



MOST OF THE MILWAUKEE'S TOP MANAGEMENT is in this picture. (Seated, left to right): P. W. Pillsbury, director; W. T. Mahoney, director; Joshua Green, director; A. N. Whitlock, vice-president and general counsel; J. B. Gallagher, director; Judson Large, director; Elmer Rich, director and voting trustee; J. P. Kiley, president; Charles H. Buford, retired president; L. T. Crowley, chairman of board of directors and voting trustee; J. W. Severs, vice-president—finance and accounting; J. D. Allen, director and voting trustee.

(Standing, left to right): L. H. Dugan, vice-president; R. J. Marony, retired vice-president; L. F. Donald, vice-president—operations; W. G. Powrie, chief engineer; T. W. Burtness, secretary; W. A. Dietze, public relations officer; L. K. Sorensen, general manager—Lines West; M. J. O'Brien, assistant to chairman; J. T. Gillick, retired vice-president; M. L. Bluhm, general solicitor; J. O. McIlyar, Southeastern traffic manager; P. H. Draver, vice-president—traffic

The New Milwaukee's First Five Years

Management, under five-man voting trust, has grappled with big problems in struggle to bring once bankrupt road to self-sufficiency

It may have occurred to you that in the case of a corporation or an institution, natural laws are seemingly reversed. Men, when they grow older, seek repose, take their ease and let younger men carry on, but the older a company or an institution is, the better and stronger it is expected to be. With age, it gains rather than loses strength. Its managers do not plan a program which tapers off as time passes but, on the contrary, they strive for a constantly expanding goal of progress and improvement. This is particularly true of companies engaged in public service, of which a railroad is a typical example."

Thus did Leo T. Crowley, chairman of the board of the Chicago, Milwaukee, St. Paul & Pacific, describe the phenomenon of perpetual—indeed increasing—youth in a railroad corporation, in an address this month before the St. Paul (Minn.) Transportation Club at a luncheon to celebrate his railroad's centennial. The Milwaukee has never been so youthful as during the past five years when its management, with financial responsibilities set down in broad outline by a five-man voting trust, has done battle with a host of difficulties in the struggle to bring the 100-year-old railroad to financial health after a decade in the courts.

Reorganization was effective as of December 1, 1945. Under its plan of revampment, on this date control of the property was vested in five voting trustees, designated, respectively, by the institutional investors, the mutual savings bank group, the 50-yr. mortgage bond committee,



