



DON BROWN COLLECTION

FORMER FJ&G "BULLET" 125 is dwarfed by one of the Bamberger Railroad's heavyweight interurbans.

# Brill's "Other" Bullets

by John Smatlak

Five cars built for the Fonda, Johnstown & Gloversville  
ended up on the Bamberger Railroad in Utah

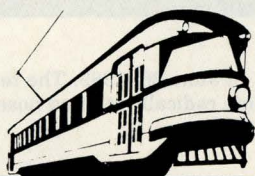
**I**n September 1931, Philadelphia's J.G.Brill Company debuted its "Bullet" interurban car design at the American Electric Railway Association Convention in Atlantic City, New Jersey. Displayed on the boardwalk in front of the convention center, car 200 looked quite unlike any other piece of railroad equipment constructed to date. Painted in a temporary pea green "Brill demonstrator" paint scheme and adorned

with AERA logos, it was the first car off the assembly line from the now-legendary ten car order for the Philadelphia & Western Railroad. Later that same month, on September 24, the Fonda, Johnstown & Gloversville Railroad formalized a \$100,000 order for five Bullet cars of a modified design, to be delivered before January 1, 1932, to their 33-mile electric division in upstate New York. This is their story.

## The FJ&G Bullets

The new lightweight aluminum streamliners were the most visible phase of a plan to rejuvenate the FJ&G's sagging passenger revenues.

The same week the cars were ordered, an ambitious reduction in scheduled express running time (from an hour and a half down to one hour between terminals) was announced, to be introduced with the arrival of the streamliners. In April 1931 drastic fare reductions had been implemented, and the work force had agreed to a ten percent cut in wages. The line's track and electrical systems also received a major overhaul beginning in 1931 and culminating with the installation of three new GE-equipped automatic substa-



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RAILFAN & RAILROAD



Johnstown & Gloversville was a 33-mile route connecting the four cities whose names were spelled out in silver lettering along the belt rails of the new streamliners: Gloversville, Johnstown, Amsterdam and Schenectady. The double track line was powered by 600-volt d.c. trolley wire, with a four-mile branch to Fonda that left the main line at Sulphur Springs. On the main line, 27.3 miles were on private right-of-way and 5.6 were on street trackage. The origin of the oldest part of the line was the Johnstown, Gloversville & Kingsboro Railroad, built in 1874 as a horse-car line between Johnstown and Gloversville and electrified by the Cayadutta Electric Railroad in 1893. To eliminate competition with the parallel Fonda, Johnstown & Gloversville steam railroad, the Cayadutta line was essentially merged with that railroad in 1893, with both steam and electric divisions continuing to operate. Electric service was extended to Amsterdam in 1902 and Schenectady in 1903.

The five Bullet cars made an impressive debut. They reduced express running times between Gloversville and Amsterdam from 93 minutes to 73 minutes, a significant improvement, although not quite as dramatic as the railroad's initial press releases which had advertised a running time of 60 minutes. Along with the new automated substation equipment, their one-man operation, high speed and reduced power consumption helped increase net revenue by dramatically cutting oper-

tions at Johnstown, Amsterdam and Gloversville in July of 1932.

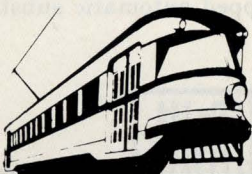
Almost one thousand onlookers showed up to view car 125 when it was put on display in the Gloversville yards on the January 1932 morning of its trial run to Schenectady. Resplendent in its highly varnished livery of dark orange carbody with yellow window band and black trim, the Bullet car provided quite a contrast to the somber heavy-weight cars on the adjacent tracks. A little before noon motorman Wellington Van Auken took the car out for the first of many trial runs. The other four Bullet cars arrived over the next few weeks, and all five began regular service on March 1, 1932.

