

In the last installment of our re-examination of John Allen's legendary Gorre & Daphetid Railroad (April 1981 RMC), we covered approximately half of the area the HO empire occupied. We'll start this segment at Squawbottom (refer to the trackplan, Fig. 1.13, in the December 1980 issue), the lowest point on the main line. Figs. 1.14 and 4.2 show this area almost in its entirety. The main line reached the long curved siding at Squawbottom by circling Scalp Mountain coming from the north wall (Fig. 4.1). The rather long spur leading off to the left of the siding in the photos could be a diabolically difficult switching problem. It held up to six cars, and when the cars to be picked up were intermingled with cars that were to be returned to their original location, the amount of backing and filling could be substantial. Uncoupling ramp locations mandated that the whole string be pulled and the sorting done at the opposite (east) end of the siding. Sorting inevitably involved using the main, and when through trains necessitated clearing the main line, working this one siding often became a time consuming undertaking.

Way freights on the G&D adopted a prototype practice not seen all that often on model railroads. Because the peddlers worked both trailing and facing spurs over their routes, and because the towns and switching areas did not always include a run-around, it was necessary to re-block (sort) the consist at those points that included a run-around capability. This in turn meant that for most of an operating session, the peddler's locomotive had cars both in front and in back of it with only the caboose (which by the rules was always at the rear end of the train) to indicate the direction of travel. This otherwise small wrinkle in the fabric of the operation tightened the requirements placed on the operator considerably. Only the expertise gained by experience could forestall the situation where he arrived in town with a car for a switchback spur on the wrong end of his locomotive—knowing full well that a trip back to the nearest run-around would entail a cornfield meet with the through freight following him.

A few errors in judgment and planning could play hob with the schedule, so experience inevitably became the bottom line. At one time, John had the notion of having every operator cross-trained in another assignment to add versatility to his crew in case someone was absent. The idea was seemingly a good one, but it never really worked out. Individuals in his group grew to like a particular job and were reluctant to change a known quantity for unknown headaches; besides, there were very few times when an experienced hand could be spared for on-the-job-training elsewhere.

A characteristic of the "gory and defeated" that few visitors gave the significance it merited was the many gentle curves built into the main line. These subtle curves actually served two purposes:

First, they broke up those severely straight lines that seem to prevail on too many model railroads and gave a more natural appearance to the scenes. We tend to forget that civil engineers surveying the right-of-way in mountainous terrain are obliged to compromise between the shortest



## Remembering the Gorre & Daphetid

Part 4: A look at some of the operating practices used on the line, and scenic features designed to create special effects or to offset layout-room problems/**Jim Findley**

routes and the economics of minimizing the number of expensive bridges and tunnels a shorter route might entail. Certainly, the G&D had bridges and tunnels aplenty, but the curves made it seem as though the survey party had genuinely tried to cut down construction and maintenance costs wherever possible.

The second advantage of the curves was that they were far less likely to cause problems when humidity and temperature caused the rails and road bed to contract and expand. They added lateral flexibility—a certain amount of give that helped prevent the track from coming out of gauge and reduced the tendency of the rails to buckle vertically as well.

However, surveyors on the G&D had their share of problems that were not visited on the prototype—such as a drain pipe a foot below the ceiling at Cold Shoulder. There were also a number of vertical timber support posts that had not only to be avoided by track at all levels but had to be disguised with plausible geology that would preclude a bizarre terrain configuration. It's not an uncommon occurrence for a splendid model railroad to remain forever partially scene-kicked due to a disregard for planning the scenery along with the trackplan. However interesting it may be to stack tracks *ad infinitum* and to disregard the number of strands in the resulting dish of spaghetti, it will ultimately become painfully difficult to add reasonable scenery without putting the whole thing inside a mountain.

