

EVOLUTION IN RAILROADING

Individuality Swallowed Up by the Vast, Complex Machine.

PASSING OF THE OLD RAILROADER

Engineer No Longer Master of His Engine, Not the Conductor of His Train—The New Aristocracy of the Road.

(Copyright, 1900, by Herbert E. Hamilton.) The conservatism of stockholders has retarded railroad improvements. The demand for punctual dividends has vetoed managerial experimentation. Experiments cost money—potential dividends—therefore inventors have met frigid receptions. In consequence innumerable worthless inventions have died stillborn, also many of the other kind. Worthy managers have escaped official shipwreck, which is a good thing, for the shipwreck of the inspired mechanical genius is alluring. There is reason in the stockholder's conservatism, but that of the old-time railroader is of the brand stenciled "bull-headed." He hates innovations. I have heard him damn double track. "Good single track is what you want," he says; "that's where they make railroad men."



TO SETTLE A DISPUTE ENGINEERS HAVE FINISHED THE TRIP WITH THE ENGINE.

The latter assertion is true. The former, also, has its adherents, being fossils, however, they may be disregarded. The old-style "man-eater" draw-head, forged on brakemen for years, the companies have invested great wealth (possible dividends) in legislation. A law resulted, popularly known and called the "co-employee act." A self-evident fact was sagely proven—that an employee could not be injured or even killed except as the result of the act of a co-employee. This was rung the death knell of cash damages, or the equivalent, a lifelong snip. The incentive for immolation withdrawn, behold the "brakery" clothed with supreme caution. Not at all! The soulless contractor gave him a coupling stick, free of charge, an instrument for holding up the link without the brakeman entering the danger zone. He rejected it scornfully, inserted himself between the man-eaters, and harried the courts, where he had no standing. The company extorted a receipt from him to prove he had accepted a stick. No use. He had lost or broken it just previous to the accident. Discharge for stickless was tried. The esprit de corps foisted this, proof was impossible.

Fall from Grates. This ultra conservatism prevails in all branches of the service. A generation ago conductors and engineers worshipped the red flag; it was their fetish. With it they were fully equipped. They could "flag" themselves out of all kinds of tight places. Opposing trains, perforce, awaited their arrival at meeting points. What of it? They got there, didn't they? Blundering dispatchers couldn't run trains together with a man walking half a mile ahead of each, carrying a red flag. No sir! Conductors and engineers were men of note. Telegraph orders concluded with "Now, do you understand?" Two such competent authorities could hardly be expected to interpret an order alike. Nor did they. Each placed his own construction upon it, the prime essential being that it should differ from the other's. The wire was kept hot with requests for light upon disputed points. Trains waited. Happy was the disputant who won, especially if he succeeded in proving the dispatcher in error. Such cases were by no means unknown. The vanquished submitted—under protest. "Sidetrack railroading" has nearly disappeared under modern methods. The book of rules still retains the ancient maxim "in case of doubt always take the side of safety," but experience has crystallized train running into an almost exact science. Doubtful cases seldom arise. Orders are issued in the tersest and plainest language, each order covering but one operation. They are issued by responsible men. They are issued to be obeyed. The men know that, they obey them. Accidents occur as the result of obedience to orders. The railroad is no exception to the fallibility of human institutions. Yet statistics prove its management to be nearly perfect as anything ever will be in this world. The old-time engineer, to all intents and purposes, owned his machine. Its throttle was never deserted by another's hand. He would not have permitted it. The locomotive lay over at the end of the run, like himself. Much capital was invested in idle engines. The engineer laid off to superintend the repairs to his engine. His opinion carried weight with the master mechanic. The repairs met his approval, or there was a howl, and it wasn't a few hours, either. Double-crowded engines earn dividends

