

TELLTALE

FOR EMPLOYEES OF THE NORTHERN PACIFIC RAILWAY COMPANY

VOL. XXVIII

FEBRUARY, 1965

NO. 2





Published monthly by the Advertising & Publicity Dept., Northern Pacific Railway, Saint Paul 1, Minn., W. A. Gustafson, Manager.



MINNESOTA CHAIRMAN -- Douglas Dillon, left, Secretary of the United States Treasury Department, appoints Robert Macfarlane, right, president of the Northern Pacific Railway, to the chairmanship of the 1965 Industrial Payroll Savings Committee in Minnesota. The appointment presentation, shown here, was made January 12 in Washington, D.C.

Our Cover . . .

... ready to go, NP Conductor W. E. Lundell presses button on his "Handie Talkie" and transmits orally to North Coast Limited Engineer P.J. Costello, giving him instructions to pull out. Newly installed two-way radios have replaced hand signals between the conductor and the engineer. For more information regarding this communication system, and how it involves Costello and Lundell, turn to the story on Page 8 of this issue.

MEMO . . . FROM THE PRESIDENT

What does NP profit mean to you?

Some people have the common misconception that stockholders are the sole beneficiaries when a firm shows a profit on its operations for the year. Though it is true that an investor is entitled to a fair return on his investment, the profit picture has a vital bearing on the growth and security of a company and its employees.

I have often said that a business can go forward or it can go backward, but it cannot stand still. If it goes backward it eventually fails. If it goes forward it must be prepared to overcome determined competitors seeking the same goals in the same market.

Without profits it is impossible for us to move forward. Without profits we simply would not have the money to plow back into the new equipment, facilities, modernization and maintenance necessary to keep abreast of competition, not only from other railroads, but from trucklines, bargelines, buses, planes and pipelines.

It takes no great stretch of imagination to picture what would happen to us and our jobs if we were not equipped to meet, beat or equal competition in this advancing, fast-moving, ever-changing new world of transportation.

It is only through the addition of the most modern equipment and facilities that we can increase the productivity and efficiency of our railroad, make it possible for NP employees to provide better service to shippers and passengers and improve our position in the transportation market. Every investment we make to this end is an investment, not only in the future of the Northern Pacific Railway, but in the future and job security of every one of us.

Profit dollars, then, are more than a return on investment, more than a mark of sound management, they are the basis of security and growth for our company and its employees.

Donald E. Dawson, vice president of E. I. du Pont de Nemours and Company, put it this way, "Only a healthy business can provide job security, and only a profitable business is a healthy one."

Robert Macfarlane



PETTICOAT JUNCTION ENGINEER Smiley Burnette of TV renown gets set to "highball" the "Minnetonka", Northern Pacific's first steam engine, during Fort Union Days celebration at Sidney, Mont. The NP purchased the Minnetonka 95 years ago in 1870. "The Minnetonka", Smiley remarked, "is two years older than the engine used in our TV show".

Charles E. Denney, Former NP President, Succumbs to Heart Attack at Home

Charles E. Denney, 84, former President and Director of the Northern Pacific Railway, died January 18 at his Pinehurst, N.C., home following a heart attack.

Born in Washington, D.C., he was educated in the public schools of Lancaster, Pa., and at Pennsylvania State College. He first went to work for Union Switch and Signal company in 1899, then started his rail career six years later as an Assistant Signal Engineer with the New York Central. Subsequently, he served with the New York Chicago and St. Louis railroad (the Nickel Plate) before joining the Erie railroad as Vice President in 1928. He was elevated to the presidency of that company in 1929 and held that position for 10 years.

Upon the death of NP President Charles Donnelly in 1939, Mr. Denney was elected to head the St. Paul-based railway. Under his leadership, the Northern Pacific carried out a 10-year improvement program which cost more than \$150 million and put the railway in the best condition of its 86-year history prior to 1950. During this decade, too, he succeeded in reducing the company's bonded indebtedness by \$70 million.

Characterized by a financial magazine as "dynamic, ebullient ... outspoken and sometimes brusque,"



Denney

he also was called "uncommonly successful in drumming up business" for the Northern Pacific. In another important contribution, he led the company into a program of dieselization, a program which was one-third complete upon his retirement on Dec. 31, 1950.

Mr. Denney continued as a member of the NP board and in a consulting and advisory capacity from the company's office in New York City. He resigned from both positions on December 31, 1952, and retired to a new home at Pinehurst.