Not that many years ago, the hobby press

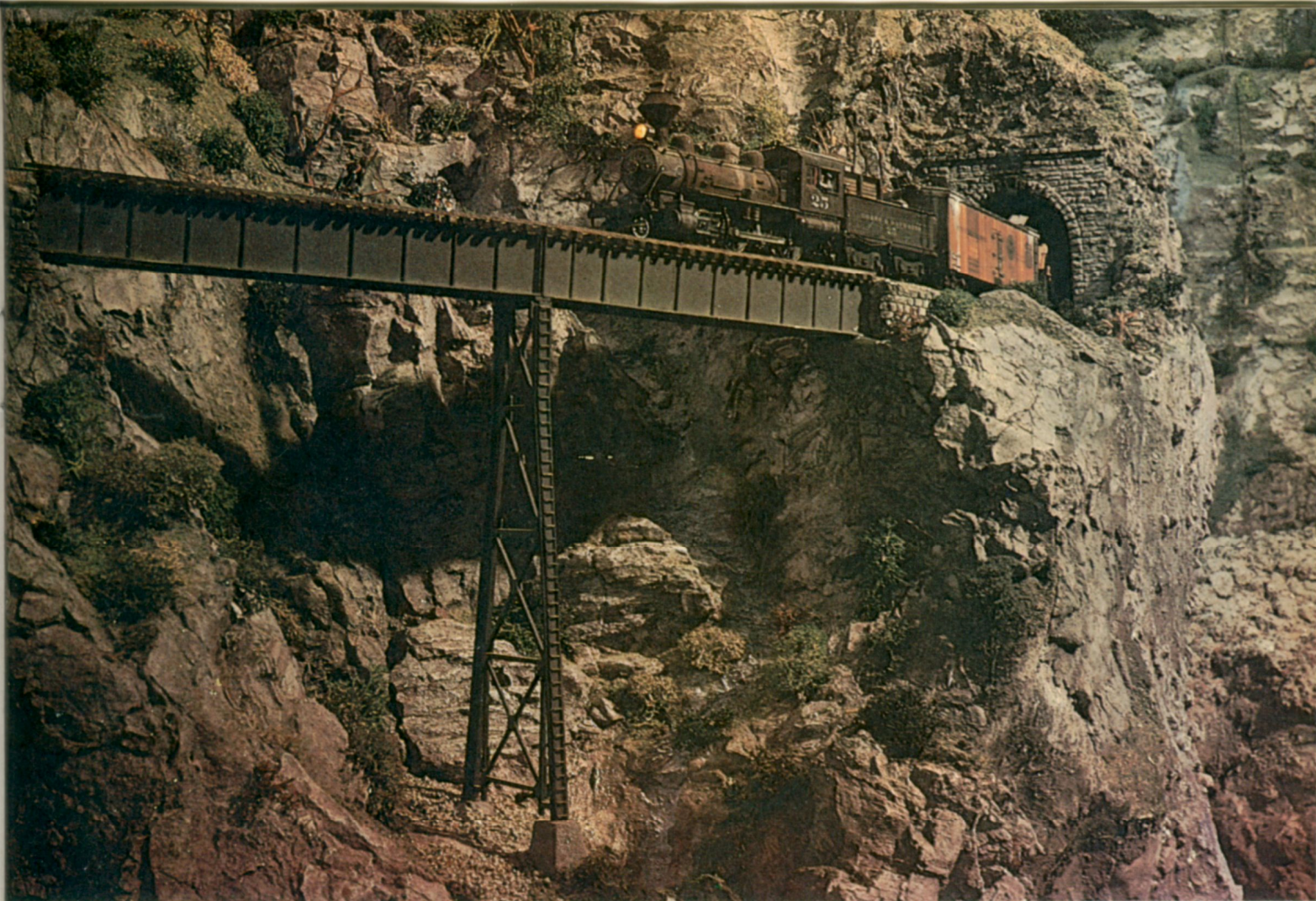
frequently published trackplans that almost completely overlooked the scenery involved. In those days, John enjoyed planning scenery for these sometimes improbably situations. His one game rule was that but bare minimum of track relocation was allowed. As a result of these mental gymnastics, he put together a great clinic on optimum use of space in track-planning. He used color slides from his own railroad as illustrations. Whether or not you learned anything about trackplanning, those slides alone made the lecture a delight to witness. Eventually he donated the clinic to the National Model Railroad Association's slide-tape program.

From Squawbottom, the main line went upgrade in both directions. Westbound, the line circled Scalp Mountain with a 26" minimum radius curve that made this loop a real test for locomotives. Eastbound, the grade was no less difficult as it climbed toward Corsa. A train of eight to ten freight cars could push the upper limits in tractive effort of a heavy Consolidation. For a passenger train, it demanded a better-than-average-pulling Pacific. A fresh-out-of-the-box engine was badly undergunned for moving traffic on the railroad; freight cars averaged right at four ounces, and passenger cars weighed upwards of seven ounces. John claimed that heavier cars tracked more reliably, a premise that stands to reason. On those occasions when a visitor had a chance to run an engine from his own stud on the G&D, he was almost always disappointed and a little shocked to discover that his prize

photography/JOHN ALLEN

PART 1 APPEARED IN DECEMBER  
1980 RMC. PART 2 IN FEBRUARY 1981.  
PART 3 IN APRIL 1981.





**Fig. 4.1 ▲**

4-8-4 was no match for a six- or seven-car passenger train that a G&D Pacific could waltz with quite comfortably. The explanation lay in the modifications John made on stock motive power to increase their "horsepower."

Let's start our G&D roster review with the tenders: Tender weight was kept to an average of five ounces, plenty enough to assure reliable electrical contact. A nine- or ten-ounce tender reduced the locomotives' car rating by one car, according to John's mathematics—and with commendable logic he also reasoned that a free-running mechanism resulted in added tractive effort with the bonus of providing smoother performance. John freely admitted to being no genius in this field and stayed mostly with standard and proven approaches to upgrading mechanical performance. He made adjustments in the neoprene tube linkage between the motor shaft and the gearbox, added shimming between the mainframe and journals where needed, and lubricated the entire mechanism carefully and sparingly—no magic breakthroughs or tricks in the treatment whatsoever. Like all of us, he coveted locomotives that ran smoothly and quietly right out of the box and thus required little or no tinkering. He begrudged the hours spent in eliminating binds in spavined engines; he had no special secret techniques for treating them. The only special tool I ever saw him employ was his spectacular profanity, applied with unrelenting diligence, all through the unpleasant chores of fine-tuning one of his pets.

