

thieves. McClure, move the engine back to the car and I'll couple it up and we'll move it up near the shanty, seal it up until the federal authorities can get here," and Wynne pushed his way toward the car, to await the arrival of the engine from the switch shanty.

Next morning, at the hospital, Charlie opened his eyes. He was dazed, and immediately called for someone to tell him where he was and what had happened.

"Did—did they get in the car?" was one of his first questions.

Miss Loyal, his nurse, sat beside his bed and told him as many of the details as she knew.

It only confused him the more. He was dumb with grief when he heard

of the suspicion pointing toward him. All because he suggested the agents get a

cup of coffee. It was preposterous! It was all as much of a mys-

tery to him as it was to Wynne and the rest.

Here he was, laid up for a week or more and this accusation hanging over his head. He must see Wynne.

About three o'clock that afternoon, Wynne paid him a call.

"Howdy, Charlie, feeling any better?" he said as he pulled up a chair beside the bed. His face was grave and Charlie knew that inwardly he was accusing him of the crime.

"Mr. Wynne, I don't know what happened last night—the last I remember somebody told me to lie down—took my lantern away and started off with the engine. I thought too slow to obey and the next I knew, I felt a dull ache in my head and I remember falling. When I awoke, I was in this room. Did—did they find out who it was?" he added anxiously.

"No the authorities have the case in hand—I expect they'll visit you for statements. It does look rather funny, Charlie, your asking me whether that car was guarded or not, and suggesting they leave it with you, but we haven't any real evidence against you. We have orders to let you go, though, Charlie. You'll be getting a visit from the officers soon, I imagine. When you get up, drop around the office. It's too bad, but of course, we can't any of us help much," and he

started toward the door.

"If there's anything we can do for you, just let us know," he added kindly. "Some of the boys will be droppin' in to see you."

It was one of those crisp mornings in December. The sun was shining on the snow-covered city, bringing to light thousands of sparkling crystals.

Charlie had been out of the hospital a week. He was rather weak and greatly discouraged. He felt that his year's work in the game he loved so well could not have ended in a more tragic way. There wasn't even a person who really understood. He had made no plans. There was in his mind one strong determination that he would clear his name of all guilt. Perhaps that was why he

could not tear himself away from the town where he had been so busily engaged for a year.

Due to the station being small but of considerable revenue, and a good interchange point, it occurred to him that another attempt might be made

to rob it—either in the yards or at the station.

Towards evening, he met the evening passenger train from the North. Two men alighted from it. They were of striking appearance, in fact, unusual types to have business in a town like Cravensville.

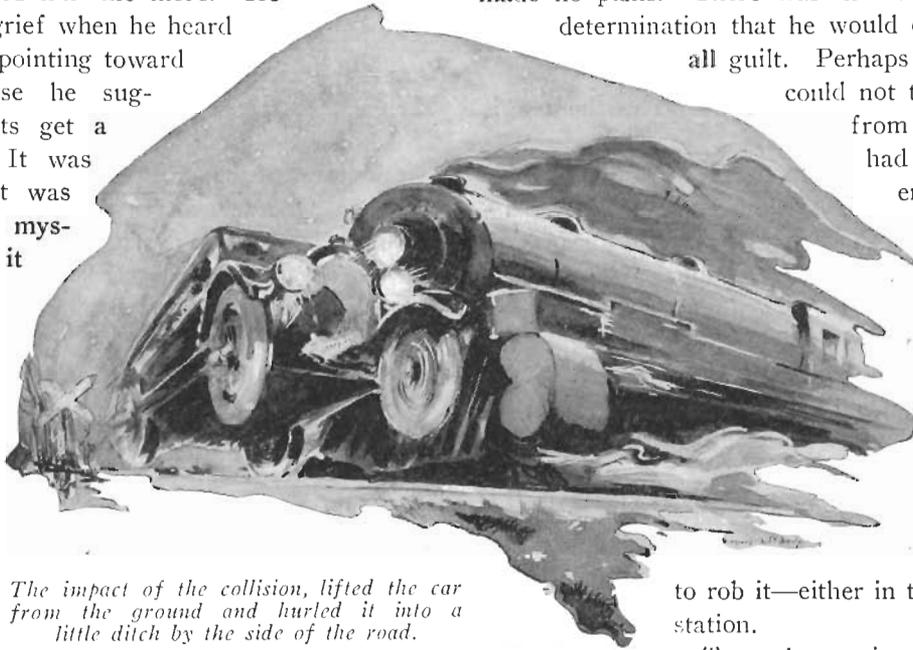
Charlie watched them as they surveyed the station. They went to the window and inquired of the cashier as to the roads and if it were possible to reach the main highway.