Nipper news bits

Christmas Day passengers aboard Northern Pacific train No. 26 going through Miles City were treated to a pleasant surprise by the city's Junior Chamber of Commerce, according to Miss Marlys Johnson, NP Stewardess - Nurse aboard.

150 individually wrapped Christmas cookies were set on board by the local Jaycees and Jayceens.

"... everyone was touched by the gesture," Miss Johnson commented.

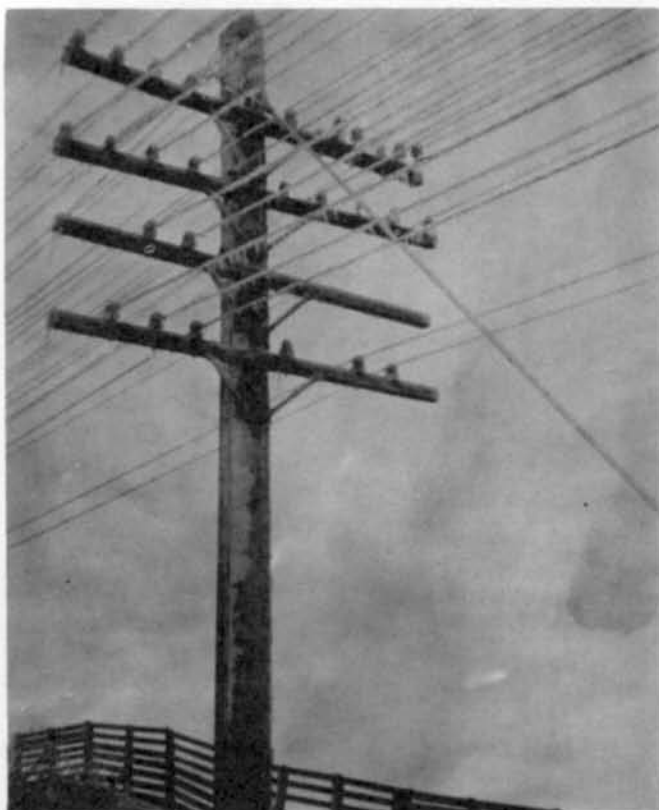
Warren C. Gilman, retired locomotive engineer at Tacoma, has expressed his appreciation for the wonderful care he received while hospitalized recently at the NPBA Hospital in Tacoma.

He extends special thanks to the members of the nursing staff who attended him there as a surgical patient.

1965 NATIONAL BROTHERHOOD WEEK

February 21 - 28

Brotherhood Week should make us all aware of our responsibility to be concerned with our fellow man. It is more than a one week proposition. It is a year-round goal. " ... Human brotherhood is not just a goal. It is a condition on which our life depends," spoke President John F. Kennedy. "The question for our time is not whether all men are brothers. That question has been answered by the God who placed us on this earth together. The question is whether we have the strength and the will to make the brotherhood of man the guiding principle of our lives. Can we match our actions to our words?"



At one time or another, nearly everyone on the Northern Pacific system who has reason to use the company's dial telephone facilities has experienced the inconvenience of being unable to complete a long distance call.

While this can happen at almost any time of the year, it occurs most frequently during the winter months. And the principal cause is not broken wires or poles, as we might logically assume, according to D. C. Hill, Superintendent of Communications.

The major problem, one common to all open lines such as ours, and one that occupies the attention of telephone companies and communications departments the world over, is what the electronics experts call attenuation. More simply, this is the partial or complete loss of signal due to any one of a number of weather conditions over which man has no control.

The most persistent cause of signal loss is a heavy accumulation of frost or ice on the lines, and this poses one of the communications department's most difficult tasks in keeping the lines operational.

Wet weather also has a significant effect on line resistances. It does so, Superintendent Hill says, because of a phenomenon which the technicians call "skin effect." For the layman, this is the tendency of the highest frequency currents to ride on the outer surface of the wire rather than within it. (Fig. I)

Most telephone lines today carry a number of conversations at the same time. This is possible because each conversation is handled at a different frequency, with the lower frequencies moving along near the center of the wire and progressively higher frequencies riding ever closer to the surface. It is as though the frequen-

cies traveled in the shape of different sized sleeves, one inside the other.

Now, when the wires become wet during rainy or foggy weather, the current which normally rides on the surface of the wire is forced to flow through a film of water. This film will actually conduct the signal, but its resistance to the current is far greater than that of copper wire, and the result is a weakening of the signal, or attenuation.