The Electric Division of the Fonda,

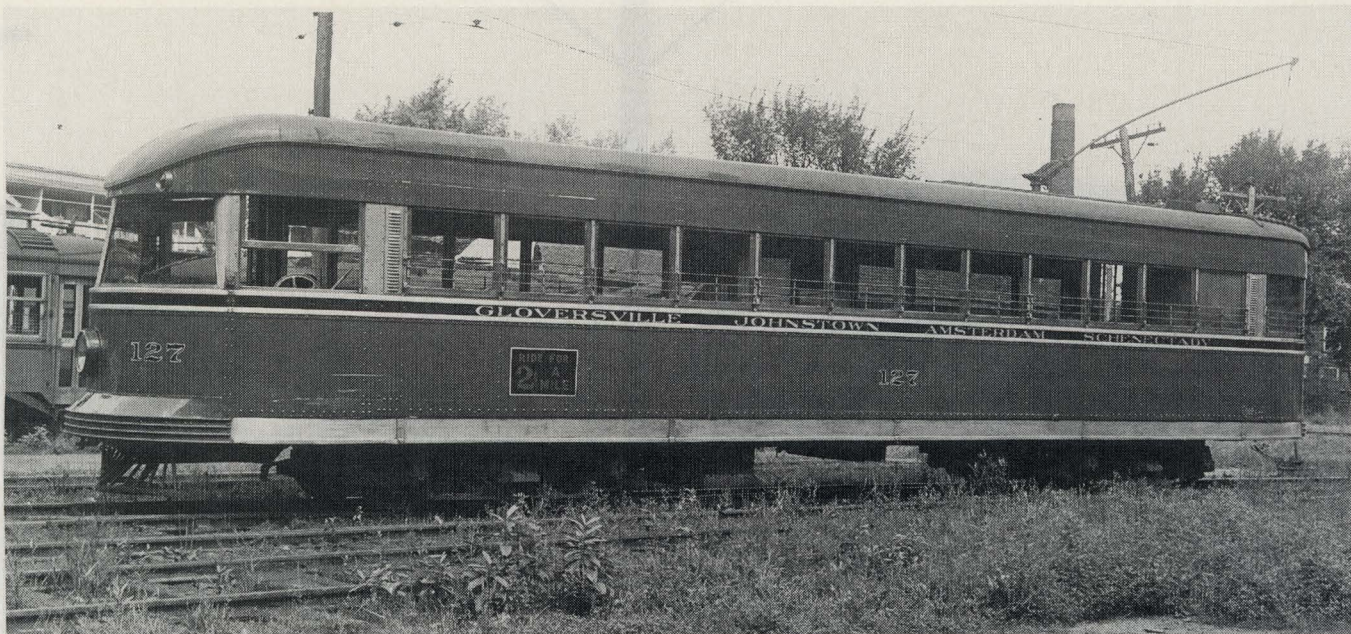
KODACHROME: JIM BOYD



SEPTA BULLET 203 was outbound at 72nd Street Shops on June 30, 1989. The ten P&W cars were 9'3" longer than the FJ&G cars and had a more radically tapered nose.



## Brill's "Other" Bullets



SCHOLES PHOTOS

**FJ&G BULLET 127** was resting between runs at the Gloversville yard in 1936. Note the FJ&G car is single-ended and has no door on the left side like P&W 203.

ating expenses. A 1933 *Transit Journal* article extolled the virtues of the new cars in an article entitled "Net Revenue Up 78 Per Cent Through Modernization." The new streamliners and reduced fares increased ridership markedly, but even they could not reverse the effects of the national depression and the trend towards other modes of transportation.

The FJ&G Electric Division continued to lead a troubled life throughout the 1930s. It was officially bankrupt in April of 1933 and placed in receivership. By 1936 the line had applied to the Public Service Commission of New York to abandon the electric service. Throughout the remainder of its life the railroad continued to pursue the riding public with excursion rates and fare reductions. The five Bullet cars were painted with signs advertising "Ride For Two Cents A Mile," and later "Ride For One Cent A Mile." Ridership rebounded as a result of these and other plans to induce business but not by enough to stem the losses.

Meanwhile, the Bullet cars continued to roll up the miles, offering a comfortable, high speed ride to Fulton County residents. Surviving FJ&G shop records indicate very few modifications to the Brill design were necessary. Shortly after entering service, glass was installed in place of wood in the lower door panels as an aid to boarding and alighting, and in 1933 modifications were made to the field

tap wiring. The Bullets were also involved in their share of grade crossing accidents, derailments and other mishaps, but none so serious as to be beyond the capability of the shop at Gloversville for repair.

The fatal blow to the FJ&G electric service came on April 5, 1938, when the Public Service Commission of New York declared the line's entrance into Schenectady, the bridge over the Mowhawk River, unsafe for trolley car operation. The railroad was unable to fund a rebuilding of the bridge, so service was terminated on the other side of the river at Scotia, with passengers being bussed into Schenectady. This event also spelled the end for the single-ended Bullets, as the railroad was unwilling to build a wye or loop to turn the cars at Scotia. The five Bullet cars were stored in the carbarn, and service continued using the older double-ended equipment for only another two months, until June 28 1938, after which busses were substituted.