They left the station and made their way toward the town, presumably to the hotel.

"Just a freak notion of mine. They're alright. I've got so I suspect everybody but a resident of this town," said Charlie as he ambled down to the switch shanty for a chat with the boys.

That night was clear and the moon painted the snow-covered hills that encircle the little town with a mysterious, yellow light.

Charlie took the short cut toward his hotel, as it was quite late. On his way home, he was thinking that it was four weeks since that terrible night. This idleness was making him jumpy.



The impact of the collision, lifted the car from the ground and hurled it into a little ditch by the side of the road.

Rather on impulse, he suddenly made up his mind to take one last glance at the station—intuition perhaps led his steps toward it. As he swung around an empty box car within several hundred feet of the building, he saw a big, black car pull up to the curb. Two men alighted. He could also see the cashier through the window, preparing to lock up for the night. The last train had wended its way out of the little town and business was over until the morrow.

He felt in his hip pocket for the automatic he had been carrying ever since his accident. It was a raw deal he got and he was determined that he should not be caught unawares a second time.

A switch engine was in the yard, several tracks on the other side of a cut of cars, but there was no other animation to mar the quietness of the scene.

He waited, undecided what to do. Then he saw it all happen.

The two men crept up to the door, walked in the station and through the window he saw old Martin, the cashier throw up both hands. One of the figures came around and, leaning over, emptied the safe of its contents.

They went behind Martin and with one stroke, he fell unconscious to the floor. The men worked in much the same manner as those who attacked him, he thought, and he was determined that if there was a way, he would trap them. The light was snuffed out, and he saw them leave the building and hurry toward the waiting, throbbing machine and it glided away, gaining speed at every inch, until it started on the old Edgehill road toward the highway.

He fairly leaped toward the switch engine, working on a nearby track and climbed in the cab. Engineer McClure looked at him in surprise.

"No time for words, McClure," and he whipped out his automatic. "You and Jim drive this engine, and drive like hell! Start down the main track and don't slow up till you get to Baxter's crossing." Old McClure had never seen his eyes blaze like that before.

"Suppose No. 19 should be on time. You fool, we can't move on the main line without orders!" McClure tried to argue.

"I said start and I meant it. I'll explain later," and Charlie's hand was nervous on the gun.

The switch engine started and gained speed with each notch old McClure pulled on the throttle. The night wind cut his face as he leaned out, searching the track for the approach of the fast passenger train, on its way through the little town. The track of cold steel lay ahead and the engine skimmed over it, clouds of steam ascending toward the sky. It was a night of a thousand stars, but to Charlie the night for the realization of his dreams. If they could make it to the

crossing, there was only one where the car could cross the track, about ten miles distant. It was his only chance. If the switch engine could block the way!

"Don't let up," Charlie yelled above the din of the throbbing engine and his mouth was set in a determined line. Old McClure let the engine out another notch.

Occasionally, Charlie glanced sideways at the road, and he thought he could discern the flash of two headlights, as the car swung over the slippery road.

As they neared Baxter's crossing, for two miles the road ran practically parallel with the track and it was McClure who called attention to the racing car.

"That feller's racin' death. He don't know there's a crossing up here two miles."

"Let him race—I hope we hit him. Don't stop till you block the crossing!" Charlie grimly commanded.

Neck and neck they raced, first the engine leading, then the car, but the steel rails were more reliable than the slippery road and the car lagged at times. Old McClure began to apply the brakes. The car, unaware of the crossing, swerved into it just as McClure clamped down on the emergency, and the impact of the collision, lifted the car from the ground and hurled it into a little ditch by the side of the road.

A few feet further on, the engine stopped, panting and puffing. The three men leaped off and sprinted back up the tracks.

The wheels of the death car had not stopped spinning. From underneath its tangled mass came a slight groan. The three of them pulled and tore until they finally extracted three of the bodies from the ruins. Two were past attention, and one was unconscious, but still breathing.

