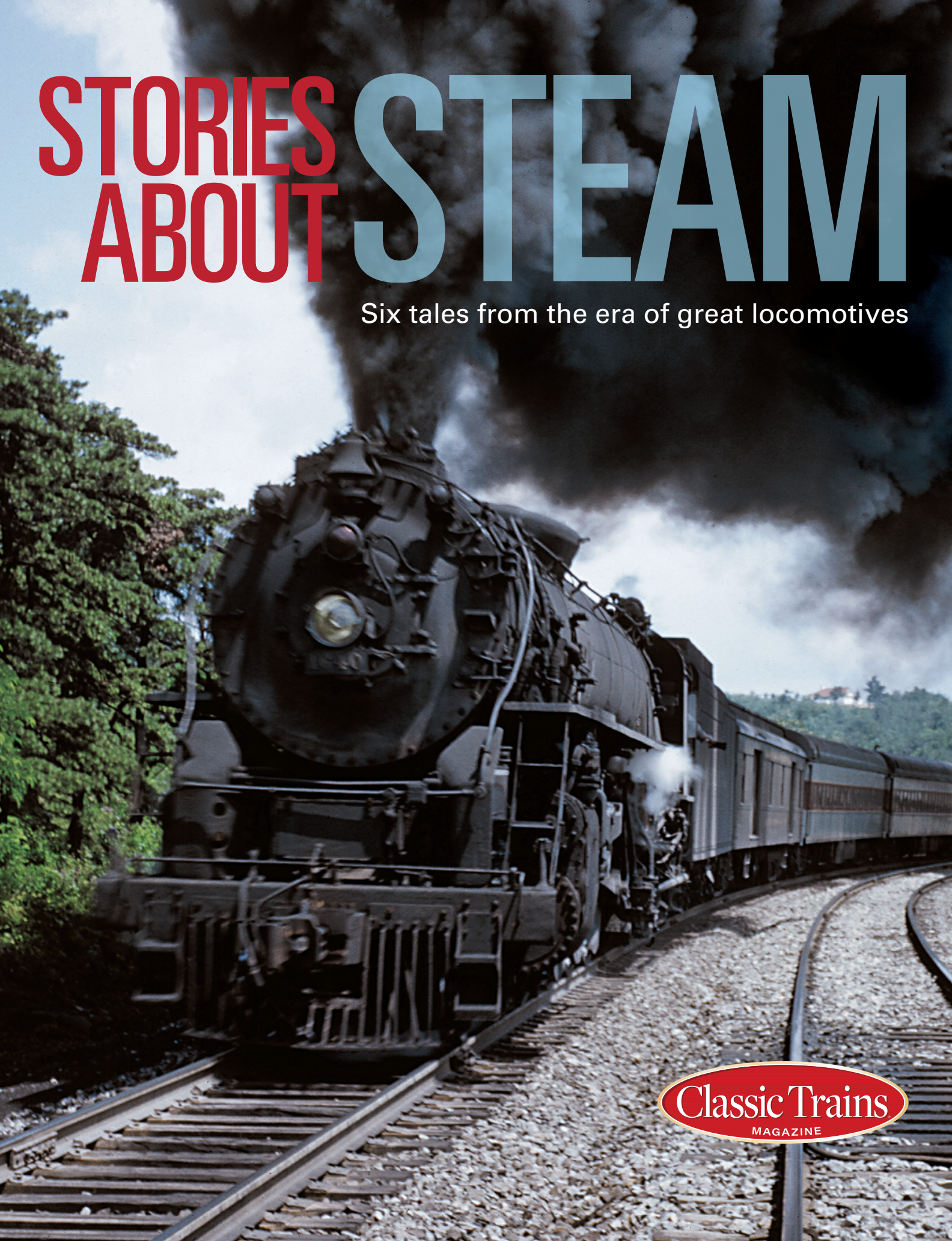
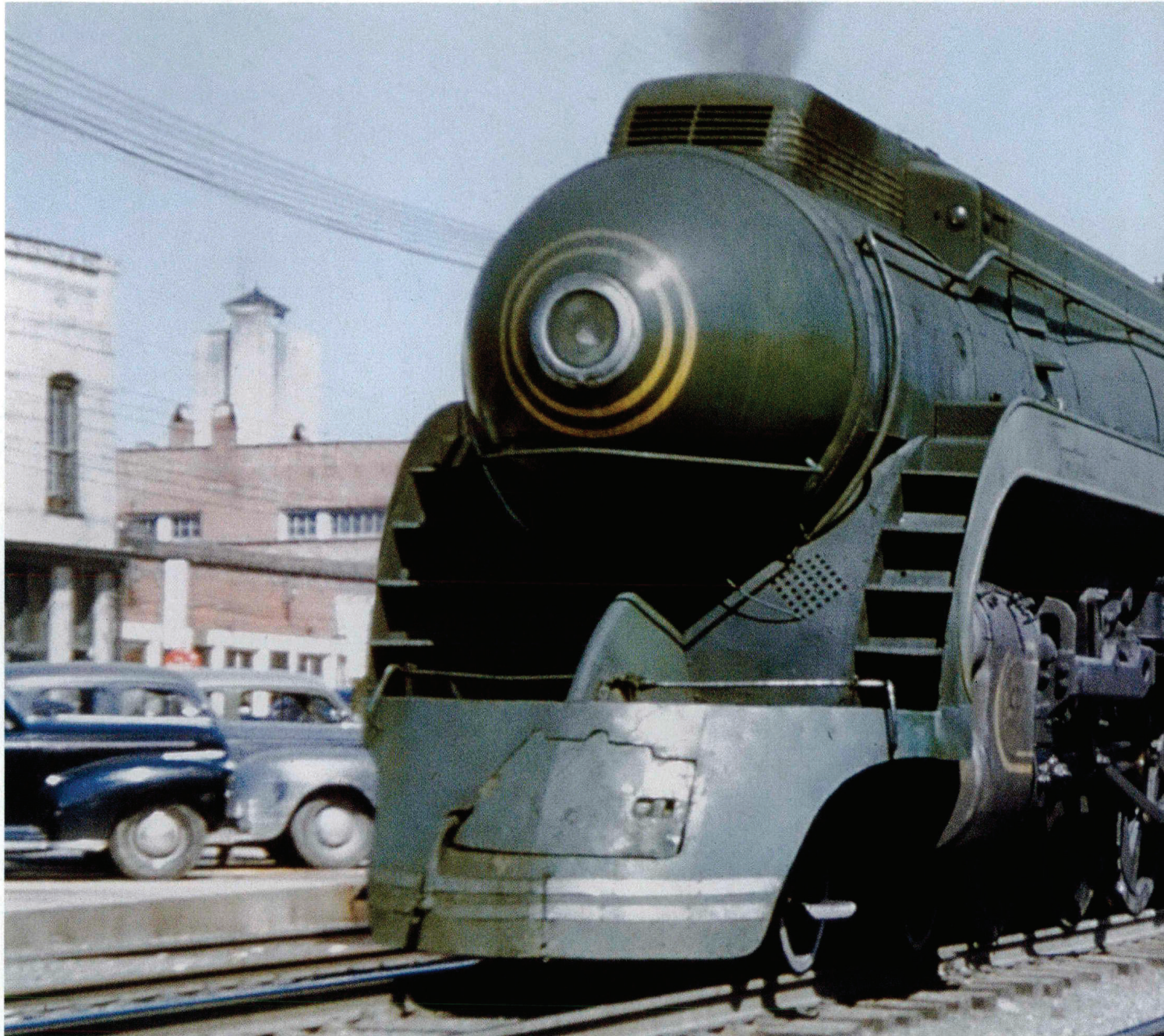


STORIES ABOUT STEAM

Six tales from the era of great locomotives



Classic Trains
MAGAZINE



Southern's streamlined Ps-4 Pacific was the best of a great breed

By Curt Tillotson Jr.

IN A WARM SUMMER AFTERNOON in June 1948, when I was 11 years old, I encountered the steam locomotives that would change my life.

My family had traveled from our hometown of Oxford, N.C., to Durham to shop, have dinner, and take in a movie. As usual, upon arrival my parents dropped me off at Durham's stately Union Station.

