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VOLUME I  
NUMBER 4

# LOCOMOTIVE

QUARTERLY

## TONNAGE MASTER

*The Kansas City Southern favored large Mallets like the 756 for many years, maximizing train length despite the road's heavy grades and many curves. Oil Painting by G.F. Mulvaney.*

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\$10.00



Preston George / F. Wesley Krambeck

*Blackening the sky with their efforts, Kansas City Southern Consolidation 532 and Simple Articulated 757 urge their southbound 73-car freight upgrade at 10 miles per hour north of Page, Okla., August 31, 1946.*

# THE KCS STAMP

Railroaders readily recognize the "look" of locomotives on many lines. Santa Fe or New York Central—they need no cab or tender lettering to tell them which road's Hudson a picture portrays. Despite a common preference for Belpaire boilers, Great Northern and Pennsylvania engines prove similarly individualistic.

Though power on the largest roads enjoys instant recognition, the medium-sized company rosters, in many cases, are fully as distinctive. The Kansas City Southern, presented in this issue, is a classic case.

Save on the ten Texas types bought in 1937—a totally new and different generation—several unique features created the KCS look. High-mounted headlights were the rule, while smokebox doors were bare. Where other roads placed either the headlight itself or a number plate, the KCS offered only a smooth metal surface. Mallets, Consolidations, Pacifics—all looked somehow "foreign" because of this.

Cab-side toe boards were another standard feature. The engines carried a profusion of domes, auxiliaries and miscellaneous plumbing atop their boilers, notably in the case of the Mallets. In combination, these elements created a strong impression of height.

It showed up particularly in the lanky 800 series Pacifics. Their long stacks, old-style domes, spoked pilot wheels and built-up trailer trucks spoke of an earlier era. Increased boiler pressure, disc main drivers and other Pittsburg Shop-applied improvements, however, made them swift steppers, fully competitive with contemporary medium-sized passenger power of the 1930s. They deserve greater recognition.

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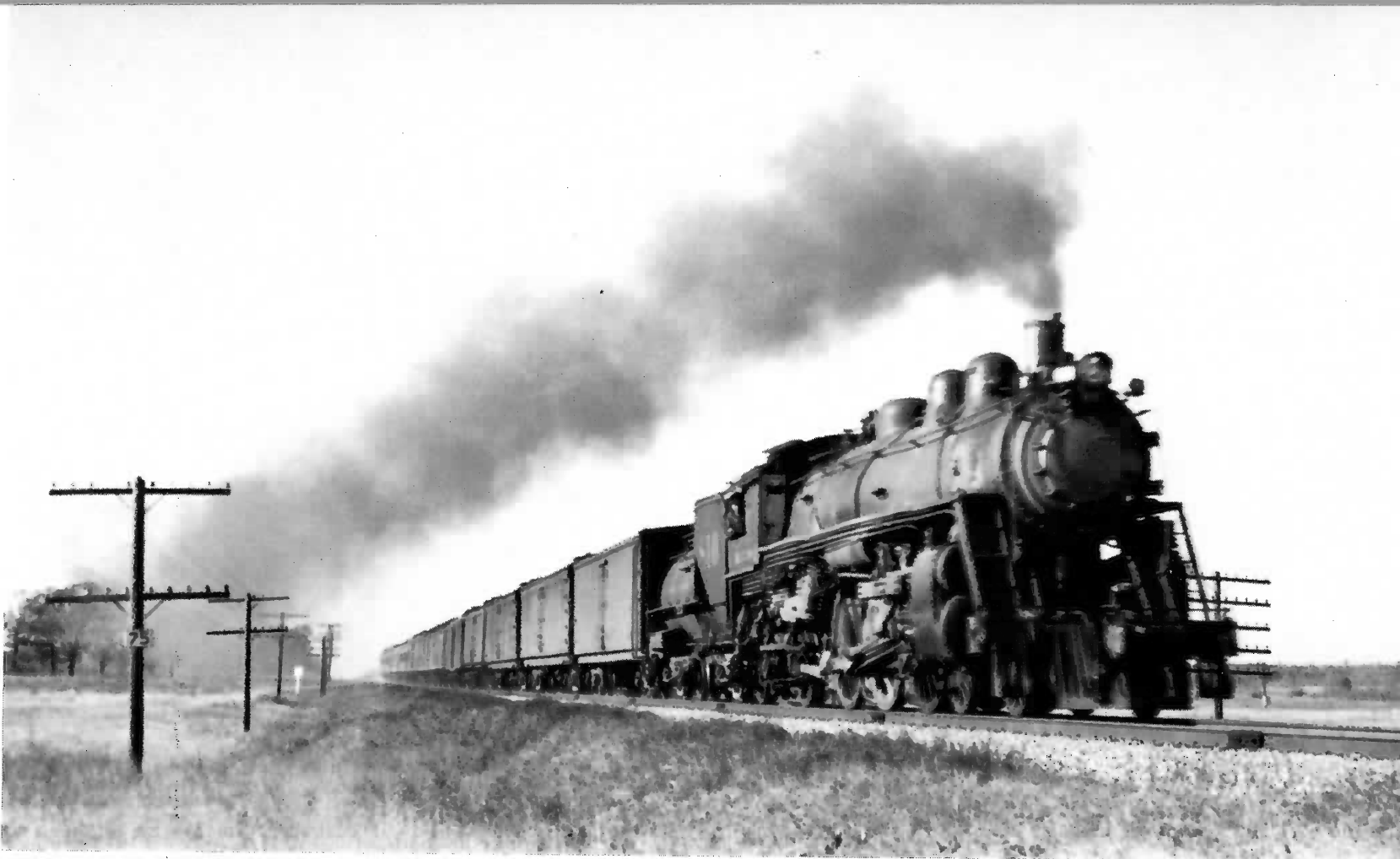
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H-1, 808-810, 24x28cyl, 75"DR, 225BP, 268,000wgt, 41,126TF, Schen., 1919



A. E. Brown

*Train 15, The Flying Crow, whips through North Shreveport behind Pacific 810 on November 28, 1946, heavy with front end traffic.*

## **KANSAS CITY SOUTHERN— WHERE MALLET'S ONCE RULED**

**by Raymond W. Brown**

Straight down America's center runs the Kansas City Southern Railway. Tying the Middle West to the Gulf Coast, its motive power roster was in many ways unusual. Several wheel arrangements common to other

