

CELEPHAIS

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At the moment, I don't know just what will be in this issue. There should be something on the trip of some months ago; one or two of you were incautious enough to mention that you liked trip reports. There may be something on the Discon. There may be something on trains. There may be mailing comments. There may even be a second page, unlike the last one.

I'd like to mention a few things about the con here, just in case I run out of time and/or energy later on. I think I saw less of the program this time than I did at Chicago - and yet I had a good time. However, I will admit I'm looking forward to San Francisco next year, where I'll be able to relax and talk to people and see part of the program, if I want to. I did have a change for a quiet little luncheon with Will F Jenkins - Murray Leinster - and Doc Smith and family. There were 8 of us, and the fans among the group had a wonderful time listening to Doc and Will talk to each other, getting better acquainted. This was one of the high points of the con, for me. Another, of course, was Ike Asimov and his Hugo. I know some people are convinced it was a put-up job, but I can assure you that only 7 people knew about it - five on the committee and Larry Breed and Steve Marshall, who were drafted into doing a lot of the leg work.

One thing I might mention is that putting on a con isn't that much of a chore. I'd say that we did really little work until the last couple of weeks - some meetings, letter writing and telephoning, and of course, the printing, which we - meaning George - did ourselves. I'd guess I was busier steadily than the rest, putting out the memberships as they came in, but it never took over a couple of hours a week. Sure there were goofs; some are obvious, and others never were caught [I should tell you now?]. We did have a lot of help, not only from the local group, who pitched in when needed, but also people like Ron Ellick and the Coulsons, who masterminded the art show, the various NFFF people, Ed Wood and Steve Tolliver, who spent time and voice on the auction, Larry and Steve in the week before, and of course the people on the program. It is surprising how cooperative people, in general are. There were some gripes about the guard at the costume ball, and the badge or costume rule for admission, but I 'm sure that considering the other groups in the hotel, and the experience of Chicago, almost all will agree it was the best thing. Sure, someone could get in if they came in a costume, and maybe some did. That group really doesn't matter, as they were a part of the event. We were aiming at the ones who just came to gawk.

And, the hotel was wondrously pleased by the behaviour of our group, young and old. Compared to the fraternity, ours were angels. The only clamp down was caused by the fraternity, who scared the night manager, and he stomped on everyone. Even the hotel admitted he wasn't the best possible person for the job....

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A Note for Dick Eney [and any one else who might be interested]

Some months ago, Dick Eney asked for an explanation of some of the esoteric railroad terms I seem to find necessary every time I talk about trains. What with a trip overseas and a convention closer at hand, I haven't had time to sit down and write an answer until now. However, here is something on the background of the classification used in the United States, and I believe in England.

First, the basic classification is based upon the number of wheels. These are divided into pilot, leading, or pony trucks, drivers, and trailing trucks. The number of wheels of each type is given; a 4-8-4 would have four leading wheels (two axles), 8 drivers, and 4 trailing wheels. The numbering is always from the front of the engine, the boiler end, backwards. [This is important only in a few cases, such as the SP cab-forwards.]

The classes of service dictate in part the wheel arrangement. For example, engines used in yard service - switchers, yard goats, etc - are not designed for fast movement; speeds over 20 mph are rare. However, they need the maximum amount of traction at low speed. High-speed passenger service, on the other hand, requires good rail-holding qualities, but less in the way of maximum traction.

In 1831, when Baldwin built Old Ironsides, it was of the 2-2-0 type, with a leading pair of idler wheels and one pair of driving wheels, all in a rigid frame. The rough, light track of the first roads, though, made this arrangement unsuitable, and about 1834 the 4-2-0 was introduced, with a four-wheel leading truck, and a three point suspension, swiveling at the center of the leading truck, and bearing on the two driving boxes. More power was needed, though, as these had poor adhesion because of the single pair of drivers. The next was the 4-4-0, with four drivers so arranged that there was still only two points of suspension for the boiler. This was very successful, and was the standard locomotive during the Civil War and the building of the transcontinental roads. For obvious reasons it was called the American type, or, sometimes, eight-wheeler. Over 25000 were built between 1840 and 1905. [In the US]

The next obvious step to secure more power was to add another pair of drivers giving the 2-6-0 [Mogul] and 4-6-0 [Ten-wheeler] classes. The Mogul, so called because it was of "great" power, was a cheaper version of the Ten-wheeler; about 11000 of these were built and used in moderate road service - branch line, local service, etc. The 4-6-0 was more popular, 17000 were built in the US, and were used in general road service until displaced by the more powerful types of later years. Add one more pair of drivers to a Mogul and you have the 2-8-0 Consolidation, built in greater numbers than any other type - 33000. Most of these were used in main-line freight service; with 57 inch drivers and later with 63" wheels, it was a good general purpose, medium speed machine, rugged and economical. The Decapod, with its 2-10-0 wheel arrangement, was not common in the States, although overseas roads liked it because of the smaller axle-loading it placed on the track. The 4-8-0 was never popular; the Mastodon had little advantage over the 2-8-0 type.

For yard service, the leading trucks, which guided the locomotive into curves and switches at higher speeds, were not needed; therefore the 0-4-0, 0-6-0, 0-8-0, and 0-10-0 types were developed; the last were too clumsy for all but the heaviest transfer service.

All of these types suffered from one defect. There was not room between the wheels or in back of them for a large enough fire-box. This was especially true in the case of the heavier classes, designed for heavy service; the fireman had a hard job keeping a head of steam on one of the big 2-8-0s by hand firing. The solution was to place the firebox behind the drivers, adding a trailing truck to carry the redistributed weight, and to provide better riding qualities.

In England the 2-2-2 type, with rigid leading and trailing wheels and 80" to 90" drivers, was popular for high-speed service; in the US, the rougher track was too much for the rigid frame. The 4-2-2 was an improvement in riding quality, but lacked the adhesion for any but very level track, and very light trains. The Columbian type, 2-4-2, was never common, but it pointed the way for the very successful (1900 built between about 1896 and 1910) Atlantic class, 4-4-2. They were used in shgh-speed passenger service, especially on the Penn RR Atlantic City line (hence the name) with 80" drivers. The Milwaukee Road's Hiawatha class were streamlined, fitted with roller bearings, and 84" drivers. Operating at 300 psi, they handled trains of 6 to 8 cars, 350-460 tons, between Chicago and Minneapolis, 421 miles in 7 hours, with five stops.

The Prairie type, 2-6-2, was used mainly in high-speed freight service in the Midwest - the CB&Q was the first buyer; the 63-69" drivers permitted higher speeds than the 2-8-0 type. This was not as popular, though, as the famous Pacific class, 4-6-2, used both for passenger and manifest-freight service. Some 6800 of these were built, starting about 1902. The PennRR K-4 is a typical example; they are really things of beauty to watch as they step out with a string of varnish. The 8-driver counterpart, the Mikado (the first of this type were ordered for the 42" Japanese Government Railways), to the Prairie, 2-8-2, was one of the most used fast freight locomotives. It was designed for service on heavy mountain grades at higher speeds than the 2-8-0 types in use on the Northern Pacific. Over 14000 were built after 1906. It was designed to handle the same manifest trains over the mountains that the 2-6-2 could handle on the prairies. [During the WWII, attempts were made to change the name to MacArthur, for obvious reasons; the name "Mike" was too firmly fixed, though.]

A "super Pacific" for handling passenger trains over mountain grades was the purpose of the 4-8-2 Mountain type. With 69-73" drivers, it could wheel heavy expresses over the mountain grades that the lighter Pacifics required helper service on.

For heavy freight service on mountain grades the 2-10-2 (Santa Fe) and 4-10-2 were developed. The first were built about 1902 for the Santa Fe; the latter first for the UP and later for the SP, both for the Overland route (the Overland class). This was a three-cylinder engine, with the third cylinder under the boiler, driving the first axle via a crank. The Union Pacific bought 90 Union Pacific class 4-12-2 engines, with a long, six-coupled-axle wheel base that could be used only on their open track with 4-5 degree curvature.

Using a 4-wheeled trailing truck gives better stability and more support for the fire-box at high speed. The 2-6-4 type never became popular in the US, although it is widely used abroad in high-speed service. The 4-6-4 Hudson, though, gave greater power than the 4-6-2, with the same driver arrangement, and if the three-coupled drivers were enough, it took over

For fast heavy freight service the Boston and Albany 2-8-4 type used over the Berkshires (hence the name Berkshires) were a very successful design. The last steam locomotives built by both the American Locomotive Co, 1948, and Lima Locomotive Works in 1949 were Berkshires. The 4-8-4 Northern type started on the Northern Pacific for both high speed freight and passenger service. With 80" wheels it could really step out. Among my favorite engines are the 4-8-4 GS (Golden State or General Service) classes of the SoPac, with their Daylight gold and red streamlined hoods. Even in plain black these were impressive in suburban service out of the San Francisco 3rd and Townsend station. Running along the Coast with a string of heavy coaches painted in Daylight colors, they made a real sight.

The Texas and Pacific ordered the first 2-10-4 Texas class; it was widely used for heavy fast freights.

This represents the height of the non-articulated locomotives. On the next page we introduce M. Mallet.

