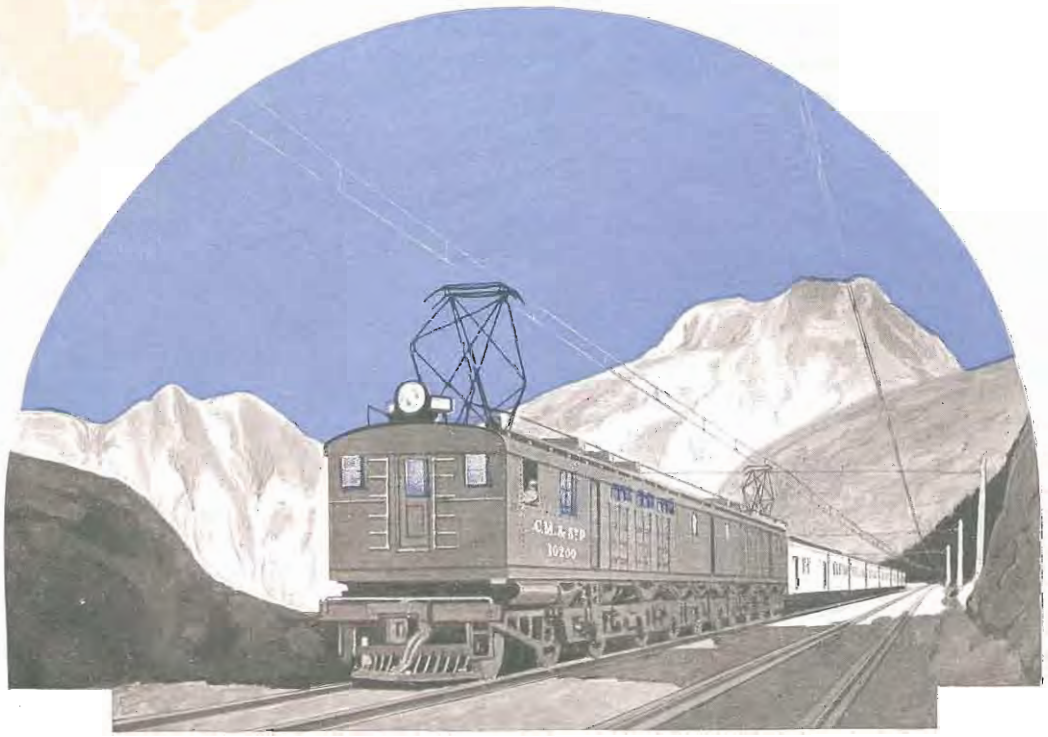
The DAWN of THE ELECTRICAL ERA IN RAILROADING

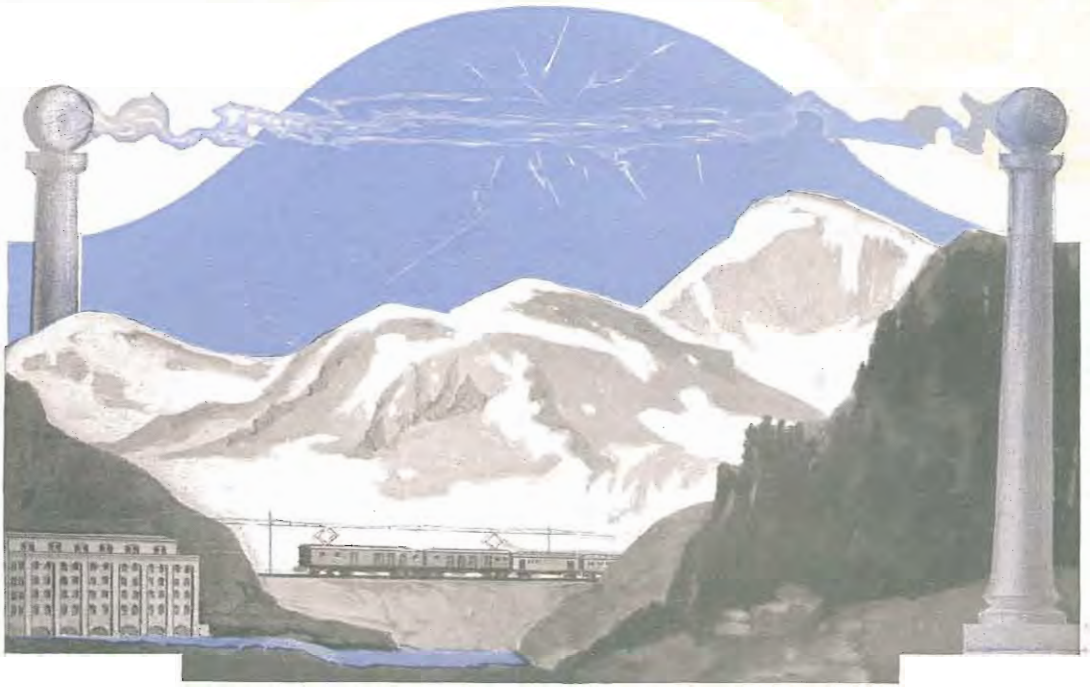


MORE PIONEERING
By The PIONEER LINE



The ELECTRIFICATION *of the* MOUNTAIN DISTRICT *of the* CHICAGO, MILWAUKEE & ST. PAUL RAILWAY

CAÑON OF THE JEFFERSON RIVER, MONTANA
—A VIEW TYPICAL OF THE MOUNTAIN SCENERY ON THE ELECTRIFIED LINE OF THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY ACROSS THE GREAT CONTINENTAL DIVIDE



The ELECTRIFICATION of the MOUNTAIN DISTRICT of the CHICAGO, MILWAUKEE & ST. PAUL RY.

PROGRESS has no age. Onward is ever the slogan of railway construction, operation and efficiency. In this forward movement electricity challenges the supremacy of steam, and on the Scroll of Time the year 1916 marks the dawn of the electrical era in railroading—and the accomplishment of a definite step to conserve the world's resources. It is particularly fitting that the Chicago, Milwaukee & St. Paul Railway, which since its inception has been identified with great pioneering achievements, should have been able to carry through to definite accomplishment the dreams and aspirations of scientists and electricians by the extended electrification of a portion of its main Pacific North Coast line.