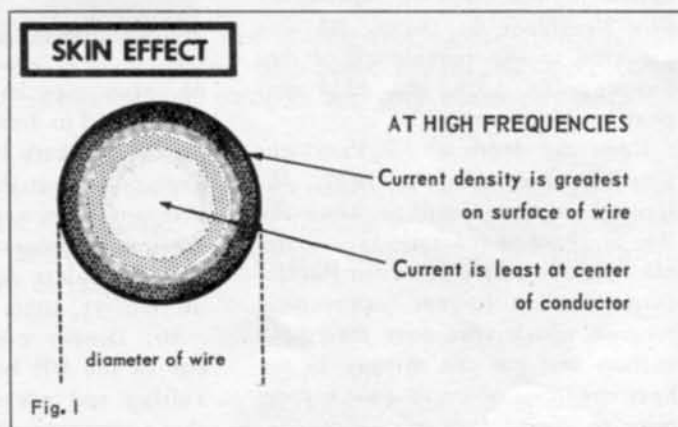
During the winter, a heavy coating of frost or ice is often deposited on the wires, and the surface current

'Sorry, the Line'

must flow through this coating. However, since frost and ice are more resistant than ordinary moisture, the signal may be weakened as much as six or more times normal dry weather attenuation. In fact, the highest frequencies sometimes cannot go through at all because of the great resistance of the frost or ice coating. (Fig. II)

Local service is largely unaffected by attenuation because these signals sent at a relatively low frequency, move along near the center of the wire. Moving out in ever widening circles, we find eastbound long distance currents surrounding the local calls. Next come the westbound long distance signals, occupying the highest frequencies and, thus, to a large extent, making up the "skin" current which rides on the surface of the wires.

This is why, during periods of heavy frost and ice conditions, it is sometimes possible to dial, say, from Seattle to St. Paul but not in the reverse. Usually, of course, service is either in or out both ways, depending on the severity of weather conditions. Westbound signals are lost more often because they are carried at frequencies near 150 kilocycles, which is just about the opti-



CROSS SECTION of wire shows how various frequencies of current are distributed like sleeves in wire. Solid black circle is high frequency current flowing on surface of wire to form a "skin".

mum level for skin effect.

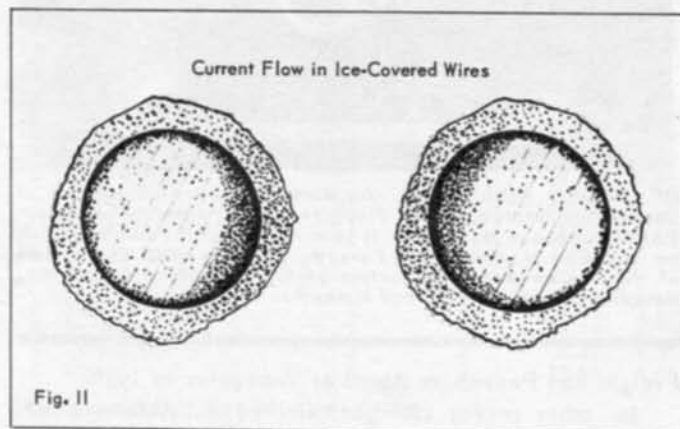
Further attenuation of the signal is experienced because of the particular physical characteristics of Northern Pacific's installations, as well as the physical requirements of all open wire construction.

NP telephone lines are strung in pairs, with about 8 inches separating the wires in each pair. The current traveling through such a set of wires tends to become mutually attracted because of the magnetic field within each wire. This causes a higher density of current near the inside surface of the wire pairs (Fig. III) and in-

es Are Out!

creases what is known as series resistance. The result of this mutual attraction is further attenuation, which becomes more pronounced if the distance between the parallel wires is reduced.

As frost and ice build up, the spread between the wires does decrease, of course. Most often, the thickness of the coating is many times the diameter of the wire, and it is not uncommon for the distance to be



CROSS SECTION shows how high frequency current flows through coating, often causing an outage. Density of dots indicates density of current. Series resistance also is increased.

reduced by an inch or more.

The third problem lies in the nature of open wire construction. A typical installation is comprised of poles, crossarms, insulators and wires. As snow, ice and frost are deposited on them, they form a continuous layer of conducting material along the wires between the poles, on and around the insulators, atop the crossarms and even down the surface of the pole. Through the paths thus formed, some of the current leaks out of the wires to flow among all of these elements, causing additional attenuation and outages.