In 1888 a Swiss designer, Anatole Mallet, developed a new type of locomotive - the compound, articulated locomotive, with two independent sets of drivers. In the true Mallet - or Mally - the steam is used twice, once in a pair of high-pressure cylinders, and then in a pair of low-pressure cylinders driving a second set of drivers. Although most articulated locomotives are called Mallets, this is not always true - only those which rouse the steam in the second set of cylinders are Mallets; the others are simple articulated. Articulated engines so materially increased the tractive effort obtainable from a single locomotive that their adoption quickly changed all prior practices in heavy-tonnage movement of freight over heavy-grade divisions. The true Mallets were built for sheer power, at low speed, pulling heavy trains at a slow, sustained rate up heavy grades. This, of course, made them unpopular for passenger service, or for manifest freight, but for heavy drags of coal, iron ore, or other bulk material where quick delivery was not a factor, they were wonderful. It is to be noted that a coal road, the B&O, bought the first American Mallet in 1903, a 0-6-6-0 that was too unstable for road service, but was very satisfactory for helper service - banking, for the English among us - and hump-yard work.

It might be mentioned that at this time between 400 and 500 articulated compound locomotives, Mallet compounds, were operating in Europe. After about 1900, though, the use of this type in Europe declined, being replaced by conventional rigid-chassis engines with 4 or 5 coupled axles, which produced all the drawbar pull that was permitted by the European standard screw-link type of coupling.

For more power, the 0-8-8-0 type was tried, but again proved unsuitable for road service. In an attempt to improve the riding qualities, both 2-6-6-0 and 2-8-8-0 were tried; the latter were rather common, and were a distinct improvement over the 0-8-8-0. However, the big step was taken with the Great Northern's 2-6-6-2, built in 1906. The addition of the trailing truck enabled the firebox to be placed behind the drivers and enlarged. These were very good compound engines, at speeds up to 25 mph. With the demand for more speed, the economics of the compound operation, which used the steam twice were sacrificed for speed, making all cylinders the same - "simple" - and using the steam but once. In effect, this placed two engines with 6 drivers under one boiler and firebox. With this change - which can be easily noticed, because the front cylinders of a true Mallet are always immense, compared with the rear pair while the simplified engines have the same size cylinders - higher speeds suitable for heavy passenger trains or manifest freights were possible. After about 1920 only simple articulateds were built, in general, except for specialized drag service, such as the C&O, B&O, and N&W coal roads. About 1300 2-6-6-2 were built.

In 1909, the Southern Pacific received the first of the next design, the 2-8-8-2, for heavy mountain service. These were originally compound, but later were simplified. [They were also converted into the first of the famous "Cab-Forwards". Because of the tunnels and snow sheds which created fume problems, the company decided to turn the engine around - this was possible, because they were oil-fired, and the tender didn't have to be next to the cab - and operate it with the cab going first, thus avoiding the exhaust from the smoke stack just ahead of the cab. This was so successful that it became the standard design for SoPac articulateds.] [To improve riding qualities, these were later fitted with a 4-wheel leading truck under the cab.] Some 700 were built, 600 compound.

In 1924 the Virginian obtained 10 2-10-10-2 locomotives, which are about the biggest - in many respects - of the compound type for slow drag service. They were very good for the service for which they were designed.

The "Triplex" type, built for the Erie and Virginian, were an attempt to obtain still more tractive force for short, specialized helper service. By putting a 0-8-2 unit under the tender of a conventional articulated 2-8-8-0 it was hoped to utilize the weight of the tender for driving-wheel adhesion. These locomotives

exerted the maximum tractive effort - 160000 lb compound - over short periods ever exerted by a steam engine with reciprocating pistons. The type is technically a 2-8-8-8-2T type, the T indicating a "tank" locomotive, or one in which the tender is also carried on the locomotive, and contributes to the locomotive mass. The similar 2-8-8-8-4T was the single example built for the Virginian.

To increase the size of the firebox, the 2-6-6-4 and 2-6-6-6 were developed from the 2-6-6-2. This permitted larger drivers and higher speeds, so that the main problem is to get enough weight on the front engine unit for stability. The front engine unit in these locomotives is inclined to "hunt" and the stability is not too satisfactory at high speeds.

In 1928, the Northern Pacific ordered the first 2-8-8-4 type; all have been built as simple engines. These were improved 2-8-8-2 types, with somewhat better firebox conditions, and proved very successful for bituminous coal. However, the most outstanding 2-8-8-4 locomotives were the Cab-forwards built for oil burning for the SoPac. [In spite of the fact that the leading truck, under the cab, is 4-wheeled, these are still 2-8-8-4s, as the numbering runs from the front of the boiler back through the firebox and cab.] This type was so successful that the SoPac alone had 197 of them, used for both freight and passenger service over the Cascades and Sierras.

The 4-6-6-4 type was originated on the UP in 1936 for its Challenger service. This type was especially designed with the weight evenly distributed on the two engine units; together with the guiding qualities of the four wheel pony truck, this made a stable-riding articulated engine at speeds up to 70 mph. It was adopted for manifest-freight service on many of the Western roads, such as the UP, WP, NP, and, D&RGW, where speed is possible because of easy curvatures.

The Union Pacific's Big Boys are the only 4-8-8-4s built; they are the heaviest steam locomotive engines in the world [except possibly the USSR] with reciprocating pistons and direct-rod drive. Although they weigh 386 tons, with a driving-axle loading of 68000 lbs, they operate easily at speeds in excess of 60 mph. Only 25 were built, for freight service and helper service over the Wasatch Mountains between Ogden and Green River, Wyoming. They have also been used in main-line service over the Sherman Hill between Laramie and Cheyenne, Wyo.

This concludes the general locomotive types. However, there are such items as the tank switcher, usually a 0-4-OT, with no tender, carrying the water in tanks alongside the boiler - hence called a "saddle-tanker". More interesting, though, are the logging engines, designed to operate in either direction over rough, temporary track with grades up to 10 percent and curvature up to 35 or 40 degrees. This called for strictly adhesion engines with direct rod drives from reciprocating pistons and with light axle loads. Three different makes of geared locomotives were designed for this service, using bevel-gear-reduction drives that gave excellent adhesion and flexibility - and very slow speeds. The Shay had two or three vertical cylinders mounted on - usually - the right side, with an offset boiler, driving a jackshaft through conventional crankshafts, much as an automobile engine does. This shaft passed, through flexible couplings - which had horrible maintenance problems - to two or three 4-wheeled driving trucks, which it drove through bevel gears. As the tender was usually included in the driving truck set-up, these would be 0-4-0-0-4-0-0-4-OT [indicating three drivers with no intermediate trucks (and I know it isn't logical to call the articulated as 0-6-6-0, except that in the Shay, we have three driving trucks, all coupled to the same drive rod/shaft)]. The Heisler is similar, except that it has two vertical cylinders, one on each side, forming a V under the boiler - like a V-2 engine in a car. The Climax used a pair of more conventional cylinders, inclined lengthwise, driving a set of gears that drove the jack-shaft.

Which should settle the locomotive question. Now for some other railroad terms, more or less as I come to them. A "string of varnish" refers to a passenger train, dating back to the days of varnished wooden cars. "Reefers" are not for smoking, but are refrigerated fruit/vegetable cars. A "drag" refers to heavy, bulk freight, such as coal or ore, that is hauled in solid trains on a slow schedule; there is usually no urgency in getting it over the road, so it sits out of the way for the hot-shot manifest freight, with its more valuable merchandise bearing a time value. "Head-end" traffic refers to the railroad cars used for hauling mail and express on passenger trains. To wipe the clock is to apply the brakes - air - so fast that the hand of the air-pressure gage drops to nearly zero. A "board" is a semaphore signal - and by extension a signal in general - as is a paddle. A red-board means a signal set at red - danger/stop. A section gang of course refers to the group of maintenance workers who were responsible for a certain "section" of the line. A "gandy dancer" was a member of a section crew. The track-walker does just that (although often by motor car (the rail type, I mean)) covering daily the track assigned to him, looking for trouble. "Brownies" are a system of demerits, named after a certain Superintendent Brown who thought of the system, assigned for infractions of the various rules; too many, and off you go. "Rule G" says no drinking on the job, or before. A hog is a large steam locomotive, a hogger the engineer of one. The brakemen are known as "shacks", the head shack being the one who rides the front of the train in the engine, the rear shack riding in the crummy (caboose/guards van) with the brains or conductor, who runs the train. Train orders, which give the train the right to be on the road, to operate on a given time table, to meet other trains, etc, are of two general types. Form 19 orders can be passed up without stopping; only the operator at the station has to sign for them. They must not restrict a train in a manner that could cause an accident if the order were missed. Form 31 orders must be signed by the conductor of the train addressed, and by him read to the engineer; they restrict the rights of the train.

A train with white flags (or white lights at night) on the front is running extra; it is not a train given in the official timetables (which include all the trains scheduled, not just the passenger trains, and show times at all stations) but has been created by the dispatcher by train order. One showing green indicates that it is followed by at least one more section of the same train, operating on the same schedule. Thus First 97 would be followed by Second 97; if 2-97 is wearing green, there will be a Third 97.

When is a train a train? This gets tricky. Outside of yard limits, which are established for switching purposes, and where engines can run light or with strings of cars without orders, clearing scheduled trains, a train is defined as an "engine with or without cars, with markers." The last are the lights usually seen on the back of the caboose and on the last car of a passenger train, one on each side, with various red and green lenses. They indicate that the last car of a train has been seen, and that the train has not been broken, leaving some cars on the track ahead.