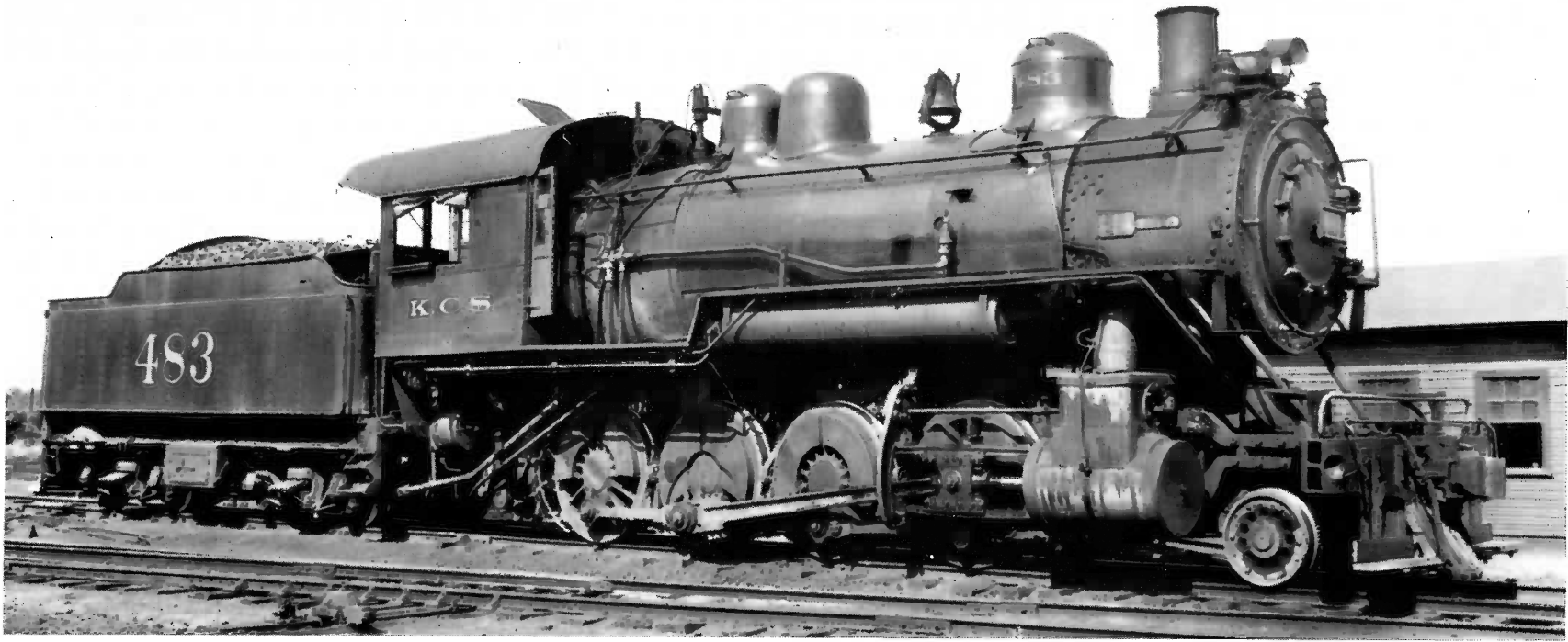
middle-sized companies never came to the KCS. Other types, seen less frequently, became prime haulers here instead. Significantly, Leonor F. Loree, of Delaware & Hudson fame, was concurrently this railway's board



*Mallet 762 rolls tonnage north through Cedar Grove, La. September 27, 1942.*

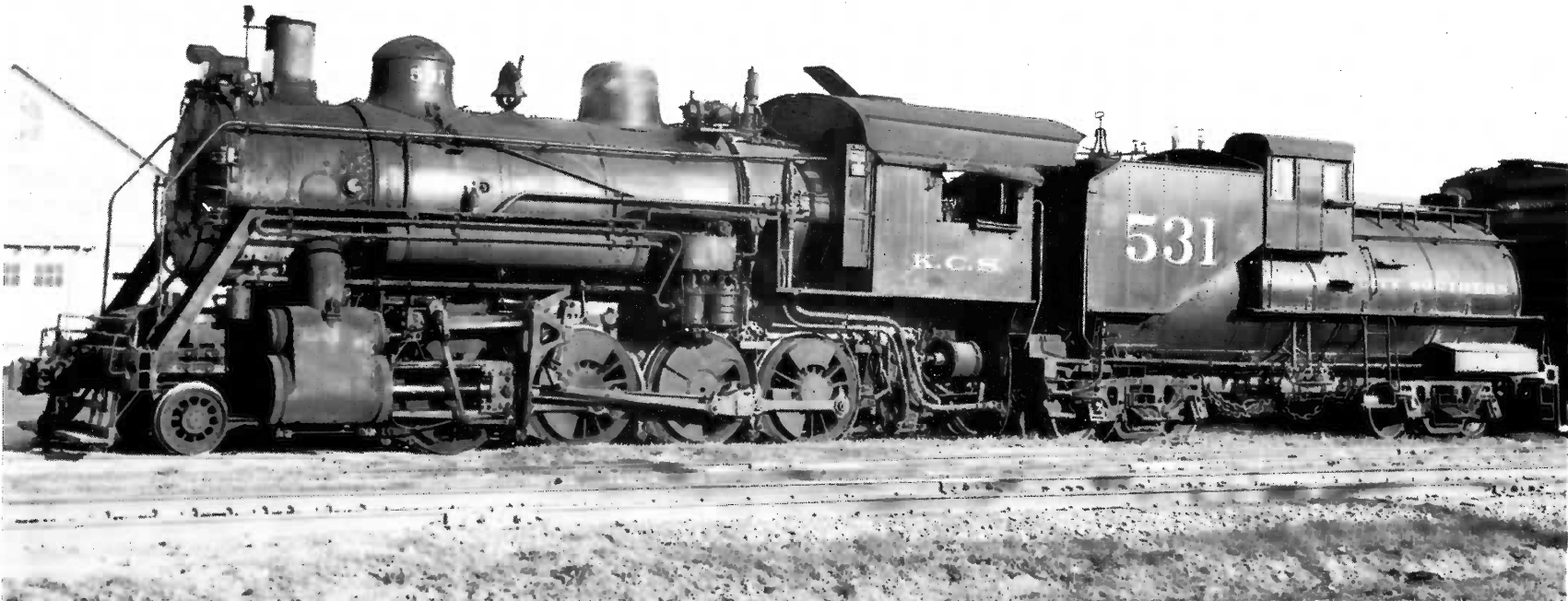
A. E. Brown

E-3, 475-499, 510-532, 22x30cyl, 55"DR, 210BP, 220,380wt, 47, 124TF, Pittsburg, 1906-07



J. O. Riley

*E-3 Consolidations, the most numerous KCS class, were also among the most varied. 483 (above) reveals Stephenson valve gear, universal valves and box tender at Joplin, Mo., August 24, 1946, while classmate 531 (below) at De Ridder, La., March 10, 1951, is equipped with Walschaert gear, piston valves, and a Vanderbilt tank.*



A. E. Brown



A. E. BROWN

*Extra 519 North at Cross Lake Dam, La., November 22, 1942. Engine 519 differs from either E-3 seen on Page Six in her tender and pilot.*

chairman for many years—an influence which caused interesting parallels between two roads with little else directly in common.

In 1910, the D&H ordered six huge 0-8-8-0 Mallets, departing from that company's heavy Consolidation policy for main line freight service. They fulfilled a special purpose, spending their long careers as pushers out of Carbondale, Pa. Within a year, the similarly 2-8-0 oriented KCS took delivery of 12 0-6-6-0 Mallets, but intended

them for broader freight haulage. They shared one feature, an unusual one for the Midwest, with their D&H sisters—wide Wootten fireboxes.

The KCS pursued an articulated course long after the D&H ceased ordering 0-8-8-0s for Pennsylvania pusher service. In 1918, Engines 750-756 arrived from Schenectady. These large 2-8-8-0s, real tonnage hogs, showed their stamina on the road's several stiff grades and easily outperformed the older 0-6-6-0s which were relegated



D. W. Eldridge/W. C. Whittaker Collection

*Heaviest KCS 2-8-0s were Class E-4. Disc-driven 550, a notorious cinder-tosser, wears a special stack to cure her problem as she waits to leave Pittsburg, Kan. on August 23, 1939, doubleheading with one of the road's large, modern Texas types.*

largely to helper service. Lack of a leading truck on those earlier Mallets suited them poorly for main line long haul duties, raising the spectre of derailments.

Did the later Mallets prove themselves? Clearly, they did. In 1924, while the D&H continued its 2-8-0 specialization, KCS bought 10 more 2-8-8-0s from Alco's Brooks works at a time when other roads were already moving away from such engines save for mountain-battling. On the "Haywire," as Kansas City railroaders called the KCS, drag freights reigned supreme, following the D&H

precedent, and this suited the big Mallets well. Except on the road's far south end, they ruled the roost for many years, supplemented by older Consolidations.