The three men lifted the unconscious man to the engine, but before they left the car, Charlie extracted from one of the side pockets the little leather bag which contained something like \$3,000 in bills and silver.

Very few words had been exchanged between Charlie, McClure and Jim. Charlie nervously watched the unconscious man, occasionally feeling his pulse. It was beginning to dawn upon the crew what this frantic ride had been for.

"I won't forget this, fellows," Charlie said. "There's going to be no explanation required from you. I think I've got the leader of the gang who got me in trouble and besides, here's the money from the little station. If you'll go back when you get to the yards, you'll find they left Martin in a bad shape and I couldn't attend to him before I left."

Due to the weather conditions, No. 19 was late, and the switch engine cleared the main track ten minutes before the flyer passed through the town.

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Reclamation Plant Maintained by Frisco at Springfield Saves in Excess of Million Dollars a Year

More Than 340 Varieties of Equipment Go Through Plant Each Month, Ranging From "Adzes" to "Wrenches"

Part II.

THE many efficient and profit-saving devices installed in the reclamation plant, not only do the work of reclaiming for service, thousands of dollars worth of material each month, but are fast becoming a manufacturing unit of splendid performance.

Three of the largest items manufactured at this plant are frogs, switch points and guard rails. Before the big rail saw arrived at the shop, the railroad was buying about sixty per cent of this material. However, since its installation, the reclamation plant manufactures all of these articles used.

This material, all manufactured from scrap, represents a saving of over \$5,000 a month, since that sum represents the price of new material bought of the manufacturer.

More than 13,000 tie, brace and follower plates are manufactured from scrap material a month, which constitutes a saving of some \$2,500.00.

When riding over the line, notice the mileage markers. More than 1,044 of these markers are manufactured in this plant a month, which, compared to a purchase price, constitutes a saving of approximately \$418.98.

All the crossing stop signs are manufactured in this plant and when it is recalled that three states, Mississippi, Arkansas and Oklahoma, have stop signs installed by the Frisco, this amounts to quite an item. The cost amounted to \$30,000.00 for one state alone. The cost for the State of Oklahoma, which recently acquired the "Stop" law, was \$5.00 a sign.

Blacksmith Shop Reclaims Track Material

The blacksmith shop reclaims almost all of the track material, such as bumping posts; track shovels, with handles to be straightened—and these are handled in quantities—journal blades are cut up and scuffle hoes made; tie plates are manufactured from scrap steel; switch lamps, lanterns, engine and caboose markers are

reclaimed and put in first-class order. Practically all fabricated parts for freight cars are manufactured from scrap material in this shop. Here are reclaimed, also: clay picks, tamping picks, mail cranes, switch stands, spike mauls, tracks chisels and claw bars.

Bolts of all descriptions are headed in this shop, after being heated to a red glow, on forging and bolt heading machines. Practically 50,000 machine and engine bolts are manufactured a month, all the machine bolts being made of scrap iron. A large number of brake shoe keys are manufactured from scrap material entirely.

There was recently installed in this shop, a shop-made drop hammer which is used for the purpose of stamping out brace plates, gauge plates and straightening angle bars and continuous joints. The Frisco is the only railroad in the country reclaiming angle bars and continuous joints. The

methods originated on this road and the Frisco is a pioneer in this field.

The tie plates can be manufactured for approximately one-half of what new tie plates cost.

Locomotive Pilots Included

Notice the next locomotive pilot you see. Practically all second hand ones are manufactured from scrap iron and scrap flues, then painted, and they are considered better than new pilots.

The bolt house is one of importance, due to the great number of bolts prepared for service from scrap ones. Here three huge drop hammers pound them into straight bolts again. They are cut in different lengths and sent to the blacksmith shop for heading, then returned to the bolt shop and threaded.

If the nuts, washers and bolts are rusty, they are placed in the "rattler", which revolves around and around, and when they are taken out, the rust is cleaned from them and they are ready for their next step of reconditioning.