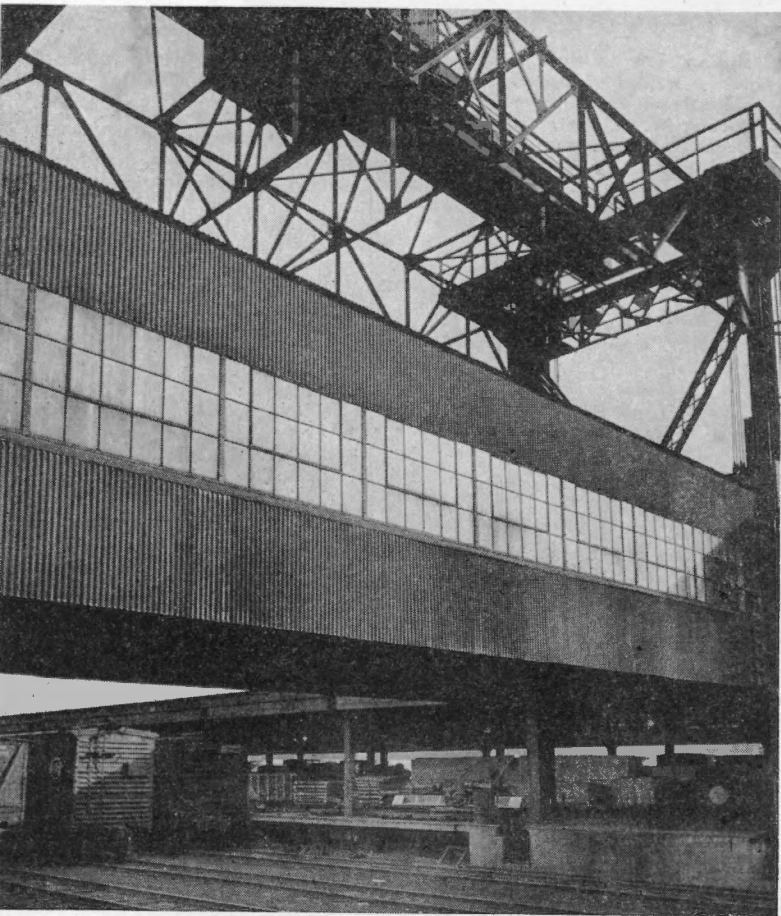
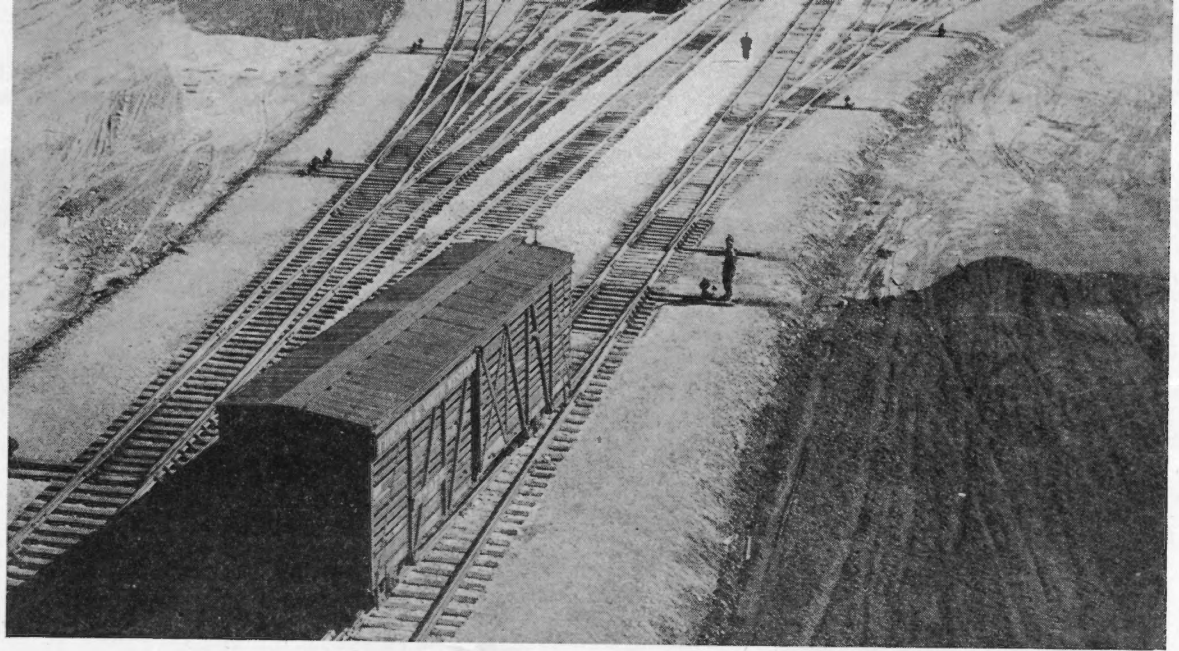
PRESIDENT KILEY TOOK OVER on September 1

the trustee for adjustment mortgage bonds and jointly by the preferred and common stockholders. The voting trustees are: John D. Allen, James M. Barker, Walter J. Cummings, Elmer Rich and Chairman Crowley—all of Chicago. According to the plan, the trust automatically expires on December 1, 1950.

The five years of the voting trust may well prove to be the most important single period in the history of the

SINCE THE ROAD CAME OUT OF REORGANIZATION IN 1945, almost \$145 million have been expended in capital improvements, like the extension and modernization of Bensenville, its main Chicago freight yard

BETTER SERVICE COMES FROM THE LARGE CAPITAL EXPENDITURES made by the Milwaukee under its voting trustees in the last five years. Here is a vertical lift bridge at the road's modernized Galewood (Chicago) freighthouse



road—at least insofar as its future is concerned. For in these five years were made expenditures, changes in techniques and pruning—both physical and financial—which bid fair to yield pay dirt in the Milwaukee's Second Century.