With the railroading speedup of the 1930s, competitive conditions forced a reluctant KCS to make changes. Four of the newest Mallets were converted to simple articulateds in 1939-1942, but more significant was the mid-1930s rebuilding of 12 E-4 class heavy Consolidations—all save three of the 1913 Richmond-built 550 series. The switch from 57-inch to 63-inch driving





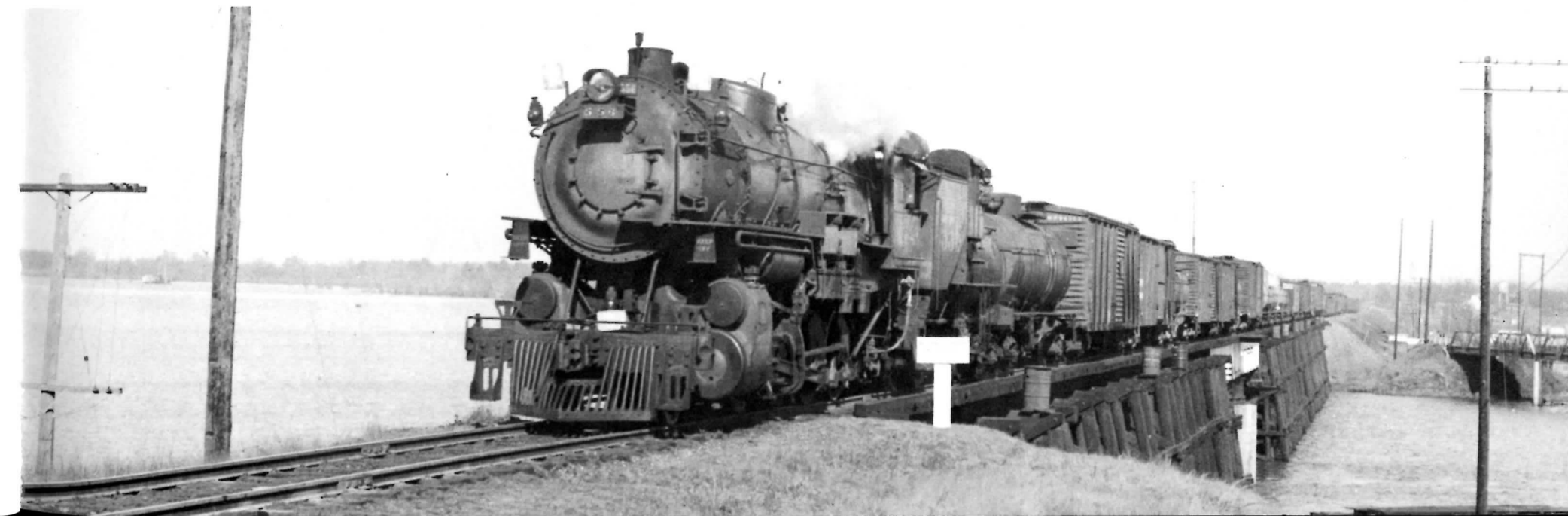
E-4, 550-564, 24x30cyl, 57"DR, 175BP, 254,000wgt, 52,923TF, Richmond, 1913

A. E. Brown

*At Shreveport, September 19, 1937, Oil Burner 556 typifies the E-4 class in their low-drivered form. Like much KCS road power, she hauls an auxiliary water car behind the tender.*

*The head brakeman peers from his tender-mounted cabin as 556 crosses Caddo Lake at Mooringsport, La. with Train 77. April, 1940.*

Harold K. Vollrath collection







A. E. Brown

*Extra 561 South below Mooringsport, La., May 5, 1946.*

wheels aided speed potential; that these were modern disc wheels—unusual on a Consolidation—helped even more.

The road also looked increasingly to its passenger power pool in speeding up manifest freights. The lanky 800 series Pacifics, regulars on *The Flying Crow*, could move freight briskly with their 75-inch drivers.

Compromise revisions offered only a temporary answer. In 1937, therefore, management went to market for new

freight power—engines that could handle heavy tonnage, but engines capable of speeds not previously feasible in KCS freight service. From Lima came 10 huge 70-inch drivered blockbusters, half of them oil burners—Texas types that opened a new railroading era.

Old habits die hard, however. “The Kansas City area’s numerous hills and valleys, under certain atmospheric conditions, cause noise to travel a long distance,” observes Veteran Rock Island Railroader F. Wesley Krambeck. “In the Northeast section of town, one night in

1937, there was an awful din, vibration and drumming, which had everybody puzzled and there was some concern in that area. Investigation disclosed the source was an engineer on a southbound drag, with one of the big, new 900 series 2-10-4 oil burners, trying to get his freight under way. The KCS had hung everything but the County courthouse on the tender drawbar. An article about the incident appeared in the Kansas City paper the following day. The Kansas City Southern always was and still is a believer in heavy tonnage per train.”

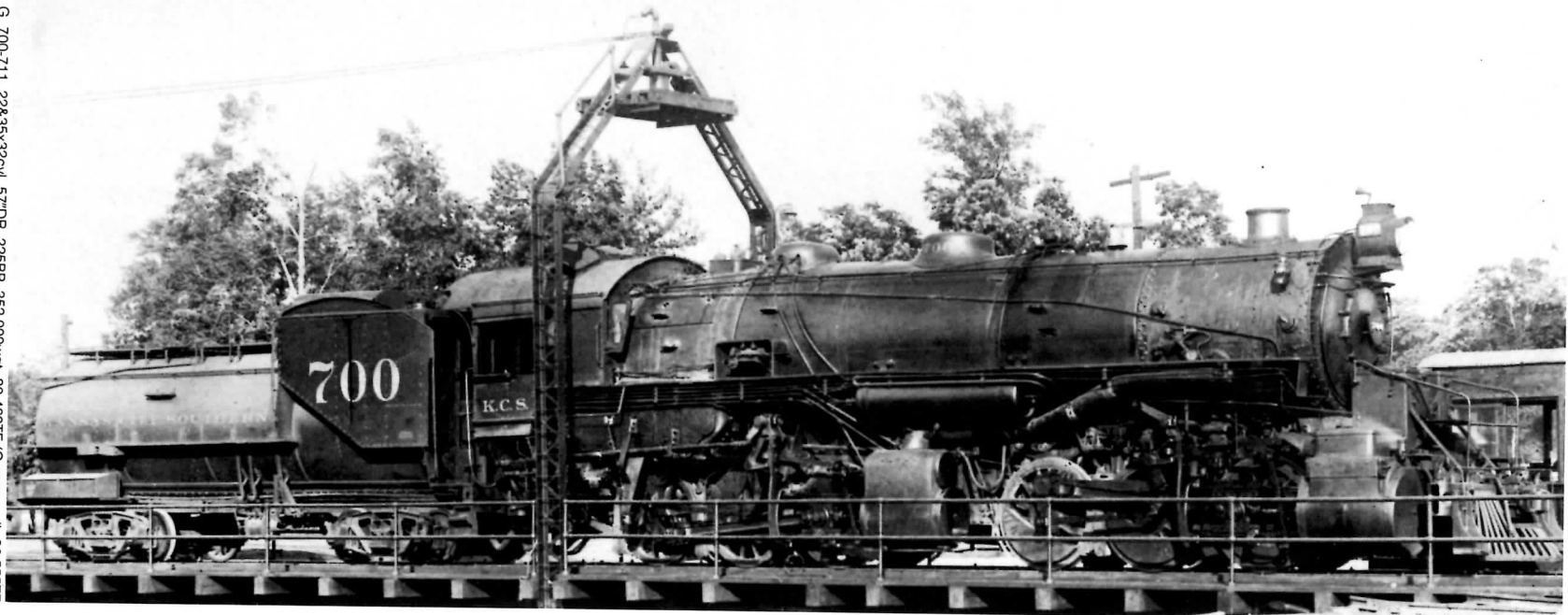
Tonnage or no, the Texas types sped things up on the Northern Division, regularly handling manifests on hot schedules between Kansas City and De Queen, Ark. Weight restrictions over the Bear Creek bridge precluded their use below there, so Pacifics doubleheaded such runs between De Queen, Ark. and Shreveport, La. The J-class 2-10-4s themselves frequently doubleheaded with Mallets between Heavener, Okla. and De Queen as well as with E-4 Consolidations between Watts, Mo. and Pittsburg, Kans.