Ownership of the seven-year-old Bullet cars reverted to the equipment trust which had financed the cars, the Electric Railway Equipment Securities Corporation, on August 10, 1938, when the FJ&G defaulted on the payments. The cars were offered for sale at a public auction on August 24, but the Securities Corporation, a Brill subsidiary, was the only bidder, formally repossessing all five with a bid of \$5000 dollars. The cars were moved to the shops

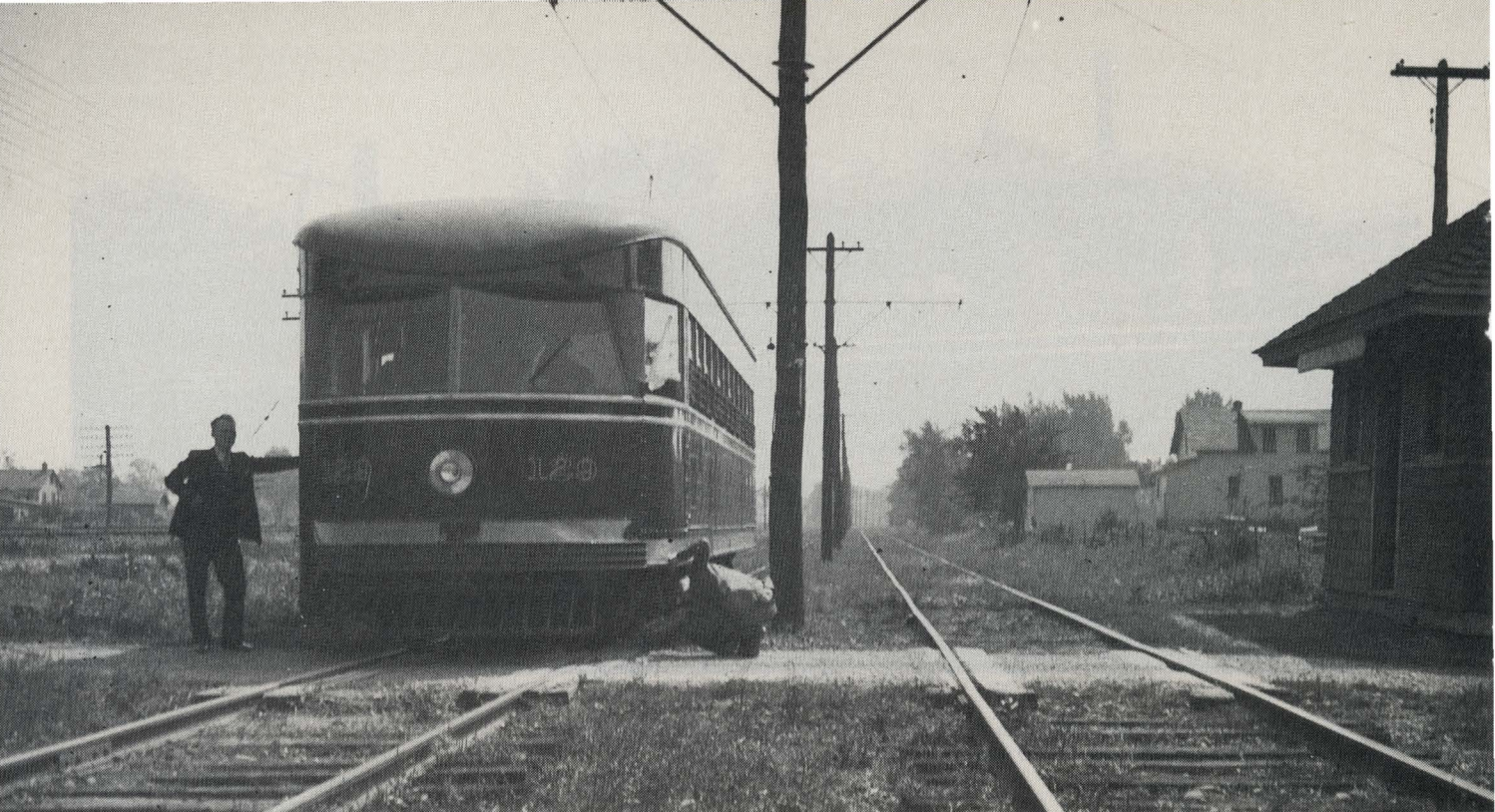
in Gloversville and were offered for sale by Brill. As mortgage holder, Brill hoped to recapture a portion of its investment. Prospective customers included Lehigh Valley Transit Company, which sent master mechanic William Klien to inspect the cars. It was the Bamberger Railroad, however, that ultimately purchased the five Bullet cars in February of 1939.

The fact that it took Brill six months to resell cars which only seven years before were state-of-the-art products, was symptomatic of the depressed state of the industry in the late 1930s. Two years later, in 1941, Brill would exit the electric car business altogether, concentrating solely on buses and trolley coaches for less than another decade before discontinuing production. It is interesting to note that another 54 similar high speed cars from different manufacturers were also on the used interurban market in 1939-1940 for the same reason: the original owner had gone out of business! These cars were 19 of the 20 Cincinnati & Lake Erie high speeds, offered for sale beginning in 1938, and followed in 1940 by the 35 Indiana Railroad high speeds. All of the C&LE cars were sold, but only two of the 35 IRR cars found buyers.