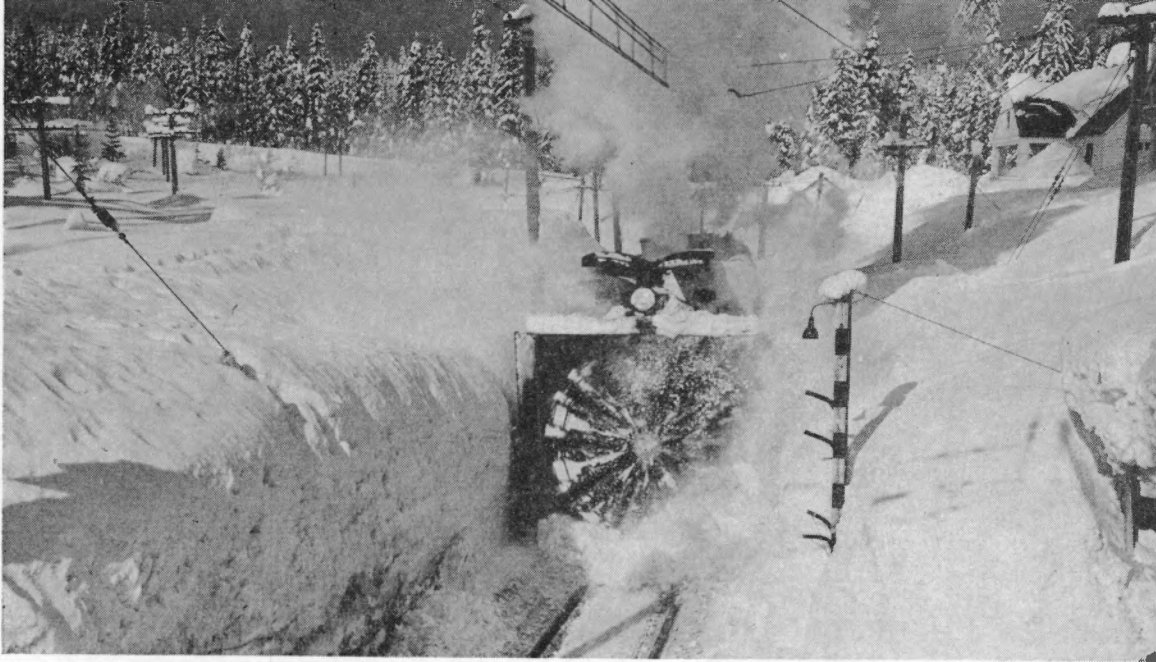
The Milwaukee is a very large and sprawling railroad. Its 10,671 operated route-miles extend into 12 states (with minor mileage in two more), from Chicago to Puget Sound, north to northern Michigan and east and south as far as Westport, Ind., which is east of both Indianapolis and Louisville. It is the fifth largest railroad system in the country in length; and twelfth in total operating revenues. The Milwaukee operates 4.7 per cent of all route-miles in the U.S., while it earns 2.8 per cent of total and freight revenues and 2.2 per cent of passenger revenues. It currently employs more than 33,000 men and women. Its rolling stock comprises 1,144 locomotives, more than 60,000 freight cars and a fleet of modern "speedliners."

In the five-year struggle to regain health after almost ten years of invalidism in bankruptcy, the railroad's management has confronted a tangle of "built in" handicaps which must be reckoned into any analysis of their accomplishment. Management itself does not hesitate to point out publicly that "the physical aspects of the railroad are not conducive to low cost operation, and compare unfavorably with other of the northwestern railroads in that respect." It calls attention to the Milwaukee's "far-flung property, relatively low traffic density, and high terminal and station expenses."

The road has many branch lines in an area which is already "over-railroded." Its traffic density is below that of the two transcontinental lines with which it most directly competes. As a result, only peak utilization—as in World War II—makes possible a good statistical performance for the system as a whole; otherwise the light-density mileage is a burden and nightmare in slack periods. Also, and not so apparent, the road has a relatively short average haul for freight on Lines East (east of Moberg, S. D.) and a high proportion of terminal cost relative to road-haul expenses. A survey in June, 1949, showed that the terminals at Chicago, Milwaukee, St. Paul and Minneapolis alone accounted for

Table 1—Three Periods of Milwaukee Expenditures Compared (Gross Capital Expenditures for Road and Equipment)

| Years | Road | Locomotives | Freight-train cars | Passenger-train cars | All Other | Total Equipment | Grand Total |
|-----------|--------------|-------------|--------------------|----------------------|-------------|-----------------|--------------|
| 1925-1929 | \$38,804,946 | \$2,159,403 | \$37,159,778 | \$2,375,855 | \$2,232,319 | \$43,927,355 | \$82,732,301 |
| 1931-1935 | 20,980,483 | 1,186,128 | 574,317 | 2,549,208 | 999,373 | 5,309,026 | 26,289,509 |
| 1946-1950 | 41,415,031 | 33,451,998 | 50,451,053 | 17,431,394 | 2,035,624 | 103,370,069 | 144,785,100 |



DIFFICULT SNOW CONDITIONS ON LINES WEST require a large investment in specialized equipment, like this rotary shown at work near Hyak, Wash.