Facts on the Plant

In reading the second part of the reclamation plant story, these statistics on the plant will be of vital interest. Three hundred and sixty-three men are employed in eight buildings with a floor space of 32,350 square feet. Fifty-three machines, with an approximate value of \$200,000 are used in the gigantic work turned out each month. Eight tracks serve the 10 acres of ground which the reclamation plant uses. The number of employes at the plant has grown from 100 in 1913, and the size of the plant itself has trebled. Six men who received their training in reclamation work with the Frisco have gone to other railroads in charge of reclaiming work. The Frisco plant was the second of its kind established in America. The Santa Fe, with its Corwith, Illinois plant, was first. Its plant was opened in 1910.

—W. L. H., Jr.

The oxweld plant reclaims brake beams and couplers. An oxwelder is sent into the yard to cut up a huge piece of scrap, which is difficult to unload from car.

In the tin shop mileage markers are manufactured out of old Murphy roofing tin. Fire buckets, hand lanterns, switch lamps, engine markers, oil cans, small tanks, pipe fittings, engineers' oilers and numerous other articles are also made.

Tool carts, blowoff cock mufflers and post hole diggers are among the many others manufactured here.

During the past year there was an accumulation of approximately 3,000 shovel handles. New shovel plates were purchased to fit these handles, and the old ones reclaimed for other purposes.

Waste Paper House Interesting Feature

One of the most interesting features is the waste paper house. The contents of every waste paper basket from the entire system is shipped to Springfield, with the exception of St. Louis. The paper is baled with an air-driven paper baler, in bales of 100 pounds each. This paper is sold for sixty-seven and one-half cents per hundred weight, or almost one cent a pound. One full car of this paper is shipped out a month.

Not long ago one of the offices in Springfield phoned the reclamation plant to watch out for a bundle containing a pair of slippers which reached the waste basket by mistake. A thorough search was instituted and the slippers found.

At different times, glasses, and numerous other articles, carelessly pushed into the waste basket, have been reclaimed and returned to the owner.

Oftentimes a whole file of papers will be accidentally thrown in the basket and it is necessary to break open any number of the bales to locate the missing files. However, if the loaded car has not been sent out, it is a comparatively easy matter to locate articles, but impossible after the car of baled paper is rolling away to be sold at eastern markets.

There is a concrete department, too, which manufactures signs of all descriptions. Superheater flues and boiler flues are filled with concrete and placed on a four-foot concrete base, which makes a serviceable sign post, one which will withstand the weather for years.

The paint shop is another important adjunct to this plant. The old saying that "a little paint does wonders" is more than true. Old fire barrels, engine pilots, crossing signs, lamps, frogs and all miscellaneous items are painted, and with the paint job that this shop administers, the article is again as good as new, even though it has been reclaimed and repaired. It begins another life of service.

No Idle Moments or Lost Motion

There is not an idle moment in the machine shop, or a lost motion. Besides the numerous large and small jobs required of this shop, it has within its walls a motor car department, where all of the small track motor cars are overhauled. These motor cars come in for classified repairs, the same as the big motor cars. As there are from 1,100 to 1,200 of them in service, the repairs amount to a considerable item in

both time and labor expended. In this shop, running repairs are given the big gas electric motor cars operated into South Springfield.

The machines in this shop are both interesting and efficient. However, there is one that surpasses anything yet placed on the



General view of rail yard, showing Brown hoist in action and rail sorted out for reclaiming work.

railroad. This is a new frog and switch planer, installed last June at a cost of \$20,000.00

There are only five of these electrically-driven machines in the United States, and this machine turns out an average of eight switch points each nine-hour shift. It is now working eighteen hours.

The cost of scrap, including the time required to saw the rail, handling the planer, etc., makes an average saving of \$9.46 per switch point. When the planer was received, requisitions were on hand for six hundred switch points.

This number has been reduced until the order is down to slightly over 100. The machine also takes care of all new requests coming in.

Makes \$151.00 Per Day Saving

An interesting item is the fact that this machine, is making a saving of \$151.00 a day over the old method. In twenty-six working days it saves approximately \$3,936.00, and in a year, this machine will save \$27,000.00, paying for itself, with a \$7,000.00 credit to operating accounts.

There are three separate yards; the standard yard, where material is placed that does not require additional labor to place it back in service, and is available at a moment's notice; the reclaim yard, where all material is in such shape that it can be repaired by running it through the shop, and is to be held until workers can get to it; and the angle bar yard, where angle bars and continuous joints are held until they can be given attention.

