

# NEW YORK TRANSIT METHODS CRUDE and ROUGH

### City Club's Exhibit of Improvements in Use Elsewhere Highly Convincing.

Perhaps the fact that Mr. Upper Westside Harlem was late and tired that morning made him somewhat oblivious to his surroundings as he jumped aboard the subway car. But a few moments after he sat down he realized that there was something beneath him differing greatly from the familiar corrugated rattan seat. Instinctively his hand stole downward, and his fingers encountered a surface of soft, fine-grained leather. He nervously adjusted his glasses and glanced about him. For a wonder he was not coming, evidently had a seat. Again he glanced cautiously about. This time he noticed the lights. The harsh glare of the bare electric bulbs had given place to the soft, subdued glow of prism globes. And the straps? Where were they? None dangled from the roof rail, but among the high backed cross seats with which the car was filled, polished brass poles were at regular intervals along the aisle, from the floor to the ceiling. He missed the familiar rows of advertisements.

He sat up with a start, and something soft and fluffy tickled his neck. He turned to investigate. Tasseled draw-curtains at the windows of a subway train! Incredible! He glanced down at his feet. Thick mats covered the floor. Well, of all the — And how quiet it was! The guards were not making half the racket they ordinarily did. Perhaps the president of the road's dead," reasoned the now thoroughly bewildered passenger, as he glanced down to the other end of the car to where a big indicator over the door had just swung into position the notice, "Grand Central, Fourteenth St., next stop."

### TOO GOOD TO BE TRUE.

As the train slowed down he peered out of the window. Neatly framed on a platform post, just opposite, was a big map of the city, and near it a complete schedule of the running time of the train. The latter was printed in bold-faced type, and the company was plainly not ashamed of it. The familiar black, grooved-covered ballast was missing from the bed of the track alongside the one his train was on. In its place was a solid floor of concrete, and as the train started off down the tunnel again he noticed that a concrete walk ran along the whole length of the tunnel just below the level of the car floor. "Swivel!" he commented. "Get stuck now and I won't have to walk the tracks." At the next street he noticed the guards did not bust out. "Mind your step," and then he discovered that there was no gaping space between the platform and the car, for the under edge of the car just covered the platform edge, a white paint line on the platform defining the danger zone. The almost noiseless operation of the train puzzled him. "Say, I never knew concrete made such a quiet roadbed," he commented to his seat mate. "I don't," if the rails weren't screwed down to anchors imbedded in it—company might have done it long ago" was the gruff rejoinder.

At Brooklyn Bridge a group of people were clustered about a big board on which an automatic register indicated that the train was north was a Broadway and Duane street express, to be succeeded by a Lexington, and that in turn by a West Farms train. At Fulton street a man dashed into the station. Pausing only to glance at the crowd waiting for their change at the ticket booth, he stepped up to a little device at one side, it appeared not unlike one of the chewing gum machines ranged alongside and deposited a nickel. The next moment, ticket in hand, he was crowding past the ticket chopper and dashed in at the car door. "Great things, those automatic ticket boxes," he gasped as he fopped into a seat across the aisle.

"Great! marvellous!" agreed Mr. U. W. Harlem. "But, say, tell me, where the—where am I?" As if in answer to his question sounded the hoarse voice of the guard: "City Hall! All out! Hey, you'd better think this is a sleeping car!" The lone passenger sat up with a start and glanced about at the empty car with its bare floors, rattan covered seats, curtainless windows and straps dangling from the ceiling. "Eh!" he ejaculated then, his memory served him. "Oh, yes, I know what that was. Was going to that City Club exhibit. Well, anyway," he commented, "it was worth while if it was only a dream."

That Mr. Upper Westside Harlem's seemingly needless flight of fancy may some day "come true" is the fond hope of those who promoted the model exhibit which has been on view at the City Club in West 43rd street, Manhattan, and at the Institute of Arts and Sciences, Brooklyn, and which will continue on view another week at the latter place. The members of the City Club's transit committee in general, and John P. Fox, an engineering member of that committee, in particular, are the ones who are not far distant when all the transit help and concern for an entire population, together with many he did not see, will be as common in New York as they are to-day in foreign cities. For instance, they hope the time is not far distant when the nerve destroying racket of the New York subway and surface cars will be abolished.