continually. The roundhouse foreman edits the engineer's work report. Meanwhile the engineer runs the machine allotted to him. He confines his howling to the seclusion of his home. His wife thereby acquires railroad lore. Conductors were once monarchs of all they surveyed up to the back of the tender. That was the firing line. There authorities clashed. To settle a dispute as to train rights engineers have uncoiled and finished the trip with the engine, leaving the conductor and his train on the siding. Thick-necked conductors have refused to open the switch, forcing the engineer to continue the trip against his judgment. Such primitive methods would now meet with official disfavor. The old-time railroader was a character. So is he of today. But he is different. In those days the industrial radius of the road was small. Its personnel was weak, scrawny, little. Small iron rails wandered about the country. The roadbed was unscientifically constructed. It was the day of the wooden trestle. Small, weak engines made long stops at woodpiles. Frowny, hard-riding passenger cars were coupled with links and pins. The hand-brake assisted in furnishing thrills to passengers. Stopping and starting were man-eating operations. The reservoirs of fendish potentiality, the car stove and the oil lamp, were omnipresent. A bible in a rack, labeled "Read and return," was flanked by an ax with a horribly suggestive red helve. Passengers were regaled with pungent wood smoke from the engine. Conductors collected fares and bought real estate.

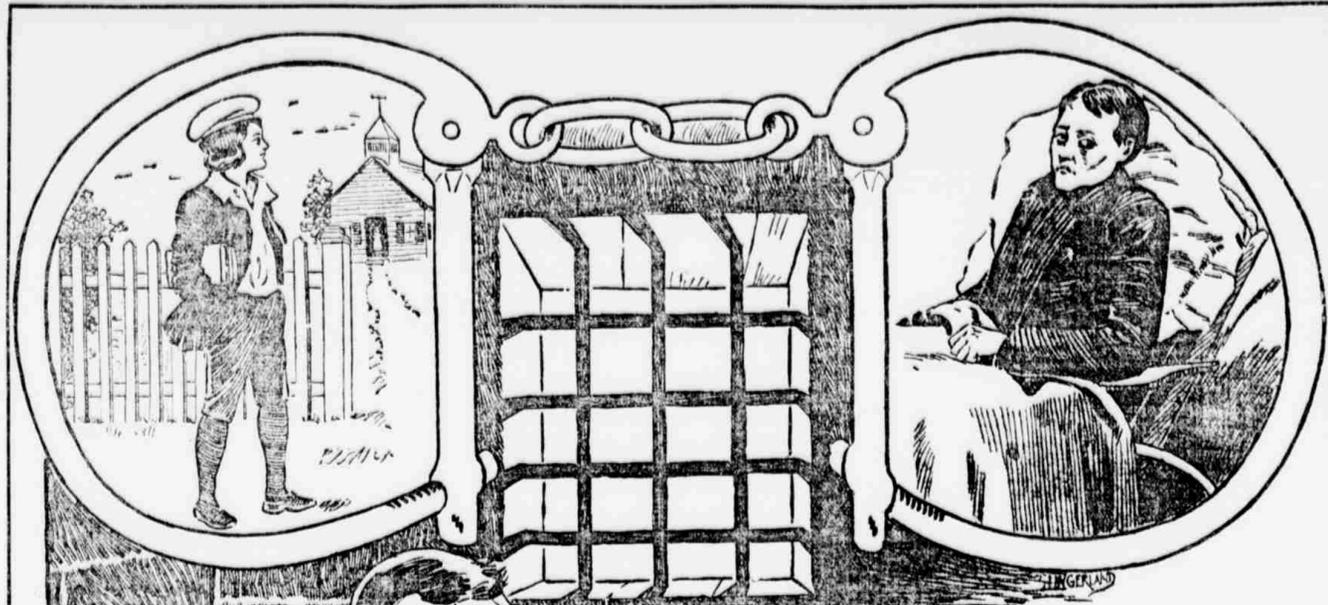
late. Passenger brakemen were unbecomingly familiar with prominent citizens. Engineers forgot, as they do yet, that they were workmen. They also died at their posts as they do yet. The men were dwarfed by their environment. Their little road was their world. They were as proud of the fast run of their little trains as is the flyer in the cab of a transcontinental flyer of today. And who what? Competition was across the prairies for a mail contract had not yet been conceived. A minute gained between School House Hill and Cider Mill Curve was a legitimate triumph.