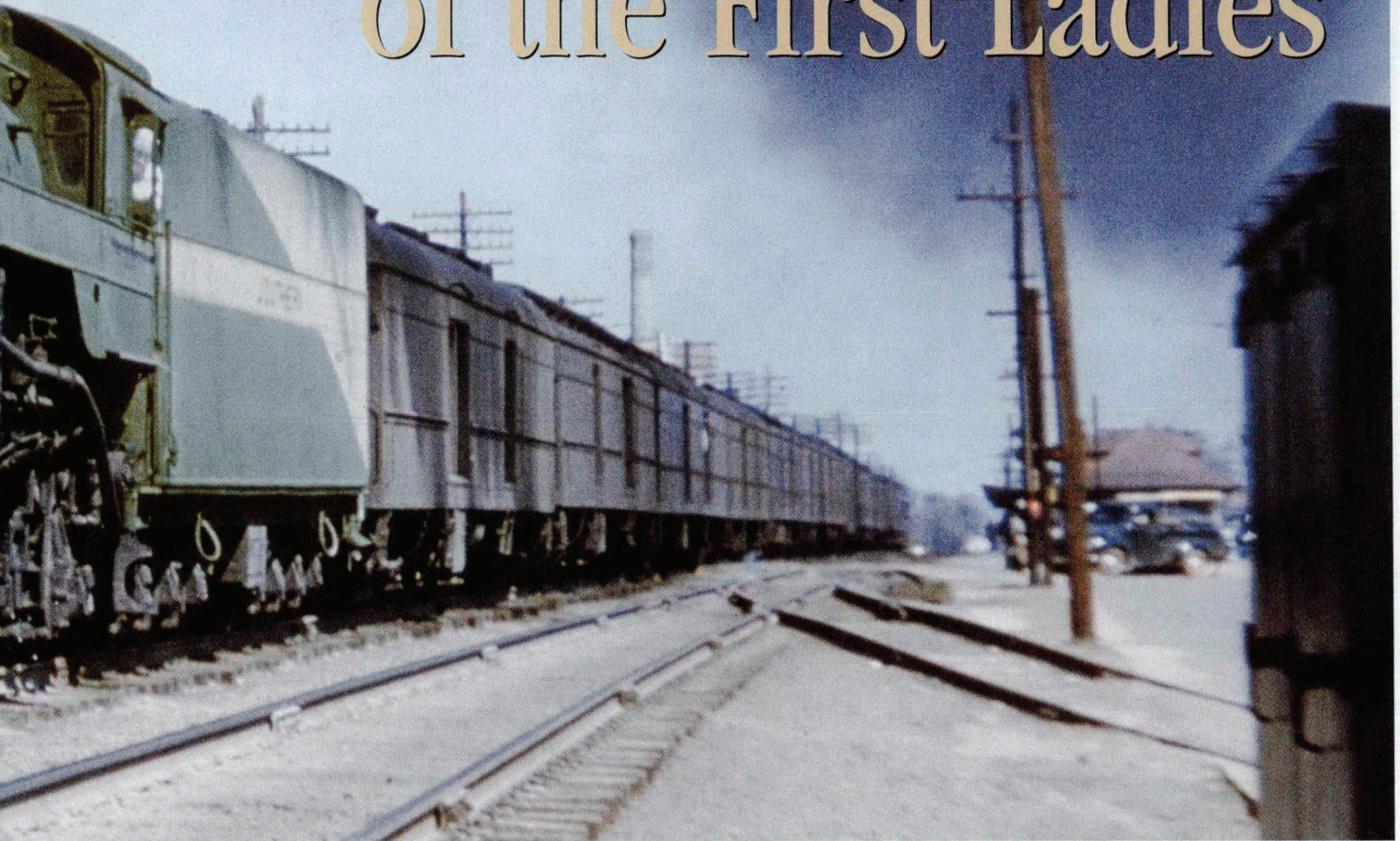
My parents knew no matter how long they stayed in the "Bull City," when it was time to leave they could find me at the station, watching the action provided by Southern Railway, Norfolk & Western, and Seaboard Air Line.

Shortly after sundown I heard a melodious whistle off to

the east, warning all to "look out, I'm coming through!" Soon I heard sharp stack-talk as a beautiful green-and-gold Southern Ps-4 Pacific came into view, pulling the nine cars of train 13, a daily Goldsboro-Greensboro passenger, mail, and express local. The engineer seemed to be an impatient hogger—he did not shut off his throttle and begin braking for the station until the last moment. Still, it was a very smooth stop. What a throttle artist!

About 10 minutes later I heard the shrill communication whistle go off in the cab of the big 4-6-2—*peep . . . peep*. Then two short *whup! whups!* emerged from the engine's huge whistle, followed by the *ding! ding! ding!* of the engine

Queen of the First Ladies

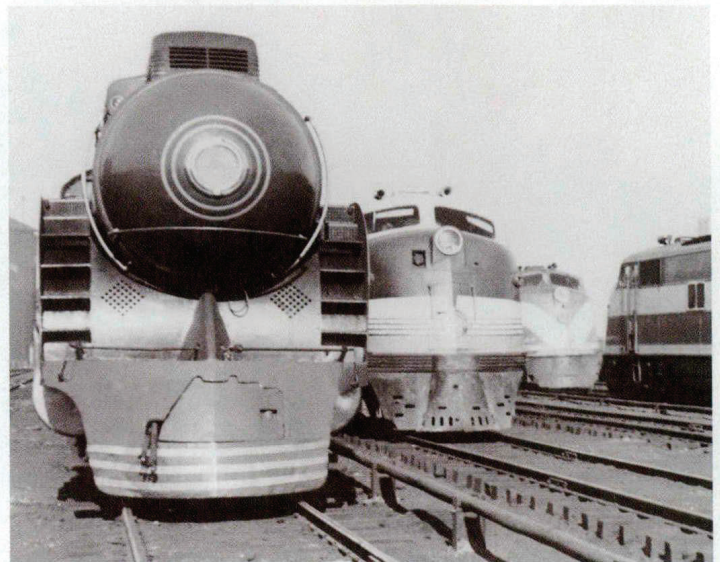


CURT TILLOTSON COLLECTION

Her 11-year-old streamlining still intact despite her imminent retirement, Southern Ps-4 1380 roars away from the depot at Reidsville, N.C. (above), with mail and express train 11 on August 29, 1952. In a 1942 photo (right), the recently streamlined 4-6-2 shares the ready tracks at Washington Union Station's Ivy City roundhouse with new Electro-Motive passenger diesels of competitor carriers Seaboard Air Line, at center, and Atlantic Coast Line.

bell. Next came one soft *whuf!* followed by a great “snap” from that graphite-finish smokestack; before I could swallow the lump in my throat, the impatient engineer really had No. 13 leaving town—I mean *really* leaving town! By the time the last coach passed, the Ps-4 had developed a staccato rhythm that sounded like a machine gun. Several minutes passed before I could move, before that last deep whistle came from far off to the west.

Thus was I introduced to Southern's renowned Ps-4. I was never the same after this hypnotic encounter with one of railroading's most attractive locomotives. I was hooked on trains. And my love for Southern steam power, and, in



FRANK CLODFELTER



MIKE RUNEY

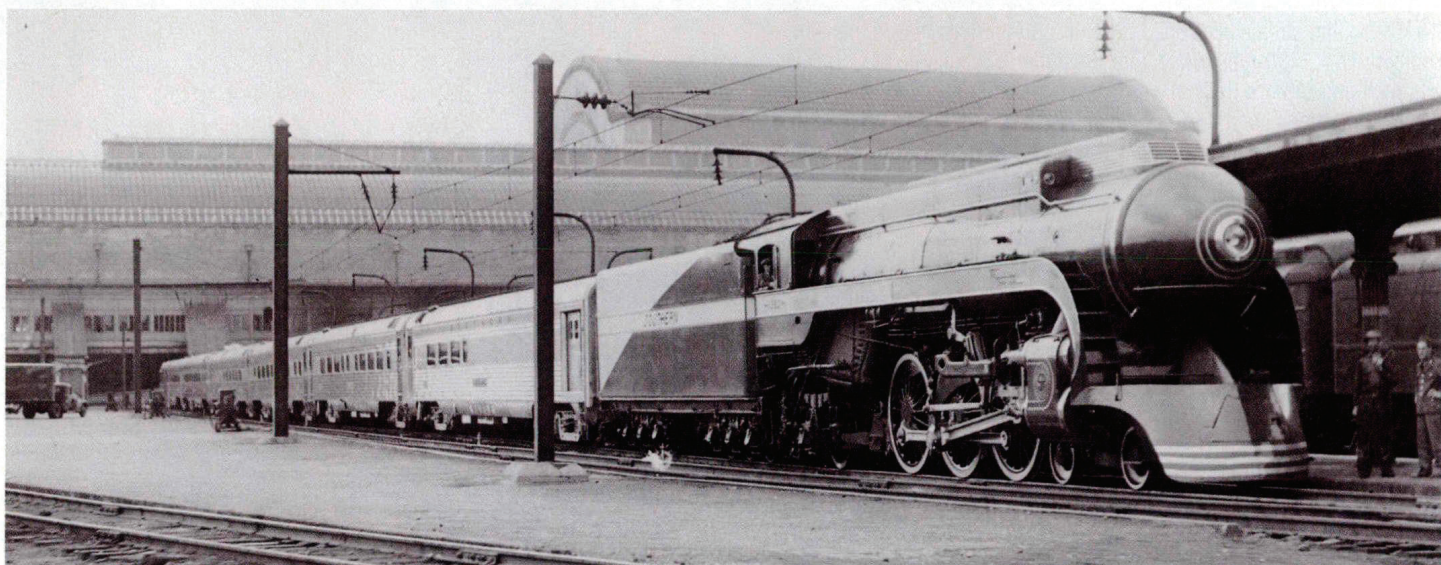
particular, the Ps-4, would be rekindled time after time in my dad's hometown of Greer, S.C., on the busy Washington-Atlanta main line. And one very special Ps-4—No. 1380—would stand out above all the rest. Dressed in a sleek shroud, she would become the Queen of Southern's First Ladies.