*Unlike many other E-4 engines, 555 carries a semifootboard pilot. Kansas City, Kan., December 12, 1948.*

F. Wesley Krambeck



G. 700-711, 22835x22cy, 57"DR, 225BP, 352,000wgt, 80,463TF (Compound), 96,555TF (Simple), Schenl., 1912

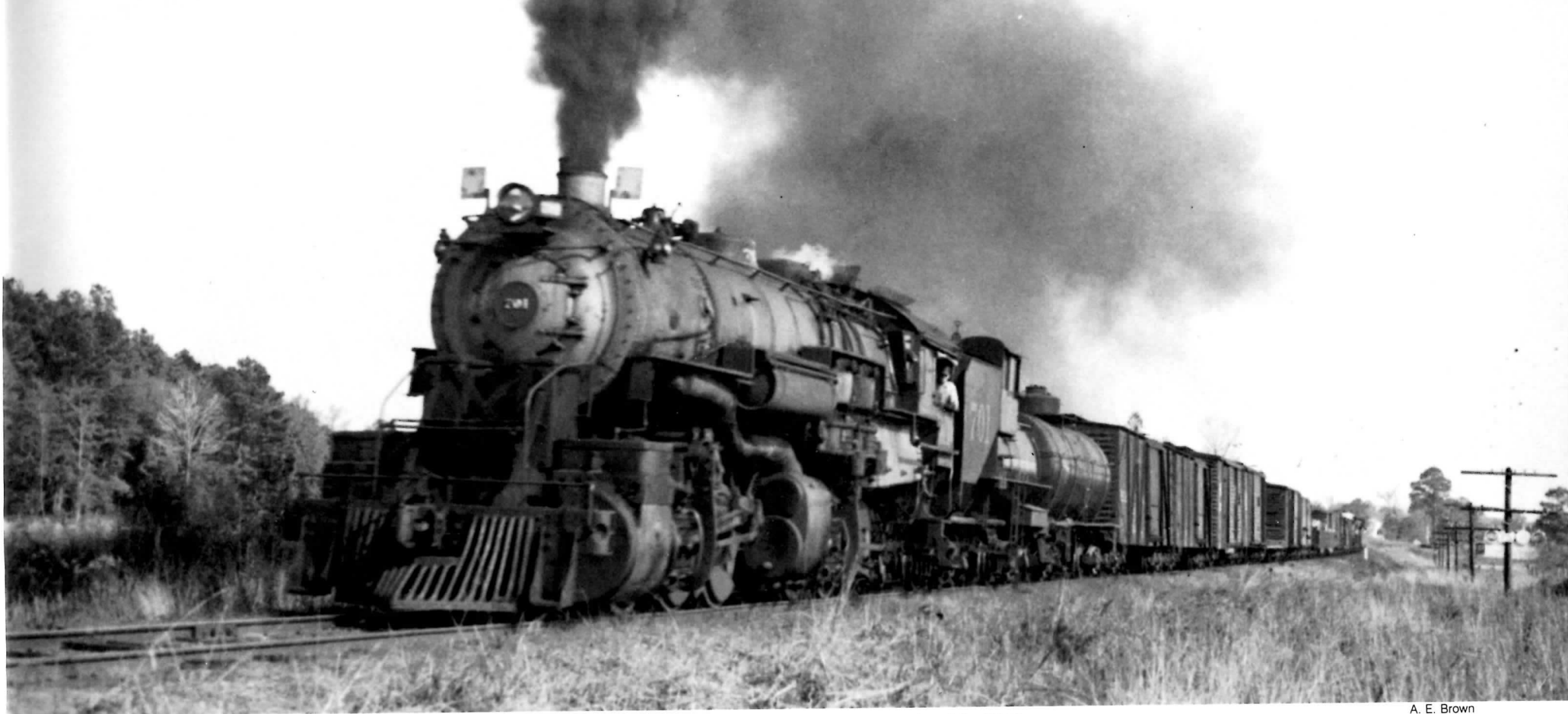


Harold K. Vollrath collection

*The 700 series 0-6-6-0 Mallets were unusual road power. 700 (above), on the Watts, Okla. turntable circa July, 1924, was in helper service north from there. 711 (below), at Shops, La., February 11, 1940, takes on oil before leaving with the Leesville local freight.*



A. E. Brown



A. E. Brown

*701 takes the Leesville-Shops (Shreveport) local freight through Many, La. on November 21, 1940.*

The new power eliminated most 2-8-8-0 operation into Kansas City, but the large Mallets continued in tonnage service, notably between Pittsburg and De Queen, as well as in through freight service between Shreveport and Leesville, La. (only lighter power could operate south of there). Heavy coal trains sometimes employed two of the big Mallets, separated by five cars to meet bridge weight limitations.

1937 also saw nine of the dozen earlier Mallets scrapped. The 0-6-6-0s continued to handle Shreveport-Port Ar-

thur local freight in deference to the stiff grade over Hornbeck Hill. Other than that, they had served principally as helpers from Watts to Neosho, Mo. and from Heavener to Mena.

World War II found the KCS pressed for power. Borrowed engines helped some, while two groups of ex-Wabash 2-10-2s brought more permanent relief when purchased in 1942—Engines 200-205, class L, a group of 64-inch drivered heavyweights built by Brooks in 1917 and L-1 Engines 220-223, four USRA light Santa Fes,



Harold K. Vollrath collection

*Engineer Wade Hampton handles Articulated 752 on a long southbound drag at Forbing, La. in April, 1946.*

supplied initially to the Ann Arbor in 1919. These were the road's final steam acquisition. They regularly handled Shreveport-De Queen and Pittsburg-Baxter Springs-Kansas City tonnage freight.

Though speed took second place to freight tonnage in large measure, KCS passenger power development followed a different route. The road never ran a great number of varnish runs, but those it did were first class and well-maintained. A few Ten-Wheelers and Americans handled the lighter work, but the primary main line

service was assigned to the 800 series Pacifics. Alco supplied Engines 800-807 in 1912, delivering somewhat heavier but otherwise similar 808-810 in 1919. Their 75-inch drivers supplied ample speed and, like most KCS power, the series saw continual upgrading which assured performance beyond that usually expected of pre-World War I locomotives.

Regulars on *The Flying Crow* between Kansas City and Shreveport, the Pacifics also saw much freight service in due time, particularly after the mid-1930s speedup. By





A. E. Brown

G-1(rebuilt), 750-756, 26&41x32cyl, 57"DR, 250BP, 495,000wgt, 122,600TF(Compound),147,220TF(Simple), Schen., 1918

*Engine 754 (above) has the huge hat valve-surmounted low pressure cylinders up front typical of the first group of KCS 2-8-8-0s at Shreveport, September 19, 1937. The 765 (below), on an oil drag at Shreveport (Shops) in May 1948, typifies the later, all-piston valve equipped 2-8-8-0 compounds.*

G-2, 757-766, 26&41x32cyl, 57"DR, 250BP, 495,000wgt, 122,600TF(Compound), 147,220TF (Simple), Brooks, 1924

Harold K. Vollrath collection







Harold K. Vollrath / Charles T. Feistead collection

Several rebuilds, (4)26x32cyl, 57"DR, 250BP, 495,000wgt, 135,000TF, rblt. 1939-42

*Freight power contrasts. Rebuilt Simple Articulated 758 (above), at Shreveport October 19, 1949, represented the road's newest and best freight power until 1937. That year saw 10 huge 2-10-4s delivered, including Coal Burner 906, seen below at Kansas City, Mo. October 26, 1940. Half the class burned oil.*

J, 900-909, 27x34cyl, 70"DR, 310BP, 514,000wgt(Oil-burners 900-904 509,000), Lima, 1937



Robert J. Foster

1936, all had boiler pressure lifted from 200 to 225 pounds, in turn raising tractive force nearly 5,000 pounds to 41,126. Disc main drivers were installed on a few.