### DOING AWAY WITH NOISE.

New York railway officials will tell one this cannot be done, but there is conclusive evidence at the City Club's exhibit to show that it has been done in several foreign cities, and even in Philadelphia, in this country. The secret of it all, say experts, is to prevent the vibration of the rails. And it is done by laying the whole road in a bed of concrete, for the concrete shrinks and leaves the road little better so far as noise is concerned than if concrete

were not used. The secret of doing away with the noise lies in first setting U-shaped "anchors" at regular intervals in the concrete and then screwing the rails to these, instead of simply spiking them to the wooden ties. There are also four good kinds of so-called noiseless rail joints. In Berlin, Germany, an ingenious joint, put together on the principle of the cantilever bridge, is used. This is so arranged that the bulk of the weight of the



**SURFACE CONTACT SYSTEM.**  
In use in London, England.

car is never on the end of a rail. In Philadelphia a riveted cast zinc joint is used, and in other places electrically welded joints are used as aids to the prevention of noise. Noiseless brake hangers are also commonly used in Berlin. In this city there is nothing of that kind.

The New York companies are now trying to do away with flat wheels by using steel instead of cast iron wheels on the cars. One great source of the noise from New York cars is, according to Mr. Fox, the gearing, which is continually creaking and rattling while the car is in motion. In London this has been overcome by treating the parts with frequent coats of oil and sand. This not only stops the noise, but protects the parts of the car from wear and tear through the action of the dust. In London one is startled by the quiet with which a streetcar approaches rather than by the noise.

### FENDERS THAT AVERT INJURY.

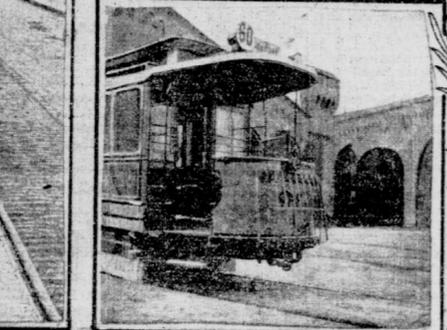
Among the devices exhibited is a powerful magnetic brake. It not only grips the rail tightly itself but automatically applies the brake shoes to the wheels at the same instant. This brake is used on 40 per cent of all the cars in England. It is used in the West in the United States and a little in the East, but not in New York. So powerful is this device that a car equipped with it running at the rate of eleven miles an hour can be stopped within thirteen feet on a slippery track. An ideal type of fender is shaped at either end of the car like the nose of a pointed nose plough, and not only are the ends of the cars guarded by it but the wheels on either side are covered as well. In other words, the running gear of the car is completely boxed in by it. The whole thing rides close to the street surface, and it is recorded of it that in seven years' trial at Liverpool it has pushed 410 people from the tracks without loss of life in any case.

An important feature of car construction in England and Germany is the manner in which the brake and other gearing are kept away from beneath either end of the car. In New York if a person falls in front of a car the chances are ten to one that he is struck on the head by a brake rod or some other portion of the gearing, and permanently injured, even if the car is stopped in time to prevent the wheels from passing over him. In most European countries all this dangerous gearing is done away with at either end of the car, and there is left a clear space in which a person cannot be very severely injured before the fender or wheel guard has a chance to act.

The projecting fender so common in New York,

### LAYING A NOISELESS TRACK.

Screwing rails to anchors embedded in concrete.



**A BERLIN STREETCAR.**  
With route number, airbrake and clearance under platform.

### ENGLISH POWER SYSTEM.

Another means of protecting life to which close heed is paid on the English streetcar lines and to which little or no attention is paid in New York is the steps taken by the English companies to prevent rails from becoming slippery. The common practice is to use rail cleaners on the level stretches and running water on the grades. On every streetcar route in Liverpool one car, equipped with a rail cleaner, a little device which is pushed ahead of the wheels and scrapes up the dirt, runs day and night. On the grades a tiny stream of water is allowed to trickle down the rails. The wheels of the cars meet this and splash it over all parts of the rail, washing off the dust and other accumulations.