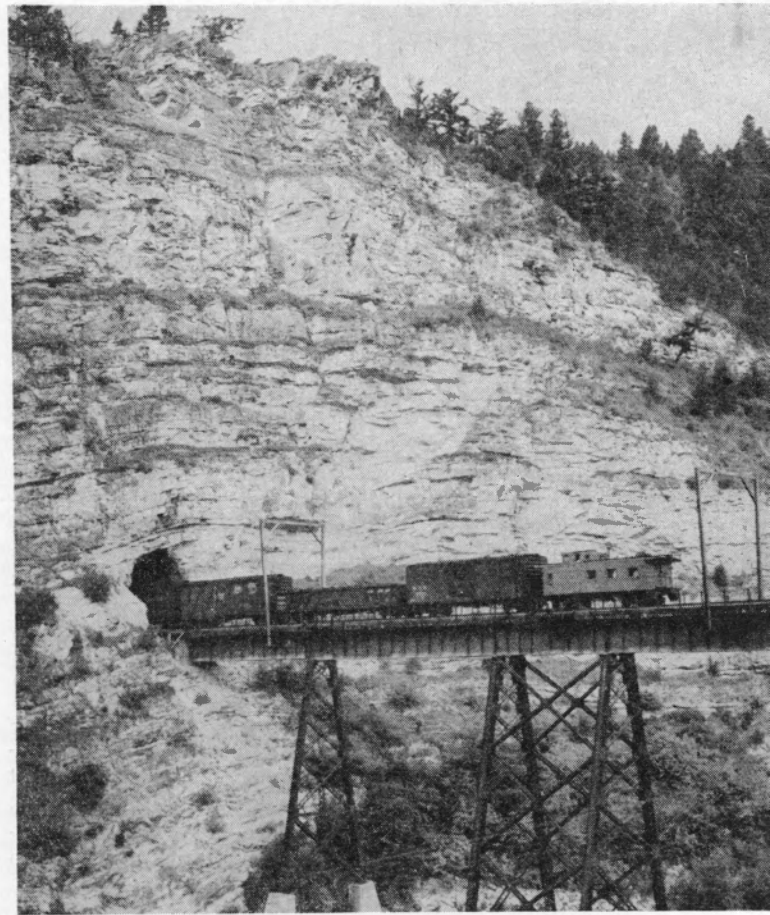
RUGGED TERRAIN REQUIRES RUGGED RAILROADING. Here is a quick transition from height to depth at the portal of Eagle Nest tunnel, Mont.

more than 25 per cent of all transportation expenses of the entire system and more than 33 per cent of such expenses on Lines East. The city of Milwaukee is the biggest originator of freight on the system, but it is also a very expensive job to serve it. It is apparent that the great mass of trackage filling up Milwaukee's Menominee valley, and the tenuous, sidetrack-flanked right-of-way of the "Beer Line," penetrating the city's waterfront and downtown area, are virtually paved with expense vouchers. The same goes for the Goose Island area in Chicago, for example, and busy Chestnut street in St. Paul.

Like the other transcontinentals, the Milwaukee also faces the hazards and burdens of operating through the great western mountain ranges with their snows and slides and natural obstructions. Of the total of 64 tunnels on the railroad, 42 are found on its Rocky Mountain and 19 on its Coast divisions. The St. Paul Pass bore, on the former, is more than a mile and a half long, while the Snoqualmie, on the latter, is well over two miles in length. The road also maintains 14 snow sheds to protect tunnel approaches. The accompanying profile diagram shows the principal mountain grades and summits between Ryegate, Mont., near the start of the approach to the most easterly of the five mountain crossings, and the Pacific Coast.

A railroad which has been through the courts, it is often said, has a moral obligation to pay dividends because its stockholders are usually former creditors who have been given shares in exchange for interest-bearing securities they held before reorganization. Consequently, there has existed for the Milwaukee's management during the past five years neither the excuse nor the means to indulge in lavish spending out of pride or perfectionism.

When the five-year period, 1946-1950, is ended, that management will, nevertheless, according to latest estimates, have completed gross capital expenditures of almost \$145 million. As shown in Table 1, this total is 5½ times the capital expenditures made in the five depression years, 1931-1935, immediately preceding filing of petition in bankruptcy. More significant, the 1946-1950 additions and betterments represented an outlay which was 75 per cent greater than gross capital expenditures made during prosperous 1925-1929, a period of notable improvement by the country's railroads. Even taking into account the reduced buying power of the dollar, the improvement program of the first five years



of the *new* Milwaukee is, set against the record of the past, a notable one.

It is noteworthy also that an overwhelming proportion of 1946-1950 expenditures—71 per cent—were for equipment, while only 53 per cent of the 1925-1929 expenditures, and 20 per cent of the 1931-1935 improvements, were for rolling stock. Almost \$331½ million was spent in the recent five years for locomotives alone, compared with only \$2 million in 1925-1929 and \$1 million in 1931-1935. Virtually all of this immense sum was spent for Diesel-electric or modern all-electric power—a form of investment notable for high annual return through reduction in operating expenses.