### The Brill lightweights

Brill had anticipated doing a volume business with the lightweight Bullet-type electric car, but the demand never developed. Ten lightweight, aluminum-





JOHN BOWMAN, JR.

bodied cars were constructed over two orders in 1931 and 1932 as the "80 class" for the Philadelphia & West Chester Traction Company which utilized many of the Bullet's features, including the 89 E series trucks. These high performance cars had many similarities to the FJ&G design, encompassing the same overall proportions and weight as well as including many similar mechanical components, such as GE 301B motors, but lacking the radical Bullet streamlining.

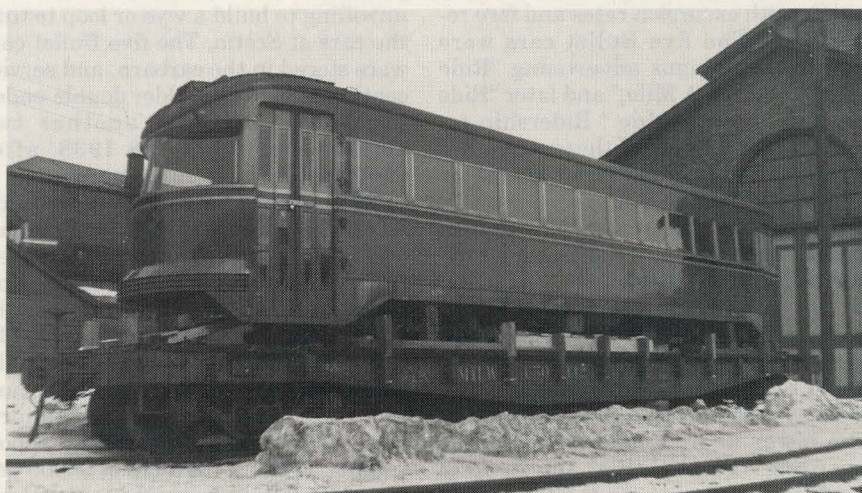
A variety of streamlined carbodies, several of which resembled the Bullet design, were applied to gas electric motor cars built by Brill and affiliate American Car Foundry, most notably 25 "Special Model 60" railcars. Between 1934 and 1937, ACF built four for Norfolk Southern and 21 for the Uruguayan State Railways in South America. However, no other electric Bullet cars were built for the American market. Two Brill sales proposals for Bullet-type electric cars were drawn up in the early '30s, but neither was constructed. One of the proposals, for the Wilkes-Barre & Hazleton in November

of 1931, was very similar to the FJ&G cars. The double-ended, street-loading car would have used a streamlined end identical to the front on the FJ&G design, but its body would have been shorter by the 2'9" width of one window, with doors on both sides and equipped with third rail apparatus as well as trolley poles.

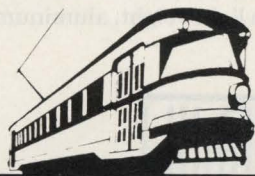
In September of 1934 plans were

drawn up for a proposed "90 class" car for the Philadelphia & West Chester Traction Company. These cars were to have been a sleek 50'1" double-ended car, with a blunted version of the four-window P&W Bullet car end, designed to operate on the Red Arrow suburban lines out of 69th Street Terminal along with the 80-class cars. Both proposals used versions of the Brill 89 E truck.

**AN NRHS/ERA FANTRIP** had FJ&G 129 posed (**above**) at the Tower Nine station on September 6, 1936. In February 1939, car 127 was loaded aboard a flatcar at the Gloversville shop (**below**) for the trip to the Bamberger Railroad at Salt Lake City.



R.G. NEVEL COLLECTION



## Brill's "Other" Bullets

## Bullets on the Bamberger

In late February of 1939, the five FJ&G Bullets were loaded aboard flatcars outside the Gloversville shops and shipped to Salt Lake City, Utah, to begin the second phase of their existence. Upon arrival at North Salt Lake shops, the cars were put back into top shape by Bamberger personnel and had some electrical modifications performed to allow them to operate from the Bamberger's 750-volt d.c. (nominally 700-volt) overhead, including disconnecting the field tap feature on the motors. The cars were placed in service in April 1939 without many visible modifications, although the front destination sign box and the window guards were removed, and the trolley pole was raised on a small wooden platform. They retained their original numbers and paint schemes with only the FJ&G lettering painted over. They were dubbed "little cars" by the locals, in reference to their size when compared with the large Jewett and Niles heavy-weight cars they shared the line with.

