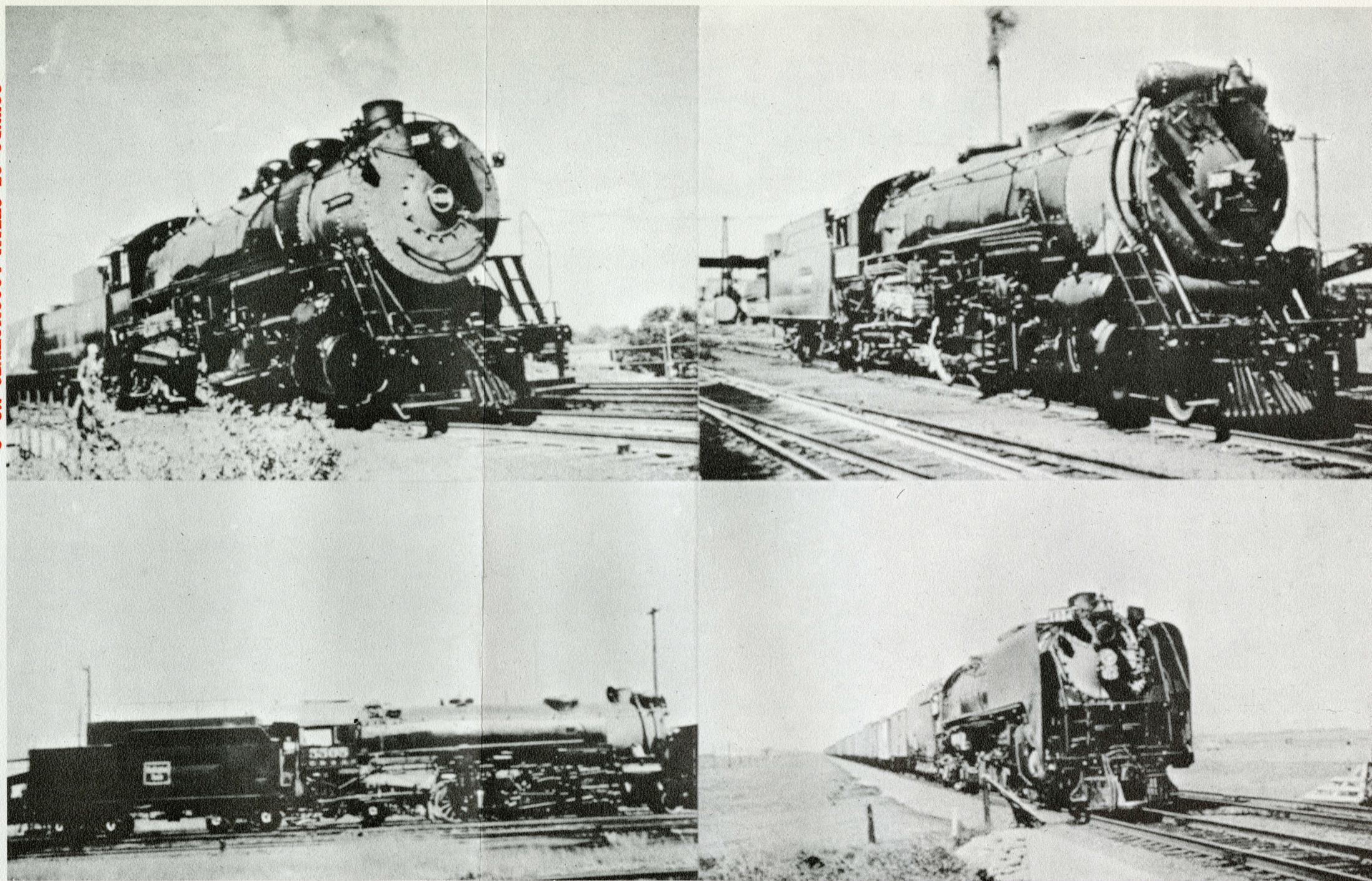


FOLKWAYS FX 6153

**SOUNDS OF  
STEAM  
LOCOMOTIVES  
NO. 2**

SOUNDS OF STEAM LOCOMOTIVES NO. 2



**DESCRIPTIVE NOTES  
ARE INSIDE POCKET**

**SOUNDS OF STEAM LOCOMOTIVES NO. 2**

**STACK MUSIC SAMPLER; OR MAKE-UP OF A TRAIN**

Library of Congress Catalogue Card No. R 60-524

© 1960 FOLKWAYS RECORDS & SERVICE Corp.  
701 Seventh Ave., New York City

FOLKWAYS FX 6153

**EDITED AND RECORDED BY VINTON WIGHT**

FOLKWAYS FX 6153

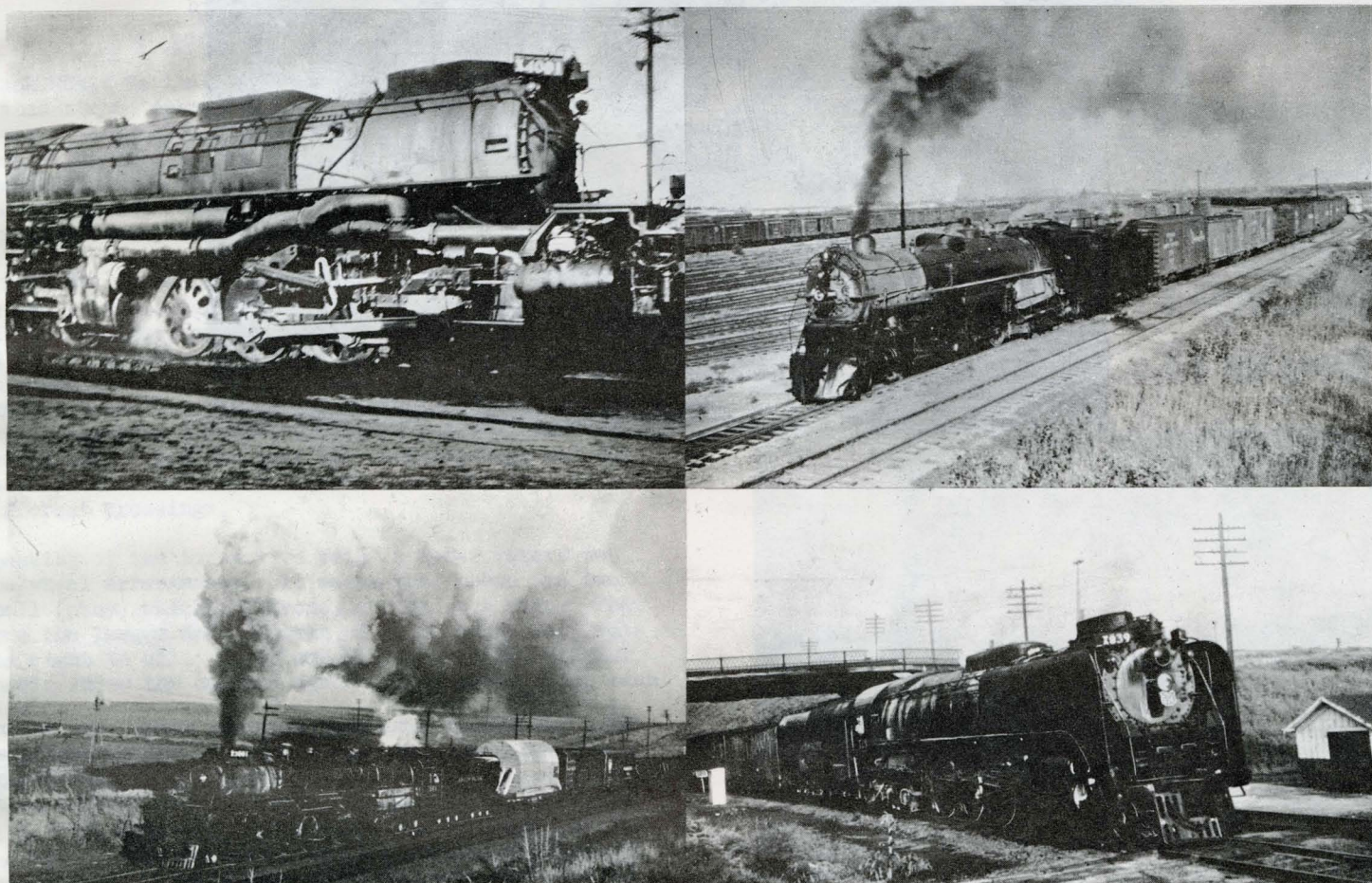
**FX 6153**

• **FOLKWAYS RECORDS & SERVICE CORP., NEW YORK** •

**SCIENCE SERIES**



FOLKWAYS RECORDS Album Nos. FX 6152 and FX 6153  
© 1957 Folkways Records & Service Corp., 43 W. 61st St., N.Y.C., USA 10023



## SOUNDS OF STEAM LOCOMOTIVES NO. 1

STACK MUSIC SAMPLER; OR STEAM, STEEL AND ACTION

## SOUNDS OF STEAM LOCOMOTIVES NO. 2

STACK MUSIC SAMPLER; OR MAKE-UP OF A TRAIN

EDITED AND RECORDED BY VINTON WIGHT

FX 6153

FX 6152

• FOLKWAYS RECORDS & SERVICE CORP., NEW YORK •

SCIENCE SERIES





#### VINTON WIGHT

Vinton Wight has been interested in trains and railroads all of his life. He has been doing recording professionally for over 20 years. So, it seems only natural that these two interests should be combined in a dramatic collection of railroad recordings.

The idea for this collection came about when he was vacationing in the Canadian Rockies. As he watched three locomotives struggle up Kicking Horse Pass with a freight train he longed for a recorder, that he might preserve the dynamic action that he witnessed.

He suddenly realized that soon the steam locomotive would be no more, so in 1952 he started recording all the material that he could find concerning them. He felt that the steam engine had individuality, personality as well as its steam and smoke. It was a living breathing thing that made delightful sounds when it came to life and went into action.

This collection naturally centered around the railroad equipment prevalent in his locality and that of his greatest interest. Hence, most of these recordings were made in Nebraska and the high country of Colorado and Wyoming. It was amazing the drama that he found right in his own back yard, when he thought that all the exciting railroading was elsewhere.

This type of recording was not without its problems and troubles. Number one was wind. The wind blows constantly in Nebraska, and the wind causes a noise in the microphone. The number two problem was unwanted noise such as automobile traffic, airplanes, live stock, and even bees buzzing near the microphone. It was not always possible to avoid these interfering sounds, but a technique for editing the tape was developed that made it possible to remove them. One 30 minute tape recording had to be edited in 44 places. This is tedious work but the results are worth it.

He was aided on recording sprees by his tolerant understanding wife Dorothy, who counted the cars, noted the engine numbers, and did her knitting while waiting for the next train to come.