By the early 1920's the Pacific type was the standard passenger locomotive on the Southern. But as traffic grew, the railroad's 12- to 14-car passenger trains became too long and, at 1000-plus tons, too heavy for the existing P, Ps-1, and Ps-2 engines. The railroad's T-class Mountains held their own, but Southern wanted to concentrate the 4-8-2's in and around mountain-area terminals such as Asheville, N.C., and Knoxville, Tenn. Doubleheading of the light Pacifics was not

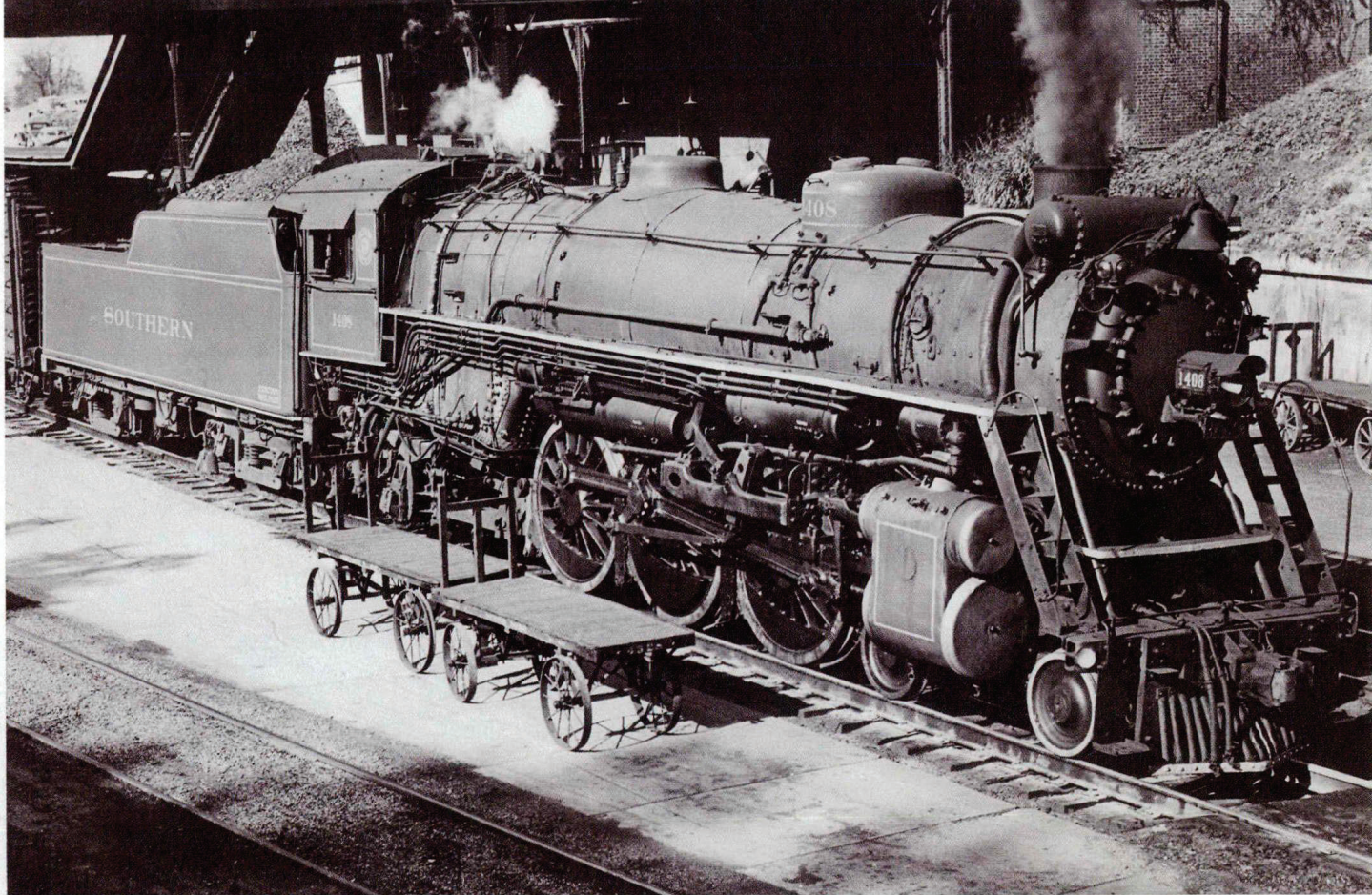
A Ps-4 has Southern train 39 (above) rolling through Richland, N.C., on the Washington-Atlanta main line in 1951. Heading up the gleaming new streamliner *Tennessean* (below), specially selected Ps-4 1380 shows off its new Otto Kuhler styling under catenary at Washington Union Station in 1941.

desirable. What Southern needed was an engine that could easily handle these heavy trains at, say, 80 mph. Southern decided it was time for a more powerful 4-6-2, the Ps-4 class.

In 1923 Southern ordered 12 USRA-design heavy 4-6-2's from American Locomotive Co.'s Schenectady plant. These first Ps-4's included a dozen, 1375-1386, assigned to the Southern proper; and four, 6684-6687, assigned to subsidiary Alabama Great Southern. The dozen proved so successful



FRANK CLODFELTER COLLECTION



H. STAFFORD BRYANT JR.

In the waning years of SR steam, green-and-gold Ps-4 1408 of the 1928 Baldwin class pauses at Lynchburg, Va., with a southbound mail train.

that in 1924 the road ordered 15 more from Schenectady, SR 1366-1374 and 1387-1392, plus 6471-6475 for subsidiary Cincinnati, New Orleans & Texas Pacific.

In 1926 the railway ordered 23 more Ps-4's, this time from American's Richmond Works: SR 1393-1404, CNO&TP 6476-6482, and AGS 6888-6891. These beautiful "Harrison engines" were colorful, the first to feature Southern's famous green with gold striping and lettering. The engines were accented by nickel-plated cylinder and valve covers; light-graphite smokeboxes; white tires, hubs, and running boards; and crimson cab roofs. The Elesco feedwater heater placed in front of the smokestack provided a finishing touch.

The colors traced to a trip to England taken in 1925 by Southern President Fairfax Harrison, who saw green and gold locomotives of both the Southern Railway of England and the London & North Eastern. So impressed was he with these polished, colorful engines that he decided to use the same colors on the next batch of Ps-4's from Richmond. The livery became so popular that, ultimately, all Southern passenger power, including the light P-class 4-6-2's as well as the 4-8-2's, would wear it.

A final 10 Ps-4's were built in 1928 by Baldwin: SR 1405-1409 and CNO&TP 6482-6486. Their basic specifications were the same as all other Ps-4's: Baker valve gear, 27x28-inch cylinders, 73-inch drivers, 200 psi boiler pressure, 70.5 square feet of grate area, engine weight of 304,000 pounds, and tractive effort of 45,000 pounds.

One of the original 1923 Schenectady Ps-4's was destined for additional honors. In 1941, Southern decided to rename and re-equip the *Memphis Special* as a new Washington-

Memphis streamliner, the *Tennessean*. This also was the year Southern got its first FT diesels from Electro-Motive. The *Tennessean* and two other Southern trains from Washington, the *Birmingham Special* and the *Pelican*, used Norfolk & Western's line, and steam power, between Lynchburg, Va., and Bristol, Tenn., where they returned to Southern rails.

Since the Washington-Lynchburg leg was too short for economical use of the FT's, Southern decided to use steam on the *Tennessean* between Washington and Lynchburg, and diesels west of Bristol. For the Washington leg the railway selected Ps-4 No. 1380, and in a break with tradition, decided to streamline it, hiring famed industrial designer Otto Kuhler to work on the project. What came out of Southern's Spencer (N.C.) Shops was a sight to behold: 1380, truly the "Queen of the First Ladies of the Pacifics," resplendent in green, gold, and white, bullet nose, and judicious striping.

For nearly a decade, the 1380 did most of the hauling of the stainless-steel *Tennessean* through the rolling hills of Virginia. When the Washington Division dieselized in the late 1940's, 1380 was bumped from the streamliner and placed in pool service with other 4-6-2's. Although it kept its shroud and *Tennessean* lettering, 1380 was assigned to secondary Lynchburg-Atlanta runs. The Pacific was retired from regular service at Spencer in 1952 and scrapped in Baltimore the next year.