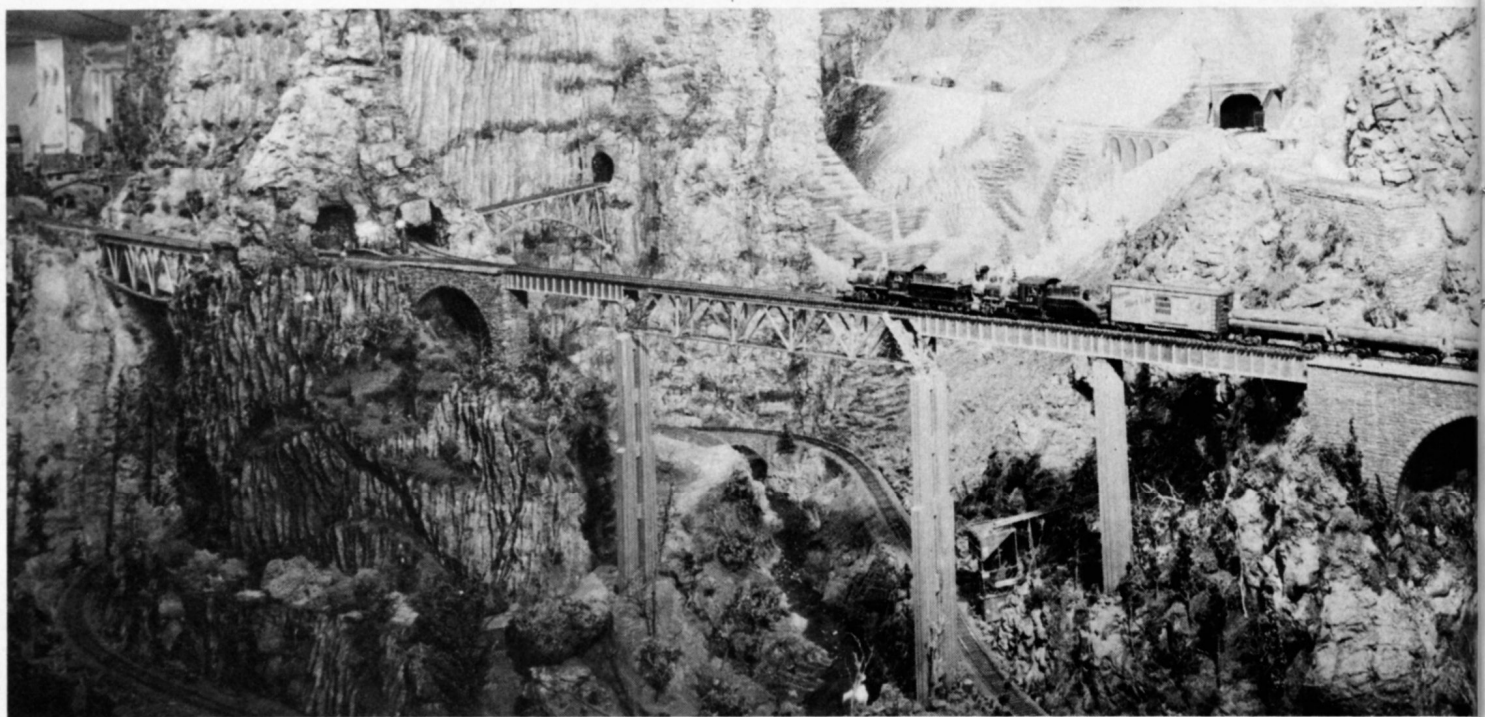
RAILROAD MODEL CRAFTSMAN

Squawbottom (Fig. 4.2) was deep in the lower elevations of Giant Canyon; to reach this oft-photographed spot, the main circled Scalp Mountain and its gullies (Fig. 4.1).

**Fig. 4.2 ▼**







**Fig. 4.3 ▲**

John often lamented that manufacturers should have spent more time, money and research effort in improving the mechanical properties of their product rather than opting for ever more lavish detail. This opinion was obviously colored by the fact that he could, and did, put on details himself, while he was ill-equipped to scratchbuild a gearbox. Additionally, he was, more than most, discriminating to the extreme in the performance standards of his roster as a part of his railroad. Slow-speed performance was far more important in the switching format of the G&D than on most layouts of that era. Nowadays, there is a much greater demand for better performance, and the importers have generally responded to that need, a trend that would have gladdened the heart of the Maestro—at least until he encountered one of today's still-too-frequent clunkers.

By far the most important modification to G&D engines was the addition of weight to the locomotive. In this he used a rule of thumb that the weight allowed be just short of enough to stall the engine and hence possibly burn out the motor. In exceptional cases, he would substitute a larger motor. It was standard procedure to pour the boiler with lead (later Cerrosafe); if that proved insufficient, he filled the cab roof as well as any other nook or cranny that looked likely and was hidden from view. He tried, insofar as possible, to add weight so that the locomotive was balanced at the center of the drivers, but he wasn't overly picky on this point. If you chanced to pick up an innocent-looking Consolidation on the Gorre & Daphetid, you were courting a hernia.

In an interesting experiment, he and a friend once carried these modifications to the ultimate on an otherwise standard Berkshire. By tender-mounting a large (Pittman DC-90) motor, they were able to cram an unbelievable amount of lead into the boiler,

cab roof and unlikely "pockets" in the loco. The drivers were carefully re-sprung to assure even contact with the rails through any track irregularities, and the drivers were roughened with fine emory cloth. The mechanism was tuned far past the usual point of acceptability. When they were finished, that 2-8-4 weighed 32 ounces (loco only), and it would just about pull a strong man off his feet!

At one of the larger clubs in the San Francisco Bay area, the highlight of their show during conventions was a pair of double-headed articulateds that circled the main with 90 to 100 cars behind them. Somehow, John managed to euchre several club members into a tractive effort contest. To make a long story short, that ordinary-looking Berkshire backed up to the two articulateds and dragged them backward down the track with their drivers spinning in futile protest! Unable to accept what they were witnessing, the club members probably concluded that it was another of John's tricks with mirrors.

It was a practice on the railroad to allow, even encourage, members of the operating crew to use their privately-owned locomotives during an operating session. Most likely John had two reasons for this generosity—the first being the fact that it saved wear and tear on his own equipment. The second, far more subtle reason was to teach his friends a great deal about what was actually required of an engine in the demanding test of an operations environment. At various times during sessions, it was not unusual to see three or four "foreign" locomotives working along with those of the G&D. Although he was strictly of the steam persuasion himself, he even managed to close his eyes to a diesel lash-up working one of the way freights or bustling around the main yard. John had the same tolerant understanding for people who loved diesels that he

would have had for a friend who was inexplicably addicted to chewing betel nut.