Changes Cause a Shock. Doings on other roads were of no interest to these men. If a stranger got a job he was permitted to live down the stigma



PASSENGER BRAKEMEN WERE UNBECOMINGLY FAMILIAR.

of his strangeness—if he could. The officials were "trailed" on the road. Their former comrades still filled the lumber positions. From them the rising generation learned to call the "super" bill and the master mechanic Joe in their absence. Any position was open to any aspirant. Chances came like a thief in the night. So gradual were they that their eventual recognition produced a shock. The rapidly growing country called for increased transportation facilities. Roads were double-tracked. Roads were paralleled. Competition reared its ugly head. More and better service was demanded of the men. Time-honored privileges and perquisites were curtailed or revoked. Pay was sometimes clipped. New rules requiring more work for the same or less wages were formulated. Competition's twin grievance, was born. The committee missed something of the old heartiness in their welcome. "Super" bill regarded his former comrade as a germ of possible trouble for himself. Committees returned dissatisfied. The friendly relations hitherto existing were sundered. The entering wedge received an occasional tap from either party. The rift widened. Now the gulf has become impassable. A thorough grounding in the various departments had been indispensable to professional. Presidents and superintendents boasted of their early familiarity with the brake wheel and the conductor's punch. That door is now closed. The most successful manager in the country has said it. There is to be an aristocracy on



Condemned But Reprieved.

"In the summer and fall of '98, while in the Indian Territory, that being a malarial country, I had fever and ague all the time till I became all run-down," writes Mr. L. Cameron, of Parvin, Denton County, Texas. "During my chilling I took catarrh of the head and it troubled me a great deal. Then I had bronchitis. Had two doctors with me and got some better, and in January, 1899, I moved from the Indian Territory to Arkansas. Being exposed by traveling in very cold weather I grew worse. I had two of the very best doctors I could get, but still grew worse. Was advised by a friend to try Dr. Pierce's Golden Medical Discovery, so I commenced taking it. The doctors could do me no good, quit coming to see me and said I would die. The people said I had consumption and could not live. I took the 'Golden Medical Discovery' according to directions. For two weeks I could not talk above a whisper, and for four weeks I had to lie on my left side all the time. I could not eat a bit of anything. All the nourishment I could take was a little sweet milk with whiskey or brandy in it to keep me from vomiting. After I had taken two or three bottles of 'Golden Medical Discovery' I began to mend. For forty-seven days I could not get out of the house. I kept on taking the 'Discovery' until I had taken twelve bottles, and I am now well and do not cough any at all. I believe Dr. Pierce's Golden Medical Discovery saved my life. I feel very thankful to you for preparing such a valuable remedy, and thankful to God for the existence of such an Institution as the one with which you are connected. I desire to have this published, in order that people who are afflicted as I was with that terrible disease (bronchitis) may read my statement and be induced to take your medicines and perhaps be saved from a consumptive's grave."

"After having followed your advice for three months longer (from the day of writing you), I feel that I have been amply repaid," writes Mr. Clarence Payne, of Washington, D. C., 1328 N. H. Avenue, N. W. "When I received your advice I was suffering greatly. Pains in my chest, sides and under shoulder-blades, spitting blood, particles, and a quantity of mucous matter (stringing as it left my mouth). The doctor pronounced my case bronchitis, and a specialist said I had laryngitis and advised me to go to the mountains; but I came into possession of one of your books, and after following your advice I am proud to say that I have gained between fifteen and twenty pounds. I took in all seven bottles of 'Golden Medical Discovery' and two vials of Dr. Pierce's Pellets. I am still using your medicine, now as a tonic."

The Child is Father of the Man.

It shocks us when we pick up the newspaper and see the name of an old schoolmate associated with crime. As we picture him behind the bars there rises before us the vision of the bright scholar and merry playmate, and it seems impossible that this boy can have ended his career in a felon's cell. There's another sad experience which comes to us. We chance on a weak, emaciated form, being pushed along in an invalid's chair. There is something familiar about the man's face. There's recognition in his eye. We take the thin, transparent hand and look enquiringly. "It can't be he!" What! Harry Smith, the college athlete? This poor, gasping wreck the one time hero of the diamond and gridiron? But so it is. And again memory flies back to the old days of school and we see this frail man as he was—magnificent in brawn and sinew, superb in health.