## RAILROAD ALBUM #1

### Stack Music Sampler, or Steam, Steel and Action

by Vinton Wight

Stack Music is that delightful sound caused by super-heated steam, exhausted from the cylinder, through the stack of a locomotive. It can be soft and soothing, when it comes effortlessly, and it can be loud and commanding when it is tugging at a heavy load. To those who love railroading, this is stack music--a symphony---yes, this is stack music.

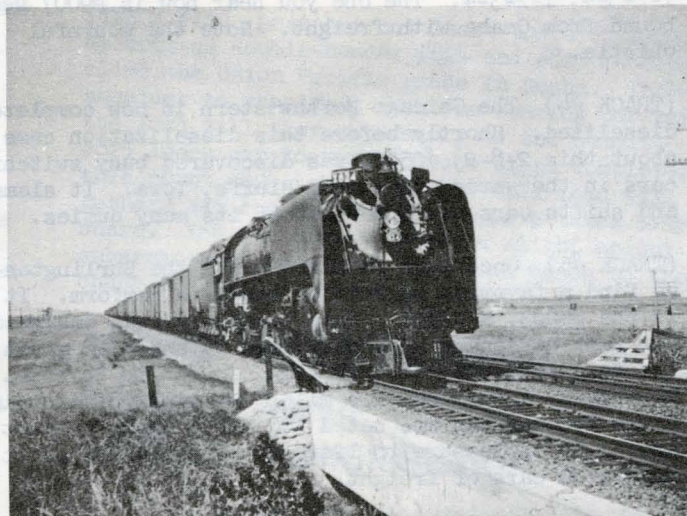
(TRACK #1) Woodbine, Iowa is a small country town on the Illinois Central. In August, empties are left at the elevator, and cars filled with grain, are picked up nearly every day. The Illinois Central track at Woodbine is on a slight grade, so the locomotive exhaust barks even though the load is not too heavy. Here locomotive #1534, a 2-8-2, starts its train and leaves town. You can hear the crossing bell and the locomotive whistle as it sounds a warning for three different crossings.

Speaking of the locomotive being a 2-8-2 refers to the wheel arrangement. It means that there are two small (pony) wheels up front, one on each side. Then come the larger drive wheels, four on each side, making eight in all. These are followed by two smaller wheels under the cab and again one of these is on each side.

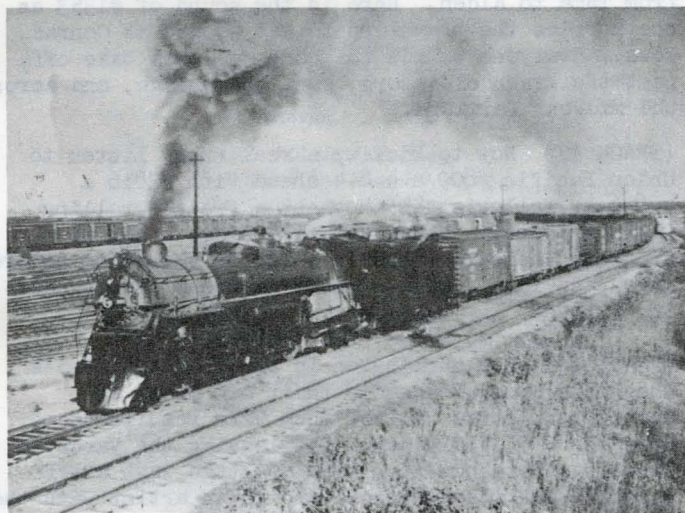
(TRACK #2) Let's go now to Lincoln, Nebraska, a busy spot for the Burlington. A husky 2-8-2, #5352 splits the warm July evening air as it starts a heavy train. It is just entering the yards at the end of a run. The track here is on a curve. This in addition to the very heavy load makes it difficult for #5352 to get the train rolling.

(TRACK #3) The Union Pacific is noted for many unique locomotives. The 800 series is the pride of the line. These have a 4-8-4 wheel arrangement and each of the drivers is 80 inches in diameter. They are high step-pers, and they are very much at home either pulling a string of "refers" (refrigerator cars), or the "var-nish" (passenger cars). They are equipt with large sheet metal smoke lifters called "elephant ears". Listen to #801 leaving Omaha with passenger train #7.

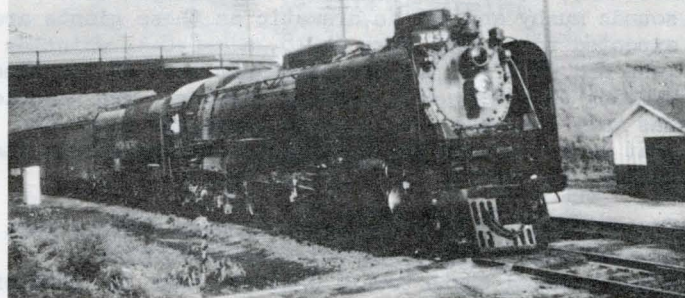
#801 is followed by a locomotive that was probably the most unique series the Union Pacific ever owned. This was the 9000 series. They were the work horse of the system for many years. There were 75 of them at one time, but they are all gone now. They were unique in many ways. They had three cylinders instead of the usual two (one on each side). The third cylinder was in the center and worked on a crank connected to the axel of the second set of drivers. The outer cylinders were connected to the third set of drivers. They were unique too in their wheel arrangement of 4-12-2. They were the only locomotives ever built with this wheel arrangement. They were also the largest rigid frame locomotive ever built.