Altogether, during the past five years, the Milwaukee

TABLE 2—EQUIPMENT PURCHASED OR CONSTRUCTED IN COMPANY SHOPS, 1946 - 1950

(1950 partly estimated)

| Equipment | No. Units | Cost |
|-----------------------------|-----------|--------------|
| Locomotives | | |
| Diesel-electric: | | |
| 6,000 hp. | 11 | \$6,653,619 |
| 4,500 hp. | 24 | 11,999,652 |
| 4,000 hp. | 7 | 2,578,168 |
| 2,400 hp. | 1 | 198,982 |
| 2,000 hp. | 1 | 199,471 |
| 2,000 hp. intermediate unit | 1 | 211,562 |
| 1,500 hp. | 24 | 3,136,691 |
| 1,200 hp. | 13 | 1,279,938 |
| 1,000 hp. | 50 | 5,028,139 |
| Total Diesel-electric | 132 | 31,286,222 |
| Electric | 12 | 950,000 |
| Total locomotives | 144 | 32,236,222 |
| Freight-train cars | | |
| Box | 5,372 | 20,526,365 |
| Automobile | 1,000 | 4,250,808 |
| Hopper | 1,290 | 4,774,753 |
| Gondola | 6,200 | 16,661,438 |
| Refrigerator | 200 | 1,300,000 |
| Log flats, skeleton | 500 | 725,289 |
| Flat cars, depressed | 4 | 32,841 |
| Caboose | 115 | 605,645 |
| Total freight-train cars | 14,681 | 48,877,139 |
| Passenger-train cars | | |
| Coaches | 72 | 5,409,831 |
| Diners | 12 | 1,087,897 |
| Lunch-lounge | 8 | 653,771 |
| Diner-lounge | 4 | 358,189 |
| Cafe-parlor | 6 | 544,058 |
| Parlor | 8 | 629,827 |
| Sleepers | 40 | 4,453,773 |
| Baggage-dormitory | 8 | 507,823 |
| Baggage | 20 | 833,551 |
| Mail and express | 23 | 1,098,549 |
| Railway postal | 2 | 92,543 |
| Coach-sleepers | 6 | 506,968 |
| Parlor-observation | 4 | 354,251 |
| Motors, Diesel-electric | 2 | 275,876 |
| Total passenger-train cars | 215 | 16,806,907 |
| Work and floating equipment | 13 | 850,980 |
| Grand total | | \$98,771,248 |

has dedicated to the service of the public more than \$103 million worth of new or rebuilt rolling stock. The \$99 million package of equipment purchased or built new in company shops is listed in detail in Table 2.

Not included in Table 2, but ordered during the five-year period, is more than \$12 million worth of additional new equipment which, it is estimated, will still be on order, but not delivered, at the end of 1950, comprising:

| | |
|--------------------------------|---------------------|
| 50 Diesel-electric locomotives | \$ 7,572,100 |
| 400 refrigerator cars | 2,600,000 |
| 250 covered hoppers | 1,575,000 |
| 80 other freight cars | 639,200 |
| Total | \$12,386,300 |

The more than \$31 million invested during the five-year period in new Diesel units, together with locomotives purchased prior to reorganization, have brought this form of motive power, within a short span of time, to a position of importance in the operations of the Milwaukee. When the straight electric units operated in

electrified territory are added to the Diesel-electric fleet, the combined totals show that, by January, 1950, at least half of each type of service was being performed with electric drive and that, when locomotives now on order are placed in service, electric power will show a clear dominance in all three services:

| | July 1949 | Jan. 1950 | Estimated Potential with Diesels on Order |
|----------------------------|-----------|-----------|---|
| Freight gross ton-miles | 38.2 | 50.2 | 70 |
| Passenger train-miles | 54.2 | 59.1 | 85 |
| Switching locomotive hours | 49.6 | 49.8 | 70 |

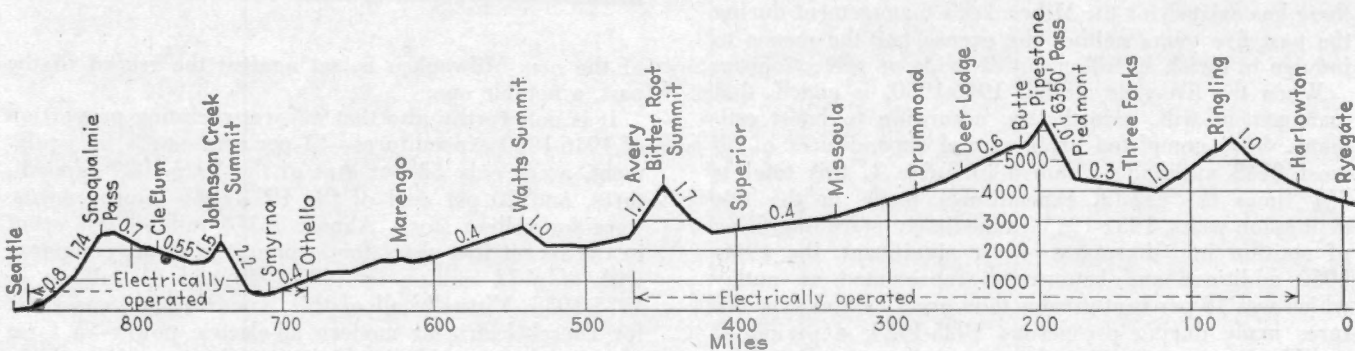
The proportion of straight electric service rendered in January, 1950, was 7.6 per cent of freight gross ton-miles; 10.1 per cent of passenger train-miles and 1.4 per cent of switching hours.

