

Keeping 37,960 Trains A Year On The Right Track



In the signal tower

It's a game of checkers, says the yard-master.

Did you ever sit on the rear platform of a train as it entered a large city, watching new tracks spring up on each side of your train until they formed a complicated network of steel?

If so, and if you are not familiar with railroading you doubtless wondered how the engineer managed to pick out the right track. You may even have had an uneasy feeling that he would choose a track already occupied.

Perhaps you had been reclining lazily on the observation platform, listening to the clickety-click of the wheels, and sleepily watching the track recede. The prolonged whistle of your engine and a slight slackening of speed rouses you a bit.

You hear a sharp clack-clack as the wheels of your car hit a switch and then, as if by magic a score of tracks appear. The wheels strike a half a dozen more switches, you are whisked swiftly by several almost endless rows of box cars, your car grazes an outgoing passenger train or two, and then you pass under a signal bridge.

Accidents Impossible.

To one side of the signal bridge is a tower, and in the tower is the highly complicated mechanism which enables your train to glide to a halt on its proper track in the station without mishap.

This mechanism, known as the "interlocking machine" makes accidents practically impossible to a train entering a large terminal.

One hundred and four passenger trains a day, or 37,960 scheduled trains a year enter the Union station here. These trains carry several million passengers a year in, out or through the city. The Union station alone serves eight railroads. Yet even minor accidents are almost unknown.

"How do you do it?" The question was directed at Charles Ostrom, day yard master.

Game of Checkers.

"Well, it takes brains," admitted Mr. Ostrom, with becoming modesty. "Especially does it take brains when you have more trains than tracks."

"What do you do when you have

more trains than tracks, Mr. Ostrom?"

"Sandwich 'em," replied the yard master. "Put two on the same track, if they're short trains."

"Being a yard master is like playing checkers, only it's always the yard master's move. And if he loses the game, well—he doesn't keep on being yard master, that's all."

"You keep records of all the cars in each train, Mr. Ostrom?" "Do we keep records? Well, rather. The only things going in and out of Omaha that we don't keep records of are those air mail planes."

The yard master explained that all cars are examined in the station under his direction; that half a dozen switch engines, also under his direction, keep the cars in their proper places.

Keep Tracks Clear.

The matter of getting trains to their tracks in the station sheds seemed a simple matter, as described by the yard master.

"I know just when a train is due, and figure out what track to bring it in on," said Mr. Ostrom. "I then phone to the east or west signal towers, depending on which way the train is coming from, and tell the tower man the track it's expected on. He does the rest."

"The big thing is to keep the tracks clear so as not to delay the arrival of trains in the station."

Mr. Ostrom pointed to a tiny structure, not more than five feet square, situated directly in front of the station.

His Palatial Offices.

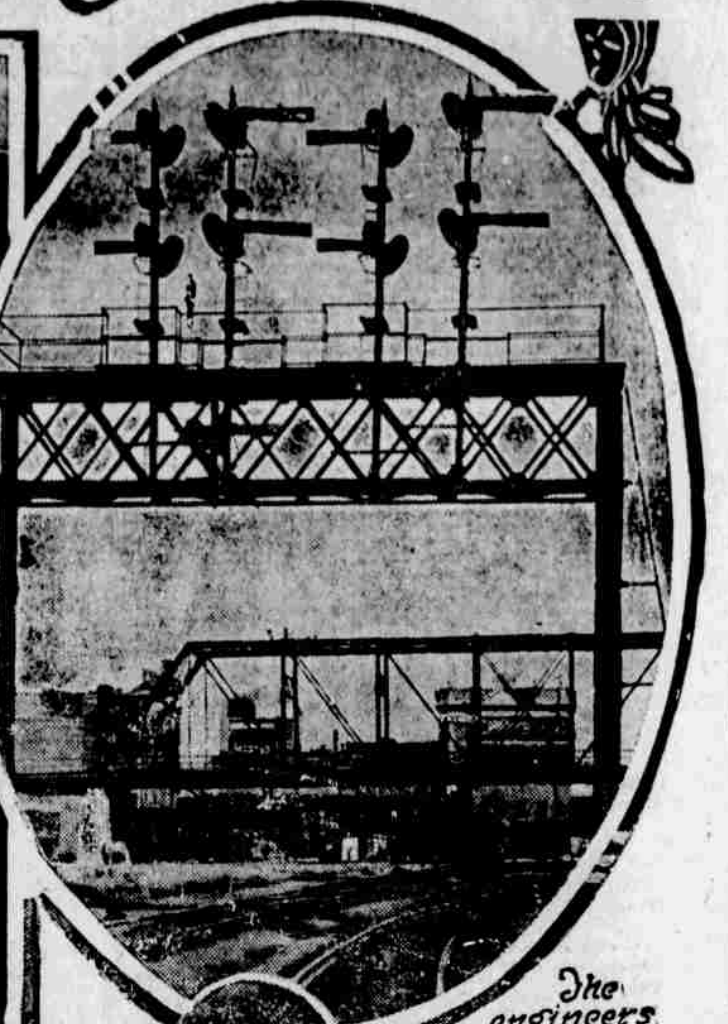
"This is my palatial offices," he smiled. "It's here we yard masters play most of our games of checkers. The booth is connected by direct wire with both signal towers."