U.P.# 824 (1954)



C.B.&Q #5632 ( 10/21/53)



# 839 AT SUMMIT, OMAHA (9/56)



The third cylinder gave an extra beat to their exhaust---sort of a 1-2-3, 1-2-3, instead of the usual 1-2-3-4, 1-2-3-4. The one you hear now is #9007 west-bound from Omaha with freight. Note the mournful whistle.

(TRACK #4) The Chicago Northwestern is now completely dieselized. Shortly before this dieselization came about this 2-8-2, #2599, was discovered busy switching cars in the yards at Council Bluffs, Iowa. It slams and shifts cars as it goes about its many duties.

(TRACK #5) Once more in Lincoln and the Burlington--we find a favorite locomotive ready to perform. It is the #4003, a 4-6-4. This locomotive was designed for fast passenger service. Here it has been given the task of toting freight from Lincoln to Ravenna. Ravenna is a terminal 125 miles northwest of Lincoln. These locomotives are noted for their sharp exhaust, and it is a pleasure to listen to one of them as it starts 80 cars of freight.

(TRACK #6) Next to central Iowa for a page of the past. In June 1955, #1353, an ancient 4-6-0 was chartered for a special Sunday outing by a group of rail-fans for a trip on the Chicago Northwestern, from Tama to Alden. Here is the sound of #1353 as she hurries the travelers to get aboard at Conrad, Iowa. Everyone boards the cars and they take off, past the grain elevators, over the bridge, and across the midwest farmland.

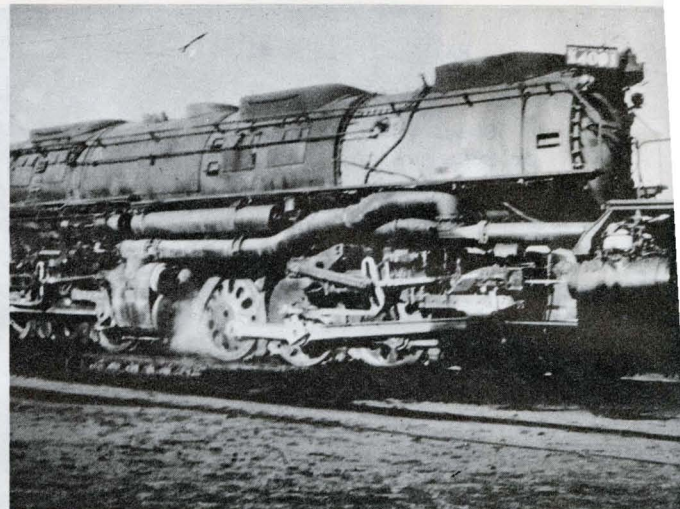
(TRACK #7) Now to kick up a real fuss, listen to Union Pacific #809 a 4-8-4 ahead with #3816 a 4-6-6-4, following as they get a freight rolling west at Kearney, Nebraska. There are a lot of crossings here so there is a lot of whistling before they pass in a jumble of hissing steam and thundering exhaust.

(TRACK #8) The Burlington is proud of the "0-5's". They made some of them in their own shops at Burlington, Iowa. All of them were rebuilt there. Here is "0-5" #5629, a 4-8-4, leaving the yards in Lincoln. Note how they slip a little just after passing, but the engineer, who is an artist with the throttle, quickly brings things under control.

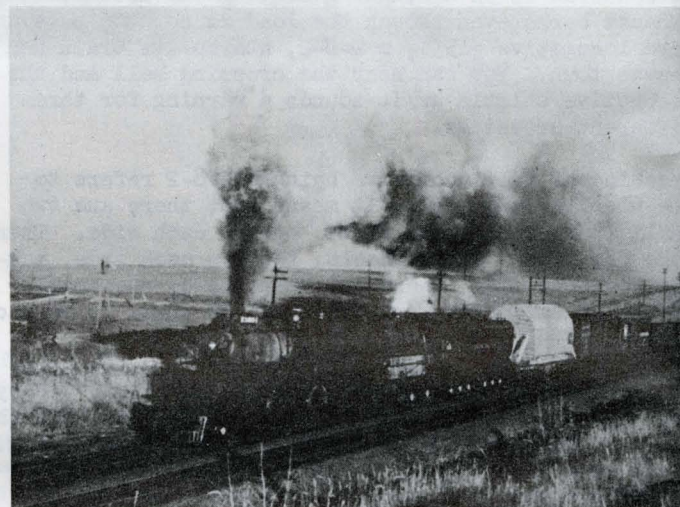
#### SIDE II

(TRACK #9) On side two we hear first from Union Pacific's biggest steam locomotive, the "Big Boy". This is the world's most powerful steam locomotive, developing more horsepower than any other. To those who have seen and heard these brutes, this sound will be thrilling, but to those who have not it may be somewhat disappointing. The four cylinders, actually two large engines in one (often erroneously called mallets), cause the exhaust to be so rapid that it sounds mushy and not as dramatic as these giants are expected to sound. Here #4018, a 4-8-8-4, whistles long and loud for the crossing just west of Cheyenne, Wyoming on a very cold January evening. The whistle was very long and loud because there was a car at that crossing with the headlights shining across the rails. It worked.

(TRACK #10) Another winter evening in another part of the country found Illinois Central #2514, a 4-8-2, headed north toward Chicago, near the town of Monee, Illinois. The evening was nippy and the wind was playing tricks with the sound as it approached.