Power in electrified territory was substantially improved in capacity and quality by the purchase, in the summer of 1950, of 12 electric locomotives built originally for Russia, which, because of international developments, could not be delivered to that country. Constructed to sell for \$350,000 apiece, the locomotives were obtained by the Milwaukee for about \$79,000 each. Replacing a larger number of locomotives built in 1915 and 1916, each does the equivalent work of two units of the old type and at higher speeds. Savings in operating costs are large.

To the almost \$49 million spent on new freight cars during the five-year period there must be added, for accurate appraisal of the success of the Milwaukee in gearing itself to meet the needs of a growing economy, the high output of repairs by company car forces to keep the older cars ready for service. Both these classes of investment in the future show up in the Milwaukee's "bad order" freight car ratio (i.e. proportion of cars awaiting or undergoing repairs to total ownership) which, as of September 1, was three per cent, compared with a national average of 6.3 per cent. A month later, the Milwaukee's ratio was reduced to 2.5 per cent.

Fixed Improvements

Expenditures on fixed properties during the voting trust period, 1946-1950, were chiefly for the purpose of adapting the property to new techniques of operation as, for example, Diesel locomotives and mechanical freight handling station equipment. Expenditures for new locomotive and car shops and servicing facilities totaled \$6,878,000. Major projects were a new passenger car body and truck shop at Milwaukee, costing \$1,438,000, and new Diesel locomotive repair and servicing facilities at Bensenville yard and Western avenue, respectively, in Chicago, and at Milwaukee, representing \$2,611,000. For new and improved freight and passenger stations and



THE MILWAUKEE CROSSES FIVE MAJOR MOUNTAIN RANGES in the 883 miles between Ryegate, Mont., and Seattle. The sections of the line with the steepest profile characteristics are electrically operated, as shown

additional facilities there was committed during the period a total of \$3,206,000. The more important jobs included two freighthouses at Chicago costing \$460,200; a potato warehouse at Mannheim (Chicago) costing \$428,000; and modernization of the Sioux City (Iowa) passenger station, \$208,800.

Extension and modernization of important freight yards on the system completed during the five-year period included:

| | |
|------------------------------------|-------------|
| Savanna, Ill. | \$900,000 |
| Milwaukee, Wis. | |
| Glendale and Port Washington Yards | 304,300 |
| Muskego Yard | 252,300 |
| Chestnut Street Yard | 330,100 |
| St. Paul, Minn. | 270,100 |
| Bensenville, Ill. | 236,200 |
| Total | \$2,293,000 |

Expenditures for other major fixed property improvements during the period were:

| |
|---|
| \$8,870,000 for heavier rail and track fastenings |
| \$5,386,000 for bridges, trestles and culverts |
| \$2,650,000 for centralized traffic control and automatic block signals |

Not included in Table I is \$700,000 for improvements to fixed property which will be authorized to the end of 1950, but not completed.

It is significant that, of the total of \$145 million expended in additions and betterments during the five-year period, only \$7.5 million was appropriated out of net income, the sum of \$2.5 million having been appropriated in each of the years 1946, 1947 and 1948, under the "optional" improvement fund authorized by the plan of reorganization. No appropriation from earnings was made in 1949 or thus far in 1950. The bulk of capital improvement expenditures found their source in depreciation allowances, retirement charges, the proceeds of salvage recovered from property retired and, for rolling stock, the sale of equipment obligations.

Pruning Dead Limbs

Concomitant with the building up of the property to make or save money has been the pruning of the dead limbs to free the useful tissue of parasites. Since the beginning of 1946, the Milwaukee has discontinued, on an annual basis, a total of almost one and one-half million train- or vehicle-miles of train, rail motor car, mixed train and bus service—most of it during 1949 and 1950. At present wages and prices, this curtailment of service, formerly rendered at a heavy loss and without the satisfaction of real economic demand, will mean to the railroad a reduction in operating expense and payroll taxes, on an out-of-pocket basis alone, of some \$1,790,000 a year. Discontinuance of another 300,000 train-miles a year, with \$200,000 annual savings estimated, is presently under study.