"How long have you occupied that suite of offices, Mr. Ostrom?" "How long has this Union station been built?" was Mr. Ostrom's counter question and reply, as he moved away, doubtless intent on some new move in his perpetual "checker game."

Which meant that Mr. Ostrom had been a yard master since 1900, when the station was completed.



The yard-master's checkerboard



The engineer's beacon light, the signal bridge



J. W. Adams whose job includes direction of the Union station terminal



How the signal tower appears to the traveler

The tower man in the west tower proved to be a busy person. He was occupied juggling a few hundred thousands tons of rolling stock into its proper place. This juggling act was being performed on the complicated "interlocking machine," which might be compared to a piano.

Rachmannoff, playing his own well-known prelude, could have displayed no more technique than did Towerman H. J. McLenithan, as he played on the levers of his machine.

No Wrong Keys.

As for harmony—well, Rachmannoff might hit a wrong key once in a while without serious results, but let McLenithan pull a wrong lever—no, McLenithan has it all over the great pianist.

"There isn't really a chance of anything going wrong, though," declared Mr. McLenithan when he had finished his rhapsody on the levers. "Everything is so arranged that a towerman can't make a mistake."

"You see this machifre is just what it's named, interlocking. There are only 77 levers, to begin

with. Everything is done by electric power. To line up a route for a train into the station it is necessary to set from three to seven switches properly. This is all done with the levers.

Mr. McLenithan pointed to a row of small dials above his machine, in which indicators resembling block signals, moved. These dials, he explained, show when the switch is properly set.

Signal on Bridge. He then called attention to the signal bridge, which is about 400 feet from the station.

"When the train leaves the automatic block signals behind it is a signal on this bridge which tells the engineer whether to stop or go ahead," said Mr. McLenithan. "If the signal is down he goes on, knowing his route is lined up."

Signals on the bridge are controlled by the interlocking machine. When a train enters the switch movement the signal rises again, and a train behind it cannot follow. Should the engineer disregard or fail to see this signal, however, and attempt to follow the first train his engine would be derailed.

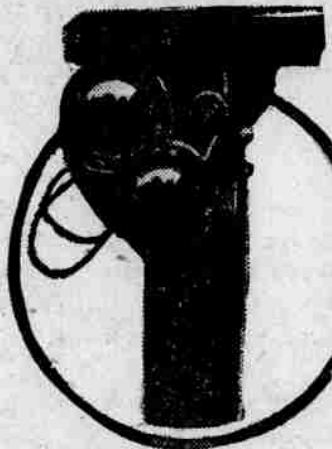
The derailing clamp works automatically, blocking the rails when the proper train enters the "movement." From three to seven switches must be set with the levers to complete a movement. Five amperes of electricity are required to throw each switch.

What's in a Whistle? Towerman McLenithan says all towermen learn to recognize trains by locomotive whistles.

"It's as easy to tell a Union Pacific engine from a Rock Island engine as it is to tell a Pullman car from a box car," said the towerman.

"This helps at night. When a towerman hears a whistle he knows immediately what railroad the train is running on. By glancing at the clock he can identify the train by the time it is due. He has instructions from the yardmaster what track to send the train in on, and the rest is simple."

In the tower, beside the towerman, is a train dispatcher. It is the duty of the train dispatcher to keep an accurate record of the time all trains arrive and leave the terminal. He has direct telephone



The dwarf signal, not the conductor, tells the engineer when to start

connections with all lines and with Lane Cutoff and Gilmore.

