

Trains Album of Railroad Photographs

Book 10

MODERN STEAM LOCOMOTIVES

Kalmbach Publishing Co.

Milwaukee 3, Wisconsin

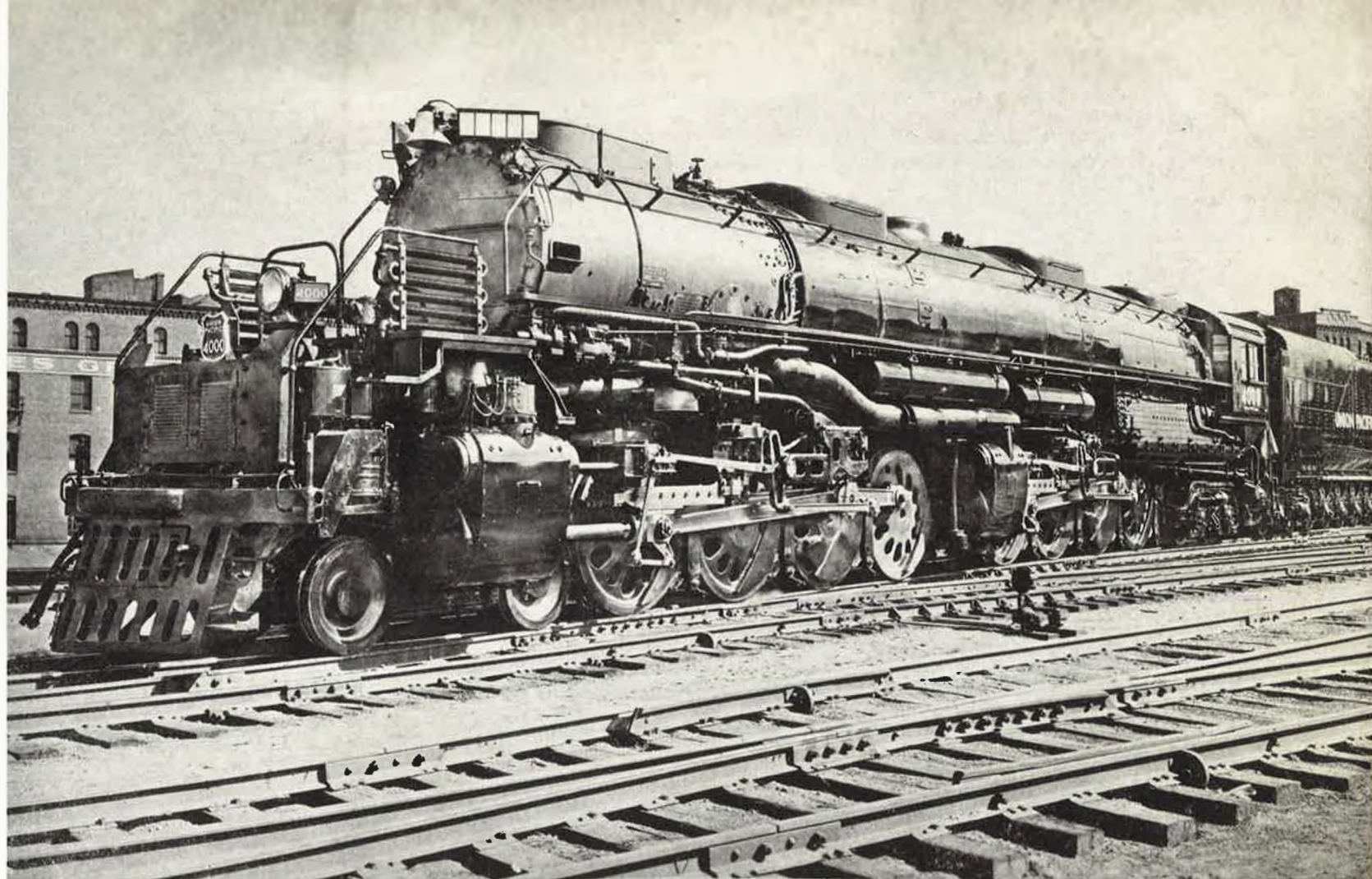
Copyright 1945 by Kalmbach Publishing Co.