As a means of doing away with the trouble experienced on some New York lines by water backing up into conduits and putting the line out of service for lack of power Mr. Fox calls attention to the surface contact conduit system, which is now being used successfully in several English cities. With this system there is no open slot in the centre of the car tracks to become filled with water or street sweepings; instead, there is nothing appearing on the street surface save a series of small metal plates laid at regular intervals. Beneath the car there is a "collector," which resembles a caterpillar as much as it does anything else. This is pointed and is as flexible as a rope. In the operation of the car it is attracted downward by the current, and as it skips from plate to plate it gathers the power with which the car is sent forward. Its flexibility allows it to touch the plates without hitting cobblestones, and as the plates are flush with the street level they are no impediment to traffic. No one can get an electric shock from them any more than from the open conduit used in New York, and the cable under ground is secure in a watertight compartment. Everywhere this system has been tried it has given satisfaction, according to Mr. Fox. Its use in such a street as West street, Manhattan, would, he says, rob the New York street railway officials of their long standing excuse for not putting electric service in that thoroughfare that water would back up and cripple the conduit in bad weather.

Trolley catchers, small spring-actuated devices controlling the cord attached to the trolley, making it impossible for it to slip from the overhead wire, are employed in European cities where the wheel trolley system is used, but in Germany the bow trolley system is in use. This Mr. Fox believes should be used on every line in and about New York having the current supplied from overhead. In this system there is no little wheel at the end of a pole to slip off the wire and become snarled in frogs and switches or the supporting wires at either side, causing delay and oftentimes serious damage. In the place of the wheel trolley is simply an elongated bow, so constructed that it cannot slip off the overhead wire. This bow does not have to be pulled down and reversed when the end of the run is reached. The car simply starts in any direction desired and the bow snaps into position automatically.

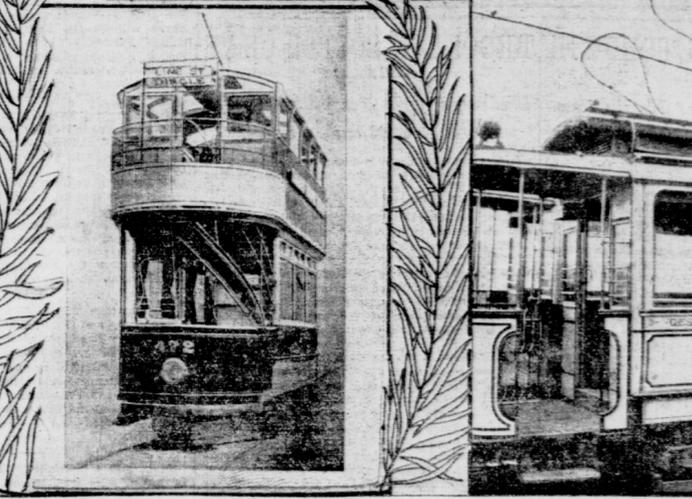
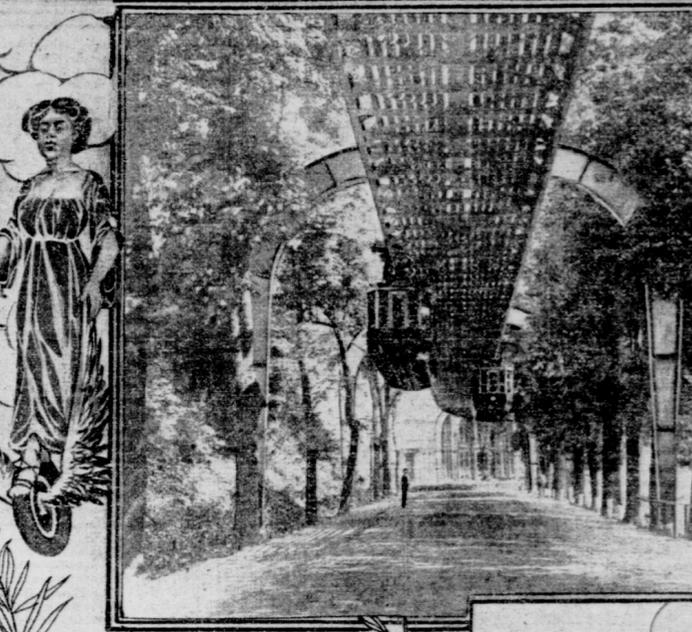
### MORE SEATS THE AIM.