The matter of dispatching trains is most interesting; I've been reading a lot about it, and about the rules under which it is done. Especially on single-track line, of which a great percentage of American railroading consists. There is very little of the staff system, as used in England and elsewhere on the Continent, where the engineer/driver has to have a staff or other token as his right to the line. In contrast to the English system, where the trains are passed along from one signal box to another, always under tight rein, here the system is to give orders at the stations spaced 10-20 miles apart, directing how the trains are to operate - and hope. Although now the CTC - centralized traffic control - which permits the dispatcher to control distant signals and switches permits him to arrange much of the actual movement at the specified time. This is more flexible. But it has removed the thrill of watching an op handing up the hoop with a train order as the hog thunders by, fireman in-cab door to catch it.

From Here to There and Back Again

One day last spring the boss remarked to me, "Bill, you know that international calorimetry conference Stig Sunner is getting up in Lund for next July? I think some one from our group should go to keep an eye on what's going on in the field. So, I'm putting you in for the trip." This was a small shock, and I wasn't too eager, as it would be just before the Discon and thus interfere with any extended plans for leave in Europe as I'd hoped to do. But, I agreed, and the papers were started. Approval by the division chief. Approval by the Director of the Bureau. Approval by the Department - Office of the Secretary. Approval by State. Approval for security clearance. Application for passport. Vaccination. Shots. Reservations. Travel plans. Where, how, what, when. One of the other fellows from the lab was also going, and suggested going by ship. This sounded interesting. If there were time.

Finally I came up with a compromise travel plan. Going over by boat, as I could get away from the office early. Flying back, so that I could take a week or so in England after the meeting. And still be back in time for the last push on the Discon. Then came the problem of what ship on what line. In the government there is a rule that you have to use a US line - airmail sea - if possible. Fortunately, there was no US line going to Scandinavia at the right time. So, we had our choice of Dutch, Swedish, etc. As it turned out - or at least as the travel people came up with - the only ship we could take, and still get there in time for the meeting, but not arrive too early (and thus collect too much per diem), was the M. V. Westerdam of the Holland-America Line, sailing from NY on July 6 for Rotterdam. This was both good and bad. Good, in that it was a one-class ship, which meant a much more informal atmosphere, and much less dressing for dinner, etc. Bad, in that it arrived on July 15.

At last, everything at the office was caught up for the month I'd be away. I'd passport - a special passport for government travel, not the regular one - camera, dutch, Danish, Swedish, and English money for routine use, and packed things down to one medium suitcase and one briefcase - after all, I was flying back. So, on the day after the 4th, a Friday, Joe drove me down to the Union Station, and I was off. First stop New York, where I was stopping overnight, as we had to be on board by no later than 11:30 AM for the noon sailing. I was going up a little early, to do some shopping, and Walt was coming up in the evening. The usual Penn RR trip to NY - interesting, as it had been a couple of years since I'd been over that line and there were some changes along the right of way - and into the Hotel. Which it turns out gives a special government rate to civil service people who preregister. Called Langley Searles, and arranged to meet him before he went down to teach his evening class at NYU Washington Square. Before, I went up to Radio City to get my British Railways pass - a real bargain if you plan to do any travelling in the British Isles. You can get it for from 7 days up, at so much per day, either first or second class, starting at any day you want. It is good for unlimited travel on the British Railways lines, except for a few extra fare trains. For these you have to pay the supplement. But, you must get it before arriving in Britain. Recommended. While getting this I found another unpublicised ticket that really intrigued me - an unlimited 7 day pass on the London Transport lines - Underground, Central Area Buses and Trolleybuses and Country Buses, except for Green Line Coaches. For the sightseer in the London area, this is wonderful, as you can get on and off and change direction as much as you want. And for anyone who wants to ride the Underground, it is almost a necessity. For the fans going over for the 65 con, I recommend these - which must be obtained early, before leaving the States (or Canada).

Anyway, after a long chat with Langley, some more book shopping, dinner, and some wandering around Times Square, and other interesting places I'd not been to for some time (plus riding a little bit on the BMT over the lines I'd not happened

to have covered before) I hit the hay - Walt had checked in earlier, and we'd gone out for a bite to eat and a drink.

The next day we got up, went shopping for a pair of shoes for Walt - he'd a new pair that were hurting him and needed another pair - picked up some film, and then taxied to the pier 40. This is a new, modern pier, so new the cab driver didn't believe it. He could drive up to within 100 feet to the ship - right outside the loading area. This was almost empty this day, as there was only a small passenger list. We checked through immigration, turned in tickets, and walked aboard.

The M V Westerdam is not a steamship. It is a motorship, driven by diesels. It is actually a combination freighter/passenger vessel of 12000 register tons, 19500 tons displacement. It has capacity for about 140 passengers, but the main item of business is the freight; it provides a fast, scheduled freight service, with incidental passenger facilities. It was built just before the War - WWII - and was sunk twice, once by the Germans before it was completed, and then by the Dutch after the Germans raised and completed it. After the war it was again raised, and placed in service. It is due for replacement in a couple of years, we were told; by modern standards it is old-fashioned, and lacking in many of the latest gadgets, like air conditioning and stabilizers. Being only one class, though, means that the passengers have the run of the ship, with nothing off-limits to a part of the passengers. With 110 passengers, as we had, there were enough so you didn't have to associate with the bore, and yet could get to meet most of the travelers.

Our cabin was on B-deck, the second or lowest cabin deck. A-deck had the dining room and Purser's office. Above this were the Promenade deck, with Lounge, Bar, writing room, smoking room, and games deck, and the boat deck, with the officers quarters, and the sun deck, aft of the bridge. It - the cabin - was small, but contained two beds, the upper a pullman type, bath with shower, wardrobe, dresser, and easy chair. Adequate, but we could have had a better cabin if the travel section had picked up our reservations earlier.

Sailing was delayed after 12M; one of the longshoremen had been left behind in the hold, and they had to check into the matter. Finally, though, we backed out into the Hudson, and headed out to sea. This was when we hit the roughest part of the trip - we crossed the wake of one of the Staten Island ferries. Out past the Statue of Liberty, which isn't that big, but is still impressive, and into the passage around the tip of Long Island along the NJ coast. Finally, we were in the open sea. This was about dinner time.

Meanwhile, Walt and I had signed up for the second sitting at dinner, and obtained a small table. We could have had the Chief Engineer's table, but picked one that gave a view on the bow and the ocean. Our table companions turned out to be a German MD, who had interned in the US - on the east coast - and his American nurse/wife, who was very pregnant; they were going back to Germany to set up his practice. The fifth one - why, I don't know, but instead of the usual four we had and extra single added - was a New York City teacher who was going over to Europe to visit her married daughter and husband - plus grandchildren - stationed in Germany with the army. She was somewhat of a bore, as she could talk only about how better everything American was - and how well she could do at the PX. I had the feeling she wouldn't really see Germany, or appreciate it. We did enjoy the Herr Doktor and Frau.

Needless to say, we also investigated the bar. It was small, and cozy. There developed a regular group of evening patrons, including a good part of the officers. There were times when I wondered. There was the Captain and Chief Engineer and Second Officer drinking Dutch Gin and Boer; at the same time the officers steward was coming down for the same for the other officers. I wondered who was running the ship....

Food on board was pretty good - in the hearty Dutch style - and wonderfully varied. Breakfast was very simple - only about 6 kinds of fruit, half a dozen cold and two hot cereals, fish, cold and hot meats, eggs in all sorts of ways, hot and cold breads, coffee, tea, milk, postum, chocolate, etc. Lunch and dinner offered more choice. Starting with soups, relishes, fish, roast, meat, salads, vegetables, pastries, desserts, fruits, and beverages. I managed, by severe limitations on my choice, to keep from gaining more than a few pounds.

The trip over was a dream. The weather was mild - warm, but not too much so during the day, and cooling off at night. Evenings on the boat deck, watching the foremast gently swaying to the slight pitch as the ship slogged its 18 knots through the gently rolling swells, with the mast light making a bright tracery against the stars - and this was one place where you could see stars, with no city lights, and the only smoke that blowing aft from the single funnel - and the light, cool breeze, lightly laden with salt spray, tingling against your face - these are among the best memories of the trip. Or the nights when we were pushing through a mild haze, not heavy enough to be called a fog, but enough to blot out the horizon, and still leave the stars overhead; the stray tendrils of mist curling around the hoists and booms over the No 1 and 2 holds, with an occasional golden glow as someone opened the forecastle door; the almost clammy feel of the wet wind, dampening shirt and hair..... Or again the moon halfway in the sky, sending a silver path over the wavelets, bouncing back and forth from the thousands of small ripples, until the smooth ocean looked as broken as ground glass; the wake catching the light and showing as a broad band of glowing cold fire stretching behind for miles..... These are memories that I retain.

The daytimes were a time for relaxation, of walking round the dock, of playing shuffleboard and bridge, of Scrabble (in German, the only common language we had - Dutch, English, American, Swedish). Watching the ships that passed - including several of the sailing ships on the America to Ireland race. Or, about 2 days out of the channel - Channel, I mean - meeting the SS America, which had sailed from New York for Southampton and Le Havre the day before we did, on her way back to New York. Finally, on Sunday afternoon, July 14, we picked up the Southwest tip of England, swung into the Channel, and picked up traffic. We were on the last leg of the trip.