During the period a total of 61 route-miles of branch line (including 22 miles of trackage rights) have been abandoned, which mileage had produced a deficit of about \$75,000 in 1945. Previously, from 1928 to the effective date of reorganization on December 1, 1945, the Milwaukee had abandoned about 500 route-miles of branch line. During reorganization proceedings the trustees furnished the Interstate Commerce Commission with studies of estimated savings to be accrued from the abandonment of additional segments aggregating 3,000 miles.

Immediately prior to the termination of trusteeship, the road joined the Rock Island and the Kansas City Southern in consolidation and modernization of their extensive terminal facilities at Kansas City, which has subsequently saved large sums compared with the continued operation of independent properties.

To speed up service, as well as to save ineffective train-miles and station time, the road's subsidiary Milwaukee Motor Transportation Company further extended its truck service in lieu of way-freight train operation. Its present route-miles operated (one-way) total 1,567, an increase of 329 per cent over the mileage served at the beginning of 1946. Annual savings resulting from further substitution of railroad-owned trucks for way-freight service and for former contract truck operations made effective during the period 1946-1950 are estimated at \$243,000. Applications for additional truck service have been made to state authorities and the I.C.C.

Hacking at Debt

One of the best-known financial statistical services in the country recently characterized the Milwaukee's financial position as "good," giving as one of the reasons the fact that, through its reorganization, "an unwieldy financial structure was eliminated and fixed charges cut drastically." But the railroad's management has not rested content with even this relatively favorable debt structure and, to the maximum extent possible, has, in each year since reorganization, whittled down its long-term funded debt by buying bonds in the open market. By these and other operations, in the period December 1, 1945, to September 30, 1950, mortgage debt was reduced by close to \$26 million (out of a total mortgage debt unmaturing, in the hands of the public, as of the end of 1949, of somewhat over \$167.5 million). As a result, annual interest requirements of the road are now well over \$1 million less than they were when it came out of reorganization.

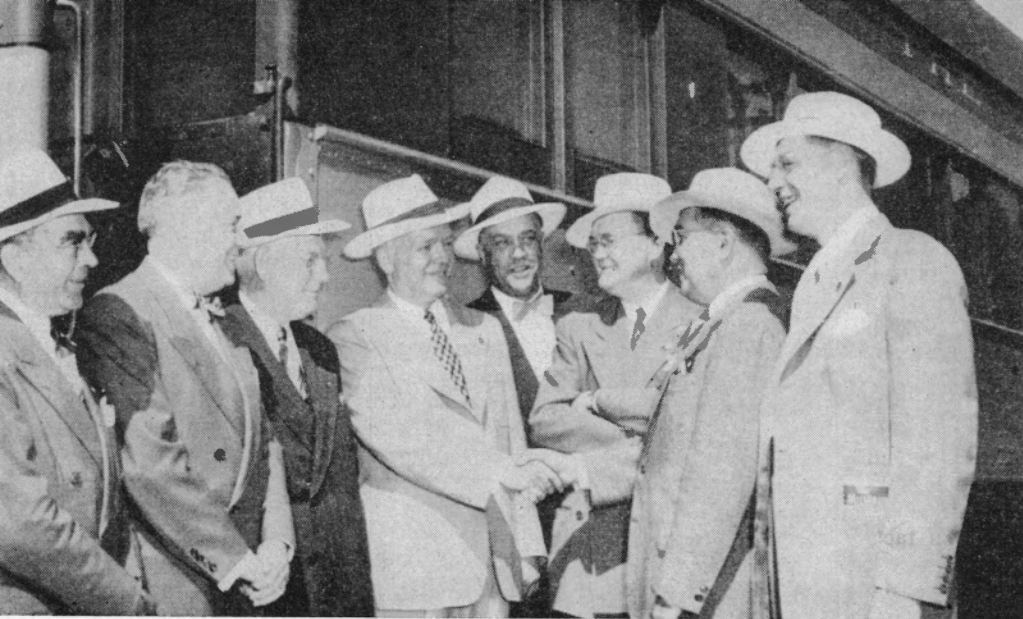
Increased efficiency has enabled the railroad to adjust its personnel to changes in the level of traffic. The average number employed during 1949—35,131—was about 6 per cent less than the number employed during 1946. Ton-miles of freight hauled by the road declined about the same percentage between the same years. A comparison of the latest available 12 months' period, ending July 31, 1951, with the calendar year 1945, shows a drop in average number of employees of more than 14 per cent—from 38,589 to 33,338. The total wage bill, nevertheless, increased because each Milwaukee employee enjoyed successive pay increases during the intervening years. Average annual compensation jumped from \$2,758 to \$3,755, an increase of 36 per cent.