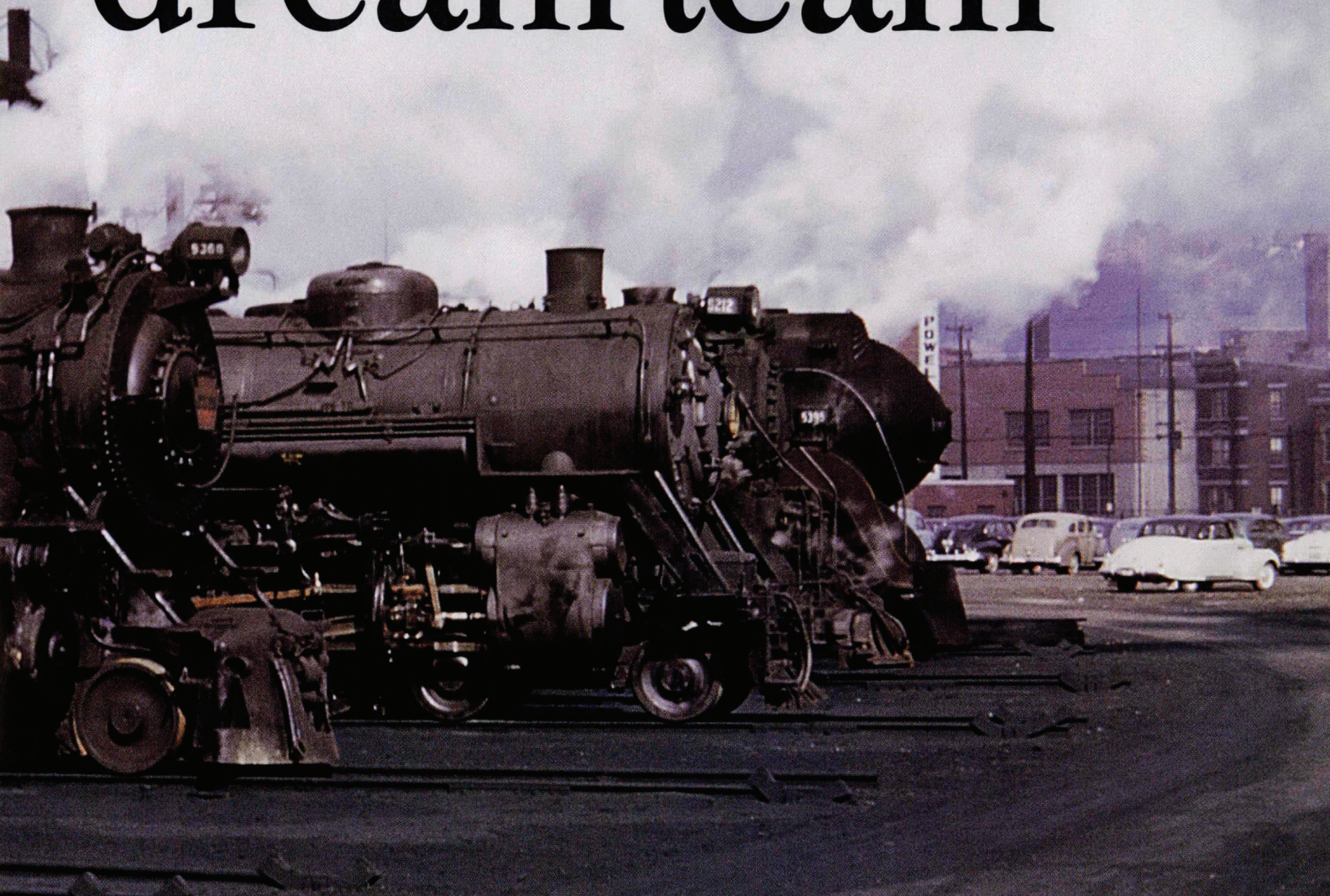
One Ps-4 survives, of course: 1401 of the 1926 Richmond class, placed on display in 1962 at the Smithsonian Institution in Washington, D.C. New generations of visitors can get an idea of what it was like to see these magnificent, colorful engines roaring along the Washington-Atlanta main line pulling some of the finest trains in the nation. I'm thankful I had the opportunity to see and remember these wonderful locomotives. ■



SAY YOU'RE A HEAD COACH in the Steam Passenger Locomotive League, Eastern Division, and it's time to pick an all-star team. What would your choices be?

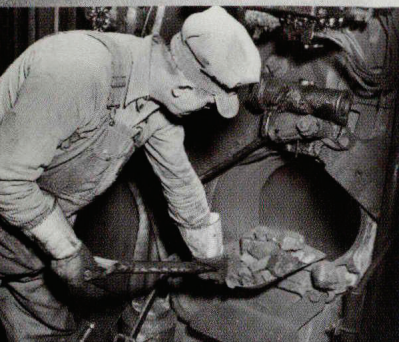
You could do worse than the five engines photographer Robert Malinoski found at the Cincinnati Union Terminal enginehouse on February 10, 1953. From the left, here's the line-up: Chesapeake & Ohio L-2 4-6-4 300, rakish with low headlight and roller bearings; Pennsylvania K4s 4-6-2 5368, a stalwart member of the largest family of Pacifics; Baltimore & Ohio P-5 4-6-2 5212, smallest of the lot, but of good USRA stock; New York Cen-

Steam's dream team



tral J-1d 4-6-4 5395, from the road that gave the Hudson type its name; and Norfolk & Western K2a 4-8-2 135, deemed by its owner—who knows steam—good enough for streamlining in middle age.

Want to make some trades? The roads serving CUT can help. B&O could swap the P-5 for a “President” P-7 (streamlined or standard). Central might send down a J-3a Super Hudson. And, with all due respect to old 135, we’d prefer an N&W J. Because their CUT trains are dieselized, we’re too late to tap Louisville & Nashville and Southern, which is a pity—a green-and-gold SR Ps-4 Pacific would make this team a lock in any league.—R.S.M.



Bad coal

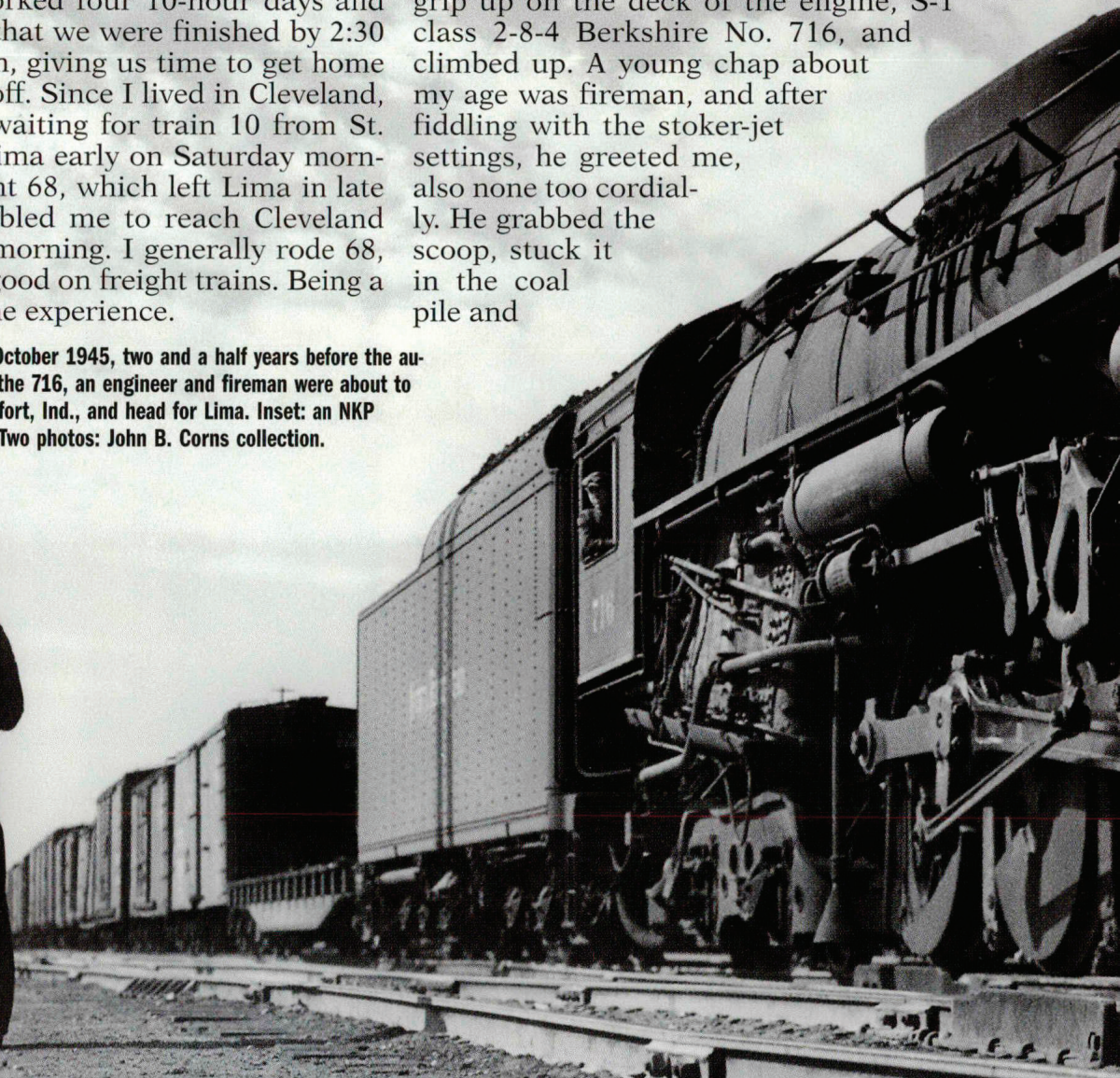
When inferior fuel laid low a mighty Nickel Plate Berkshire