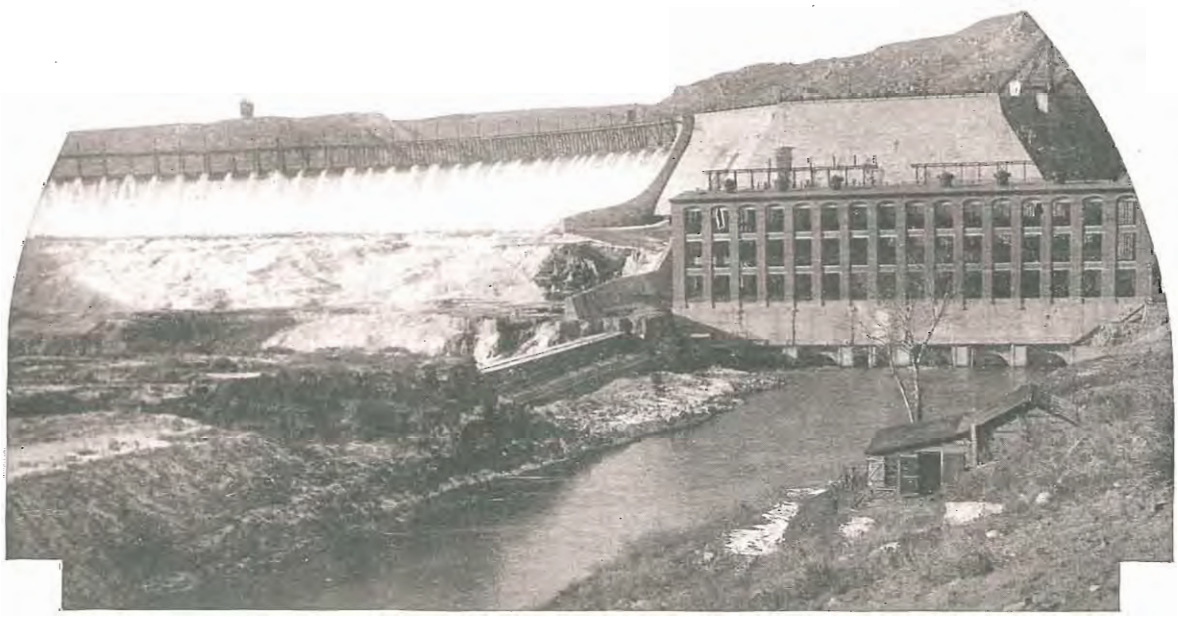
For 440 miles, from Harlowton, Montana, to Avery, Idaho, over the Great Continental Divide, the main line of the Chicago, Milwaukee & St. Paul Railway has been electrified; the first unit of 115 miles from Three Forks to Deer Lodge is now in actual operation and other units will be operated as rapidly as work is completed. In affording a smokeless, dustless and gasless main line route for 440 miles through the beautiful Belt, Rocky and Bitter Root Mountains this railway has identified with its equipment the latest word in all those factors that conduce to the safety, comfort and pleasure of the traveling public.

The entire work cost approximately twelve million dollars and required three years' time to complete. The electrical energy is obtained from the mountain waterfalls along the route.

WHAT THIS MEANS TO THE TRAVELER

Of all the achievements in railroad transportation—and they have been manifold and splendid—electrification stands as the one supremely towering fact of a hundred years. The magnificent upbuilding of railroad value and worth has rested for over a century on the one foundation of steam locomotion. *Electric* locomotion means the change to a newer, better foundation, on which builders shall rear the structure of railroading to undreamed-of efficiency and comfort.

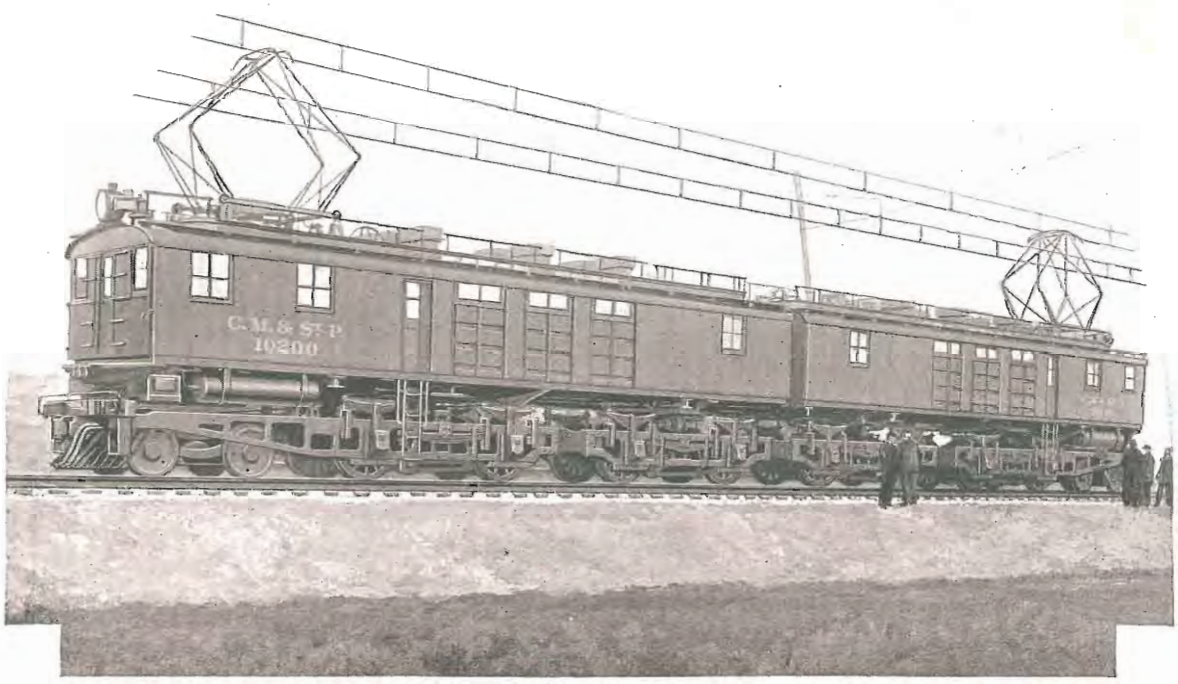
The traveler is destined to reap great benefits from this stupendous achievement of the Chicago, Milwaukee & St. Paul Railway, for with electrification has come a greater dispatch in train operation, a better maintenance of time schedules, the practical elimination of vexatious delays due to snow blockades and cold weather,



Hydro-Electric Power Plant and Dam at Great Falls, Montana

smoother riding caused by the greater evenness of speed, enhanced comforts due to greater cleanliness, and a pronounced improvement of the view from car window and observation platform, owing to the absence of smoke, dirt and other undesirable incidents to steam travel.

These advantages, added to the luxuriousness of the train equipment as exemplified in the superb transcontinental all-steel "Olympian" and "Columbian," the renowned personal service of the employes, the splendid physical condition of the line, and the extent and variety of the scenery, make the Chicago, Milwaukee & St. Paul Railway more than ever the route of efficiency, comfort and charm. It is the shortest highway connecting the great Central West with the North Pacific Centers. Chicago, Milwaukee, St. Paul, Minneapolis, Aberdeen, Miles City, Butte, Missoula, Spokane, Seattle and Tacoma are main line metropolitan marts, most conveniently reached by this short direct route of magnificent and matchless scenery. No other railway offers more interesting or pleasurable features, greater comfort and more efficient service. With the two splendid de luxe trains, "The Olympian" and "The Columbian," superb service is provided between Chicago and the Pacific North Coast and points intermediate.



The World's Mightiest Electric Locomotive

The ELECTRIFICATION of the MOUNTAIN DISTRICT

DETAILS OF THE ELECTRIFICATION

There is only one other event in railroad history that compares with the electrical achievement of the Chicago, Milwaukee & St. Paul Railway—and that was the first trip of the first steam locomotive. That trip ushered in the era of steam railroading. When the first train ran over the electrified trackage of the main line of the Chicago, Milwaukee & St. Paul Railway, drawn by an electrical locomotive, the electrical era in railroading was ushered in—the last word in scientific transportation.