In 1939, after merger of the KCS and the Louisiana & Arkansas, the latter acquired Pacifics 800 and 806. They regularly worked a new *Flying Crow* connection between Shreveport and New Orleans. Later years also found 800s working between Shreveport and Port Arthur after retirement of the last Ten-Wheelers.

Until the late 1940s, however, it was the colorful old 600s that did most passenger work below Shreveport. Baldwin-built in 1903, then rebuilt for more power in 1908, these 4-6-0s were further upgraded over the years in typical KCS fashion, but retaining their old arch-windowed cabs.

Also unique to the south end in later years were the last American types. They regularly handled the Lake Charles branch *Flying Crow* connection until it was dropped toward the close of the 1930s.

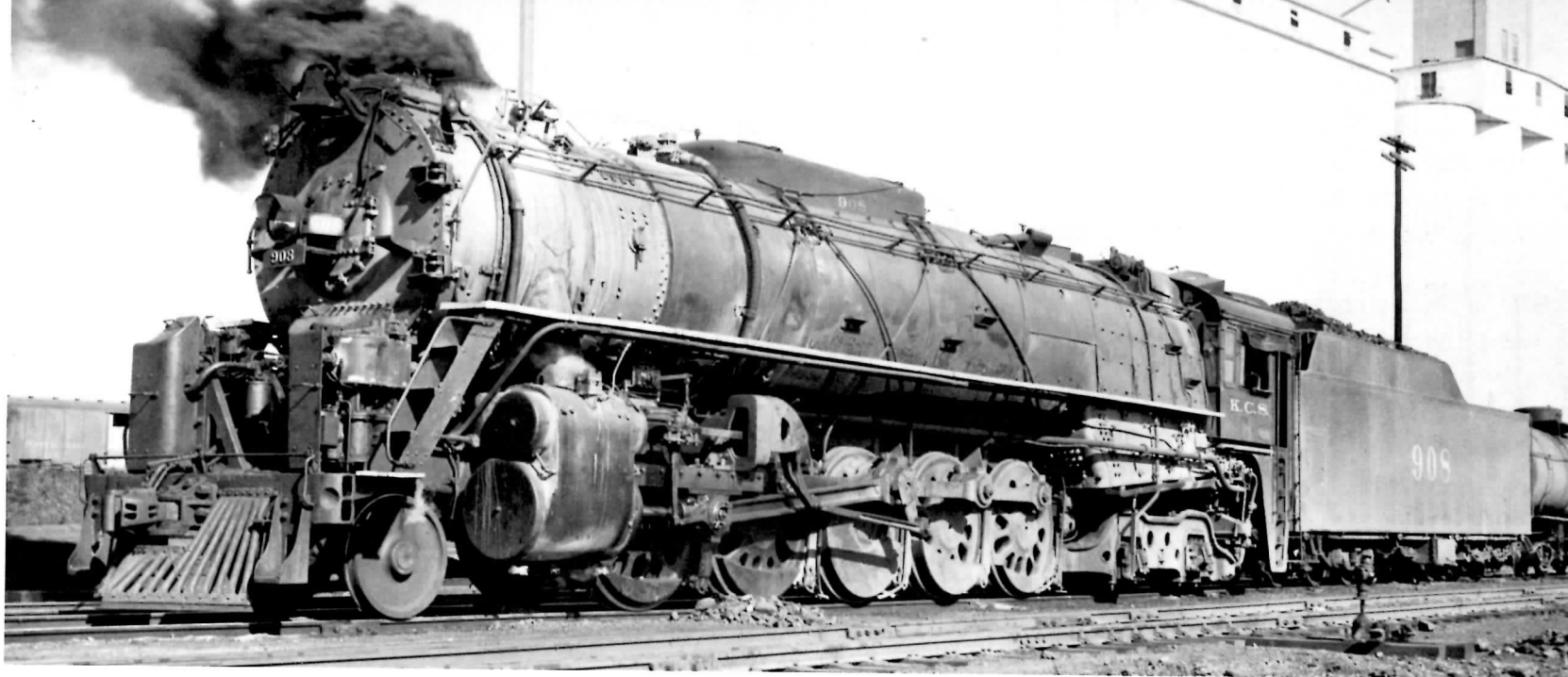
Ambitious rebuilding programs were a KCS hallmark, just as on the Loree-controlled D&H. As the latter road's Colonie shops rebuilt much power beyond recognition, so the KCS Pittsburg plant made the most of its opportunities.

Consider the company's switchers: All of the 0-8-0s were converted Consolidations. one group having gone through a previous major rebuild within a few years after delivery, converting them from Vaucrain compounds to simple locomotives. In addition, the 0-6-0 fleet included two engines revamped with Bethlehem trailer boosters, a

*Oil Burner 2-10-4 904 challenges Rich Mountain, Ark. with Southbound Train 41 in July, 1940.*



Harold K. Vollrath collection



W. C. Whittaker collection

*Huge grain elevators at Kansas City, Mo. form a backdrop for Texas Type 908 (above) on October 20, 1945. With Train 88, Engine 904 roars northward through Kings, Ark. on April 20, 1938.*



A. E. Brown



A. E. Brown

L, 200-205(ex WAB 2504,2508,2521,2525,2511), 27x32cyl, 64"DR, 210BP, 395,099wgt, 75,059TF, Brooks, 1917

*Previously-owned power. World War II found some Wabash expatriates added to the KCS roster. At Leesville, February 4, 1951, Engine 205 (above) was former Wabash 2511. Light USRA 2-10-2 221 (below), ex-Wabash 2551, was initially Ann Arbor 191. Shreveport, July 26, 1951.*

I-1, 220-223 (exWAB 2550-2553, ex Ann Arbor 190-193) 27x32cyl, 64"DR, 210BP, 357,900wgt, 68,377TF, Baldwin, 1919

A. E. Brown







*Extra 222 South at Milepost 544, below Mooringsport, La., March 31, 1946.*

A. E. Brown

device initiated by the D&H, while a few other 0-6-0s were rebuilt as 2-6-0 road engines to operate the Fort Smith branch because of weight restrictions there.

The ex-Vauclain compounds constituted Class K as 0-8-0s. Class K-1 consisted of a dozen former E-3 2-8-0s. The latter was the largest single road class on the KCS—48 engines delivered by Pittsburgh and Baldwin from 1906 to 1908. Already rebuilt prior to World War I, these engines were further upgraded in due course. Though general specifications were uniform, there were

considerable differences among the class as to valve gear and other elements. In local or light work all over the system, four E-3 engines were also sold to the L&A in 1939-1940, spreading the class orbit.

Like some other roads, the Kansas City Southern installed a brakeman's cabin on many tenders. Unlike the others, it placed them on numerous round Vanderbilt tenders. Mounted astride one side, seemingly in defiance of all the laws of nature—and railroading, these cabins gave much KCS power a look uniquely its own.