If you still have your December 1980 issue of RMC around, you might check those first color photographs for confirmation of two interesting points. To prove the point of John's magic with mirrors, there is a large mirror smack in the top center of Fig. 1.1! It's verified by the "two" snow plows that are really only one sitting in front of the Cold Shoulder depot.

The high scenery up at Cold Shoulder was logically snow covered, as the track was fully 60" above the basement floor. Between the highest track at CS and the doubling-back main climbing out of Squawbottom far below, the scenery was on a large hinged dropleaf that could be swung down to allow work in the area—as long as the worker stood on a chair. The scenery was finished to closely resemble a huge rock slide and, with an unaccountable lack of imagination, John named it Giant Slide.

While you're reviewing that photo, you've doubtlessly already observed from Fig. 1.3 that no scenic possibility escaped consideration in the achievement of a desired effect—including the floor in the aisle which became the surface of a great river. The effect was particularly striking in photographs where the steep canyon walls and floor-to-ceiling scenery came fully into play. The floor had substantial pedestrian traffic, but it only required re-painting once in the life of the layout. Just before taking pictures that would show the river, John would go over it with a damp mop to give it a wetter look. Not all of his visitors noted that the floor was a river, but this may have been due to the fact that they were usually pretty goggle-eyed looking at other things. Some who did notice it may not have mentioned the improbability of a floor becoming the surface of a river, perhaps

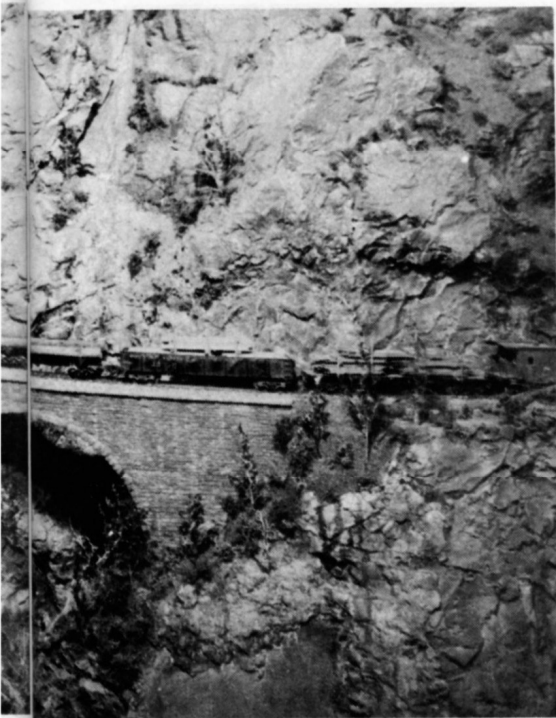
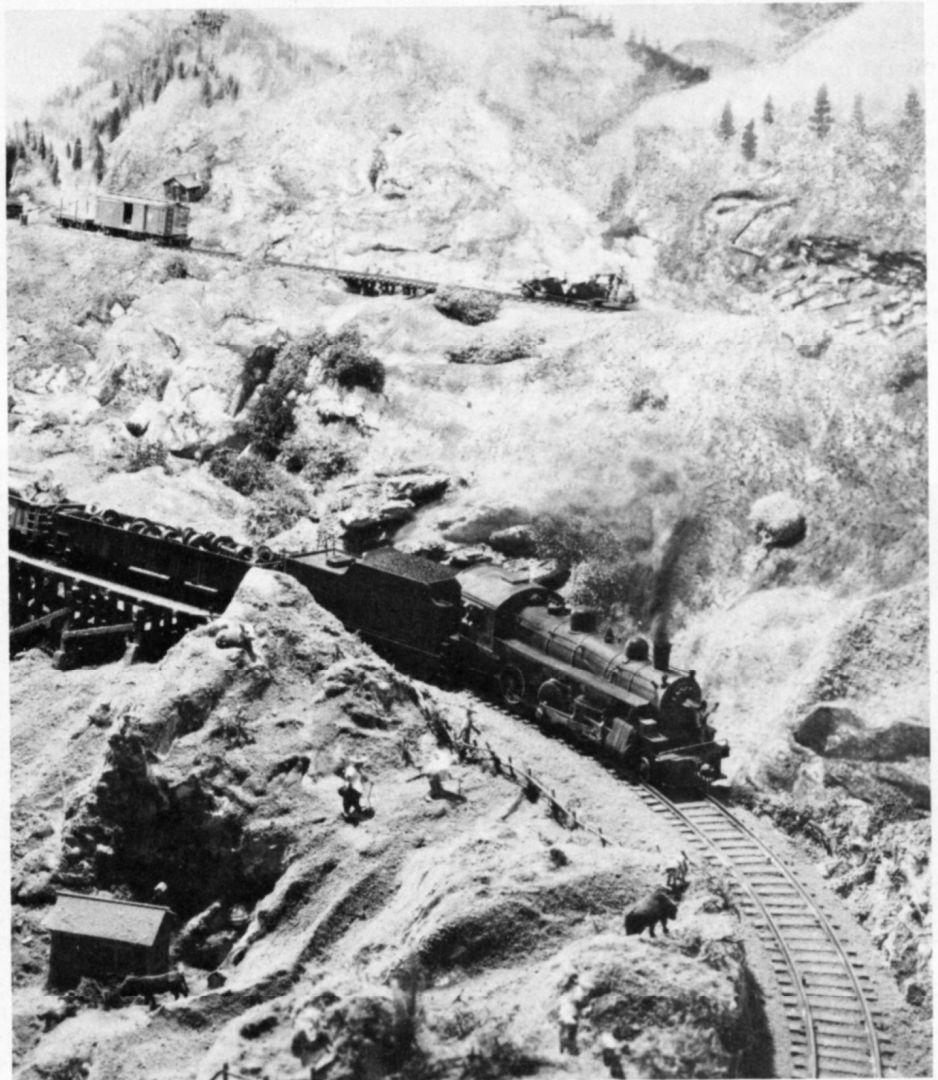