Harlowton, Montana, and Avery, Idaho, are the terminals of this main line electrification across the Great Continental Divide. Harlowton, on the Musselshell, a tributary of the Missouri River, is directly south of Montana's geographical center. Avery is on the St. Joe Swiftwater, Idaho's beautiful historic stream, famous for its timbered slopes, magnificent fishing and hunting and gorgeous scenery, whose waters find their way to the Columbia River. The full "from-east-to-west" sweep of the Rocky Mountains is traversed and the electrical line runs across the three principal mountain ranges with their bewildering panorama of picturesque valleys, rivers and

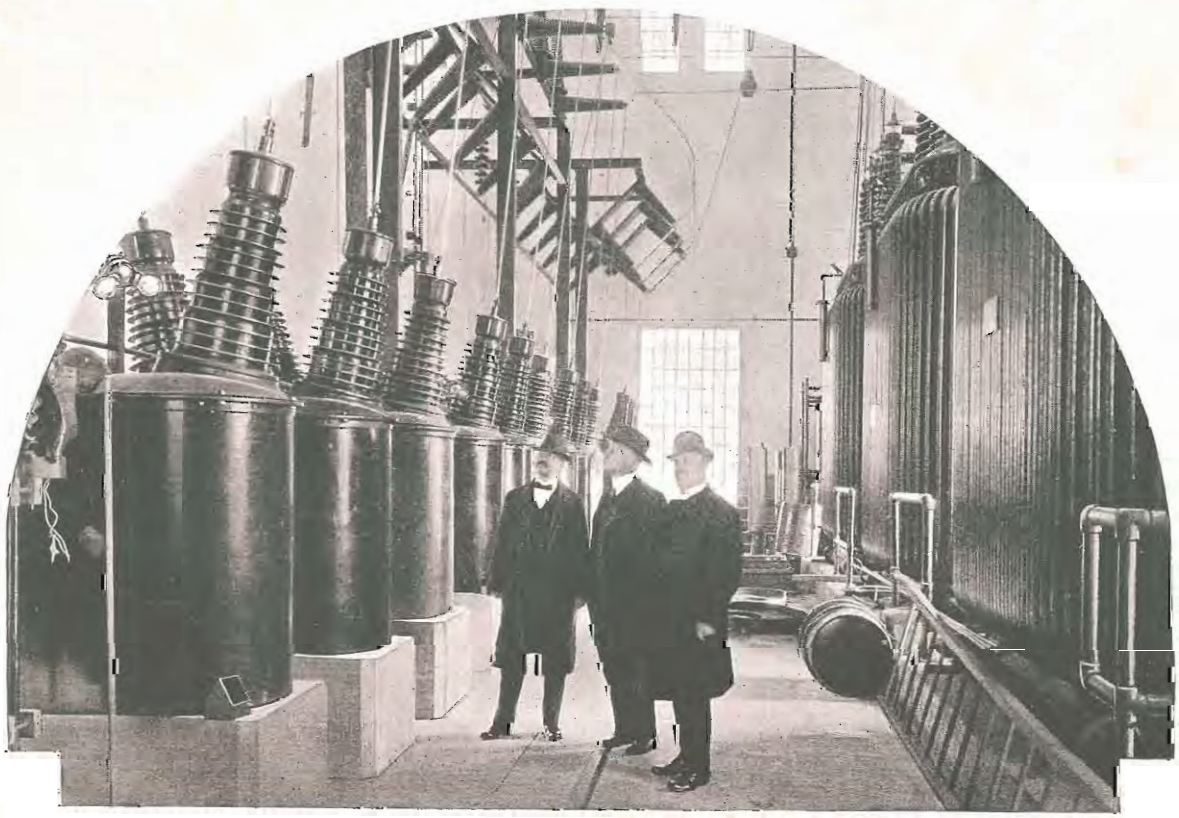
The "Olympian" Passing the Sub-Station at Piedmont, Montana

forests, contrasting with the bleak, barren and forbidding stony uplifts which form a continuation of the vast wastes of the Great American deserts of fifty years ago.

To-day hardly an acre of the lower altitudes suggests a desert—the fertile soil often reaches far up the mountain side. Nowhere are there finer farms, more productive orchards, more progressive towns or cities. Here are huge lumber industries, as well as some of the world's most famous copper, lead, silver, gold and zinc mines. An empire of happiness and contented homes is traversed—a land of health, long life and awakened opportunity.

The Belt Mountains are crossed at an altitude of 5,788 feet at Summit; the main Rockies or the Continental Divide at an altitude of 6,322 feet at Donald; the Bitter Root Mountains at an altitude of 4,163 feet at East Portal. Pipestone Tunnel, the half-mile bore through the backbone of the continent at Donald, is the highest elevation of the railway.

To give an idea of the difficulties that had to be overcome in this enormous undertaking, a 2 per cent grade had to be surmounted for a distance of 20.9 miles

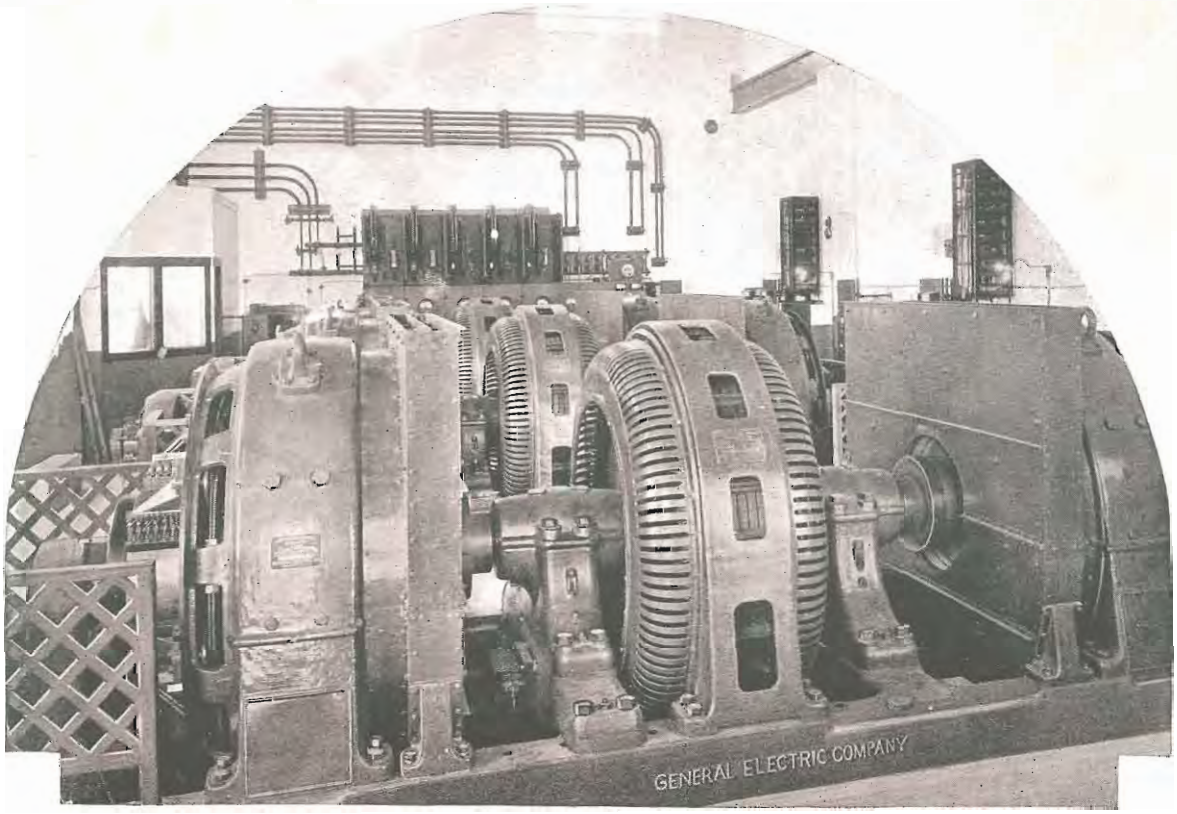


Oil Switches in Sub-Station, through which the 100,000-Volt Alternating Current is Received