The Bamberger Railroad was a 36-mile line between Utah's two principal cities, Ogden and Salt Lake City. Paralleled the entire length of its route by both the Union Pacific and the Denver & Rio Grande Western railroads, its origin was the Salt Lake & Ogden Railroad, which was electrified in 1910. In contrast to the FJ&G line, it had milder curves, gentler grades, long sections of tangent track and also long sections of single track. The character of the line was reflected in the 60-minute "flyer" schedules for the 36 miles (compared with 73 minutes for a 33-mile express run on the FJ&G).

After a short time in service, all five cars had their trolley poles elevated further on a new two-and-a-half-foot platform mounted on the roof which raised the base to about the height it sat on the heavyweight equipment. The crews called it a "trolley stool," and it allowed the pole to more reliably track the Bamberger's higher than normal overhead wire. A curiosity of this arrangement was the absence of the usual trolley hook on the roof to secure the pole when unused. When not in use, the pole was simply lowered from the wire and the rope tied off around the retriever. Inside, the rear-facing bucket seat was removed from the back platform and replaced by a semi-circular five-passenger seat along the platform walls. A few months later the original air horns were moved out from underneath the cars, and new ones were installed outside adjacent to the motorman's window, supposedly to make more noise outside and less noise inside

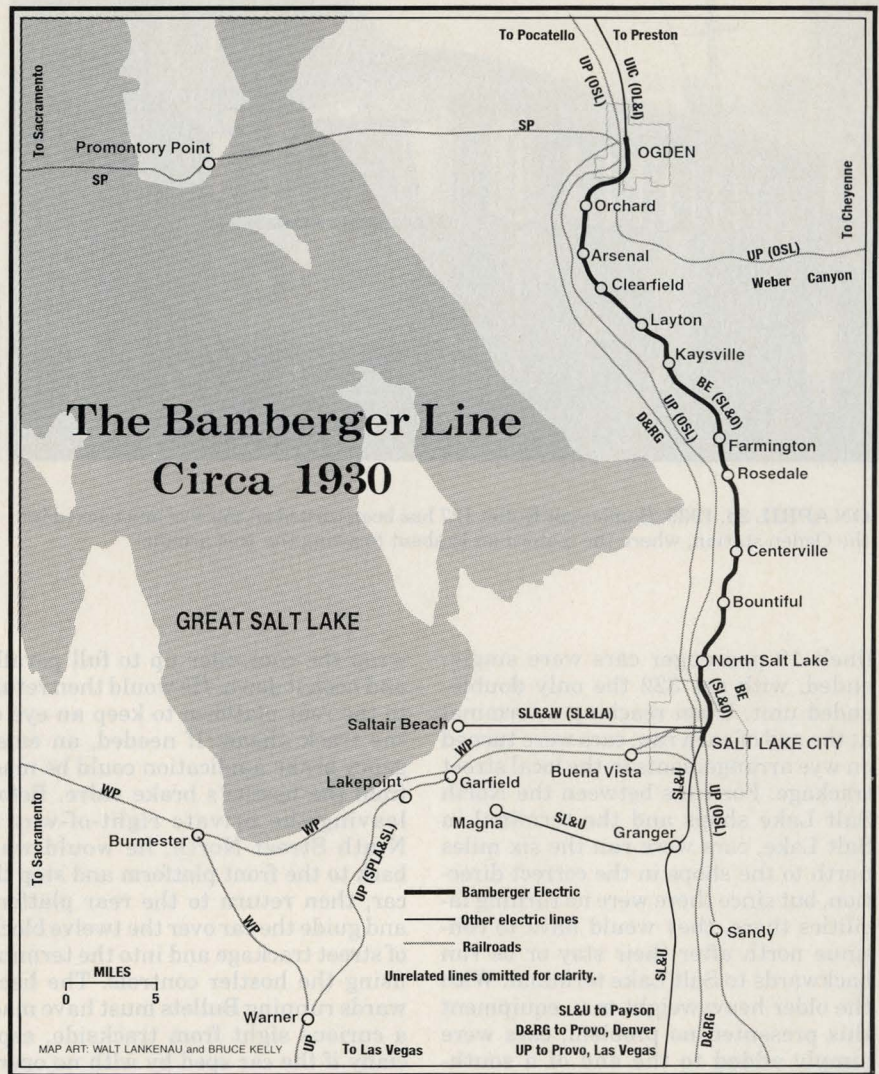
the cars. At about the same time, a small reflector was added to the front and rear dashers, and a small spotlight, wired into the battery lighting circuit, was added to the front for additional visual protection in the event of the trolley pole dewiring. This spotlight was removed in later years.