U.P. 'BIG BOY' #4001 CHICAGO, JAN. 1955



U.P. # 3801 MILLARD (12/26/55)



# 4003 PULLING OUT OF LINCOLN YARDS WITH 80 CARS. (10/13/52)



(TRACK #11) If you have never heard an O-6-0 switcher start out to do its evening chores, here is your chance. It has been sitting for some time, so the cylinder cocks had to be blown out. We hear the steam hiss as each cylinder, in turn, goes into action. This is #4471 at the Union Pacific, Omaha shops.

(TRACK #12) At one time there were many narrow gauge railroads in this country. They were cheaper to build and more practical to operate in the more mountainous regions, where sharp curves and steep grades were necessary. They have nearly disappeared today, but a few can still be found. The most popular and the most extensive is the narrow gauge line of the Denver Rio Grande Western in southwestern Colorado. Even this line is shrinking nearly every year. The rails of this railroad are three feet apart, the most popular size for the narrow gauge railroads of this country. Listen now as #480, a 2-8-2, hauls 28 empty gondolas past a highway crossing at Poncha Springs, Colorado. Even this section of the narrow gauge is no more. This track was made standard gauge in 1956, so diesels now growl where the once proud little engines tugged their diminutive cars up the mountain.

(TRACK #13) Now back to Omaha where Union Pacific #3839, a 4-6-6-4, climbs the grade to Summit (the top of the Missouri river watershed)....#3839 is another dual locomotive. It is two locomotives built in one articulated unit with one set of controls. Notice how the two engines are out of step? Then one unit slips a little and they are in step. It is no wonder that they slip occasionally. This is a good pull with 100 cars of freight. These locomotives once saw service on Sherman Hill in Wyoming. Later most of them were in Idaho. Now they are closing their life history in service between North Platte and Omaha, and then only when business is rushing.

(TRACK #14) And, now back to the narrow gauge. The main line of the Denver Rio Grande, narrow gauge, has been said to be between Alamosa and Durango. Most trains here have two locomotives. There are some places along the line where the bridges will not support two locomotives coupled together. This is true between Antonita and Cumbres Pass. So, trains leave Antonita with one locomotive in front and one coupled into the middle of the train. Here is such a train leaving Antonita. #495 gives a highball (two toots on the whistle) and they start off with 50, or so, cars of pipe. #493 also toots a highball from the middle as she passes to let the crewmen know that all is OK. Incidentally both of these locomotives have a 2-8-2 wheel arrangement and were re-built from standard guage locomotives. They are interesting to watch because the wheels are on the inside of the frames and are not easy to see. You see only the off-center counterbalances from the outside which looks very odd as they lumber along.

(TRACK #15) Now still in Colorado we hear Colorado Southern #809, a 2-10-2, click over a crossing in Fort Collins. Then before they stop completely switcher #648, a 2-8-0, moved in to switch the cars.

(TRACK #16) Last but not least there is drama aplenty as double-header #824 and #825 (4-8-4's) climb the Union Pacific grade in Omaha. They climb shoulder to shoulder, each one sharing her part of the load till they get nearly to the summit. Then #825 loses her footing and she slips completely. At this point #824 takes over the full load till #825 gathers her composure and once more takes over her share. You can almost detect a slight amount of embarrassment as she settles down again to the rhythmic chant of their stack music.

## Additional FOLKWAYS/SCHOLASTIC

### Releases of Interest:

### SCIENCE: JUNIOR-SENIOR

#### ★ 6101 SCIENCE IN OUR LIVES.

Narr. by author-scientist Ritchie Calder. Inc. aspects of science devel.; origins, terms, evolution, & man's relationship to land. Inc. text. 1-12" LP-

#### ★ 6124 SOUNDS OF ANIMALS.

How animals express their emotions & wants through sounds: puma, lion, elephant, chicks, goat, sheep, etc. Good study of animal behavior. 1-12" LP-

#### 6130 SOUND PATTERNS.

Compiled by Moses Asch. Natural, man-made, mus., human & location sounds of the world. Basic intro. to sound for students of all levels. 1-12" LP-

#### ★ 6136 THE SCIENCE OF SOUND.

Prod. by Bell Telephone Labs. (Abridged version of 6007.) Demos. var. phenomena inc. how we hear, frequency, pitch, Doppler effect; more. Acquaints upper elem.-h.s. students with sound. 1-12" LP-

#### 6161 HERE AT THE WATER'S EDGE.

From the sound track by Leo Hurwitz & Charles Pratt. Rec. in & around Port of N.Y. Inc. water sounds & men on shore; notes inc. 1-12" LP-\$5.79

#### ★ 6166 SOUNDS OF NORTH AMERICAN FROGS.

Docu., & field rec. by Charles M. Bogert in U.S. & Mexico. Study of biological significance of 92 frog voices; inc. var. calls & sounds. Illus. docu. text. 1-12" LP-

#### 6178 SOUNDS OF INSECTS.

Rec. by Albro T. Gaul. Courtship & protective calls, sounds in response to stimuli or by-product of motion; inc. cicadas, crickets, & beetles. 1-12" LP-

#### ★ 6200 VOICES OF THE SATELLITES.

Rec. & notes by T. A. Benham. Tracking signals from U.S. & Russian satellites; also inc. heartbeat of Leika, first dog in space. 1-12" LP-

#### 6431 INTRODUCTORY HUMAN BIOLOGY Vol. 1.

A basic course by George E. Caraker. inc. *The Cell, Reproduction, Basis of Heredity, Human Inheritance, & Structure of Human Body*; text & dictionary of terms inc. 1-12" LP-

STAR (★) indicates record appearing on one or more professionally recommended lists.



## STACK MUSIC ALBUM #2

### The Make-Up of a Train

All the locomotives heard here are Burlington and were recorded in or near Lincoln, Nebraska.