The ELECTRIFICATION of the MOUNTAIN DISTRICT

on the east approach to the Continental Divide; immediately west of the Divide, for a distance of 10.4 miles, is a 1.66 per cent grade, and on the western slope of the Big Belt Mountains, for a distance of forty miles, is a 1 per cent grade—where the line climbs 52.8 feet to the mile. These grades make steam locomotive operation difficult for long, heavily loaded trains and especially so in winter time. To-day electric locomotives not only haul heavier trains more smoothly over these grades, but travel at much greater speed than when steam power was used, in all kinds of weather.

The particular and impressive feature of the Chicago, Milwaukee & St. Paul electrification accomplishment is that this is the first undertaking to install and operate electric locomotives on tracks extending over several engine divisions and under the most difficult traffic conditions. The various terminal and tunnel electric installations made by railways in the past were necessary by reason of local conditions and are limited to short distances. Purely economic reasons, together with anticipated superior operating results and greater comfort for the traveling public, was the inspiration for the extended electrification of the Chicago, Milwaukee & St. Paul



Motor-Generator Sets, in One of the Fourteen Sub-Stations, which Change the Current from Alternating to Direct

Railway. Already results have been obtained that foreshadow large developments in steam road electrification throughout the world.

POWER SUPPLY

The electrical power employed to operate the entire 440 miles of electrified main line road, and the 160 miles of electrified spurs and yards of the Chicago, Milwaukee & St. Paul Railway is obtained from the hydro-electric power plants of the Montana Power Company, whose main plant is located at Great Falls, Mont. The power is delivered to the railroad at fourteen sub-stations scattered along the route.

Since the sub-stations receive the electricity in 100,000-volt alternating current, and since they must deliver it to locomotives in 3,000-volt direct current, each sub-station has two functions to perform—to reduce the voltage and to change the current from alternating to direct.

The reduction of the voltage is accomplished as follows: The 100,000-volt alternating current is received through oil switches, is conveyed to the high-tension

One of the Sub-Stations and Bungalow Homes of Employes

The ELECTRIFICATION of the MOUNTAIN DISTRICT

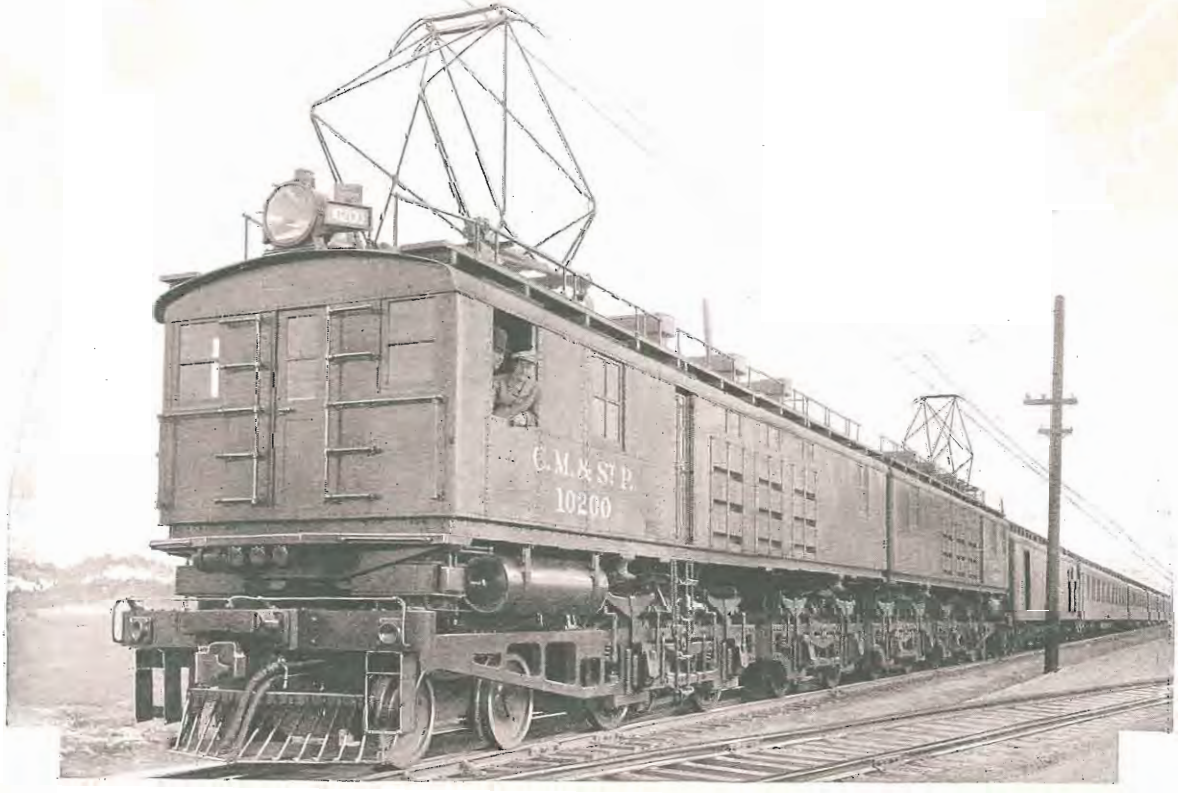
current distributor made up of three lines of copper tubing, and there forms the source of power for the sub-station.

From the current distributor the current is conducted through other oil switches to the transformers—entering at 100,000 volts and emerging at 2,300 volts.

The voltage being reduced, the next step is to change from alternating to direct current. The current is conducted from the transformers through switches to the motor-generator sets and is the power employed to operate them.

Motor generators, of which there are either two or three in each sub-station, consist of one alternating current motor driving two direct current generators. The motor is of the 60-cycle synchronous type, which means that the current changes sixty times each second. Each set generates a 1,500 or 2,000-volt direct current, and the two generators, being permanently connected in series, deliver a combined direct current of 3,000 volts, which is the highest voltage direct current adopted for railroad work in the world. By way of comparison—the direct current voltage for ordinary street railway work is only 550 volts.

After passing through the control switches, this 3,000-volt direct current is conducted to the feeder and trolley lines, thence through the pantagraph for the



The "Olympian," Electrically Operated, Starting on Its Trip over the Rockies

operation of the locomotive. Each locomotive is equipped with two pantagraphs, one located at each end. The pantagraph performs the same function as the trolley pole on the ordinary electric car.