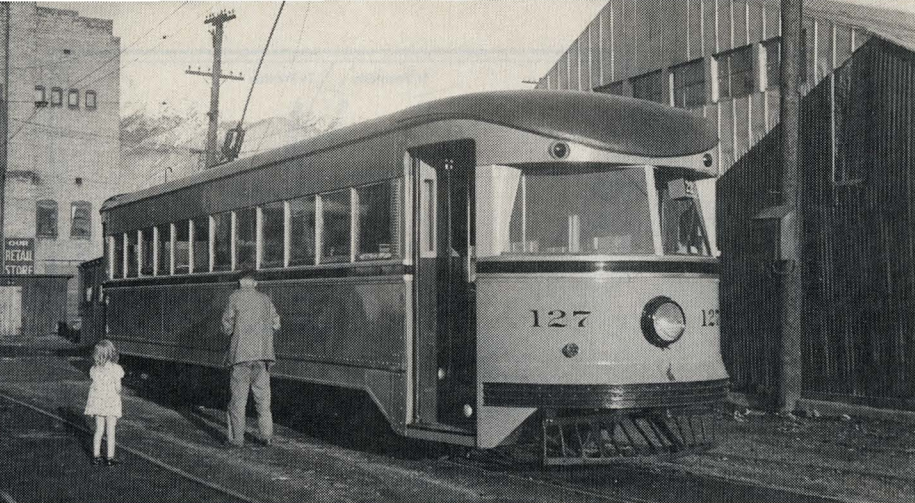
As on the FJ&G, the Bullets were operated as one-man cars, (all Bamberger cars were run as one-man beginning in the 1920s) and the "little cars" were well liked by Bamberger patrons and crews alike. In order to battle the fierce Utah winters, each season all of the Bamberger's cars were weatherproofed with storm sash and equipped with small pilot-mounted snowplows. Their low seating capacity and inability to m.u. were the Bullets' only limiting factors for the Bamberger's operation. To increase their utility, the Bamberger talked of trying to make the cars m.u. capable and even of lengthening the cars' design by splicing two together,

but neither plan materialized.

The Bullets took full advantage of the line's long sections of tangent track and mild grades, and even without the use of their field taps, they were well known for their high performance capabilities. Bamberger motorman Gordon Cardall recalled a 1949 fantrip during which he piloted car 128. Equipped with a new set of wheels, the 128 made the northbound run in 38 minutes for the 36 miles terminal to terminal. This time includes the street running in Salt Lake City and Ogden, two stops to meet opposing trains, and a dewirement in route which required a stop to replace the pole and inspect the overhead for damage.

The little cars' dissimilarity with the rest of the railroad's passenger equipment did lead to some operating peculiarities. In the Bullet car era, 18 of the





VERNON J. SAPPERS COLLECTION

**ON APRIL 24, 1939**, Bamberger Bullet 127 has been turned on the wye and backed into the Ogden station, where the motorman is about to swing the pole around.

line's 19 passenger cars were single-ended, with car 322 the only double-ended unit. Upon reaching a terminal at the end of each run, cars were turned on wye arrangements in the local street trackage. For runs between the North Salt Lake shops and the terminal in Salt Lake, cars were run the six miles north to the shops in the correct direction, but since there were no turning facilities there, they would have to continue north after their stay or be run backwards to Salt Lake terminal. With the older heavyweight m.u. equipment this presented no problem, cars were simply added to the end of a southbound passenger run passing through. The Bullets, however, were required to run backwards, in daylight only, of course, as a no-passengers "extra" if it was desired to route the car back to Salt Lake. The hostler controls on the rear platform consisted only of a control switch, a simplified brake valve and whistle valve. After turning the trolley pole around and defeating the "dead man" feature of the controller on the front platform by holding down the controller handle using the hook provided for this purpose, the control switch on the rear platform allowed the application of the first "point" (or notch on the controller) of power. Although company policy dictated otherwise, the cars were routinely maneuvered out of the shops area using this method, and once on the private right-of-way, the motorman would return to the front platform and

wrap the controller up to full parallel and hook it down. He would then return to the rear platform to keep an eye on the track ahead. If needed, an emergency brake application could be made from the hostler's brake valve. Before leaving the private right-of-way at Ninth Street North, he would walk back to the front platform and stop the car, then return to the rear platform and guide the car over the twelve blocks of street trackage and into the terminal using the hostler controls. The backwards running Bullets must have made a curious sight from trackside, especially if the car sped by with no operator on the forward-facing platform! This curious practice came to an end in about 1950 when a loop was constructed for turning equipment at North Salt Lake shops.