As fast as the material is reclaimed and finished, it is taken to a part of the yard marked off into divisions. Here the different division requisitions are filled. Every day a car moves out to one of these divisions, containing perhaps some of the same scrap material sent in, except in a very different shape than when it first arrived.

The roundhouse, handling engines for the south side station is located in one end of the yards. This roundhouse is under the supervision of Mr. J. L. Harvey, master mechanic, but under Mr. Leysaht's direction.

The roundhouse turns from twenty-six to thirty engines a month, and tries to give classified repairs to one engine a month. The power plant is under the supervision of

Mr. F. W. Lampton, roundhouse foreman, and contains two Heine tubular boilers, of 225 horse power capacity.

Here the big oil-burning engines are turned and given light repairs, therefore the oiling facilities are located here.

One tank holds 210,000 gallons, another underground tank 20,000, and three overhead tanks contain 38,000 gallons. The roundhouse is a nineteen-stall one, five stalls of which are equipped with drop pits.

Rapid Movement from Yard to Yard

One detail of most astonishing proportions is the rapid movement with which the different materials are transported from one shop to another, from one yard to another and between the different cars.

This was formerly done by wagon gangs, six gangs in number, and several men who used wheelbarrows. It required six men some forty minutes to move a

wagon load of heavy material from one shop to another—completing the round trip.

Some two or three years ago shop "mules" were purchased. These "mules" are small trucks, operated in the same manner as a Ford. At a demonstration prior to their purchase, one of them pulled a loaded box car of heavy store department material. They hitch onto filled wagons and get around the yards at the rate of fifteen or twenty miles an hour, handling efficiently and quickly the work formerly done by hand, and saving \$21.00 a day in labor alone.

Mr. Leysaht has invented a signal system. The shop "mules" can go anywhere, and have no beaten path; however, outside of each shop is a triangle block placed on a concrete base. One side is red, another blue and another white. As the "mule" drivers go by, if the red side is to the front, they know that that

foreman has a load for them and when they have delivered the one they have, they will pick it up. If the blue signal is out, it means that the foreman wants an empty wagon to load, and the white signal means he has nothing and does not need a wagon at that time.

Mr. Leysaht has one of the hardest places on

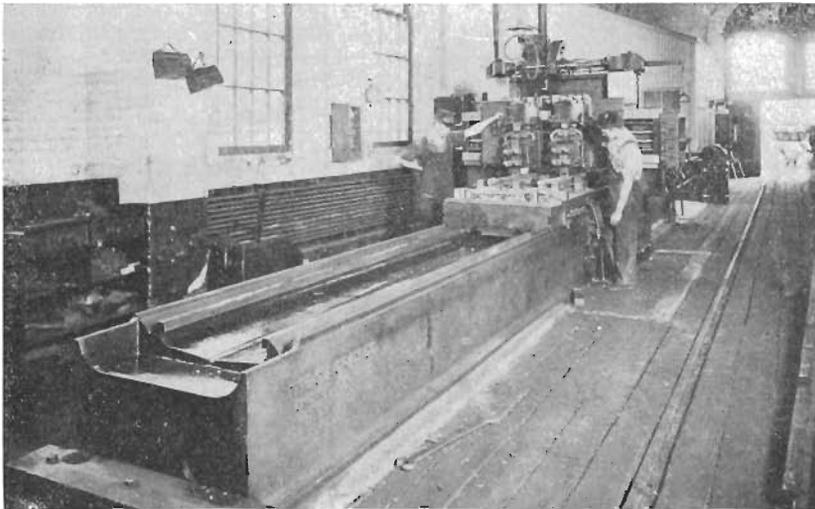
the railroad to keep clean, yet it is almost spotless. Tours of inspection made by officials and outsiders never fail to bring forth a comment on the tidiness of the place. And Mr. Leysaht is more than proud of the efforts of his co-workers.

A "Sure 'Nough" Scrap Pile

Outside of the twisted masses of rods, broken couplers, engine pilots and tangled heaps of scrap, there is one place to which Mr. Leysaht directed the attention of the photographer, which he claims does not belong to him. The division forces are so used to shipping every bit of scrap to him that he sometimes gets more than his share.

This scrap pile consists of tin cans, springs, barbed wire and material which can be used only to fill a deep hole in some ravine and might as well fill one on the

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One of the five frog and switch planers in the United States, electrically driven, installed at a cost of \$20,000.00.