New technology to eliminate all of these problems is

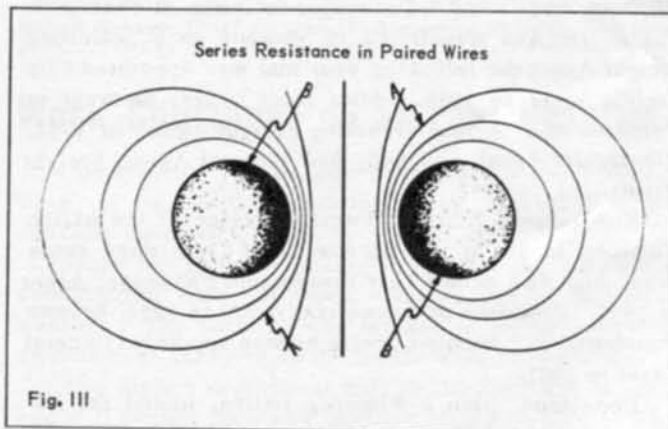


SNOW REMOVAL by helicopter is employed by the Northern Pacific when excessive attenuation threatens to disrupt service. Here a 'copter dislodges heavy accumulations of frost and snow from the company's lines between Spokane and Pasco, Wash.

on the horizon. As a matter of fact, the company already has made a small start in adopting it. The magic formula is MICROWAVE.

Just over a year ago, NP's long distance open wire facilities between Seattle and Portland were replaced by microwave. Experience shows that the attenuation caused by the weather conditions described above is not associated with the new system because it is wireless.

When the day arrives on which all of the company's existing long distance facilities will have been replaced by microwave, that discouraging word -- outage -- will seldom be heard.



INCREASED ATTENUATION of high frequencies is partly caused by resistance due to higher current density near surface. "A" arrows shows magnetic field; "B" arrows show mutual attraction of current.



Promotions



Charles C. Gardner, General Agent for the Northern Pacific in Winnipeg, has been appointed General Agent, Freight Department, at the company's Portland office, effective February 1.

Gardner succeeds H. H. Happe, who retired January 1 after more than 41 years of NP service, the last 33 of them in Portland.

Named to fill Gardner's post was K. R. Rue, General Agent in Edmonton. R. W. Donaldson, Traveling Freight and Passenger Agent at NP's Vancouver, B.C., office, succeeded Rue.

Gardner, a Toronto native, began his railroad career with the Canadian Pacific in 1935. After five years in



Gardner



Rue

the Royal Canadian Navy, he joined NP's Toronto staff in 1946. He transferred to Detroit in 1950, became Traveling Freight and Passenger Agent in Buffalo in 1952, and returned to Toronto as General Agent a year later. He became Assistant to the General Freight Agent in St. Paul in 1955. He has been General Agent at Winnipeg since 1956.

A veteran of two World Wars, Happe joined the Northern Pacific as a Passenger Solicitor at Seattle in 1923. He was transferred to Spokane as a Soliciting Freight Agent the following year and was appointed City Freight Agent in 1929. After three years, he went to Portland and became Traveling Freight Agent in 1934, Commercial Agent in 1946, and General Agent, Freight Department, in 1953.

Rue entered Northern Pacific service at his native Winnipeg in 1945. He became Chief Clerk three years later, and was named City Freight and Passenger Agent in 1951. Promoted to Commercial Agent in 1954, he was transferred to Edmonton, where he was appointed General Agent in 1961.

Donaldson, also a Winnipeg native, joined the NP there in 1954 following 12 years with the Canadian National. He went to Los Angeles as Chief Clerk in 1956 and to Seattle the following year as City Freight and Passenger Agent. He was promoted to Traveling



55-YEAR VETERAN RETIRES - Clarence C. Rippel, center, White Bear Lake Agent, pauses with fellow employees, A. L. Nygaard, left, his successor, and J. W. Nelson, Traveling Auditor, during his last days on duty for the Northern Pacific. Beginning as a Telegrapher in 1910, Rippel became Agent at White Bear in 1949.



NP MODEL BUILDER A. A. Meredith, retired conductor of Desert Hot Springs, Calif., displays model he made of Northern Pacific caboose No. 1720. It is a replica of the one on which he and Earl H. Marcellus, Forsyth, Mont., worked at the time of their retirement. Conductors on the Forsyth to Laurel run, Meredith retired in 1947, and Marcellus in 1962.

Freight and Passenger Agent at Vancouver in 1959.

In other recent changes, George W. Abbott, Jr. of NP's Lake Superior Division, was appointed Working Supervisor at North Bemidji, Minn. He formerly held the position of Night Working Supervisor.