Fig. 4.4 ▲

Fig. 4.5 ▼

It's a hard pull up the mountain from Squawbottom, (Fig. 4.3), and six loads required a double-header up front on this 4% grade. Eagles Nest is ahead, just past the stone arch bridge on the left. Trailing this consist is an old Model Engineering Works Grasse River logging caboose. Though John modeled a heavy-duty railroad, he was obviously fond of small equipment. John avoided long stretches of tangent track to enhance the flow in a scene. While this was perfected in the last G&D layout, it was also found in his earlier work (Figs. 4.4 and 4.5). The locomotives in this pair of photos are Varney products; the pictures are from the group done for that company's ads in the late 1950's.





## G&D remembered/4

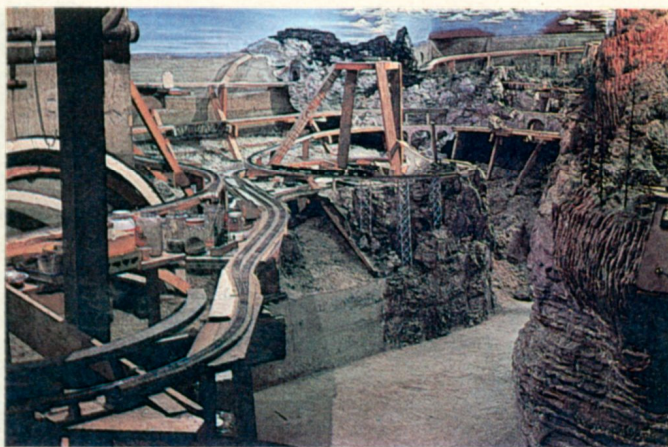


Fig. 4.6 ▲

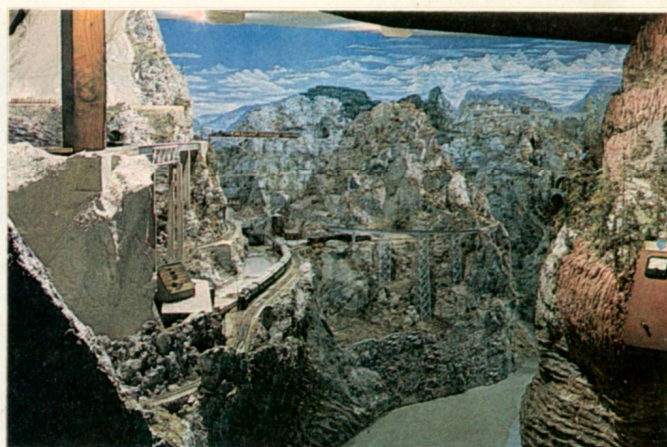


Fig. 4.7 ▲

having become half convinced that John's magical skills included walking on water anyway. Most model rails are as interested in "progress" pictures as in the finished product, and Figs. 4.6-4.9 give you an idea of how this area looked at various stages. These are among the most interesting slides that Paul Beard salvaged from John's fire-ravaged basement.

Before leaving the Squawbottom/Cold Shoulder area, we might talk about the use of real water on the layout. There was a stream that originated at Andrews and wound through much of the G&D, visible in some of the illustrations you've already seen. John used this stream to satisfy his curiosity about using real water in scenic effects. (He had opted not to use real water at Port.) The entire streambed was carefully scenicked to represent water when there was no water running, and then waterproofed for its entire length—a clever idea. Part of the stream is visible far below the bridge in Fig. 3.9 and paralleling the tracks through the valley below Eagle's Roost.

When the whim moved him—or for a particular photograph—John would lug a five-gallon can of water from the basement tap and pour it into the log pond at Andrews where the stream started. The water left the log pond via a spillway in a dam at one end of the pond, turning a waterwheel in the process. After an initial precipitous descent, the stream wound through the valley(s) and behind Scalp Mountain, finally reaching the basement floor some 35 feet later at a drain. From the first pouring, it took the water about 15 minutes to reach the drain, and it then flowed steadily for another half-hour, guided down waterfalls by thin shaped and painted pieces of celluloid and flowing naturally around boulders in the white-water stretches. It proved one of John's long held contentions—that nothing looks so much like water as the real thing. Note that he was careful not to allow the real water to stand in a given area, as it would have at Port.

Eagle's Roost came about as a means of disguising one of the vertical timbers that supported the house. To distract visitors

from what might have been discerned a fantasyland flavor in the geology here, John added animation to the scene in the form of an operating vertical lift. The area included a hotel at the top of a mountain, the hotel being built in place around the offending timber. Enough clearance was allowed between the timber post and the walls of the building to facilitate the addition of interior lights. See Fig. 4.11 (upper left). This intentionally introduced the problem of getting hotel patrons from trackside up to their lodgings, a reasonable excuse for the open-air elevator he wanted. Local passenger trains made scheduled stops here, and the motorized elevator slowly lifted disembarked passengers to Eagle's Roost Inn. Micro-switches stopped the car at both ends; the switch that set the lift in motion was at the main control panel.