OVERHEAD CONSTRUCTION

To eliminate any likelihood of the trolley wire breaking and falling to the earth, a strong steel cable, called a "catenary," runs just above the trolley wire and parallel to it all the way, and from this catenary the trolley wire is suspended by hangers at short intervals. In ordinary trolley construction, cross-wires strung between twin poles are the only support for the trolley wire. But in the "catenary" type, single poles, each bearing a bracket, support the catenary, and the catenary supports the trolley wire.

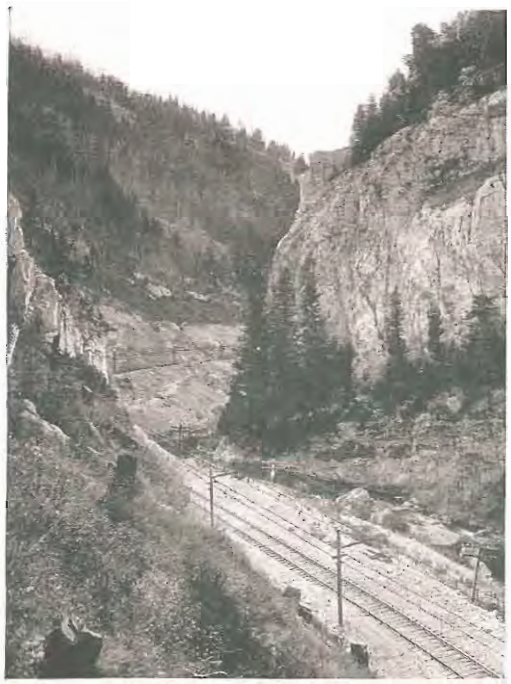
While "bracket" construction is used on straight track, "cross span" construction is used on sharp curves and in the yards.

The trolley wires, of which there are two, are of 4/0 size. They are specially made for high voltage electrical power use, and are the largest diameter copper wire employed for this purpose.