C. J. Varriano, former Night Working Supervisor on the Yellowstone Division, has been named Working Supervisor at Forsyth, Mont.

J. P. Hochmuht, formerly Pipefitter at NP's Livingston Roundhouse, has been appointed Working Supervisor on the Tacoma Division. His new headquarters are at the King Street Station in Seattle.

R. L. Bowers, of the Tacoma Division, is the new Night Assistant Car Foreman at the Third Street Coach Yards in St. Paul. He formerly was a Car Inspector in Tacoma.

O. C. Anderson, formerly Night Roundhouse Foreman for the NP at Dilworth, Minn., has been named Assistant Roundhouse Foreman there.



RETIREMENT GIFT - Mildred Vaselenak, stenographer in Northern Pacific's Passenger Traffic Department in St. Paul, receives a farewell present at her recent retirement. F. G. Scott, NP's Passenger Traffic Manager, made the presentation on behalf of Miss Vaselenak's fellow employees.

Safety Score Board

January 1 thru Dec. 31, 1964

RANK	REPORTABLE INJURIES		CAS. RATIO	
	1964	1963	1964	1963
STANDING BY DISTRICTS				
1. Western District	110	93	9.60	7.54
2. Eastern District	140	97	12.48	7.94
STANDING BY DIVISIONS				
1. Fargo	14	5	6.88	2.49
2. Rocky Mountain	21	16	7.101	5.33
3. Idaho	25	21	7.104	5.88
4. Yellowstone	33	28	9.33	7.86
5. Tacoma	64	56	12.86	11.40
6. Lake Superior	29	18	15.50	9.39
7. St. Paul	64	46	16.95	12.04
STANDING BY MAIN SHOPS				
1. South Tacoma	1	2	1.96	3.58
2. Brainerd	2	3	3.14	4.73
3. Livingston	3	2	6.49	4.56
4. Como	8	2	15.68	3.86
STANDING BY CLASS OF EMPLOYEES				
1. Stationmen	17	10	3.06	1.79
2. Shopmen	7	8	4.11	4.59
3. Enginemen	14	14	5.18	4.64
4. Carmen	15	18	6.31	7.63
5. Trackmen	33	29	6.95	6.39
6. Bridgemen	14	16	13.32	15.27
7. Trainmen	56	35	23.06	14.65
8. Yardmen	94	60	44.50	28.27
MISCELLANEOUS DEPARTMENTS				
1. General Office & Misc.	0	2	0.00	5.88
Tie Chief Special Agent	0	1	0.00	4.61
Tie Mechanical Engineering	0	0	0.00	0.00
4. Communications Dept.	0	7	4.305	15.40
5. Signal Department	2	4	4.314	9.23
6. Dining Car Department	4	3	6.66	4.88
7. Store Department	6	2	6.88	2.28
8. Engineering Department	4	1	9.67	2.25
9. Electrical Engineers Dept.	1	1	11.17	12.46
10. King Street Station	8	...	22.86	-----
TOTAL FOR SYSTEM	291	219	9.15	6.94
Train and Yard Accidents	160	195		
Motor Car Accidents	28	28		



Retirements



Lee J. Allison	1st Class Carpenter	Auburn	28
Clarence J. Balko	Carman	So. Tacoma	29
Earl A. Bishop	Car Repairer	Glendive	22
Mike Boehm	Carman	Mandan	22
Orville H. Dahl	Special Accountant	St. Paul	45
William E. Dillman	Car-Roundhouse Foreman	Everett	41
Leonard W. Dinnie	Communication Lineman	St. Cloud	39
John J. Fix	Car Inspector	Mandan	40
William R. Hambley	Writer-up-man	Parkwater	42
Fred C. Hass	Warehouseman	Wadena	49
Edward D. Hogan	Section Laborer	Steele	45
Winifred O. Johnson	Agent-Telegrapher	Roberts	47
Frederick Klipfel	Section Laborer	Edeley	21
Steve Kussy	Section Laborer	Medora	22
Tennis F. Milligan	Switchman	Laurel	41
William F. Nicholson	Signal Maintainer	Brainerd	40
Walter P. Otto	Boilermaker Helper	Livingston	21
Hans Petersen	Freight Carman	St. Paul	42
John Strand	Crane Operator	Brainerd	42
Arnold R. Waite	Tinsmith	So. Tacoma	38



EXAMINING PLANS for the NPBA's ancillary service building addition in St. Paul are: left to right, the Chief Engineer Robert Nelson, Chief Surgeon Dr. Alexander McEwan, Secretary J. C. Tierney and NPBA President T. O. Peterson.