What can we do for these unfortunates—the criminal and consumptive? For the criminal we can do little. For the consumptive much. We can point him to a great army of men and women who were in like case. They were weak and emaciated, coughing night and day. They had hemorrhages and night-sweats. Medicine failed to help them. Doctors gave them up. Then someone said try Dr. Pierce's Golden Medical Discovery. It looked like the straw which the drowning man clutches. It proved to be a life buoy.

In the other column are given some specimen statements by those who have been cured by the use of "Golden Medical Discovery." "Condemned but reprieved." These are fairly representative statements. They are only two out of thousands.

It is natural to ask, "How can these things be?" How can Dr. Pierce's Golden Medical Discovery cure when doctors pronounce the case hopeless and all other means and methods have utterly failed? That question deserves an honest answer.

Think a moment. Did you ever know of a fleshy, well-nourished man dying of consumption? The question itself seems absurd. Consumption is a wasting disease. The sign manual of consumption is emaciation.

Then it seems evident that the principal feature of the disease is lack of nutrition. If the body could be nourished and increased in flesh, the disease would lose its hold. All treatments of consumption recognize this chief factor of nourishment. Nauseating oils and their scarcely more palatable emulsions are administered as body-building foods, easy of assimilation. The appetite is poor. The stomach is weak. The administration of oil is an attempt to slip food past a weak stomach. As far as it goes the oil is good. But it does not go far enough, because it does nothing for the health of the stomach, and the stomach is the vital center of the whole physical organism. No man can be stronger than his stomach. Weak stomach means weak man.

Now suppose a medicine that began by curing the diseases of the stomach and other organs of digestion and nutrition. When this is done the appetite increases. The food eaten is properly digested and perfectly assimilated and is converted into nutrition which in the form of blood builds up every organ of the body.

That is just the work done by "Golden Medical Discovery." It makes new blood and new flesh and so new life. What's the best test of the progress of consumption? The scales. Every day will show a loss of weight as emaciation progresses. What's the best test of the progress of the cure by "Discovery"? Again the scales. If the weight increases. If flesh is being formed and the body filled out the "Discovery" has called "Halt!" to the disease.

It is the common experience that the cures effected by the use of "Golden Medical Discovery" are marked by gains of sound, solid flesh. These gains speak for themselves. For as surely as the downward progress is marked by loss of flesh, so surely gain of flesh must indicate a gain of health.

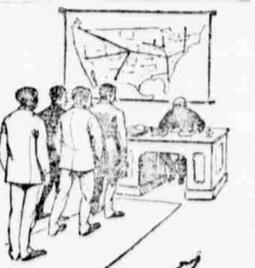
Dr. Pierce's Golden Medical Discovery cures obstinate, deep-seated coughs, bronchitis, bleeding of the lungs, and other forms of disease which if neglected or unskillfully treated find a fatal termination in consumption.

COMMON SENSE applied to hygiene and medicine, aptly describes Dr. Pierce's great work, The People's Common Sense Medical Adviser, 1008 pages, which is sent free on receipt of stamps to pay expense of mailing only.

"I thank you most sincerely for the Common Sense Medical Adviser," writes Mrs. Charles E. Thompson, of Georgetown, Ridorado Co., Cal. It is a splendid book, and everything is made so plain in it that anyone can understand. I would not part with mine for anything."

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the railroad, officers to the manner used and devoid of memories of the road. They grab with a grin, compared to which a steel bear trap is like the puling lips of an infant. The ever alert valve does other things. Properly manipulated, it can promptly stop a flying train without spilling the contents of a brimming glass. Instant wreck or derailment of the engine is almost sure to rupture the frail brake connections. This is the triple valve's opportunity. Regardless of orders the prompt little monitor sets the brakes. Many train loads of passengers have thus been kept out of the ditch. The connections fitting to rupture, a valve within easy reach of every trainman accomplishes the same purpose. The old railroader is vanquished. The capitalization of all the roads in the country would not induce him to return to hand brakes. He is conservative, but not hopelessly so. Besides, he is dying off.