The Bullets had a good safety record save for one collision in late 1943 on a single track section of the line in Clearfield. Bullet 129 was assigned as the first train out of Ogden on a cold winter morning and was headed south for Salt Lake City. The line was double track for the 9½ miles between Ogden and Clearfield, with a steady six mile uphill climb, a final peak and then six miles of downhill beginning about a mile before the Clearfield station. The ill-fated southbound car was due to meet a northbound run at Clearfield, but racing down the 1.1% grade on frosty rails, the 129 slid through the station and past the end of the double track located a block beyond. Northbound Jewett heavyweight 301 working up the grade on the single track saw the 129 approaching and was almost stopped when the collision occurred. The 129 sustained heavy damage, the

entire front platform collapsing from the force of the collision with the higher heavyweight car. It was out of service into 1946. After rebuilding, the 129 was distinctive because of its sagging front platform.

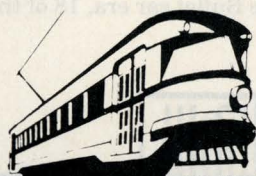
In 1941, as wartime passenger traffic began to pick up, all of the Bamberger's cars had their lavatories removed in order to fit in more seats. Inside the Bullet cars, an additional bucket seat pair was installed in place of the lavatory. This seating arrangement was maintained until the end of service. During the course of the war, the Bullets were taken out of service during periods of peak travel. Even though their seating capacity had been upgraded to 53, they were still too small to efficiently handle the crowds, and the majority of service was maintained using the older heavyweight multiple unit equipment which had seats for between 56 and 84 passengers per car.

After the cessation of hostilities in 1945, the four serviceable Bullets were returned to daily service, and wreck damaged 129 was eventually rebuilt. Their postwar paint scheme featured cream instead of yellow in the window band portion, and later the roof and anticlimbers were painted silver with the exhaust fan vent on the rear hood removed.

By 1952, the Bamberger wanted out of the rail passenger business. The turning point was March 11, 1952, when fire destroyed the majority of the company's rail maintenance shop at North Salt Lake. Nineteen days later, on March 30, a new schedule went into effect leaving only three daily round trips by rail (increased to four daily round trips April 27) and increased bus service. These trips were generally handled using the heavyweight cars, and the Bullets mostly sat at the terminals. Public outcry over the curtailment of service was ignored. Management insisted that the facilities lost in the fire made continuing maintenance on the passenger fleet impossible, although the public pointed out that the shop used to maintain the line's electric locomotives was still in operation. In June 1952, fire again struck the Bamberger, this time the Ogden substation was destroyed. The last electric passenger operation occurred September 6. The railroad continued as a diesel freight line until 1958.

### The "pickle cars"

The Bamberger Bullet cars were offered for sale following the abandonment and reportedly inspected by the Sand Springs Railway of Tulsa, Oklahoma, but no railroad buyer emerged.



## Brill's "Other" Bullets

Instead, all five cars were sold to the Utah Pickle company in 1953 for use as living quarters for field laborers. The trucks and electrical equipment are assumed to have been scrapped. The car bodies were originally scattered around in different fields in the Layton, Utah, area still painted in their Bamberger colors. Later all five were brought together in a central location near Layton. All five were painted green, and four were arranged into a bunkhouse complex comprised of two rows with two cars each placed end to end. A common roof covered half of the complex, and car 125 was set up adjacent to the compound.

The pickle factory personnel covered the windows with wire screening and installed stoves for heat but performed no other structural modifications. The cars were kept in good condition, but by the mid-1960s this novel bunkhouse facility had fallen into disuse. As early as 1966, Orange Empire Railway Museum members began looking into their rescue. Several inspection visits selected 127 as the best of the lot, and in 1971 an agreement was secured for its donation to the museum in Perris, California. The museum was also given permission to remove parts from the other four cars in order to complete the 127 to the extent possible. The 127 arrived at the museum by flatbed trailer on Friday evening, July 16, 1971. For the first time since they had been built 40 years before, the five cars of the series were no longer together.

### Trolley Square

In late 1972 the other four Bullet bodies were purchased by Salt Lake City real estate developer Wally Wright for use in the Trolley Square shopping mall. Opened in June 1972 in the former Utah Light & Railway Company carbarns in Salt Lake City, the shopping center featured several for-

mer Utah traction cars adapted to house a variety of businesses. Bullet 125 was used as a hotdog stand. It was shortened by having its middle cut out and the two ends joined back together over an arch-bar truck, sort of a "Bullet Birney." It was painted white and lettered "Corn Dog Trolley."

In the late 1970s, car 128 was modified and brought to Trolley Square for use as a sporting goods outlet. Standee windows were cut into one side, extra doors were added, and the car was given a bizarre six-window front. This car was later moved outside and set up as part of a gas station complex. In this incarnation it was painted brown and lettered "Trolley Station."