By Ben F. Anthony

DURING SPRING 1948 I was working as a helper in Signal Gang No. 3 for the Nickel Plate Road, installing CTC signaling on the LE&W District (Lake Erie & Western) between Lima and St. Marys, Ohio. The gang worked four 10-hour days and one 8-hour day so that we were finished by 2:30 on Friday afternoon, giving us time to get home for a full weekend off. Since I lived in Cleveland, I had a choice of waiting for train 10 from St. Louis, which left Lima early on Saturday morning, or riding freight 68, which left Lima in late afternoon and enabled me to reach Cleveland early on Saturday morning. I generally rode 68, since my pass was good on freight trains. Being a railfan, I enjoyed the experience.

One day in late March when I arrived at South Lima yard, I saw 68's engine being readied. I decided that, if it was agreeable with the engineer, I would ride in the locomotive cab. He was not cordial but reluctantly agreed, so I threw my grip up on the deck of the engine, S-1 class 2-8-4 Berkshire No. 716, and climbed up. A young chap about my age was fireman, and after fiddling with the stoker-jet settings, he greeted me, also none too cordially. He grabbed the scoop, stuck it in the coal pile and

Same engine, same route: In October 1945, two and a half years before the author's bad-coal experience on the 716, an engineer and fireman were about to board the same 2-8-4 at Frankfort, Ind., and head for Lima. Inset: an NKP fireman feeds coal to a 2-8-2. Two photos: John B. Corns collection.







Looking not unlike the author's 2-8-2/2-8-4 duo tackling the hill out of Findlay, the same 716 trails ex-W&LE 2-8-4 828 at Cadiz, Ohio, in 1957.

said, "Look at the stuff they expect us to burn!" The "coal" didn't look much different from the cinders I'd been digging through while burying signal cable in South Lima yard.

When the engineer joined us, the fireman complained to him, but the engineer just said, "Do the best you can." We left the dock, coupled to the train, made our air-brake test, snagged our orders as we passed the yard office, and headed onto the Baltimore & Ohio, over which we ran for 1½ miles through the city. We got back onto Nickel Plate track at "MO" Tower (also known as "NS") where we crossed the "Fort Wayne" (Pennsylvania's main line to Chicago, the old Pittsburgh, Fort Wayne & Chicago).

After we cleared the street crossings at Morris, the automatic interlocking with the Detroit, Toledo & Ironton about a mile east of Lima, our engineer widened on the throttle, and the fun began.

Our train speed and steam pressure steadily fell until the gauge read somewhere around 150 lbs. Instead of pulling

through the sags with slack stretched, the slack would run-in and give us a jolt before it ran out again. Instead of being crisp, No. 716's exhaust was mushy. We limped along in this fashion for the next 29 miles until we were stopped by the holdout signal just west of Findlay.

The head brakeman got on the phone and was informed by the dispatcher that another freight, Second 90, was ahead of us with similar steam/bad coal problems and had stalled on the hill out of Findlay. After Second 90 finished doubling the hill, he would clear us at Weidlers siding so we could run around him. This was before radio, so the game plan proposed was that if we also stalled on the hill, we were to dim our headlight and light a red fusee. The track was tangent, so the fusee could easily be seen. That would be the signal for Second 90's engine to cut off, back down against us, and doublehead us to the top of the hill at Weidlers.

Meantime, we took advantage of the delay to try to get our fire in shape and dump the ashpan, which was full. Nickel Plate had thoughtfully provided small air hoses on either side on the ashpan that facilitated dumping the ashes, as

well as blowing them out from between the rails so as not to burn the ties.

Finally, we got a clear signal and left. Once clear of the New York Central crossing north of Findlay, we headed up the 3-mile hill to Weidlers. Again the steam pressure and our speed sagged until we hit the 0.6 percent portion of the grade, where we of course stalled. We dimmed our headlight, lit a fusee, and again took advantage of the delay to get the fire in shape and dump the ashpan. During this stop, the head brakeman and I had to man the scoop and broom to snuff out any fires started from blowing the ashes from between the rails and onto the right of way.

Per the plan, Second 90's engine, light USRA Mikado No. 602, drifted down and coupled up to our engine. We had no trouble getting started, and with both engines working hard, we surmounted the grade and stopped at the east end of the siding to uncouple the 602. During the hard pull, I witnessed a most spectacular display of fireworks exhausting from the stacks of both engines as a result of the bad coal. I was lucky I didn't get a hot cinder in my eye.

We munched onto the Chicago-Belle-



HERBERT H. HARWOOD JR.

vue main line at “DA” (Arcadia) and proceeded east 7 miles to Blair Yard, just east of the Chesapeake & Ohio crossing in Fostoria, where we had cars to pick up. By that time, the coal pile had been somewhat depleted. The engineer had a plan to improve the coal situation, whereby the head brakeman and fireman would stand on the stoker trough slide plates and dig through the coal pile and get to the good coal at the back of the bunker and pile it on the tender apron. The engineer would then scoop it up and hand-fire the engine, which was reasonably possible since the MB stoker elevator was below the cab deck, leaving the fire door clear.

After getting the fire in shape, we left Blair Yard and headed for Bellevue, 30 miles east. The engineer, after setting the throttle and cut-off, assumed the role of fireman, which left me as the “whistle blower” (I won’t lay claim to being the engineer). This was a simple job, but was complicated by the fact that I didn’t know the railroad, plus there was a steam leak around the right-side valve-stem packing that partially obscured my view ahead. I tried to gauge the time and distance to crossings after I glimpsed the

whistle post, so I could blow the familiar two longs, a short, and a long as we passed over each road. Fortunately, no trains were ahead of us, so I was calling out nothing but clear signals. At the top of the hill at Colby, the engineer took over for the last 7 miles into Bellevue.

Rather than ride the engine to the coal dock, I swung down at the yard office at Bellevue, since I was going on to Cleveland on No. 66, symbol freight FS-2. As I entered the caller’s office to inquire about No. 66, the clerk asked, “Where have you been?” I told him and asked why he wanted to know. He said to look at myself in the mirror in the locker room. I was wearing my Navy pea coat and watch cap, and in the mirror my face was as dark as my navy blue coat and cap! After cleaning up, I walked back to the depot and its “Eat” restaurant (so called for its exterior sign). Our engine crew was there by that time, and the men were more cordial than before, having won the battle with

bad coal. Unfortunately, I never learned their names. I also later learned that several engines coaled at South Lima that day had failed out on the road.

My deadhead journey to Cleveland was, as usual, in regular conductor Walt Williams’ caboose 1035 on No. 66. Walt’s

crew was all “old heads,” and I thought I would impress them by recounting my trip on No. 68. I should have known better. Those 35-year-plus veterans all had bad-coal stories that topped mine! By the time the stories were finished, it was after midnight. I was tired, so I made my “bed” on the locker cushions in the far end of the car. I was soon lulled to sleep by the muffled *boom-ba-boom-ba-boom* sound those old

NKP 1000-series wooden cabooses made as they rolled along at track speed.

Despite the bad-coal factor, this run increased my desire to enter engine service and become an engineer. I would have to wait 10 years to realize that goal, but that’s another story. ■

During the hard pull, I witnessed a most spectacular display of fireworks exhausting from both stacks.



WITH THE ADVENT OF THE “SUPER-POWER era” of the 1930’s and ’40’s—the last hurrah for steam—came the finest examples of that ultimate expression of motive-power utility, the dual-service locomotive. Not since the 19th century’s 4-4-0 American Standard type had so many railroads and manufacturers designed and built such a range of power suitable for both high-speed freight or passenger trains.