THE COMMITTEE MISSED SOMETHING OF THE OLD HEARTINESS.

automatic airbrake. For complex simplicity or simple complexity, perfection and reliability, it holds the record. Futile Opposition. The old railroader disapproved of power-brakes. Their great value lay in their ability to reduce the time consumed in stopping. "If ye run right snug up to the stop block before ye shot off, and the pesky thing don't work, where be ye?" he argued. They developed defects at first; all new ventures do. The old railroader was vindicated. What he wanted was a live man who would obey his whistle signals. What he got was the triple valve. It never sleeps. It never lays off sick. It is not brought with waspish maidens or teasing "news butcher" when wanted. The whistle itself is not more sensitive to the slightest touch. The triple valve instantly

clamps a brake-shoe to every wheel on the train. They grab with a grin, compared to which a steel bear trap is like the puling lips of an infant. The ever alert valve does other things. Properly manipulated, it can promptly stop a flying train without spilling the contents of a brimming glass. Instant wreck or derailment of the engine is almost sure to rupture the frail brake connections. This is the triple valve's opportunity. Regardless of orders the prompt little monitor sets the brakes. Many train loads of passengers have thus been kept out of the ditch. The connections fitting to rupture, a valve within easy reach of every trainman accomplishes the same purpose. The old railroader is vanquished. The capitalization of all the roads in the country would not induce him to return to hand brakes. He is conservative, but not hopelessly so. Besides, he is dying off.

The block signal has relieved the overworked red flag. The flag has not been eliminated. It never will be. Like the rapidly passing horse, it holds a place in the affections of men. It is the omega, the reliable, the indispensable. It emerges triumphant from the mazes woven by self-seeking bars. Competition demanded heavier engines. There were longer trains to be run at higher speed. To meet the increased strain the permanent way must be strengthened. An increase of one pound per yard in steel rails means the renewal of the entire track. Lesser innovations have wrecked huge enterprises. The microscopic eye of a financial mathematician scrutinizes the pros and cons. Track, like rolling stock, must even up to the limit. A wheel rolling a mile in a given time represents an item in the earnings column. Decrease the time and the item increases pro rata.

Block Signals. This axiom ailed the block signal. The road is divided into sections, called blocks. In its simplest form a block comprises the track between any two stations. It is guarded by a semaphore controlled by the telegraph operator at the station. In its normal position, horizontal, it means "Stop." The preceding train has not yet been reported by wire as having passed out of the block ahead. An approaching engineer whistles for the semaphore. If it is promptly pulled down he proceeds on his way rejoicing. The block ahead is clear. Otherwise profanity ensues, but he stops

just the same. From the operator he gets a signed statement as to the time the other train entered the block. It adds that it has not yet left it. The requisite time (by the rules) having elapsed, the operator pulls down the semaphore. The engineer may now proceed at his own risk—knowing the block to be occupied. It is his privilege, however, to wait for a clear block.

Wireless telegraphy may supersede the block, which, however, is quite satisfactory. Bar accidents, trains trundle the entire length of the road at short intervals at high speed and infrequently. The system here simply outlined is capable of numberless combinations. Many semaphores governing different tracks may appear upon the same pole. The operator, knowing the destination of the approaching train, governs himself accordingly. The engineer also. That other ingenious system, the interlocking switch and signal, enables one man to handle all the trains and engines at a large terminal. The perfected system renders mistakes by the operator impossible. Switches cannot be opened or closed until the warning signal has been displayed. Nor, when once set, can they be changed until the last wheel has passed. A train arriving at the terminus faces a acre of tracks crossed by



THEY WOULD FLAG THEMSELVES OUT OF ALL KINDS OF TIGHT PLACES.

switches in all directions. Trains are continuously arriving and departing. Switch engines, busy little railroad tug, are flying cars all over the yard. It is a scene to daunt a veteran. How shall he pick his way through such confusion and land his train safely in the shed, half a mile or more away? When the semaphore controlling the track he is to enter is pulled down the engineer knows two things. He knows his track is clear all the way in, otherwise the operator could not have pulled it down, as it would have been locked. He knows, too, that time is exceedingly valuable in the yard. He is entitled to the least possible fraction thereof. Owing to the interlocking system an amount of work is done that would have required many times the space available under former conditions. Hence business is expedited.