Montana Canon—Made Famous by the Pathfinders, Lewis and Clark

BITTER ROOT MOUNTAINS

THE GREAT CON

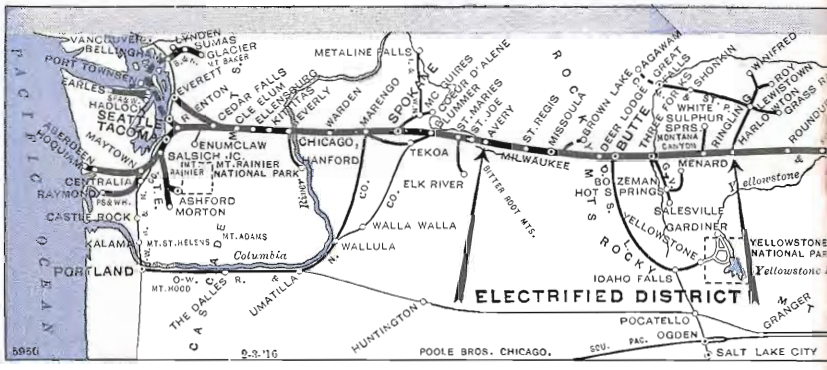


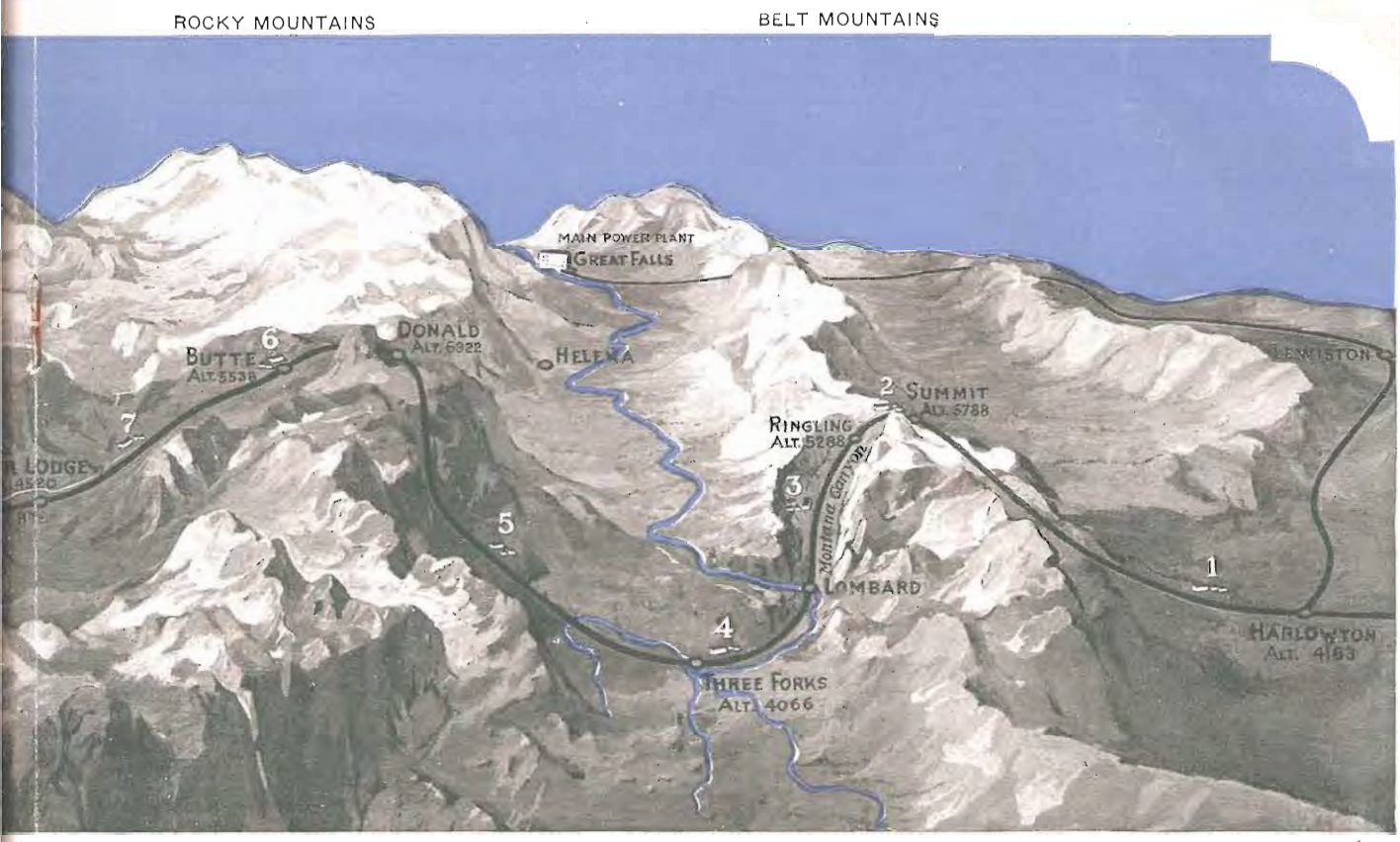
Map showing the Electrified Distric

CHICAGO, MILWAUKE

KEY TO SU

1—Two Dot
2—Summit
3—Josephine
4—Eustis
5—Piedmont
6—Janney
7—Morel





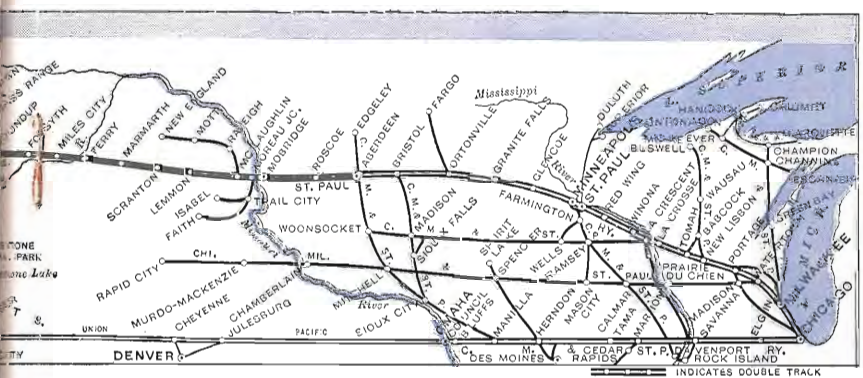
ONTINENTAL DIVIDE

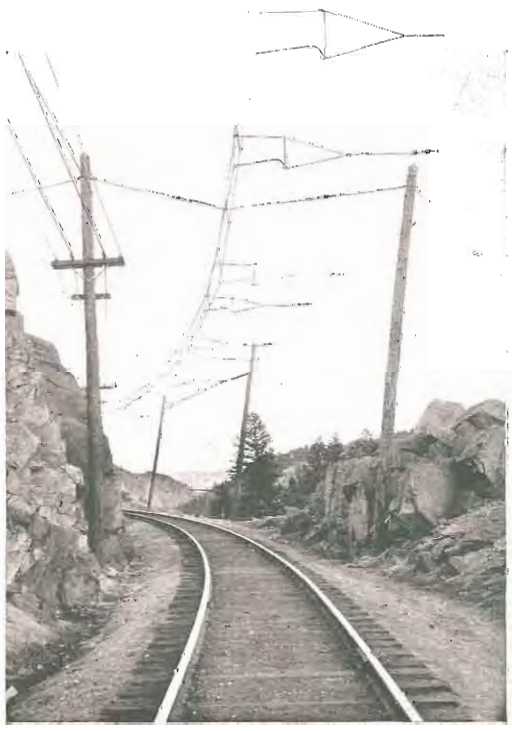
rict and location of Sub-Stations of the

EE & ST. PAUL RAILWAY

SUB-STATIONS

8—Gold Creek
9—Ravenna
10—Primrose
11—Tarkio
12—Drexel
13—East Portal
14—Avery





The so-called twin conductor trolley has been installed after careful investigation and experiment. This comprises two 4/0 wires alternately connected to the steel catenary. This form of construction permits the collection of heavy current through the twin contact of the pantagraph with the two trolley wires, and assures sparkless collection under all speeds.

EQUIPMENT

Under normal conditions, forty-two immense electrical locomotives are required to haul freight and passenger trains over the electrified mountain districts of the Chicago, Milwaukee & St. Paul Railway. These locomotives each cost approximately $112,000; they weigh 284 tons each and will haul 3,200-ton loads trailing up a 1 per cent grade at an average speed of sixteen miles an hour. Similar electric locomotives geared for greater speed will haul 800-ton passenger trains over the same stretch of road at a speed of about twenty-five miles an hour, and on a level stretch at a speed of sixty miles per hour. To appreciate the immense tractive power of these electrical "Goliaths" one should know that the wood-burning locomotive of fifty years ago weighed twenty tons and had a tractive power of only 5,000 pounds. The present day Mallet steam locomotive has a tractive power of

View in the Beautiful Jefferson River Cañon, Montana

76,200 pounds and the electrical locomotives weighing 284 tons have a tractive power of 85,000 pounds. These electrical locomotives are 112 feet, 8 inches long, and are driven by separate motors, twin-geared to each of eight pairs of driving wheels. The cab extends nearly the whole length of the locomotive.

REGENERATIVE BRAKING

Regenerative braking applies to a method used on down grades, by which the train, instead of consuming electricity, actually produces it while traveling onward, and by which, at the same time, the speed of the train in kept under perfect control.

This is the first use ever made of direct current regenerative braking, and the following from an authority on the subject explains its functions:

"Electric motors are reversible in their function, namely: while they absorb electrical energy and give out mechanical energy going up grades, they can reverse this operation and absorb the mechanical energy given the train down grade by gravity, and transfer it into electrical energy. Thus the electric locomotive provides a perfect braking system, which is independent and separate from the air brakes, which

Eastern Slope of the Rockies

are used only in emergency and for stopping trains. Electric energy so generated can be turned into the trolley wire to assist other trains and reduce the amount of purchased electric current."

In actual operation, at the crest of the grade, the helper locomotive is brought to the front of the train and coupled with the forward locomotive, both being operated as one. The train is then controlled on the down grade by regenerative braking.

This system of braking provides maximum safety, eliminates wheel, brake-shoe and track wear and overheating; insures uniform speed on down grades, and returns electrical energy to sub-stations to be utilized by other trains—from 25 to 52 per cent of power is recovered by regenerative braking.

MORE EFFICIENT OPERATION

The electric locomotive can be operated for a thousand miles or more with only casual inspection, whereas the steam locomotive on mountain work requires considerable attention at every division point. This has made it possible to operate the electric locomotive over several old steam divisions, and practically eliminate roundhouses and yards at intermediate points.

The "Olympian" Climbing the Continental Divide

By contrasting its workings with the steam locomotive in cold weather, the superiority of the electric locomotive is notably demonstrated. In cold weather a steam locomotive, losing much of its power through heat radiation, draws lighter loads, makes less speed, and has greater difficulty in climbing grades and penetrating snowdrifts, while the electric locomotive, aided by the cold in keeping its motors cool. is able to draw maximum loads, maintain its regular speed, and, by its immense power, to drive through snowdrifts with comparative ease.

SUB-STATIONS

There are fourteen sub-stations on the road between Harlowton and Avery, each of which, with its equipment, costs about $160,000. Each sub-station is about thirty-three miles from its neighbor. Stations are located at Two Dot, twelve miles west from Harlowton and continuing west, at Summit, Josephine, Eustis, Piedmont, Janney, Morel, Gold Creek, Ravenna, Primrose, Tarkio, Drexel, East Portal and Stetson.

Two handsome bungalows have been erected adjoining each of the sub-stations for housing the sub-station employes. These bungalows, built in the heart of the mountains, compare favorably in artistry of design and equipment with similar structures in the suburbs of any of the large cities.

Western Slope of the Rockies

The buildings are of modern, permanent, fireproof construction, with concrete foundations, brick super-structure and concrete roofs.

SUMMARY

Some of the advantages of the Electric Locomotive:

Does away with fuel trains.
Runs at an even speed.
Has no tender, as it uses neither coal or water.
Operates over several steam railway divisions.
Is always ready to start simply by turning a hand-switch.
Has no ashes to dump—no flues to clean—no boilers to inspect.
Power to send it through the heaviest snowdrifts.
Handles twice the load of the steam locomotive at greatly reduced cost.
Is smokeless, noiseless, dirtless and "jerkless."
Operates best in cold temperatures when steam locomotives have their greatest troubles.
Is thoroughly dependable in all temperatures.