Obvious contenders for the dual-service sobriquet would be 4-8-2’s and 4-8-4’s. Now, some purists also

might cite the Atlantic Coast Line’s use of 4-6-2’s, or Chesapeake & Ohio and Louisville & Nashville’s practice of putting 2-8-4’s on varnish. And the frequent assignment of 4-6-6-4 Challengers to passenger trains by Union Pacific is noteworthy.

But dual service was mostly the province of Mountains and Northerns. Notable 4-8-2 switch hitters include the Boston & Maine R-1d, New York Central L-4, and Pennsylvania M1. Among 4-8-4’s, the Lehigh Valley

Dual-service paragon

For a brief season, Lackawanna's elite and versatile Q-4 4-8-4 Poconos staved off the diesel

By John R. Canfield



JOHN R. CANFIELD

T-3; Chicago & North Western H; Burlington O-5; Frisco 4500-series; and Nashville, Chattanooga & St. Louis J-2 and J-3 were well-known as dual-service machines.

Perhaps the most successful dual-service engine was the Delaware, Lackawanna & Western Q-4 4-8-4, built by Alco in 1934. My choice is not entirely objective—I was fortunate enough to have close access to the mighty Poconos (as DL&W nicknamed its 4-8-4's). On aesthetics alone, the Lackawanna's 1631-1650 class may be without peer. These machines featured 74-inch disc drivers, multiple-bearing crossheads, cast frames with integral air

Lackawanna Q-4 1640 hauls train 21, the *Mountain Special*, a Saturday-only summer train to Scranton, Pa., through the Poconos in 1948.

reservoirs, a perfectly proportioned boiler, slightly-below-center visored headlight, roller bearings (engine only), heavy-duty Walschaerts valve gear, a Worthington SA-type feedwater heater (except Nos. 1649 and 1650), front-mounted air compressors, and a rakish pilot—in a word, elegant!

Detracting from the Q-4 somewhat was its stubby 12-wheel tender, necessary because of Lackawanna's nu-



ROBERT M. FAASSE

merous 90-foot turntables, as well as an extra-large sand dome with an odd, “undercut” appearance. But that latter feature, it could be argued, only served to enhance the impressive bulk of the engine.

Aesthetics aside, consider the practical operating utility of the Q-4 in the context of Lackawanna’s conservative motive-power policy. For various reasons, the DL&W never ventured near the 10-coupled or articulated steam designs more suited to its heavy grades. Motive-power assignment policy was pretty much dictated by the principle of “whatever’s in the barn!” This approach held sway during wartime and con-

tinued into the diesel era. The railroad ordered its diesel road power in “retail-size” groups: two- and three-unit combinations that assured consistently underpowered manifest freights, frequently around 1.1 h.p. per ton.

In a way, Lackawanna’s dieselization policy contributed to the longevity of the Q-4’s. Often, on other railroads, the biggest, newest steam power was the first to be withdrawn. But compatibility problems within DL&W’s diesel fleet—mismatched gear ratios, lack of nose jumper receptacles on cab units, a lack of passenger units with steam generators—only served to point up the Q-4’s dual-service capabilities.

In this 1934 builder’s photo, the aesthetic assets of the Q-4—clean running gear, classic headlight placement, elegant boiler proportion—stand in contrast with the stubby tender, a concession to 90-foot turntables.

ALCO



Demonstrating its freight credentials, Q-4 1638 hustles through Paterson, N.J., on August 26, 1949, with train NE-4, the daily hotshot from Buffalo.

The Q-4's were first assigned to manifest service between Scranton, Pa., and Buffalo, N.Y. Grades on this route required helpers west from Scranton 7 miles to Clarks Summit, Pa., and east from Groveland 14 miles to Wayland, N.Y. On the east end of the railroad between Scranton and Hoboken, N.J. (133 miles via Boonton, N.J., or 135 miles via Morristown), Lackawanna used the older 77-inch-drivered Q-1 Poconos in heavy passenger service and 70-inch-drivered Q-2 and Q-3 engines on freights. Anthracite traffic, still a major revenue source during the Depression, was hauled by 35 low-drivered, three-cylinder 4-8-2's. Helper duty east and west from Scranton, as well as east and west from the Delaware River valley, went to 2-8-2's of heroic proportions.

The Q-4's could handle any type of train in the Lackawanna's schedule. However, they were restricted to 70 mph, and so could not legally recover time in passenger service in the 80-mph territory of the Buffalo Division or on the 28-mile cut-off across New Jersey. Nevertheless, in an era with more relaxed attitudes about speed limits, the Q-4's were sometimes given their head. One engineer told of No. 1648 surviving a broken main rod while running at 84 mph on the cut-off with the westbound *Lackawanna Limited*. Another bragged of recovering 25 minutes with the 1650 between Scranton and Hoboken on the eastbound *Limited*.

The Q-4's ultimate test came after the war and during Lackawanna's transition from steam to diesel. Alone among the DL&W's doomed steam power—excepting some local freight assignments and the New Jersey commuter service (outside electrified territory)—the Q-4's remained active in their originally intended duties. They hauled extra sections of through-line passenger trains, summertime weekend-only trains, and milk trains running between Hoboken and Binghamton, N.Y. During this period in the late '40's, a Q-4 did the honors on an unusual Monday-morning, summertime-only passenger extra operating the 46 miles between Lake Hopatcong, N.J., and Hoboken. The heavy train took week-ending businessmen back into the city to avoid overcrowding the scheduled, Pacific-powered commuter runs.

Thanks to the performance provided by 74-inch driving wheels and 66,000 pounds of tractive effort, the big Poconos hung onto many of the hottest manifest runs on the west end of the Lackawanna. Also, certain manifest trains on the rugged east end operated at 60-mph maximums and rated

Q-4's in lieu of 48-mph-gear F3 diesels. When 65-mph F7's arrived in 1949, many of these choice assignments between Hoboken and Scranton went to diesels.

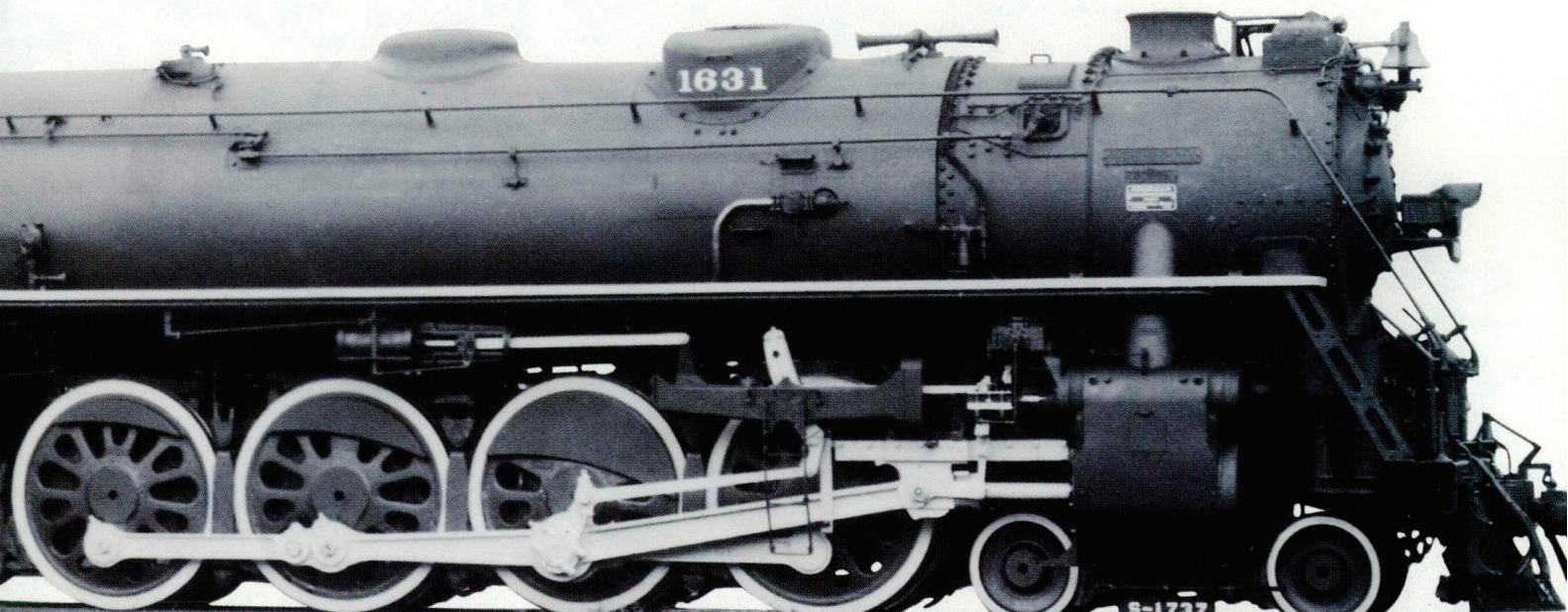
Even then, the big Poconos found niche roles in the period 1948-52. These included the nightly interchange run between Port Morris and Phillipsburg, N.J. This same locomotive often was used during the day to doublehead the Lehigh & Hudson River's hot New England connection up the steep grade from Andover Junction, N.J., into Port Morris. During this period the Q-4's, acting as helpers, could allow for 1200 tons of additional capacity on diesel-powered freights ascending the 1.5 percent grades out of Scranton and Gravel Place (East Stroudsburg, Pa.). The 4-8-4's logically replaced older Mikados on these assignments.