Individuality Lost. The individuality of the railroad man is lost. The crystallization of a generation's experience has produced definite rules, and every possible emergency. Expert interpretations of orders are barred. A generation has arisen to whom law made track is but a legend. The discriminating old-timer has been supplanted by the new school, which obeys orders. The system of the cordiality formerly existing between the upper and the lower strata has disappeared organization on both sides. The inflexible law as to the superiority of intelligence over numbers never had a clearer cut illustration. A handful of managers, the kind who are born, impress their wills upon the mass.

After many years the man-eater draw-head and the red flag have accompanied the hand brake and the old-fashioned switchmen to the scrap pile. The organization concentrates themselves upon their political "jobs," but I fancy that, with modern methods, the link and pin and slow-going brake wheel were found prohibitively expensive. Great industries can survive only by the practice of strict discipline. While filtering through many subordinate discipline easily degenerates into idleness. It retains the compulsory virtue of the source from which it emanated. The railroad man of today has been relieved of much responsibility, since not his companying, simple American dignity is he the gainer? The old-timer, with his sturdy, stubborn, lovable positiveness, will soon be but a memory. Peace to his ashes! HERBERT E. HAMILTON.

RELIGIOUS. Dr. John H. W. Chestnut of Philadelphia, who died at Dutch Harbor, Alaska, while temporarily residing there, bequeathed \$2,000 to the Presbyterian Home for Widows and Single Women in Philadelphia for a memorial room in his memory. Rev. W. J. McCaughan, the pastor of the Third Presbyterian church in Chicago, has received a call to Belfast, Ireland, although the Belfast church offered him a life appointment with a salary of \$3,000 a year. He has decided to remain in Chicago permanently. Bishop Leighton Coleman of the Episcopal diocese of Delaware will start on his second annual tour afoot through parts of England, Scotland, Ireland and West Virginia the last of this month. He says it keeps him in touch with nature and lonely people and gives him a rich fund of anecdotes for sermons. A window will soon be placed in the Center church of Hartford by Edward W. Hooker in memory of Rev. Thomas Hooker, who in 1636 removed from Cambridge and who in about a hundred others founded the commonwealth of Hartford and became the first pastor of its church society. Father Francis Alden Simpson, the new head of the Benedictine Order in England, is the author of "Henry VIII. and the English Monasteries," a work which has attracted some attention. He has decided to receive in his own favor the vicar's demerit since the reformation of about 1800. He is a familiar figure at the British museum. Mrs. Deane of Newark, who has been visiting his place, Miss Elizabeth of Jamaica Plain, N. Y., but summer home in Bethlehem, N. Y., quietly celebrated his seventh birthday September 5. After a pleasant drive he donated his vestments and received several offers. Many presents, as well as letters and telegrams, were received. In spite of repeated warnings from the women's female members of the 33rd and Episcopal church at Knightstown, Ind., refused to remove their hats during services. They have been highly successful in wearing their headgear until they received news in the morning, and there is a prospect that they will increase in numbers. For most of the women want to wear their hats, although many yielded to the pastor's wish. A Powder Mill Explosion. Remove everything in sight, so do drastic measures. No need to dynamite your body when Dr. King's New Life Pills do the work so easily and perfectly. Cure headache, constipation. Only 25 cents at Kuhn & Co's drug store.

"A Blessing to all Women" Great joy and comfort comes into every household when the virtue of "Mother's Friend" is known. No more gloomy forebodings or nervousness by expectant mothers, as all pain is prevented by the external use of "Mother's Friend," the marvelous liniment. There is nothing like it. B. F. BROWN, of Wash. D. C., writes: "Many of my wife's friends have used 'Mother's Friend' before confinement, and after the birth of the child, and all agree it is the best thing they ever used." Sent by express paid on receipt of price, \$1.00 per Bottle. Book "Motherhood," written especially for young and middle-aged women, mailed free. Sold by ALL DRUGGISTS. THE BEEHIVE LITHOGRAPH CO. ATLANTA, GA.