The best single index of efficiency and service in operations—because it reflects both load and speed—is gross ton-miles per freight-train-hour (excluding locomotives and tenders). The Milwaukee's management has produced a fairly consistent improvement in this measurement during the five-year period since reorganization, despite a generally declining traffic level, as follows:

| | |
|---------------------|--------|
| 1946 | 35,015 |
| 1947 | 34,474 |
| 1948 | 34,645 |
| 1949 | 37,054 |
| 1950 (8 mos.) | 39,744 |

This index of efficiency reached a recent system "high" in August, 1950, when it touched 43,125, or an increase of 16 per cent compared with the same month in 1946.

For the celebration of its centennial, the Milwaukee's management chose a slogan which looks forward rather than backward—"Opening our second century." In the success of this second 100 years the improvements made and planned during the five years since reorganization should play an important part.



THE MILWAUKEE'S MANAGEMENT MADE THE MOST OF ITS CENTENNIAL opportunity to meet friends along the line. Typical was this group arriving to take part in the centennial dinner of the Aberdeen (S.D.) Chamber of Commerce. (Left to right): H. L. McLaughlin, Minneapolis, general northwestern freight agent; Harry Sengstacken, Chicago, passenger traffic manager; H. S. Zane, Chicago, freight traffic manager; P. H. Draver, Chicago, vice-president—traffic; J. W. Wolf, assistant superintendent, Montevideo, Minn.; H. M. Larson, Minneapolis, assistant general passenger agent; J. A. Jakubec, Aberdeen, superintendent; George Neu, Aberdeen, division freight and passenger agent

Getting Public Relations Value From a Centennial

Milwaukee fully exploits opportunity to make good impression on customers, employees and neighbors in its territory

November 20 will mark the 100th anniversary of actual operation of the first train over the oldest segment of the Chicago, Milwaukee, St. Paul & Pacific—five miles of rickety track between Milwaukee, Wis., and Wauwatosa. This day is the high point of the road's centennial year and cause for considerable whoop-de-do, as well as serious searching of memory, for the city of Milwaukee, birthplace of the railroad and still originator of more cars of freight for it than any other point on its line.

To do it honor, the citizens will, according to plans now in the works, join the railroad in a re-enactment of the first run to Wauwatosa in a locomotive, under steam, and two cars of the 1850-type. Crew and passengers will be in full costume. Represented will be celebrities of the day. The Milwaukee Road's Mixed Choral Club of 50 voices, in 1850 garb, and the 55-piece "Hiawatha Band" of Milwaukee employees will render a musical program. Civic officers, directors and officers of the railroad and officers of the Milwaukee Association of Commerce will view the pageantry at the railroad's passenger station.

Upon its return from Wauwatosa, the old-time train will meet a six-car train of newest equipment and both will remain on public display throughout the day. Participants in the run and witnessing dignitaries will parade to the Shroeder Hotel for a special Association of Commerce luncheon at which Chairman Crowley and President Kiley will make brief addresses.

Year 'Round Observance

But the public relations department, back in 1949, started to make certain that the Milwaukee's centennial opportunity was not shot off on one day in one city. The

management agreed that the marking of a century of operation afforded opportunities to bring to the entire 12-state area served by the line facts about its economic effect, its present-day facilities and services, and history—both palatable and sound—to help bury some erroneous and widespread notions about the past of railroading.

In 1948 a private publisher produced a 330-page, illustrated history of the Milwaukee by August Derleth, well-known Wisconsin writer. While this work was not sponsored by the railroad, the author conferred with its public relations advisory committee before starting work, and the public relations department furnished considerable data and photographs and read proof. The railroad purchased a sufficient number of copies to provide one for each public library and institution of higher learning in the principal communities it serves.

As a part of its centennial program, the railroad produced, early this year, an attractive 50-page pamphlet titled "Four Generations on the Line." By ingenious resort to diary-letter treatment, this illustrated piece sets forth all of the important facts in the Milwaukee's first 100 years without the heavy-handed bulk of conventional chronological narrative. Excerpts purporting to come from a farmer's diary cover 1850-1875; jottings of his telegraph-operator son summarize the second quarter century; his son, turned merchant, follows the westward trek of the Milwaukee in a diary covering 1900 to 1925; while the most recent 25 years are cared for by letters exchanged between the merchant and his railroader son.

"Four Generations" not only humanizes the railroad as an adjunct of family life but succeeds as well in matching corporate events with the things going on in national life—like wars and new Presidents. To date about 62,000 copies of the publication have been dis-