The arrival of 11 E8 diesels for mainline passenger service in 1951 bumped the five three-unit F3's, Nos. 801-805,

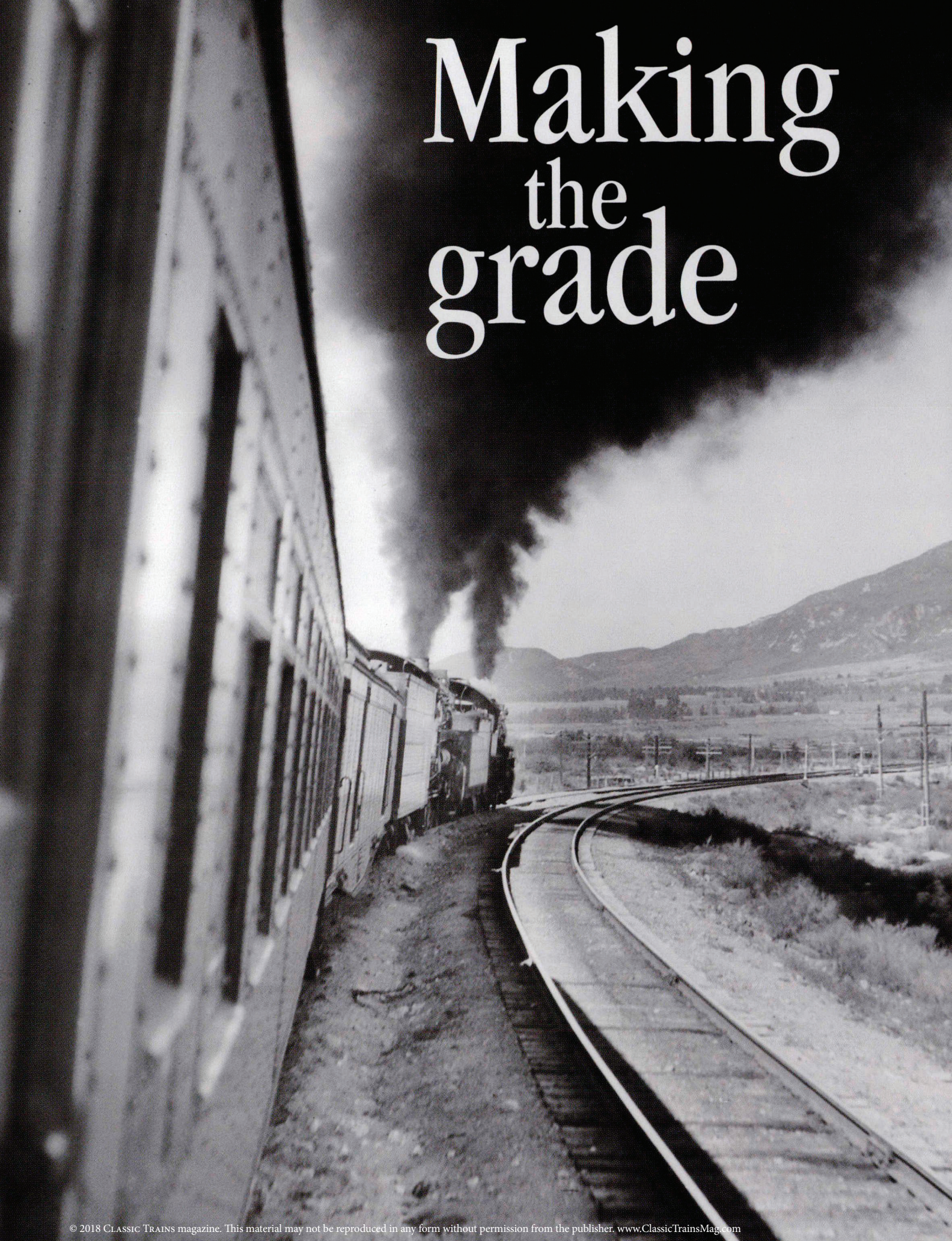
The Q-4's **ultimate test** came after the war and during Lackawanna's **transition** from steam to diesel.

into freight service, marking the beginning of the end for the Q-4's. During that year, Nos. 1632, 1634, 1636, 1642, 1648, and 1650—all of them, curiously, with even numbers—went to the scrapper's torch. Four more of the class of '34 were scrapped in 1952. The 10 remaining Q-4's were sporadically active until complete dieselization in June 1953.

In the end, high labor and maintenance costs justified retiring the still-useful Q-4's, just as they did other modern steam locomotives. There remains, however, a lingering question about the effect of this policy on service, particularly involving highly competitive overhead traffic between Hoboken, New England, and Buffalo. One had only to see train NE-4, grinding up the superbly aligned New Jersey cut-off at 15 mph to its hot New England connection at Port Morris, to realize that the Lackawanna had insufficient diesel power. Obviously more diesel power per train could have been made available if steam had been retained in one niche service—for example, helper duty out of Scranton or on the longer New Jersey commuter runs. But to speculate that such a policy might have staved off—even for a few years—the coming financial armageddon for the Lackawanna would indeed be stretching a point! ■



Making the grade



For a young fireman, a veteran hogger's stamp of approval was a prized achievement

By Jack Elwood

FOR SEVERAL YEARS during the Great Depression, the Santa Fe Railway, with business down, demoted locomotive engineers back to firemen and hired very few new firemen. The first hiring of firemen of any magnitude, at least on the Los Angeles Division where I worked, started in 1936.

The engineers who were able to hold jobs were, of course, the most senior men on the division; only the passenger-service engineers out of Los Angeles had more seniority.

The freight pool, working out of San Bernardino, was a choice assignment, and five turns in this pool were designated as helper turns. As such, they worked only in helper service. Most every train east out of San Bernardino required a helper up Cajon Pass to Summit, or west from Victorville up to Summit. Victorville was the east end of their working limits.

Senior engineers favored the helper turns, as they could spend their off-duty time at home instead of laying over at the away terminal, Barstow. And with only five helper turns, they were almost always called to help a train as soon as they had gotten their required eight hours rest. By working more hours, helper-turn men could earn more money than if they were in the regular freight pool that worked through to Barstow.

During these lean times, the helper engineers had an experienced regular engineer as a fireman. The pairs worked together for so long that each man knew what the other was going to do at all times. This was a real asset, as operating a steam locomotive required total cooperation between engineer and fireman.

By 1940, business was on the rise, and gradually the demoted engineers who had been working as helper-turn firemen were being "re-promoted" back as engineers.

In 1941, when I was 22 years old and working as a regular freight-pool fireman, I had the opportunity to bid for a helper turn with engineer Arthur

Sharp, whose long-time fireman had been promoted back to engineer. I had not worked with Sharp before, and, as a young fireman, was in awe of the old-head hogger. I was the senior bidder and so got the job.

When I arrived at the roundhouse for my first trip with Mr. Sharp, I hesitantly introduced myself to him, and received a grunt or groan and a look down his nose, with no comment. Needless to say, my self-assurance was not at its highest level. I quickly tended to my duties, registering out, checking my watch and the work reports, and then I went out to our assigned engine. The fireman was expected to be on the engine and have everything checked and ready to go before the engineer made his appearance.

The fireman would fill the engineer's hand oiler, complete with a ball of waste in the handle, having it ready to hand to him on the ground and then take his grip and put it up in the cab. I had everything done that needed to be done and was ready for us to leave. Mr. Sharp completed his oiling around and inspection, came up into the cab, and said nothing to me whatsoever.

As we started the trip, I noticed he watched every move I made. Fortunately we had a good-steaming engine, and everything seemed to work fine. At Summit, we cut off the train and went on to Victorville, light, to help another train back westward. At Victorville I took water, turned the engine on the wye, and backed in on the back track to wait for our train. All this time, Mr. Sharp said nothing. He climbed down and departed to go uptown on foot; I stayed on the engine. After some time, he came back and our train arrived. We helped it to Summit, then went light-engine down the hill to San Bernardino. Again, no conversation ensued, but Mr. Sharp was ever watchful.

Our next trip was a duplicate—no conversation, just watching.