There is more to railroading than just connecting a locomotive to a string of cars and hauling them to another city. There is more to a locomotive than just steam, steel and smoke. But, when a locomotive is connected to a string of cars, and the smoke pours out of the stack, from the coal burning in the fire-box, and the heat turns water into steam, there are two things that take place. The steam develops power to move the train, and it also produces beautiful music, called STACK MUSIC.

(TRACK #1) There is a lot of work to be done before a train can leave for another city. First the cars, that have come into the yards from other trains, must be shifted and classified. They are assembled into groups according to where they are going. They might be going to different parts of the city, or to other cities miles away. Number 510 is a small switch engine. It is small but very powerful. It has small wheels which give it the power to move a lot of cars at a slow speed. It was made for just one thing and that is moving cars in the yard.

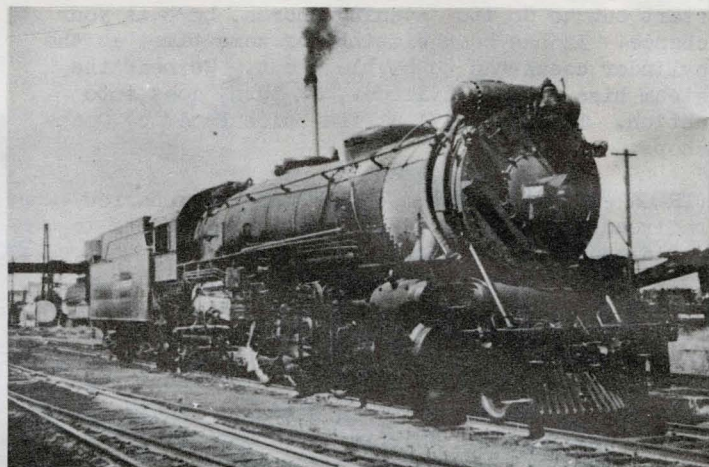
(TRACK #2) After the cars have been sorted another locomotive picks up several cars loaded with grain. These cars are to be set out on a track at the grain elevator, so the cars can be unloaded and the grain stored. The elevator is in another part of the city, so the locomotive takes the cars out of the yard and starts to the elevator. (actually #4958 a 2-8-2)

(TRACK #3) The track to the elevator gets a little steep, so the locomotive has to work hard to deliver these cars. They are heavily loaded with grain. Just before they arrive, at the elevator, the train whistles for a crossing. (actually #5116 another 2-8-2)

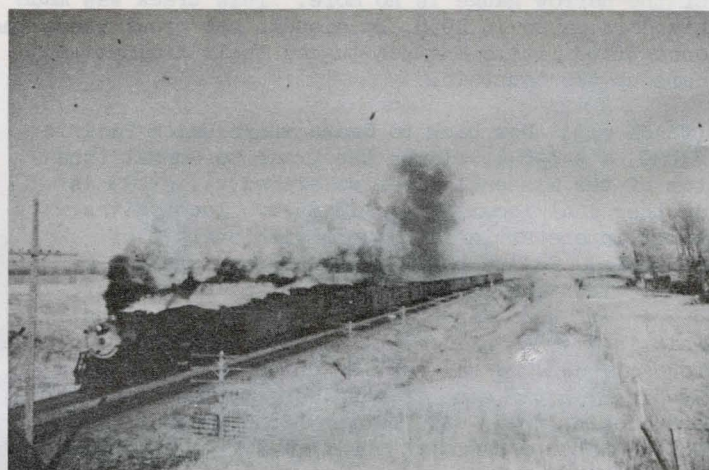
(TRACK #4) At the elevator the locomotive runs into trouble, as it attempts to move the cars. They must be set at just a certain spot, but since they are heavily loaded, and the track is on a grade, the locomotive very nearly becomes stalled. It is able to move the cars only after making several unsuccessful attempts. Maybe the track was wet that day. At any rate it was a struggle and it made good stack music. (actually #4958 again)

(TRACK #5) After the loaded cars are set out, the empty ones are picked up to take back to the yards, so they can become a part of the train that is being made up. Returning with the empties is easy work. There are lots of streets to cross and they whistle for each one. (This is #4958 again)

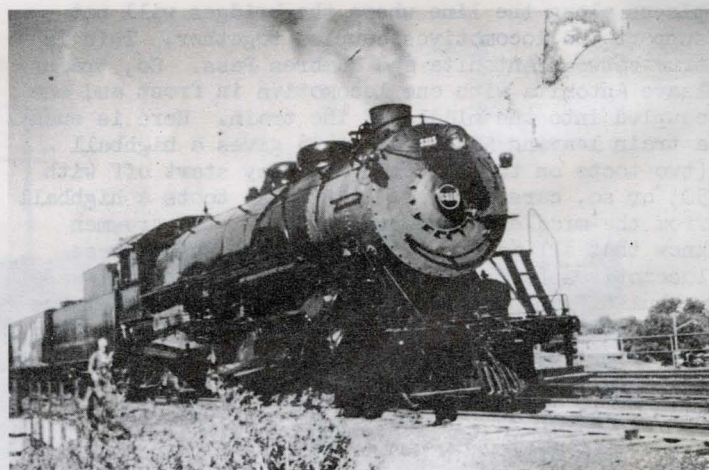
(TRACK #6) In the meantime the locomotive that is going to pull the train is being prepared for the trip. You can hear the pumps working to keep up the air pressure. The air is used for the brakes and