Mr. Fox considers the new "pay-as-you-enter" cars a flat failure from the public standpoint. "They may be a good thing for the company," said he, "but they are a poor thing for the people. Why, they are 12 feet longer than the old cars, but they do not contain a single extra seat, and only thirty-six seats, mind you, instead of a possible sixty-four, to have been obtained by the use of cross seats, or 112 if they had been double decked. The additional space has been used only to prevent a loss of fares resulting from incompetent management. If the Montreal fare system is to reduce the capacity of our cars one-half it has simply got to go."

In illustrating the desire of the European transit companies to increase the seating capacity of their cars rather than to reduce it the exhibit calls

### ELEVATED ROAD WITHOUT SURFACE OBSTRUCTION.

Arch supporting the structure leaves roadway clear. In Elberfeld, Germany.



**A MODEL WHEEL GUARD.**  
On a double-decker Liverpool municipal car. This wheel guard has put an end to running over people.

### THE BOW TROLLEY.

In use in Berlin. Never slips off the wire.

attention to the use of double decked cars in London and other cities, to the use of two light trailers during rush hours in Berlin, and to the fact that the Great Eastern Railway, of London, a few years ago voluntarily cut 70 of its side-door cars in two lengthwise and spliced them together, after increasing the width of each half, in order to add 20 per cent to the seating capacity of each car. "If a railway company carrying passengers eleven miles for 2 cents can afford to do this, why cannot the wealthy Interborough company?" asks Mr. Fox. In putting distinguishing signs on the cars and in the general use of signs, Mr. Fox declares the New York railway officials have much to learn from their brethren abroad. In many of the foreign cities, especially Berlin, the use of colored lights on cars has been given up entirely, their places being taken by big, illuminated route numbers, which are plainly discernible at a considerable distance. Along with these, signs lettered so large that they can easily be read are used on the outside of the cars. "The theory governing the use of transit signs in Berlin," said Mr. Fox, "is that the passenger must be able to tell the destination and route of the car, whether inside or out of it."

### LUXURIES OF BERLIN CARS.

His photographs and description of the interior finish and equipment of European cars go to show that M. U. W. Harlem's seemingly fantastic dream of what might be in New York was not beyond the possibilities. For instance, in German parlor cars which are operated in connection with all elevated and subway trains—and in which, by the way, the fare is only 25 cents, the fare in ordinary cars being 20 cents—the seats are red leatherette covered cushions on springs. These Berlin parlor cars have windows five feet long, and the dimensions of the lengthwise seats are twenty and one-half inches apart, enough space being provided for three persons in each division. Every three seats brass poles are provided for use instead of straps by the compelled to stand.

These cars, like the London subway cars, are equipped with prism globes, which give a very soft light. Mr. Fox says that cushioned seats on springs are the rule on the transit lines throughout Europe, and that in some European cities one can buy guides to the city on the street cars. On the Berlin cars one can obtain for six cents a complete timetable and map showing the parks and other points of interest, with information about them.

### TICKET SLOT MACHINES.

The European motor buses, which in some cities where competition is strong, have fares as low as one cent, are also beautifully finished inside. On one line in Berlin on which a person can ride a half mile for 14 cents and any distance for 25 cents, the seats are upholstered in figured blue plush, and there are shaded electric lights, window draperies and other comforts and conveniences, including careful ventilation and an emergency lamp. In all the Berlin elevated and subway stations are ticket slot machines, from which tickets can be obtained by dropping in a coin. They work automatically, even to the extent of making change and refunding the one's money if the machine is empty. One is not even obliged to pull down a lever. A combination cleaning and whitewashing device, used in the London subway, is shown in the City Club exhibit. This machine, which is operated on the vacuum cleaner principle, sucks up the dust, which is then filtered through water. The whitewash is automatically applied as the machine moves forward through the tube.

Attention is called by the exhibit to many other matters of detail, in which New York transit conditions fall short of those in Europe. The exhibit is wanted in Boston, and will probably be shown there and in other large cities after it closes in Brooklyn.

### HIS MISFORTUNE.

"I was a celebrated pianist and a great success with the public," confided the sad-eyed man to his companion, "but I had a misfortune which threw me out of favor with my audiences and cut off my revenue as a performer." "What was your misfortune?" asked his friend. "My hair fell out!"—Bohemian.