Early the next morning everyone was up, watching the ship dock in Rotterdam. Before we docked we went through customs and immigration. Finally, we were in, and down the gangplank, to claim bags and check through the actual customs. I didn't have to open a bag. That was the end of a restful, relaxing, enjoyable cruise. From here things picked up in tempo.

It took us an hour to get a cab. At last, we snared a Mercedes 180D, and more than the legal number piled in for the Railroad station. On the way I realized we were in a world where they still were convinced of the utility of the streetcar. So much so that they ran them in trains of four or five for suburban service, as well as two car units for city service. At the station, we picked up tickets for Amsterdam and climbed aboard the interurban electric railcar trains. As I remember, ours was only 4 units; some of the expresses for further places were up to 10 motor/trailer trains, all run from overhead pantograph. Fast, clean, and quiet. We rolled through the Dutch countryside, which looked like a prosperous farmland, with small farms, and few cars, but many bicycles. And only a few windmills, which are kept as souvenirs. [A story has it that in the Catholic areas of the Low Countries and Scandinavia, the windmills are stopped with blades vertical and horizontal; in Protestant areas, they are stopped at the diagonal....]

We arrived at Amsterdam in about 50 minutes, hiked a block to the Hotel Victoria, where we were able to get a room for \$42 + the overpriced 15% service. [A custom I wish American hotels/restaurants would adopt; it eliminates most of the outstretched palms, and makes for better feelings. But, with American bell-boys...]

After lunch we shopped a time - the bookstores have obvious tourist - American type - bait, with various nudes and sex books that can't be found even in New York openly and which might cause trouble if you tried to bring them back. Then we took a trip through some of the canals on one of the special canal excursion boats, with a spiel in Dutch, German, French, and English - the latter three much abbreviated, and with some differences, as I picked up from the German and English. It started to rain about then, which cut down on picture opportunities, and I never did get to ride the streetcars, although they did have a lot of them. Old and new, single and motor/trailer and multiple units. I want to go back and spend some time on those lines.

For dinner we went to "De Port van Cleve" an old restaurant/hotel, well recommended for its steaks. The prices were high - f6.60 for a steak, plus f0.60 for coffee +15% - until we converted it. This came to about \$2.50 for a full steak meal, served in the Continental tradition, with plenty of food - almost too much - and good. They had steak in about 15 different ways, with various garnishes and sauces. Nothing like the standard American steak house, with its broiled cuts, with the standard baked/french fried potatoes and tossed salad. [Salads were the hardest thing to find in Europe.]

We wandered back to the hotel via the red-light district. Amsterdam has the most open district in Europe now, much more so than the Roppebahn or any other major city, except possibly in the Mediterranean ports. We weren't interested in sampling the wares, but were interested in the sights. It was still early, so things weren't in full swing, but the girls were out in force. Here there is none of the subterfuges found in the other cities - there are houses with a large front parlor window, with draw drapes. The merchandise sits in the window, with discrete lighting; in one corner of the window, or on the doorway, is a red light - yes, this is a real redlight district - as an advertisement. When there is a customer, the drapes are drawn, indicating the girl is temporarily occupied. Of course, there were the perambulating competition, the girls who were trying to pick up customers on the front steps or along the sidewalks. And this is only a couple of blocks from the main shopping area of Amsterdam - at the far end we had only one block to walk to the hotel.

The next morning we caught the train for Copenhagen. This required a change to the through train at the German border, and through a foulup of the reservation agency, a change to a through car before the ferry from Germany to Denmark at Puttgarten. The run to the Dutch border was behind a B-B electric locomotive [two pairs of powered trucks]. There, the DBB put on a streamlined heavy Pacific, which rambled along well at better than 110 km/hr. It felt good to ride behind high-speed steam power, with the smell of coal smoke and the pound of the drivers on the rails, the hiss of the steam and the watery gurgle of the steam whistle instead of the standard air horn. All too soon, we reached Hamburg, where a sleek Diesel was hooked on. The main line trains of the European roads are first and second class, with compartment stock with aisles on one side, and sliding glass windowed doors. The first class have three seats per side, the second four, with less plush seats and no arm rests. All compartments are either "rauchen" or "nicht rauchen".

We shared a first class compartment with two German couples. Customs was easy, although one of the Germans had some coffee and had quite a discussion with the inspector as to the amount of tax. [A word of warning; the only two things the German customs seem to care about are tobacco and coffee/tea, especially the coffee.] The ferry, on which the rail cars were run for the hour and a half trip, offered a real smorgasbord during the trip. Plus the last chance to buy liquor and cigarettes tax free until we left Scandinavia. So, we each picked up a couple of fifths as presents for Swedish friends - liquor there is even more expensive than in the state monopoly states here. And had dinner.

It was just dusk as we pulled into the Copenhagen station behind another electric locomotive. Coming out of the station, we strolled over to the Hotel Terminus, where we had reservations. Being willing to go first class European, we hadn't asked for full bath, and so had only wash facilities - very ornate, with a nice wash basin and hot and cold running water, all in a wardrobe type built-in closet - plus the standard chamber pot. The bath and toilet were down the hall. This hotel had something extra added - you had to pay, in addition to the 15% service, a sko-bag charge or the charge for the boots who polished the shoes placed outside the doors. As this was added, whether used or not, we used it. After cleaning up a little, we went out for a stroll through the early evening in the center of Copenhagen. The Tivoli was at hand, but we didn't feel like spending too much time there then; after all, Copenhagen wasn't too far from Malmö or from Lund. So we strolled around, had a beer in one of the sidewalk cafe's, and ran onto another of the fellows from the Lab and his wife. They had been in England and Ireland for a couple of weeks, at earlier meetings, and were on their way to Lund. The hotel had conveniently forgotten to deliver the message we had left for them - or the one they had left for us. But, we met them on the street. This led to a rather long evening, but not very wild (what can you do with a wife along?).

The next day I went out strolling around, looking for books, with little luck, until about 11; we checked out of the hotel and cabbled to the ferry to Malmö, which we thought left at 1215. It left at 1200 and we just skinned on board. I actually blocked the gangway while Walt dashed for the tickets. Here we relaxed with a beer and a small smorgesbord. It is about a 65-70 min ride from the Danish shore to the Swedish. More customs, and a look around the old town of Malmö, with even the streetcars of the older pattern. Walt had been over a couple of years before and knew a little Swedish - but when he asked for directions, we ended up getting them in English. Here I bought my only major purchase - at least the only one that was declared or that I brought with me - a Rolex automatic waterproof wrist watch. Living in Washington has made me incapable of paying the list price for anything; I'd shopped in Copenhagen, and been quoted tax-free export figures, with some way of getting it out of the country. In Malmö the dealer quoted me the same price with no questions of where I was going. Then, as I was hesitating, he pulled out a last year's model, at a savings of some 25%. It was a plain, stainless steel case, with luminous dial, self winding, waterproof, chronometer checked. At the price of some 375 Scr, I was hooked. So far as I know, these are the only waterproof watches - this is guaranteed to 20 meters pressure - because they don't rely on merely a packing gland on the stem. Instead, the stem screws down on a seat, pressing a gasket against the edge of the case. They even make a model with a double seal good for 200 meters, designed for skin divers. I'm happy with the watch, even though the customs inspector in New York looked a little doubtful when I showed him the sales slip.

After wandering around for a couple of hours, we went back to the station and caught the electric interurban for Lund, some 17 km away. All the main line trains north go thru Lund, and there are frequent railcar services, so you can get from Malmö to Lund and back at almost half hour intervals. We clambered aboard, the electric cars pulled out, and after 20 minutes and several stops we pulled into the college town of Lund. A cab took us to the Hotel Ulrikedal - which is really a student dorm used in the summer for tourist and University visitors. Rates here were real low - so low I don't dare let the Audit people at the Bureau know, or they'll chop my per diem - 14 Scr per day, or \$2.80. Nice, plain rooms with toilet and washroom; bath and shower down the hall. Arriving, we were met by the reception group from the conference, including, by chance, the organizer, Prof Sumner, and work had started.

Lund is an interesting old town. It was founded about 1020 by the same Cnut - or Knut, as the Swedes have it - who caused so much trouble in the British Isles. In fact, the town is named after the more famous Lund, better known as London. It is a small town, dominated by a large cathedral, built 1123, and restored in the 1800s - and being restored again. I was tempted to quote the tourist pamphlet but it might not be appreciated - I'm not sure how many can read Swedish. It is quite an impressive sight, especially in the rather small town - of about 40000 when college is in session. And, as is usual in Europe, it is so placed that it is almost impossible to get a good picture. The University of Lund was founded in 1668. It is one of three state universities in Sweden, and has about 7000 students. It is building new facilities as rapidly as most of the American colleges - new dorms and new labs and new classrooms. The Thermochemistry Lab has just moved into their own building - which looks like a medium sized, two family house from the outside. I was very impressed.

The general impression of the town was one of bustle - but not of hurry. There were fewer cars; those that were around drove on the wrong side of the road, making the Britishers at the meeting feel at home - except that the driver was on the wrong side for them. Sweden is the only other country in Europe that drives on the left; they plan to change to right hand driving on Jan 1, 19 65 (I believe), so all new cars are left-hand drive, but still driven on the left. It means that both the Americans and British didn't feel really at home in traffic. Another very noticeable fact was the car the Swedes took about not mixing alcohol and driving. We were invited to dinner a couple of times; the host picked us up in his Volvo very nicely. During, before, and after dinner we had some drinks - Scotch before, wine with, and liquors after. When it was time to go, our host called a cab. He didn't dare drive, even with only a couple of drinks. If he had been picked up for any offence, or had any sort of minor accident, he would have automatically been tested for alcohol. If over the limit - and one beer is just brushing the limit, one shot is too much - he would have been fined 1/12 of his year's income. A second offense would mean jail - no ifs, ands or buts.