A. E. Brown



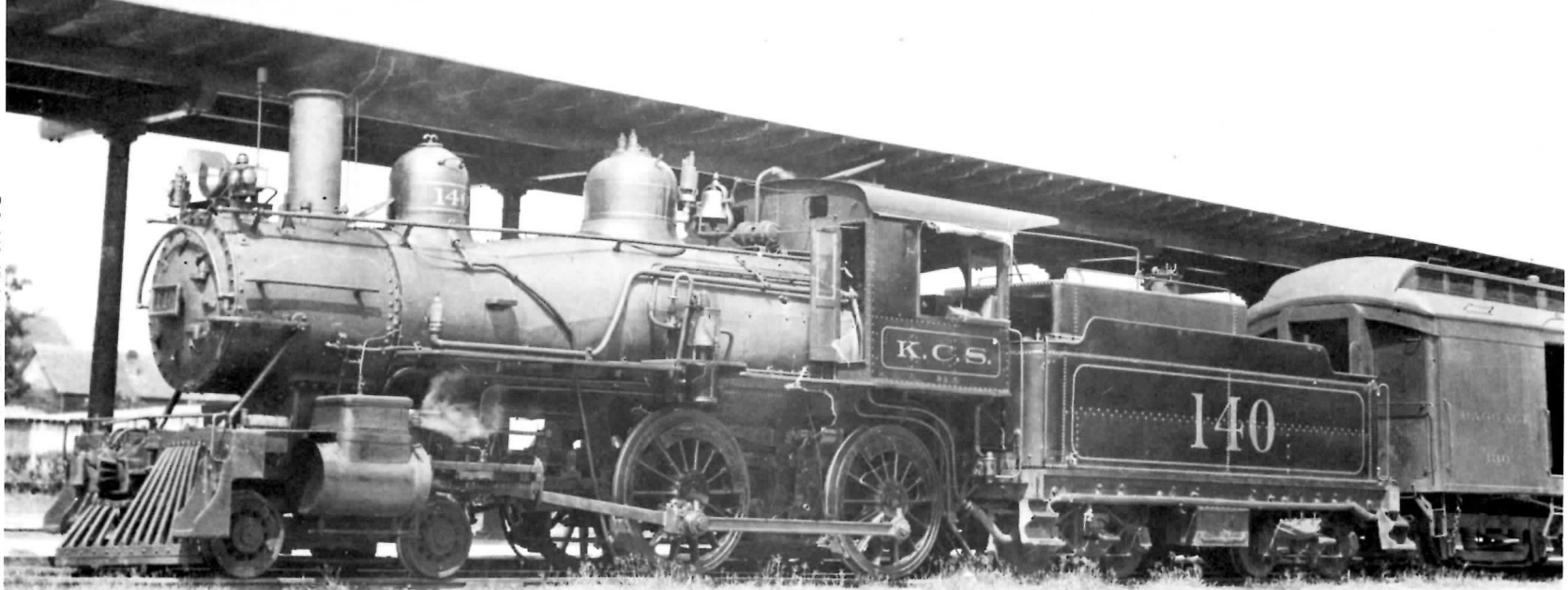
H. Dubal

D-5, 350-380, 29x26cyl., 55"DR., 180BP., 141,400wgt., 29,338TF., Baldwin, 1898

*Most earlier KCS power disappeared before the 1930s, but some stayed on longer. At C. S. Jct., La. in 1931, light Ten-Wheeler 368 still sports a clerestory-roofed cab. 361 (below) of the same series, worked the Fort Smith branch where bridge limitations severely restricted locomotive axle weights in pre-World War II days.*



B-3, 140, 17x24cyl, 60"DR, 160BP, 107,500wgt, 15,000TF, Schen., 1893



A. E. Brown

*Classic Eight-Wheelers still saw service in the 1930s. Engine 140 (above), heads the branch line Flying Crow connection at Lake Charles, La. in 1932, while 143 takes that same run, Train 216, toward the main line. South of De Quincy, La., March 21, 1937.*

B-3, 143, 18x24cyl, 60"DR, 160BP, 107,500wgt, 17,626TF, Schen., 1893



A. E. Brown



A. E. BROWN

*Until the late 1940s, D-7 class Ten-Wheelers worked The Flying Crow below Shreveport. December 24, 1946 finds 605 with the southbound side, Train 15, whistling through Forbing, La. (above). Sister 602 (below) heads northbound Train 16 at Hornbeck, La., May 12, 1940.*



A. E. BROWN

D-7, 600-606 (ex 500-506), 20x26cyl, 67"DR, 200BP, 178,500wgt, 26,389TF, Baldwin, 1903