Like many other spots on the G&D, the wiring for all of this became quite intricate which recalls another farsighted practice on the G&D: From the outset, John kept a large loose-leaf notebook with schematic drawings

Fig. 4.8 ▼



Fig. 4.9 ▼



Under-construction shots (Figs. 4.6-4.9) show Cold Shoulder and Scalp Mountain. The timber post was eventually buried in the scenery. Much of the track really was quite close to the floor, but running the scenery down to its level allowed John to take photos

that seemed to have great height. Gray-painted floor looked like water when carefully positioned in a picture; the expanse seen in Fig. 4.7 became a wisp of silt-laden water, as seen in the shot from behind the hills (Fig. 4.9).



John often set up switching moves that required the locomotive to push the cars into siding (Fig. 4.10). When this section of the original G&D was built into the last layout, the tunnel at left was boarded up and the track removed. Eagles Nest was served by a steam-powered donkey engine (Fig. 4.11); it hauled passengers up to a restaurant at the top. Trips to such places offered a pleasant escape for the residents of Great Divide (Fig. 4.12).



Fig. 4.10 ▲

of all of the wiring. He had special pages for such complexities as the vertical lift. This is a good idea, no matter what the size of a layout. We all know why and how we do things at the time of installation, but when we go back a few months or years later, it is a different matter entirely. Very few practicing model rails will not recall lying under the benchwork mumbling in perplexity, "What in creation is that yellow wire doing there—and what does it do?"

In the concluding visit to the Gorre & Daphetid in the August 1981 RMC, we'll look at the Andrews area where the stream originated and talk about operations there. We'll then move to the hottest operational spot on the railroad, Port, and discuss another approach to simulating water—this time on a grand scale—and examine more scenery, mirrors and structures including large three-dimensional flats. This won't quite conclude the series, however, as we will also recall John Allen as a very human being in the October issue.