The steam locomotive is the most grandly fascinating mechanism conceived by man. It is the personification of power.

Basically the steam locomotive is the same machine as George Stephenson's Rocket of 1825, but it has evolved in every detail until today it is such a highly efficient machine that in the United States it moves goods for less than one cent per ton mile. It was the economical mass transportation made possible by the locomotive which built America into a nation and which now makes possible an industrial productivity greater than any the world has before known.

Despite hard competition from newer forms of motive power the reciprocating steam locomotive, improved and modified into a high horsepower machine quite unlike the locomotive of even 20 years ago, continues to dominate the American railroad scene. It is chosen by unsentimental general managers whose opinion on locomotives is strictly a matter of which will do the required job for the least expenditure, fuel, wages, repairs, lubrication, depreciation and interest all included. And the steam locomotive is so closely competitive with the Diesel and the electric locomotive that there is no general rule and each job must be closely analyzed, with fractions of cents often determining which type of locomotive will be used. In first cost the steam locomotive is much less per horsepower than the others, and it has the big advantage of using our cheapest and most abundant fuel, coal.

No longer does the steam locomotive consider a 100-mile division a day's work. The magnificent Hudsons and Mohawks of the New York Central run 927 miles at a stretch between Chicago and Union, N. Y. The Milwaukee Road puts its hefty F-6 4-6-4's over 335 miles from Chicago to Harlowton, Mont., and the steam locomotive retires there only because it is exchanged for the electric which takes the Olympian over the Rockies. On the Santa Fe the same steam locomotive which breasted steep Cajon and Raton passes



World's most powerful steam locomotive, Union Pacific's 4-8-8-4 simple articulated.

sometimes puffs into Chicago's venerable Dearborn Station, a matter of 2257 miles.

For speed the steam locomotive can compete with the best of them. Locomotives have been designed, like the Milwaukee Road Hiawatha type Atlantic, which develop maximum horsepower at 100 miles per hour and have exceeded 120 miles an hour in service. For the steam locomotive is essentially a high speed machine. As it gets up to speed its power is limited only by the capacity of the boiler to generate steam, and perhaps no phase of the locomotive has been more improved in recent decades than the boiler. Above the once-magic mile-a-minute speed the steam locomotive can accelerate from a slowdown with remarkable energy, and this means much in maintaining schedule on high speed main lines with long runs between stops.

Yes, the steam locomotive still has the chug (although the Pennsylvania's turbine locomotive even does away with that) but Casey Jones would be rather perplexed in a modern cab with its multitudinous control valves for boiler auxiliaries, its low water alarm, and its valve pilot. He would find little use for his long spouted oil can in these days of pressure lubrication and roller bearings. And his fireman would be chagrined at the adeptness of the stoker at keeping an even fire.

But one characteristic Casey Jones would find the same. The steam locomotive is still a custom-built machine, designed to fit the specific job to which it is assigned. Each class of locomotives is distinctly individual, and the locomotives of a railroad often follow a variation of design which identifies them at once to the experienced locomotive connoisseur. The builders' photographs which we have selected for this album show, for instance, how different the 4-8-4 type can be upon various railroads, and they show how Pennsylvania Railroad locomotives are always Pennsylvania and New York Central are always New York Central.

We have picked those locomotives which give the best overall picture of modern practice, locomotives of many wheel arrangements and of many railroads. Care has been taken to include locomotives which have particularly distinguished themselves by perfection of design, although it is inevitable that our opinion will not agree 100 per cent with others. The photographs, all furnished by the builders, are spread across the full width of the page to bring out details to best advantage. A special printing process and paper make the prints equal to photographic glossies. Principal dimensions are added to make the information complete and to enable comparison. We hope you enjoy the book as much as we have enjoyed its preparation.