On our third trip, we helped No. 20, the *Chief*, to Summit, then ran light to Victorville, crossed over to the west side, and again I turned the engine and put her on the back track to wait for a westbound to help. Mr. Sharp got off the seatbox and climbed down the cab ladder. As he reached the ground, he called out, "Come on, kid, let's go uptown and eat." He had a big smile on his face, so I knew right then that Art Sharp approved of me, without reservation. When Art took you with him to eat and then go visit the Western Auto store in Victorville, you were his fireman, no question. We worked together for quite some time. He was a fine engineer, and I learned a lot from him.

In time, my seniority built up, and I bid in the passenger pool out of Los Angeles, and many times Art Sharp would help us up the hill.

In steam days, a veteran engineer was like God to the fireman. Some hoggers regarded the fireman only as a necessary evil, not due any consideration. They had been treated rough by the old engineers they'd fired for, so they treated their firemen the same way—part of the process, I guess.

Thankfully, in my time as fireman, I encountered only a few engineers who were unpleasant to work with, men who were impossible to please no matter what. By the same token, there were many fine ones who could teach a young fireman how to be a successful engineer himself. Their stamp of approval was a prized achievement, long remembered. ■



ESTABLISHED 1885
GUSTAV BERGMAN CRANE

2721



9 decades in the service of steam

Stratford Shop became Canadian National's biggest—and last—steam overhaul facility

By James A. Brown • Photos by the author

IT WAS ARTHUR ALDER'S last day on the job. For over 40 years, his chosen vocation had been steam locomotive maintenance, a craft he had practiced for the most part in Canadian National's giant Stratford (Ontario) motive-power shop. This place had repaired its first steam locomotives 90 years before. By now, though, steam operations on CNR had ended a year and a half ago, and Stratford had outshopped its last locomotive for regular service. The massive facility, always dedicated to steam power, was in its death throes. Alder would spend this day, November 30, 1961, in farewells to his mates and reflections on a career—and a way of life

Mountain 6001 rides above Consolidation 2721 in Stratford's vast erecting hall on December 29, 1958. Within three months, even minor steam repairs would cease here.

—that was winding down.

The tracks of the Grand Trunk Railway of Canada first reached Stratford in 1856. The city is in the heart of southwestern Ontario, about midway between Toronto and the U.S. border on the GTR's main line to Chicago. By 1870, Stratford had become the center of GTR's regional operations, and the railway logically selected it as the site of new locomotive and car shops. The shops opened in 1871.

Despite having shifted heavy-car repair in 1888 to new facilities in London, Ont., 33 miles southwest, GTR was obliged to rebuild, modify, and expand Stratford shops to keep ahead of an expanding fleet of locomotives, which were ever longer and heavier. Four times GTR enlarged the shop, in 1888, 1904, 1908, and 1919. When Alder began his apprenticeship with the Grand Trunk, the original two-building,



39,000-square-foot shop of 1871 had evolved into a complex that exceeded 275,000 square feet.

By 1923, though, after amassing a 4800-mile system (one quarter of it in the U.S.) from 125 individual railways, Grand Trunk was on its financial knees. On January 23, 1923, the GTR became part of Canadian National Railways, a creation of the Canadian government. Under CNR stewardship, the Stratford main shop was expanded again, in 1928 and one more time in 1948-50, becoming—at 313,000 square feet—the largest main shop on the CNR system.

As Alder strolled around the now-quiet stores building and powerhouse, past his old haunts in the tender shop, boiler shop, and machine shop, and into the vaulted hall of the erecting shop, he reflected on the days when the “Big Shop” (as it was known to Stratford railroaders) literally trembled with activity.

It was organized chaos, and a smorgasbord for the senses. There was the hum of generators and electrical machines; a never-ending sibilance of steam and compressed air and welders’

torches; the heavy thud of the steam hammer; a gear whine as the overhead crane eased a 150-ton locomotive down the length of the erecting hall, high above the engines below; the booming shop whistle, which regulated not only the Big Shop’s activities but seemingly all of Stratford’s as well; an amalgam of smells—hot oil, solvents, freshly milled wood, coal smoke, paint; and everywhere a cacophony of percussion from shop machines and hand tools and material trolleys.

He recalled the locomotives. All steam, of course. There were switchers, Moguls, Ten-Wheelers, Consolidations, Pacifics, Hudsons, Mikados, Mountains, Northerns, Santa Fes. There were other creatures repaired at the Big Shop, too—cranes and “doodlebug” railcars mostly—but their needs were minor compared to the work required by the steamers. No diesel locomotive ever received classified repairs at Stratford.

Then there were the men. Over Alder’s career, so many men. Through its apprenticeship programs, Stratford trained—and Arthur Alder worked alongside—hundreds and hundreds of

In January 1959, Stratford men cut apart the frame of 4-8-2 6032, being scrapped less than two years after receiving classified repairs here.

machinists, pipefitters, boilermakers, blacksmiths, and electricians. Many of these men went on to assignments elsewhere on the CNR. But many also chose to spend their entire career in Stratford; it was a closely knit family.

A few diesels began appearing on CNR trains in the Central Region in the late 1940’s, but in the early ’50s hundreds were added to the roster, more were on order, and the handwriting on the wall was becoming unmistakable. Around the Big Shop there grew an uneasy sense of foreboding. In 1953, with more than 2400 steam engines still on the roster, CNR confirmed their fears: Stratford would not take on diesel repairs, and the shop was expected to be closed within a decade. The shock was palpable.

Still, the Big Shop had never been busier, as other CNR backshops—at Montreal, Moncton, Battle Creek, and Winnipeg—began repairing diesels, and more and more of their steam work was sent to Stratford. In 1955, when overall dieselization was far advanced in the U.S., Stratford’s Big Shop overhauled 290 steam engines. The next year saw production reach an all-

Like one who is gravely ill, the shop enjoyed a magnificent rally just before the end.

Back from a 5-mile test run, 4-8-4 6221 hostles freshly shipped Western Lines 2-8-0 2721 outside the Erecting Shop annex in January 1959.

time high: 370 locomotives, eclipsing even the frenetic output during World War II. More than 1500 employees worked in the Shop, on 48-hour weeks, to keep up with the demand.

Despite it all, though, steam's days were clearly numbered. Locomotive retirements and scrappings were brutal. By mid-1958, CNR's roster was down to about 1300 steamers, many of them stored and never to run again. Alder recalled a somber meeting at the Big Shop that June, which detailed a program of layoffs for 850 men and proposed a "temporary work program" for those more senior. Major overhauls for Central Region engines had ended, and the shop was keeping busy with minor work, mostly converting from coal- to oil-burning some locomotives destined for the Western Region. (Ironically, some of these locomotives were laid up before completing their journeys west, to be scrapped without having turned a revenue wheel after their conversion.)

Thus, beneath its Sword of Damocles, Stratford's sights and sounds of steam continued through 1958, and freshly painted locomotives were turned out ready for service at the rate of two or three a week.

It couldn't last. The final oil-burner, 2-8-2 3552, was outshopped on January 12, 1959, and light repairs to the few engines still in service were all done by the end of March. Like one who is gravely ill, CNR's Stratford Motive Power Shop enjoyed a magnificent rally just before the end. But inevitably the end did come.

It came for CNR regular-service steam, in fact, while Alder was still employed at Stratford. In the U.S., on March 27, 1960, Grand Trunk Western 4-8-4's 6319 and 6322 operated the "last regular major run" of steam in the country, on two sections of passenger trains 21 and 56 from Detroit to Durand, Mich., and return, although GTW did use steam sporadically on freight and the occasional passenger train for a short time thereafter. A month after GTW's ceremonial day, on April 25, 1960, CNR 4-8-2 6043 rang down the curtain on system steam operation when it hauled train 76 from The Pas to Winnipeg, Manitoba.

More on our website

See a movie clip of Canadian National steam in action, plus more on Stratford Shop, at our website, www.classictrainsmag.com



Oh yes, Alder recalled, there was other work at Stratford after that: rebuilding cranes, fabricating track components, scrapping of steam engines, odd things. And a portion of the shop had been leased to Cooper-Bessemer for its then-expanding Canadian market for heavy diesel and gas engines and compressors. But the spirit of steam was gone.

Well, not completely. As he reached the east end of the Big Shop's erecting hall on his last day of service, Alder paused for a moment at Pit 4 to reflect on 4-8-4 6167, in for Class 5 (minor) repairs after two seasons of excursion service. For a few moments, he savored

Dressed in a suit for his last day on the job, Arthur Alder inspects excursion-service 4-8-4 6167, back at Stratford for Class 5 repairs.

the memories. Then he turned his back on the big engine and slipped out of the great building for the last time. ■

POSTSCRIPT: One of Stratford Big Shop's last-ever tasks was the overhaul of 4-8-4 6218 in November 1963, to replace 6167 in excursion duties. Arthur Alder would have been pleased. On March 31, 1964, all remaining Stratford Shop employees were transferred, retired, or laid off, and the facility was finally closed, 93 years after it all began.