Electrified Yards at Butte, Montana

Is easy on track and roadbed at all speeds.

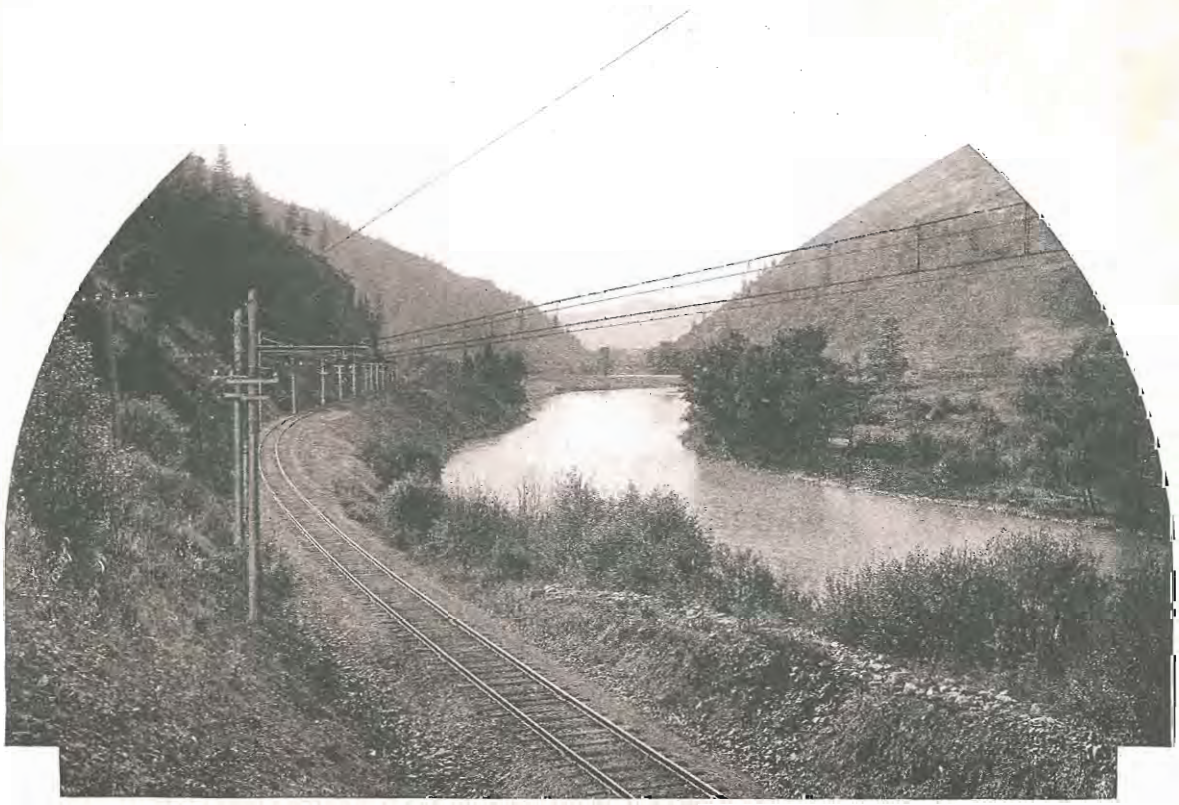
Its motors, when reversed on down grades, become generators which return from 25 per cent to 52 per cent of the power used in climbing.

HISTORIC

Sixty-five years ago the first train on the line that formed the nucleus of the Chicago, Milwaukee & St. Paul Railway made its maiden trip from Milwaukee to Waukesha, a distance of twenty miles.

To-day the mileage of the Chicago, Milwaukee & St. Paul Railway is more than 10,000 miles—self-owned—and with its allied lines serves people of eighteen states. Sixty years ago twelve of these states were not born—five of them do not even appear in the census tabulations of that time.

The area of these states is approximately 15,000,000 square miles. More than one-third of the people of this country live, work, trade and prosper within their borders. Their 1,700,000 farms—their mines—their manufacturing plants, produce annually about ten billion dollars of wealth, and in that territory nearly 1,000 cities and towns of commercial significance are on the Chicago, Milwaukee & St. Paul Railway.



In the Picturesque Missoula River Gorge, Montana

The ELECTRIFICATION of the MOUNTAIN DISTRICT

Railroad history records the following transportation achievements for the Chicago, Milwaukee & St. Paul Railway:

It was the first railway to link Chicago with St. Paul and Minneapolis.

It was the first to operate all-steel trains between Chicago and the Twin Cities.

It was the first to connect Chicago and the Twin Cities with a double track.

It was the first railway to electrically light and steamheat passenger trains.

It has been from the beginning, and still is, the only railway in America directly employing all train attendants.

It has been from the beginning, and still is, the only railway in America owning and operating all train equipment.

It is the shortest line between Chicago and Pacific North Coast cities.

It was the first, and is still, the only road operating all-steel trains between Chicago, Spokane, Seattle and Tacoma.

It has been from the beginning, and still is, the only railway to operate over its own rails all the way from Chicago to Pacific North Coast terminals.

It was the first to install "*longer-higher-and-wider*" berths in its sleeping cars.

Scene in the Forested Bitter Roots, Idaho

of the CHICAGO, MILWAUKEE & ST. PAUL RY.

The greatest achievement next to the electrification was the inauguration, in 1911, of through service between Chicago and the North Pacific Coast, the fifth great transcontinental line to be built, and the shortest, with light curves and easy grades. The extension of this road from Mobridge, South Dakota, to Spokane, Seattle, Tacoma and other important centers of the Northwest Domain, is notable as well for the rapidity of its building as for its solidity. The line, 1,420 miles across the Rockies, Bitter Roots and Cascades, was completed in one day less than three years, the fastest rounding out of high-class mountain construction in railway history. The cost exceeded $200,000,000. As none of the errors of previous railway building were made, it will not be necessary in the future to re-locate the line.

Unlike the earlier transcontinental roads, the Chicago, Milwaukee & St. Paul Railway received no government grant either of money or lands. The builders were content to depend on the resources of the marvelously rich country penetrated by its lines, and results have fully justified this faith in the success of the great enterprise. In addition to the new sections opened to settlement, many important industrial areas were tapped which supply a large and increasing traffic. From the opening day of its through service, the Pacific North Coast Line has proved to be in a class by itself,

In the Snow-Crowned Cascades, Washington

The ELECTRIFICATION of the MOUNTAIN DISTRICT

the route that is different. Popular from the first, it has steadily grown in favor and is being more and more appreciated as filling a want felt by both the business public and by pleasure seekers.

TWO SUPERB TRAINS

Travelers are of one mind as to "The Olympian" and "The Columbian" being the most sumptuously appointed trains in the American railway service, which means there are none finer in the world. The equipment consists of observation-library cars, drawing-room, compartment standard sleeping cars, tourist sleeping cars, dining cars, coaches, baggage, mail and express cars—all steel. Each train is the other's counterpart and it seems impossible to improve on what this provides in the way of utility, comfort and pleasure.