Work Continues on St. Paul Hospital

Construction of the new Northern Pacific Hospital wing in St. Paul is moving along smoothly, NPBA officials announced recently.

Since the ground breaking in April, 1964, very little construction time has been lost because of inclement weather. The building was bricked in before snow fell enabling the crews to do the inside work fully staffed.

The dietary department will be the first unit to move and will occupy their new quarters after February 1. The laboratory will be relocated around the middle of February, and other departments will be moved at intervals thereafter until July, when the new building will be completely finished.

NP Installs Two-Way Radios



NP ENGINEER Phillip J. Costello, seated at the controls of his diesel cab, receives the departure message to go ahead from Conductor Lundell.

New two-way radios are making main line passenger operations safer and more efficient on the Northern Pacific, according to D. C. Hill, Superintendent, Communications.

Train conductors on both the Vista-Dome North Coast Limited and the Mainstreeter are now equipped with lightweight, fully transistorized portables that are powered by rechargeable nickel-cadmium batteries.

Rechargers have been installed in Seattle and St. Paul, where the "Handie Talkies" are deposited at the end of each run by the last conductor on duty. The sets then receive a "trickle" charge for a minimum of 16 hours to assure their maximum efficiency during the 1,900-mile cross-country trips.

The new radios have eliminated the need for hand signals between train conductor and engineer, Hill says, and they have even speeded up the departure of trains

from stations, especially in winter.

Formerly, he explains, it was necessary for the conductor to give his "highball" signal by hand from the platform. Frequently, however, the engineer was unable to see the signal because of fog or steam, and he was required to delay starting the train until he could read the signal.

"Today," Hill says, "the conductor has only to press a button, transmit his message orally, and the train is underway. And this is only one of the uses our crews have found for their radios," he adds.

Delivering 1.4 watts of power, they have a range of over a mile. This makes it possible for conductors to reach not only the engineer in the cab, but any wayside base radio station that comes within range of the sets.

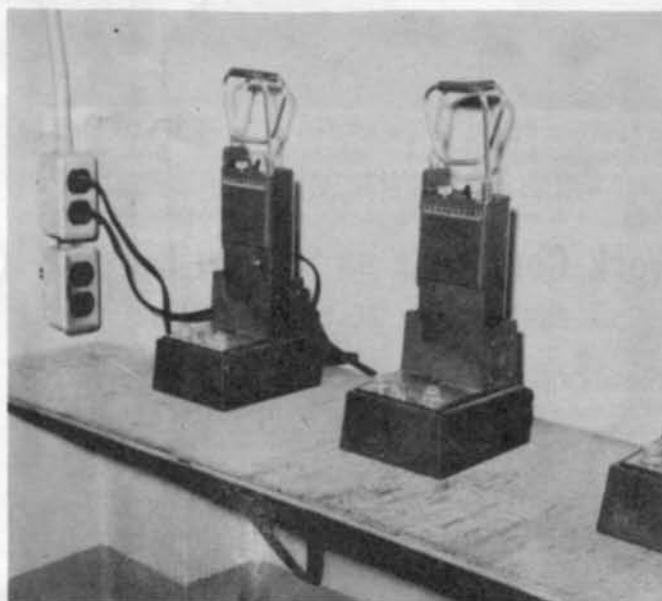
For example, no sooner do the wheels begin turning to ease the train out of a passenger station than the conductor is calling the local operator to give the exact time of departure. This, Hill points out, can be most important in today's high-speed, high-density rail operations.

How the new radios may be used in emergencies was dramatically illustrated on the North Coast Limited recently when a 10-year old girl became ill.

The stewardess-nurse assigned to the train notified the conductor, who relayed the message over his radio to the engineer. With the more powerful set in the head-end diesel, the engineer radioed to a telegrapher at Bismarck, where the agent immediately called a doctor and described the nature of the case. When the train arrived at the station, the doctor was standing by with medicine and an ambulance.

"Fortunately," Hill related, "the ambulance wasn't required, and the girl, after receiving proper medication, was able to continue the journey with her family. At the same time, we learned quickly that the radios can be lifesavers in more serious cases.

"This use of the new units was not fully anticipated when they were first placed in service, and we fully expect to discover other uses as we gain more experience with this new application of train radio."



BATTERY RECHARGERS in operation, above, at the Third Street Coach Yards, St. Paul, recharges the radios' nickel-cadmium batteries for a minimum of 16 hours in readiness for the 1,900-mile trip to Seattle.