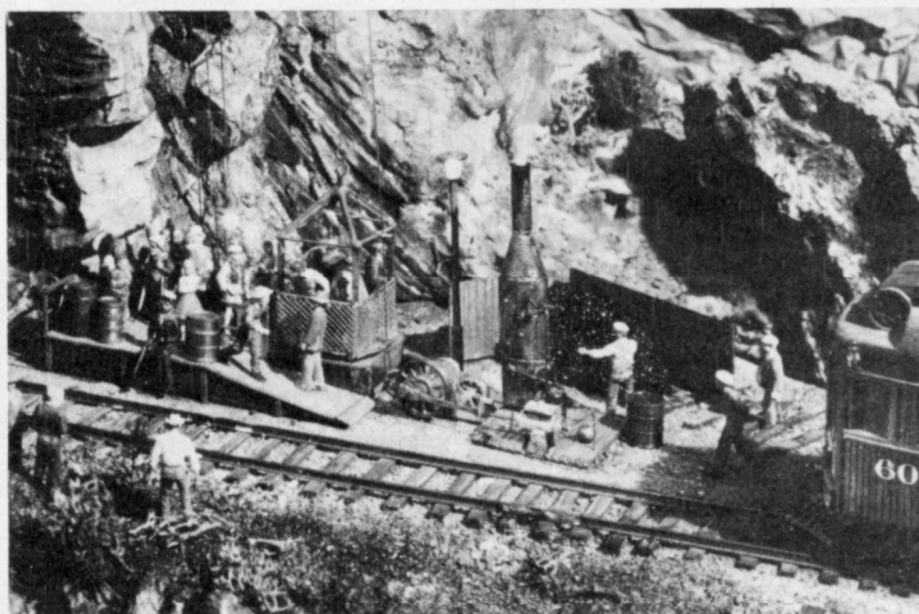


Fig. 4.11 ▼

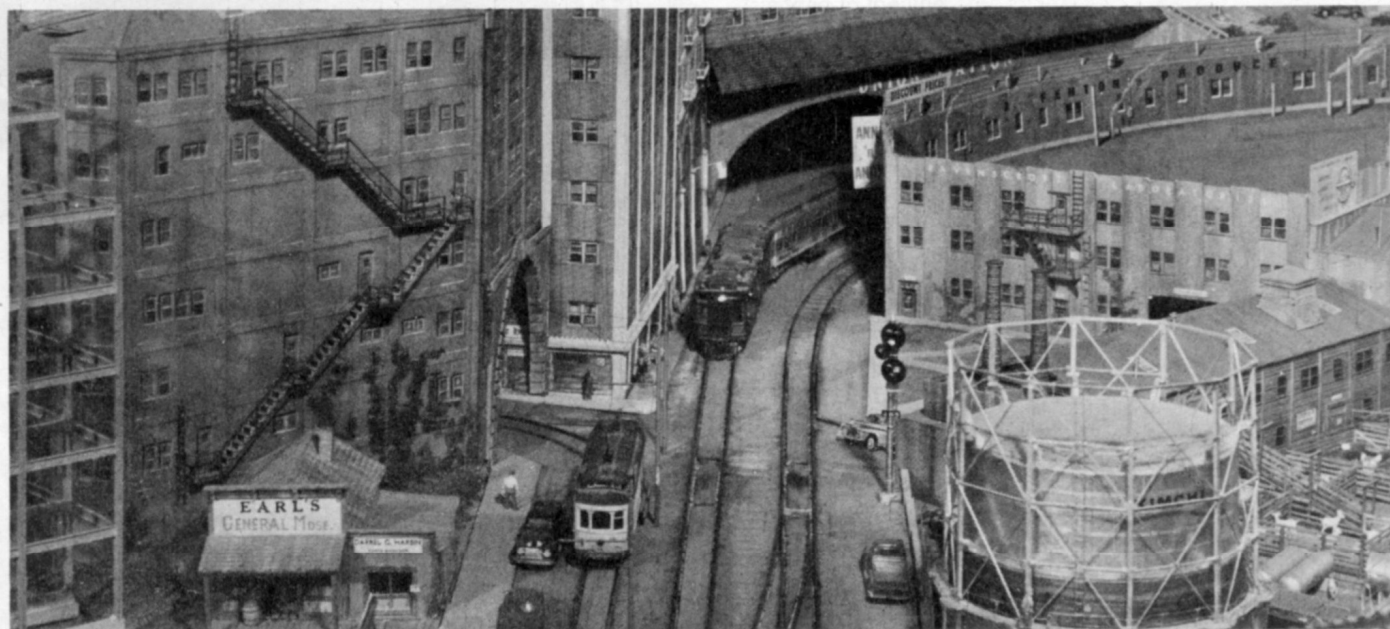


Fig. 4.12 ▼





**Fig. 4.13 ▲**

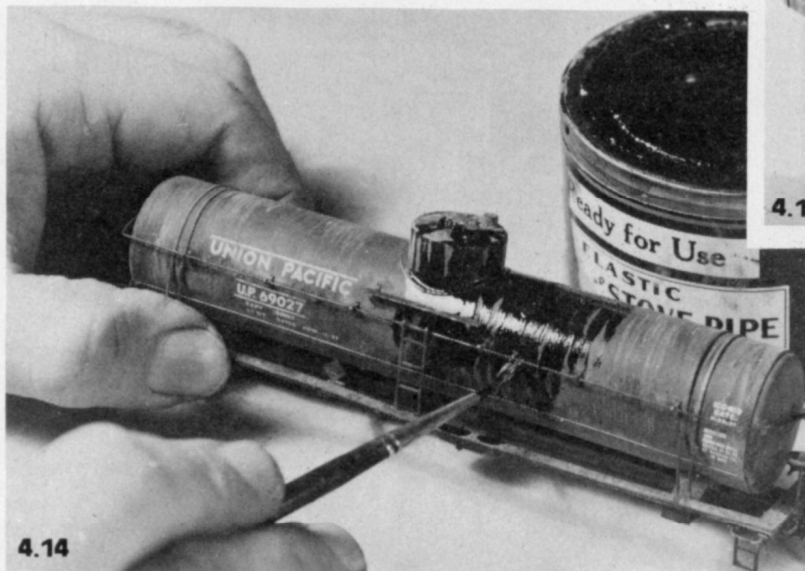
This unpowered "antique" locomotive (Fig. 4.13) was around the layout for years; it starred in photo set ups that included the addition of smoke from the stack.