# 5505 AT LINCOLN ROUNDHOUSE 2-8-2



C B & Q JUST SOUTH OF ASHLAND 2-8-2



# 5315 AT ASHLAND 2-8-2 (6/7/54)



other equipment. When the steam pressure in the boiler gets high enough a valve opens and you can hear the steam rush out till the pressure goes down enough to close the valve. The locomotive has to be checked very carefully and the tender filled with coal and water. (This is #5344, another 2-8-2)

(TRACK #7) When the train is ready and it is time for it to leave, the engine leaves the track where it was being prepared and backs down on the tracks where the cars are waiting. (This #5351 still a 2-8-2)

(TRACK #8) Finally the train is ready. The locomotive and cars are all coupled together and the train pulls out of the yards. It whistles for a crossing as it leaves. (This time it was #5504)

(TRACK #9) They finally work up a little more speed and whistle for some more crossings as they leave town and head for another city. (This is #5355)

## SIDE II

(TRACK #10) After they get to the other city they must do some switching. Cars must be left to be filled or emptied as the case may be. Other cars must be picked up and assembled. Still other cars have to be moved and sorted. (This is #5505 at Ashland, Nebraska)

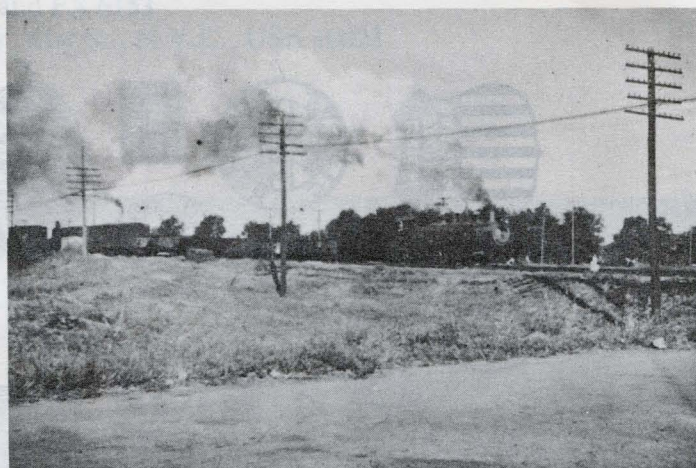
(TRACK #11) As the train is hauling freight from city to city the cars are not always easy to pull. 44 cars of gravel may not be many cars but gravel makes a very heavy load, especially when there is a hill to climb. Listen to this locomotive that didn't make it. The load was too heavy and they had to stop. (#5504 near Woodlawn, Nebraska. Don't try to find it on the map. It's a station near Lincoln)

(TRACK #12) Usually when a train is loaded so heavily another locomotive is added as a helper. This makes a doubleheader. Many times the helper is needed only for a hill or series of hills. Sometimes the second locomotive is added for the entire trip to speed up the train. Here is a train with an extra locomotive to help pull the train over a hill. One locomotive has larger wheels than the other. This causes the exhausts to be constantly changing in rhythm as they climb out of the valley. When they get safely over the hill, the helper engine will cut off and go back to the terminal. (This is helper #7000, a 4-8-2, and road engine #5347, a 2-8-2)

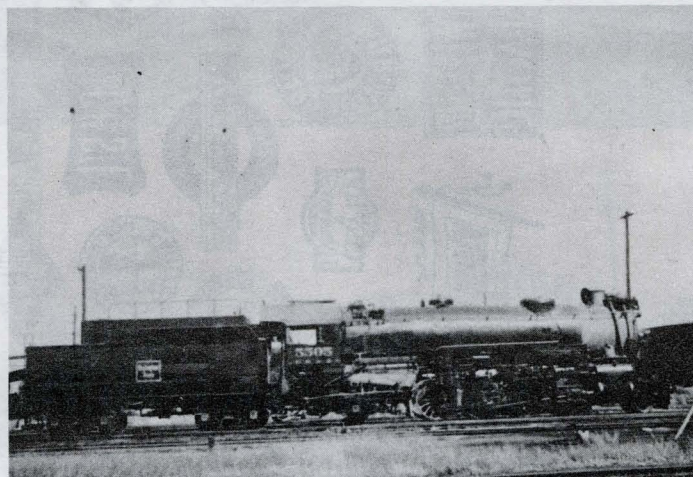
(TRACK #13) After a locomotive has pulled a train for a long distance it finally pulls into the yards where it is uncoupled from the cars. Here like a tired steed it pulls onto a track in the yards that has been selected for this train to leave its cars. (This is #5335)

(TRACK #14) When it has been uncoupled it runs right to the roundhouse. Here it puts on a short spurt of pep as it anticipates a rest and grooming. (This time it is #5504)

(TRACK #15) Then the shifting of cars begins again. Here we find the switcher simmering just before it goes into action. Perhaps the crew are having lunch. Then after the engineer goes over the mechanical parts with an oil can, and tests a few valves, they go about the work of switching the cars. It seems to me that this is about where we came in. (This is #5334 and #5351)



0-6-0 SWITCHER NEAR LINCOLN YARD



# 5505 IN LINCOLN YARDS 2-8-2 (8/54)

RECORDED AND EDITED BY VINTON WIGHT  
PHOTOGRAPHS BY VINTON WIGHT  
MASTERED BY PETER BARTOK  
PRODUCTION DIRECTOR MOSES ASCH





School and College Service  
**ASSOCIATION OF AMERICAN RAILROADS**  
 Transportation Building  
 Washington 6, D. C.