### PURSUE H. H. ROGERS

Bermudian Promoters Want Backing—Twin His Companion.

Hamilton, Bermuda, April 5.—H. H. Rogers is here for a rest. He has been told that if he gives up business until next fall he may then go on with it in safety. Now he is taking extreme care of his health. He says that he gets tired very easily, and that he wants to turn the currents of his thought into new channels. His wife, who also suffers greatly from nervousness, is here with him. Though he keeps a stiff upper lip and a rigid jaw, the Standard Oil man shows in the expression of his eyes, his gestures, his careful gait and slow pace that he needs rest. His friend Mark Twain drives with him every day, and they go about together to the homes of the islanders. With the natives who go to him to ask financial backing for their schemes of local improvement Mr. Rogers is polite but evasive. To one genius of scientific leanings he even offered conditionally the services of a Standard Oil expert for the purpose of making deep borings to look for fresh well water, which the islanders want. The scientific citizen went away rejoiced and told of his success at the club. "Now," said the wise one, "we shall have the resources of the greatest American capitalists at our back and a permanent water supply is assured."

"What?" demanded a bystander, "you expect to strike fresh water by going down into this coral rock?" "Well, we will at least get natural gas."

"Oh, cork that up," scoffed the other; "there's too much natural gas here already."

It may be remarked that the islands are just now being flooded with talk and literature by a company of American promoters seeking to introduce electric light, trolleys and other blessings. There is not a great deal of diversion in Bermuda, and Messrs. Rogers and Twain spend most of their time sitting on the hotel porches gossiping with the throng. With Dr. Nicholas Murray Butler, president of Columbia University, one of the recent visitors, Mr. Rogers talks a good deal, though abstaining as a rule from economics and politics. He did go so far as to declare the other day that McKinley's was the ideal administration of recent years, until the President allowed himself to be drawn into the Spanish war, which, according to Mr. Rogers, showed him to have been a weak man.

On his arrival some six weeks ago Mr. Rogers and his son-in-law were strolling along Front street, when a benevolent and bewhiskered old gentleman approached and accosted them with the query, "Have I the honor of meeting Mr. H. H. Rogers?"

Mr. Rogers softened at this official courtesy and later accepted an invitation to Bellevue, the Mayor's home, where, together with Mr. Clemens and a large company of guests, he was shown the process of arborvitae making and supplied with various dainties in the shape of Bermuda fruits. His natured residents of opposite political views hinted that the Mayor took the occasion to show his place to Mr. Rogers with the thought that he might get a customer, the estate being in the market. Since the law forbidding aliens to own land was repealed last year there has been much bidding for American custom in the real estate business. Senator Clark of Montana, began it when he offered \$1,000 for a month's use of a small house near Hamilton.

When Mr. Clemens is not driving or chatting with Mr. Rogers he is usually acting as escort to the little girls at the hotel, who drive about in donkey carts on the white roads. By walking alongside Mr. Clemens gets exercise and diversion. He was asked the other day how he felt and said that his digestion hadn't been very good, he'd been forced to drink whiskey the night before for his stomach's sake. "Maybe," he added, reflectively, "my digestion is too good. I've a notion that it got away with the food so quickly that an empty well was left and the whiskey was needed to fill up."