**Special  
report**

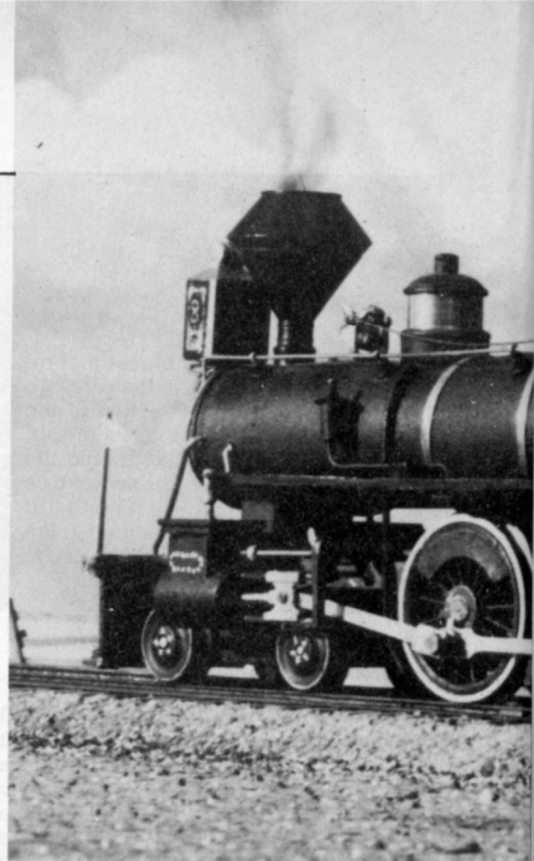


## Rolling stock

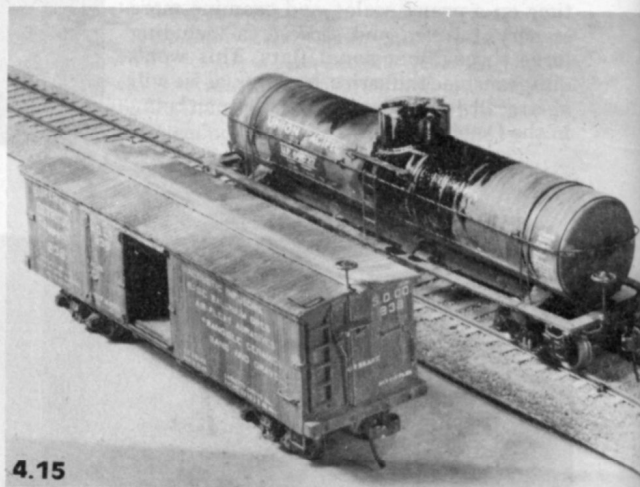
photography/JOHN ALLEN



**4.14**



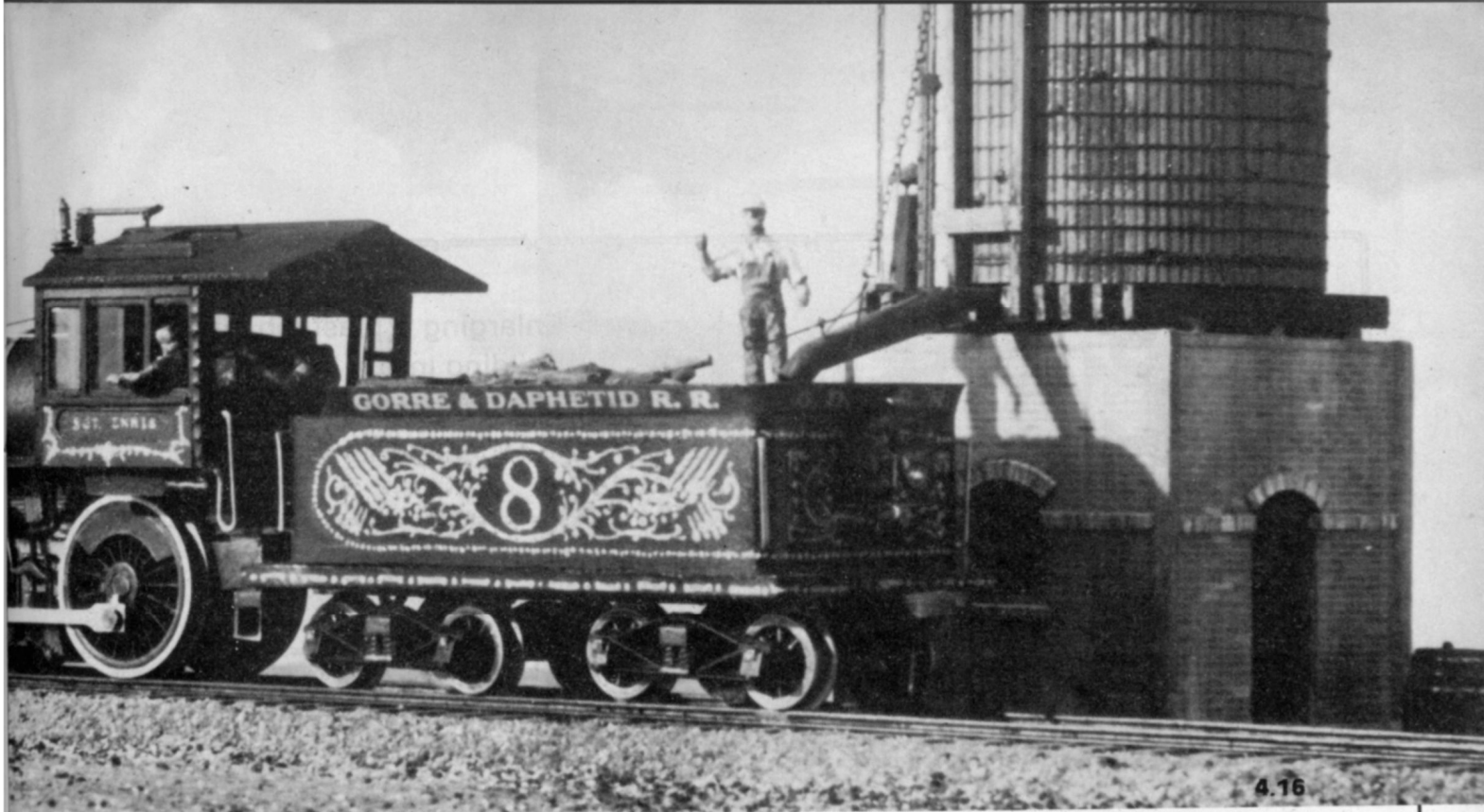
John's rolling stock was a mixture of kit-built and scratchbuilt cars, all weathered to some degree with pioneering techniques



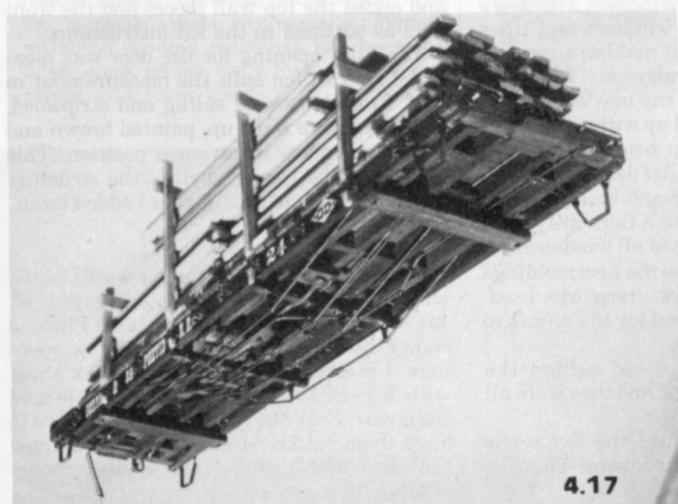
**4.15**

Weathering was applied to nearly everything on the G&D; the equipment and scenes looked dusty. Powdered pigments and even stove pipe cement (Figs. 4.14-4.15) were used by The Maestro.





4.16



4.17

G&D No. 8 was one of John's first engines. (Fig. 4.16). The ornate scrollwork had to be applied by hand. Weathering was not to be considered synonymous with rough craftsmanship. The crispness of flat No. 24 (Fig. 4.17) is a testament to the scratchbuilding ability of its maker. All that No. 24 needed when this photo was taken was a pair of trucks and a coat of dust. No look at G&D equipment would be complete without a photo of No. 13, the famous work dino. (Fig. 4.19). He appeared time and again on the G&D, usually pulling his wax and wire-armature muscles as hard as he could; here a power truck is being delivered to the freight dock. The variety of the figures and their placement on the G&D was a feature which brought the road to life. This work dino, and even caricatured people, truly added to the line.



4.18