Maybe this explains the large number of bicycles around. (I don't know what the law on drunken bicycle-riding is) Not only young people, but older men and women rode blithely along; the women had skirts flying and they vigorously pumped the pedals, but seemed to not notice it. Young mothers would have junior either perched in the basket on the handlebars, or in/on the luggage rack behind. Or both. Maybe that's why the Swedish girls are so healthy looking.

The meeting was a great success. Not because of the papers - I'd read a lot of them, and knew most of the material - but because of the discussions, formal and informal, with the various specialists from over the world. There were no attendees from the CCCP - although the purpose of holding it in Sweden was to make it easy for them - but there were four from Romania. And some from France, Italy, Spain, Netherlands, Belgium, England, Ireland, Scotland, lots from all over the US, Canada, and of course Sweden. I had the job of chairing one of the discussion sessions; it was fun, and did give me a chance to put in a few "well-chosen" remarks, and get a few things said that I've felt needed saying. Then there were the people from the States I hadn't seen since the last meeting, two years before, in Canada. The evenings provided a chance to become better acquainted with others; I feel now that I could certainly go visiting in a number of areas and have someone to stop off and at least drink a beer with.

The meetings opened on Thursday, ran through Sat morning, recessed til Monday and continued through Tuesday. There was a dinner - Smorgasbord, naturally - Friday at an old inn some miles outside of Lund, complete with drinks, toasts, etc. [And when the Scandinavians "Skål" it means drinking; during a small party, the host skåls everyone else, and they in turn do the same - except for the hostess, who isn't supposed to drink too much.] The drive out was through the countryside, and I found

it a beautiful sight. The back roads wound through the fields, which were just coming into ripeness and up some of the hills, giving wonderful views over the valleys - which really aren't valleys, but broad river plains. It was the kind of country that made me - and makes me - want to get out with a bicycle or a car, and just roam. In many ways it reminded me of parts of Ohio and Indiana - the sections with the gently rolling hills, the small valleys, and the green fields of grain, but not the endless type found in the mid-western plains. I like Sweden.

Except for the weather. Sweden is north. We were told it would probably be cool, and might rain. So, I believe everyone - even the Britishers, who should have known better, but didn't - came with warmish clothes. Not overcoats, or anything like that, but spring-weight pants, sport coats, ordinary shirts, and such. We found it was warm - or, rather, hot. Even the Swedes admitted it was a little warm for the season. It reminds me of a conference several years at Berkeley - on High Temperature Properties, the same general field, but higher temperatures as this - in which the first day was hot. The second was over 100. The third was hotter. It was interesting to note the way coats and ties disappeared. The first day a few brave souls took off their coats (like me). The second almost all coats had disappeared, and some ties (I was wearing a sport shirt by then.) The third day sport shirts were in the majority. It was so bad that the natives were profoundly embarrassed. That conference lived up to its name, weather-wise. Likewise, Lund was trying its best. The usual explanation was "This is South Sweden; wait until you get north." [It ain't true.]

Sunday, excursions were arranged. One of the popular ones, on which a whole busfull went, was a tour of some of the Chateaux of Scania. Scania is the southern part of the Swedish peninsula, pointing at Denmark. It used to be Danish, but was captured by the Swedes in the 17 or 18 century - I'm rusty on dates. Anyway, there are a number of Chateaux scattered over the province, mostly built after the change of ownership. They are not castles or forts in the older sense; they were built as replacements for the fortresses that were destroyed in the Danish-Swedish wars, and used as manor houses. The trip started from Malmö at 9.30, winding through the countryside - and I'm sure our driver took some extra back roads just to show off the beautiful countryside. There were the clean, green and gold fields, the woods of hardwoods, with lots of birch and alder, and notable for the lack of heavy undergrowth, and the vistas over the wide valleys, with the summer haze hanging in the air, giving that special glamour that defies the picture - the luminous glow, the shimmer that blurs gently the distance in a blue mist. Then came the chateaux - Skabersjö, more a working farm, Torup, with some beautiful formal gardens, bursting with flowers, Håckeberga, Kragholm, and Tosterup. The route then turned towards the sea, and I saw the Baltic. We ran down the coast, through the farmlands, and noting the bunkers dating from the days of WWII of the coast defense; I understand they are still kept ready, and can be manned in minutes. The coast swings south, running around the bottom of the peninsula. Lunch - the overpresent smorgasbord - at Löderup gave a view of the water, with bathers and coastal shipping further out. This seemed to be typical of many of the beaches - no facilities for dressing, other than some large clumps of beach grass. Amazingly enough, this is enough.

The next stop was Ystad, a small town with half-timbered houses, some the oldest in Scandinavia, and a 750 year old church, restored in 1925, that is fine, but very typical. Much more interesting was the church at Tosterup. This was begun in the 11th century, and enlarged and enlarged and built essentially in the final form in the 1500. This was Tycho Brahe's estate; he is buried, I believe, in the church graveyard. Inside it was small, with whitewashed walls, a beautiful pair of hanging candleabra, some rough carved wooden screens - that would make any museum director happy - and an air of tranquility and reverence the church at Ystad, a tourist attraction - lacks.

Anyway, adjacent to the St. Mary's Church there is a museum, ranging in scope from stone age to early 19th century handicrafts. The latter were among the more interesting - especially as the labels were all in Swedish. From the museum we strolled around the city, and were shepherded into a hand potter's, where we were given a demonstration of throwing on the wheel - and also a sales pitch. No one fell. The guide seemed a little disappointed. From here we went on to Trelleborg, to visit the Axel Ebbe Art Gallery. Ebbe was a noted sculptor, and replicas and early models of many of his statues are displayed here. The setting is a two-story square building, with a fountain and lily pond in the center of the main floor, and the gallery upstairs for the smaller works. Some of the work was very good; a couple I would have liked to have had, and a couple would have been hard to get past the customs. But in good taste. And on display in Stockholm, I believe, in one of the big parks. Finally, back to Malmö, with a stop for a restored windmill - they have them in Denmark and Sweden, too - and on to Lund, arriving back about 20.00. A very enjoyable trip, covering a lot of the Scania - Skåne - province, and seeing some very interesting areas.

I nearly forgot one ruin. On the way back we detoured to the ruined castle of Månstorp, which was destroyed in the 1530s during the Swedish-Danish wars. It is being restored slowly, but is still pretty much a ruin. It was interesting to scramble through the walls, with the gaping holes, in spite of the 8-10' thickness, and to speculate on the smallness of the castle. I had never before realized just how small many of the castle-forts were. I don't think there was more area than in a medium two-bedroom rambler, with less on the second and third floor. And I'd guess it was cold and damp there - with a moat and boggy ground outside, and no type of heating except fireplaces.

Finally the meeting was over. Early Wednesday morning I taxied down to the station to catch the "Skåningen" for Stockholm. This is a deluxe electric powered express from Malmö to Stockholm, making the 617 km trip in 6 hours and 20 minutes. Fortunately there was a buffet car, serving "Varma och kalla rätter. Smörgåsar, wienerbröd. Kaffe, te, choklad. Mjölk, pilsner, porter, läskedrycker." So, I was able to get some eggs and sausage and toast and coffee for breakfast.

We arrived at the main Stockholm station, suburban and main line, below street level, on time. I walked over to the hotel, the Hotel Continental, with everything plusher and more modern than anything I've found in the states, and a price, for a single of only 41 Skr, including service. In the US large city, this would be a \$15 room.

After checking in, I took a cab out to the Royal Institute of Technology, where I had a long chat with several of the people in the chemistry department who were working on the determination of formation constants for metal-ammine complexes. The buildings are older, and give that impression more because they are in the older style, to harmonize with the old buildings. However, it is a modern unit in its attitude and work, in spite of the limited facilities. Leaving here, and dodging showers, I went back to the hotel, and then out for dinner and a little sightseeing. I strolled along the streets, looking at the shop windows - the stores were closed as it was after 6 - and listening to the people. Stockholm is a big city, and a modern city; there is very little of the feel I found in Lund or even in Malmö. After a nice dinner, in which I managed to figure out most of the menu without help, I inspected one of the Underground stations, looked over the main station - and went to bed.

The next day I had figured out the bus system enough to get myself and bags to the airport terminal - which is several miles from the center of town. It would be like having to go to Hollywood to catch the airport bus from downtown LA. From there I managed to get back to the Institute, missing riding on the streetcars, but getting some good pictures, as well as of two of the suburban systems - all juice.

After a fruitful conference with the director of the project on the compilation of data on the complex compounds, he drove me to the air terminal. Here I caught the airport bus, for a ride of some 40 km, out through the countryside, and over numerous detours, where there were new roads being built. At the airport, I sneaked an unofficial weigh of my luggage, finding it a couple of kilos over. I took out three or four books, and checked in with them under my arm - and with exactly 44 lbs - 20 kilos - of baggage. Here I found out that the direct flight I had booked on to London had been canceled, and that we were taking a Trans-Atlantic flight to Copenhagen, changing there. So, I wended my way through the checkout, the immigration service, letting me out of the country, and collecting the airport tax of 10 Kr, into the loading area - the section of the waiting room for passengers in international travel who had been checked through. It was hot and sticky. Finally, we boarded the plane, and waited until the departure time of the canceled flight, to make sure all passengers were aboard.