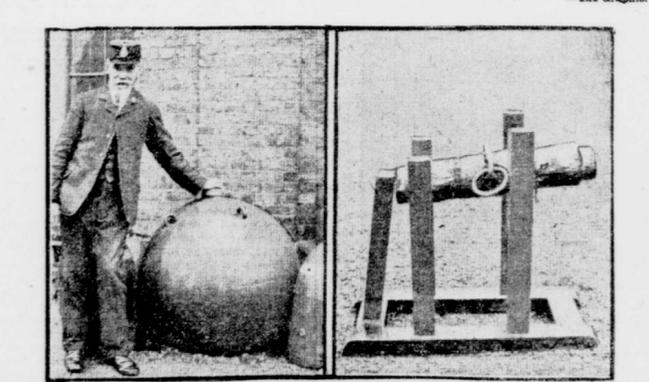
# NEW AND TERRIBLE ENGINE OF WAR

### Cities to be Destroyed at 200 Miles Range.

How would New York feel if an enemy lying in Boston Bay or off the coast of Maryland, or anywhere two hundred miles away, should begin to bombard her with high explosive projectiles? Some wireless scout might report that a missile was on the way. It would take a full minute, even with the enormous initial velocity of six miles a second, for the destructive visitor to arrive. A minute is long enough to get thoroughly scared in, but scarcely gives the opportunity for an entire population to escape. If there were any sound accompanying the discharge it would be heard about sixteen minutes after the arrival of the projectile. Probably no warning would be given. Noiseless and irresistible as a flight of meteors, aimed to the hairbreadth with mathematical calculation, death would descend from a clear or clouded sky. There would be no means of telling the distance or direction of the enemy. He might be operating upon the sea; he might be located on the land anywhere on the circumference of a circle 1,600 miles in extent. There is a good deal of space in such a sea. Let the wireless buzz and the aeroplanes go whizzing at all points of the compass in search of the enemy of cities. New York may be blotted out in the few hours required, with the best luck, to find the enemy. And if the location of the enemy is known at the beginning, and fire fights fire, the enemy has a city for a target, while the defenders must aim at a tiny bull's-eye.

Such speculations would seem to belong to the realm of fantastic dreamers of the future. However, they are actually advanced as matters not very far from the future horizon by Colonel Frederick N. Maude, C. B., a military authority and lecturer in military history at Manchester University in England. It appears to Colonel Maude, writing in "The Contemporary Review" for April, that the invention of the electric gun is the last word in war making machines and must result either in a universal catatonia or a world peace. It is not as a mere life destroyer that the new invention can hope to change the face of things. People have often predicted the end of war through the increasing deadliness of modern weapons. But increasing precision and distance between opposing forces have counteracted the effect of the new invention, and no modern weapon has wrought havoc comparable to the handiwork of our ancestors. Not to destroy life, but to destroy property, and on

### ANCESTORS OF MODERN ARTILLERY.



**THE LARGEST PROJECTILE EVER MADE.**  
It weighs one and a quarter tons and was cast for the men of a garrison and intended to be used against Sebastopol, but was found too heavy for practical purposes.

It is assumed that two hundred miles will be the effective range. At this estimate the nations of Europe could mutually devastate their cities without overstepping frontiers. A small anarchistic state could blow up half a dozen metropolises. Bombs could be dispensed from London to a circuit of cities including Liverpool, Amsterdam, Brussels and Paris. The Channel would interpose no obstacle to a duel between the French and English capitals, torpedoes flying through the air in opposite directions to destroy Westminster and the Houses of Parliament and the Louvre. Silent would be the old-fashioned siege and coast defence guns, helpless to aid or hinder the aerial combat. A petty conflict might be going on between the battalions of the warring powers. This would not last long and would have no decisive effect, whichever side won. Modern battleships are like bulldozers; the survivor is as much hors du combat as the vanquished. The contest would be one of property destruction, the wiping out of cities, with a merely incidental destruction of human lives, and victory would go to the nation able to stand the more punishment and the greater loss of property. The new weapon has two important features that put it within the means of the humblest persons as well as the most powerful. War machines are usually heavy and costly. This is cheap and light. Battleships are built of enormous strength and weight mainly to enable them to resist the shock of firing big guns. The electric weapon, having no recoil, may be mounted on any light and speedy vessel, even a torpedo boat destroyer type that makes thirty miles an hour. No doubt it would be as easy to set it up on Mont Blanc and lay low the cities of France and Germany, of Italy and Austria. The elements of cheapness and light weight suggest the danger of unauthorized persons getting hold of it and turning it against civilization in wanton amusement. The Black Hand might employ it against a rich neighbor. War machines are usually heavy and costly. This is cheap and light. Battleships are built of enormous strength and weight mainly to enable them to resist the shock of firing big guns. The electric weapon, having no recoil, may be mounted on any light and speedy vessel, even a torpedo boat destroyer type that makes thirty miles an hour. No doubt it would be as easy to set it up on Mont Blanc and lay low the cities of France and Germany, of Italy and Austria. The elements of cheapness and light weight suggest the danger of unauthorized persons getting hold of it and turning it against civilization in wanton amusement. The Black Hand might employ it against a rich neighbor. War machines are usually heavy and costly. This is cheap and light. Battleships are built of enormous strength and weight mainly to enable them to resist the shock of firing big guns. 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