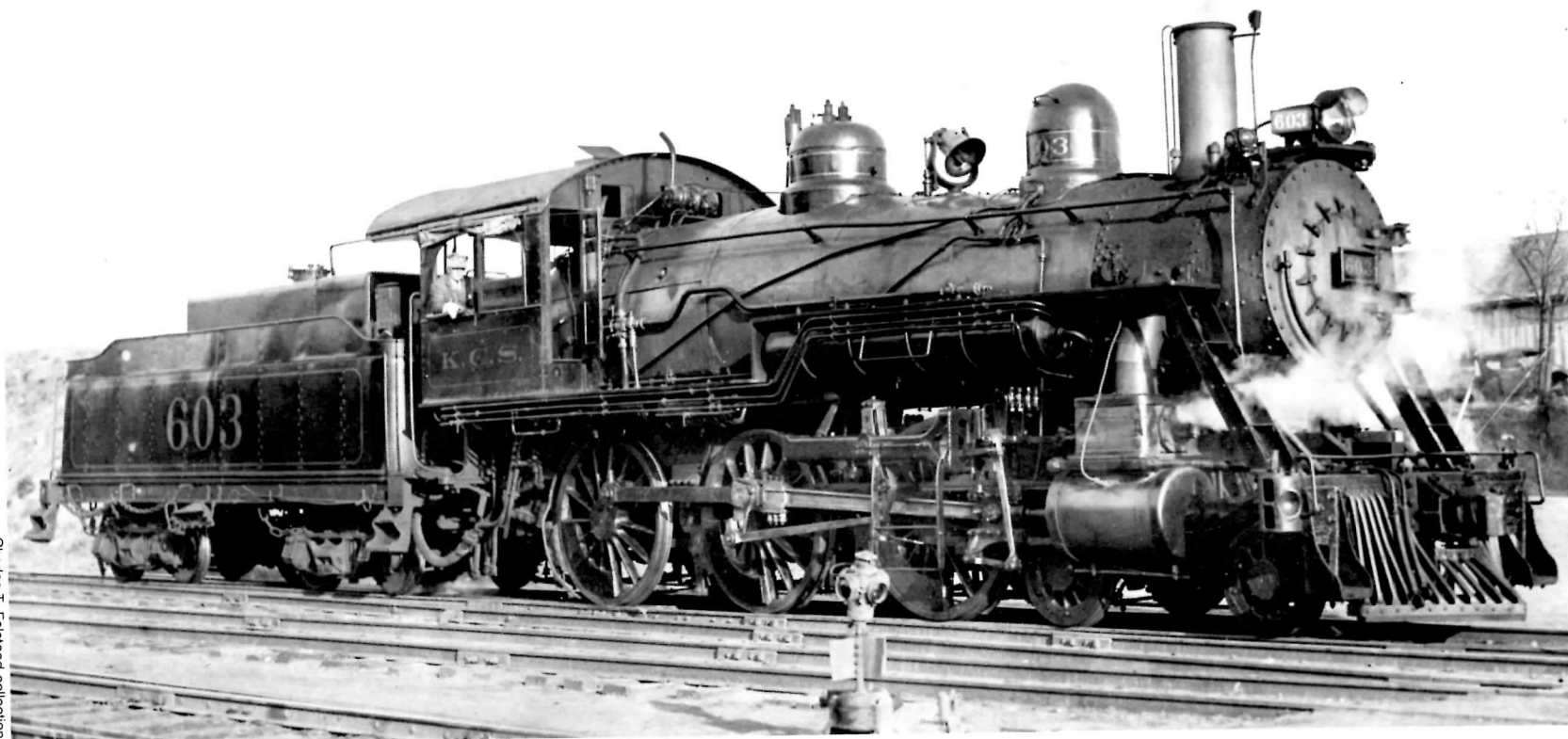


Harold K. Vollrath collection

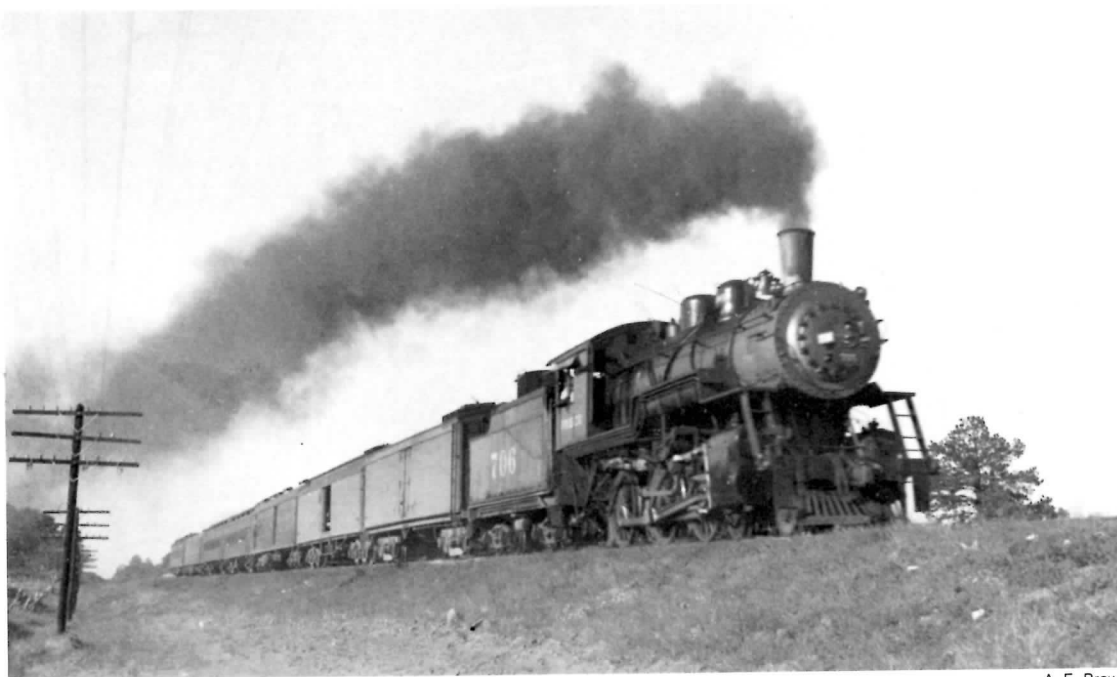
*At C. S. Jct., La., below De Quincy (above), 605 pauses briefly with Train 15 in June, 1937. At Forbing, La. January 25, 1942 (below) 605 and 602 race The Flying Crow southward.*



A. E. Brown



*In the early 1930s, a polished 603 still wears old-style universal valves (above), while the wartime power shortage finds a stranger, Frisco Ten-Wheeler 706, taking a heavy consist through Forbing, La. November 21, 1943 as she heads for Port Arthur, Tex. with Train 15.*



A. E. Brown



Harold K. Vollrath collection

*North of Shreveport was primarily Pacific passenger territory. At left, Train 15 departs Texarkana, Tex. in November, 1937 behind the initial KCS 4-6-2, Engine 800. At Shops, La. December 8, 1940, H-class 801 (below) portrays the lanky, high-wheeled look for which the H and H-1 Pacifics were noted.*



A. E. Brown

H. 800-807, 24x27cm, 75°DR, 225BP, 258,000wgt, 41,126TF, Schen., 1912



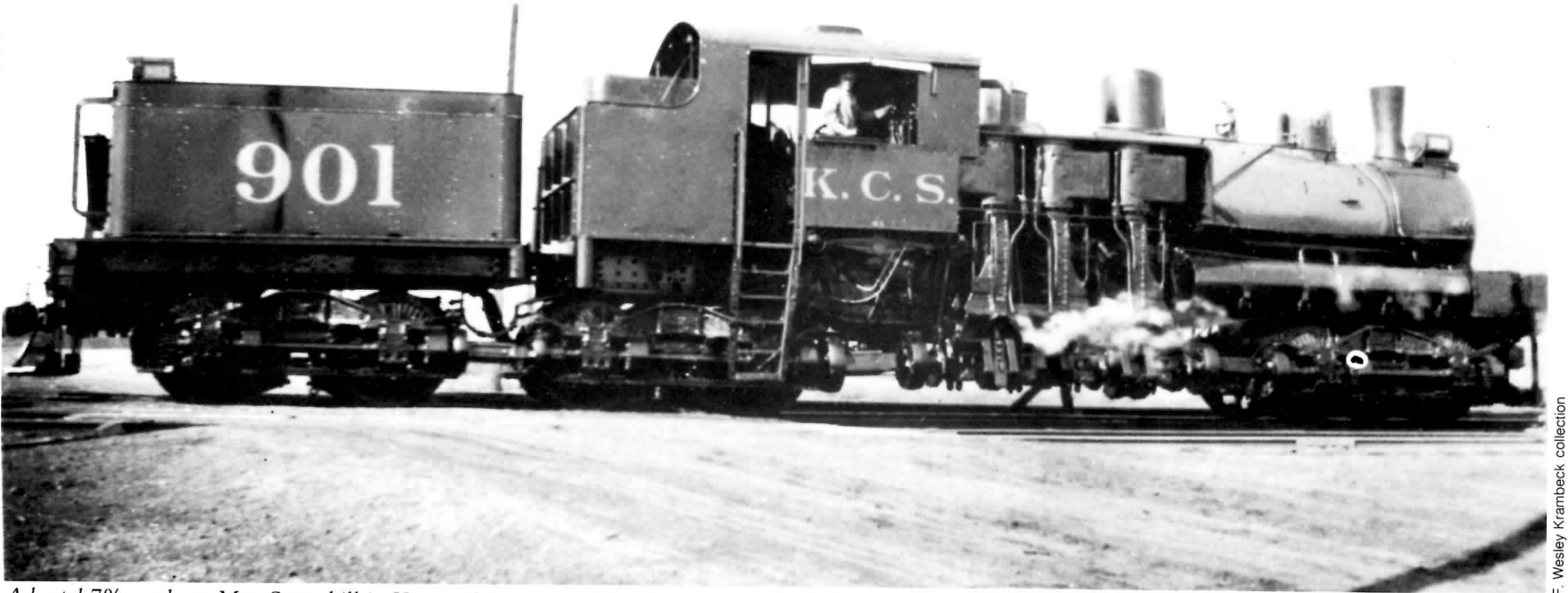


*Southbound Train 77 finds Pacifics 807 and 808 up front at Mooringsport, La. (above) in November, 1939, typical manifest power below De Queen, Ark. At Pittsburg, Kan. December 28, 1947, Engine 803 (below) shows the look of those 800s that were given disc main drivers.*