The flight was unimpressive - it was very cloudy, and nothing much could be seen. Denmark was rainy, and we landed in a brisk rain at Copenhagen. Here, at least, I didn't have to go through customs - just wait around in the international area, where I could have bought all sort of tax-free items, if I hadn't been going on to London. Finally, after about an hour, our flight was posted, so we dashed out to the gate, to wait another half hour in the sultry, steamy heat. When we finally got aboard, the plane was crowded, and hot. At last, though, we were off, and flying down the coast. The weather cleared somewhat when we crossed the channel, and I did get a good look at the checkerboard of England. Then, I began seeing the huge sprawl that is London. I knew London was big, but I had never realized just how much area it covered. It makes a very impressive sight, located as it is in the midst of green fields and farms - much more so than Los Angeles, in the midst of a desert.

Customs here was easy, but the immigration had something added - a health check. It seems that there had been an outbreak of smallpox in Scandinavia, and all passengers from there were duly noted, with local addresses, and given a form so that if they became sick for any reason, the doctor would notify the health service. [It seems that smallpox is giving younger doctors in the States and the civilized parts of Europe, like England, trouble; they have never seen a case and don't recognize it.] Then, into the bus, not a double decker, but an up and down split level, for the run to the air terminal. This was apparently the older one, as it was too small, and taxis were at a premium; finally I got one, and drove up in style to the hotel, over near Kensington Park.

The London cabs fascinate me. They are uniformly black, and mostly square. The driver sits in his little cubbyhole, which takes up only the right half of the front seat. The left has a sort of shelf, on which luggage is placed, and held in position by a strap. Inside, you sit back, behind the windows, as the driver plunges headlong into the madness of traffic around the Marble Arch. I recommend riding one of the older ones at least once; it is a part and parcel with a trip to London. Just as the Paris cab is supposed to be. Of Paris trips, I mean.

The hotel was new, quite American in furnishings, and for London rather high. It had a dining room, where I had several meals; the food was up to the standard of English cooking, as I had been warned - uninspired. The beer, though, was a different story. In Sweden I'd gotten used to drinking beer at room temperature - or at least at cellar temperature, and liked it. The English beer, and the heavier porter and ale, when mildly cool, are a wonderful drink. They make up for a lot of the sub-standard cooking.

After I'd had a bite to eat, and a wash-up, I strolled across into the famous Kensington Park, mentally comparing the way in which the lawn chairs, casually spread around, were in relatively good order, which they would not have been in most US parks. I found the pond, on which small boys sail innumerable boats, and ducks and geese make themselves at home, and wandered on across until I came upon a monument.

I can't describe this. It has to be seen to be believed. It is the Albert memorial, and is the perfect example of a Victorian monument. I'd guess that there is enough material in the memorial to make several respectable monuments, which might be more impressive. However, it does have a fascination.

Facing this is the Royal Albert Hall - familiar to me through the many recordings that had come from there. I noticed on the hoardings that there were a series of Promenade Concerts the next few weeks; it would have been nice to have attended one, but I just didn't feel I could spend the time.

So, I strolled back through the gathering dusk - it gets dark late in the summer in these high latitudes - luxuriating in the coolness, after the heat of the Scandinavian area. And marvelling when the hall porter mentioned how warm it had been that day. Little did I know.....

The next day I started becoming familiar with the Underground, I never did get down to Barking and Epping, or across to New Cross, or Morden, but did manage to ride at least once on each of the lines - Central, which went by the hotel, Bakerloo, Northern, Piccadilly, Circle, District and Metropolitan. I never got around to the Waterloo and City, unfortunately. The different lines have a definite character of their own. The Metropolitan and District (which is the old Metropolitan District), and the Circle, which is made up of the circle route of the two former independent companies, were originally built just 100 years ago as steam-operated lines. This, of course, required as much ventilation as possible, and so they were built by the cut-and-cover method - as used on parts of the New York IRT - just below the streets, with as much running in deep cuts as possible. Only where they go under buildings or streets are they covered. This, of course, means that the stations can get wet in the rain. It does make an interesting sight, standing on a platform, to watch a train emerge from the tunnel entrance in the massive brick wall. Much of the brick work is the original construction. As these lines were built for standard steam stock, the cars used are high, big monsters with square sides, and little awnings over the windows. Some of the extensions, though, are of standard tube clearance, and it is a study in contrasts to see a tube-stock train and a District or Circle train in the same station; the tube is dwarfed.

At least a part of the Metropolitan, the Hammersmith line, runs on elevated structures until just before it reaches Paddington, offering an opportunity to look in the second floor houses. In Paddington the station is on the upper level, higher than the main line rails.

The tubes, which are just that, run much deeper - in places I'd guess at least 100 feet down. They were built for electric service only, and had to wait until the tunnel shield was invented before they could be built. Only the tubes go under the Thames. The tube stock is designed for the tubes, and is built with curved sides so that it fits as closely as possible. In the outskirts, the lines come to the surface, and run on the level, or in shallow cuttings, with no level crossings. All lines of the system, shallow and tube, are two track; in the tubes each line has its own tube, coming into the open only at stations - which in themselves are larger tube segments.

All trains are multiple-unit, usually of two or three units permanently coupled, and in turn joined into 6, 8, or 10 car trains. Two unit sets are usually a motor and a control trailer, so that each pair can be controlled from each end. In the central area, there will be trains for at least two destinations running in each direction, often with numerous cut-backs, trains stopping short of the farthest stations. There are no expresses; each train makes all the stops. And, in rush hour, headway is tight. I have watched a train disappear into the tube leading from a station, and turned to see the markers of another coming out of the tube into the station. Timetables are figured to the 1/2 minute, and headways are often to no more than 45 seconds. Which requires tight signalling and close control.

To anyone familiar with the New York subways the marking of routes, directions, and system maps in each train would come as a welcome relief. Each car has not just one or two, but a whole series, running the length of the car, along the upper space over the windows, showing the particular line the car is used on, with each station and all the interchanges with other lines. In addition, each line has its characteristic color, used in all system maps - red for Central, light brown for Bakerloo, yellow for Circle, etc. All cars also have the whole system map, in color, in at least two places. Indicators at the major stations show what the next train's destination is, and often the one following. Exits and entrances are posted, with arrows pointing to other lines. All in all, quite an easy system to get around in.

With a pass I didn't have to worry about the ticket system, which would be confusing to an American used to the single fare system used in the New York and other American systems. This makes for some confusion, as everyone has to stop and purchase a ticket - either from the ticket window or, at the larger stations, from machines that take 3d, 6d, or 1/- and give tickets good for certain stations. In the usual continental system, tickets are surrendered on leaving the train/station. It is possible to thus ride free - but the penalties for so doing are a little expensive.

One item that would shock the New Yorker is the fact that the Underground doesn't operate 24 hours a day. The last trains run about 12:30 or 1:00, with no service until about 5:30. This makes maintenance easy, but means that late parties are a much more serious matter than in NY. If you have much of a trip, you have to leave early - parties tend to break up before midnight, with a fast run for the last train. There is some owl surface service, but it is slower and less convenient.

Anyway, I started riding the underground lines as soon as I got in to the city, in between shopping, and making like a tourist. I was looking for books. Unfortunately, London seems to be rather barren of medium-priced second hand book shops, or at least of any I could find. There are lots with really old books, and learned tracts, but almost none with stocks of modern and recent fiction. [The only shop I found that had much of anything was in Salisbury.] And used magazine stores or used pocket books are an unknown thing. I did do well in both stamps and coins, filling out a number of ~~the~~ I'd been looking for for some time. This took place throughout the next week of shopping days. Of course I also made like a tourist, doing some of the special sights.

Among the special sights was an apartment out in NW6, on Albert Road. I got a call from Ella Parker the evening after I got in, while I was trying to figure out the London phone system. So, out I went, via Underground of course, to 43 William Dunbar House, to visit Ella and her brother in their new apartment. I wasn't the first American visitor to the new place, just the second. I was there for several evenings, meeting a passle of London fans, plus some of the auslanders. Ken Hesling was staying there for a few days, and there were a couple of meetings of the London SF Club where such people as Ted Forsythe, Atom, Ethel Lindsay, and a bunch of others whose names I can't remember at the moment - and my apologies to them - were. Anyway, Ella and I had a lot of fun talking over that trip back from Seattle, looking at the pictures of her trip, discussing the London Con, and other chitter-chatter. I also had a chance to compare English television with American. It was a draw, I feel. In fact, I think the English is a little better - the ads are somewhat less repulsive. I had a chance to watch cricket - England vs West Indies - and see just what those funny expressions "lbw", "crease", "stonewalling", and other esoteric terms mean with actual examples. It was interesting - and no more incomprehensible than an American baseball game would be to a newcomer who had merely read references in the fiction of the country. Some time, when I get back, I'm going to have to actually watch part of a match. Next will be rugby and "football".