On this particular occasion F. E. Fowler was serving as dispatcher. He was too busy to talk.

How Trains Start. J. W. Adams is the responsible head of the system which includes the Union station and yards, and which daily handles more trains and passengers than many larger

terminals. Despite his responsibility Mr. Adams is a genial man.

"It isn't so very complicated," he said, in a voice which really seemed to infer, "you don't know the half of it."

It is seldom a train is delayed in entering the Union station or leaving it, according to Mr. Adams. A five-minute delay in other and even larger terminals may be quite

common, but here a five-minute delay would be considered a catastrophe, Mr. Adams said.

"Who tells the engineer when to start his train?" Mr. Adams was asked.

"Ah, that indeed is simple," he replied. "To the right of each track in the station is a dwarf signal. These signals have green

(Turn to Page Five, Column Seven.)

The Married Life of Helen and Warren

A Day Exploring the Ancient Dwellings in the Buried City of Pompeii.

"An egg shell over 2,000 years old! Dear, that's one of the most impressive things we've seen."

"Huh, wonder if they had it fried or scrambled?" Warren paused to view the fragile, petrified relic labeled:

"Found in the kitchen of the House of Sericus in the excavations of 1854."

"And here's some cooking utensils! What curious long-handled spoons!" Helen had passed on to the next case. "Think of seeing spoons that were used before Christ!"

In this museum of Pompeian relics, it was the prosaic domestic articles that most interested Helen. All museums exhibit specimens of ancient art, but a biscuit mold and a rolling pin used in 79 B. C. have an intimate appeal.

"Great guns, this is a cheerful bunch!" Warren crossed to a large case in which lay three mummified human figures in writhing, agonized postures.

"Found in the cellar of a wine shop where they had sought refuge. Buried in the ashes and lava before they could escape. The figure lying face downward is that of a young woman, her hand over her mouth to shut out the volcanic fumes."

Silently Helen viewed these gruesome remains that so tragically testified to the swiftness with which death had overtaken them. Her meager school history knowledge of the destruction of Pompeii, supplemented by a hasty reading of the guide book that morning, became suddenly vitalized.

The "young woman"—smallest of the shriveled mummies—what had been her life? Had she been married? Had one of these men been her husband?

"Love, these look burglar proof!" Warren had turned to a case of massive locks from Pompeian doors. "Take a good, strong jimmy to force that one."

There were cases of jewelry, coins and Etruscan pottery, all found in the excavations and all remarkably preserved.

"Come on, we've got to move fast. This whole show closes down at six—we've only about three hours."

"And they say it takes two days to do it properly. We always have to rush through everything," regretted Helen, as they left the museum which stood at the gates of the excavations, to explore the Buried City itself.

Here another group of guides besieged them. Equally persistent were the men with litters who wanted to carry them through the ruins.

"Guess we can toddle around on our own pines," Warren waved

them away. "You'll have to wait for some real suckers."

Eluding the importuning guides, they mounted the steep lava path, from the top of which they had their first glimpse of Pompeii.

A city of deserted streets with gutted, roofless houses!

Helen caught her breath. She had expected only ruins. Here house after house, save for the roof, stood almost intact. They were all low stone structures of but one story, built around an interior open court.

And the silence! That curious listening silence—as though the very houses were waiting for the return of their ancient inhabitants.

"It's weird!" shuddered Helen. "No wonder they call it the 'City of the Dead.'"

"That looks like 'Main street.' Let's take a whirl down there."

"Wait, here's a plan," unfolding a map. "How curious, it's divided into nine regions—and the streets are all named. Where are we now?"

"You've got it turned wrong." Glancing over her shoulder Warren swiftly found their location. "Here we are!"

"Yes, that's right—'Strada di Nola,' verifying it by the street sign on the corner house. And it was the Main street, it says so here. Dear, you're wonderful, how did you know?"

Warren's shrug implied that he could spot "Main street" even though

the town had been buried a couple of thousand years.

"Here's your corner saloon," he paused before a house, No. 27, at the next crossing. "Wonder if they could mix a good cocktail? How about a dry Pompeian? Why not? No more unlikely than a Roman punch. Where'd they rush the can? Don't see any side door."

"Dear, you're uncanny! It was a wine shop. Listen to this: 'In No. 27, were found many of the bottles and flacons now on view in the Museum. The carving over the door—two men carrying a large bunch of grapes—was the trade sign for a wine shop.'"

"So that's how you knew!" disillusioned, viewing the quaint carved sign.