Only by the Chicago, Milwaukee & St. Paul Railway can the transcontinental trip between Chicago, Seattle and Tacoma be completely enjoyed without discomfort or the least fatigue, for no other route offers the advantages of the short, direct, mountain electrified line—a fact to be remembered by the traveler contemplating a trip to or from the Pacific Coast. From Lake Michigan to Puget Sound "The Trail of the

Kendall's Peak, in the Cascades

Olympian" presents ever-changing views of pleasing variety and unequaled grandeur. The beauty of the majestic "Father of Waters" to the Twin Cities, the interesting expanse of the vast wheat areas and fertile prairies of the Wonder West, the exhilarating thrills of the Montana-Idaho Rockies, with their valley farms and towering forests, the unique "Shadowy" St. Joe Country, the marvels of the "Inland Empire," and the Cascades where Mount Rainier—"easily King of all"—and other snow-mantled sentinels, guard the Pacific, compose a galaxy of instructive and uplifting joys which no words can portray, and which, not seen, is a life-long regret.

PROGRESS

The electrification of the 440 miles of main line of the Chicago, Milwaukee & St. Paul Railway over the Great Continental Divide is a long stride forward in Railroading, in Electricity and in Conservation of Resources. To produce enormous power from mountain waterfalls instead of from coal, to transmit this power in the form of electricity over great distances with but small loss in transmission, and to apply it so as to promote more efficient and economical operation, is an achievement of the Chicago, Milwaukee & St. Paul Railway which has created a new epoch in railroad transportation and has erected another milestone in the world's progress.

At Indian Henry's, in Mt. Rainier National Park, Washington

PASSENGER REPRESENTATIVES

ABERDEEN, S. D.	O. F. WALLER, Division Passenger Agent
ATLANTA, Ga., 1509 Candler Building	O. H. WILSON, Commercial Agent
BOSTON, MASS., 260 Washington Street	J. H. SKILLEN, New England Passenger Agent
BUFFALO, N.Y., 303 Main Street	J. J. MCTAGUE, Commercial Agent
BUTTE, MONT., 127 North Main Street	W. J. KEELEY, Assistant General Passenger Agent
CEDAR RAPIDS, IOWA	W. C. PARKER, Division Passenger Agent
CHICAGO, ILL., 52 W. Adams Street	C. N. SOUTHER, General Agent Passenger Department
	E. G. WOODWARD ..... Traveling Passenger Agent
CINCINNATI, OHIO, Sinton Hotel Bldg., 25 E. Fourth Street	H. H. HUNKINS, Traveling Passenger Agent
CLEVELAND, OHIO, 27 Taylor Arcade	E. G. HAYDEN, District Passenger Agent
COUNCIL BLUFFS, IOWA, 34 Pearl Street	C. A. SEARIGHT, City Ticket Agent
DALLAS, TEXAS, 902 Southwestern Life Bldg., 1506 Main Street	W. D. BELT, JR., Commercial Agent
DAVENPORT, IOWA	A. A. WILSON, Division Passenger Agent
	P. L. HINRICHS ..... Commercial Agent
DENVER, COLO., 821 Seventeenth Street	EDWARD MAHONEY, District Passenger Agent
DES MOINES, IOWA, 420 Walnut Street	C. E. HILLIKER, Division Passenger Agent
DETROIT, MICH., 212 Majestic Building	H. W. STEINHOFF, District Passenger Agent
DUBUQUE, IOWA	S. N. BAIRD, Division Passenger Agent
DULUTH, MINN., Torrey Building	G. M. BOWMAN, General Agent
GREAT FALLS, MONT	C. H. MITCHELL, Division Passenger Agent
HELENA, MONT., Montana Club Building	P. H. SCANLAN, District Passenger Agent
HOUGHTON, MICH., 78 Shelden Street	H. E. STEWART, Commercial Agent
INDIANAPOLIS, IND., 408 Traction Terminal Building	A. L. EIDEMILLER, Traveling Passenger Agent
JUNEAU, ALASKA	A. E. HARRIS, Traveling Passenger Agent
KANSAS CITY, MO., 907 Main Street	R. A. LAUGHLIN, City Ticket Agent
LEWISTOWN, MONT	E. A. BRADLEY, Traveling Passenger Agent
LIVERPOOL, ENG., 18 Chapel Street and 9 James Street LONDON, ENG., 7-8 Charing Cross	J. JACKSON & SONS, European Agents
LOS ANGELES, CAL., 130 West Sixth Street	D. T. BERRY, Commercial Agent
MADISON, WIS.	W. W. WINTON, District Passenger Agent
MASON CITY, IOWA	W. F. CODY, Division Passenger Agent
MILES CITY, MONT	J. J. FOLEY, Traveling Passenger Agent
MILWAUKEE, WIS., 400 East Water Street	W. J. BOYLE, General Agent Passenger Department
MINNEAPOLIS, MINN., 328 Nicollet Avenue	C. R. LEWIS, City Passenger and Ticket Agent
NEW ORLEANS, LA., 517 Hibernia Bank Building	WM. H. ROGERS, Commercial Agent
NEW YORK, N.Y., 1200 Broadway	G. L. COBB, General Agent Passenger Department
OMAHA, NEB., 1317 Farnam Street	EUGENE DUVAL, General Agent
PHILADELPHIA, PA., 818 Chestnut Street	GEO. J. LINCOLN, General Agent
PITTSBURGH, PA., Rooms 205-6-7 Park Building	JOHN R. POTT, District Passenger Agent
PORTLAND, ORE., Railway Exchange Building	E. K. GARRISON, District Passenger Agent
SALT LAKE CITY, UTAH, 319 South Main Street	C. S. WILLIAMS, Commercial Agent
SAN FRANCISCO, CAL., Flood Building, 22 Powell Street	C. H. MILES, District Passenger Agent
SEATTLE, WASH., Second and Cherry Streets	A. P. CHAPMAN, JR., General Agent Pass'r Department
SIOUX CITY, IOWA, Martin Hotel Bldg., 503 Fourth Street	C. N. CURTIS, Division Passenger Agent
SPOKANE, WASH., 618 Riverside Avenue	W. P. WARNER, Assistant General Passenger Agent
ST. LOUIS, MO., 205-6 Boatmen's Bank Bldg., Broadway and Olive Streets	J. I. CAMPBELL, Com'l Agent
ST. PAUL, MINN., 365 Robert Street	W. B. DIXON, Assistant General Passenger Agent
TACOMA, WASH., 1001 Pacific Avenue	F. A. VALENTINE, City Passenger Agent
TORONTO, ONT., 53 Yonge Street	W. H. D. SNAZEL, Traveling Passenger Agent
VANCOUVER, B. C., 443 Hastings Street, West	A. W. NASE, Commercial Agent
VICTORIA, B. C., 1003 Government Street	J. G. THOMSON, Commercial Agent
WATERLOO, IOWA, 316 Oaklawn Avenue	J. F. KANE, Traveling Passenger Agent
WINNIPEG, MAN., 349 Main Street	A. W. JONES, Commercial Agent

GEO. W. HIBBARD
General Passenger Agent
SEATTLE

F. A. MILLER
Passenger Traffic Manager
CHICAGO

GEO. B. HAYNES
General Passenger Agent
CHICAGO

POOLE BROS. CHICAGO.