For that Sunday, Ella had arranged an expedition to the City of London - which is not the same as the city of London. The City is the financial center of the city, and has its own police, etc. So, about noon we met - all but Ella, who decided to stay home and iron - at the Wall at Moorgate station, where there is still a part of the original city wall carefully preserved. I can remember Ted Forsythe, Ken Cheslin, the Varleys, Ethel Lindsay, and a couple of others. We set off, rambling along the empty streets - Sunday or maybe Saturday afternoon is the only time you have a chance to be casual here - to the Guildhall, which has been pretty much restored from the war damage. Quite an impressive building, with some interesting statues - including one of Churchill - and in the pavement of the main hall the markers for the yard, rod, and chain. I don't know if these are the original standards, but they were certainly used for standards purposes. From there down to the Bank of England, past the Royal and Stock exchanges - not quite as impressive as the NY Exchange building - past Lloyd's, across Cannon Street, and to the Monument - to the London Fire. From here along Lower Thames street, along the Thames, under London Bridge, past the Billingsgate Fish Market - quiet and empty, but still with an aroma proclaiming its purpose. Next was the Tower.

Here we found the Tower closed, with handbills stating, and I quote in full.

Sorry We're Closed
by TREASURY OBSTRUCTION

All Museums and Galleries are closed because of a 12 month old dispute between the Treasury and the Civil Service Union on the pay and hours of Warders and Attendants.

THE UNION'S CLAIM

Reduce hours from 48 to 42 per week. 25s. per week increase to give a maximum of £12 per week after two years.

THE TREASURY'S OFFER

A reduction of two hours (the first reduction in 31 years). No pay increase at all (last increase, April, 1962.)

A BORTIVE NEGOTIATIONS

In June 1962, a Government Committee under Lord Bridges, recommended higher pay or better conditions (or both) for all warding staff.

In August, 1962, the Union made its claim. Since October eleven meetings have been held without result. Meanwhile, prices have increased by 4%, other workers (including nearly all other Civil Servants) have had pay increases.

Today's closure is a protest against the Treasury's meanness and go-slow tactics in negotiations.

We regret the inconvenience caused, but ask for your support-- write to the Chancellor and your M.P.

So, I didn't get in to see the Crown jewels, or the other parts of the Tower. I hoped to get back, but never made it.

We walked around the Tower, and then down to the Tower Bridge. This was closed for some sort of repairs, with not even foot passage over. By then, we were getting tired and hungry, so we meandered slowly back to Moorgate, where there were a couple of cars parked, and then out to Ella's. On the way we passed the memorial to the Merchant Sailors who lost their lives in the WW I & II. The original memorial lists each ship, and the crew members lost; a large addition around a court has the same for the second War. [I don't believe anything similar has been done in the States.] I was quite impressed.

All in all, it was a wonderful day, and I certainly appreciate the group's efforts. Even if it was a case of seeing the sights for the first time when a visitor comes.

On succeeding days I wandered around the Serpentine in Kensington Gardens, saw the famous Peter Pan statue, browsed in the shops along Bond Street and Regent St, and in the Mayfair area around Berkeley Square, visited Piccadilly Circus and Oxford Circus - really nothing more than our traffic circles, and a similar drivers' nightmare - visited a couple of the railroad stations - Charing Cross, to watch the ex-Southern electrics, and Paddington - browsed along the Embankment, and peeked into the Temple (I missed Lincoln's Inn), walked down the Mall from the Nelson Monument in Trafalgar Square, through the Admiralty Arch, past Marlborough House and St James Palace to the Victoria Memorial and Buckingham Palace. Here I caught part of the changing of the guard - there were too many local tourists to get a good view - and finally got to Westminster Abbey. This was one of the most impressive parts of the visit - it is hard not to have a feeling of awe at the memorials to the many famous men buried here. In addition, the building is really beautiful, in a majestic way. The stained glass windows are beautiful. I was also impressed by the little St. Margaret's Church, which huddles in the shadow of the Abbey, and which is the parish church for Westminster. This is a real parish church, medium size, and with relics of less important people, who lived in the parish. I enjoyed it. The nearby Houses of Parliament were as pictures had them; Big Ben lived up to its reputation.

I was at Westminster Abbey twice. Once it was crowded with tourists. The second time was on the morning of the start of Bank Holiday, while I had a few hours to spend before catching my plane. It had been raining - still was, actually - the first rain I'd encountered in England. There were few people around; the locals were bent on escaping the city for a couple of days - and were the trains and busses crowded - and the county visitors had not yet arrived in numbers. So, the Abbey was almost deserted. This time I especially was conscious of the air of serenity and tranquility that prevailed the building - a feeling that one should think not of the hours or days, but of the years and centuries. There are very few places I have had such feelings. It is a wonderful feeling, and left me with a very nice final memory of England.

But I anticipate. in the middle of the week I took a two day excursion to the south coast, following a suggestion Bill Morse made as to certain interesting lines worth riding. And they were. I left Paddington early in the morning, behind a diesel, on a through train for Bristol via Reading and Bath. This was interesting, but nothing really unusual. The double track main line, the arrangement of switch points almost always trailing; the signal boxes and manually operated signals, with wires running for a mile or more the the distant signals were all different from American operation.

At Bristol I changed to a small local train, drawn by a saddle tanker, for Yatton. Here I changed again, onto a real old-time train of a couple of cars, all second class, I believe, and an antique saddle tanker. The single track line wound away from the main line for the 32 mile run to Witham, via the Cheddar Valley. [Is this where Cheddar cheese got its name? I noted dairy cattle and I think a cheese plant.] The line climbed gradually along a ridge of hills, giving a glorious view over the valley, with that peculiar summer haze that tones down the bright colors, and which looks so unnatural if reproduced exactly by a painter. Pretty soon we were in the hills, plunged through a tunnel, and started down the valley to Wells and Shepton Mallet. Again there were some marvelous views - not the spectacular kind you find in the mountains, but the rolling hills and small farms and little hamlets, with a pub, a store, and a small parish church, probably with a square tower in place of our standard pointed steeple. The roads brought home to me some of the descriptions I'd read of English country roads. I can see why motoring there could be an adventure - the roads are narrow, and seem to be almost troughs cut in the land, with banks several feet high. A meet would be exciting.

From Wells on the route sloped downwards, and the engine, which had been working hard with its two or three cars, relaxed into a soft chuggle instead of the hard panting puffs that featured the climb. At was fun to lean out of the window as the train climbed up the hills, prepared to raise the glass quickly when a deep cut or tunnel came along. The windows were primitive - a window sliding in the door, held up by a leather strap hooking over a brass stud. I imagine this is the same arrangement used in the 90s - I seem to remember some of the Holmes stories mentioning such an item.

At last we reached Witham. Here I had a wait of an hour or so which I spend watching the trains, passenger and goods, passing. As it was the height of the holiday season, there was a lot of passenger traffic, and steam was plentiful - Pacifics and 2-6-0s were in evidence, plus some 4-6-0s. It was quite a nice spot. Finally, though, I caught the railcar for Yeovil (Pen Mill). This was a two or three unit rail car, diesel powered, and one of a large fleet the Great Western region uses for branch line service where there is a fair amount of traffic.

At Pen Mill, one of three stations at Yeovil, I changed again, into a shuttle train, worked by a tanker, for Yeovil Junction, via Yeovil town. Here I had a short wait for a main line train for Exeter, Plymouth and Penzance. However, I rode only to Axminster, where I changed again. Here the line to Lyme Regis, a small seaside resort. This is a three car train, hauled by Lyme Willie, a venerable 4-4-2T built about 1883 for the London South Western. This was a most interesting run, run, and one that kept the old engine, and the driver and fireman, working. From Axminster, the line climbs steadily - in fact, just after leaving the station it curves around and over the main line - up through some beautiful hills, with interesting views across the rolling plains, deep cuts, little valleys, and all, until suddenly it reaches the top, and coasts gently down to the station on the cliffs above the water. Going back, was easier, with only a little climb, and then a long drop, coasting under almost no steam, back to Axminster. In the late afternoon, this was a most entertaining trip, and one that should be taken by everyone who has a chance.

Unfortunately, there is really no way to describe these locomotives or trains. Only a picture could do them justice. I have the pictures, but can't afford to reproduce them.

From Axminster, I caught an express back towards London - an up train - behind a Pacific - I think it was a Bulleid light "West Country" class, built 1945-50. This I rode to Salisbury, where I had a reservation at a Trust Company House the White Hart. I arrived just in time for dinner, which I needed, having been on the go since morning with nothing to eat except a sandwich. The White Hart is an old inn, dating back at least 200 years, to the stage coach days, and has rooms in odd angles and at odd levels. The halls run along, with an unexpected jog or a couple of steps showing where apparently additions have been made. However, they serve an adequate meal and a good beer, and the rooms are comfortable. One bath for the floor, though.

Next morning I had some time to kill before the train to Templecombe left, so I spent some time walking around, viewing the Cathedral, complete with its wall, completely encircling the cathedral and its associated houses and school. The gates in this wall are narrow, admitting only one-way traffic, and are closed fairly early in the evening. I don't know what happens if an inhabitant of the cloistered area wants to come in late. The cathedral is beautiful, a classic design, and nicely situated with open space around for easy viewing. I was impressed. I also tried to look up the pub Bill recommended - the Old George - but found it closed and out of business. I did find a very good second hand book dealer who admitted that some people might want modern fiction and detective stories, and had a pretty good stock at reasonable prices. Here I bought more books than on the rest of the trip.