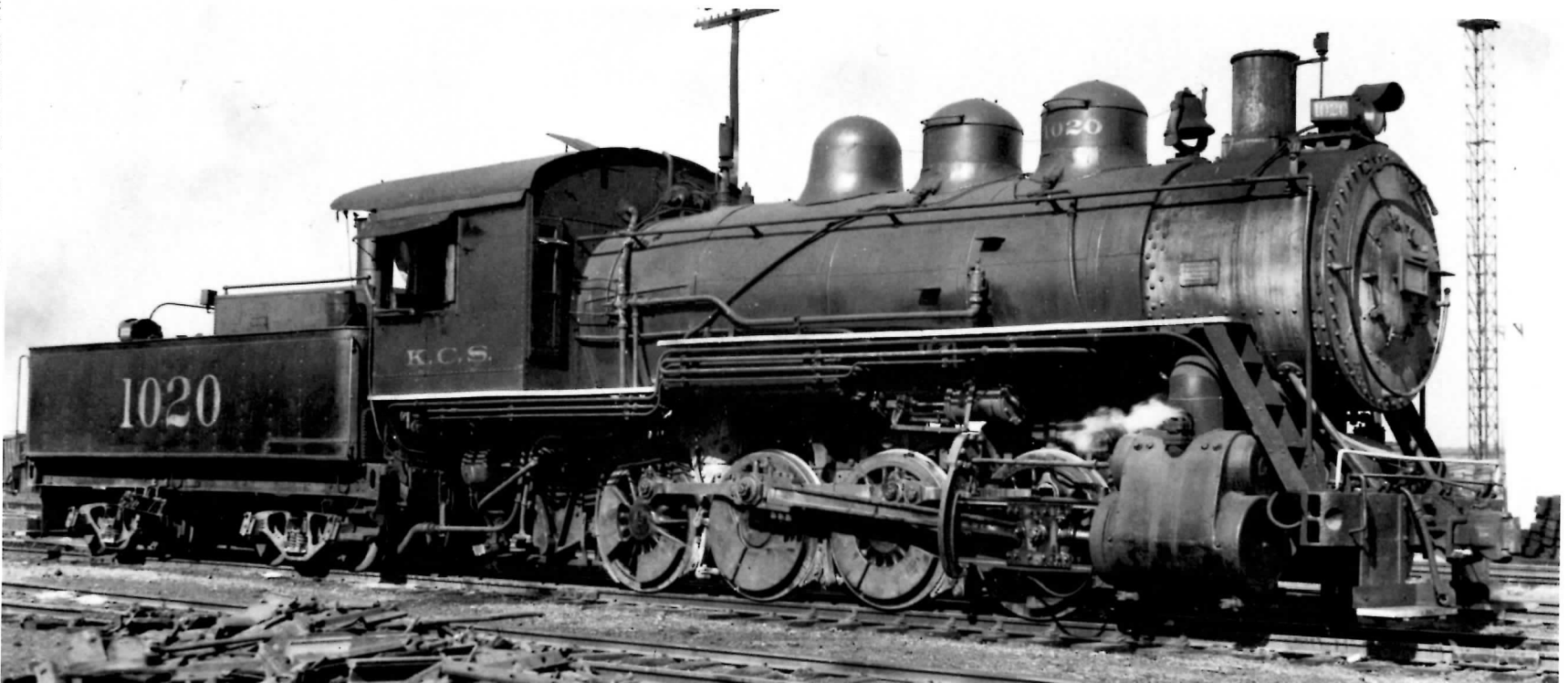
S-1, 901, (3)17x18cy, 48"DR, 180BP, 206,300wgt, 54,855TF, Lima, 1914 (Scr. 1929)



F. Wesley Krambeck collection

*A brutal 7% grade on May Street hill in Kansas City accounted for the two large KCS Shays, once the world's heaviest (above: 901 at Kansas City, Mo., 1921). A large part of KCS switching power once worked in road service. Engine 1020 (below), at Kansas City, Mo. on October 24, 1948, was formerly E-3 Consolidation 482.*

K-1, 1020-1031, 22x30cy, 55"DR, 210BP, 240,000wgt, 47,124TF, Irbt. from Class E-3



F. Wesley Krambeck collection



A. E. Brown

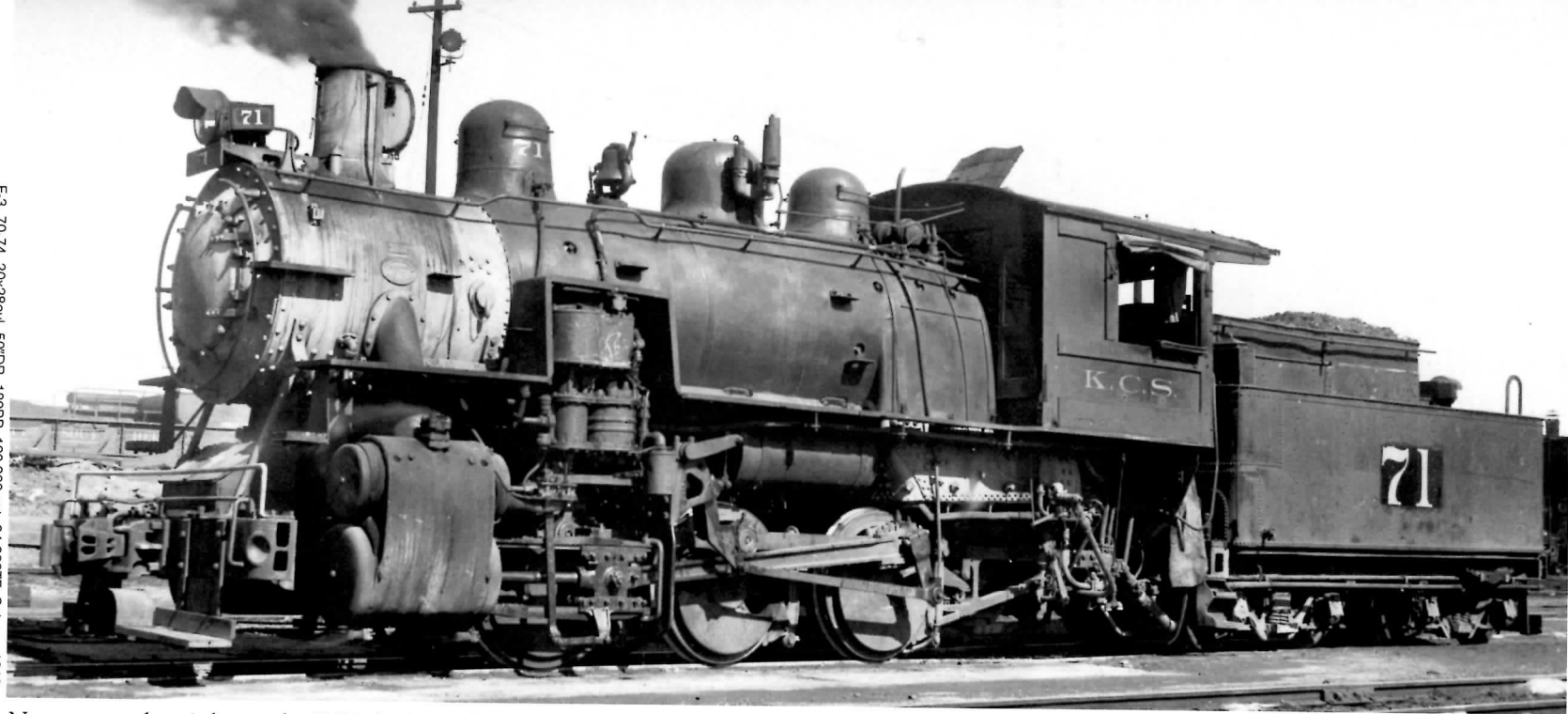
K. 1000-1012, 21x30cyl. 55"DR. 210BP. 189,650wgt. 42,973TF. rblt. from Class E-1

*Much-rebuilt Vaucain Compound 2-8-0 469 ultimately became 0-8-0 1005 (above), as seen at Kansas City, Mo., July 2, 1953. K-class 0-8-0 1011 (below), at Pittsburg, Kan., May 30, 1947, was formerly E-2 Consolidation 460, also a Vaucain Compound.*



R. H. Kennedy

F-3, 70-74, 20x28cy, 50"DR, 180BP, 120,900wt, 34,300TF, Schen., 1913



W. C. Whitaker collection

Numerous and varied were the KCS 0-6-0s. Engine 71, above, Class F-3, still carries a wooden cab at Pittsburg, Kan., May 30, 1947. Mogul 85, below, was formerly F-2 0-6-0 85, but was rebuilt for road service as a 2-6-0 for the Fort Smith Branch. Spiro, Okla., April 23, 1947.

C-2, 85, 19x26cy, 51"DR, 180BP, 139,000wt, 28,158TF, Holt, from Class F-2



W. C. Whitaker

A. E. Brown



F.2, 81-100, 19x26cyl, 51"DR, 180BP, 129,900wgt, 28,156TF, Baldwin, 1901, 07.08 (81-9)  
Pittsburg, 1905 (93-100)

*At Port Arthur, southern end of the KCS, Engine 95 sits beside an E-3 Consolidation July 4, 1939 above. Most unusual was Engine 99 of the same group (below), one of two 0-6-0s with Bethlehem tender boosters, in yard service at Kansas City, Mo. on October 26, 1940.*

R. H. Kennedy