The next few houses were very similar. All had held small shops in front, the family living in rear rooms which opened on the inevitable court.

"They spent most of their time in these courts—the 'Atrium' it was called," eager to impart her guide book knowledge.

"I think they'd have to—these courts aren't big enough to swing a cat. Must've been the descendants of these old birds that built the flats in Harlem."

"Huh, shouldn't think it would be very good to shave by!" grunted Warren. "No wonder those Johnnies grew whiskers!"

"And imagine having to come out here every time you wanted to powder your nose! Oh, look, it's a lizard!" started by a faint rustle at her feet.

It was a tiny green lizard, the only living thing in this house of the dead. Musingly Helen watched it as it glided beneath a moss-grown stone.

"Well, you can't dawdle here—we've got to dust along." Warren's briskness was a jarring note.

On the next street were the more pretentious houses. In the House of Vettus, a rich merchant, the mural paintings were astonishingly served.

Apparently the Pompeians gloried in the gruesome, for in one room the walls were covered with mythological scenes of torture.

A nude woman chained to the horns of a bull, another torn to

pieces by wild horses. Ixion, nailed to the wheel of torture on which he must forever revolve, and others, even more lurid, which the guide did not elucidate.

"Prohibition wouldn't have stood much chance with these guys," Warren strode into the next room.

"From these pictures you'd think they spent most of their time tanking up. Pipe the size of those highballs!"

Helen followed him into what had been the dining room. Here the walls flamed grotesque scenes of reveling, Bacchant, grapes and huge wine flacons.

The designs in the mosaic floor indicated the place for the dining table, and the couches, on which, while eating, the Pompeians reclined.

"The kitchen was even more interesting. A great stone oven still held the ancient cooking vessels. Fitted in deep depressions were three huge copper cauldrons, just as they had been left on that fatal day—August 24, 79, B. C."

"I'll bet they never had breakfast on time if they had to heat this up to bake the biscuits." Warren poked into the deep oven with his cane.

"And the weight of those pots! Imagine having to wash them!" thinking of her own light aluminum ware.

"Plenty of slaves then. They didn't have to pay a snippy servant

60 berries a month to cook for two people. Hello, what's this?" tapping a leaden pipe exposed in the crumbling wall. "Did those ginks have running water?"

"Oh, yes, an elaborate system of waterworks—it speaks of that. We must see one of their public baths—they're supposed to be very wonderful."

For another hour they wandered on through this strange corpse of a city. House after house of echoing desolation, the painted walls, marvelously preserved, giving intimate glimpses into Pompeian life.

"I wonder what this meant?" Helen paused to read the carved lettering: "Salve lucru" still legible on a worn door step.

"Welcome" on the mat, grinned Warren. "Those old codgers were strong on inscriptions—peppered 'em all over the place."

Warren's facetious comment and poking cane grated on Helen's reverential mood. It seemed like sacrilege to pry into the homes and intimate customs of these people, whose lives had been so tragically wiped out.

A clangorous bell from the direction of the museum suddenly violated the stillness. It was a rude bringing back to the prosaic world of today.

"Guess that's chugging out time." Warren glanced at his watch. "Five minutes of six. We'll have to mosey along—don't want to be shut up here."

"I wouldn't mind—it would be a wonderful experience! Think of what it must look like at night! Think of it in the moonlight—those strange streets and empty houses. I wonder if their spirits ever come back?"

"Well, we'll not stay to see," he strolled ahead. "Come on, I'm about fed up with this burg."

Back through the streets they had explored; past the market place, the columns still intact; and they reached the road that led to the Marina Gate.

"Wait just a moment—I want to see it from here." Helen turned for a last glimpse of the ruins, now hauntingly sad in the twilight.

Over it all loomed Vesuvius, grim, menacing, awesomely near. From the funeral carter came a thin coil of smoke, as though still threatening the city that centuries ago she had so ruthlessly destroyed.

"Dear, I'm going to read 'Last Days of Pompeii' again—it'll mean so much more now." Then musingly, "I'll never forget this picture—the houses are wonderful in this dusk. You don't expect to see the lights come out in the windows."

"Well don't stand mooning there—we've got an hour's drive back to Naples. I'll be after seven before we get any dinner," grudgingly. "Come on now, stir your stumps!"

Next Week—Their First Restaurant Dinner in Italy. Copyright, 1921, by Mabel Herbert Harjes.