Finally it was time to catch the train to Templecombe - by one of the southern expresses, drawn by steam. I had about an hours wait on the platform at Templecombe, watching the mainline traffic, Battle of Britain and Merchant Navy light and heavy Pacifics, a King Arthur 4-6-0 on a slower local, several 0-6-0-T shunters, etc. Quite a parade of Southern Region steam. At last the signals on the branch line clanked over, as the bells in the signal box dinged, and the sound of a working train could be heard coming around the branch line curve that lead up towards Shepton Mallet and Bath on the Somerset and Dorset line. Around the curve steamed a medium sized tank engine, a 0-6-0T as I remember, followed by three or four coaches - and a second engine. The train coasted to a stop, the front engine detached itself and pulled away to the yards, and the rear one, which was now facing in the right direction, chuffed away quietly, awaiting the guard's whistle before taking up the job of getting that small train over the hills.

I selected a compartment and settled myself for the start. At 2:41 we pulled out and started for Evercreech Junction, Shepton Mallet, and Bath Green Park. At first the route was only a mild climb, but beyond Shepton Mallet the grade became quite severe, at least by English standards. Beyond Evercreech Junction another feature appeared - single track - the first I'd seen in England, except for the Lyme Regis branch. But this was a main line - or had been at one time. We made numerous stops at small stations, loading and unloading passengers and goods/luggage/express. At some there was an agent on duty; at others the guard had the job of picking up the tickets, issuing tickets, etc. Leaving Shepton Mallet we were climbing, passing over roads on bridges of stone at least 100 feet high. This gave a real view onto the town and the valley. Then we plunged into the wooded hills, with deep cuttings and several tunnels. The major one must have been at least a mile long - or so it seemed. The area was wild, with dense underbrush along the right of way.

At length we were over the hump, and coasting down the gentle - on the down grade they seemed to be gentle - grades into Bath Green Park, which is not the Bath Spa station I had been through the day before. The entry into the city gave more of an impression of the town, coming, as we did, from the hills and into a high level station. Green Park is a stub station, and the train to Bristol I picked up here left the same way we entered, but immediately diverged for the 15 mile run to Bristol Temple Meads by way of Mangotsfield. This is a sort of back way, not on the main line between the two cities, and the train proceeded at a leisurely pace, taking 47 minutes to cover the distance. [The trip from Templecombe to Bath Green Park was 37 miles, and took 101 minutes. Not exactly high-speed running, but very relaxing and enjoyable.] So, about 5:17 I arrived at Bristol.

In Bristol I had time to grab a sandwich, and then crowded myself on board an up express coming from the shore, which was jammed. I managed to find a seat, and was lucky in that the party of two families that had the rest of the compartment got off at Bath Spa - yes, I was back in Bath again. It was hot and sultry, and the crowded train wasn't as comfortable, even when going at speed, as the branch lines. However, all things end, and at last I found myself in Paddington. A quick trip on the Underground to the Hotel, a good meal - English version - and a shower and I felt back to normal.

It had been a somewhat hectic trip, with all the changes, but a wonderful experience. I feel I got to see more of England in a short time than most tourists, and certainly more of the older railroading. I had noticed that the Cheddar Valley line had been approved to be abandoned as of the change in time, about Labor Day, and that the Transport Board's plans to drop the Somerset and Dorset line - from Evercreech Junction to Bath Green Park, I believe - had been delayed by remonstrances, with hearings due soon. And rumour had it that Lyme Willie was slated to go at the end of the summer, or possibly the next summer. So, I had probably had the only chance to ride these lines. And I certainly wouldn't have wanted to miss it, just to view a couple of London monuments. But, I'm a rail fan.

As an aside. I feel the British Railways are missing a bet in not promoting at least the Lyme Regis line as a tourist attraction. Properly publicized, this could be a real treat, something like the D&RGW narrow gage line out of Durango to Silverton. It would make business for the railway, both on the line and in the passengers to Axminster; it would help Axminster, with an influx of business, and would give travellers something to talk about. I'm sure a lot of American visitors would go to Salisbury, for example, to view the famous Stonehenge - which I didn't get to see - and then on to Axminster for the short ride. The Shepton Mallet Somerset and Dorset has possibilities, but something that goes and then returns in a reasonably short time would have great potentials.

But of course I'm merely a b.... American, sticking my nose in other's business.

At last the vacation ended, as all vacations due. I had a final visit at Ella's, where there were a few new faces, two of special interest to me from the dim days of my ancient fanning days. I knew Mike Rosenblum would be there, but was surprised when he arrived bringing in tow Doug Webster, who had been one of my earliest correspondents during the war. I had lost track of Doug during my wanderings, but still had fond memories of the old Fantast. I had a real good time talking with both Mike and Doug, and am afraid I neglected some of the others. At the inevitable breakup - train time, boys - Mike took me with Doug and him to pick his wife up at Doug's. We stopped in, and kept on talking. I met Doug's gracious Chinese wife, and Mike's wife. At last we broke away, and Mike and his wife dropped me off at the hotel.

The next morning - the start of Bank Holiday - it rained heavily. This seemed natural; after all, our Labor Day weekend is the signal for the start of the rains. I checked out, cabbied to the air terminal, where I checked in my bags, and then decided to do a little sightseeing in the rain. I wandered down to the Abbey, and around the Horse Guards barracks, where I caught part of the troupe. A walk along the Victoria Embankment, and then back to Victoria Station - to watch the crowds jamming onto the trains for the country, the coast, the beaches, the north - anywhere out of town, and to watch the beginning influx of travellers from the country pouring into London from the coast, the north, the west, the south.... On up the road the Green Coach terminal was similar, on a smaller scale. On the contrary the air terminal was quiet. I checked into my bus, and rode through the dwindling rain to the airport - miles and miles away, through streets of houses. Through the air terminal, and into the TWA space, waiting for the jet across the field. The bus to the plane, up the ramp and the scramble to find a seat. Then, the take off. As we were taxing to the runway, our pilot called attention across the field to a rare sight - the new Russian jet liner, apparently the only one in service.

The flight across was boring - nothing to watch but clouds. They showed movies which meant the windows were screened. And I don't like movies, especially the ones they served. The food was rather good. The weather did break a couple of times, and in one opening we were able to see one of the weather station ships - after the pilot called attention to it. However, I didn't appreciate the trip. By now I was tired and eager to get home. And sleepy; when we landed in NY at 6 PM, I had been up for about 17 hours, and was feeling it.

Customs was little trouble - one bag opened, a little thought over my watch, for which I had the slip, and a request to see a couple of pocket books I had in my coat pockets - no, they weren't that type, but harmless detective stories. Immigration was a little rougher, because I had been in Scandinavia within the last two weeks. I was given a quarantine-type notice, similar to the English one, with similar instructions to the doctor. Fortunately, I didn't come down with smallpox. I collected my bags, rechecked them to National, changed my reservation to an earlier plane, and then, when loaded, sat for about 30 minutes waiting to take off - the airport was on instrument landings, and things were slowed down. At last, we were off, and an hour later bumped down at National. I grabbed a cab, and was soon back in Mount Rainier. The official/vacation trip was over. I was home - exhausted, but home.

I spent the next day doing nothing but reading mail and resting. Then, on the Monday, I was in to work, where I spent the day reading mail. And have spent most of the last two months, except for the time spent on the convention, in trying to get caught up to where I should be on the various projects I have going. Among other little facets to consider, I found they had switched computers again, to a 7094, and in the process changed the monitor program. Which means I have to take some time someday and revise the input/output of my programs. And probably update them a little.

However, I feel the trip was worth all the bother. I have a feeling that I may not have communicated the feeling I obtained in England; how thoroughly I enjoyed myself, especially how greatly I liked the country that I managed to see. I certainly want to get back and spend some more time in just rambling through the country. And, then there are the sights in London I didn't see; whole areas that are still a mystery to me. And the shops I'd like to dip into with some more time - and cooler weather. I think I forgot to mention that one day I was there was the hottest July 2x in recorded weather history. When you see men in central London strolling along, Bowler on head, furred umbrella in hand - and suit coat over one arm.... That means it must be hot. (I think it got up into the low 80s.) I found the people a little reserved, but basically friendly; there seemed to be very little of the attitude I find, especially in New York, in American cities, of getting everything you can and to hell with the customer.

I'd like to add a special word of thanks, publically, to Ella Parker for the wonderful way she helped me. I found her place a center of evening interest, so much so that I never did get into one of the shows or reviews I really should have investigated. But I know I enjoyed Ella's more. I'm looking forward to the 1965 convention, which will be partially under her thumb. It should be a good one.

I'd thought of adding a con report to this, but it really wouldn't be fair. My con report would have to be one that omitted most of the program, avoided any mention of most of the people I'd have liked to have talked to, and revealed the inner secrets that the world is not yet ready for. Like, the secret of the Hugos. How to con the hotel into doing what you want. How to run a banquet without any cutoff for ticket sales, etc. Maybe next year I'll have a normal con report to write.

I might mention the day after the con - or the Labor Day evening, when there was the Collapsacon in the Con suite. Everyone sat around, talking quietly, having a few drinks, and enjoying themselves. Even the filk singers, a door away, had to be stomped on only once. It was a nice ending for a con. In spite of the stuff to be cleaned up the next day. I'm sure the maids must have hated that set of rooms Tuesday, with everything filled with paper, bottles, cups, etc, etc.

But, all in all, I think the hotel was pleased with the con. Especially in comparison with both the high school frat group and the "adult" insurance get-to-gather. I'm sure they would like us back. If some other group of Washingtonians wants to put on a con in some future year.

Bill