Trolley Square was purchased from its original owners in 1986 and substantially remodeled. Unfortunately,

most of the trolleys incorporated into the mall by its original developers were removed, including Bullet cars 125 and 128. The 125 was cut up on site. Thankfully, the 128 was removed intact. Car 128 is still in Salt Lake City, on the lot of the demolition contractor who removed it; the contractor is hoping to sell it for restaurant use. Owing to all the modifications, it no longer looks much like a Bullet car when viewed from the front.

Cars 126 and 129 sat in storage in Salt Lake City awaiting further use. All of the remaining stainless steel window sash had been removed by owner Wally Wright to supply the cars in Trolley Square. In early 1978, Utah traction enthusiast Heinz Bruhl purchased car 126 with the hopes of eventually restoring it. He removed the car from its storage location in June 1978 and transported it via flatbed trailer to the driveway of his home in Ogden. On the way, he had the car repainted into its Bamberger colors at an auto body shop. This car was acquired in 1988 by the Ogden Union Station Museum. Not currently on display, it sits uncovered onboard a railroad flatcar which is parked on a rented siding inside the Ogden Defense Depot, where the group stores several pieces of equipment. Its roof and floor are disappearing from the weather, but hopefully its caretakers will take steps to protect the body from further damage.

DON BROWN COLLECTION



**BAMBERGER CAR 125** made a pretty sight in regular service. All five of the Bamberger/FJ&G cars survived for many years as housing units for field workers on a pickle farm near Layton, where the 125 was photographed (**below**) surprisingly intact in the 1950s. In the 1960s the cars were inspected, and the 127 was selected for preservation.

COLOR PRINT. CORDON CARDALL





**AT THE UTAH PICKLE COMPANY** in August 1971, the Orange Empire Railway Museum removal crew posed with the 127. By the headlight is former Bamberger motorman Gordon Cardall. In late summer of 1991, the 127 was undergoing an extensive restoration at Perris, California (**below**). Trucks and interior seats were obtained from SEPTA.

Car 129, which still had its front end dented from a tangle with a truck at a grade crossing during the final months of passenger operations, languished in storage into the 1980s. It sat neglected without any windows, on a lot in Salt Lake City along with two other local trolley cars and is assumed to have been scrapped sometime in the late 1980s.

**Car 127 at Perris**

Car 127 was put into storage upon arrival at the Orange Empire Railway Museum while members began to locate the parts needed to complete it. The car arrived with a complete set of windows and interior fittings including baggage racks and lighting fixtures salvaged from the other four cars. The operator's position survived the 19 years of bunkhouse use almost entirely intact! The original operators chair, controller, brake valve and almost all of the dash-mounted electrical equipment remained. The rear platform hostler controls and the circular seat also survived \$MD but, unfortunately, the original passenger compartment bucket seats had been removed long ago. Underneath the car, almost all of the elec-

trical and airbrake equipment was gone, although the bolsters and mounting hardware had endured. In anticipation of eventual restoration, former Bamberger mechanical superintendent V.J. Crossley was contacted shortly after the car was acquired, and he contributed copies of the original Brill airbrake and wiring prints.

The final stop for car 127 on its long journey from the J.G. Brill plant in Philadelphia is the Orange Empire

Railway Museum. Located 70 miles southeast of Los Angeles in Perris California, the museum was incorporated in 1956 by a small group of railway enthusiasts. Today it is the largest operating railroad museum in the western United States. It has over 1000 members and is home to some 180 pieces of railroad equipment. The 60-acre site features two miles of operating railway. The half-mile, dual gauge loop and a 1½-mile main line operate on weekends and special events year round. The year's biggest events are the rail festivals held every April and October.

The 127 has a well-preserved and structurally sound carbody with a nearly complete interior. The museum purchased original P&W Bullet car seating from SEPTA in 1990 for use inside the 127, and in September 1991 it successfully acquired a pair of Brill 89 E2 trucks from the same Philadelphia source. As funding becomes available, these trucks will be rebuilt to serve as the 127's running gear. The timetable for 127's restoration depends upon the continued success of the fund raising and parts acquisition drives now underway. Anyone wishing to help in the restoration of car 127 can make a tax-deductible donation to the museum's "Bullet Car 127 Fund." (The museum's address is P.O. Box 548, Perris, CA 92572-0548; 714/657-2605.)

**Next Month**

In the February '92 R&R we will continue our look at the "other" Bullet cars by comparing the FJ&G/Bamberger units with their more famous P&W brethren, taking note of some interesting differences.

KODACHROME: JOHN SMATLAK



**Brill's "Other" Bullets**