## RAILROAD ALBUM #1

Stack Music Sampler,  
or Steam, Steel and Action

by Vinton Wight

Stack Music is that delightful sound caused by super-heated steam, exhausted from the cylinder, through the stack of a locomotive. It can be soft and soothing, when it comes effortlessly, and it can be loud and commanding when it is tugging at a heavy load. To those who love railroading, this is stack music--a symphony---yes, this is stack music.

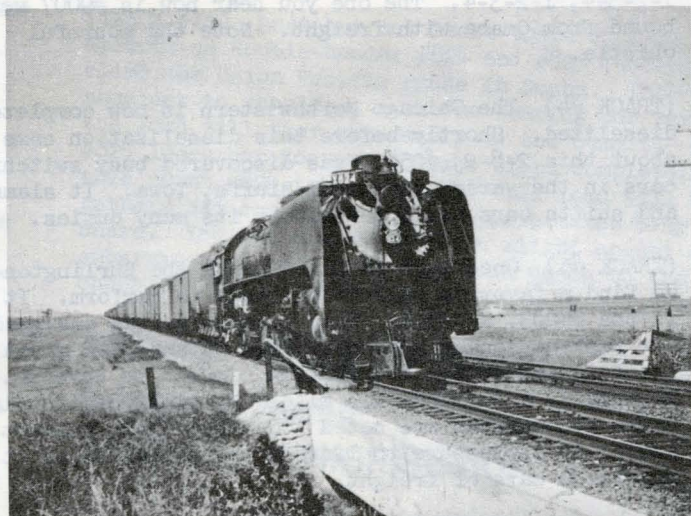
(TRACK #1) Woodbine, Iowa is a small country town on the Illinois Central. In August, empties are left at the elevator, and cars filled with grain, are picked up nearly every day. The Illinois Central track at Woodbine is on a slight grade, so the locomotive exhaust barks even though the load is not too heavy. Here locomotive #1534, a 2-8-2, starts its train and leaves town. You can hear the crossing bell and the locomotive whistle as it sounds a warning for three different crossings.

Speaking of the locomotive being a 2-8-2 refers to the wheel arrangement. It means that there are two small (pony) wheels up front, one on each side. Then come the larger drive wheels, four on each side, making eight in all. These are followed by two smaller wheels under the cab and again one of these is on each side.

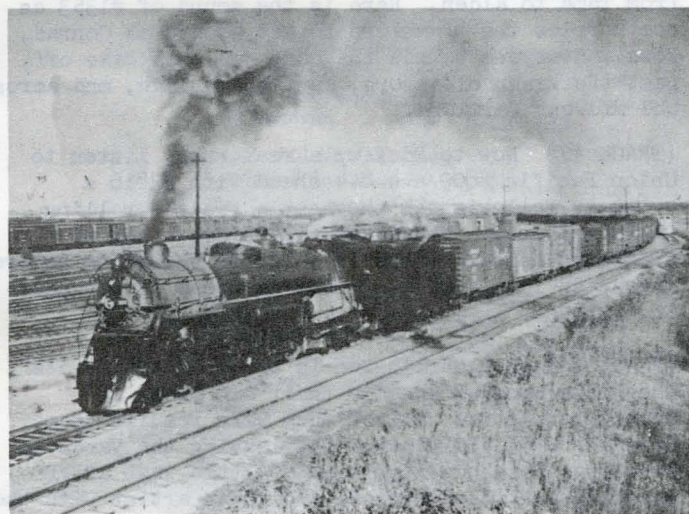
(TRACK #2) Let's go now to Lincoln, Nebraska, a busy spot for the Burlington. A husky 2-8-2, #5352 splits the warm July evening air as it starts a heavy train. It is just entering the yards at the end of a run. The track here is on a curve. This in addition to the very heavy load makes it difficult for #5352 to get the train rolling.

(TRACK #3) The Union Pacific is noted for many unique locomotives. The 800 series is the pride of the line. These have a 4-8-4 wheel arrangement and each of the drivers is 80 inches in diameter. They are high step-pers, and they are very much at home either pulling a string of "refers" (refrigerator cars), or the "varnish" (passenger cars). They are equipt with large sheet metal smoke lifters called "elephant ears". Listen to #801 leaving Omaha with passenger train #7.

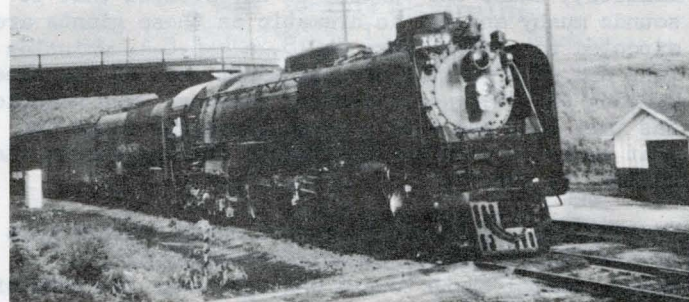
#801 is followed by a locomotive that was probably the most unique series the Union Pacific ever owned. This was the 9000 series. They were the work horse of the system for many years. There were 75 of them at one time, but they are all gone now. They were unique in many ways. They had three cylinders instead of the usual two (one on each side). The third cylinder was in the center and worked on a crank connected to the axel of the second set of drivers. The outer cylinders were connected to the third set of drivers. They were unique too in their wheel arrangement of 4-12-2. They were the only locomotives ever built with this wheel arrangement. They were also the largest rigid frame locomotive ever built.



U.P. # 824 (1954)



C.B.&Q #5632 ( 10/21/53)



# 839 AT SUMMIT, OMAHA (9/56)